

GARMIN[®]

G1000[®] NXi

Cockpit Reference Guide



Cessna NAV III

FLIGHT INSTRUMENTS

ENGINE INDICATION SYSTEM (EIS)

NAV/COM/TRANSPONDER/AUDIO PANEL

FLIGHT MANAGEMENT SYSTEM

HAZARD AVOIDANCE

AUTOMATIC FLIGHT CONTROL SYSTEM

ADDITIONAL FEATURES

ANNUNCIATIONS & ALERTS

ABNORMAL OPERATION

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This manual reflects the operation of System Software version 2501.00 or later for the Cessna Nav III. Some differences in operation may be observed when comparing the information in this manual to earlier or later software versions.

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WARNING: Do not use terrain avoidance displays as the sole source of information for maintaining separation from terrain and obstacles. Garmin obtains terrain and obstacle data from third party sources and cannot independently verify the accuracy of the information.



WARNING: Always refer to current aeronautical charts and NOTAMs for verification of displayed aeronautical information. Displayed aeronautical data may not incorporate the latest NOTAM information.



WARNING: Do not use geometric altitude for compliance with air traffic control altitude requirements. The primary barometric altimeter must be used for compliance with all air traffic control altitude regulations, requirements, instructions, and clearances.



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



WARNING: Do not rely solely upon the display of traffic information to accurately depict all of the traffic within range of the aircraft. Due to lack of equipment, poor signal reception, and/or inaccurate information from aircraft or ground stations, traffic may be present that is not represented on the display.



WARNING: Do not use data link weather information for maneuvering in, near, or around areas of hazardous weather. Information contained within data link weather products may not accurately depict current weather conditions.



WARNING: Do not use the indicated data link weather product age to determine the age of the weather information shown by the data link weather product. Due to time delays inherent in gathering and processing weather data for data link transmission, the weather information shown by the data link weather product may be older than the indicated weather product age.



WARNING: The displayed minimum safe altitude (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: Always obtain qualified instruction prior to operational use of this equipment.



WARNING: Do not use a QFE altimeter setting with this system. System functions will not operate properly with a QFE altimeter setting. Use only a QNH altimeter setting for height above mean sea level, or the standard pressure setting, as applicable.



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.



WARNING: When using the autopilot to fly an approach with vertical guidance, the autopilot will not level the aircraft at the MDA/DH even if the MDA/DH is set in the altitude preselect.



WARNING: Traffic information shown on system displays is provided as an aid in visually acquiring traffic. Traffic avoidance maneuvers are based upon TCAS II Resolution Advisories, ATC guidance, or positive visual acquisition of conflicting traffic.



WARNING: Because of variation in the earth's magnetic field, do not rely on the accuracy of attitude and heading indications (GRS 77 installations only) in the following geographic areas: 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 rely on information from a lightning detection system display as the sole basis for hazardous weather avoidance. Range limitations and interference may cause the system to display inaccurate or incomplete information. Refer to documentation from the lightning detection system manufacturer for detailed information about the system.



WARNING: Use appropriate primary systems for navigation, and for terrain, obstacle, and traffic avoidance. Garmin SVT is intended as an aid to situational awareness only and may not provide either the accuracy or reliability upon which to solely base decisions and/or plan maneuvers to avoid terrain, obstacles, or traffic.



WARNING: Do not use the Garmin SVT runway depiction as the sole means for determining the proximity of the aircraft to the runway or for maintaining the proper approach path angle during landing.



WARNING: Intruder aircraft at or below 500 ft. AGL may not appear on the Garmin SVT display or may appear as a partial symbol.



WARNING: Do not operate the weather radar in a transmitting mode when personnel or objects are within the MPEL boundary.



WARNING: Always position the weather radar gain setting to Calibrated for viewing the actual intensity of precipitation. Changing the gain in weather mode causes precipitation intensity to be displayed as a color not representative of the true intensity.



WARNING: Do not use TAWS information for primary terrain or obstacle avoidance. TAWS is intended only to enhance situational awareness.



CAUTION: Do not clean display surfaces with abrasive cloths or cleaners containing ammonia. They will harm the anti-reflective coating.



CAUTION: Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and affect the airworthiness of the aircraft.



NOTE: Do not rely solely upon data link services to provide Temporary Flight Restriction (TFR) information. Always confirm TFR information through official sources such as Flight Service Stations or Air Traffic Control.



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



NOTE: 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 system utilize GPS as a precision electronic NAVigation AID (NAVAID). Therefore, as with all NAVAIDs, information presented by the system can be misused or misinterpreted and, therefore, become unsafe.



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: 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: 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: Operating the system in the vicinity of metal buildings, metal structures, or electromagnetic fields can cause sensor differences that may result in nuisance miscompare annunciations during start up, shut down, or while taxiing. If one or more of the sensed values are unavailable, the annunciation indicates no comparison is possible.



NOTE: The system responds to a terminal procedure based on data coded within that procedure in the Navigation Database. Differences in system operation may be observed among similar types of procedures due to differences in the Navigation Database coding specific to each procedure.



NOTE: The FAA has asked Garmin to remind pilots who fly with Garmin database-dependent avionics of the following:

- It is the pilot's responsibility to remain familiar with all FAA regulatory and advisory guidance and information related to the use of databases in the National Airspace System.
 - Garmin equipment will only recognize and use databases that are obtained from Garmin or Jeppesen. Databases obtained from Garmin or Jeppesen are assured compliance with all data quality requirements (DQRs) by virtue of a Type 2 Letter of Authorization (LOA) from the FAA. A copy of the Type 2 LOA is available for each database and can be viewed at <http://fly.garmin.com> by selecting 'Type 2 LOA Status.'
 - Use of a current Garmin or Jeppesen database in your Garmin equipment is required for compliance with established FAA regulatory guidance, but does not constitute authorization to fly any and all terminal procedures that may be presented by the system. It is the pilot's responsibility to operate in accordance with established AFM(S) and regulatory guidance or limitations as applicable to the pilot, the aircraft, and installed equipment.
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NOTE: The pilot/operator must review and be familiar with Garmin's database exclusion list as discussed in SAIB CE-14-04 to determine what data may be incomplete. The database exclusion list can be viewed at www.flygarmin.com by selecting 'Database Exclusions List.'



NOTE: The pilot/operator must have access to Garmin and Jeppesen database alerts and consider their impact on the intended aircraft operation. The database alerts can be viewed at www.flygarmin.com by selecting 'Aviation Database Alerts.'



NOTE: If the pilot/operator wants or needs to adjust the database, contact Garmin Product Support to coordinate the revised DQRs.



NOTE: Garmin requests the flight crew report any observed discrepancies related to database information. These discrepancies could come in the form of an incorrect procedure; incorrectly identified terrain, obstacles and fixes; or any other displayed item used for navigation or communication in the air or on the ground. Go to FlyGarmin.com and select 'Aviation Data Error Report'.



NOTE: When operating the system with the magnetic sensor uncoupled from the AHRS, the displayed heading and heading information used by some system components (e.g. traffic system, AFCS, and weather radar) will be different from the heading calculated by the AHRS. The difference is an amount equal to the difference between the current Magnetic Field Variation Database (MV DB) value, and the MV DB value when the magnetic sensor was uncoupled. Due to the convergence of isogonic lines, this condition is most noticeable at or near the north and south magnetic poles.



NOTE: When using Stormscope, there are several atmospheric phenomena in addition to nearby thunderstorms that can cause isolated discharge points in the strike display mode. However, clusters of two or more discharge points in the strike display mode do indicate thunderstorm activity if these points reappear after the screen has been cleared.



NOTE: Operate G1000 NXi system power through at least one cycle in a period of four days of continuous operation to avoid an autonomous system reboot.



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 system more easily. It is not intended to be a comprehensive operating guide. Complete operating procedures for the system are found in the Pilot's Guide for this aircraft.*



NOTE: *The system supports approval of AC 120-76C Hardware Class 3, Software Type B Electronic Flight Bag (EFB) electronic aeronautical chart applications. Possible additional requirements may make a secondary source (traditional paper or additional electronic display) necessary onboard the aircraft. If the secondary source is a Portable Electronic Device (PED), its use must be consistent with guidance in AC 120-76C.*

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Part Number	Change Summary
190-02178-00	Production Release

Revision	Date of Revision	Affected Pages	Description
A	November 2016	All	Initial release at GDU 20.00
B	December 2016	All	Added CAS Messages Added SurfaceWatch Alerts Added AFCS Alerts Updated other messages

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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 Opt** Softkey.
- 2) Press the **STD Baro** Softkey to set standard barometric pressure.

CHANGE ALTIMETER BAROMETRIC PRESSURE SETTING UNITS

- 1) Press the **PFD Opt** Softkey to display the second-level softkeys.
- 2) Press the **ALT Units** 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 twice to return to the top-level softkeys.

DISPLAYING THE METRIC ALTITUDE OVERLAY

- 1) Press the **PFD Opt** Softkey to display the second-level softkeys.
- 2) Press the **ALT Units** Softkey
- 3) Press the **Meters** Softkey to enable metric altitude overlays.
- 4) Press the **Back** Softkey twice to return to the top-level PFD softkeys.

SETTING BARO TRANSITION ALERTS

- 1) Use the **FMS** Knob to select the Aux - System Setup 1 Page on the MFD.
- 2) Press the **FMS** Knob to activate the cursor.
- 3) To enable/disable the Baro Transition Alert based on altitude, turn the large **FMS** Knob to highlight the 'On' or 'Off' field for the BARO Transition Alert Altitude in the BARO Transition Alert Box.
- 4) If desired, turn the small **FMS** Knob to set the BARO Transition Alert Altitude On or Off.
- 5) Turn the large **FMS** Knob to highlight the Altitude field.
- 6) Use the **FMS** Knobs to change the altitude and press the **ENT** Key to accept or press the **CLR** Key to return to the previous altitude selection.
- 7) Turn the large **FMS** Knob to highlight the 'On' or 'Off' field for the BARO Transition Alert Level.
- 8) If desired, turn the small **FMS** Knob to set the BARO Transition Alert Flight Level On or Off.
- 9) Turn the large **FMS** Knob to highlight the Flight Level field.
- 10) Use the **FMS** Knobs to change the Flight Level for the alert and press the **ENT** Key to accept or press the **CLR** Key to return to the previous altitude selection.
- 11) Push the **FMS** Knob to deactivate the cursor.

CHANGE NAVIGATION SOURCES

- 1) Press the **CDI** Softkey to change from GPS to VOR1 or LOC1. This places the cyan tuning box over the NAV1 standby frequency in the upper left corner of the PFD.
- 2) Press the **CDI** Softkey again to change to VOR2 or LOC2. This places the cyan 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 A GPS FLIGHT PLAN

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

DISPLAYING THE DME INFORMATION WINDOW

- 1) Press the **PFD Opt** Softkey.
- 2) Press the **DME** Softkey to display the DME Information Window above the BRG1 Information Window.
- 3) To remove the DME Information Window, press the **DME** Softkey again.

GENERIC TIMER

- 1) Press the **Tmr/Ref** Softkey, then turn the large **FMS** Knob to select the timer field (hh/mm/ss). Turn the **FMS** Knobs to set the desired time, then press the **ENT** Key. The Up/Dn field is now highlighted.
- 2) Turn the small **FMS** Knob to display the Up/Down window. Turn the **FMS** Knob to select 'Up' or 'Dn', 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 will start counting up after reaching zero). Press the **CLR** Key or the **Tmr/Ref** Softkey to remove the window.

CONFIGURE VSPEED BUGS INDIVIDUALLY

- 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 highlighted Vspeed in 1-kt increments. When a speed has been changed from its default value, an asterisk appears next to the changed 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.

MODIFYING VSPEEDS AS A GROUP (ALL ON, ALL OFF, RESTORE DEFAULTS)

- 1) Press the **Tmr/Ref** Softkey.
- 2) Press the **MENU** Key.
- 3) Turn the **FMS** Knob to highlight the desired selection.
- 4) Press the **ENT** Key.
- 5) To remove the window, press the **CLR** Key or the **Tmr/Ref** Softkey.

SET BAROMETRIC MINIMUM DESCENT ALTITUDE/DECISION HEIGHT

- 1) Press the **Tmr/Ref** Softkey.
- 2) Turn the large **FMS** Knob to highlight the Off/BARO/TEMP COMP field to the right of 'MINS'.
- 3) Turn the small **FMS** Knob clockwise to select BARO or TEMP COMP. Off is selected by default.
- 4) Press the **ENT** Key or turn the **FMS** Knob to highlight the next field.
- 5) Use the small **FMS** Knob to enter the desired altitude (BARO or TEMP COMP from zero to 16,000 feet). If TEMP COMP was selected, a field for entering the airport temperature appears. Press the **ENT** Key or turn the large **FMS** Knob to highlight this field, and use the small **FMS** Knob to enter the temperature.
- 6) Press the **ENT** Key.
- 7) To remove the window, press the **CLR** Key or the **Tmr/Ref** Softkey.

DISPLAYING WIND DATA

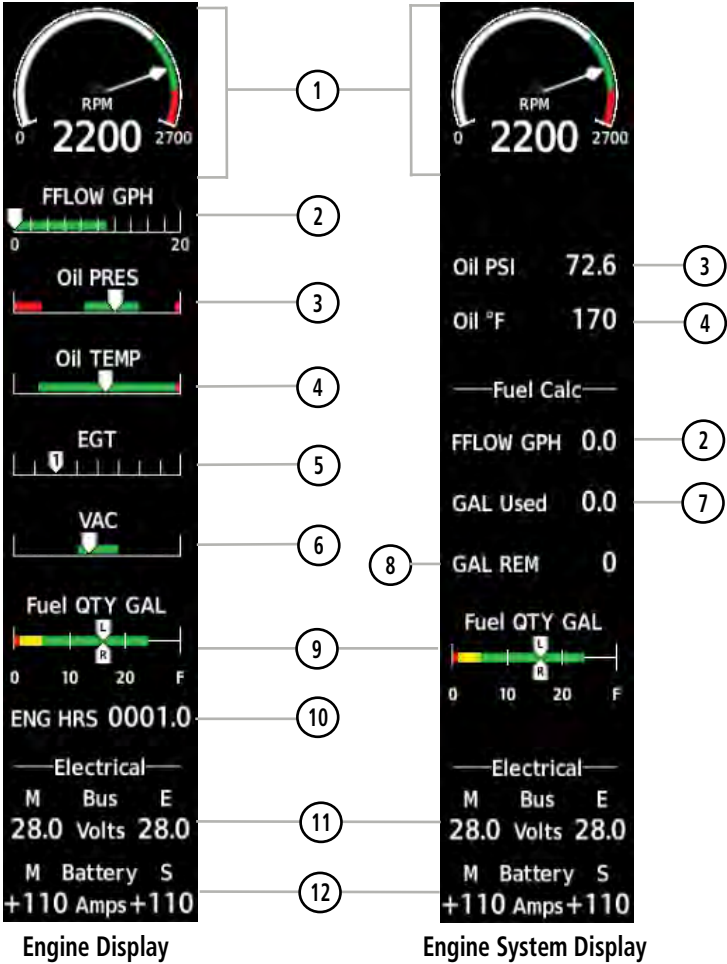
- 1) Press the **PFD Opt** Softkey.
- 2) Press the **Wind** Softkey.
- 3) Press one of the **Option** softkeys to change how wind data is displayed.
- 4) To remove the Wind Data Window, press the **Off** Softkey.
- 5) Press the **Back** Softkey twice to return to the top-level PFD softkeys.

ENGINE INDICATION

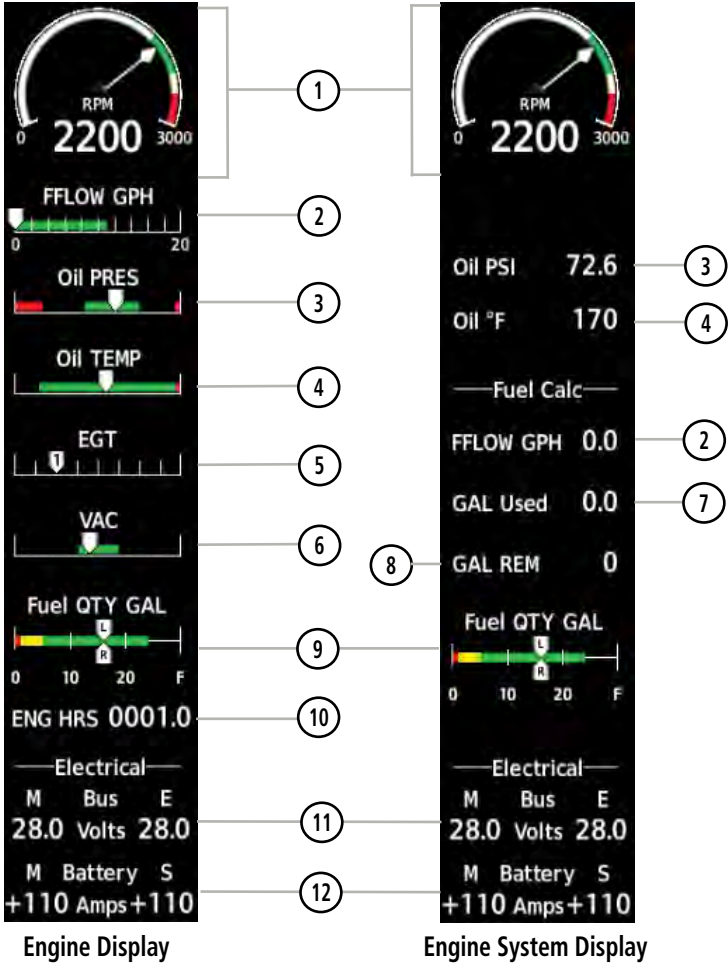
ENGINE DISPLAYS

Engine displays for the 172R, 172S, 182T, T182T, 206H & T206H variants are shown on the subsequent pages.

