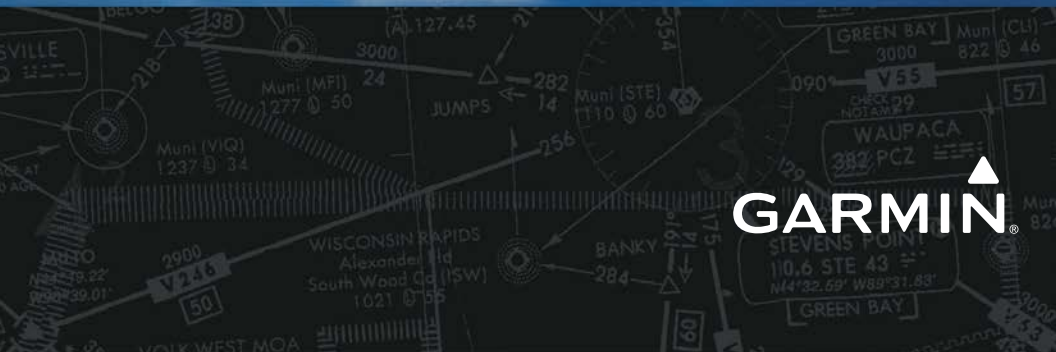




G1000® Integrated Flight Deck

Cockpit Reference Guide for the Beechcraft G58



GARMIN ▲

FLIGHT INSTRUMENTS

ENGINE INDICATION SYSTEM

NAV/COM/TRANSPONDER/AUDIO PANEL

AUTOMATIC FLIGHT CONTROL SYSTEM

GPS NAVIGATION

FLIGHT PLANNING

PROCEDURES

HAZARD AVOIDANCE

ADDITIONAL FEATURES

ABNORMAL OPERATION

ANNUNCIATIONS & ALERTS

APPENDIX

INDEX

Copyright © 2005, 2007-2012, 2019 Garmin Ltd. or its subsidiaries. All rights reserved.

This manual reflects the operation of System Software version 0857.10 or later for the Beechcraft G58 . Some differences in operation may be observed when comparing the information in this manual to earlier or later software versions.

Garmin International, Inc.

1200 East 151st Street
Olathe, Kansas 66062, U.S.A.

Garmin (Europe) Ltd.

Liberty House, Hounsdown Business Park
Southampton, Hampshire SO40 9LR U.K.

Garmin AT, Inc.

2345 Turner Road SE
Salem, OR 97302, U.S.A.

Garmin Corporation

No. 68, Zhangshu 2nd Road
Xizhi District, New Taipei City, Taiwan

**Contact Garmin Product Support or view warranty information at
www.flygarmin.com.**

Except as expressly provided herein, no part of this manual may be reproduced, copied, transmitted, disseminated, downloaded or stored in any storage medium, for any purpose without the express written permission of Garmin. Garmin hereby grants permission to download a single copy of this manual and of any revision to this manual onto a hard drive or other electronic storage medium to be viewed for personal use, provided that such electronic or printed copy of this manual or revision must contain the complete text of this copyright notice and provided further that any unauthorized commercial distribution of this manual or any revision hereto is strictly prohibited.

Garmin® is a registered trademark of Garmin Ltd. or its subsidiaries, and G1000® is a trademark of Garmin Ltd. or its subsidiaries. These trademarks may not be used without the express permission of Garmin.

Bendix/King® and Honeywell® are registered trademarks of Honeywell International, Inc.; Becker® is a registered trademark of Becker Flugfunkwerk GmbH; NavData® is a registered trademark of Jeppesen, Inc. SiriusXM Weather and SiriusXM Satellite Radio are provided by SiriusXM Satellite Radio, Inc.

AOPA Membership Publications, Inc. and its related organizations (hereinafter collectively "AOPA") expressly disclaim all warranties, with respect to the AOPA information included in this data, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information is provided "as is" and AOPA does not warrant or make any representations regarding its accuracy, reliability, or otherwise. Under no circumstances including negligence, shall AOPA be liable for any incidental, special or consequential damages that result from the use or inability to use the software or related documentation, even if AOPA or an AOPA authorized representative has been advised of the possibility of such damages. User agrees not to sue AOPA and, to the maximum extent allowed by law, to release and hold harmless AOPA from any causes of action, claims or losses related to any actual or alleged inaccuracies in the information. Some jurisdictions do not allow the limitation or exclusion of implied warranties or liability for incidental or consequential damages so the above limitations or exclusions may not apply to you.

AC-U-KWIK and its related organizations (hereafter collectively "AC-U-KWIK Organizations") expressly disclaim all warranties with respect to the AC-U-KWIK information included in this data, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information is provided "as is" and AC-U-KWIK Organizations do not warrant or make any representations regarding its accuracy, reliability, or otherwise. Licensee agrees not to sue AC-U-KWIK Organizations and, to the maximum extent allowed by law, to release and hold harmless AC-U-KWIK Organizations from any cause of action, claims or losses related to any actual or alleged inaccuracies in the information arising out of Garmin's use of the information in the datasets. Some jurisdictions do not allow the limitation or exclusion of implied warranties or liability for incidental or consequential damages so the above limitations or exclusions may not apply to licensee.

Printed in the U.S.A



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 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: *Do not rely on the autopilot to level the aircraft at the MDA/DH when flying 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: *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: *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: 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: Do not use TAWS information for primary terrain or obstacle avoidance. TAWS is intended only to enhance situational awareness.



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.



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



CAUTION: Do not allow repairs to be made by anyone other than an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and affect the airworthiness of the aircraft.



CAUTION: Never disconnect power to the system when loading a database. Power interruption during the database loading process could result in maintenance being required to reboot the system.



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 that have a Type 2 Letter of Authorization (LOA) from the FAA are assured compliance with all data quality requirements (DQRs). A copy of the Type 2 LOA is available for each applicable database and can be viewed at <http://fly.garmin.com> by selecting 'Aviation Database Declarations.'
- 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 pertinent aircraft documents and regulatory guidance or limitations as applicable to the pilot, the aircraft, and installed equipment.



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.



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: Electronic aeronautical charts displayed on this system have been shown to meet the guidance in AC 120-76D as a Type B Electronic Flight Bag (EFB) for FliteCharts and ChartView. The accuracy of the charts is subject to the chart data provider. Own-ship position on airport surface charts cannot be guaranteed to meet the accuracy specified in AC 120-76D. Possible additional requirements may make a secondary source of aeronautical charts, such as traditional paper charts or an additional electronic display, necessary on the aircraft and available to the pilot. If the secondary source of aeronautical charts is a Portable Electronic Device (PED), its use must be consistent with the guidance in AC 120-76D.



NOTE: The navigation databases used in Garmin navigation systems contain Special Procedures. Prior to flying these procedures, pilots must have specific FAA authorization, training, and possession of the corresponding current, and legitimately-sourced chart (approach plate, etc.). Inclusion of the Special Procedure in the navigation database DOES NOT imply specific FAA authorization to fly the procedure.



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.



NOTE: The nose of the 'own ship' symbol represents the location of the aircraft. The center of any traffic symbol represents the location of that traffic. The traffic and own ship symbols are an abstract representation and do not reflect the physical extent of the aircraft/traffic, and should not replace other methods for identifying traffic.



NOTE: Lamp(s) inside this product contain mercury (HG) and must be recycled or disposed of according to local, state, or federal laws. For more information, refer to our website at www.garmin.com/en-US/company/environment/recycling



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 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..

Blank Page

SOFTWARE LICENSE AGREEMENT

BY USING THE DEVICE, COMPONENT OR SYSTEM MANUFACTURED OR SOLD BY GARMIN ("THE GARMIN PRODUCT"), YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY. Garmin Ltd. and its subsidiaries ("Garmin") grants you a limited license to use the software embedded in the Garmin Product (the "Software") in binary executable form in the normal operation of the Garmin Product. Title, ownership rights, and intellectual property rights in and to the Software remain with Garmin and/or its third-party providers. You acknowledge that the Software is the property of Garmin and/or its third-party providers and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and code of the Software are valuable trade secrets of Garmin and/or its third-party providers and that the Software in source code form remains a valuable trade secret of Garmin and/or its third-party providers. You agree not to reproduce, decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America.

Blank Page

Record of Revisions				
Part Number	Revision	Date	Page Range	Description
190-00526-00	A	October, 2005	All	Initial release.
190-00526-01	A	December, 2007	All	Changed to smaller format Added Airways, WAAS, VNAV, and Charts Updated G1000 System Messages Added other GDU 8.10 parameters
	B	December, 2007	All	Removed FD Formatting feature
190-00526-02	A	May, 2010	All	Added GDU 11.01 parameters Added Synthetic Vision System Added flight plan import/export Updated procedure for entering User Waypoints Updated XM weather products Updated TAWS annunciations Added CDI operation in Dead Reckoning mode Added AOPA Airport Directory Added temporary user waypoints Added database synchronization Added GTS 820 TAS Removed support for non-WAAS systems Various clerical corrections
190-00526-03	A	March, 2012	All	Added Profile View Added new weather product symbols and legend Added MV DB update procedure Added other GDU 11.13 parameters

Record of Revisions				
Part Number	Revision	Date	Page Range	Description
190-00526-04	A	June, 2019	All	Added Software License Agreement Updated Warnings, Cautions, and Notes section Added support for ADS-B out Added User Defined Holds Updated Approach types Added Temperature Compensated Altitudes Updated TAWS-B information Updated Transponder information Updated Sirius XM radio information Updated to GDU SW version 13.31
	B	June, 2019	All	Updated FliteCharts Information

Flight Instruments	1
Selecting the Altimeter Barometric Pressure Setting	1
Selecting Standard Barometric Pressure (29.92 in Hg)	1
Change Altimeter Barometric Pressure Setting Units	1
Change Navigation Sources	1
Enable/Disable OBS Mode While Navigating with GPS	2
Generic Timer	2
Configure Vspeed Bugs Individually	2
Set Barometric Minimum Descent Altitude	3
Displaying Wind Data	3
Changing HSI Format	3
Engine Indication System	5
Engine Display	5
Lean Engine Display	6
Engine System Display	8
Nav/Com/Transponder/Audio Panel	9
ADF Tuning (Optional)	9
DME Tuning (Optional)	9
Selecting A Transponder Mode	9
Enter a Transponder Code	9
Selecting a COM Radio	10
Selecting a NAV Radio	10
NAV/COM Tuning	10
Split COM	10
Digital Clearance Recorder and Player	11
Intercom System (ICS) Isolation	11
Automatic Flight Control System	13
Flight Director Activation	13
Vertical Modes	14
Lateral Modes	15
GPS Navigation	17
Direct-to Navigation	17
Activate a Stored Flight Plan	18
Activate a Flight Plan Leg	18
Stop Navigating a Flight Plan	19
Vertical Navigation (VNAV)	19
Altitude Constraints	20

Flight Planning	25
Trip Planning	25
Create a User Waypoint Defined by Latitude & Longitude	27
Create a User Waypoint Defined by Radials from Other Waypoints	27
Create a User Waypoint Defined by a Radial & Distance from Another Waypoint ..	29
Delete a User Waypoint	30
Create a Flight Plan	31
Import a Flight Plan from an SD Card	32
Insert a Waypoint in the Active Flight Plan	33
Enter an Airway in a Flight Plan	33
Invert An Active Flight Plan	34
Entering An Along Track Offset Distance	34
Remove a Departure, Arrival, Approach, or Airway from a Flight Plan	35
User Defined Holding Patterns	35
Activating Temperature Compensated Altitude	38
Cancelling Temperature Compensated Altitude	38
Store a Flight Plan	39
Edit a Stored Flight Plan	39
Delete a Waypoint from the Flight Plan	39
Invert and Activate a Stored Flight Plan	40
Copy a Flight Plan	40
Delete a Flight Plan	40
Graphical Flight Plan Creation	41
Export a Flight Plan to an SD Card	41
 Procedures	 43
Load and Activate a Departure Procedure	43
Activate A Departure Leg	43
Load An Arrival Procedure	43
Activate An Arrival Leg	44
Load and/or Activate an Approach Procedure	45
Approach Type and Downgrade Support	46
Activate An Approach in the Active Flight Plan	46
Activate a Vector to Final Approach Fix	46
Activate A Missed Approach in the Active Flight Plan	47
 Hazard Avoidance	 49
Customizing the Hazard Displays on the Navigation Map	49
STORMSCOPE® (Optional)	49
SiriusXM Weather (Optional)	51
Traffic Systems	53
Terrain Awareness & Warning System (TAWS-B) Display	55
Airborne Color Weather Radar	57

Additional Features	63
Synthetic Vision	63
Terminal Procedure Charts	64
Airport Directory	67
SiriusXM Radio Entertainment	68
Pilot Profiles	70
Abnormal Operation	75
Reversionary Mode	75
Abnormal COM Operation	75
Hazard Displays with Loss of GPS Position	75
Unusual Attitudes	76
Dead Reckoning	77
Annunciations & Alerts	79
WARNING Annunciation	79
CAUTION Annunciation	79
ADVISORY Annunciation	80
Alert Message	80
AFCS ALERTS	80
TAWS-B Alerts	81
TAWS-B System Status Annunciations	83
Voice Alerts	84
MFD & PFD Message Advisories	85
Database Message Advisories	86
GMA 1347 Message Advisories	88
GIA 63W Message Advisories	89
GEA 71 Message Advisories	92
GTX 33 Message Advisories	92
GRS 77 Message Advisories	93
GDC 74A Message Advisories	94
GMU 44 Message Advisories	94
GDL 69/69A Message Advisories	94
GWX 68 Message Advisories	94
GTS 820 Message Advisories	95
Miscellaneous Message Advisories	95
Flight Plan Import/Export Messages	99
Pilot Profile Import/Export Messages	101

Appendix	103
PFD Softkey Map	103
MFD Softkey Map	108
Database Updates	111
Index	Index-1

FLIGHT INSTRUMENTS



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.

SELECTING THE ALTIMETER BAROMETRIC PRESSURE SETTING

Turn the **BARO** Knob to select the desired setting.

SELECTING STANDARD BAROMETRIC PRESSURE (29.92 IN HG)

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

CHANGE ALTIMETER BAROMETRIC PRESSURE SETTING UNITS

- 1) Press the **PFD** Softkey to display the second-level softkeys.
- 2) Press the **ALT UNIT** Softkey.
- 3) Press the **IN** Softkey to display the barometric pressure setting in inches of mercury (in Hg).

Or:

Press the **HPA** Softkey to display the barometric pressure setting in hectopascals.

- 4) Press the **BACK** Softkey to return to the top-level softkeys.

CHANGE NAVIGATION SOURCES

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

ENABLE/DISABLE OBS MODE WHILE NAVIGATING WITH GPS

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

GENERIC TIMER

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

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

SET BAROMETRIC MINIMUM DESCENT ALTITUDE

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

DISPLAYING WIND DATA

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

CHANGING HSI FORMAT

- 1) Press the **PFD** Softkey.
 - 2) Press the **HSI FRMT** Softkey.
 - 3) Press the **360 HSI** Softkey to display the full size HSI.
- Or:**
Press the **ARC HSI** Softkey to display the arc style HSI.

Flight Instruments

EIS

Nav/Com/
XPDR/Audio

AFCs

GPS Nav

Flight
Planning

Procedures

Hazard
Avoidance

Additional
Features

Abnormal
Operation

Annun/
Alerts

Appendix

Index

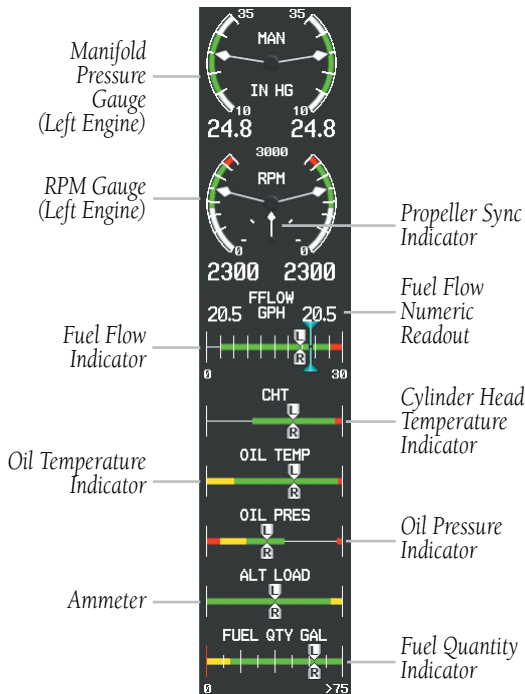
Blank Page

ENGINE INDICATION SYSTEM

ENGINE DISPLAY

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

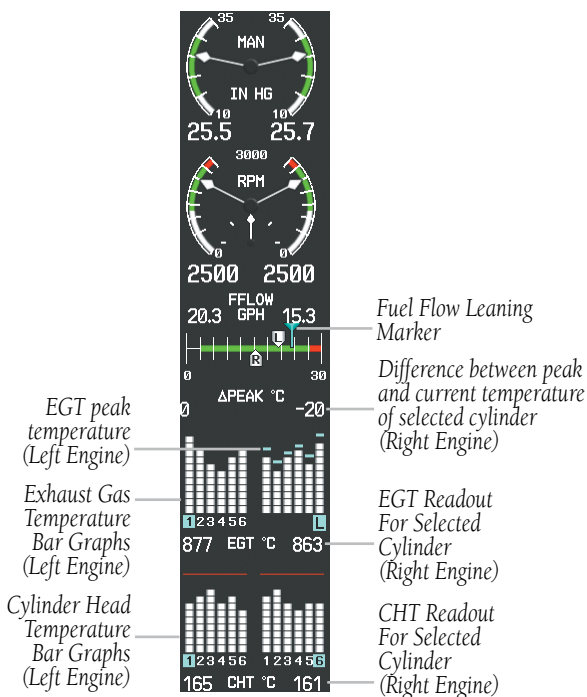
Pressing the **ENGINE** Softkey makes available the **LEAN** and **SYSTEM** softkeys which in turn provide access to the Lean Page and the System Page, respectively.



Default Engine Page

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

LEAN ENGINE DISPLAY



Lean Engine Display

Accessing the EIS Lean Display:

- 1) Press the **ENGINE** Softkey.
- 2) Press the **LEAN** Softkey.
- 3) To return to the default Engine Display, press the **ENGINE** or **BACK** Softkey.

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

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 above the EGT bar graph.

As the mixture is leaned, a light blue line will appear above each cylinder to indicate EGT peak.

When the system detects the first cylinder to peak, the cylinder numbers below the EGT graph disappear, and the letter "R" is annunciated below the first peaked cylinder to indicate the other cylinders are rich of peak. As the mixture is further leaned, the letter "L" is annunciated below the last peaked cylinder indicating all cylinders are lean of peak. Refer to the POH and AFM for the recommended mixture adjustment procedures.

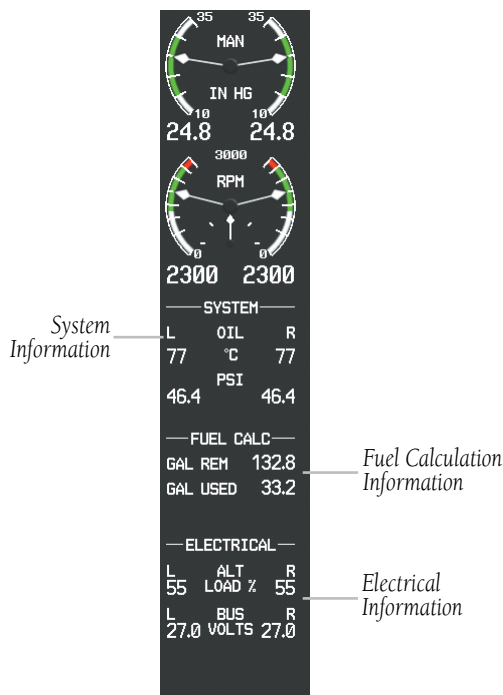
Monitoring of the cylinder continues until the **ASSIST** Softkey is pressed again which disables lean assist and removes the peak lines from the bar graph and the temperature deviation from peak (Δ PEAK). The system then returns to seeking the hottest cylinder.

ENGINE SYSTEM DISPLAY

- 1) Press the **ENGINE** Softkey, then the **SYSTEM** Softkey to display the SYSTEM Engine Page.
- 2) If desired, use the **DEC FUEL**, **INC FUEL**, **166 GAL**, and **194 GAL** softkeys to adjust the amount of fuel remaining for totalizer calculations.



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



SYSTEM Engine Page

NAV/COM/TRANSPONDER/AUDIO PANEL

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 A TRANSPONDER MODE

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

The transmission of the ADS-B information is enabled/disabled by pressing the **ADS-B TX** Softkey. ADS-B transmission defaults to enabled at each power cycle.

ENTER A TRANSPONDER CODE

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

SELECTING A COM RADIO

Transmit/Receive

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

Receive Only

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

SELECTING A NAV RADIO

- 1) To begin navigating using a navigation radio, press the **CDI** Softkey on the PFD to select VOR1/LOC1 (NAV1) or VOR2/LOC2 (NAV2).
- 2) Press the **NAV1**, **NAV2**, **DME**, or **ADF** Key on the audio panel to select or deselect the navigation radio audio source. All radio keys can be selected individually or together.

NAV/COM TUNING

- 1) Press the small tuning knob to select the desired radio for tuning. A light blue box highlights the radio frequency to be tuned.
- 2) Turn the respective tuning knobs to enter the desired frequency into the standby frequency field. The large knob enters MHz and the small knob enters kHz.
- 3) Press the **Frequency Transfer** Key to place the frequency into the active frequency field.

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, ADF, 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 Instruments
- EIS
- Nav/Com/XPDR/Audio**
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page

AUTOMATIC FLIGHT CONTROL SYSTEM



NOTE: If sensor information (other than attitude) required for a flight director mode becomes invalid or unavailable, the flight director automatically reverts to the default mode for that axis.



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

FLIGHT DIRECTOR ACTIVATION

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 Switch	Roll Hold (default)	ROL	Pitch Hold (default)	PIT
GA Switch	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
VNV Key	Roll Hold (default)	ROL	Vertical Path Tracking*	VPTH
NAV Key	Navigation**	GPS VOR LOC	Pitch Hold (default)	PIT
APR Key	Approach**	GPS VAPP LOC	Pitch Hold (default) Glidepath Glideslope	PIT GP GS
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.

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 Armed	AFCS armed to capture the altitude displayed in the Selected Altitude window	*	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	Maintains the current aircraft airspeed in IAS while the aircraft is climbing/descending to the Selected Altitude	FLC Key	FLC	nnn KT
VNAV	Captures and tracks the VNAV flight path	VNV Key	VPTH	
VNAV Target Altitude Armed (GDU 1045 only)	AFCS armed to capture the altitude displayed in the VNAV Target Altitude window	**	ALTV	
Glidepath	Captures and tracks the SBAS glidepath on approach	APR Key	GP	
Glideslope	Captures and tracks the ILS glideslope on approach		GS	
Go Around	Disengages the autopilot and commands a constant pitch attitude and wings level	GA Switch	GA	

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

** ALTV armed automatically under VPTH when VNAV Target Altitude is to be captured instead of Selected 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	Captures and tracks the selected navigation source (GPS, VOR, LOC)	NAV Key	GPS
Navigation, VOR (Enroute Mode)			VOR
Navigation, LOC (Glideslope will not arm or capture)			LOC
Navigation, Backcourse			BC
Approach, GPS (Glidepath mode automatically armed if vertical guidance is available)	Captures and tracks the selected navigation source (GPS, VOR, LOC)	APR Key	GPS
Approach, VOR			VAPP
Approach, LOC (Glideslope Mode automatically armed)			LOC
Go Around	Disengages the autopilot and commands a constant pitch angle and wings level	GA Switch	GA


- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS**
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page


GPS NAVIGATION

DIRECT-TO NAVIGATION

Direct-to Navigation from the MFD

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

Direct-to Navigation from the PFD

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

- 7) Turn the small **FMS** Knob to enter the desired altitude.
- 8) Press the **ENT** Key. If the waypoint entered is an airport, the option to select MSL or AGL is now displayed. If the waypoint is not an airport, proceed to step 10.
- 9) Turn the small **FMS** Knob to select 'MSL' or 'AGL'.
- 10) Press the **ENT** Key. The cursor is placed in the OFFSET distance field.
- 11) Turn the small **FMS** Knob to enter the desired target altitude offset from the selected Direct-to.
- 12) Press the **ENT** Key to highlight 'Activate?' or turn the large **FMS** Knob to highlight the 'CRS' field.
- 13) Turn the small **FMS** Knob to enter the desired course to the waypoint.
- 14) Press the **ENT** Key to highlight 'ACTIVATE?'.
- 15) Press the **ENT** again to activate the Direct-to.

ACTIVATE A STORED FLIGHT PLAN

- 1) Press the **FPL** Key on the MFD and turn the small **FMS** Knob to display the Flight Plan Catalog Page.
- 2) Press the **FMS** Knob to activate the cursor.
- 3) Turn the large **FMS** Knob to highlight the desired flight plan
- 4) Press the **ACTIVE** Softkey. The confirmation window is now displayed.
- 5) With 'OK' highlighted, press the **ENT** Key to activate the flight plan. To cancel the flight plan activation, turn the large **FMS** Knob to highlight 'CANCEL' and press the **ENT** Key.

ACTIVATE A FLIGHT PLAN LEG

- 1) From the Active Flight Plan Page, press the **FMS** Knob to activate the cursor and turn the large **FMS** Knob to highlight the desired waypoint.
- 2) Press the **ACT LEG** Softkey on the MFD.
OR
- 3) Press the **MENU** Key, select the 'Activate Leg' option from the page menu and press the **ENT** Key. This step must be used when activating a leg from the PFD.
- 4) With 'Activate' highlighted, press the **ENT** Key.

STOP NAVIGATING A FLIGHT PLAN

- 1) Press the **FPL** Key to display the Active Flight Plan Page.
- 2) Press the **MENU** Key to display the Page Menu Window.
- 3) Turn the large **FMS** Knob to highlight 'Delete Flight Plan' and press the **ENT** Key. With 'OK' highlighted, press the **ENT** Key to deactivate the flight plan. This does not delete the stored flight plan, only the active flight plan.

VERTICAL NAVIGATION (VNAV)

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 CURRENT VNV PROFILE box (defaults first waypoint in the active flight plan with an altitude enabled for vertical navigation (e.g., HABUK)).

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.

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.



NOTE: The selected waypoint must have a designated altitude constraint (light blue number) to be used. If not, the first waypoint in the flight plan with a designated altitude constraint is selected.

- 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 CURRENT VNV PROFILE box.
- 3) Turn the **FMS** Knobs as needed to edit the values.
- 4) Press the **FMS** Knob to remove the flashing cursor.

ALTITUDE CONSTRAINTS

The G1000 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. The navigation database only contains altitudes for procedures that call for “Cross at” altitudes. If the procedure states “Expect to cross at,” then the altitude is not in the database. In this case the altitude may be entered manually.

ACTIVE FLIGHT PLAN			
KIXD / KDFW			
	DTK	DIS	ALT
KARLA	221°	11.7NM	13000FT
COVIE	221°	9.0NM	12400FT
LEMVN	220°	8.0NM	9900FT
Approach - KDFW-RNAV 17L GPS LPV			
RIVET <i>iaf</i>	259°	18.8NM	4000FT
DRAAK	176°	3.3NM	2000FT
INWOD	176°	3.2NM	3000FT
MENOL <i>faf</i>	176°	3.9NM	<u>2300FT</u>
RW17L <i>map</i>	176°	5.3NM	
990FT	174°	0.8NM	<u>990FT</u>
POLKE			

Large White Text

Large Light Blue Text

Small Light Blue Text

Small Light Blue Subdued Text

Small White Text with Altitude Restriction Bar



Cross AT or ABOVE 5,000 ft



Cross AT 2,300 ft



Cross AT or BELOW 3,000 ft

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

Altitudes associated with approach procedures are “auto-designated”. This means the system automatically uses the altitudes loaded with the approach for giving vertical speed and deviation guidance. Note that these altitudes are displayed as blue 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 recalculations 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 blue, 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) Press the **ENT** Key. The altitude is now shown in blue, indicating it is usable for vertical guidance.

Altitude constraints are displayed and entered in feet mean sea level (MSL) values to the nearest hundred. An altitude constraint in feet above ground level (AGL) format is supported for airports. When a database altitude restriction is displayed, the G1000 allows entry of a different altitude when creating a waypoint, effectively overriding the database restriction (only before the FAF). When a database altitude restriction of type “AT or ABOVE” or “AT or BELOW” is activated, the system uses the “AT” portion of the restriction to define the vertical profile.

An altitude constraint is invalid if:

- Meeting the constraint requires the aircraft to climb
- Meeting the constraint requires the maximum flight path angle or maximum vertical speed 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.

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.

Altitude constraints can be modified or deleted after having been added to the flight plan. In the event an altitude constraint is deleted and the navigation database contains an altitude restriction for the lateral waypoint, the G1000 displays the altitude restriction from the database provided no predicted altitude can be provided. The G1000 also provides a way to reinstate a published altitude constraint that has been edited.

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 constraint?' 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.

FLIGHT PLANNING

TRIP PLANNING

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

Or:

For point-to-point planning:

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

Or:

For flight plan leg planning:

- a) Press the **FPL** Softkey (at the bottom of the display).
- b) Turn the small **FMS** Knob to select the desired flight plan (already stored in memory), by number.
- c) Turn the large **FMS** Knob to highlight the 'LEG' field.

- d) Turn the small **FMS** Knob to select the desired leg of the flight plan, or select 'CUM' to apply trip planning calculations to the entire flight plan. Selecting 'FPL 00' displays the active flight plan. If an active flight plan is selected, 'REM' is an available option to display planning data for the remainder of the flight plan.



NOTE: The page mode must be set to 'MANUAL' to perform the following steps.