Flight Instruments
EIS
Nav/Com/XPDR/Audio
Flight Management
Hazard Avoidance
AFCs
Additional Features
Abnormal Operation
Annun/Alerts
Appendix
Index

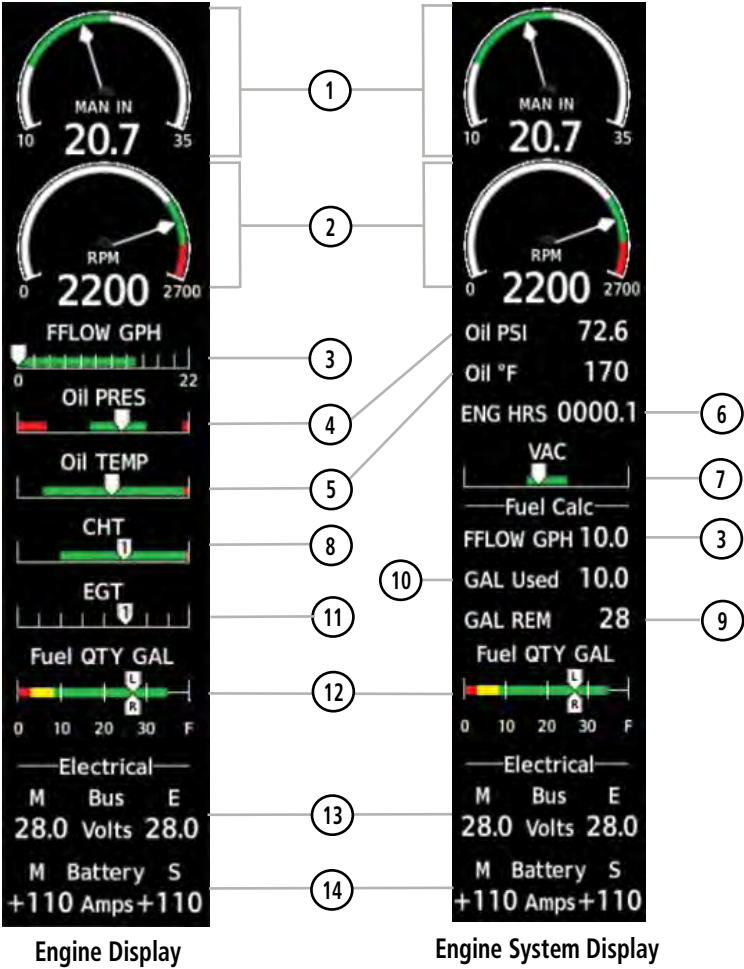


- | | | |
|--|---|---------------------|
| ① Tachometer Indicator (RPM) | Displays engine tachometer in revolutions per minute (RPM) | Flight Instruments |
| ② Fuel Flow Indicator (FFLOW GPH) | Displays fuel flow in gallons per hour (gph) | |
| ③ Oil Pressure Indicator (OIL PSI) | Displays oil pressure in pounds per square inch (psi) | EIS |
| ④ Oil Temperature Indicator (OIL °F) | Displays oil temperature in degrees Fahrenheit (°F) | Nav/Com/XPDR/Audio |
| ⑤ Exhaust Gas Temperature Indicator (EGT) | Displays exhaust gas temperature in degrees Fahrenheit (°F) | Flight Management |
| ⑥ Vacuum Pressure Indicator (VAC) | Displays standby vacuum pump pressure) | Hazard Avoidance |
| ⑦ Calculated Fuel Used (GAL Used) | Displays fuel used in gallons, based on fuel flow | AFCS |
| ⑧ Calculated Fuel Remaining (GAL REM) | Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys | |
| ⑨ Fuel Quantity Indicator (Fuel QTY GAL) | Displays the amount of fuel in gallons (gal) for each side of a standard fuel tank | Additional Features |
| ⑩ Engine Hour Indicator (ENG HRS) | Displays a numeric readout for the time in hours (hrs) the engine has been in service | Abnormal Operation |
| ⑪ Voltmeter (M, S Bus Volts) | Displays the main and essential bus voltages | Annun/Alerts |
| ⑫ Ammeter (M, S Battery Amps) | Displays the main and standby battery load in amperes | |

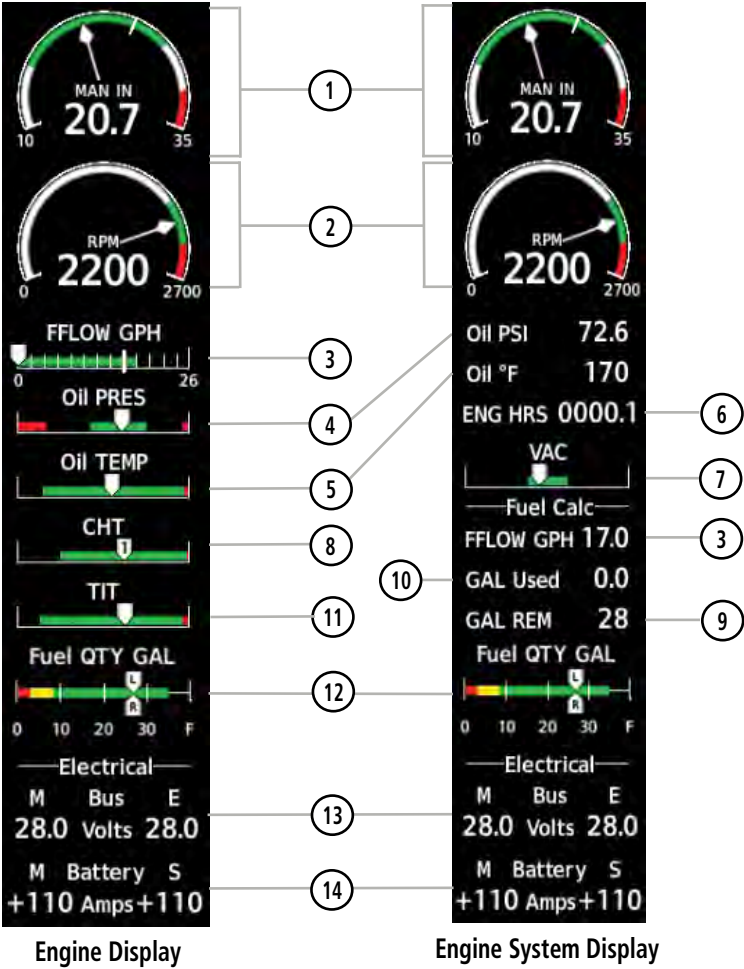


Model 172S

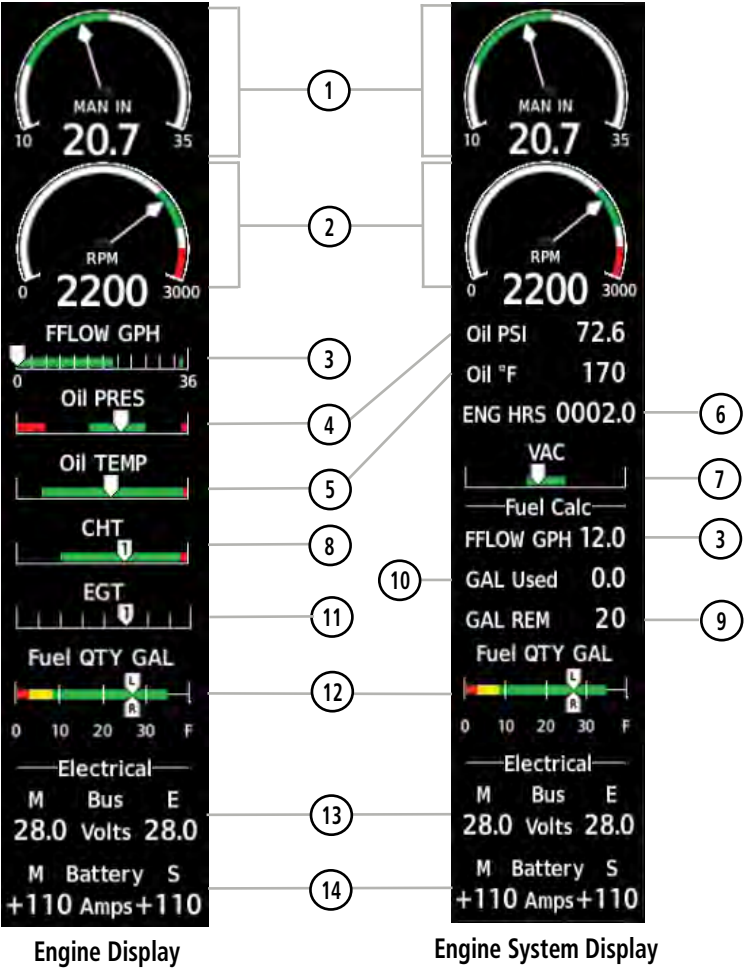
①	Tachometer Indicator (RPM)	Displays engine tachometer in revolutions per minute (RPM)	Flight Instruments
②	Fuel Flow Indicator (FFLOW GPH)	Displays fuel flow in gallons per hour (gph)	EIS
③	Oil Pressure Indicator (OIL PSI)	Displays oil pressure in pounds per square inch (psi)	Nav/Com/XPDR/Audio
④	Oil Temperature Indicator (OIL °F)	Displays oil temperature in degrees Fahrenheit (°F)	Flight Management
⑤	Exhaust Gas Temperature Indicator (EGT)	Displays exhaust gas temperature in degrees Fahrenheit (°F)	Hazard Avoidance
⑥	Vacuum Pressure Indicator (VAC)	Displays standby vacuum pump pressure	ARCS
⑦	Calculated Fuel Used (GAL Used)	Displays fuel used in gallons, based on fuel flow	Additional Features
⑧	Calculated Fuel Remaining (GAL REM)	Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys	Abnormal Operation
⑨	Fuel Quantity Indicator (Fuel QTY GAL)	Displays the amount of fuel in gallons (gal) for each side of a standard fuel tank	Annun/Alerts
⑩	Engine Hour Indicator (ENG HRS)	Displays a numeric readout for the time in hours (hrs) the engine has been in service	Appendix
⑪	Voltmeter (M, S Bus Volts)	Displays the main and essential bus voltages	Index
⑫	Ammeter (M, S Battery Amps)	Displays the main and standby battery load in amperes	



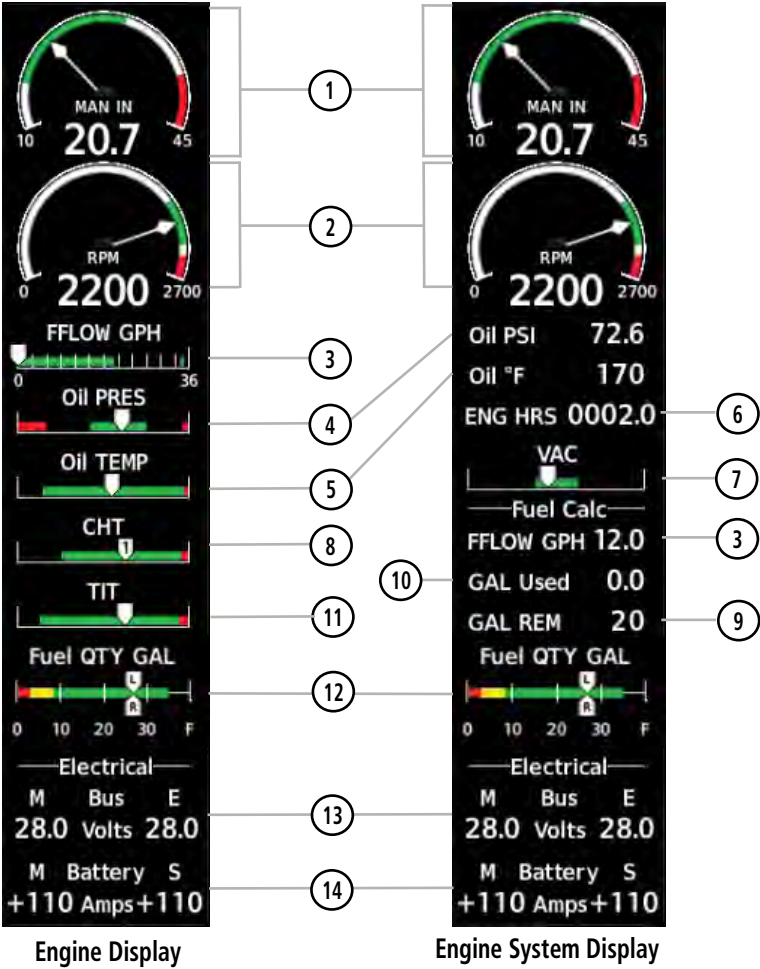
1	Manifold Pressure Indicator (IN HG)	Displays engine manifold pressure inches of mercury (IN HG)	Flight Instruments
2	Tachometer Indicator (RPM)	Displays engine tachometer in revolutions per minute (RPM)	EIS
3	Fuel Flow Indicator (FFLOW GPH)	Displays fuel flow in gallons per hour (gph)	Nav/Com/XPDR/Audio
4	Oil Pressure Indicator (OIL PSI)	Displays oil pressure in pounds per square inch (psi)	Flight Management
5	Oil Temperature Indicator (OIL °C)	Displays oil temperature in degrees Celsius (°C)	Hazard Avoidance
6	Engine Hour Indicator (ENG HRS)	Displays a numeric readout for the time in hours (hrs) the engine has been in service	AFCS
7	Vacuum Pressure Indicator (VAC)	Displays standby vacuum pump pressure)	Additional Features
8	Cylinder Head Temperature Indicator (CHT)	Displays cylinder head temperature in degrees Celsius (°C)	Abnormal Operation
9	Calculated Fuel Remaining (GAL REM)	Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys	Annun/Alerts
10	Calculated Fuel Used (GAL Used)	Displays fuel used in gallons, based on fuel flow	Appendix
11	Exhaust Gas Temperature Indicator (EGT)	Displays exhaust gas temperature in degrees Fahrenheit (°F)	Index
12	Fuel Quantity Indicator (Fuel QTY GAL)	Displays the amount of fuel in gallons (gal) for each side of a standard fuel tank.	
13	Voltmeter (M, S Bus Volts)	Displays the main and essential bus voltages	
14	Ammeter (M, S Battery Amps)	Displays the main and standby battery load in amperes	



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3	Fuel Flow Indicator (FFLOW GPH)	Displays fuel flow in gallons per hour (gph)	Nav/Com/XPDR/Audio
4	Oil Pressure Indicator (OIL PSI)	Displays oil pressure in pounds per square inch (psi)	Flight Management
5	Oil Temperature Indicator (OIL °C)	Displays oil temperature in degrees Celsius (°C)	Hazard Avoidance
6	Engine Hour Indicator (ENG HRS)	Displays a numeric readout for the time in hours (hrs) the engine has been in service	AFCS
7	Vacuum Pressure Indicator (VAC)	Displays standby vacuum pump pressure)	Additional Features
8	Cylinder Head Temperature Indicator (CHT)	Displays cylinder head temperature in degrees Celsius (°C)	Abnormal Operation
9	Calculated Fuel Remaining (GAL REM)	Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys	Annun/Alerts
10	Calculated Fuel Used (GAL Used)	Displays fuel used in gallons, based on fuel flow	Appendix
11	Turbine Inlet Temperature Indicator (TIT)	Displays turbine inlet temperature in degrees Fahrenheit (°F)	Index
12	Fuel Quantity Indicator (Fuel QTY GAL)	Displays the amount of fuel in gallons (gal) for each side of a standard fuel tank.	
13	Voltmeter (M, S Bus Volts)	Displays the main and essential bus voltages	
14	Ammeter (M, S Battery Amps)	Displays the main and standby battery load in amperes	



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2	Tachometer Indicator (RPM)	Displays engine tachometer in revolutions per minute (RPM)	EIS
3	Fuel Flow Indicator (FFLOW GPH)	Displays fuel flow in gallons per hour (gph)	Nav/Com/XPDR/Audio
4	Oil Pressure Indicator (OIL PSI)	Displays oil pressure in pounds per square inch (psi)	Flight Management
5	Oil Temperature Indicator (OIL °C)	Displays oil temperature in degrees Celsius (°C)	Hazard Avoidance
6	Engine Hour Indicator (ENG HRS)	Displays a numeric readout for the time in hours (hrs) the engine has been in service	AFCS
7	Vacuum Pressure Indicator (VAC)	Displays standby vacuum pump pressure)	Additional Features
8	Cylinder Head Temperature Indicator (CHT)	Displays cylinder head temperature in degrees Celsius (°C)	Abnormal Operation
9	Calculated Fuel Remaining (GAL REM)	Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys	Annun/Alerts
10	Calculated Fuel Used (GAL Used)	Displays fuel used in gallons, based on fuel flow	Appendix
11	Exhaust Gas Temperature Indicator (EGT)	Displays exhaust gas temperature in degrees Fahrenheit (°F)	Index
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3	Fuel Flow Indicator (FFLOW GPH)	Displays fuel flow in gallons per hour (gph)	Nav/Com/XPDR/Audio
4	Oil Pressure Indicator (OIL PSI)	Displays oil pressure in pounds per square inch (psi)	Flight Management
5	Oil Temperature Indicator (OIL °C)	Displays oil temperature in degrees Celsius (°C)	Hazard Avoidance
6	Engine Hour Indicator (ENG HRS)	Displays a numeric readout for the time in hours (hrs) the engine has been in service	AFCS
7	Vacuum Pressure Indicator (VAC)	Displays standby vacuum pump pressure)	Additional Features
8	Cylinder Head Temperature Indicator (CHT)	Displays cylinder head temperature in degrees Celsius (°C)	Abnormal Operation
9	Calculated Fuel Remaining (GAL REM)	Displays the totalizer-based fuel remaining in gallons, adjusted using the DEC FUEL and INC FUEL Softkeys	Annun/Alerts
10	Calculated Fuel Used (GAL Used)	Displays fuel used in gallons, based on fuel flow	Appendix
11	Turbine Inlet Temperature Indicator (TIT)	Displays turbine inlet temperature in degrees Fahrenheit (°F)	Index
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14	Ammeter (M, S Battery Amps)	Displays the main and standby battery load in amperes	

ENGINE PAGE

In all cases green indicates normal operation, amber indicates caution, and red indicates warning.

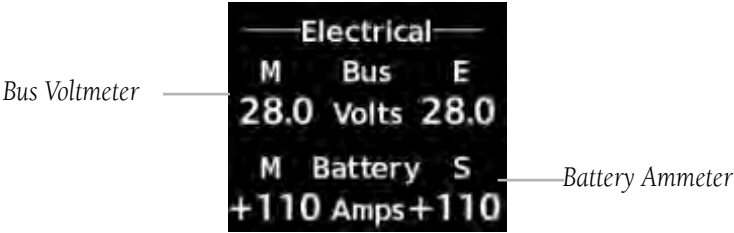
Pressing the **ENGINE** Softkey, makes available the **LEAN** and **SYSTEM** softkeys that provides access to the Lean Page and the System Page.



Engine Page

Electrical

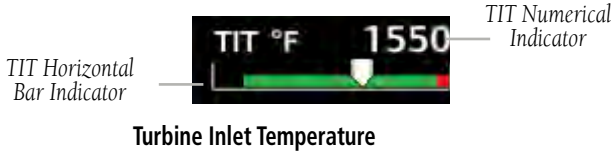
Current for the battery (Battery Amps) and bus voltage (Bus Volts) are displayed in numerical digits and are located on the Engine System Page.



Electrical Group

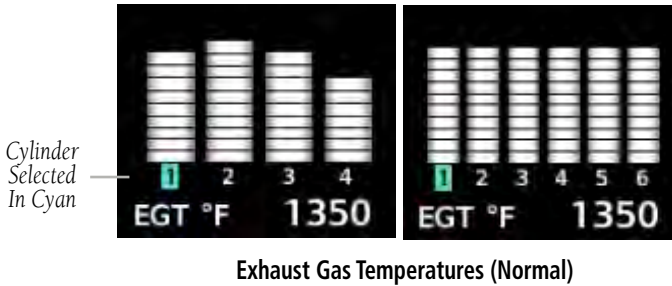
TURBINE INLET TEMPERATURE

Turbine Inlet Temperature (TIT) horizontal bar indicators is displayed on the main Engine Page and on the Engine Lean page. The Engine Lean page also displays the numerical temperature in degrees of Fahrenheit (°F).



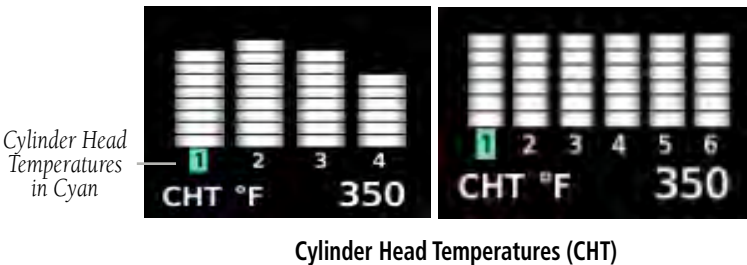
EXHAUST GAS TEMPERATURE

Exhaust Gas Temperature (EGT) readout for the selected cylinder is displayed on the Engine Lean Page. The temperature readout is displayed in degrees of Fahrenheit (°F).



CYLINDER HEAD TEMPERATURE

Cylinder Head Temperature (CHT) readout is shown near the bottom Engine Lean Page.



LEAN ENGINE PAGE



Exhaust Gas Temperatures (Lean Assist)

- 1) From the MFD Navigation Map Page.
- 2) Press the **Engine** softkey.
- 3) Press the **Lean** softkey.