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



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

- 6) Enter the departure time. Press the **ENT** Key when finished. Departure time may be entered in local or UTC time, depending upon system settings.
- 7) The flashing cursor moves to the ground speed (GS) field. Enter the ground speed. Press the **ENT** Key when finished. Note that in 'automatic' page mode, ground speed is provided by the system.
- 8) The flashing cursor moves to the fuel flow field. Enter the fuel flow. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, fuel flow is provided by the system.
- 9) The flashing cursor moves to the fuel onboard field. Enter the fuel onboard. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, fuel onboard is provided by the fuel totalizer.
- 10) The flashing cursor moves to the calibrated airspeed (CALIBRATED AS) field. Enter the calibrated airspeed. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, calibrated airspeed is provided by the system.
- 11) The flashing cursor moves to the altitude (IND ALTITUDE) field. Enter the altitude. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, altitude is provided by the system.
- 12) The flashing cursor moves to the barometric setting (PRESSURE) field. Enter the desired baro setting. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, the baro setting is provided by the setting entered on the PFD.
- 13) The flashing cursor moves to the air temperature (TOTAL AIR TEMP) field. Enter the desired air temperature. Press the **ENT** Key when finished. Note that in 'AUTOMATIC' page mode, air temperature is provided by the system outside air temperature.

CREATE A USER WAYPOINT DEFINED BY LATITUDE & LONGITUDE

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

CREATE A USER WAYPOINT DEFINED BY RADIALS FROM OTHER WAYPOINTS

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

- 7) With the cursor in the 'WAYPOINT TYPE' field, turn the small **FMS** Knob to display a list of waypoint types.
- 8) Turn the small **FMS** Knob to select RAD/RAD (radial/radial).
- 9) Press the **ENT** Key.
- 10) The cursor moves to the 'REFERENCE WAYPOINTS' field. With the first waypoint name highlighted, use the **FMS** Knobs to enter the desired waypoint name. Waypoints may also be selected as follows:
 - a) When a flight plan is active, turning the small **FMS** Knob to the left will display a list of the flight plan waypoints.
 - b) Turn the large **FMS** Knob to select the desired waypoint.
 - c) Press the **ENT** Key.

Or:

 - a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'NRST' airports to the aircraft's current position.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.

Or:

 - a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'RECENT' waypoints.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.

Or:

 - a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'USER' waypoints.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.
- 11) Press the **ENT** Key. The cursor is displayed in the 'RAD' (radial) field. Enter the desired radial from the reference waypoint.

- 12) Press the **ENT** Key.
- 13) Repeat step 10 to enter the next waypoint name.
- 14) Press the **ENT** Key. The cursor is displayed in the 'RAD' (radial) field for the second waypoint. Enter the desired radial from the reference waypoint.
- 15) Press the **ENT** Key.
- 16) Press the **FMS** Knob to remove the flashing cursor.

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

- 1) Turn the large **FMS** Knob on the MFD to select the 'WPT' page group.
- 2) Turn the small **FMS** Knob to select the User WPT Information Page.
- 3) Press the **NEW** Softkey. A waypoint is created at the current aircraft position.
- 4) Enter the desired waypoint name.
- 5) Press the **ENT** Key.
- 6) The cursor is now in the 'WAYPOINT TYPE' field. If desired, the waypoint can be made temporary (deleted automatically when the system is turned off). If the waypoint is to remain in the system, proceed to step 7.
 - a) Turn the large **FMS** Knob one click to the left to highlight 'TEMPORARY'.
 - b) Press the **ENT** Key to place a check-mark in the box. Turn the large **FMS** Knob to place the cursor back in the 'WAYPOINT TYPE' field.
- 7) With the cursor in the 'WAYPOINT TYPE' field, turn the small **FMS** Knob to display a list of waypoint types.
- 8) Turn the small **FMS** Knob to select RAD/DIS (radial/distance).
- 9) Press the **ENT** Key.
- 10) The cursor moves to the 'REFERENCE WAYPOINTS' field. With the first waypoint name highlighted, use the **FMS** Knobs to enter the desired waypoint name. Waypoints may also be selected as follows:
 - a) When a flight plan is active, turning the small **FMS** Knob to the left will display a list of the flight plan waypoints.
 - b) Turn the large **FMS** Knob to select the desired waypoint.
 - c) Press the **ENT** Key.

Or:

- a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
- b) Turn the small **FMS** Knob to the right to display the 'NRST' airports to the aircraft's current position.
- c) Turn the large **FMS** Knob to select the desired waypoint.
- d) Press the **ENT** Key.

Or:

- a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
- b) Turn the small **FMS** Knob to the right to display the 'RECENT' waypoints.
- c) Turn the large **FMS** Knob to select the desired waypoint.
- d) Press the **ENT** Key.

Or:

- a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'USER' waypoints.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.
- 11) Press the **ENT** Key. The cursor is displayed in the 'RAD' (radial) field. Enter the desired radial from the reference waypoint.
 - 12) Press the **ENT** Key.
 - 13) The cursor is now displayed in the 'DIS' (distance) field. Enter the desired distance from the reference waypoint.
 - 14) Press the **ENT** Key.
 - 15) Press the **FMS** Knob to remove the flashing cursor.

DELETE A USER WAYPOINT

- 1) Turn the large **FMS** Knob to select the 'WPT' page group.
- 2) Turn the small **FMS** Knob to select the User WPT Information Page.
- 3) Press the **FMS** Knob to activate the cursor.

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

CREATE A FLIGHT PLAN



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

Creating an active flight plan:

- 1) Press the **FPL** Key.
- 2) Press the **FMS** Knob to activate the cursor (only on MFD).
- 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. The active flight plan is modified as each waypoint is entered.
- 5) Repeat step numbers 3 and 4 to enter each additional flight plan waypoint.
- 6) When all waypoints have been entered, press the **FMS** Knob to remove the cursor.

Creating a stored flight plan:

- 1) Press the **FPL** Key.
- 2) Turn the small **FMS** Knob clockwise to display the Flight Plan Catalog Page.
- 3) Select the **NEW** Softkey; or press the **MENU** Key, highlight 'Create New Flight Plan', and press the **ENT** Key to display a blank flight plan for the first empty storage location.

- 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 departure waypoint or select a waypoint from the submenu of waypoints and press the **ENT** Key.
- 6) Repeat step numbers 4 and 5 to enter each additional flight plan waypoint.
- 7) When all waypoints have been entered, press the **FMS** Knob to return to the Flight Plan Catalog Page. The new flight plan is now in the list.

IMPORT A FLIGHT PLAN FROM AN SD CARD



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

- 1) Insert the SD card containing the flight plan in the top card slot on the MFD.
- 2) Press the **FPL** Key on the MFD to display the Active Flight Plan Page.
- 3) Turn the small **FMS** Knob to select the Flight Plan Catalog Page.
- 4) Press the **FMS** Knob to activate the cursor.
- 5) Turn either **FMS** Knob to highlight an empty or existing flight plan.
- 6) Press the **IMPORT** Softkey.

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

Or:

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

- 7) Turn the small **FMS** Knob to highlight the desired flight plan for importing.
- 8) Press the **ENT** Key.

INSERT A WAYPOINT IN THE ACTIVE FLIGHT PLAN

- 1) Press the **FPL** Key to display the active flight plan.
- 2) If required, press the **FMS** Knob to activate the cursor.
- 3) Turn the large **FMS** Knob to highlight the desired flight plan waypoint. The new waypoint is inserted before the highlighted waypoint.
- 4) Turn the small **FMS** Knob. The Waypoint Information Window is now displayed.
- 5) Enter the new flight plan waypoint by one of the following:
 - a) Enter the user waypoint identifier, facility, or city.
 - b) Press the **ENT** Key.

Or:

 - a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'NRST' airport waypoints to the aircraft's current position.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.

Or:

 - a) Turn the small **FMS** Knob to the left. Initially, a flight plan waypoint list is displayed.
 - b) Turn the small **FMS** Knob to the right to display the 'RECENT' waypoints.
 - c) Turn the large **FMS** Knob to select the desired waypoint.
 - d) Press the **ENT** Key.
 - e) Press the **ENT** Key again to accept the waypoint.

ENTER AN AIRWAY IN A FLIGHT PLAN

- 1) Press the **FPL** Key.
- 2) Press the **FMS** Knob to activate the cursor (not required on the PFD).
- 3) Turn the large **FMS** Knob to highlight the waypoint after the desired airway entry point. If this waypoint is not a valid airway entry point, a valid entry point should be entered at this time.

- 4) Turn the small **FMS** Knob one click clockwise and press the **LD AIRWY** Softkey, or press the **MENU** Key and select "Load Airway". The Select Airway Page is displayed. The **LD AIRWY** Softkey or the "Load Airway" menu item is available only when an acceptable airway entry waypoint has been chosen (the waypoint ahead of the cursor position).
- 5) Turn the **FMS** Knob to select the desired airway from the list, and press the **ENT** Key. Low altitude airways are shown first in the list, followed by "all" altitude airways, and then high altitude airways.
- 6) Turn the **FMS** Knob to select the desired airway exit point from the list, and press the **ENT** Key. 'LOAD?' is highlighted.
- 7) Press the **ENT** Key. The system returns to editing the flight plan with the new airway inserted.

INVERT AN ACTIVE FLIGHT PLAN

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

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 OFST** 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 99 nm (limited by leg distances).
- 5) Press the **ENT** Key to create the offset waypoint.
- 6) Turn the small **FMS** Knob to enter the desired altitude for the offset.
- 7) Press the **FMS** Knob to remove the flashing cursor.

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

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

Or, for a stored flight plan:

 - a) Press the **FPL** Key on the MFD.
 - b) Turn the small **FMS** Knob to select the Flight Plan Catalog Page.
 - c) Press the **FMS** Knob to activate the cursor.
 - d) Turn the large **FMS** Knob to highlight the desired flight plan.
 - e) Press the **EDIT** Softkey.
- 2) Turn the large **FMS** Knob to highlight the title for the approach, departure, arrival, or airway to be deleted. Titles appear in white directly above the procedure's waypoints.
- 3) Press the **CLR** Key to display a confirmation window.
- 4) With 'OK' highlighted, press the **ENT** Key to remove the selected procedure or airway.

USER DEFINED HOLDING PATTERNS

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 'DIST' 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 'DIST' 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 'DIST' 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.

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.



NOTE: The temperature at the destination can be entered in the TEMPERATURE COMPENSATION Window on the MFD, or in the REFERENCES Window on the PFD. There is only one compensation temperature for the system, therefore, changing the temperature will affect both the loaded approach altitudes and the minimums. Refer to the Flight Instruments section for information about applying temperature compensation to the MDA/DH.

- 5) 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.



NOTE: Activating/cancelling temperature compensation for the loaded approach altitudes does not select/deselect temperature compensated minimums (MDA/DH), nor does selecting/deselecting temperature compensated minimums activate/cancel temperature compensated approach altitudes.

STORE A FLIGHT PLAN

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

EDIT A STORED FLIGHT PLAN

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

DELETE A WAYPOINT FROM THE FLIGHT PLAN

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

Or, for a stored flight plan:

 - a) Press the **FPL** Key on the MFD.
 - b) Turn the small **FMS** Knob to select the Flight Plan Catalog Page.
 - c) Press the **FMS** Knob to activate the cursor.
 - d) Turn the large **FMS** Knob to highlight the desired flight plan.
 - e) Press the **EDIT** Softkey.
- 2) Turn the large **FMS** Knob to highlight the waypoint to be deleted.
- 3) Press the **CLR** Key to display a 'REMOVE (Wpt Name)?' confirmation window.

- 4) With 'OK' highlighted, press the **ENT** Key to remove the waypoint. To cancel the delete request, turn the large **FMS** Knob to highlight 'CANCEL' and press the **ENT** Key.
- 5) Once all changes have been made, press the **FMS** Knob to remove the cursor.

INVERT AND ACTIVATE A STORED FLIGHT PLAN

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

COPY A FLIGHT PLAN

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

DELETE A FLIGHT PLAN

- 1) Press the **FPL** Key on the MFD.
- 2) Turn the small **FMS** Knob to select the Flight Plan Catalog Page.
- 3) Press the **FMS** Knob to activate the cursor.

- 4) Turn the large **FMS** Knob to highlight the flight plan to be deleted.
- 5) Press the **DELETE** Softkey. A 'Delete flight plan #' confirmation window is displayed.
- 6) With 'OK' highlighted, press the **ENT** Key to delete the flight plan. To cancel, turn the large **FMS** Knob to highlight 'CANCEL' and press the **ENT** Key.

GRAPHICAL FLIGHT PLAN CREATION

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

EXPORT A FLIGHT PLAN TO AN SD CARD



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

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

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning**
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page

PROCEDURES

LOAD AND ACTIVATE A DEPARTURE PROCEDURE

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

ACTIVATE A DEPARTURE LEG

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

LOAD AN ARRIVAL PROCEDURE

- 1) Press the **PROC** Key.
- 2) Turn the large **FMS** Knob to highlight 'SELECT ARRIVAL'.
- 3) Press the **ENT** Key. The cursor is displayed in the 'ARRIVAL' field with a list of available arrivals.

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

ACTIVATE AN ARRIVAL LEG

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

LOAD AND/OR ACTIVATE AN APPROACH PROCEDURE



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

- 1) Press the **PROC** Key.
- 2) Turn the large **FMS** Knob to highlight 'SELECT APPROACH'.
- 3) Press the **ENT** Key. A list of available approaches for the destination airport is displayed.
- 4) Turn either **FMS** Knob to highlight the desired approach.
- 5) Press the **ENT** Key. A list of available transitions for the selected approach procedure is now displayed.
- 6) Turn either **FMS** Knob to select the desired transition. The "Vectors" option assumes vectors will be received to the final course segment of the approach and will provide navigation guidance relative to the final approach course.
- 7) Press the **ENT** Key. The cursor moves to the MINIMUMS field.
- 8) If desired, the DA/MDA for the selected approach procedure may be entered and displayed on the PFD. Turn the small **FMS** Knob in the direction of the green arrow to change the display from OFF to BARO.
- 9) Press the **ENT** Key. The cursor moves to the altitude field. Turn the small **FMS** Knob to enter the published DA/MDA for the selected approach procedure.
- 10) Press the **ENT** Key. 'LOAD?' or 'ACTIVATE?' is now displayed with 'LOAD?' highlighted.
- 11) Turn the large **FMS** Knob to select either 'LOAD?' or 'ACTIVATE?'.
 Selecting 'LOAD?' enters the selected approach procedure into the active flight plan, but is not currently active. Selecting 'ACTIVATE?' enters the selected approach procedure into the active flight plan and activates the first leg of the approach.
- 12) Press the **ENT** Key.

APPROACH TYPE AND DOWNGRADE SUPPORT

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 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 if SBAS unavailable)

ACTIVATE AN APPROACH IN THE ACTIVE FLIGHT PLAN

- 1) Press the **PROC** Key.
- 2) Turn the large **FMS** Knob to highlight 'ACTIVATE APPROACH'.
- 3) Press the **ENT** Key.

ACTIVATE A VECTOR TO FINAL APPROACH FIX

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

ACTIVATE A MISSED APPROACH IN THE ACTIVE FLIGHT PLAN

- 1) Press the **PROC** Key.
- 2) Turn the large **FMS** Knob to highlight 'ACTIVATE MISSED APPROACH'.
- 3) Press the **ENT** Key. A confirmation window is displayed.
- 4) With 'ACTIVATE' highlighted, press the **ENT** Key.

Or:

Press the Go-around Button.