From the Lean Page, the **CYL SLCT** and **Assist** Softkeys can be utilized to obtain information about specific cylinders on both the EGT and CHT graphs. Pressing the **CYL SLCT** Softkey cycles through the cylinders; the selected cylinder number is displayed in cyan. The **CYL SLCT** Softkey is disabled during warning or caution conditions or when the **ASSIST** Softkey is pressed.

Monitoring the desired cylinder's EGT and CHT:

From the Lean Page, press the **CYL SLCT** Softkey to cycle through each cylinder and view its EGT and CHT. The selected cylinder is shown in cyan.

When the **ASSIST** Softkey is selected, the system initially highlights and selects the cylinder number with the hottest EGT and displays its temperature below the EGT bar graph. A readout showing the difference between peak (Δ PEAK) and the current temperature for the selected cylinder is displayed the EGT numerical temperature indication.

As the mixture is leaned, a cyan line will appear above each cylinder to indicate EGT peak. Refer to the POH and AFM for the recommended mixture adjustment procedures.

Monitoring of the cylinder continues until the **ASSIST** Softkey is pressed again which disables lean assist and removes the peak lines from the bar graph and the temperature deviation from peak (Δ PEAK). The system then returns to seeking the hottest cylinder.

FUEL CALCULATIONS



NOTE: Fuel calculations do not use the aircraft fuel quantity indicators and are calculated from the last time the fuel was reset.

Fuel used (GAL Used) and range (in nautical miles) are calculated based on the displayed fuel remaining (GAL REM) and the fuel flow totalizer. The calculated range also takes into account the aircraft's heading and the wind direction and speed.

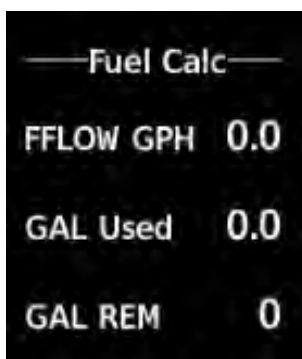
Adjusting the fuel totalizer quantity:

- 1) From the MFD Navigation Map Page.
- 2) Press the **Engine** softkey.
- 3) Press the **System** softkey.
- 4) Press the **GAL REM** softkey.

Select the softkey that best describes the current fuel load desired. Once selected, press the **BACK** softkey.

Resetting the fuel totalizer:

On the Engine System Page, press the **RST Fuel** Softkey; this resets displayed fuel remaining (GAL REM) to the maximum fuel capacity for the aircraft and fuel used to zero.



Fuel Flow

Calculated Fuel Used

Calculated Fuel Remaining

Fuel Calculations Group

A map feature related to the EIS Fuel Calculations is the Fuel Range Ring, which graphically illustrates the aircraft's remaining range based on heading, groundspeed, and wind direction and speed. The solid green circle represents the range until all the remaining fuel is depleted. The dashed green circle indicates the aircraft range until only reserve fuel remains. Once on reserve fuel, the range is indicated by a solid amber circle.

The Fuel Range Ring shifts position in relation to the aircraft according to wind effects. For example, more fuel is required for flying into a headwind, and the aircraft's decreased range in that direction is indicated by the Fuel Range Ring shifting toward the tail of the Aircraft Symbol.

The amount of reserve fuel (only for purposes of the Fuel Range Ring) is set on the Navigation Map Page Setup Menu in terms of remaining flight time. When enabled the Fuel Range Ring appears on the Navigation Map Page, the Weather Data Link Page, and PFD Inset Map.

Enabling/disabling the Fuel Range Ring and selecting a reserve fuel time:

- 1) Display the Navigation Map Page (press and hold the **CLR** Key for 2 seconds to quickly select this map).
- 2) Press the **MENU** Key.
- 3) Highlight 'Map Settings' and press the **ENT** Key. The Map Settings Menu is displayed.
- 4) Use the small **FMS** Knob to select the 'Map' group and press the **ENT** Key.
- 5) Highlight the 'FUEL RNG (RSV)' field.
- 6) Turn the small **FMS** Knob to select 'On' or 'Off'.
- 7) Turn the large **FMS** Knob to highlight the reserve fuel time, how long the aircraft can fly after reaching the reserve fuel.
- 8) Enter the desired reserve fuel time (00:00 to 23:59; hours:minutes) and press the **ENT** Key.
- 9) Press the **FMS** Knob to return to the Navigation Map Page.

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OIL PRESSURE AND TEMPERATURE GAUGES

Engine oil pressure and temperature are shown along horizontal bar indicators on the MFD, and are shown in numerical digit readouts when Engine System is displayed. Oil pressure is shown in pounds per square inch (psi) and temperature in degrees of Fahrenheit (°F).. If the oil pressure pointer enters the amber band, a caution is issued. If the oil pressure or oil temperature pointers enter the red band, a warning is issued.



Engine Displayed Oil Pressure and Temperature Gauges Displayed on MFD



Engine System Displayed Oil Pressure and Temperature Gauges

FUEL QUANTITY

The fuel display shows the fuel quantity in each tank in gallons (gal). Fuel quantity for each tank is normally shown along a horizontal bar indicator. A caution or warning is issued for low fuel quantity.



Fuel Display

CREW ALERTING SYSTEM (CAS)



NOTE: Refer to the Pilot's Operating Handbook (POH) for corrective pilot actions.

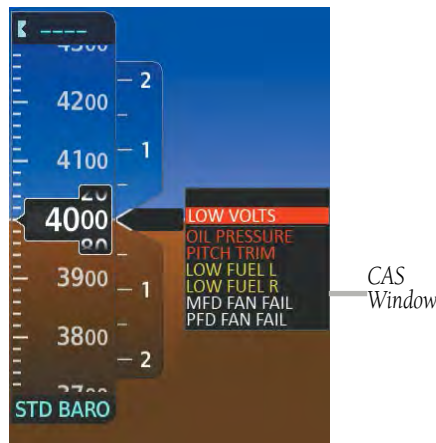


NOTE: Any CAS messages that are generated when the system is first powered on are considered already acknowledged. They do not flash or trigger the Master Warning or Master Caution.

The Crew Alerting System (CAS) Display is located on the right side of the PFD. Up to 14 messages can be displayed; when more than 14 messages accumulate, the scrolling **CAS** softkeys become available.

CAS messages are grouped by criticality (warning, caution) and sorted by order of appearance (most recent messages on top). The color of the message is based on its urgency and on required action:

- **Warning** (red) – Immediate crew awareness and action required; Master Warning triggered
- **Caution** (amber) – Immediate crew awareness and possible future corrective action required; Master Caution triggered
- **Advisory** (white) – Crew awareness required and subsequent action may be required



NAV/COM/TRANSPONDER/AUDIO PANEL

ENTER OR CHANGE A FLIGHT ID (OPTIONAL)

- 1) Press the **TMR/REF** Softkey, then turn the large **FMS** Knob to highlight the Flight ID field.
- 2) Turn the small **FMS** Knob to enter the first character.
- 3) Turn the large **FMS** Knob to select the next field.
- 4) Turn the small **FMS** Knob to enter the next desired character.
- 5) Repeat steps 3 and 4 until the desired Flight ID is entered.
- 6) Press the **ENT** Key to update the Flight ID. Do not perform any other system functions until 'updating' is no longer displayed.

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.

SELECTING TRANSPONDER MODE

- 1) Press the **XPDR** Softkey to display the Transponder Mode Selection Softkeys.
- 2) Select the desired softkey to activate the transponder mode.

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** (optional COM, if installed) Key on the audio panel.

Receive Only

Press the **COM1**, **COM2**, or **COM3** (optional COM, if installed) Key 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 cyan 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.

AUTO-TUNING RADIOS ON THE PFD

- 1) Press the **Nearest** Softkey to display the Nearest Airports Window.
- 2) Turn either **FMS** Knob to highlight the desired frequency.
- 3) Press the **ENT** Key to place the frequency in the standby field of the active COM.
- 4) Press the Frequency Transfer Key to place the frequency in the active field.

NAV frequencies are entered automatically in the NAV frequency active or standby field (depending in CDI selection) upon approach loading or approach activation.

AUTO-TUNING RADIOS ON THE MFD

Auto-tuning on the MFD is done in much the same way as on the PFD. Use the **FMS** Knobs to select the desired frequency on any of the information pages. Pressing the **ENT** Key then loads the selected frequency in the tuning box as a standby frequency.

SPLIT COM

During Split COM operation, both the pilot and the copilot can transmit simultaneously over separate radios. The pilot can still monitor NAV1, NAV2, ADE, DME, and MKR Audio as selected, but the copilot is only able to monitor COM2.

When Split COM operation is selected, COM1 is used by the pilot and COM2 is used by the copilot. The COM1 MIC Annunciator flashes when the pilot's microphone PTT is pressed. The COM2 MIC Annunciator flashes when the copilot's microphone PTT is pressed.

Pressing the **COM 1/2** Key selects Split COM operation. The COM 1/2 Annunciator is illuminated indicating Split COM operation. COM1 and COM2 frequencies are displayed in green indicating that both transceivers are active. Split COM operation is cancelled by pressing the **COM 1/2** Key again, at which time the annunciator is extinguished.

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 **PLAY** once plays the latest recorded memory block, then returns to normal operation.
- Pressing **MKR/MUTE** 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 to select those isolated from hearing the Nav/Com radios and music.

Mode	PILOT KEY ANNUNCIATOR	COPLT KEY ANNUNCIATOR	Pilot Hears	Copilot Hears	Passenger Hears
ALL	OFF	OFF	Selected radios; pilot; copilot; passengers; music	Selected radios; pilot; copilot; passengers; music	Selected radios; pilot; copilot; passengers; music
PILOT	ON	OFF	Selected radios; pilot	Copilot; passengers; music	Copilot; passengers; music
COPILOT	OFF	ON	Selected radios; pilot; passengers; music	Copilot	Selected radios; pilot; passengers; music
CREW	ON	ON	Selected radios; pilot; copilot	Selected radios; pilot; copilot	Passengers; music

FLIGHT MANAGEMENT

Changing A Field In The MFD Navigation Status Box

- 1) Use the **FMS** Knob to select the AUX - System Setup 1 Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight the desired field number in the MFD Data Bar Fields Box.
- 4) Turn the small **FMS** Knob to display and scroll through the data options list to select the desired data.
- 5) Press the **ENT** Key. Pressing the **Defaults** Softkey returns all fields to the default setting.

USING MAP DISPLAYS

CHANGING THE NAVIGATION MAP ORIENTATION

- 1) With the Navigation Map Page displayed, press the **MENU** Key. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key to display the Map Settings Window.
- 3) Turn the large **FMS** Knob, or press the **ENT** Key once, to select the 'Orientation' field.
- 4) Turn the small **FMS** Knob to select the desired orientation.
- 5) Press the **ENT** Key to select the new orientation.
- 6) Press the **FMS** Knob to return to the base page.

CONFIGURING AUTOMATIC ZOOM

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Select the 'Map' group.
- 4) Press the **ENT** Key.
- 5) Highlight the 'Auto Zoom' on/off field, and select 'Off' or 'On' using the small **FMS** Knob.

- 6) Press the **ENT** Key to accept the selected option. The flashing cursor highlights the 'Auto Zoom' display selection field.
- 7) Select 'MFD', 'PFD', or 'All' using the small **FMS** Knob.
- 8) Press the **ENT** Key to accept the selected option. The flashing cursor highlights the 'Max Look FWD' field. Times are from zero to 999 minutes.
- 9) Use the **FMS** Knobs to set the time. Press the **ENT** Key.
- 10) Repeat step 9 for 'Min Look FWD' (zero to 99 minutes) and 'Time Out' (zero to 99 minutes).
- 11) Press the **FMS** Knob to return to the Navigation Map Page.

PANNING THE MAP

- 1) Push the **Joystick** to display the Map Pointer.
- 2) Move the **Joystick** to move the Map Pointer around the map.
- 3) Push the **Joystick** to remove the Map Pointer and recenter the map on the aircraft's current position.

REVIEWING INFORMATION FOR AN AIRPORT, NAVAID, OR USER WAYPOINT

- 1) Place the Map Pointer on a waypoint.
- 2) Press the **ENT** Key to display the Waypoint Information Page for the selected waypoint.
- 3) Press the **Go Back** Softkey, the **CLR** Key, or the **ENT** Key to exit the Waypoint Information Page and return to the Navigation Map showing the selected waypoint.

VIEWING AIRSPACE INFORMATION FOR A SPECIAL-USE OR CONTROLLED AIRSPACE

- 1) Place the Map Pointer on the boundary of an airspace.
- 2) Push the **Joystick** to remove the Map Pointer and center the map on the aircraft.

DISPLAYING/REMOVING TOPOGRAPHIC DATA ON THE PFD INSET MAP OR THE HSI MAP

- 1) Press the **Map/HSI** Softkey.
- 2) Press the **Topo** Softkey.
- 3) Press the **Topo** Softkey again to remove topographic data from the PFD Inset Map or the HSI Map. When topographic data is removed from the PFD Map or HSI Map, all navigation data is presented on a black background.

DISPLAYING/REMOVING TOPOGRAPHIC DATA USING THE NAVIGATION MAP PAGE MENU

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Select the 'Map' group.
- 4) Press the **ENT** Key.
- 5) Highlight the 'Terrain Display' field.
- 6) Select 'Topo' or 'Off'.
- 7) Press the **FMS** Knob to return to the Navigation Map Page.

SETTING UP THE 'LAND', 'AVIATION' OR 'AIRSPACE' GROUP ITEMS

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Turn the small **FMS** Knob to select the desired group.
- 4) Press the **ENT** Key. The cursor flashes on the first field.
- 5) Turn the large **FMS** Knob to select the desired option.
- 6) Turn the small **FMS** Knob to select the desired setting (e.g. On/Off or maximum range).
- 7) Press the **ENT** Key to accept the selected option and move the cursor to the next item.
- 8) Repeat steps 5-7 as necessary.
- 9) Press the **FMS** Knob to return to the Navigation Map Page.

DECLUTTERING THE MAP

Press the **Detail** Softkey with the Navigation Map Page displayed. The current declutter level is shown. With each softkey press, another level of map information is removed.

DECLUTTERING THE PFD INSET MAP

- 1) Press the **Map/HSI** Softkey.
- 2) Press the **Detail** Softkey. The current declutter level is shown. With each selection, another level of map information is removed.

DISPLAYING/REMOVING AIRWAYS

- 1) Press the **Map Opt** Softkey.
- 2) Press the **AWY** Softkey. Both High and Low Altitude Airways are displayed (AWY On).
- 3) Press the softkey again to display Low Altitude Airways only (AWY LO).
- 4) Press the softkey again to display High Altitude Airways only (AWY HI).
- 5) Press the softkey again to remove High Altitude Airways. No airways are displayed (AWY Off).

SELECTING AN AIRWAY RANGE (LOW ALT AIRWAYS OR HIGH ALT AIRWAYS)

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Turn the small **FMS** Knob to select the 'Airways' group, and press the **ENT** Key.
- 4) Highlight the 'Low ALT Airways' or 'High ALT Airways' range field.
- 5) To change the range setting, turn the small **FMS** Knob to display the range list.
- 6) Select the desired range using the small **FMS** Knob.
- 7) Press the **ENT** Key.
- 8) Press the **FMS** Knob to return to the Navigation Map Page.

DISPLAYING/REMOVING THE TRACK VECTOR

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Setting' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Select the 'Map' group.
- 4) Press the **ENT** Key.
- 5) Highlight the 'Track Vector' field.
- 6) Select 'On' or 'Off'. Press the **ENT** Key to accept the selected option. The flashing cursor highlights the look ahead time field. Use the **FMS** Knob to select the desired time. Press the **ENT** Key.
- 7) Press the **FMS** Knob to return to the Navigation Map Page.

DISPLAYING/REMOVING THE FUEL RANGE RING AND SELECTING A FUEL RANGE TIME

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.
- 3) Select the 'Map' group.
- 4) Press the **ENT** Key.
- 5) Highlight the 'Fuel Range (RSV)' field.
- 6) Select 'On' or 'Off'.
- 7) Highlight the fuel reserve time field. This time should be set to the amount of flight time equal to the amount of fuel reserve desired.
- 8) To change the reserve fuel time, enter a time (00+00 to 23+59; hours+minutes). The default setting is 00+45 minutes.
- 9) Press the **ENT** Key.
- 10) Press the **FMS** Knob to return to the Navigation Map Page.

DISPLAYING/REMOVING THE SELECTED ALTITUDE INTERCEPT ARC

- 1) Press the **MENU** Key with the Navigation Map Page displayed. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed.

- 3) Select the 'Map' group.
- 4) Press the **ENT** Key.
- 5) Highlight the 'Select ALT Arc' field.
- 6) Select 'On' or 'Off'.
- 7) Press the FMS Knob to return to the Navigation Map Page.

WAYPOINTS

SELECTING AN AIRPORT FOR REVIEW BY IDENTIFIER, FACILITY NAME, OR LOCATION

- 1) From the Airport Information Page, press the **FMS** Knob.
- 2) Use the **FMS** Knobs and enter an identifier, facility name, or location.
- 3) Press the **ENT** Key.
- 4) Press the **FMS** Knob to remove the cursor.

SELECTING A RUNWAY

- 1) With the Airport Information Page displayed, press the **FMS** Knob to activate the cursor.
- 2) Turn the large **FMS** Knob to place the cursor in the 'Runways' Box, on the runway designator.
- 3) Turn the small **FMS** Knob to display the desired runway (if more than one) for the selected airport.
- 4) To remove the flashing cursor, press the **FMS** Knob.

VIEWING A DESTINATION AIRPORT

From the Airport Information Page press the **MENU** Key. Select 'View Destination Airport'. The Destination Airport is displayed.

VIEWING INFORMATION FOR A NEAREST AIRPORT ON THE PFD

- 1) Press the **Nearest** Softkey to display the Nearest Airports Window.
- 2) Highlight the airport identifier with the **FMS** Knob and press the **ENT** Key to display the Airport Information Window.

- 3) To return to the Nearest Airports Window press the **ENT** Key (with the cursor on 'BACK') or press the **CLR** Key. The cursor is now on the next airport in the nearest airports list. (Repeatedly pressing the **ENT** Key moves through the airport list, alternating between the Nearest Airports Window and the Airport Information Window.)
- 4) Press the **CLR** Key or the **Nearest** Softkey to close the PFD Nearest Airports Window.

VIEWING INFORMATION FOR A NEAREST AIRPORT ON THE MFD

- 1) Turn the large **FMS** Knob to select the NRST page group.
- 2) Turn the small **FMS** Knob to select the Nearest Airports Page (it is the first page of the group, so it may already be selected). If there are no Nearest Airports available, "None Within 200nm" is displayed.
- 3) Press the **APT** Softkey; or press the **FMS** Knob; or press the **MENU** Key, highlight 'Select Airport Window' and press the **ENT** Key. The cursor is placed in the 'Nearest Airports' Box. The first airport in the nearest airports list is highlighted.
- 4) Turn the **FMS** Knob to highlight the desired airport. (Pressing the **ENT** Key also moves to the next airport.)
- 5) Press the **FMS** Knob to remove the flashing cursor.

VIEWING RUNWAY INFORMATION FOR A SPECIFIC AIRPORT

- 1) With the Nearest Airports Page displayed, press the **RNWX** Softkey; or press the **MENU** Key, highlight 'Select Runway Window'; and press the **ENT** Key. The cursor is placed in the 'Runways' Box.
- 2) Turn the small **FMS** Knob to select the desired runway.
- 3) Press the **FMS** Knob to remove the flashing cursor.

SELECTING AN INTERSECTION

- 1) With the Intersection Information Page displayed, enter an identifier in the Intersection Box.
- 2) Press the **ENT** Key.
- 3) Press the **FMS** Knob to remove the flashing cursor.

SELECTING AN NDB

- 1) With the NDB Information Page displayed, enter an identifier, the name of the NDB, or the city in which it's located in the NDB Box.
- 2) Press the **ENT** Key.
- 3) Press the **FMS** Knob to remove the flashing cursor.

SELECTING A VOR

- 1) With the VOR Information Page displayed, enter an identifier, the name of the VOR, or the city in which it's located in the VOR Box.
- 2) Press the **ENT** Key.
- 3) Press the **FMS** Knob to remove the flashing cursor.

SELECTING A VRP

- 1) With the VRP Information Page displayed, enter the identifier or the name of the VRP in the VRP Box.
- 2) Press the **ENT** Key.
- 3) Press the **FMS** Knob to remove the flashing cursor.

SELECTING A USER WAYPOINT

- 1) With the User Waypoint Information Page displayed, enter the name of the User Waypoint, or scroll to the desired waypoint in the User Waypoint List using the large **FMS** Knob.
- 2) Press the **ENT** Key.
- 3) Press the **FMS** Knob to remove the flashing cursor.

CREATING USER WAYPOINTS FROM THE USER WAYPOINT INFORMATION PAGE

- 1) With the User Waypoint Information Page displayed, press the **New** Softkey, **or** press the **MENU** Key and select 'Create New User Waypoint'.
- 2) Enter a user waypoint name (up to six characters).
- 3) Press the **ENT** Key. The current aircraft position is the default location of the new waypoint.

- 4) If desired, define the type and location of the waypoint in one of the following ways:

Select "RAD/RAD" using the small **FMS** Knob, press the **ENT** Key, and enter the two reference waypoint identifiers and radials into the Reference Waypoints window using the **FMS** Knobs.

Or:

Select "RAD/DIS" using the small **FMS** Knob, press the **ENT** Key, and enter the reference waypoint identifier, the radial, and the distance into the Reference Waypoints window using the **FMS** Knobs.

Or:

Select "LAT/LON" using the small **FMS** Knob, press the **ENT** Key, and enter the latitude and longitude into the Information window using the **FMS** Knobs.

- 5) Press the **ENT** Key to accept the new waypoint.
- 6) If desired, change the storage method of the waypoint to Temporary or Normal by moving the cursor to "Temporary" and selecting the **ENT** Key to check or uncheck the box.
- 7) Press the **FMS** Knob to remove the flashing cursor.

CREATING USER WAYPOINTS FROM MAP PAGES

- 1) Push the **Joystick** to activate the panning function and pan to the map location of the desired user waypoint.
- 2) Press the **ENT** Key. The User Waypoint Information Page is displayed with the captured position.
- 3) Enter a user waypoint name (up to six characters).
- 4) Press the **ENT** Key to accept the selected name. The first reference waypoint box is highlighted.
- 5) If desired, define the type and location of the waypoint in one of the following ways:

Select "RAD/RAD" using the small **FMS** Knob, press the **ENT** Key, and enter the two reference waypoint identifiers and radials into the Reference Waypoints window using the **FMS** Knobs.

Or:

Select "RAD/DIS" using the small **FMS** Knob, press the **ENT** Key, and enter the reference waypoint identifier, the radial, and the distance into the Reference Waypoints window using the **FMS** Knobs.

Or:

Select "LAT/LON" using the small **FMS** Knob, press the **ENT** Key, and enter the latitude and longitude into the Information window using the **FMS** Knobs.

- 6) Press the **ENT** Key to accept the new waypoint.
- 7) If desired, change the storage method of the waypoint to "Temporary" or "Normal" by moving the cursor to "Temporary" and selecting the **ENT** Key to check or uncheck the box.
- 8) Press the **FMS** Knob to remove the flashing cursor.
- 9) Press the **Go Back** Softkey to return to the map page.

CHANGING THE ALTITUDE BUFFER DISTANCE SETTING

- 1) Use the **FMS** Knob to select the AUX - System Setup 1 Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight the altitude buffer field in the Airspace Alerts Box.
- 4) Use the **FMS** Knob to enter an altitude buffer value and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

AIRSPACES

TURNING AN AIRSPACE ALERT ON OR OFF

- 1) Use the **FMS** Knob to select the AUX - System Setup 1 Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight the desired field in the Airspace Alerts Box.
- 4) Turn the small **FMS** Knob clockwise to turn the airspace alert ON or counterclockwise to turn the alert OFF.
- 5) Press the **FMS** Knob to remove the flashing cursor.

SELECTING AND VIEWING AN AIRSPACE ALERT WITH ITS ASSOCIATED INFORMATION

- 1) Select the Nearest Airspaces Page.
- 2) Press the **Alerts** Softkey; or press the **FMS** Knob; or press the **MENU** Key, highlight 'Select Alerts Window', and press the **ENT** Key. The cursor is placed in the 'Airspace Alerts' Box.
- 3) Select the desired airspace.
- 4) Press the **FMS** Knob to remove the flashing cursor.

TURNING SMART AIRSPACE ON OR OFF

- 1) Use the **FMS** Knob to select the Navigation Map Page.
- 2) Press the **MENU** Key, and press the **ENT** Key. The cursor is placed in the 'Group' Box.
- 3) Turn the small **FMS** Knob to highlight the 'Airspace' in the 'Group' Box and press the **ENT** Key.
- 4) Turn the large **FMS** Knob to highlight the 'Smart Airspace' field in the Aviation Map Setup Window.
- 5) Turn the small **FMS** Knob clockwise to turn smart airspace 'On' or counterclockwise to turn smart airspace 'Off'.
- 6) Press the **FMS** Knob to remove the flashing cursor.

DIRECT-TO NAVIGATION

ENTERING A WAYPOINT IDENTIFIER, FACILITY NAME, OR CITY AS A DIRECT-TO DESTINATION

- 1) Press the **Direct-to** Key. The Direct-to Window is displayed (with the active flight plan waypoint as the default selection or a blank waypoint field if no flight plan is active).

- 2) Turn the small **FMS** Knob clockwise to begin entering a waypoint identifier (turning it counter-clockwise brings up the waypoint selection submenu - press the **CLR** Key to remove it), or turn the large **FMS** Knob to select the facility name, or city field and turn the small **FMS** Knob to begin entering a facility name or city. If duplicate entries exist for the entered facility or city name, additional entries can be viewed by turning the small **FMS** Knob during the selection process.
- 3) Press the **ENT** Key. The 'Activate?' field is highlighted.
- 4) Press the **ENT** Key to activate the direct-to.

SELECTING AN ACTIVE FLIGHT PLAN WAYPOINT AS A DIRECT-TO DESTINATION

- 1) While navigating an active flight plan, press the **Direct-to** Key. The Direct-to Window is displayed with the active flight plan waypoint as the default selection.
- 2) Turn the small **FMS** Knob counter-clockwise to display a list of flight plan waypoints (the FPL list is populated only when navigating a flight plan).
- 3) Select the desired waypoint.
- 4) Press the **ENT** Key. The cursor is now displayed on 'Activate?'.
- 5) Press the **ENT** Key again to activate the direct-to.

SELECTING A NEAREST, RECENT OR USER WAYPOINT AS A DIRECT-TO DESTINATION

- 1) Press the **Direct-to** Key. The Direct-to Window is displayed (with the active flight plan destination as the default selection or a blank destination if no flight plan is active).
- 2) Turn the small **FMS** Knob counter-clockwise to display a list of flight plan waypoints (the FPL list is populated only when navigating a flight plan).
- 3) Turn the small **FMS** Knob clockwise to display the Nearest, Recent or User waypoints.
- 4) Turn the large **FMS** Knob clockwise to select the desired waypoint.
- 5) Press the **ENT** Key. The cursor is now displayed on 'Activate?'.
- 6) Press the **ENT** Key again to activate the direct-to.

CANCELLING A DIRECT-TO

- 1) Press the **Direct-to** Key to display the Direct-to Window.
- 2) Press the **MENU** Key.
- 3) With 'Cancel Direct-To NAV' highlighted, press the **ENT** Key. If a flight plan is still active, the system resumes navigating the flight plan along the closest leg.

SELECTING A MANUAL DIRECT-TO COURSE

- 1) Press the **Direct-to** Key. The Direct-to Window is displayed with the destination field highlighted.
- 2) Highlight the course field.
- 3) Enter the desired course.
- 4) Press the **ENT** Key. The cursor is now displayed on 'Activate?'.
- 5) Press the **ENT** Key again to activate the direct-to.

ENTERING A VNV ALTITUDE AND ALONG-TRACK OFFSET FOR THE WAYPOINT

- 1) Press the **Direct-to** Key to display the Direct-to Window.
- 2) Turn the large **FMS** Knob to place the cursor over the 'VNV' altitude field.
- 3) Enter the desired altitude.
- 4) Press the **ENT** Key. The option to select MSL or AGL is now displayed if the entry was an airport. Turn the small **FMS** Knob to select 'MSL' or 'AGL'.
- 5) Press the **ENT** Key. The cursor is now flashing in the VNV offset distance field.
- 6) Enter the desired along-track distance before the waypoint.
- 7) Press the **ENT** Key. The 'Activate?' field is highlighted.
- 8) Press the **ENT** Key to activate.

REMOVING A VNV ALTITUDE CONSTRAINT

- 1) Press the **Direct-to** Key to display the Direct-to Window.
- 2) Press the **MENU** Key.
- 3) With 'Clear Vertical Constraints' highlighted, press the **ENT** Key.

FLIGHT PLANNING

CREATING AN ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key.
- 2) Press the small **FMS** Knob to activate the cursor (only on MFD).
- 3) Select the origin airport and runway.
 - a) Turn the small **FMS** Knob to display the Waypoint Information Window. (Turning it clockwise displays a blank Waypoint Information Window, turning it counter-clockwise displays the Waypoint Information Window with a waypoint selection submenu allowing selection of active flight plan, nearest, recent, or user waypoints).
 - b) Enter the identifier, facility, or city name of the departure waypoint or select a waypoint from the submenu of waypoints and press the **ENT** Key. The Set Runway Window is displayed with the Runway field highlighted.
 - c) Turn the small **FMS** Knob to select the runway and press the **ENT** Key.
 - d) Press the **ENT** Key again to add the runway to the flight plan.
- 4) Turn the large **FMS** Knob to highlight the destination airport identifier field.
- 5) Select the destination airport and runway.
 - a) Turn the small **FMS** Knob to display the Waypoint Information Window. (Turning it clockwise displays a blank Waypoint Information Window, turning it counter-clockwise displays the Waypoint Information Window with a waypoint selection submenu allowing selection of active flight plan, nearest, recent, or user waypoints).
 - b) Enter the identifier, facility, or city name of the departure waypoint or select a waypoint from the submenu of waypoints and press the **ENT** Key. The Set Runway Window is displayed with the Runway field highlighted.
 - c) Turn the small **FMS** Knob to select the runway and press the **ENT** Key.
 - d) Press the **ENT** Key again to add the runway to the flight plan.
- 6) Turn the large **FMS** Knob to highlight the Enroute Header, an enroute waypoint, or the dashes below the header. (If the header is selected, the new waypoint is placed following the header. If an enroute waypoint or the dashes are selected, the new waypoint will be placed ahead of the selected item.)

- a) Turn the small **FMS** Knob to display the Waypoint Information Window. (Turning it clockwise displays a blank Waypoint Information Window, turning it counter-clockwise displays the Waypoint Information Window with a waypoint selection submenu allowing selection of active flight plan, nearest, recent, or user waypoints).
- b) Enter the identifier, facility, or city name of the departure waypoint or select a waypoint from the submenu of waypoints and press the **ENT** Key. The active flight plan is modified as each waypoint is entered.
- 7) Repeat step number 6 to enter each additional enroute waypoint.
- 8) When all waypoints have been entered, press the **FMS** Knob to remove the cursor.

ADDING A WAYPOINT TO THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key.
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD).
- 3) Select the point in the flight plan before which to add the new waypoint. The new waypoint is placed directly in front of the highlighted waypoint.
- 4) Turn the small **FMS** Knob to display the Waypoint Information Window. (Turning it clockwise displays a blank Waypoint Information Window, turning it counter-clockwise displays the Waypoint Information Window with a waypoint selection submenu allowing selection of active flight plan, nearest, recent, user, or airway waypoints).
- 5) Enter the identifier, facility, or city name of the waypoint or select a waypoint from the submenu of waypoints and press the **ENT** Key. The active flight plan is modified as each waypoint is entered.

CREATING AND ADDING USER WAYPOINTS TO THE ACTIVE FLIGHT PLAN

- 1) Push the **Joystick** to activate the panning function on the Active Flight Plan Page and pan to the map location of the desired user waypoint.
- 2) Press the **LD WPT** Softkey; or press the **MENU** Key, select 'Load Waypoint', and press the **ENT** Key. The user waypoint is created with a name of **USRxxx** (using the next available in sequence) and is added to the end of the active flight plan.

ADDING AN AIRWAY TO 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) Press the **MENU** Key and select "Load Airway". The Select Airway Page is displayed.
- 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.

COLLAPSE/EXPAND AIRWAYS IN A FLIGHT PLAN

- 1) Press the **FPL** Key.
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD).
- 3) Press the **MENU** Key, highlight 'Collapse Airways' or 'Expand Airways' and press the **ENT** Key. All airways are collapsed/expanded.

STORING AN ACTIVE FLIGHT PLAN FROM THE ACTIVE FLIGHT PLAN PAGE OR THE ACTIVE FLIGHT PLAN WINDOW

- 1) Press the **MENU** Key.
- 2) Highlight 'Store Flight Plan'.
- 3) Press the **ENT** Key.
- 4) With 'OK' highlighted, press the **ENT** Key. The flight plan is stored in the next available position in the flight plan list on the Flight Plan Catalog Page.

ACTIVATING A STORED FLIGHT PLAN ON THE MFD

- 1) Press the **FPL** Key and turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 2) Press the **FMS** Knob to activate the cursor, and turn the **FMS** Knob to highlight the desired flight plan.
- 3) Press the **Activate** Softkey; or press the **ENT** Key twice; or press the **MENU** Key, highlight 'Activate Flight Plan', and press the **ENT** Key. The 'Activate Stored Flight Plan?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

INVERTING AND ACTIVATING A STORED FLIGHT PLAN ON THE MFD

- 1) Press the **FPL** Key and turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 2) Press the **FMS** Knob to activate the cursor, and turn the **FMS** Knob to highlight the desired flight plan.
- 3) Press the **Invert** Softkey; or press the **MENU** Key, highlight 'Invert & Activate FPL?', and press the **ENT** Key. The 'Invert and activate stored flight plan?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

IMPORT A FLIGHT PLAN FROM AN SD CARD

- 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 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 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 to confirm the import.

EXPORT A FLIGHT PLAN TO AN SD CARD

- 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.

Flight plans can be transferred to or from a mobile device via the Flight Stream 510 Bluetooth wireless connection. Transfer of a flight plan to a mobile device is controlled by the mobile device.

PREVIEWING A FLIGHT PLAN TRANSFER FROM A WIRELESS CONNECTION:

- 1) When a flight plan transfer has been initiated from a mobile device, a Pending Flight Plan pop-up alert appears in the lower right corner of the MFD, and a Connex announcement appears to the right of the MFD page name.
- 2) Press the **ENT** Key to display the Preview Flight Plan Page on the MFD.

IGNORING A FLIGHT PLAN TRANSFER FROM A WIRELESS CONNECTION:

- 1) When a flight plan transfer has been initiated from a mobile device, a Pending Flight Plan pop-up alert appears in the lower right corner of the MFD, and an Connex announcement appears to the right of the MFD page name.
- 2) Press the **CLR** Key to remove the pop-up alert and ignore the pending flight plan. The pending flight plan will still be available on the Flight Plan Catalog page.

STORING A PENDING FLIGHT PLAN:

- 1) Press the **FPL** Key.
- 2) Turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 3) Press the **FMS** Knob to activate the cursor, and
- 4) Turn the **FMS** Knob to highlight the pending flight plan.
- 5) Press the **ENT** Key to display the Preview Flight Plan Page on the MFD.
- 6) Press the **Store** Softkey to store the flight plan. The pending flight plan is stored and the pending announcement is removed.

ACTIVATING A PENDING FLIGHT PLAN:

- 1) Press the **FPL** Key and turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 2) Press the **FMS** Knob to activate the cursor, and turn the **FMS** Knob to highlight the pending flight plan.
- 3) Press the **ENT** Key to display the Preview Flight Plan Page on the MFD.
- 4) Press the **Activate** Softkey. The 'Activate Flight Plan?' window is displayed.
- 5) With 'OK' highlighted, press the **ENT** Key to activate the pending flight plan. The pending flight plan becomes the active flight plan and is removed from the Flight Plan Catalog Page. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

DELETING A PENDING FLIGHT PLAN:

- 1) Press the **FPL** Key.
- 2) Turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 3) Press the **FMS** Knob to activate the cursor.
- 4) Turn the **FMS** Knob to highlight the desired pending flight plan.
- 5) Press the **Delete** Softkey. The 'Delete Flight Plan XX?' window is displayed.
- 6) With 'OK' highlighted, press the **ENT** Key to delete the pending flight plan. The pending flight plan is removed from the Flight Plan Catalog Page. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

DELETING ALL PENDING FLIGHT PLANS:

- 1) Press the **FPL** Key.
- 2) Turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 3) Press the **MENU** Key.
- 4) Turn the **FMS** Knob to highlight 'Delete All Pending'.
- 5) Press the **ENT** Key. A 'Delete all pending flight plans?' confirmation window is displayed.
- 6) With 'OK' highlighted, press the **ENT** Key to delete all pending flight plans. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

DELETING THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Delete Flight Plan', and press the **ENT** Key. The 'Delete all waypoints in flight plan?' window is displayed.
- 3) With 'OK' highlighted, press the **ENT** Key to delete the active flight plan. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

DELETING AN INDIVIDUAL WAYPOINT FROM THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the waypoint to be deleted.
- 3) Press the **CLR** Key. The 'Remove XXXXX?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

DELETING AN ENTIRE AIRWAY FROM THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the cyan header of the airway to be deleted.
- 3) Press the **CLR** Key. The 'Remove <airway name> from flight plan?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

DELETING AN ENTIRE PROCEDURE FROM THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the cyan header of the procedure to be deleted.
- 3) Press the **CLR** Key. The 'Remove <procedure name> from flight plan?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

ENTERING AN ALONG TRACK OFFSET DISTANCE

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the waypoint for the along track offset.
- 3) Press the **ATK OFS** Softkey (MFD only); or press the **MENU** Key, highlight 'Create ATK Offset Waypoint', and press the **ENT** Key.
- 4) Enter a positive or negative offset distance in the range of +/- 1 to 999 nm (limited by leg distances).
- 5) Press the **ENT** Key to create the offset waypoint.
- 6) Press the **FMS** Knob to remove the flashing cursor.

ACTIVATING PARALLEL TRACK

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Parallel Track', and press the **ENT** Key. The Parallel Track Window is displayed with the 'Direction' field highlighted.
- 3) Turn the small **FMS** Knob to select 'LEFT' or 'RIGHT' and press the **ENT** Key. The 'Distance' field is highlighted.
- 4) Turn the small **FMS** Knob to enter a distance from 1-99 nm and press the **ENT** Key. 'Activate Parallel Track' is highlighted.
- 5) Press the **ENT** Key to activate parallel track. Press the **FMS** Knob or the **CLR** Key to cancel the parallel track activation.

CANCELLING PARALLEL TRACK

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Parallel Track', and press the **ENT** Key. The Parallel Track Window is displayed with 'Cancel Parallel Track?' highlighted.
- 3) Press the **ENT** Key.