Flight
Instruments

EIS

Nav/Com/
XPDR/Audio

AFCs

GPS Nav

Flight
Planning

Procedures

Hazard
Avoidance

Additional
Features

Abnormal
Operation

Annun/
Alerts

Appendix

Index

Blank Page

HAZARD AVOIDANCE

CUSTOMIZING THE HAZARD DISPLAYS ON THE NAVIGATION MAP

- 1) With the Navigation Map Page displayed, press the **MENU** Key to display the Navigation Map Page Menu. The cursor flashes on the 'Map Setup' option.
- 2) Press the **ENT** Key. The Map Setup Menu is displayed. Turn the small **FMS** Knob to select '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: *The Stormscope system is not intended to be used for hazardous thunderstorm penetration. Weather information on the G1000 MFD is approved for weather avoidance only. Refer to the WX-500 Pilot's Guide for detailed operation.*

Displaying Stormscope Lightning Data on the Navigation Map Page

- 1) Press the **MAP** Softkey.
- 2) Press the **STRMSCP** Softkey. Press the **STRMSCP** Softkey again to remove Stormscope Lightning Data from the Navigation Map Page.

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	

Select 'Cell' or 'Strike' as the Stormscope Lightning Mode

- 1) Press the **MENU** Key (with the Navigation Map Page displayed).
- 2) Turn either **FMS** Knob to highlight 'Map Setup'.
- 3) Press the **ENT** Key.
- 4) Turn the small **FMS** Knob to highlight 'Weather'.

- 5) Press the **ENT** Key.
- 6) Turn the large **FMS** Knob to place the cursor in the 'STRMSCP MODE' field.
- 7) Turn the small **FMS** Knob to display the 'Cell/Strike' window.
- 8) Turn either **FMS** Knob to select 'Cell' or 'Strike'. Press the **ENT** Key.
- 9) Push the **FMS** Knob to return to the Navigation Map Page.

Clear Stormscope Lightning Data from the Navigation Map Page

- 1) Press the **MENU** Key (with the Navigation Map Page displayed).
- 2) Turn either **FMS** Knob to highlight the 'Clear Stormscope® Lightning' field and press the **ENT** Key.



NOTE: If heading input is lost, strikes and/or cells must be cleared manually after the execution of each turn. This is to ensure that the strike and/or cell positions are depicted accurately in relation to the nose of the aircraft.

Stormscope Page

- 1) Turn the large **FMS** Knob until the Map Page group is selected.
- 2) Turn the small **FMS** Knob until the Stormscope Page is selected.

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

- 1) 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 left corner of the Stormscope Page.



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

Change the Viewing Mode Between 360° and 120°

- 1) Select the Stormscope Page.
- 2) Press the **VIEW** Softkey. The **360** and **ARC** Softkeys are displayed. Press the **360** Softkey to display a 360° viewing area or press the **ARC** Softkey to display a 120° viewing area.

Press the **CLEAR** Softkey to remove all Stormscope lightning data from the display.

SIRIUSXM WEATHER (OPTIONAL)



WARNING: Use of SiriusXM Weather for hazardous weather penetration is not recommended. Weather information provided by SiriusXM Radio Service is approved only for weather avoidance, not penetration.

Displaying SiriusXM Weather on the Navigation Map Page

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

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 (METAR and TAF information is updated every 12 minutes).

Displaying Weather on the Weather Data Link 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 Page.
- 3) Press the available softkeys to select the desired XM weather product.
- 4) Press the **LEGEND** Softkey to view the legends for the selected 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.




Map Panning Information – Weather Data Link Page

- 1) Push in the **Joystick** to display the panning arrow.
- 2) Move the **Joystick** to place the panning arrow on AIRMETS, TFRs, METARs, or SIGMETs.
- 3) Press the **ENT** Key to display pertinent information for the selected product.

Note that pressing the **ENT** Key when panning over an AIRMET or a SIGMET displays an information box that shows the text of the report. Panning over an airport with METAR information does not display more information but allows the user to press the **ENT** Key and select that Airport's Information Page to display the text of the report. Pressing the **ENT** Key when panning over a TFR displays TFR specific information.





SiriusXM Weather Products and Symbols

Wx Product Status Icons	Description
	NEXRAD - Available for the US and Canada. The age of the displayed data for each is shown at the right.
	ECHO TOP - The age of the displayed data is shown at the right. Not displayed when CLOUD TOP is displayed.
	CLOUD TOP - The age of the displayed data is shown at the right. Not displayed when ECHO TOP is displayed.
	XM LIGHTNING - The age of the displayed data is shown at the right.
	CELL MOVEMENT - The age of the displayed data is shown at the right.
	SIGMET & AIRMET - The age of the displayed data for each is shown at the right.
	METAR - Available for the US and Canada. The age of the displayed data for each is shown at the right.
	SURFACE ANALYSIS with CITY FORECAST - The upper symbol depicts Surface Analysis. The lower symbol depicts City Forecast. The age of the displayed data for each is shown at the right. The selected forecast period is shown at the bottom.
	FREEZING LEVEL - The age of the displayed data is shown at the right.
	WINDS ALOFT - Available for the US and Canada. The age of the displayed data for each is shown at the right. The altitude selection is shown at the bottom.
	COUNTY WARNING - The age of the displayed data is shown at the right.
	CYCLONE WARNING - The age of the displayed data is shown at the right.
	AIREP - The age of the displayed data is shown at the right.

Wx Product Status Icons	Description
	PIREP - The age of the displayed data is shown at the right. Urgent Pireps are displayed in yellow.
	TURBULENCE - The age of the displayed data is shown at the right. The altitude selection is shown at the bottom.
	ICING POTENTIAL - The age of the displayed data is shown at the right. The altitude selection is shown at the bottom.

TRAFFIC SYSTEMS

- If Traffic information Service (TIS) is configured, **STANDBY**, **OPERATE**, and **TNA MUTE** softkeys are displayed.
- If a Traffic Advisory System (TAS) is configured, **STANDBY**, **NORMAL**, **TEST**, and **ALT MODE** softkeys are displayed.

Traffic Symbol	Description
	Non-Threat Traffic (intruder is beyond 5 nm and greater than 1200' vertical separation)
	Proximity Advisory (PA) (Not available with TIS system) (intruder is within 5 nm and less than 1200' vertical separation)
	Traffic Advisory (TA) (closing rate, distance, and vertical separation meet TA criteria)
	Traffic Advisory Off Scale

Traffic Symbol Description

Traffic Information Service (TIS)



NOTE: If the G1000 is configured to use a Traffic Advisory System (TAS), TIS is not available for use.



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

Displaying Traffic on the Traffic Map Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Traffic Map Page.
- 3) Press the **OPERATE** Softkey to begin displaying traffic. 'OPERATING' is displayed in the Traffic Mode field.
- 4) Press the **STANDBY** Softkey to place the system in the Standby Mode. 'STANDBY' is displayed in the Traffic Mode field.
- 5) Rotate the **Joystick** clockwise to display a larger area or rotate counter-clockwise to display a smaller area.
- 6) Press the **TNA MUTE** Softkey to mute the "Traffic Not Available" aural alert.

Displaying Traffic on the Navigation Map

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

Traffic Advisory System (TAS)(If Installed)

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) Select the **OPERATE** or **NORMAL** Softkey to begin displaying traffic. 'OPERATING' is displayed in the Traffic Mode field.
- 4) Select the **ALT MODE** Softkey to change the altitude volume. Select the desired altitude volume by pressing the **BELOW**, **NORMAL**, **ABOVE**, or **UNREST** (unrestricted) Softkey. The selection is displayed in the Altitude Mode field.
- 5) Select the **STANDBY** Softkey to place the system in the Standby Mode. 'STANDBY' is displayed in the Traffic Mode field.
- 6) Rotate the **Joystick** clockwise to display a larger area or rotate counter-clockwise to display a smaller area.
- 7) Select the **FLT ID** Softkey to enable or disable Flight ID displayed with the intruder information (GTS 820 only).

System Self Test

- 1) With the Traffic Map Page displayed, set the range to 2/6 nm.
- 2) Select the **STANDBY** Softkey.
- 3) Select the **TEST** Softkey.
- 4) Self test takes approximately eight seconds to complete. When completed successfully, traffic symbols are displayed and a voice alert is heard (see Alerts and Annunciations section). If the self test fails, the system reverts to Standby Mode and a voice alert is heard.

Displaying Traffic on the Navigation Map

- 1) Ensure TAS is operating.
- 2) With the Navigation Map displayed, select the **MAP** Softkey.
- 3) Select the **TRAFFIC** Softkey. Traffic is now displayed on the map.

TERRAIN AWARENESS & WARNING SYSTEM (TAWS-B) DISPLAY



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



NOTE: The data contained in the TAWS databases comes from government agencies. Garmin accurately processes and cross-validates the data but cannot guarantee the accuracy and completeness of the data.



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

Displaying terrain and obstacle information (maps other than the TAWS-B Page):

- 1) Press the **MAP** Softkey (for the PFD Inset Map, press the **INSET** Softkey).
- 2) Press the **TERRAIN** Softkey to display terrain and obstacle data.

Customizing terrain and obstacle display on the Navigation Map Page:

- 1) Select the Navigation Map Page.
- 2) Press the **MENU** Key.

- 3) With 'Map Setup' 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 DATA – Turns the display of terrain data on or off and sets maximum range at which terrain is shown
 - OBSTACLE DATA – Turns the display of obstacle data on or off and sets maximum range at which obstacles are shown
- 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 TAWS-B Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the TAWS-B Page.

Changing the TAWS-B Page view

- 1) Press the **VIEW** Softkey.
- 2) Press the **360** or **ARC** Softkey to select the desired view.

Or:

 - 1) Press the **MENU** Key.
 - 2) Select 'View Arc' or 'View 360°' (choice dependent on current state) and press the **ENT** Key to change the view

Showing/hiding aviation information on the TAWS-B Page

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

Color	Terrain/Obstacle Location
Red	Terrain/Obstacle above or within 100' below current aircraft altitude.
Yellow	Terrain/Obstacle between 100' and 1000' below current aircraft altitude.
Black	Terrain/Obstacle is more than 1000' below aircraft altitude.

TAWS Inhibit

Inhibiting/enabling TAWS-B alerting:

- 1) Select the TAWS-B Page.
- 2) Press the **INHIBIT** Softkey to inhibit or enable TAWS (choice dependent on current state).

Or:

- a) Press the **MENU** Key.
- b) Select 'Inhibit TAWS' or 'Enable TAWS' (choice dependent on current state) and press the **ENT** Key.

Manually testing the TAWS-B System

- 1) Select the TAWS-B Page.
- 2) Press the **MENU** Key.
- 3) Select 'Test TAWS System' and press the **ENT** Key to confirm the selection.



NOTE: If TAWS alerts are inhibited when the Final Approach Fix is the active waypoint in a GPS SBAS approach, a LOW ALT annunciation may appear on the PFD next to the altimeter if the current aircraft altitude is at least 164 feet below the prescribed altitude at the Final Approach Fix.

AIRBORNE COLOR WEATHER RADAR



WARNING: Begin transmitting only when it is safe to do so. If it is desired to transmit while the aircraft is on the ground, no personnel or objects should be within 11 feet of the antenna.



CAUTION: *In Standby Mode, the antenna is parked at the center line. It is always a good idea to put the radar in Standby Mode before taxiing the aircraft to prevent the antenna from bouncing on the bottom stop and possibly causing damage to the radar assembly.*

Displaying Weather on the Weather Radar Page

- 1) Turn the large **FMS** Knob to select the Map Page Group.
- 2) Turn the small **FMS** Knob to select the Weather Radar Page.
- 3) Press the **MODE** Softkey.
- 4) If the aircraft is on the ground, press the **STANDBY** Softkey to initiate the one minute warm-up period. After the warm-up is complete, the radar enters Standby Mode. After the aircraft is airborne, press the **WEATHER** Softkey.

Or:

If the aircraft is already airborne, press the **WEATHER** or **GROUND** Softkey. The one-minute warm-up period is initiated, after which the radar begins transmitting. The horizontal scan is initially displayed.

- 5) Turn the **Joystick** to select the desired range.
- 6) If desired, press the **VERTICAL** Softkey for vertical scanning.

Adjusting Antenna Tilt

Move the **Joystick** up or down to adjust the tilt of the antenna up or down. Monitor the displayed tilt value in the TILT field.

When scanning vertically, a Tilt Line may be displayed to aid in positioning the tilt of the antenna. If the Tilt Line is not displayed, perform the following steps:

- 1) Press the **MENU** Key
- 2) Turn the large **FMS** Knob to select 'Show Tilt Line'.
- 3) Press the **ENT** Key.

Adjusting Antenna Bearing

Move the **Joystick** right or left to adjust the azimuth position of the antenna right or left. Monitor the displayed bearing value in the BEARING field.

When scanning horizontally, a Bearing Line may be displayed to aid in positioning the antenna for the vertical scan. If the Bearing Line is not displayed, perform the following steps:

- 1) Press the **MENU** Key
- 2) Turn the large **FMS** Knob to select 'Show Bearing Line'.
- 3) Press the **ENT** Key.

Vertically Scan a Storm Cell

- 1) While in the Horizontal Scan view, move the **Joystick** to place the Bearing Line on the desired storm cell, or other area, to be vertically scanned.
- 2) Press the **VERTICAL** Softkey. A vertical 'slice' of the selected area is now displayed.
- 3) Move the **Joystick** right or left to move the scanned "slice" a few degrees right or left.
- 4) Turn the **Joystick** to adjust the range.
- 5) To select a new area to be vertically scanned, press the **HORIZON** Softkey to return to the Horizontal Scan view and repeat the previous steps.

Adjusting Gain



WARNING: Changing the gain in Weather Mode causes precipitation intensity to be displayed as a color not representative of the true intensity. Remember to return the gain setting to 'Calibrated' for viewing the actual intensity of precipitation.

- 1) Press the **GAIN** Softkey to activate the cursor in the 'GAIN' field.
- 2) Turn the small **FMS** Knob to adjust the gain for the desirable level. The gain setting is visible in the gain field as a movable horizontal bar in a flashing box. The line pointer is a reference depicting the calibrated position.
- 3) Press the **FMS** Knob to remove the cursor.
- 4) Press the **GAIN** Softkey again to recalibrate the gain. 'CALIBRATED' is displayed in the 'GAIN' field.

Ground Mapping

- 1) Press the **MODE** Softkey.
- 2) Press the **GROUND** Softkey to place the radar in Ground Map Mode.
- 3) Press the **BACK** Softkey.
- 4) Press the **FMS** Knob to activate the cursor.
- 5) Turn the large **FMS** Knob to place the cursor in the 'TILT' field.
- 6) Adjust the antenna tilt angle by turning the small **FMS** Knob to position the ground returns as desired.
- 7) Press the **FMS** Knob to remove the cursor.

Sector Scan

- 1) While in the Horizontal Scan Mode, move the **Joystick** right or left to place the Bearing Line in the desired position. The location of the Bearing Line becomes the center point of the Sector Scan.
- 2) Press the **FMS** Knob to display the cursor.
- 3) Turn the large **FMS** Knob to place the cursor in the SECTOR SCAN field.
- 4) Turn the small **FMS** Knob to select FULL, 60°, 40°, or 20° scan.
- 5) If desired, readjust the Bearing Line with the **Joystick** to change the center of the Sector Scan.
- 6) Press the **FMS** Knob to remove the cursor.

Antenna Stabilization

- 1) To activate or deactivate the antenna stabilization, press the **MODE** Softkey.
- 2) Press the **STAB ON** Softkey to activate antenna stabilization or press the **STAB OFF** Softkey to deactivate. The current stabilization condition is shown in the upper right of the weather radar display.

Weather Attenuated Color Highlight (WATCH[®])

To activate or deactivate the WATCH[®] feature, press the **WATCH** Softkey. This feature is only available in the Horizontal Scan Mode.

Weather Alert

To activate or deactivate Weather Alert, press the **WX ALRT** Softkey. Activating and deactivating also enables or inhibits the alert on the PFD.

Automatic Standby

When the weather radar system is in the Weather or Ground Map Mode, upon landing the system automatically switches to Standby Mode.

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance**
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page

ADDITIONAL FEATURES

SYNTHETIC VISION



WARNING: Use appropriate primary systems for navigation, and for terrain, obstacle, and traffic avoidance. SVS 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 SVS 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 System (SVS) functionality is offered as an optional enhancement to the G1000 Integrated Flight Deck System.

SVS 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. SVS information is shown on the primary flight display (PFD).

SVS offers a three-dimensional view of terrain and obstacles. Terrain and obstacles that pose a threat to the aircraft in flight are shaded yellow or red.

In addition to SVS enhancement to the PFD, the following feature enhancements have been added to the PFD:

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

Displaying SVS Terrain

- 1) Press the **PFD** Softkey.
- 2) Press the **SYN VIS** Softkey.
- 3) Press the **SYN TERR** Softkey.
- 4) Press the **BACK** Softkey to return to the previous page.

Displaying Pathways

- 1) Press the **PFD** Softkey.
- 2) Press the **SYN VIS** Softkey.
- 3) If not already enabled, press the **SYN TERR** Softkey.
- 4) Press the **PATHWAY** Softkey.
- 5) Press the **BACK** Softkey to return to the previous page.

Displaying Heading on the Horizon

- 1) Press the **PFD** Softkey.
- 2) Press the **SYN VIS** Softkey.
- 3) If not already enabled, press the **SYN TERR** Softkey.
- 4) Press the **HRZN HDG** Softkey.
- 5) Press the **BACK** Softkey to return to the previous page.

Displaying Airport Signs

- 1) Press the **PFD** Softkey.
- 2) Press the **SYN VIS** Softkey.
- 3) If not already enabled, press the **SYN TERR** Softkey.
- 4) Press the **APTSIGNS** Softkey.
- 5) Press the **BACK** Softkey to return to the previous page.

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 (Optional)

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 geo-referenced aircraft position is indicated by an aircraft symbol displayed on the chart when the current position is within the boundaries of the chart. Not all charts are geo-referenced. These charts will display an Aircraft Not Shown Icon in the lower right corner of the MFD.

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, press the **SHW CHRT** 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 Show Chart.
- 3) Press the **ENT** Key to display the chart.

Selecting a chart

- 1) While viewing the Navigation Map Page, Flight Plan Page, or Nearest Airports Page, press the **SHW CHRT** Softkey. The airport diagram or approach chart is displayed on the Airport Information Page.
- 2) Press the **FMS** Knob to activate the cursor.
- 3) Turn the large **FMS** Knob to select either the Airport Identifier Box or the Approach Box. (Press the **APR** Softkey if the Approach Box is not currently shown).
- 4) Turn the small and large **FMS** Knob to enter the desired airport identifier.
- 5) Press the **ENT** Key to complete the airport selection.
- 6) Turn the large **FMS** Knob to select the Approach Box.
- 7) Turn the small **FMS** Knob to show the approach chart selection choices.
- 8) Turn either **FMS** Knob to scroll through the available charts.
- 9) Press the **ENT** Key to complete the chart selection.

Selecting Additional Information

- 1) While viewing the Airport Taxi Diagram, press the **FULL SCN** 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 AIRPORT, INFO, RUNWAYS, or FREQUENCIES Box (INFO Box shown).
- 4) Turn the small **FMS** Knob to select the INFO Box choices. 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) and optional AC-U-KWIK Airport Directory databases offer detailed information regarding services, hours of operation, lodging options, and more. This information is viewed on the Airport Information Page by selecting the INFO Softkey until **INFO-2** is displayed.

Both Airport Directories are available for downloading at flygarmin.com. However, copy only one of the databases to the Supplemental Data Card. The system cannot recognize both databases simultaneously.

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 Information Page.
- 3) Press the **RADIO** Softkey to show the XM Radio Page where audio entertainment is controlled.

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, press the **CHNL** Softkey.
- 2) Press 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, press the **CHNL** Softkey.
- 2) Press the **DIR CH** Softkey. The channel number in the Active Channel Box is highlighted.
- 3) Press the numbered softkeys located on the bottom of the display to directly select the desired channel number.

Selecting a Category

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

- 1) Press the **CATGRY** Softkey on the XM Radio Page.
- 2) Press 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.

- 3) Press the **ENT** Key.

Select an Available Channel within the Selected Category

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

Or:

Press the **FMS** Knob to highlight the channel list and turn the large **FMS** Knob to scroll through the channels.

- 3) With the desired channel highlighted, press the **ENT** Key.

Entering a Channel Directly

- 1) While on the XM Radio Page, press the **CHNL** Softkey.
- 2) Press the **DIR CH** Softkey. The channel number in the Active Channel Box is highlighted.
- 3) Press 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.

Assigning Channel Presets

Up to 15 channels from any category can be assigned a preset number.

- 1) On the XM Radio Page, while listening to an Active Channel that is wanted for a preset, press the **PRESETS** Softkey to access the first five preset channels (**PS1 - PS5**).
- 2) Press the **MORE** Softkey to access the next five channels (**PS6 – PS10**), and again to access the last five channels (**PS11 – PS15**). Pressing the **MORE** Softkey repeatedly cycles through the preset channels.
- 3) Press the **SET** Softkey.
- 4) Press any one of the (**PS1 - PS15**) softkeys to assign a number to the active channel.

Adjusting Volume

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

Unmuting SiriusXM audio:

With the XM Radio Page displayed, press the **MUTE** Softkey to restore (unmute) SiriusXM Audio.

Or:

- 1) While the XM – Radio Page, press the **MENU** Key to display the PAGE MENU.
- 2) Turn the large **FMS** Knob to select the Unmute option.
- 3) Press the **ENT** Key to restore (unmute) SiriusXM Audio.

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 Pilot 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. Pilot 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 current system 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 and 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 Pilot Profile Box.
- 4) Turn the small **FMS** Knob to display the pilot profile list and highlight the desired profile.
- 5) Press the **ENT** Key. The G1000 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 Pilot 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 Pilot 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 pilot 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 Pilot Profile' and press the **ENT** Key.
- 4) The system displays the Pilot Profile Importing window with 'IMPORT' highlighted. To change the selected profile to be imported from the SD card (shown as 'SELECT FILE'), turn the large **FMS** Knob to highlight the profile file name, then turn the small **FMS** Knob to highlight a profile from the list, and press the **ENT** Key.

- 5) If desired, the profile name to be used after profile has been imported can be changed by turning the **FMS** Knob to highlight the 'PROFILE NAME' field, then use the large and small **FMS** Knobs to enter the name, and press the **ENT** Key. Imported profile names cannot begin with a blank space or be named 'DEFAULT', 'GARMIN DEFAULTS' or 'DEFAULT SETTINGS'.
- 6) With 'IMPORT' highlighted, press the **ENT** Key.
- 7) If the imported profile name is the same as an existing profile on the system, the system displays an 'Overwrite existing file? 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 Pilot Profile Importing window.
- 8) If successful, the system displays 'Pilot profile import succeeded.' in the IMPORT RESULTS 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 Pilot Profile into the top card slot on the MFD.
- 2) Turn the **FMS** Knob to select the AUX - SYSTEM SETUP Page.
- 3) If necessary, activate the desired pilot profile to export. Only the currently active Pilot Profile can be exported.
- 4) Select the **EXPORT** Softkey. The system displays the Pilot Profile Exporting window.

Or:

 - a) Press the **MENU** Key.
 - b) Turn the **FMS** Knob to highlight 'Export Pilot Profile' and press the **ENT** Key.
- 5) To export the pilot profile using the current supplied name, press the **ENT** Key with 'EXPORT' highlighted. To change the profile file name turn the large **FMS** Knob to highlight the 'SELECT FILE' field, then enter the new name with the large and small **FMS** Knobs, then press the **ENT** Key. Then press the **ENT** Key with 'EXPORT' highlighted.

- 6) If the profile name to be exported is the same as an existing profile file name on the SD card, the system displays an 'Overwrite existing file? 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 EXPORT RESULTS window displays 'Pilot 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.

ABNORMAL OPERATION

REVERSIONARY MODE

Should a system detected failure occur in either display, the G1000 automatically enters reversionary mode. In reversionary mode, critical flight instrumentation is combined with engine instrumentation on the remaining display.

Reversionary display mode can be manually activated by pressing the **DISPLAY BACKUP** Button on the audio panel.



NOTE: *The Beechcraft G58 Pilot's Operating Handbook (POH) always takes precedence over the information found in this section.*

ABNORMAL COM OPERATION

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

HAZARD DISPLAYS WITH LOSS OF GPS POSITION

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



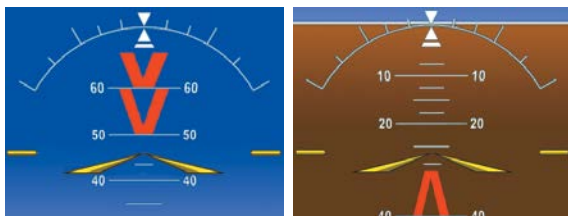
Loss of Hazard Functions with Loss of GPS Position

UNUSUAL ATTITUDES

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

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

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



Extreme Pitch Indication

DEAD RECKONING

While in Enroute or Oceanic phase of flight, if the G1000 detects an invalid GPS solution or is unable to calculate a GPS position, the system automatically reverts to Dead Reckoning (DR) Mode. In DR Mode, the G1000 uses its last-known position combined with continuously updated airspeed and heading data (when available) to calculate and display the aircraft's current estimated position.



NOTE: *Dead Reckoning Mode only functions in Enroute (ENR) or Oceanic (OCN) phase of flight. In all other phases, an invalid GPS solution produces a "NO GPS POSITION" annunciation on the map and the G1000 stops navigating in GPS Mode.*

DR Mode is indicated on the G1000 by the appearance of the letters 'DR' superimposed in yellow over the 'own aircraft' symbol as shown in the following figure. In addition, 'DR' is prominently displayed, also in yellow, on the HSI slightly above and to the right of the aircraft symbol on the CDI as shown in the following figure. The CDI deviation bar is displayed in yellow, but will be removed from the display after 20 minutes. Lastly, but at the same time, a 'GPS NAV LOST' alert message appears on the PFD.

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

It is important to note that estimated navigation data supplied by the G1000 in DR Mode may become increasingly unreliable and must not be used as a sole means of navigation. If, while in DR Mode, airspeed and/or heading data is also lost or not available, the DR function may not be capable of estimating your position and, consequently, the system may display a path that is different than the actual movement of the aircraft. Estimated position information displayed by the G1000 through DR while there is no heading and/or airspeed data available should not be used for navigation.

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

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index



CDI 'DR' Indication on PFD



Symbolic Aircraft
(Map pages and Inset Map)

Dead Reckoning Indications

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

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

Also, while the G1000 is in DR Mode, the autopilot will couple to GPS for up to 20 minutes. TAWS are also disabled. Additionally, the accuracy of all nearest information (airports, airspaces, and waypoints) is questionable. Finally, airspace alerts continue to function, but with degraded accuracy.

ANNUNCIATIONS & ALERTS

WARNING ANNUNCIATION

Annunciation Text	Alerts Window Message	Audio Alert
GEAR UP	Gear up with power below 13 in Hg or flaps down.	Continuous Tone (received through the G1000 audio from another source)
L ALT INOP	Left alternator offline.	Repeating Tone
R ALT INOP	Right alternator offline.	Repeating Tone
L-R ALT INOP	Right and Left alternators offline.	Repeating Tone
FUEL FLOW HI	L or R fuel flow is greater than 27.4 gph	Repeating Tone
CHT HI	L or R CHT is greater than 238 deg C.	Repeating Tone
OIL TEMP HI	L or R oil temp is greater than 116 deg C.	Repeating Tone
OIL PRESS HI	L or R oil press is greater than 100 psi.	Repeating Tone
OIL PRESS LO	L or R oil press is less than 10 psi.	Repeating Tone
FUEL QTY LO	L or R fuel qty is at zero.	Repeating Tone

CAUTION ANNUNCIATION

Annunciation Text	Alerts Window Message	Audio Alert
L START ENGD	Left starter relay has power applied.	Single Chime
R START ENGD	Right starter relay has power applied.	Single Chime
LBUS VOLT HI	Left bus voltage greater than 30 VDC.	Single Chime
RBUS VOLT HI	Right bus voltage greater than 30 VDC.	Single Chime
LBUS VOLT LO	Left bus voltage less than 24 V.	Single Chime
RBUS VOLT LO	Right bus voltage less than 24 V.	Single Chime
AFT DOOR	Aft door not latched.	Single Chime
L AIR PUMP	Press Low — Ops in icing conditions not approved.	Single Chime
R AIR PUMP	Press Low — Ops in icing conditions not approved.	Single Chime

Annunciation Text	Alerts Window Message	Audio Alert
OIL PRESS LO	L or R oil press is between 30 and 10 psi.	Single Chime
FUEL QTY LO	L or R fuel qty is less than or equal to 13 gal.	Single Chime
ALT LOAD	L or R alternator load exceeds 100 amps.	Single Chime

ADVISORY ANNUNCIATION








Annunciation Text	Alerts Window Message	Audio Alert
BUSES TIED	Right Bus is tied to Left Bus.	None

ALERT MESSAGE






Alerts Window Message	Audio Alert
PFD FAN FAIL – The cooling fan for the PFD is inoperative.	None
MFD FAN FAIL – The cooling fan for the MFD is inoperative.	None
AVIONICS FAN – The cooling fan for remote avionics is inoperative.	None

AFCS ALERTS

Condition	Annunciation	Description
Pitch Failure		Pitch axis control failure. AP is inoperative.
Roll Failure		Roll axis control failure. AP is inoperative.
MET Switch Stuck, or Pitch Trim Axis Control Failure		If annunciated when AP is engaged, take control of the aircraft and disengage the autopilot. If annunciated when AP is not engaged, move each half of the MET switch separately to check if a stuck switch is causing the annunciation.
Yaw Damper Failure		YD control failure; AP also inoperative
System Failure		AP and MET are unavailable. FD may still be available.
Elevator Mistrim Up		A condition has developed causing the pitch servo to provide a sustained force. Be prepared to apply nose up control wheel force upon autopilot disconnect.

Condition	Annunciation	Description
Elevator Mistrim Down		A condition has developed causing the pitch servo to provide a sustained force. Be prepared to apply nose down control wheel force upon autopilot disconnect.
Aileron Mistrim Left		A condition has developed causing the roll servo to provide a sustained left force. Ensure the slip/skid indicator is centered and observe any maximum fuel imbalance limits.
Aileron Mistrim Right		A condition has developed causing the roll servo to provide a sustained right force. Ensure the slip/skid indicator is centered and observe any maximum fuel imbalance limits.
Rudder Mistrim Left		A condition has developed causing the yaw servo to provide a sustained force. Ensure the slip/skid indicator is centered and observe any maximum fuel imbalance limits.
Rudder Mistrim Right		A condition has developed causing the yaw servo to provide a sustained force. Ensure the slip/skid indicator is centered and observe any maximum fuel imbalance limits.
Preflight Test		Performing preflight system test. Upon completion of the test, the aural alert will be heard.
		Preflight system test has failed.