ACTIVATING A FLIGHT PLAN LEG

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the destination waypoint for the desired leg.
- 3) Press the **ACT Leg** Softkey (MFD only); or press the **MENU** Key, highlight 'Activate Leg', and press the **ENT** Key. A confirmation window is displayed with 'Activate' highlighted.
- 4) Press the **ENT** Key to activate the flight plan leg. To cancel, press the **CLR** Key, or highlight 'Cancel' and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

INVERTING THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Invert Flight Plan', and press the **ENT** Key. An 'Invert Active Flight Plan?' confirmation window is displayed.
- 3) Select 'OK'.
- 4) Press the **ENT** Key to invert and activate the active flight plan. To cancel, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

INVERTING AND ACTIVATING A STORED FLIGHT PLAN

- 1) Press the **FPL** Key and turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 2) Press the **FMS** Knob to activate the cursor, and turn the **FMS** Knob to highlight the desired flight plan.
- 3) Press the **Invert** Softkey; or press the **MENU** Key, highlight 'Invert & Activate FPL?', and press the **ENT** Key. The 'Invert and activate stored flight plan?' window is displayed.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the request, press the **CLR** Key, or highlight 'CANCEL' and press the **ENT** Key.

SWITCHING BETWEEN LEG-TO-LEG WAYPOINT DISTANCE AND CUMULATIVE WAYPOINT DISTANCE

- 1) Press the **FPL** Key on the MFD to display the Active Flight Plan Page.
- 2) Press the **View** Softkey to display the **CUM** and **Leg-Leg** Softkeys.
- 3) Press the **CUM** Softkey to view cumulative waypoint distance, or select the **Leg-Leg** Softkey to view leg-to-leg waypoint distance.
- 4) Press the **Back** Softkey to return to the top level active flight plan softkeys.

DETERMINING THE CLOSEST POINT ALONG THE ACTIVE FLIGHT PLAN TO A SELECTED WAYPOINT

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Closest Point Of FPL', and press the **ENT** Key. A window appears with the reference waypoint field highlighted.
- 3) Enter the identifier of the reference waypoint and press the **ENT** Key. The system displays the bearing (BRG) and distance (DIS) to the closest point along the flight plan to the selected reference waypoint and creates a user waypoint at this location. The name for the new user waypoint is derived from the identifier of the reference waypoint.

CREATING A USER-DEFINED HOLD AT AN ACTIVE FLIGHT PLAN WAYPOINT

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the waypoint for the hold.
- 3) Press the **MENU** Key, highlight 'Hold At Waypoint', and press the **ENT** Key. The 'Hold at' window appears with the course field highlighted.
- 4) Use the **FMS** Knobs to edit the entry course, and press the **ENT** Key.
- 5) Use the small **FMS** Knob to select 'Inbound' or 'Outbound' course direction, and press the **ENT** Key.
- 6) Use the small **FMS** Knob to select 'Time' or 'Distance' length mode, and press the **ENT** Key.
- 7) Use the **FMS** Knobs to edit the length, and press the **ENT** Key.

- 8) Use the small **FMS** Knob to select 'Right' or 'Left' turn direction, and press the **ENT** Key.
- 9) Use the **FMS** Knobs to edit the Expect Further Clearance Time (EFC Time), and press the **ENT** Key.
- 10) Press the **ENT** Key while 'Load?' is highlighted to insert the hold into the flight plan.

CREATING A USER-DEFINED HOLD AT THE AIRCRAFT PRESENT POSITION

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, highlight 'Hold At Present Position', and press the **ENT** Key. The 'Hold at' window appears with the course field highlighted.
- 3) If desired, use the **FMS** Knobs to edit the entry course, and press the **ENT** Key.
- 4) Use the small **FMS** Knob to select 'Inbound' or 'Outbound' course direction, and press the **ENT** Key.
- 5) Use the small **FMS** Knob to select 'Time' or 'Distance' length mode, and press the **ENT** Key.
- 6) Use the **FMS** Knobs to edit the length, and press the **ENT** Key.
- 7) Use the small **FMS** Knob to select 'Right' or 'Left' turn direction, and press the **ENT** Key.
- 8) Use the **FMS** Knobs to edit the Expect Further Clearance Time (EFC Time), and press the **ENT** Key.
- 9) Press the **ENT** Key while 'Activate?' is highlighted to create an Offroute Direct-to hold waypoint at the aircraft present position and activate the hold.

CREATING A USER-DEFINED HOLD AT A DIRECT-TO WAYPOINT

- 1) Press a **Direct-to** Key and set up the direct-to waypoint as desired, but select 'Hold?' instead of 'Activate?' when finished (MFD or PFD).
- 2) Use the **FMS** Knobs to edit the entry course, and press the **ENT** Key.
- 3) Use the small **FMS** Knob to select 'Inbound' or 'Outbound' course direction, and press the **ENT** Key.
- 4) Use the small **FMS** Knob to select 'Time' or 'Distance' length mode, and press the **ENT** Key.

- 5) Use the **FMS** Knobs to edit the length, and press the **ENT** Key.
- 6) Use the small **FMS** Knob to select 'Right' or 'Left' turn direction, and press the **ENT** Key.
- 7) Use the **FMS** Knobs to edit the Expect Further Clearance Time (EFC TIME), and press the **ENT** Key.
- 8) Press the **ENT** Key while 'Activate?' is highlighted to activate the direct-to with the user-defined hold defined at the direct-to waypoint. (If the direct-to waypoint is part of the active flight plan, the HOLD is inserted into the active flight plan. If the direct-to waypoint is not part of the active flight plan, an off-route direct-to hold is created.)

EXITING A USER-DEFINED HOLD INSERTED INTO THE ACTIVE FLIGHT PLAN

Press the **SUSP** Softkey. The system will provide guidance to follow the holding pattern to the inbound course and resume automatic waypoint sequencing.

REMOVING A USER-DEFINED HOLD INSERTED INTO THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD) and turn the large **FMS** Knob to highlight the HOLD waypoint.
- 3) Press the **CLR** Key. A 'Remove Holding Pattern?' confirmation window is displayed.
- 4) Select 'OK' and press the **ENT** Key. The holding pattern is removed from the active flight plan. Select 'CANCEL' and press the **ENT** Key to cancel the removal of the holding pattern.

REMOVING A USER-DEFINED HOLD AT AN OFF-ROUTE DIRECT-TO

- 1) Press a **Direct To** Key to display the Direct To Window (PFD or MFD).
- 2) Press the **MENU** Key to display the Page Menu with the cursor on the 'Cancel Direct-To NAV' selection.
- 3) Press the **ENT** Key. The holding pattern is removed.

VERTICAL NAVIGATION

ENABLING VNV GUIDANCE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **ENBL VNV** Softkey; or press the **MENU** Key, highlight 'Enable VNV', and press the **ENT** Key. Vertical navigation is enabled, and vertical guidance begins with the waypoint shown in the Active VNV Profile box (defaults first waypoint in the active flight plan with an altitude enabled for vertical navigation).

DISABLING VNV GUIDANCE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **Cncl VNV** Softkey; or press the **MENU** Key, highlight 'Cancel VNV', and press the **ENT** Key. Vertical navigation is disabled.

ALTITUDE CONSTRAINTS

The system can use altitude constraints associated with lateral waypoints to give guidance for vertical navigation. These altitudes are, depending on the specific instance, manually entered or retrieved from the published altitudes in the navigation database.

Active Flight Plan KMKC / KCOS			
	DTK	DIS	ALT
BRK	353°	21.5NM	12000FT
KCOS-RNAV _{GPS} Y 35R LPV			
HABUK iaf	164°	8.0NM	10280FT
FALUR	290°	5.3NM	8600FT
CEGIX faf	352°	6.4NM	8100FT
RW35R map	352°	6.1NM	
6600FT	352°	0.9NM	6600FT
ADANE mahp	056°	15.6NM	9000FT
HOLD	297°	7.0NM	

Displayed Text Examples

- White Text
- Cyan Text with Pencil Icon
- Cyan Text
- White Text with Altitude Restriction Bar

Altitude Constraint Examples

2300FT

Cross AT 2,300 ft

5000FT

Cross AT or ABOVE 5,000 ft

3000FT

Cross AT or BELOW 3,000 ft

6646FT

Temperature Compensated

White Text	Cyan Text
<p>5000FT</p> <p>Altitude calculated by the system estimating the altitude of the aircraft as it passes over the navigation point. No white line above or below to indicate a potential constraint.</p> <p>5000FT</p> <p>Altitude retrieved from the navigation database. White line above or below indicates the type of constraint, as shown in the preceding figure. These altitudes are provided as a reference, and are not designated to be used in determining vertical guidance.</p>	<p>5000FT</p> <p>Altitude is designated for use in determining vertical guidance. A pencil icon indicates manual designation or manual data entry.</p> <p>5000FT</p> <p>The system cannot use this altitude in determining vertical guidance because of an invalid constraint condition.</p>

Altitudes associated with arrival and approach procedures are “auto-designated”. This means the system automatically uses the altitudes loaded with the arrival or approach for giving vertical speed and deviation guidance. Note that these altitudes are displayed as cyan text up to, but not including, the FAF. The FAF is always a “reference only” altitude and cannot be designated, unless the selected approach does not provide vertical guidance. In this case, the FAF altitude can be designated.

Altitudes that have been designated for use in vertical guidance can be “un-designated” using the **CLR** Key. The altitude is now displayed only as a reference. It is not used to give vertical guidance. Other displayed altitudes may change due to re-calculations or be rendered invalid as a result of manually changing an altitude to a non-designated altitude.

DESIGNATING A WAYPOINT ALTITUDE TO BE USED FOR VERTICAL GUIDANCE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude.
- 3) Turn the small **FMS** Knob to enter editing mode.
- 4) Press the **ENT** Key. The altitude is now shown in cyan, indicating it is usable for vertical guidance.

DESIGNATING A PROCEDURE WAYPOINT ALTITUDE TO BE USED FOR VERTICAL GUIDANCE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude.
- 3) Turn the small **FMS** Knob to enter editing mode.
- 4) Press the **ENT** Key. The altitude is now shown in cyan, indicating it is usable for vertical guidance.

ENTERING/MODIFYING AN ALTITUDE CONSTRAINT

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude constraint.
- 3) Enter an altitude constraint value using the **FMS** Knobs. To enter altitudes as a flight level, turn the small **FMS** Knob counter-clockwise past zero or clockwise past 9 on the first character, and the system automatically changes to show units of Flight Level. Turn the large **FMS** Knob clockwise to highlight the first zero and enter the three digit flight level.
- 4) Press the **ENT** Key to accept the altitude constraint; if the selected waypoint is an airport, an additional choice is displayed. Turn the small **FMS** Knob to choose 'MSL' or 'AGL', and press the **ENT** Key to accept the altitude.

An altitude constraint is invalid if:

- Meeting the constraint requires the aircraft to climb
- Meeting the constraint requires the maximum flight path angle (6° down) or maximum vertical speed (-6000 fpm) to be exceeded
- The altitude constraint results in a TOD behind the aircraft present position
- The constraint is within a leg type for which altitude constraints are not supported
- The altitude constraint is added to the FAF of an approach that provides vertical guidance (i.e., ILS or GPS SBAS approach)
- The altitude constraint is added to a waypoint past the FAF

ACTIVATING A VERTICAL NAVIGATION DIRECT-TO

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob to activate the cursor and turn the **FMS** Knob to highlight the desired waypoint.
- 3) Press the **VNV Direct-To** Softkey; or press the **MENU** Key, highlight 'VNV Direct-To', and press the **ENT** Key. An 'Activate vertical Direct-to to: NNNNNFT at XXXXXX?' confirmation window is displayed.
- 4) Press the **ENT** Key. Vertical guidance begins to the altitude constraint for the selected waypoint.
- 5) Press the **FMS** Knob to remove the flashing cursor.

MODIFYING THE VS TGT AND FPA

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **VNV Prof** Softkey; or press the **MENU** Key, highlight 'Select VNV Profile Window', and press the **ENT** Key. The cursor is now located in the Active VNV Profile box.
- 3) Turn the **FMS** Knobs as needed to edit the values.
- 4) Press the **FMS** Knob to remove the flashing cursor.

DELETING AN ALTITUDE CONSTRAINT PROVIDED BY THE NAVIGATION DATABASE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude constraint.
- 3) Press the **CLR** Key. A 'Remove VNV altitude?' confirmation window is displayed.
- 4) Select 'OK' and press the **ENT** Key.

DELETING AN ALTITUDE CONSTRAINT THAT HAS BEEN MANUALLY ENTERED

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude constraint.

- 3) Press the **CLR** Key. A 'Remove or Revert to published VNV altitude of nnnnnFT?' confirmation window is displayed.
- 4) Select 'REMOVE' and press the **ENT** Key. The manually entered altitude is deleted (it is replaced by a system calculated altitude, if available).

REVERTING A MANUALLY ENTERED ALTITUDE CONSTRAINT BACK TO THE NAVIGATION DATABASE VALUE

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude constraint.
- 3) Press the **CLR** Key. A 'Remove or Revert to published VNV altitude of nnnnnFT?' confirmation window is displayed.
- 4) Select 'REVERT' and press the **ENT** Key. The altitude is changed to the navigation database value.
- 5) Press the **FMS** Knob to remove the flashing cursor.

MODIFYING A SYSTEM CALCULATED ALTITUDE CONSTRAINT

- 1) Press the **FPL** Key to display the Active Flight Plan Page on the MFD.
- 2) Press the **FMS** Knob, and turn to highlight the desired waypoint altitude constraint.
- 3) Press the **CLR** Key. An 'Edit or Revert to published VNV altitude of nnnnnFT?' confirmation window is displayed.
- 4) Select 'EDIT' and press the **ENT** Key.
- 5) Edit the value using the **FMS** Knobs, and press the **ENT** Key.
- 6) Press the **FMS** Knob to remove the flashing cursor.

PROCEDURES

LOADING A DEPARTURE INTO THE ACTIVE FLIGHT PLAN USING THE PROC KEY

- 1) Press the **PROC** Key. The Procedures Window is displayed.
- 2) Highlight 'Select Departure'.
- 3) Press the **ENT** Key. The Departure Loading Page is displayed.

- 4) Use the **FMS** Knob to select an airport and press the **ENT** Key.
- 5) Select a departure from the list and press the **ENT** Key.
- 6) Select a runway (if required) and press the **ENT** Key.
- 7) Select a transition (if required) and press the **ENT** Key. 'Load?' is highlighted.
- 8) Press the **ENT** Key to load the departure procedure.

VIEWING AVAILABLE DEPARTURES AT AN AIRPORT

- 1) From the Airport Information Page (first page in the WPT group), press the **DP** Softkey. The Departure Information Page is displayed, defaulting to the airport displayed on the Airport information Page.
- 2) To select another airport, press the **FMS** Knob to activate the cursor, enter an identifier/facility name/city, and press the **ENT** Key.
- 3) Turn the large **FMS** Knob to highlight the Departure. The departure is previewed on the map.
- 4) Turn the small **FMS** Knob to view the available departures. Press the **ENT** Key to select the departure. The cursor moves to the Runway box. The departure is previewed on the map.
- 5) Turn the small **FMS** Knob to view the available runways. Press the **ENT** Key to select the runway. The cursor moves to the Transition box (only if there are available transitions). The departure is previewed on the map.
- 6) Turn the small **FMS** Knob to view the available transitions. Press the **ENT** Key to select the transition. The cursor moves to the Sequence box. The departure is previewed on the map.
- 7) Press the **Info-1** Softkey or the **Info-2** Softkey to return to the Airport Information Page.

REMOVING A DEPARTURE PROCEDURE FROM THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, and highlight 'Remove Departure'.
- 3) Press the **ENT** Key. A confirmation window is displayed listing the departure procedure.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the removal request, highlight 'CANCEL' and press the **ENT** Key.

LOADING AN ARRIVAL INTO THE ACTIVE FLIGHT PLAN USING THE PROC KEY

- 1) Press the **PROC** Key. The Procedures Window is displayed.
- 2) Highlight 'Select Arrival'.
- 3) Press the **ENT** Key. The Arrival Loading Page is displayed.
- 4) Use the **FMS** Knob to select an airport and press the **ENT** Key.
- 5) Select an arrival from the list and press the **ENT** Key.
- 6) Select a transition (if required) and press the **ENT** Key.
- 7) Select a runway (if required) and press the **ENT** Key. 'Load?' is highlighted.
- 8) Press the **ENT** Key to load the arrival procedure.

VIEWING AVAILABLE ARRIVALS AT AN AIRPORT

- 1) From the Airport Information Page (first page in the WPT group), press the **STAR** Softkey. The Arrival Information Page is displayed, defaulting to the airport displayed on the Airport Information Page.
- 2) To select another airport, press the **FMS** Knob to activate the cursor, enter an identifier/facility name/city, and press the **ENT** Key.
- 3) Turn the large **FMS** Knob to highlight the Arrival. The arrival is previewed on the map.
- 4) Turn the small **FMS** Knob to view the available arrivals. Press the **ENT** Key to select the arrival. The cursor moves to the Transition box. The arrival is previewed on the map.
- 5) Turn the small **FMS** Knob to view the available transitions. Press the **ENT** Key to select the transition. The cursor moves to the Runway box. The arrival is previewed on the map.
- 6) Turn the small **FMS** Knob to view the available runways. Press the **ENT** Key to select the runway. The cursor moves to the Sequence box. The arrival is previewed on the map.
- 7) Press the **Info-1** Softkey or the **Info-2** Softkey to return to the Airport Information Page.

HSI Annunciation	Description
LNAV	RNAV GPS approach using published LNAV minima
LNAV+V	RNAV GPS approach using published LNAV minima. Advisory vertical guidance is provided
L/VNAV (available only if SBAS available)	RNAV GPS approach using published LNAV/VNAV minima (downgrades to L/VNAV (Baro VNAV) if SBAS unavailable)
LP (available only if SBAS available)	RNAV GPS approach using published LP minima (downgrades to LNAV if SBAS unavailable)
LP+V (available only if SBAS available)	RNAV GPS approach using published LP minima Advisory vertical guidance is provided (downgrades to LNAV if SBAS unavailable)
LPV (available only if SBAS available)	RNAV GPS approach using published LPV minima (downgrades to L/VNAV (Baro VNAV) if SBAS unavailable)

Approach Service Levels

LOADING AN APPROACH INTO THE ACTIVE FLIGHT PLAN USING THE PROC KEY

- 1) Press the **PROC** Key. The Procedures Window is displayed.
- 2) Highlight 'Select Approach', and press the **ENT** Key. The Approach Loading Page is displayed.
- 3) Select the airport and approach:
 - a) Use the **FMS** Knob to select an airport and press the **ENT** Key.
 - b) Select an approach from the list and press the **ENT** Key.

Or:

 - a) If necessary, push the **FMS** Knob to exit the approach list, and use the large **FMS** Knob to move the cursor to the Approach Channel field.
 - b) Use the **FMS** Knob to enter the approach channel number, and press the **ENT** Key to accept the approach channel number. The airport and approach are selected.
- 4) Select a transition (if required) and press the **ENT** Key.

- 5) Minimums
 - a) To set 'Minimums', turn the small **FMS** Knob to select 'BARO' or 'TEMP COMP' and press the **ENT** Key. Turn the small **FMS** Knob to select the altitude, and press the **ENT** Key.
 - b) If 'TEMP COMP' was selected, the cursor moves to the temperature field. Turn the small **FMS** Knob to select the temperature, and press the **ENT** Key.

Or:

To skip setting minimums, press the **ENT** Key.
- 6) Press the **ENT** Key with 'Load?' highlighted to load the approach procedure; or turn the large **FMS** Knob to highlight 'Activate' and press the **ENT** Key to load and activate the approach procedure.

VIEWING AVAILABLE APPROACHES AT AN AIRPORT

- 1) From the Airport Information Page (first page in the WPT group), press the **APR** Softkey. The Approach Information Page is displayed, defaulting to the airport displayed on the Airport information Page.
- 2) To select another airport, press the **FMS** Knob to activate the cursor, enter an identifier/facility name/city, and press the **ENT** Key.
- 3) Press the **FMS** Knob, then turn the large **FMS** Knob to highlight the Approach. The approach is previewed on the map.
- 4) Turn the small **FMS** Knob to view the available approaches. Press the **ENT** Key to select the approach. The cursor moves to the Transition box. The approach is previewed on the map.
- 5) Turn the small **FMS** Knob to view the available transitions. Press the **ENT** Key to select the transition. The cursor moves to the Minimums box. The approach is previewed on the map.
- 6) Turn the small **FMS** Knob to select minimums on or off. Press the **ENT** Key.
 - a) When minimums are selected on, the cursor moves to the minimum altitude field. Use the small **FMS** Knob to select the altitude. Press the **ENT** Key.
 - b) If temperature compensated minimums was selected, the cursor moves to the temperature field. Use the small **FMS** Knob to select the temperature. Press the **ENT** Key. The cursor moves to the Sequence box. The approach is previewed on the map.

Or:

When minimums are selected off, the cursor moves to the Sequence box. The approach is previewed on the map.

- 7) Press the **Info-1** or the **Info-2** Softkey to return to the Airport Information Page.

ACTIVATING A PREVIOUSLY LOADED APPROACH WITH VECTORS TO FINAL

- 1) Press the **PROC** Key to display the Procedures Window.
- 2) Highlight 'Activate Vector-to-Final' and press the **ENT** Key.

REMOVING AN APPROACH FROM THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page (MFD) or the Active Flight Plan Window (PFD).
- 2) Press the **MENU** Key, and highlight 'Remove Approach'.
- 3) Press the **ENT** Key. A confirmation window is displayed listing the approach procedure.
- 4) With 'OK' highlighted, press the **ENT** Key. To cancel the removal, highlight 'CANCEL' and press the **ENT** Key.
- 5) Press the **FMS** Knob to remove the flashing cursor.

ACTIVATING A MISSED APPROACH IN THE ACTIVE FLIGHT PLAN

- 1) Press the **PROC** Key.
 - 2) Turn the **FMS** Knob to highlight 'Activate Missed Approach'.
 - 3) Press the **ENT** Key. The aircraft automatically sequences to the MAHP.
- Or:**
- Press the Go-Around Button.

ACTIVATING TEMPERATURE COMPENSATED ALTITUDE

- 1) From the Active Flight Plan Page, press the **MENU** Key. The Page Menu is displayed.
- 2) Turn the **FMS** Knob to highlight 'Temperature Compensation'.
- 3) Press the **ENT** Key. The Temperature Compensation Window is displayed.
- 4) Use the small FMS Knob to select the temperature at the <airport>. The compensated altitude is computed as the temperature is selected.

- 1) Press the **ENT** Key. 'Activate Compensation?' is highlighted.
- 6) Press the **ENT** Key. The compensated altitudes for the approach are shown in the flight plan.

CANCELLING TEMPERATURE COMPENSATED ALTITUDE

- 1) From the Active Flight Plan Page, press the **MENU** Key. The Page Menu is displayed.
- 2) Turn the **FMS** Knob to highlight 'Temperature Compensation'.
- 3) Press the **ENT** Key. The Temperature Compensation Window is displayed.
- 4) Press the **ENT** Key. 'Cancel Compensation?' is highlighted.
- 5) Press the **ENT** Key. The temperature compensated altitude at the FAF is cancelled.

TRIP PLANNING

SELECTING AUTOMATIC OR MANUAL PAGE MODE

Press the **Auto** Softkey or the **Manual** Softkey; or press the **MENU** Key, highlight 'Auto Mode' or 'Manual Mode', and press the **ENT** Key.

SELECTING FLIGHT PLAN OR WAYPOINT MODE

Press the **FPL** Softkey or the **WPTs** Softkey; or press the **MENU** Key, highlight 'Flight Plan Mode' or 'Waypoints Mode', and press the **ENT** Key.

SELECTING A FLIGHT PLAN AND LEG FOR TRIP STATISTICS

- 1) Press the **FMS** Knob to activate the cursor in the flight plan number field.
- 2) Turn the small **FMS** Knob to select the desired flight plan number.
- 3) Turn the large **FMS** Knob to highlight 'CUM' or 'REM'. The statistics for each leg can be viewed by turning the small **FMS** Knob to select the desired leg. The Inset Map also displays the selected data.

SELECTING WAYPOINTS FOR WAYPOINT MODE

- 1) Press the **WPTs** Softkey; or press the **MENU** Key, highlight 'Waypoints Mode', and press the **ENT** Key. The cursor is positioned in the waypoint field directly below the FPL field.

- 2) Turn the **FMS** knobs to select the desired waypoint (or select from the Page Menu 'Set WPT to Present Position' if that is what is desired), and press the **ENT** Key. The cursor moves to the second waypoint field.
- 3) Turn the **FMS** knobs to select the desired waypoint, and press the **ENT** Key. The statistics for the selected leg are displayed.

ENTERING MANUAL DATA FOR TRIP STATISTICS CALCULATIONS

- 1) Press the **Manual** Softkey or select 'Manual Mode' from the Page Menu, and press the **ENT** Key. The cursor may now be positioned in any field in the top right two boxes.
- 2) Turn the **FMS** Knobs to move the cursor onto the Departure Time field and enter the desired value. Press the **ENT** Key. The statistics are calculated using the new value and the cursor moves to the next entry field. Repeat until all desired values have been entered.

RAIM PREDICTION

PREDICTING RAIM AVAILABILITY AT A SELECTED WAYPOINT

- 1) Select the AUX-GPS Status Page.
- 2) Press the **FMS** Knob. The RAIM Prediction 'Waypoint' field is highlighted.
- 3) Turn the small **FMS** Knob to display the Waypoint Information Window. (Turning it clockwise displays a blank Waypoint Information Window, turning it counter-clockwise displays the Waypoint Information Window with a waypoint selection submenu allowing selection of active flight plan, nearest, recent, user, or airway waypoints).
- 4) Enter the identifier, facility, or city name of the departure waypoint; or select a waypoint from the submenu of waypoints and press the **ENT** Key to accept the waypoint entry.
- 5) Turn the FMS Knobs to enter an arrival time and press the **ENT** Key.
- 6) Turn the FMS Knobs to enter an arrival date and press the **ENT** Key.
- 7) Press the **ENT** Key with 'Compute RAIM?' highlighted to begin the computation.

PREDICTING RAIM AVAILABILITY AT THE AIRCRAFT PRESENT POSITION

- 1) Select the AUX-GPS Status Page.
- 2) Press the **FMS** Knob. The RAIM Prediction 'Waypoint' field is highlighted.
- 3) Press the **MENU** Key, highlight 'Set WPT to Present Position', and press the **ENT** Key.
- 4) Press the **ENT** Key to accept the waypoint entry.
- 5) Turn the FMS Knobs to enter an arrival time and press the **ENT** Key.
- 6) Turn the FMS Knobs to enter an arrival date and press the **ENT** Key.
- 7) Press the **ENT** Key with 'Compute RAIM?' highlighted to begin the computation.

ENABLING/DISABLING SBAS

- 1) Select the AUX-GPS Status Page.
- 2) Press the **SBAS** Softkey.
- 3) Press the **FMS** Knob, and turn the large FMS Knob to highlight 'EGNOS', 'MSAS' or 'WAAS'.
- 4) Press the **ENT** Key to disable SBAS. Press the **ENT** Key again to enable SBAS.

HAZARD AVOIDANCE

Customizing the Hazard Displays on the Navigation Map Page:

- 1) With the Navigation Map Page displayed, press the **MENU** Key to display the Navigation Map Page Menu. The cursor flashes on the 'Map Settings' option.
- 2) Press the **ENT** Key. The Map Settings Menu is displayed. Turn the small **FMS** Knob to select 'Weather' to customize the display of weather features. Select 'Traffic' to customize the display of traffic.
- 3) Press the small **FMS** Knob to return to the Navigation Map Page.

STORMSCOPE® (OPTIONAL)







WARNING: Do not rely on information from the lightning detection system display as the sole basis for hazardous weather avoidance. Range limitations and interference may cause the system to display inaccurate or incomplete information. Refer to the documentation from the lightning detection system manufacturer for detailed information about the system.

Displaying Stormscope Lightning Data on the Navigation Map Page

- 1) Select the **Map Opt** Softkey.
- 2) Select the **STRMSCP** Softkey.

Enabling/disabling Stormscope information on PFD maps:

- 1) On the PFD, press the **Map/HSI** Softkey.
- 2) Press the **Lightning** Softkey.
- 3) Press the **STRMSCP** Softkey to enable Stormscope lightning information, or press the **LTNG Off** Softkey to disable Stormscope lightning information.

Lightning Age	Symbol
Strike is less than 6 seconds old	
Strike is between 6 and 60 seconds old	
Strike is between 1 and 2 minutes old	
Strike is between 2 and 3 minutes old	

Change the Stormscope Lightning Mode Between 'Cell' and 'Strike'

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Stormscope Page.
- 2) Press the **Mode** Softkey. The **Cell** and **Strike** Softkeys are displayed. Press the **Cell** Softkey to display 'CELL' data or press the **Strike** Softkey to display 'STRIKE' data. 'CELL' or 'STRIKE' is displayed in the mode box located in the upper right corner of the Stormscope Page.



NOTE: "Cell mode" uses a clustering program to identify clusters of electrical activity that indicate cells.

Manually Clearing Stormscope Data on the Stormscope Page

Press the **Clear** Softkey.

Manually Clearing Stormscope Data on the Navigation Map Page

- 1) Press the **MENU** Key.
- 2) Turn the **FMS** Knob to highlight 'Clear Stormscope® Lightning'.
- 3) Press the **ENT** Key.

SIRIUSXM WEATHER (OPTIONAL)



WARNING: Do not use data link weather information for maneuvering in, near or around areas of hazardous weather. Information contained within data link weather products may not accurately depict current weather conditions.



WARNING: Do not use the indicated data link weather product age to determine the age of the weather information shown by the data link weather product. Due to time delays inherent in gathering and processing weather data for data link transmission, the weather information shown by the data link weather product may be older than the indicated weather product age.

Changing the Data Link Weather Source to display SiriusXM Weather

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Data Link Page. If the name of another source besides '(XM)' is in the page title, continue to Step 3.

- 3) Press the **MENU** Key.
- 4) If necessary, turn the large **FMS** Knob to highlight 'Display XM Weather' and press the **ENT** Key.

Displaying SiriusXM Weather on the Navigation Map Page

- 1) Press the **Map Opt** Softkey.
- 2) Press the **NEXRAD** or **XM LTNG** or **METAR** Softkey to display the desired weather product. Press the applicable softkey again to remove the weather product from the Navigation Map Page.

Displaying SiriusXM Weather on PFD maps

- 1) Press the **Map/HSI** Softkey.
- 2) Press the **NEXRAD** or **METAR** Softkey to display the desired weather product. Press the applicable softkey again to remove weather product from the map.
- 3) Press the **Lightning** Softkey to display softkeys for lightning weather products.
- 4) Press the **Datalink** Softkey to enable SiriusXM lightning information on the PFD Maps or press the **LTNG Off** Softkey to disable lightning information.

Displaying/Removing the Weather Product Information Box on PFD Maps

- 1) On the PFD, press the **Map/HSI** Softkey.
- 2) Press the **Layout** Softkey.
- 3) Press the **WX LGND** Softkey to display/remove the weather product information box.

Displaying Sirius Weather Legends on the Navigation Map Page

- 1) Press the **Map Opt** Softkey.
- 2) Press the **Legend** Softkey to display or remove the legend.

Display METAR and TAF information on the Airport Information Page

- 1) Turn the large **FMS** Knob to select the WPT Page Group.
- 2) Turn the small **FMS** Knob to select the Airport Information Page.
- 3) Press the **WX** Softkey to display METAR and TAF text.

- 4) Press the **FMS** Knob to enable the cursor, then turn the small **FMS** Knob as needed to **FMS** knob to scroll through the text.
- 5) After viewing text, press the **FMS** Knob to disable the cursor.

Displaying Weather on the Weather Data Link (XM) Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Data Link (XM) Page.
- 3) Press the available softkeys to select the desired SiriusXM Weather product.
- 4) Press the **Legend** Softkey to view the legends for the enables weather products. If necessary, turn either **FMS** Knob to scroll through the list. Press the small **FMS** Knob or the **ENT** Key to return to the map.

Enabling/disabling NEXRAD Animation on the Weather Data Link (XM) Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Data Link (XM) Page.
- 3) Press the **MENU** Key.
- 4) Turn the **FMS** Knob to select 'Weather Setup' and press the **ENT** Key.
- 5) Turn the large **FMS** Knob to highlight the NEXRAD Animation On/Off field.
- 6) Turn the small **FMS** Knob to select 'On' or 'Off' then press the ENT Key.

Map Panning Information – Weather Data Link (XM) Page

- 1) Push in the **Joystick** to activate the Map Pointer.
- 2) Move the **Joystick** to place the Map Pointer over graphical weather information. For Cloud Tops, Echo Tops, METAR flags, Storm Cells, and County Warnings, an information box appears near the Map Pointer. If the Map Pointer has highlighted a SIGMET, AIRMET, PIREP, AIREP, or TFR, press the **ENT** Key to view additional information such as report text, then press the **ENT** Key or the **CLR** Key to remove the information.

Note when a METAR flag or airport is highlighted, pressing the **ENT** Key shows the WPT - Weather Information Page. The decoded and original METAR text is available on this page as well as the TAF, if provided. When finished, press the **Go Back** Softkey or press the **CLR** Key to return to the Weather Data Link (XM) Page.








Enabling/disabling winds aloft data display in the Vertical Situation Display (VSD):











- 1) Select the Navigation Map Page.
- 2) Press the **MENU** Key.
- 3) With 'Map Settings' highlighted, press the **ENT** Key
- 4) Turn the small **FMS** Knob to select the 'VSD' Group and press the **ENT** Key
- 5) Turn the large **FMS** Knob to select the Winds On/Off field.
- 6) Turn the small **FMS** Knob to select 'On' or 'Off'.
- 7) Press the **FMS** Knob or **CLR** Key to return to the Navigation Map Page with the changed settings.



NOTE: NEXRAD data cannot be displayed simultaneously on the same map as relative terrain, echo tops, turbulence, or icing is displayed.

SiriusXM Weather Products and Symbols

Weather Product	Symbol	Expiration Time (Minutes)	Refresh Rate (Minutes)
NEXRAD		30	5 (U.S.) 10 (Canada)
Cloud Top (CLD TOP)		60	15 (69/69A) 30 (69/69A SXM)
Echo Top (ECHO TOP)		30	7.5
SiriusXM Lightning (LTNG)		30	5
Cell Movement (CELL MOV)		30	1.25
SIGMETs/AIRMETs (SIG/ AIR)		60	12
METARs		90	12

Weather Product	Symbol	Expiration Time (Minutes)	Refresh Rate (Minutes)
City Forecast (CITY)		90	12
Surface Analysis (SFC)		60	12
Freezing Levels (FRZ LVL)		120	12
Winds Aloft (WIND)		90	12
County Warnings (COUNTY)		60	5
Cyclone Warnings (CYCLONE)		60	12
Icing Potential (CIP and SLD) (ICNG)		90	22
Pilot Weather Report (PIREPs)		90	12
Air Report (AIREPs)		90	12
Turbulence (TURB)		180	12
Radar Coverage Not Available	No product image	30	5
TFRs	No product image	60	12
TAFs	No product image	60	12

FIS-B WEATHER



WARNING: Do not use data link weather information for maneuvering in, near, or around areas of hazardous weather. Information contained within data link weather products may not accurately depict current weather conditions.



WARNING: Do not use the indicated data link weather product age to determine the age of the weather information shown by the data link weather product. Due to time delays inherent in gathering and processing weather data for data link transmission, the weather information shown by the data link weather product may be older than the indicated weather product age.

The optional GTX 345R transponder receives Flight Information Services - Broadcast (FIS-B) weather data from a network of UAT ground-based transceivers (GBTs).

FIS-B weather data reception requires the aircraft being within range and line-of-sight of an operating GBT broadcasting FIS-B weather data. Reception may be affected by factors including altitude or terrain.

Reception of FIS-B weather data occurs automatically without any pilot action. FIS-B broadcasts provide weather data in a repeating cycle which may take approximately ten minutes to transmit all available weather data. Therefore, not all available weather data may be available immediately upon initial FIS-B signal acquisition.







Viewing the Weather Data Link (FIS-B) Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Data Link (FIS-B or XM) Page.
- 3) If the page title displays a weather data link weather source other than 'FIS-B', such as 'XM', proceed to the following steps to change the data link weather source.
- 4) Press the **MENU** Key.
- 5) Turn the small **FMS** Knob to select 'Display FIS-B Weather'.
- 6) Press the **ENT** Key. The page title will display 'Map - Weather Data Link (FIS-B)' to indicate FIS-B is now the selected data link weather source.

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Enabling/Disabling FIS-B Weather weather reception

- 1) Select the Weather Data Link (FIS-B) Page.
- 2) Press the **MENU** Key.
- 3) Turn the small **FMS** Knob to highlight ‘Enable FIS-B Weather’ or ‘Disable FIS-B Weather’, and press the **ENT** Key.

FIS-B Weather Product	Symbol	Expiration Time (Minutes)	Broadcast Rate (Minutes)
NEXRAD Composite (US)		30	15
NEXRAD Composite (Regional)		30	2.5
Meteorological Aerodrome Report (METARs)		90	5
Pilot Weather Report (PIREPs)		90	10
Winds and Temperatures Aloft (WIND)		90	10
SIGMETs/AIRMETs (SIG/AIR)		60	5
No Radar Coverage	no product image	30	2.5
Terminal Aerodrome Forecast	no product image	60	10
Temporary Flight Restriction (TFR)	no product image		10

Weather Product Symbols and Data Timing

Setting Up and Customizing the Weather Data Link (FIS-B) Page

- 1) Select the Weather Data Link (FIS-B) Page.
- 2) Press the **MENU** Key.
- 3) With ‘Weather Setup’ highlighted, press the **ENT** Key.
- 4) Turn the small **FMS** Knob to select ‘Product Group 1’, and press the **ENT** Key.

- 5) Turn the large **FMS** Knob or press the **ENT** Key to scroll through product selections.
- 6) Turn the small **FMS** Knob to scroll through options for each product (On/Off, range settings, etc.).
- 7) Press the **ENT** Key to select an option.
- 8) Press the **FMS** Knob or **CLR** Key to return to the Weather Data Link (FIS-B) Page with the changed settings.

Setting Up and Customizing FIS-B Weather on the Navigation Map Page

- 1) Select the Navigation Map Page.
- 2) Press the **MENU** Key.
- 3) With 'Map Settings' highlighted, press the **ENT** Key.
- 4) Turn the small **FMS** Knob to select the 'Weather' Group and press the **ENT** Key.
- 5) Turn the large **FMS** Knob or press the **ENT** Key to scroll through product selections.
- 6) Turn the small **FMS** Knob to scroll through options for each product (On/Off, range settings).
- 7) Press the **ENT** Key to select an option.
- 8) Press the **FMS** Knob or **CLR** Key to return to the Navigation Map Page with the changed settings.

Displaying/Removing the Weather Product Information Box on PFD Maps

- 1) On the PFD, press the **Map/HSI** Softkey.
- 2) Press the **Layout** Softkey.
- 3) Press the **WX LGND** Softkey to display/remove the weather product information box.