TAWS-B ALERTS

Alert Type	PFD/MFD TAWS-B Page Annunciation	MFD Pop-Up Alert	Aural Message
Excessive Descent Rate Warning (EDR)			"Pull Up"
Reduced Required Terrain Clearance Warning (RTC)		 or 	"Terrain, Terrain; Pull Up, Pull Up" or "Terrain Ahead, Pull Up; Terrain Ahead, Pull Up"

	Alert Type	PFD/MFD TAWS-B Page Annunciation	MFD Pop-Up Alert	Aural Message
Flight Instruments EIS Nav/Com/ XPDR/Audio AFCS GPS Nav Flight Planning Procedures Hazard Avoidance Additional Features Abnormal Operation Annun/ Alerts Appendix Index	Imminent Terrain Impact Warning (ITI)	PULL UP	TERRAIN AHEAD - PULL-UP or TERRAIN - PULL-UP	Terrain Ahead, Pull Up; Terrain Ahead, Pull Up” or “Terrain, Terrain; Pull Up, Pull Up”
	Reduced Required Obstacle Clearance Warning (ROC)	PULL UP	OBSTACLE - PULL-UP or OBSTACLE AHEAD - PULL-UP	“Obstacle, Obstacle; Pull Up, Pull Up” or “Obstacle Ahead, Pull Up; Obstacle Ahead, Pull Up”
	Imminent Obstacle Impact Warning (IOI)	PULL UP	OBSTACLE AHEAD - PULL-UP or OBSTACLE - PULL-UP	“Obstacle Ahead, Pull Up; Obstacle Ahead, Pull Up” or “Obstacle, Obstacle; Pull Up, Pull Up”
	Reduced Required Terrain Clearance Caution (RTC)	TERRAIN	CAUTION - TERRAIN or TERRAIN AHEAD	“Caution, Terrain; Caution, Terrain” or “Terrain Ahead; Terrain Ahead”
	Imminent Terrain Impact Caution (ITI)	TERRAIN	TERRAIN AHEAD or CAUTION - TERRAIN	“Terrain Ahead; Terrain Ahead” or “Caution, Terrain; Caution, Terrain”
	Reduced Required Obstacle Clearance Caution (ROC)	TERRAIN	CAUTION - OBSTACLE or OBSTACLE AHEAD	“Caution, Obstacle; Caution, Obstacle” or “Obstacle Ahead; Obstacle Ahead”
	Imminent Obstacle Impact Caution (IOI)	TERRAIN	OBSTACLE AHEAD or CAUTION - OBSTACLE	“Obstacle Ahead; Obstacle Ahead” or “Caution, Obstacle; Caution, Obstacle”
	Premature Descent Alert Caution (PDA)	TERRAIN	TOO LOW - TERRAIN	“Too Low, Terrain”

Alert Type	PFD/MFD TAWS-B Page Annunciation	MFD Pop-Up Alert	Aural Message
Altitude Callout "500"	None	None	"Five-Hundred"
Excessive Descent Rate Caution (EDR)	TERRAIN	SINK RATE	"Sink Rate"
Negative Climb Rate Caution (NCR)	TERRAIN	DON'T SINK or TOO LOW - TERRAIN	"Don't Sink" or "Too Low, Terrain"

TAWS-B SYSTEM STATUS ANNUNCIATIONS

Alert Type	PFD/MFD Alert Annunciation	TAWS-B Page Annunciation	Aural Message
System Test in Progress	TAWS TEST	TAWS TEST	None
System Test Pass	None	None	"TAWS System Test OK"
TAWS Alerting is disabled	TAWS INH	None	None
MFD Terrain or Obstacle database unavailable or invalid. TAWS operating with PFD Terrain or Obstacle databases	None	TERRAIN DATABASE FAILURE	None
TAWS-B System Test Fail	TAWS FAIL	TAWS FAIL	"TAWS System Failure"
Terrain or Obstacle database unavailable or invalid, invalid software configuration, system audio fault	TAWS FAIL	TAWS FAIL	"TAWS System Failure"
No GPS position	TAWS N/A	NO GPS POSITION	"TAWS Not Available"
Excessively degraded GPS signal, Out of database coverage area	TAWS N/A	None	"TAWS Not Available"
Sufficient GPS signal received after loss	None	None	"TAWS Available"

VOICE ALERTS

Voice Alert	Description
"Minimums, minimums"	The aircraft has descended below the preset barometric minimum descent altitude.
"Vertical track"	The aircraft is one minute from Top of Descent. Issued only when vertical navigation is enabled.
"Traffic"	Played when a Traffic Advisory (TA) is issued (TIS and GTS 820).
"TIS Not Available"	The aircraft is outside the Traffic Information Service (TIS) coverage area.
"Traffic, Traffic"	Played when a Traffic Advisory (TA) is issued (Skywatch TAS system).
"Traffic Advisory System Test Passed"	Played when the Skywatch TAS system passes a pilot-initiated self test.
"Traffic Advisory System Test Failed"	Played when the Skywatch TAS system fails a pilot-initiated self test.
"TAS System Test Passed"	Played when the GTS 820 TAS system passes a pilot-initiated self test.
"TAS System Test Failed"	Played when the GTS 820 TAS system fails a pilot-initiated self test.
"One o'clock" through "Twelve o'clock" or "No Bearing"	Intruder bearing (GTS 820 only)
"High", "Low", "Same Altitude" (if within 200 feet of own altitude), or "Altitude not available"	Intruder relative altitude (GTS 820 only)
"Less than one mile", "One Mile" through "Ten Miles", or "More than ten miles"	Intruder distance (GTS 820 only)

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

MFD & PFD MESSAGE ADVISORIES

Message	Comments
DATA LOST – Pilot stored data was lost. Recheck settings.	The pilot profile data was lost. System reverts to default pilot profile and settings. The pilot may reconfigure the MFD & PFDs with preferred settings, if desired.
XTALK ERROR – A flight display crosstalk error has occurred.	The MFD and PFD are not communicating with each other. The system should be serviced.
PFD1 SERVICE – PFD1 needs service. Return unit for repair.	The PFD and/or MFD self-test has detected a problem. The system should be serviced.
MFD1 SERVICE – MFD1 needs service. Return unit for repair.	
MANIFEST – PFD1 software mismatch, communication halted.	The PFD and/or MFD has incorrect software installed. The system should be serviced.
MANIFEST – MFD1 software mismatch, communication halted.	
PFD1 CONFIG – PFD1 config error. Config service req'd.	The PFD configuration settings do not match backup configuration memory. The system should be serviced.
MFD1 CONFIG – MFD1 config error. Config service req'd.	The MFD configuration settings do not match backup configuration memory. The system should be serviced.
SW MISMATCH – GDU software version mismatch. Xtalk is off.	The MFD and PFD have different software versions installed. The system should be serviced.
PFD1 COOLING – PFD1 has poor cooling. Reducing power usage.	The PFD and/or MFD is overheating and is reducing power consumption by dimming the display. If problem persists, the system should be serviced.
MFD1 COOLING – MFD1 has poor cooling. Reducing power usage.	
PFD1 KEYSTK – PFD1 [key name] Key is stuck.	A key is stuck on the PFD and/or MFD bezel. Attempt to free the stuck key by pressing it several times. The system should be serviced if the problem persists.
MFD1 KEYSTK – MFD [key name] Key is stuck.	
CNFG MODULE – PFD1 configuration module is inoperative.	The PFD1 configuration module backup memory has failed. The system should be serviced.

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

MFD & PFD MESSAGE ADVISORIES (CONT.)

Message	Comments
PFD1 VOLTAGE – PFD1 has low voltage. Reducing power usage	The PFD1 voltage is low. The system should be serviced.
MFD1 VOLTAGE – MFD1 has low voltage. Reducing power usage	The MFD voltage is low. The system should be serviced.

DATABASE MESSAGE ADVISORIES

Message	Comments
MFD1 DB ERR – MFD1 navigation database error exists.	The MFD and/or PFD detected a failure in the navigation database. Attempt to reload the navigation database. If problem persists, the system should be serviced.
PFD1 DB ERR – PFD1 navigation database error exists.	
MFD1 DB ERR – MFD1 basemap database error exists.	The MFD and/or PFD detected a failure in the basemap database.
PFD1 DB ERR – PFD1 basemap database error exists.	
MFD1 DB ERR – MFD1 terrain database error exists.	The MFD and/or PFD detected a failure in the terrain database. Ensure that the terrain card is properly inserted in display. Replace terrain card. If problem persists, the system should be serviced.
PFD1 DB ERR – PFD1 terrain database error exists.	
MFD1 DB ERR – MFD1 terrain database missing.	The terrain database is present on another LRU, but is missing on the specified LRU.
PFD1 DB ERR – PFD1 terrain database missing.	
MFD1 DB ERR – MFD1 obstacle database error exists.	The MFD and/or PFD detected a failure in the obstacle database. Ensure that the data card is properly inserted. Replace data card. If problem persists, the system should be serviced.
PFD1 DB ERR – PFD1 obstacle database error exists.	
MFD1 DB ERR – MFD1 obstacle database missing.	The obstacle database is present on another LRU, but is missing on the specified LRU.
PFD1 DB ERR – PFD1 obstacle database missing.	

DATABASE MESSAGE ADVISORIES (CONT.)

Message	Comments
MFD1 DB ERR – MFD1 airport terrain database error exists.	The MFD and/or PFD detected a failure in the airport terrain database. Ensure that the data card is properly inserted. Replace data card. If problem persists, the system should be serviced.
PFD1 DB ERR – PFD1 airport terrain database error exists.	
MFD1 DB ERR – MFD1 airport terrain database missing.	The airport terrain database is present on another LRU, but is missing on the specified LRU.
PFD1 DB ERR – PFD1 airport terrain database missing.	
MFD1 DB ERR – MFD1 Safe Taxi database error exists.	The MFD and/or PFD detected a failure in the Safe Taxi database. Ensure that the data card is properly inserted. Replace data card. If problem persists, the system should be serviced.
PFD1 DB ERR – PFD1 Safe Taxi database error exists.	
MFD1 DB ERR – MFD1 Chartview database error exists.	The MFD detected a failure in the ChartView database (optional feature). Ensure the data card is properly inserted. Replace data card. If problem persists, system should be serviced.
MFD1 DB ERR – MFD1 FliteCharts database error exists.	The MFD detected a failure in the FliteCharts database (optional feature). Ensure the data card is properly inserted. Replace data card. If problem persists, system should be serviced.
MFD1 DB ERR – MFD1 Airport Directory database error exists.	The MFD detected a failure in the Airport Directory database. Ensure that the data card is properly inserted. Replace data card. If problem persists, the system should be serviced.
DB MISMATCH – Navigation database mismatch. Xtalk is off.	The PFD and MFD have different navigation database versions or regions installed. Crossfill is off. Check the AUX-SYSTEM STATUS Page to determine versions or regions. Also, check the AUX-SYSTEM STATUS Page for a database synchronization function not completed. After synchronization is complete, power must be turned off, then on.

DATABASE MESSAGE ADVISORIES (CONT.)

Message	Comments
DB MISMATCH – Terrain database mismatch.	The PFD and MFD have different terrain database versions or regions installed. Check the AUX-SYSTEM STATUS Page to determine versions or regions. Also, check the AUX-SYSTEM STATUS Page for a database synchronization function not completed. After synchronization is complete, power must be turned off, then on.
DB MISMATCH – Obstacle database mismatch.	The PFD and MFD have different obstacle database versions or regions installed. Check the AUX-SYSTEM STATUS Page to determine versions or regions. Also, check the AUX-SYSTEM STATUS Page for a database synchronization function not completed. After synchronization is complete, power must be turned off, then on.
DB MISMATCH – Airport Terrain database mismatch.	The PFD and MFD have different airport terrain database versions or regions installed. Check the AUX-SYSTEM STATUS Page to determine versions or regions. Also, check the AUX-SYSTEM STATUS Page for a database synchronization function not completed. After synchronization is complete, power must be turned off, then on.
NAV DB UPDATED – Active navigation database updated.	System has updated the active navigation database from the standby navigation database.
TERRAIN DSP – [PFD1 or MFD1] Terrain awareness display unavailable.	One of the terrain, airport terrain, or obstacle databases required for TAWS in the specified PFD or MFD is missing or invalid.

GMA 1347 MESSAGE ADVISORIES

Message	Comments
MANIFEST – GMA1 software mismatch, communication halted.	The audio panel has incorrect software installed. The system should be serviced.
GMA1 FAIL – GMA1 is inoperative.	The audio panel self-test has detected a failure. The audio panel is unavailable. The system should be serviced.

GMA 1347 MESSAGE ADVISORIES (CONT.)

Message	Comments
GMA1 CONFIG – GMA1 config error. Config service req'd.	The audio panel configuration settings do not match backup configuration memory. The system should be serviced.
GMA1 SERVICE – GMA1 needs service. Return unit for repair.	The audio panel self-test has detected a problem in the unit. Certain audio functions may still be available, and the audio panel may still be usable. The system should be serviced when possible.

GIA 63W MESSAGE ADVISORIES

Message	Comments
GIA1 CONFIG – GIA1 config error. Config service req'd.	The GIA1 and/or GIA2 configuration settings do not match backup configuration memory. The system should be serviced.
GIA2 CONFIG – GIA2 config error. Config service req'd.	
GIA1 CONFIG – GIA1 audio config error. Config service req'd.	The GIA1 and/or GIA2 have an error in the audio configuration. The system should be serviced.
GIA2 CONFIG – GIA2 audio config error. Config service req'd.	
GIA1 COOLING – GIA1 temperature too low.	The GIA1 and/or GIA2 temperature is too low to operate correctly. Allow units to warm up to operating temperature.
GIA2 COOLING – GIA2 temperature too low.	
GIA1 COOLING – GIA1 over temperature.	The GIA1 and/or GIA2 temperature is too high. If problem persists, the system should be serviced.
GIA2 COOLING – GIA2 over temperature.	
GIA1 SERVICE – GIA1 needs service. Return the unit for repair.	The GIA1 and/or GIA2 self-test has detected a problem in the unit. The system should be serviced.
GIA2 SERVICE – GIA2 needs service. Return the unit for repair.	

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

GIA 63W MESSAGE ADVISORIES (CONT.)

Message	Comments
HW MISMATCH – GIA hardware mismatch. GIA1 communication halted.	A GIA mismatch has been detected, where only one is SBAS capable.
HW MISMATCH – GIA hardware mismatch. GIA2 communication halted.	
MANIFEST – GIA1 software mismatch, communication halted.	The GIA1 and/or GIA 2 has incorrect software installed. The system should be serviced.
MANIFEST – GIA2 software mismatch, communication halted.	
MANIFEST – GFC software mismatch, communication halted.	Incorrect servo software is installed, or gain settings are incorrect.
MANIFEST – COM1 software mismatch, communication halted.	COM1 and/or COM2 software mismatch. The G1000 system should be serviced.
MANIFEST – COM2 software mismatch, communication halted.	
MANIFEST – NAV1 software mismatch, communication halted.	NAV1 and/or NAV2 software mismatch. The G1000 system should be serviced.
MANIFEST – NAV2 software mismatch, communication halted.	
COM1 CONFIG – COM1 config error. Config service req'd.	The COM1 and/or COM2 configuration settings do not match backup configuration memory. The G1000 system should be serviced.
COM2 CONFIG – COM2 config error. Config service req'd.	
COM1 TEMP – COM1 over temp. Reducing transmitter power.	The system has detected an over temperature condition in COM1 and/or COM2. The transmitter is operating at reduced power. If the problem persists, the system should be serviced.
COM2 TEMP – COM2 over temp. Reducing transmitter power.	
COM1 SERVICE – COM1 needs service. Return unit for repair.	The system has detected a failure in COM1 and/or COM2. COM1 and/or COM2 may still be usable. The system should be serviced when possible.
COM2 SERVICE – COM2 needs service. Return unit for repair.	