Viewing Legends for Displayed Weather Products on the Weather Data Link (FIS-B) Page

- 1) Select the Weather Data Link (FIS-B) Page.
- 2) Press the **Legend** Softkey to display the legends for the displayed weather products.
Or:
 - a) Press the **MENU** Key.
 - b) Select 'Weather Legend' and press the **ENT** Key.
- 3) To remove the Legend Window, press the **Legend** Softkey, the **ENT** or the **CLR** Key, or press the **FMS** Knob.

Viewing Legends for Displayed Weather Products on the Navigation Map Page

- 1) Select the Navigation Map Page.
- 2) Press the **Map Opt** Softkey.
- 3) Press the **Legend** Softkey (available if one or more FIS-B weather products are enabled for display).
- 4) To remove the Legend Window, press the **Legend** Softkey, the **ENT** or the **CLR** Key, or press the **FMS** Knob.

Displaying Weather on the Weather Data Link (FIS-B) Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Data Link (FIS-B) Page.
- 3) Press the available softkeys to enable/disable the display of the desired FIS-B Weather product.

Displaying the NEXRAD weather product on the Weather Data Link (FIS-B) Page

- 1) Select the Weather Data Link (FIS-B) Page.
- 2) Press the **NEXRAD** Softkey. Each softkey press cycles through a coverage option as the softkey name changes (**US**, **RGNL**, or **US/RGNL**).

Displaying the NEXRAD weather product on the Navigation Map Page

- 1) Press the **Map Opt** Softkey.
- 2) Press the **NEXRAD** Softkey.
- 3) To change the type of NEXRAD displayed, press the **MENU** Key.

- 4) With 'Map Settings' highlighted, press the **ENT** Key.
- 5) Turn the small **FMS** Knob to select the 'Weather' Group, then press the **ENT** Key.
- 6) Turn the large **FMS** Knob to highlight the NEXRAD Data Region field.
- 7) Turn the small **FMS** Knob to highlight 'CONUS' (continental United States), 'RGNL' (regional), or 'Combined', then press the **ENT** Key. This selection also affects display of NEXRAD on the PFD Maps.
- 8) When finished, press the **FMS** Knob or press the **CLR** Key.

Display METAR and TAF information on the Airport Information Page

- 1) Turn the large **FMS** Knob to select the WPT Page Group.
- 2) Turn the small **FMS** Knob to select the Airport Information Page.
- 3) Press the **WX** Softkey to display METAR and TAF text.
- 4) Press the **FMS** Knob to enable the cursor, then turn the small **FMS** Knob as needed to **FMS** knob to scroll through the text.
- 5) After viewing text, press the **FMS** Knob to disable the cursor.

Map Panning Information – Weather Data Link (FIS-B) Page

- 1) Push in the **Joystick** to activate the Map Pointer.
- 2) Move the **Joystick** to place the Map Pointer over graphical weather information. For Cloud Tops, Echo Tops, METAR flags, Storm Cells, and County Warnings, an information box appears near the Map Pointer. If the Map Pointer has highlighted a SIGMET, AIRMET, PIREP, or TFR, press the **ENT** Key to view additional information such as report text, then press the **ENT** Key or the **CLR** Key to remove the information.

Note when a METAR flag or airport is highlighted, pressing the **ENT** Key shows the WPT - Weather Information Page. The decoded and original METAR text is available on this page as well as the TAF, if provided. When finished, press the **Go Back** Softkey or press the **CLR** Key to return to the Weather Data Link (FIS-B) Page.

Enabling/disabling winds aloft data display in the Vertical Situation Display (VSD)

- 1) Select the Navigation Map Page.
- 2) Press the **MENU** Key.
- 3) With 'Map Settings' highlighted, press the **ENT** Key

- 4) Turn the small **FMS** Knob to select the 'VSD' Group and press the **ENT** Key
- 5) Turn the large **FMS** Knob to select the Winds On/Off field.
- 6) Turn the small **FMS** Knob to select 'On' or 'Off'.
- 7) Press the **FMS** Knob or **CLR** Key to return to the Navigation Map Page with the changed settings.




Traffic Information Service (TIS)



NOTE: If the aircraft has a Traffic Advisory System (TAS) or the capability to receive Automatic Dependent Surveillance-Broadcast (ADS-B) traffic reports, including TIS-B, these features supersede TIS.



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

Traffic Symbol	Description
	Non-Threat Traffic (intruder is beyond 5 nm and greater than 1200' vertical separation)
	Traffic Advisory (TA) (closing rate, distance, and vertical separation meet TA criteria)
	Traffic Advisory Off Scale

TIS Traffic Symbol Description

Displaying TIS 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 increase the map range or rotate counter-clockwise to decrease the map range.
- 6) Press the **TNA Mute** Softkey to mute/unmute the "TIS Not Available" voice alert.

Displaying TIS Traffic on the Navigation Map Page

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

Displaying TIS Traffic on PFD Maps

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

TRAFFIC ADVISORY SYSTEM (TAS)



WARNING: Do not rely solely upon the display of traffic information for collision avoidance maneuvering. The traffic display does not provide collision avoidance resolution advisories and does not under any circumstances or conditions relieve the pilot's responsibility to see and avoid other aircraft.







WARNING: Do not rely solely upon the display of traffic information to accurately depict all of the traffic within range of the aircraft. Due to lack of equipment, poor signal reception, and/or inaccurate information from aircraft or ground stations, traffic may be present that is not represented on the display.



NOTE: ADS-B traffic symbols are only displayed if the equipment installed in the aircraft is capable of receiving ADS-In traffic reports.

Symbol	Description
	Traffic Advisory with ADS-B directional information. Points in the direction of the intruder aircraft track.
	Traffic Advisory without ADS-B directional information.
	Traffic Advisory out of the selected display range with ADS-B directional information. Displayed at outer range ring at proper bearing.
	Traffic Advisory out of the selected display range without ADS-B directional information. Displayed at outer range ring at proper bearing.
	Proximity Advisory with ADS-B directional information. Points in the direction of the aircraft track.
	Proximity Advisory without ADS-B directional information.
	Other Non-Threat traffic with ADS-B directional information. Points in the direction of the intruder aircraft track.
	Other Non-Threat traffic without ADS-B directional information.

Symbol	Description
	Traffic located on the ground with ADS-B directional information. Points in the direction of the aircraft track. Ground traffic is only displayed when ADS-B is in Surface (SURF) Mode or own aircraft is on the ground.
	Ground traffic without ADS-B directional information. Ground traffic is only displayed when ADS-B is in Surface (SURF) Mode or own aircraft is on the ground.
	Non-aircraft ground traffic with ADS-B directional information. Ground traffic is only displayed when ADS-B is in Surface (SURF) Mode or own aircraft is on the ground.
	Non-aircraft ground traffic without ADS-B directional information. Ground traffic is only displayed when ADS-B is in Surface (SURF) Mode or own aircraft is on the ground.

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** or **TAS OPER** Softkey to begin displaying TAS traffic. 'OPERATING' is displayed in the Traffic Mode field.
- 4) Press the **ADS-B** Softkey to begin display ADS-B traffic (if equipped).
- 5) Press the **ALT Mode** Softkey to change the altitude volume. Select the desired altitude volume by pressing the **Above**, **Normal**, **Below**, or **UNREST** (unrestricted) Softkey. The selection is displayed in the Altitude Mode field. Press the **Back** Softkey to return to the previous level softkeys.
- 6) Press the **Motion** Softkey (if equipped).
- 7) Press one of the following softkeys:
 - Absolute:** Displays the motion vector pointing in the absolute direction.
 - Relative:** Displays the motion vector relative to own aircraft
 - Off:** Disables the display of the motion vector.
- 8) Press the **Back** Softkey to return to the previous level softkeys.
- 9) Press the **TAS STBY** or **Standby** Softkey to place the system in the Standby Mode. 'STANDBY' is displayed in the Traffic Mode field.
- 10) Rotate the **Joystick** clockwise to display a larger area or rotate counter-clockwise to display a smaller area.

System Self Test

- 1) With the Traffic Map Page displayed, set the range to 2/6 nm.
- 2) Press the **Standby** or **TAS STBY** Softkey.
- 3) Press the **Test** Softkey.
- 4) Self test takes approximately eight seconds to complete. When completed successfully, traffic symbols are displayed and a voice alert "TAS System Test OK" is heard. If the self test fails, the system reverts to Standby Mode and a voice alert "TAS System Test Fail" is heard.

Displaying Traffic on the Navigation Map

- 1) Ensure the TAS system is operating. With the Navigation Map displayed, press the **Map Opt** Softkey.
- 2) Press the **Traffic** Softkey. Traffic is now displayed on the map.

TERRAIN AVOIDANCE (TERRAIN PROXIMITY, TERRAIN-SVT, TAWS)



WARNING: Do not use terrain avoidance displays as the sole source of information for maintaining separation from terrain and obstacles. Garmin obtains terrain and obstacle data from third party sources and cannot independently verify the accuracy of the information.



NOTE: Terrain data is not displayed when the aircraft is outside the installed terrain database coverage area.



NOTE: Terrain and obstacle alerting is not available north of 89° North latitude and south of 89° South latitude. This is due to limitations present within the Terrain database and the system's ability to process the data representing the affected areas.

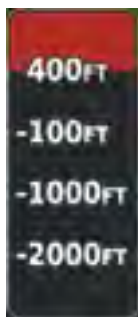
Enabling/disabling relative terrain information on MFD navigation maps

- 1) Press the **Map Opt** Softkey.
- 2) Press the **TER** Softkey to cycle through a terrain option with each press. The selected mode is displayed in cyan: Off, Topo, REL. Press the **TER** Softkey as needed until 'REL' is displayed on the softkey.

Displaying relative terrain information (PFD Maps)

- 1) Press the **Map/HSI** Softkey.
- 2) Press the **Rel Ter** Softkey.

Relative Terrain On-Ground Legend



Relative Terrain In-Air Legend



Relative Terrain Legends (Terrain Proximity, Terrain-SVT, TAWS-B)

Customizing terrain and obstacle display on the Navigation Map Page:

- 1) Select the Navigation Map Page.
- 2) Press the **MENU** Key.
- 3) With 'Map Settings' highlighted, press the **ENT** Key.
- 4) Turn the small **FMS** Knob to select the 'Map' Group and press the **ENT** Key.
- 5) Turn the large **FMS** Knob or press the **ENT** Key to scroll through product selections.
 - Terrain Display – Selects terrain 'Off' for no terrain, 'Topo' for topographic information, or relative terrain 'Rel'. The distance field selects the maximum map range to display terrain information before it is removed from the map.
 - Obstacle Data – Turns the display of obstacles on or off. The distance field selects the maximum map range to display obstacle symbols before they are removed from the map.
- 6) Turn the small **FMS** Knob to scroll through options for each product (ON/OFF, range settings).
- 7) Press the **ENT** Key to select an option.
- 8) Press the **FMS** Knob or **CLR** Key to return to the Navigation Map Page with the changed settings.

Displaying the terrain page (Terrain Proximity, Terrain-SVT, TAWS-B)

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Terrain Proximity, Terrain-SVT, or TAWS-B Page.

Showing/hiding aviation information on the terrain page

- 1) Press the **MENU** Key.
- 2) Turn the **FMS** Knob to highlight 'Show Aviation Data' or 'Hide Aviation Data' (choice dependent on current state) and press the **ENT** Key.

Manually testing the terrain system (TAWS-B only)

- 1) With the aircraft on the ground, select the TAWS-B Page.
- 2) Press the **MENU** Key.
- 3) Turn the FMS Knob to highlight 'Test TAWS System' and press the **ENT** Key to confirm the selection.

Inhibiting/enabling terrain/obstacle alerting (Terrain SVT and TAWS-B only)

- 1) Select the Terrain-SVT or TAWS-B Page.
- 2) Press the **Inhibit** Softkey to inhibit or enable terrain/obstacle alerting.

AUTOMATIC FLIGHT CONTROL SYSTEM



NOTE: If the attitude information required for the default flight director modes becomes invalid or unavailable, the autopilot automatically disengages.

ACTIVATING THE FLIGHT DIRECTOR

An initial press of a key listed in the following table (when the flight director is not active) activates the pilot-side flight director in the listed modes.

Control Pressed	Modes Selected			
	Lateral		Vertical	
FD Key	Roll Hold (default)	ROL	Pitch Hold (default)	PIT
AP Key	Roll Hold (default)	ROL	Pitch Hold (default)	PIT
CWS Button	Roll Hold (default)	ROL	Pitch Hold (default)	PIT
GA Button	Go Around (in air)	GA	Go Around (in air)	GA
ALT Key	Roll Hold (default)	ROL	Altitude Hold	ALT
VS Key	Roll Hold (default)	ROL	Vertical Speed	VS
FLC Key	Roll Hold (default)	ROL	Flight Level Change	FLC
VNV Key	Roll Hold (default)	ROL	Vertical Path Tracking*	VPTH
NAV Key	Navigation**	GPS VOR LOC	Pitch Hold (default)	PIT
BC Key	Backcourse***	BC	Pitch Hold (default)	PIT
APR Key	Approach**	GPS VOR LOC	Pitch Hold (default)	PIT
HDG Key	Heading Select	HDG	Pitch Hold (default)	PIT

*Valid VNV flight plan must be entered before **VNV** Key press activates flight director.

The selected navigation receiver must have a valid VOR or LOC signal or active GPS course before **NAV or **APR** Key press activates flight director.

***The selected navigation receiver must have a valid LOC signal before **BC** Key press activates flight director.

VERTICAL MODES

Vertical Mode	Description	Control	Annunciation	
Pitch Hold	Holds the current aircraft pitch attitude; may be used to climb/descend to the Selected Altitude	(default)	PIT	
Selected Altitude Capture	Captures the Selected Altitude	*	ALTS	
Altitude Hold	Holds the current Altitude Reference	ALT Key	ALT	nnnnn FT
Vertical Speed	Maintains the current aircraft vertical speed; may be used to climb/descend to the Selected Altitude	VS Key	VS	nnnn FPM
Flight Level Change, IAS Hold	Maintains the current aircraft airspeed (in IAS or Mach) while the aircraft is climbing/descending to the Selected Altitude	FLC Key	FLC	nnn KT
Flight Level Change, Mach Hold			FLC	M .nnn

* *ALTS armed automatically when PIT, VS, FLC, TO, or GA active, and under VPTH when Selected Altitude is to be captured instead of VNV Target Altitude*

LATERAL MODES

Lateral Mode	Description	Control	Annunciation	
Roll Hold	Holds the current aircraft roll attitude or rolls the wings level, depending on the commanded bank angle	(default)	ROL	
Heading Select	Captures and tracks the Selected Heading	HDG Key	HDG	
Navigation, GPS Arm/Capture/Track	Captures and tracks the selected navigation source (GPS, VOR, LOC)	NAV Key	GPS	
Navigation, VOR Enroute Arm/Capture/Track			VOR	
Navigation, LOC Arm/Capture/Track (No Glideslope)			LOC	

* *No annunciation appears in the AFCS Status Box. The acceptable bank angle range is indicated in green along the Roll Scale of the Attitude Indicator.*

COMBINATION MODES (VNV, APR, NAV, BC, GA)

Lateral Mode	Description	Control	Annunciation
Vertical Path Tracking	Captures and tracks descent legs of an active vertical profile	VNV Key	VPTH
VNV Target Altitude Capture	Captures the Vertical Navigation (VNV) Target Altitude	*	ALTV
Glidepath	Captures and tracks the SBAS glidepath on approach	APR Key	GP
Glideslope	Captures and tracks the ILS glideslope on approach		GS
Backcourse Arm/Capture/Track	Captures and tracks a localizer signal for backcourse approaches	BC Key	BC
Approach, GPS Arm/Capture/Track	Captures and tracks the selected navigation source (GPS, VOR, LOC)	APR Key	GPS
Approach, VOR Arm/Capture/Track			VAPP
Approach, ILS Arm/Capture/Track (Glideslope Mode automatically armed)			LOC
Go Around**	Commands a constant pitch angle and wings level in the air	GA Button	GA

* *ALTV is armed automatically under VPTH when VNV Target Altitude is to be captured instead of Selected Altitude.*

** *Go Around mode disengages the autopilot unless a compatible lift computer is installed.*

*** *Level mode can only become activated as a function of Electronic Stability and Protection (ESP). Refer to the Additional Features section for a detailed discussion of the optional ESP feature.*

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ADDITIONAL FEATURES

SYNTHETIC VISION



WARNING: Use appropriate primary systems for navigation, and for terrain, obstacle, and traffic avoidance. SVT is intended as an aid to situational awareness only and may not provide the accuracy and/or fidelity upon which to solely base decisions and/or plan maneuvers to avoid terrain, obstacles, or traffic.



WARNING: Do not use SVT runway depiction as the sole means for determining the proximity of the aircraft to the runway or for maintaining the proper approach path angle during landing.

Synthetic Vision Technology (SVT) functionality is offered as an optional enhancement to the system.

SVT is primarily comprised of a computer-generated forward-looking, attitude aligned view of the topography immediately in front of the aircraft from the pilot's perspective. SVT information is shown on the primary flight display (PFD).

In addition to SVT enhancement to the PFD, the following features have been added to the PFD:

- Pathways
- Flight Path Marker
- Horizon Heading Marks
- Terrain and Obstacle Alerting
- Three-dimensional Traffic
- Airport Signs
- Runway Display

Activating and deactivating SVT:

- 1) Press the **PFD Opt** Softkey.
- 2) Press the **SVT** Softkey.
- 3) Press the **Terrain** Softkey. The SVT display will cycle on or off with the **Terrain** Softkey.

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Activating and deactivating Pathways:

- 1) Press the **PFD Opt** Softkey.
- 2) Press the **SVT** Softkey.
- 3) Press the **Pathways** Softkey. The Pathway feature will cycle on or off with the **Pathways** Softkey.

Activating and deactivating Horizon Headings:

- 1) Press the **PFD Opt** Softkey.
- 2) Press the **SVT** Softkey.
- 3) Press the **HDG LBL** Softkey. The horizon heading display will cycle on or off with the **HDG LBL** Softkey.

Activating and deactivating Airport Signs:

- 1) Press the **PFD Opt** Softkey.
- 2) Press the **SVT** Softkey.
- 3) Press the **APT Sign** Softkey. Display of airport signs will cycle on or off with the **APT Sign** Softkey.

TERMINAL PROCEDURE CHARTS



NOTE: With the availability of SafeTaxi®, ChartView, or FliteCharts®, it may be necessary to carry another source of charts on-board the aircraft.

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.

ChartView

ChartView resembles the paper version of Jeppesen terminal procedures charts. The charts are displayed in full color with high-resolution. The MFD depiction shows the aircraft position on the moving map in the plan view of most approach charts and on airport diagrams.

The ChartView database is updated on a 14-day cycle. If the ChartView database is not updated within 70 days of the expiration date, ChartView will no longer function.

FliteCharts®

FliteCharts® resemble the paper version of AeroNav Services terminal procedures charts. The charts are displayed with high-resolution and in color for applicable charts. The MFD depiction shows the aircraft position on the moving map in the plan view of most approach charts and on airport diagrams.

The FliteCharts database contains procedure charts for the United States only. This database is updated on a 28-day cycle. If not updated within 180 days of the expiration date, FliteCharts will no longer function.

Selecting Terminal Procedures Charts:

While viewing the Navigation Map Page, Nearest Airport Page, or Flight Plan Page, select the **Charts** Softkey.

Or:

- 1) Press the **MENU** Key to display the Page Menu.
- 2) Turn the large **FMS** Knob to scroll through the Options Menu to Charts.
- 3) Press the **ENT** Key to display the chart.

Selecting Additional Information:

- 1) While viewing the Airport Taxi Diagram, select the **WX** Softkey to display the information windows (AIRPORT, INFO).
- 2) Press the **FMS** Knob to activate the cursor.
- 3) Turn the large **FMS** Knob to highlight the INFO Box.
- 4) Turn the small **FMS** Knob to select the INFO Box choices. When the INFO Box is selected the G1000NXi softkeys are blank. If multiple choices are available, scroll to the desired choice with the large **FMS** Knob and press the **ENT** Key to complete the selection.
- 5) Press the **FMS** Knob again to deactivate the cursor.

Selecting full screen On or Off:

- 1) While viewing a terminal chart press the **MENU** Key to display the Page Menu OPTIONS.
- 2) Turn the large **FMS** Knob to highlight the Chart Setup Menu Option and press the **ENT** Key.
- 3) Turn the large **FMS** Knob to move between the Full Screen and Color Scheme Options.
- 4) Turn the small **FMS** Knob to choose between the On and Off Full Screen Options.

Selecting Day, Night, or Automatic View:

- 1) While viewing a terminal chart press the **MENU** Key to display the Page Menu OPTIONS.
- 2) Turn the large **FMS** Knob to highlight the Chart Setup Menu Option and press the **ENT** Key.
- 3) Turn the large **FMS** Knob to move to the Color Scheme Option.
- 4) Turn the small **FMS** Knob to choose between Day, Auto, and Night Options.
- 5) If Auto Mode is selected, turn the large **FMS** Knob to select the percentage field. Use the small **FMS** Knob to change the percentage value. The percentage value is the day/night crossover point based on the percentage of backlighting intensity. For example, if the value is set to 15%, the day/night display changes when the display backlight reaches 15% of full brightness.

The display must be changed in order for the new setting to become active. This may be accomplished by selecting another page or changing the display range.

- 6) Press the **FMS** Knob when finished to remove the Chart Setup Menu.

AIRPORT DIRECTORY

The Aircraft Owners and Pilots Association (AOPA) or AC-U-KWIK Airport Directory database offers detailed information regarding services, hours of operation, lodging options, and more for various airports. This information is viewed on the WPT-Airport Information Page.

The Airport Directory databases are revised every 56 days. The Airport Directory is always available for use after the expiration date. Check fly.garmin.com for the current database.

Selecting the Airport Directory Page:

- 1) Turn the large **FMS** Knob to select the 'WPT' page group.
- 2) Turn the small **FMS** Knob to select the Airport Information Page. Initially, information for the airport closest to the aircraft's present position is displayed.
- 3) If necessary, select the Info softkey until **Info 2** is displayed.

SIRIUSXM™ RADIO ENTERTAINMENT

The XM Radio Page provides information and control of the audio entertainment features of the SiriusXM™ Satellite Radio.

Selecting the XM Radio Page

- 1) Turn the large **FMS** Knob to select the Auxiliary Page Group.
- 2) Turn the small **FMS** Knob to select the displayed Aux - XM Radio Page.

Active Channel and Channel List

The Active Channel Box on the XM Radio Page displays the currently selected channel. The Channels List Box of the XM Radio Page shows a list of the available channels for the selected category.

Selecting a channel from the channel list:

- 1) While on the XM Radio Page, select the **Channel** Softkey.
- 2) Select the **CH +** Softkey to go up through the list in the Channel Box, or move down the list with the **CH –** Softkey.

Or:

- 1) Press the **FMS** Knob to highlight the channel list and turn the large **FMS** Knob to scroll through the channels.
- 2) Press the **ENT** Key to activate the selected channel.

Selecting a channel directly:

- 1) While on the XM Radio Page, select the **Channel** Softkey.
- 2) Select the **Direct CH** Softkey. The channel number in the Active Channel Box is highlighted.
- 3) Select the numbered softkeys located on the bottom of the display to directly select the desired channel number.
- 4) Press the **ENT** Key to activate the selected channel.

Selecting a Category

The Category Box of the XM Radio Page displays the currently selected category of audio.

- 1) Select the **Category** Softkey on the XM Radio Page.
- 2) Select the **CAT +** and **CAT –** Softkeys to cycle through the categories.

Or:

Turn the small **FMS** Knob to display the Categories list. Highlight the desired category with the small **FMS** Knob and press the **ENT** Key. Selecting All Categories places all channels in the list.

Setting a preset channel number:

- 1) On the XM Radio Page, while listening to an Active Channel that is wanted for a preset, select the **Presets** Softkey to access the first five preset channels (**Preset 1 - Preset 5**).
- 2) Select the **More** Softkey to access the next five channels (**Preset 6 – Preset 10**), and again to access the last five channels (**Preset 11 – Preset 15**). Selecting the **More** Softkey repeatedly cycles through the preset channels.

- 3) Select any one of the (**Preset 1 - Preset 15**) softkeys to assign a number to the active channel.
- 4) Select the **Set** Softkey on the desired channel number to save the channel as a preset.

Adjusting Volume

- 1) With the XM Radio Page displayed, select the **Volume** Softkey.
- 2) Select the **VOL –** Softkey to reduce volume or select the **VOL +** Softkey to increase volume. (Once the **VOL** Softkey is selected, the volume can also be adjusted using the small **FMS** Knob.)

SiriusXM Radio volume may also be adjusted on each passenger headset.

Mute SiriusXM audio:

- 1) Select the XM Radio Page or XM Information Page.
- 2) Select the **Mute** Softkey to mute the audio. Select the **Mute** Softkey again to unmute the audio.

SCHEDULER

The Scheduler feature can be used to enter and display reminder messages (e.g., Change oil, Switch fuel tanks, or Altimeter-Transponder Check) in the Alerts Window on the PFD. Messages can be set to display based on a specific date and time (event), once the message timer reaches zero (one-time; default setting), or recurrently whenever the message timer reaches zero (periodic). 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

Entering 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 Messages 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 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 messages, use the **FMS** Knob to enter the timer value (HHH: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.

Deleting 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.

SURFACEWATCH (OPTIONAL)

The SurfaceWatch™ feature provides aural and visual annunciations to help the flight crew maintain situational awareness and avoid potential runway incursions and excursions during ground and air operations in the airport environment.

Inhibit/Uninhibit SurfaceWatch:

- 1) Select the Aux - System Setup 1 Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor..
- 3) Turn the large **FMS** Knob to highlight the SurfaceWatch field.
- 3) Turn the small **FMS** Knob to toggle the SurfaceWatch alerts on or off.

PILOT PROFILES

Creating a profile:

- 1) Select the Aux - System Setup Page.
 - 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
 - 3) Turn the large **FMS** Knob to highlight 'Create' in the Crew Profile Box.
 - 4) Press the **ENT** Key. A 'Create Profile' window is displayed.
 - 5) Use the **FMS** Knob to enter a profile name up to 16 characters long and press the **ENT** Key. Crew profile names cannot begin with a blank as the first letter.
 - 6) In the next field, use the small **FMS** Knob to select the desired settings upon which to base the new profile. Profiles can be created based on Garmin factory defaults, default profile settings (initially based on Garmin factory defaults unless edited by the pilot), or other previously created profile settings.
 - 7) Press the **ENT** Key.
 - 8) With 'Create' highlighted, press the **ENT** Key to create the profile
- Or:**
- Use the large **FMS** Knob to select 'Create & Activate' and press the **ENT** Key to activate the new profile.
- 9) To cancel the process, select 'Cancel' with the large FMS Knob and press the **ENT** Key.

Selecting an active profile:

- 1) Select the Aux - System Setup Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight the active profile field in the Crew Profile Box.
- 4) Turn the small **FMS** Knob to display the crew profile list and highlight the desired profile.
- 5) Press the **ENT** Key. The system loads and displays the system settings for the selected profile.

Renaming a profile:

- 1) Select the Aux - System Setup Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight 'Rename' in the Crew Profile Box.
- 4) Press the **ENT** Key.
- 5) In the 'Rename Profile' window, turn the **FMS** Knob to select the profile to rename.
- 6) Press the **ENT** Key.
- 7) Use the **FMS** Knob to enter a new profile name up to 16 characters long and press the **ENT** Key.
- 8) With 'Rename' highlighted, press the **ENT** Key.
- 9) To cancel the process, use the large **FMS** Knob to select 'Cancel' and press the **ENT** Key.

Deleting a profile:

- 1) Select the Aux - System Setup Page.
- 2) Press the **FMS** Knob momentarily to activate the flashing cursor.
- 3) Turn the large **FMS** Knob to highlight 'Delete' in the Crew Profile Box.
- 4) Press the **ENT** Key.
- 5) In the 'Delete Profile' window, turn the **FMS** Knob to select the profile to delete.
- 6) Press the **ENT** Key.

- 7) With 'Delete' highlighted, press the **ENT** Key.
- 8) To cancel the process, use the large **FMS** Knob to select 'Cancel' and press the **ENT** Key.

Importing a profile from an SD card:

- 1) Insert an SD card containing the crew profile(s) into the top card slot on the MFD.
 - 2) Turn the **FMS** Knob to select the Aux - System Setup Page.
 - 3) Select the **Import** Softkey.
- Or:**
- a) Press the **MENU** Key.
 - b) Turn the **FMS** Knob to highlight 'Import Crew Profile' and press the **ENT** Key.
- 4) The system displays the Crew Profile Importing window with 'Import' highlighted. Turn the large **FMS** Knob to highlight the 'Profile Name' field, then scroll to the desired profile name with the large and small FMS Knobs, then press the **ENT** Key. Then press the **ENT** Key with 'Import' highlighted.
 - 7) If the imported profile name is the same as an existing profile on the system, the system displays an 'Overwrite existing profile? OK or CANCEL' prompt. Press the **ENT** Key to replace profile on the system with the profile imported from the SD card, or turn the **FMS** Knob to highlight 'CANCEL' and press the **ENT** Key to return to the Crew Profile Importing window.
 - 8) If successful, the system displays 'Crew profile import succeeded.' in the window below. With 'OK' highlighted, press the **ENT** or **CLR** Keys or press the **FMS** Knob to return to the Aux - System Setup Page. The imported profile becomes the active profile.

Exporting a profile to an SD card:

- 1) Insert the SD card for storing the Crew Profile into the top card slot on the MFD.
 - 2) Turn the **FMS** Knob to select the Aux - System Setup Page.
 - 3) Select the **Export** Softkey. The system displays the Crew Profile Exporting window.
- Or:**

- a) Press the **MENU** Key.
 - b) Turn the **FMS** Knob to highlight 'Export Crew Profile' and press the **ENT** Key.
- 5) To export the crew profile using the current selected profile, press the **ENT** Key with 'Export' highlighted. To change the selected profile, turn the large **FMS** Knob to highlight the 'Profile Name' field, then scroll to the desired profile name with the large and small FMS Knobs, then press the **ENT** Key. Then press the **ENT** Key with 'Export' highlighted.
 - 6) If the selected profile to be exported is the same as an existing profile file name on the SD card, the system displays an 'Overwrite existing profile? OK or CANCEL' prompt. Press the **ENT** Key to replace the profile on the SD card with the profile to be exported, or turn the FMS Knob to highlight 'CANCEL' and press the **ENT** Key to return to the Pilot Profile Exporting window without exporting the profile.
 - 7) If successful, the window displays 'Crew profile export succeeded.' With 'OK' highlighted, press the **ENT** or **CLR** Keys, or press the **FMS** Knob to return to the Aux - System Setup Page.

BLUETOOTH[®] MANAGEMENT

The Connex Setup Page allows for setting up the installed optional Flight Stream device for a Bluetooth connection between the system and a mobile device running the Garmin Pilot[™] application.

The mobile device must be 'paired' with the system in order to use the various functions. Pairing is accomplished by first placing the system in pairing mode by displaying the Connex Setup Page. The system is 'discoverable' whenever this page is displayed. The pairing operation is completed from the mobile device and the Garmin Pilot application. See the device Bluetooth pairing instructions and the connection instructions in the Garmin Pilot application.

Viewing the Connex Setup Page

- 1) Turn the large **FMS** Knob on the MFD to select the Aux page group.
- 2) Turn the small **FMS** Knob to select the Connex Setup page.

Changing the Bluetooth Name

- 1) While viewing the Connex Setup Page, press the **FMS** Knob to activate the cursor.
- 2) Turn the large **FMS** Knob to place the cursor in the 'Bluetooth Name' field.

- 3) Enter the desired name by using the large **FMS** Knob to select the character field, and the small **FMS** Knob select the desired alphanumeric character for that field.
- 4) Press the **ENT** Key. The cursor is removed and the new name is displayed.

Enabling/Disabling Flight Plan Importing from Garmin Pilot

- 1) While viewing the Connex Setup Page, press the **FMS** Knob to activate the cursor.
- 2) Turn the large **FMS** Knob to place the cursor in the 'Flight Plan Import' field.
- 3) Turn the small **FMS** Knob to select 'Enabled' or 'Disabled'.
- 4) Press the **FMS** Knob to remove the cursor.

Enabling/Disabling Automatic Reconnection of a Specific Paired Device

- 1) While viewing the Connex Setup Page, press the **FMS** Knob to activate the cursor.
- 2) Turn the large **FMS** Knob to highlight the desired paired device.
- 3) Turn the small **FMS** Knob to select 'Enabled' or 'Disabled'. Selecting 'Enabled' allows the system to automatically connect to a previously paired device when detected.
- 4) Press the **FMS** Knob to remove the cursor.

Remove a Specific Paired Device from the List of Paired Devices:

- 1) While viewing the Connex Setup Page, press the **FMS** Knob to activate the cursor.
- 2) Turn the large **FMS** Knob to highlight the desired paired device.
- 3) Press the **Remove** Softkey. A confirmation screen is displayed.
- 4) If necessary, turn the large **FMS** Knob to select 'YES'.
- 5) Press the **ENT** Key to remove the device from the list of paired devices.

ELECTRONIC CHECKLISTS



NOTE: The checklists presented here are for example only and may not reflect checklists actually available for the Cessna NAV III Aircraft. This material is not intended to replace the checklist information presented in the AFM or the Pilot Safety and Warning Supplements document.



NOTE: Garmin is not responsible for the content of checklists. Cessna NAV III Aircraft checklists are created, modified, and updated by the aircraft manufacturer.

The optional checklist functions are displayed on two levels of softkeys that are available on any MFD page.

The MFD is able to display optional electronic checklists which allow a pilot to quickly find the proper procedure on the ground and during each phase of flight. The system accesses the checklists from an SD card inserted into the bezel slot. If the SD card contains an invalid checklist file or no checklist, the Power-up Page messages display 'Checklist File: Invalid' or 'Checklist File: N/A (not available)' and the **Checklist** Softkey is not available.

Accessing and navigating checklists:

- 1) From any page on the MFD, press the **Checklist** Softkey or turn the large **FMS** Knob to select the Checklist Page.
- 2) Turn the large **FMS** Knob to select the 'Group' field.
- 3) Turn the small **FMS** Knob to select the desired procedure and press the **ENT** Key.
- 4) Turn the large **FMS** Knob to select the 'Checklist' field.
- 5) Turn the **FMS** Knob to select the desired checklist and press the **ENT** Key. The selected checklist item is indicated with white text surrounded by a white box.
- 6) Press the **ENT** Key or **Check** Softkey to check the selected checklist item. The line item turns green and a checkmark is placed in the associated box. The next line item is automatically selected for checking.

Either **FMS** Knob can be used to scroll through the checklist and select the desired checklist item.

Press the **CLR** Key or **Uncheck** Softkey to remove a check mark from an item.

- 7) When all checklist items have been checked, '*Checklist Finished*' is displayed in green text at the bottom left of the checklist window. If all items in the checklist have not be checked, '*CHECKLIST NOT FINISHED*' will be displayed in yellow text.
- 8) Press the **ENT** Key. 'GO TO NEXT CHECKLIST?' will be highlighted by the cursor.
- 9) Press the **ENT** Key to advance to the next checklist.
- 10) Press the **EXIT** Softkey to exit the Checklist Page and return to the page last viewed.

Immediately Accessing Emergency Procedures

- 1) From any page on the MFD, press the **Checklist** Softkey or turn the large **FMS** Knob to select the Checklist Page.
- 2) Press the **Emergency** Softkey.
- 3) Turn the **FMS** Knob to select the desired emergency checklist and press the **ENT** Key.
- 4) Press the **ENT** Key or **Check** Softkey to check the selected emergency checklist item. The line item turns green and a checkmark is placed in the box next to it. The next line item is automatically highlighted for checking. Either **FMS** Knob can be used to scroll through the checklist and select the desired checklist item.
Press the **CLR** Key or **Uncheck** Softkey to remove a check mark from an item.
- 5) When all checklist items have been checked, '*Checklist Finished*' is displayed in green text at the bottom left of the checklist window. If all items in the checklist have not be checked, '*CHECKLIST NOT FINISHED*' will be displayed in yellow text.\
- 6) Press the **ENT** Key. 'GO TO NEXT CHECKLIST?' will be highlighted by the cursor.
- 7) Press the **ENT** Key to advance to the next checklist.
- 8) Press the **Return** Softkey to return to the previous checklist.
- 9) Press the **Exit** Softkey to exit the Checklist Page and return to the page last viewed.

AUXILIARY VIDEO (OPTIONAL)

There are four modes of operation of the optional auxiliary video display: Full-Screen, Full-Screen with Digital Zoom, Split-Screen with Map, and Split-Screen with Map and Digital Zoom.

Displaying auxiliary video:

- 1) Turn the large **FMS** Knob to select the Aux page group.
- 2) Turn the small **FMS** Knob to select Video and display the Aux-Video Page.

Selecting video menu options:

- 1) While viewing the Aux - Video Page press the **MENU** Key to display the Page Menu Options.
- 2) Turn the large **FMS** Knob to highlight the desired video adjustment option and press the **ENT** Key.

Once the **ENT** key is pressed on any option, the page menu closes and returns to the Aux - Video Page.

Video Setup

Video brightness, contrast, and saturation may be adjusted by selecting the setup function. While viewing the setup function softkeys, after 45 seconds of softkey inactivity, the system reverts to the Aux - Video Page softkeys.

Adjusting the video settings:

- 1) With the Aux-Video Page displayed, press the **Setup** Softkey.
- 2) Press the **Bright -** or **Bright +**, to adjust display brightness in five percent increments from 0 to 100%.
- 3) Press the **Contrast-** or **Contrast +**, to adjust display contrast in five percent increments from 0 to 100%.
- 4) Press the **SAT -** or **SAT +**, to adjust display saturation in five percent increments from 0 to 100%.
- 5) If desired, return the display to the default settings by pressing the **Reset** Softkey.
- 6) Press the **Back** Softkey to return to the previous softkey level.

Display Selection

Pressing the **Hide Map** Softkey removes the map and displays video on the full screen. The softkey label changes to grey with black characters. Pressing the **Hide Map** Softkey again restores the map view and the small video image. The softkey label returns to white characters on a black background.

Zoom/Range

Pressing the **Zoom +** or **Zoom -** Softkeys increases or decreases video display magnification between 1x and 10x.

The **RANGE** Knob can be used to increase or decrease the range setting on the map display or zoom in and out on the video display. While in the Split-Screen mode, pressing the **Map Actv** or **Vid Actv** Softkey determines which display the **RANGE** Knob adjusts. Pressing the softkey to display Map Actv allows the **RANGE** Knob to control the range setting of the map display. Pressing the softkey to display Vid Actv allows the **RANGE** Knob to control the zoom setting of the video display.

Input Selection

While on the Aux - Video Page, press the **Input** Softkey to select the EVS or Aux video source.



NOTE: Images provided on the Aux-Video page are for supplemental use only.

Flight
Instruments

EIS

Nav/Com/
XPDR/Audio

Flight
Management

Hazard
Avoidance

AFCs

Additional
Features

Abnormal
Operation

Annun/Alerts

Appendix

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