GIA 63W MESSAGE ADVISORIES (CONT.)

Message	Comments
COM1 PTT – COM1 push-to-talk key is stuck.	The COM1 and/or COM2 external push-to-talk switch is stuck in the enable (or “pressed”) position. Press the PTT switch again to cycle its operation. If the problem persists, the system should be serviced.
COM2 PTT – COM2 push-to-talk key is stuck.	
COM1 RMT XFR – COM1 remote transfer key is stuck.	The COM1 and/or COM2 transfer switch is stuck in the enabled (or “pressed”) position. Press the transfer switch again to cycle its operation. If the problem persists, the system should be serviced.
COM2 RMT XFR – COM2 remote transfer key is stuck.	
LOI – GPS integrity lost. Crosscheck with other NAVS.	GPS integrity is insufficient for the current phase of flight.
GPS NAV LOST – Loss of GPS navigation. Insufficient satellites.	Loss of GPS navigation due to insufficient satellites.
GPS NAV LOST – Loss of GPS navigation. Position error.	Loss of GPS navigation due to position error.
GPS NAV LOST – Loss of GPS navigation. GPS fail.	Loss of GPS navigation due to GPS failure.
ABORT APR – Loss of GPS navigation. Abort approach.	Abort approach due to loss of GPS navigation.
APR DWNGRADE – Approach downgraded.	Vertical guidance generated by SBAS is unavailable, use LNAV only minimums.
TRUE APR – True north approach. Change HDG reference to TRUE.	Displayed after passing the first waypoint of a true north approach when the nav angle is set to ‘AUTO’.
GPS1 SERVICE – GPS1 needs service. Return unit for repair.	A failure has been detected in the GPS1 and/or GPS2 receiver. The receiver may still be available. The system should be serviced.
GPS2 SERVICE – GPS2 needs service. Return unit for repair.	
NAV1 SERVICE – NAV1 needs service. Return unit for repair.	A failure has been detected in the NAV1 and/or NAV2 receiver. The receiver may still be available. The system should be serviced.
NAV2 SERVICE – NAV2 needs service. Return unit for repair.	

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

GIA 63W MESSAGE ADVISORIES (CONT.)

Message	Comments
NAV1 RMT XFR – NAV1 remote transfer key is stuck.	The remote NAV1 and/or NAV2 transfer switch is stuck in the enabled (or “pressed”) state. Press the transfer switch again to cycle its operation. If the problem persists, the system should be serviced.
NAV2 RMT XFR – NAV2 remote transfer key is stuck.	
G/S1 FAIL – G/S1 is inoperative.	A failure has been detected in glideslope receiver 1 and/or receiver 2. The system should be serviced.
G/S2 FAIL – G/S2 is inoperative.	
G/S1 SERVICE – G/S1 needs service. Return unit for repair.	A failure has been detected in glideslope receiver 1 and/or receiver 2. The receiver may still be available. The system should be serviced when possible.
G/S2 SERVICE – G/S2 needs service. Return unit for repair.	

GEA 71 MESSAGE ADVISORIES

Message	Comments
GEA1 CONFIG – GEA1 config error. Config service req'd.	The GEA1 configuration settings do not match those of backup configuration memory. The G1000 system should be serviced.
MANIFEST – GEA1 software mismatch, communication halted.	The #1 GEA 71 has incorrect software installed. The G1000 system should be serviced.

GTX 33 MESSAGE ADVISORIES

Message	Comments
MANIFEST – GTX1 software mismatch, communication halted.	The transponder has incorrect software installed. The system should be serviced.
GTX1 MANIFEST – GTX1 software mismatch, communication halted.	The transponder has incorrect software installed. The G1000 system should be serviced.
XPDR1 ADS-B FAIL – Transponder: XPDR1 is unable to transmit ADS-B messages.	ADS-B is inoperative. The transponder may not be receiving a valid GPS position. Other transponder functions may be available. Service when possible.
XPDR1 CONFIG – XPDR1 config error. Config service req'd.	The transponder configuration settings do not match those of backup configuration memory. The system should be serviced.

GTX 33 MESSAGE ADVISORIES (CONT.)

Message	Comments
XPDR1 SRVC – XPDR1 needs service. Return unit for repair.	The #1 transponder should be serviced when possible.
XPDR1 FAIL – XPDR1 is inoperative.	There is no communication with the #1 transponder.

GRS 77 MESSAGE ADVISORIES

Message	Comments
AHRS1 TAS – AHRS1 not receiving airspeed.	The #1 AHRS is not receiving true airspeed from the air data computer. The AHRS relies on GPS information to augment the lack of airspeed. The system should be serviced.
AHRS1 GPS – AHRS1 using backup GPS source.	The #1 AHRS is using the backup GPS path. Primary GPS path has failed. The system should be serviced when possible.
AHRS1 GPS – AHRS1 not receiving any GPS information.	The #1 AHRS is not receiving any or any useful GPS information. Check AFMS limitations. The system should be serviced.
AHRS1 GPS – AHRS1 not receiving backup GPS information.	The #1 AHRS is not receiving backup GPS information. The system should be serviced.
AHRS1 GPS – AHRS1 operating exclusively in no-GPS mode.	The #1 AHRS is operating exclusively in no-GPS mode. The system should be serviced.
AHRS MAG DB – AHRS magnetic model database version mismatch.	The #1 AHRS and #2 AHRS magnetic model database versions do not match.
AHRS1 SRVC – AHRS1 Magnetic-field model needs update.	The #1 AHRS earth magnetic field model is out of date. Update magnetic field model when practical.
GEO LIMITS – AHRS1 too far North/South, no magnetic compass.	The aircraft is outside geographical limits for approved AHRS operation. Heading is flagged as invalid.
MANIFEST – GRS1 software mismatch, communication halted.	The #1 AHRS has incorrect software installed. The system should be serviced.

GDC 74A MESSAGE ADVISORIES

Message	Comments
MANIFEST – GDC1 software mismatch, communication halted.	The GDC 74A has incorrect software installed. The G1000 system should be serviced.

GMU 44 MESSAGE ADVISORIES

Message	Comments
HDG FAULT – AHRs1 magnetometer fault has occurred.	A fault has occurred in the #1 GMU 44. Heading is flagged as invalid. The AHRs uses GPS for backup mode operation. The G1000 system should be serviced.
MANIFEST – GMU1 software mismatch, communication halted.	The GMU 44 has incorrect software installed. The G1000 system should be serviced.

GDL 69/69A MESSAGE ADVISORIES

Message	Comments
GDL69 CONFIG – GDL 69 config error. Config service req'd.	GDL 69 configuration settings do not match those of backup configuration memory. The G1000 system should be serviced.
GDL69 FAIL – GDL 69 has failed.	A failure has been detected in the GDL 69. The receiver is unavailable. The G1000 system should be serviced.
MANIFEST – GDL software mismatch, communication halted.	The GDL 69 has incorrect software installed. The G1000 system should be serviced.

GWX 68 MESSAGE ADVISORIES

Message	Comments
GWX CONFIG – GWX config error. Config service req'd.	GWX 68 configuration settings do not match those of the GDU configuration. The G1000 system should be serviced.
GWX FAIL – GWX is inoperative.	The GDU is not receiving status packet from the GWX 68 or the GWX 68 is reporting a fault. The GWX 68 radar system should be serviced.
GWX SERVICE – GWX needs service. Return unit for repair.	A failure has been detected in the GWX 68. The GWX 68 may still be usable.

GWX 68 MESSAGE ADVISORIES (CONT.)

Message	Comments
MANIFEST – GWX software mismatch, communication halted.	The GWX 68 has incorrect software installed. The G1000 system should be serviced.
WX ALERT – Possible severe weather ahead.	The GWX 68 indicates severe weather within ± 10 degrees of the aircraft heading at a range of 80 to 320 nm.

GTS 820 MESSAGE ADVISORIES

Message	Comments
GTS CONFIG – GTS config error. Config service req'd.	The GTS and GDU have incompatible configurations. This alert is also set when the GTS has an invalid mode S address configured or the mode S address does not match both XPDR mode S addresses.
MANIFEST – GTS software mismatch, communication halted.	The GTS has incorrect software installed. The G1000 system should be serviced.

MISCELLANEOUS MESSAGE ADVISORIES

Message	Comments
FPL WPT LOCK – Flight plan waypoint is locked.	<p>Upon power-up, the system detects that a stored flight plan waypoint is locked. This occurs when an navigation database update eliminates an obsolete waypoint. The flight plan cannot find the specified waypoint and flags this message. This can also occur with user waypoints in a flight plan that is deleted.</p> <p>Remove the waypoint from the flight plan if it no longer exists in any database, Or update the waypoint name/identifier to reflect the new information.</p>

MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

Message	Comments
FPL WPT MOVE – Flight plan waypoint moved.	The system has detected that a waypoint coordinate has changed due to a new navigation database update. Verify that stored flight plans contain correct waypoint locations.
TIMER EXPIRD – Timer has expired.	The system notifies the pilot that the timer has expired.
DB CHANGE – Database changed. Verify user modified procedures.	This occurs when a stored flight plan contains procedures that have been manually edited. This alert is issued only after an navigation database update. Verify that the user-modified procedures in stored flight plans are correct and up to date.
DB CHANGE – Database changed. Verify stored airways.	This occurs when a stored flight plan contains an airway that is no longer consistent with the navigation database. This alert is issued only after an navigation database update. Verify use of airways in stored flight plans and reload airways as needed.
FPL TRUNC – Flight plan has been truncated.	This occurs when a newly installed navigation database eliminates an obsolete approach or arrival used by a stored flight plan. The obsolete procedure is removed from the flight plan. Update flight plan with current arrival or approach.
LOCKED FPL – Cannot navigate locked flight plan.	This occurs when the pilot attempts to activate a stored flight plan that contains locked waypoint. Remove locked waypoint from flight plan. Update flight plan with current waypoint.
WPT ARRIVAL – Arriving at waypoint -[xxxx]	Arriving at waypoint [xxxx], where [xxxx] is the waypoint name.
STEEP TURN – Steep turn ahead.	A steep turn is 15 seconds ahead. Prepare to turn.
INSIDE ARSPC – Inside airspace.	The aircraft is inside the airspace.
ARSPC AHEAD – Airspace ahead less than 10 minutes.	Special use airspace is ahead of aircraft. The aircraft will penetrate the airspace within 10 minutes.

MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

Message	Comments
ARSPC NEAR – Airspace near and ahead.	Special use airspace is near and ahead of the aircraft position.
ARSPC NEAR – Airspace near – less than 2 nm.	Special use airspace is within 2 nm of the aircraft position.
APR INACTV – Approach is not active.	The system notifies the pilot that the loaded approach is not active. Activate approach when required.
SLCT FREQ – Select appropriate frequency for approach.	The system notifies the pilot to load the approach frequency for the appropriate NAV receiver. Select the correct frequency for the approach.
SLCT NAV – Select NAV on CDI for approach.	The system notifies the pilot to set the CDI to the correct NAV receiver. Set the CDI to the correct NAV receiver.
PTK FAIL – Parallel track unavailable: bad geometry.	Bad parallel track geometry.
PTK FAIL – Parallel track unavailable: past IAF.	IAF waypoint for parallel offset has been passed.
PTK FAIL – Parallel track unavailable: past IAF.	IAF waypoint for parallel offset has been passed.
UNABLE V WPT – Can't reach current vertical waypoint.	The current vertical waypoint can not be reached within the maximum flight path angle and vertical speed constraints. The system automatically transitions to the next vertical waypoint.
VNV – Unavailable. Excessive track angle error.	The current track angle error exceeds the limit, causing the vertical deviation to go invalid.
VNV – Unavailable. Unsupported leg type in flight plan.	The lateral flight plan contains a procedure turn, vector, or other unsupported leg type prior to the active vertical waypoint. This prevents vertical guidance to the active vertical waypoint.
VNV – Unavailable. Excessive crosstrack error.	The current crosstrack exceeds the limit, causing vertical deviation to go invalid.
VNV – Unavailable. Parallel course selected.	A parallel course has been selected, causing the vertical deviation to go invalid.

Flight Instruments

EIS

Nav/Com/XPDR/Audio

AFCS

GPS Nav

Flight Planning

Procedures

Hazard Avoidance

Additional Features

Abnormal Operation

Annun/Alerts

Appendix

Index

MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

Message	Comments
NO WGS84 WPT – Non WGS 84 waypoint for navigation -[xxxx]	The position of the selected waypoint [xxxx] is not calculated based on the WGS84 map reference datum and may be positioned in error as displayed. Do not use GPS to navigate to the selected non-WGS84 waypoint.
TRAFFIC FAIL – Traffic device has failed.	The system is no longer receiving data from the traffic system. The traffic device should be serviced.
FAILED PATH – A data path has failed.	A data path connected to the GDU, GSD 41, or the GIA 63/W has failed.
MAG VAR WARN – Large magnetic variance. Verify all course angles.	The GDU's internal model cannot determine the exact magnetic variance for geographic locations near the magnetic poles. Displayed magnetic course angles may differ from the actual magnetic heading by more than 2°.
SVS – SVS DISABLED: Out of available terrain region.	Synthetic Vision is disabled because the aircraft is not within the boundaries of the installed terrain database.
SVS – SVS DISABLED: Terrain DB resolution too low.	Synthetic Vision is disabled because a terrain database of sufficient resolution (9 arc-second or better) is not currently installed.
SCHEDULER [#] – <message>.	Message criteria entered by the user.
CHECK CRS – Database course for LOC1 / [LOC ID] is [CRS]°.	Selected course for LOC1 differs from published localizer course by more than 10 degrees.
CHECK CRS – Database course for LOC2 / [LOC ID] is [CRS]°.	Selected course for LOC2 differs from published localizer course by more than 10 degrees.
[PFD1 or MFD1] CARD 1 REM – Card 1 was removed. Reinsert card.	The SD card was removed from the top card slot of the PFD or MFD. The SD card needs to be reinserted.
[PFD1 or MFD1] CARD 2 REM – Card 2 was removed. Reinsert card.	The SD card was removed from the bottom card slot of the PFD or MFD. The SD card needs to be reinserted.

MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

Message	Comments
[PFD1 or MFD1] CARD 1 ERR – Card 1 is invalid.	The SD card in the top card slot of the PFD or MFD contains invalid data.
[PFD1 or MFD1] CARD 2 ERR – Card 2 is invalid.	The SD card in the bottom card slot of the PFD or MFD contains invalid data.

FLIGHT PLAN IMPORT/EXPORT MESSAGES

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

Flight Plan Import/Export Results	Description
'Flight plan successfully imported.'	A flight plan file stored on the SD card was successfully imported as a stored flight plan.
'File contained user waypoints only. User waypoints imported successfully. No stored flight plan data was modified.'	The file stored on the SD card did not contain a flight plan, only user waypoints. These waypoints have been saved to the system user waypoints. No flight plans stored in the system have been modified.
'No flight plan files found to import.'	The SD card contains no flight plan data.
'Flight plan import failed.'	Flight plan data was not successfully imported from the SD card.
'Flight plan partially imported.'	Some flight plan waypoints were successfully imported from the SD card, however others had errors and were not imported. A partial stored flight plan now exists in the system.
'File contained user waypoints only.'	The file stored on the SD card did not contain a flight plan, only user waypoints. One or more of these waypoints did not import successfully.
'Too many points. Flight plan truncated.'	The flight plan on the SD card contains more waypoints than the system can support. The flight plan was imported with as many waypoints as possible.

FLIGHT PLAN IMPORT/EXPORT MESSAGES (CONT.)

Flight Plan Import/Export Results	Description
'Some waypoints not loaded. Waypoints locked.'	The flight plan on the SD card contains one or more waypoints that the system cannot find in the navigation database. The flight plan has been imported, but must be edited within the system before it can be activated for use.
'User waypoint database full. Not all loaded.'	The flight plan file on the SD card contains user waypoints. The quantity of stored user waypoints has exceeded system capacity, therefore not all the user waypoints on the SD card have been imported. Any flight plan user waypoints that were not imported are locked in the flight plan. The flight plan must be edited within the system before it can be activated for use.
'One or more user waypoints renamed.'	One or more imported user waypoints were renamed when imported due to naming conflicts with waypoints already existing in the system.
'Flight plan successfully exported.'	The stored flight plan was successfully exported to the SD card.
'Flight plan export failed.'	The stored flight plan was not successfully exported to the SD card. The SD card may not have sufficient available memory or the card may have been removed prematurely.

PILOT PROFILE IMPORT/EXPORT MESSAGES

Pilot Profile Import/Export Results	Description
'No pilot profile plan files found to import.'	Displayed if the SD card does not have one or more valid pilot profile filenames.
'Overwrite existing profile?'	Displayed if the profile name matches the name of existing profile.
'Profile name invalid. Enter a different profile name.'	Displayed if the profile name is invalid.
'All available pilot profiles in use. Delete a profile before importing another.'	Displayed if the maximum number for pilot profiles has been reached.
'Pilot profile import failed.'	Displayed if the importing operation fails for any other reason.
'Pilot profile import succeeded.'	Displayed if the importing operation succeeds.
'Overwrite existing file?'	Displayed if the filename matches the name of an existing file on the SD card.
'Pilot profile export failed.'	Displayed if the export operation fails.
'Pilot profile export succeeded.'	Displayed if the export operation succeeds.

Flight
Instruments

EIS

Nav/Com/
XPDR/Audio

AFCs

GPS Nav

Flight
Planning

Procedures

Hazard
Avoidance

Additional
Features

Abnormal
Operation

Annun/
Alerts

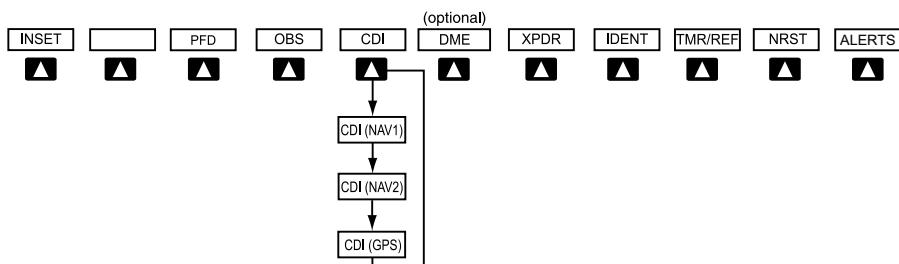
Appendix

Index

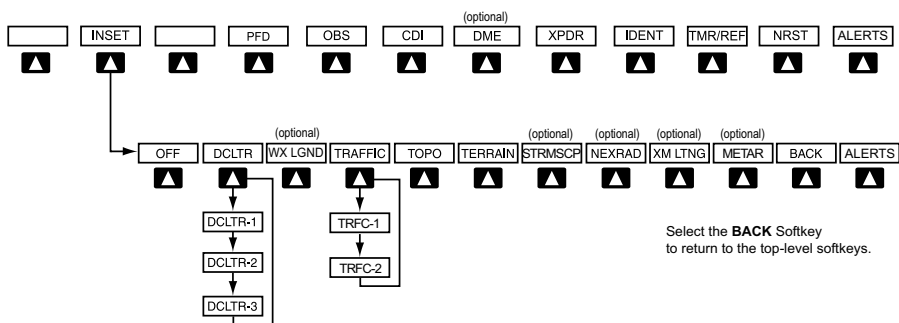
Blank Page

APPENDIX

PFD SOFTKEY MAP



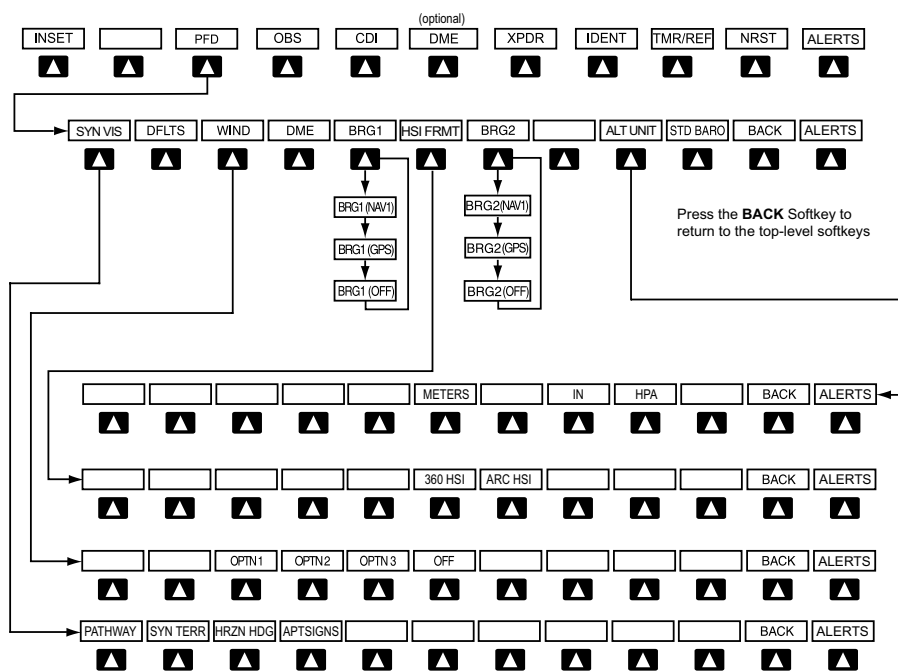
Top Level PFD Softkeys



Inset Map Softkeys

Level 1	Level 2	Level 3	Description
INSET			Displays Inset Map in PFD lower left corner
	OFF		Removes Inset Map
	DCLTR (3)		Selects desired amount of map detail; cycles through declutter levels: DCLTR (No Declutter): All map features visible DCLTR-1: Declutters land data DCLTR-2: Declutters land and SUA data DCLTR-3: Removes everything except the active flight plan
	WX LGND		Displays icons and age on the Inset Map for selected weather products (optional)

Level 1	Level 2	Level 3	Description
	TRAFFIC		Displays traffic information on Inset Map
	TOPO		Displays topographical data (e.g., coastlines, terrain, rivers, lakes) and elevation scale on Inset Map
	TERRAIN		Displays terrain information on Inset Map
	STRMSCP		Press to display the Stormscope lightning data on the Inset Map (within a 200 nm radius of the aircraft)
	NEXRAD		Displays NEXRAD weather and coverage information on Inset Map (optional feature)
	XM LTNG		Displays XM lightning information on Inset Map (optional feature)
	METAR		Displays METAR flags on airport symbols shown on the Inset Map (optional)



PFD Configuration Softkeys

Level 1	Level 2	Level 3	Description
PFD			Displays second-level softkeys for additional PFD configurations
	SYN VIS		Displays the softkeys for enabling or disabling Synthetic Vision features
		PATHWAY	Displays rectangular boxes representing the horizontal and vertical flight path of the active flight plan
		SYN TERR	Enables synthetic terrain depiction
		HRZN HDG	Displays compass heading along the Zero-Pitch line
		APTSIGNS	Displays position markers for airports within approximately 15 nm of the current aircraft position. Airport identifiers are displayed when the airport is within approximately 9 nm.
	DFLTS		Resets PFD to default settings, including changing units to standard
	WIND		Displays softkeys to select wind data parameters
		OPTN 1	Headwind/tailwind and crosswind arrows with numeric speed components
		OPTN 2	Wind direction arrow and numeric speed
		OPTN 3	Wind direction arrow with numeric direction and speed
		OFF	Information not displayed
	DME		Displays the DME Information Window
	BRG1		Cycles the Bearing 1 Information Window through NAV1 or GPS/waypoint identifier and GPS-derived distance information.
	HSI FRMT		Displays the HSI formatting softkeys
		360 HSI	Displays the HSI in a 360 degree format

Flight Instruments

EIS

Nav/Com/XPDR/Audio

AFCS

GPS Nav

Flight Planning

Procedures

Hazard Avoidance

Additional Features

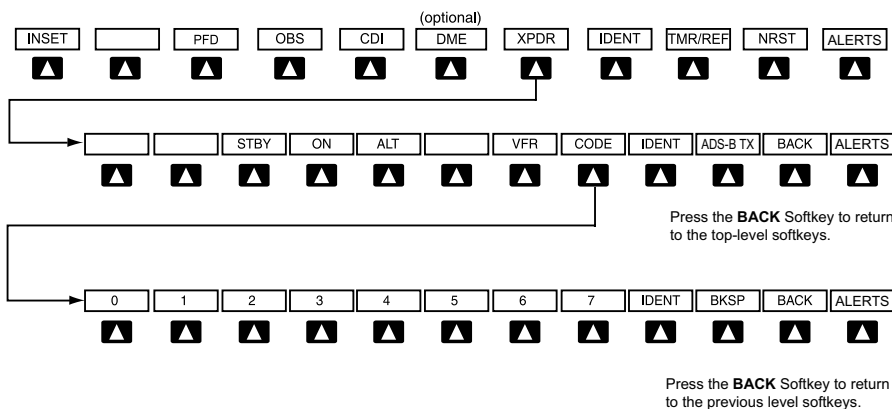
Abnormal Operation

Annun/Alerts

Appendix

Index

Level 1	Level 2	Level 3	Description
		ARC HSI	Displays the HSI in an arc format
	BRG2		Cycles the Bearing 2 Information Window through NAV2 or GPS/waypoint identifier and GPS-derived distance information.
	ALT UNIT		Displays softkeys for setting the altimeter and BARO settings to metric units
		METERS	When enabled, displays altimeter in meters
		IN	Press to display the BARO setting as inches of mercury
		HPA	Press to display the BARO setting as hectopascals
	STD BARO		Sets barometric pressure to 29.92 in Hg (1013 hPa)



Transponder Softkeys

Level 1	Level 2	Level 3	Description
XPDR			Displays transponder mode selection softkeys
	STBY		Selects standby mode (transponder does not reply to any interrogations)
	ON		White (On-Ground) - Transponder generates Mode A and Mode S replies, as well as transmission of acquisition and extended squitters, including ADS-B out. Green (Airborne) - Transponder generates Mode A and Mode S replies, as well as transmission of acquisition and extended squitters, including ADS-B out.
	ALT		Selects Altitude Mode (selection is usually automatic) White (On-Ground) - Transponder does not allow Mode A or Mode C replies to interrogations, , but it does permit acquisition and extended squitters including ADS-B out, and replies to discretely addressed Mode S interrogations. Green (Airborne) - Transponder generates Mode A, Mode C, and Mode S replies to interrogations, as well as transmissions of acquisition and extended squitters including ADS-B out.
	VFR		Automatically enters the VFR code (1200 in the U.S.A. only)
	CODE		Displays transponder code selection softkeys 0-7
	IDENT		Activates the Special Position Identification (SPI) pulse for 18 seconds, identifying the transponder return on the ATC screen

Flight Instruments

EIS

Nav/Com/XPDR/Audio

AFCS

GPS Nav

Flight Planning

Procedures

Hazard Avoidance

Additional Features

Abnormal Operation

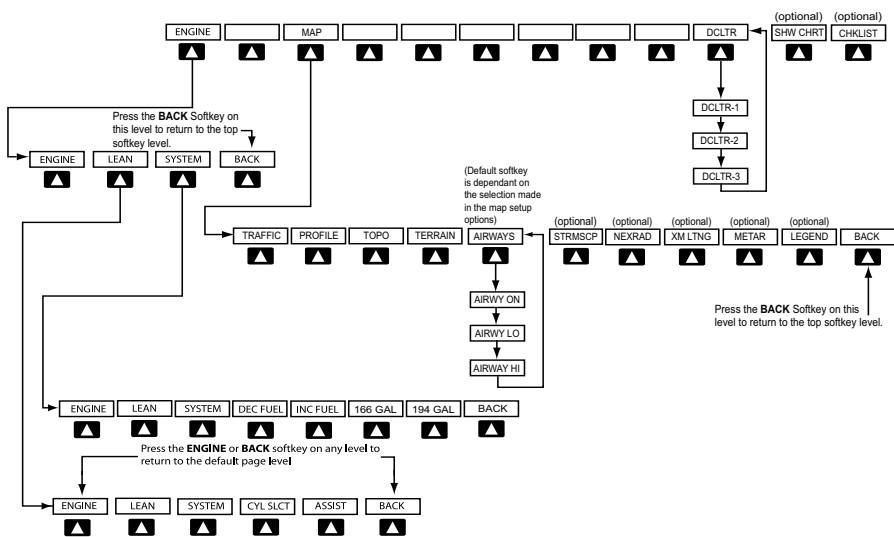
Annun/Alerts

Appendix

Index

Level 1	Level 2	Level 3	Description
	ADS-B TX		Activates/deactivates transmission of the aircraft's three-dimensional position and aircraft heading for reception by ADS-B systems.
		0 — 7	Use numbers to enter code
		BKSP	Removes numbers entered, one at a time
IDENT			Activates the Special Position Identification (SPI) pulse for 18 seconds, identifying the transponder return on the ATC screen
TMR/REF			Displays Timer/References Window
NRST			Displays Nearest Airports Window
ALERTS			Displays Alerts Window

MFD SOFTKEY MAP



MFD Softkeys

Level 1	Level 2	Level 3	Description
ENGINE			Displays the LEAN and SYSTEM softkeys
	LEAN		Displays the engine leaning softkeys

Level 1	Level 2	Level 3	Description
		CYL SLCT	Selects the desired cylinder for monitoring
		ASSIST	Highlights the first cylinder that peaks and displays information for that cylinder
		BACK	Press to return to the top level softkeys
	SYSTEM		Displays fuel system softkeys
		DEC FUEL	Press to decrease fuel quantity in 1-gallon increments
		INC FUEL	Press to increase fuel quantity in 1-gallon increments
		166 GAL	Press to reset fuel to 166 gallons
		194 GAL	Press to reset fuel to 194 gallons
		BACK	Press to return to the top level softkeys
MAP			Enables second-level Navigation Map softkeys
	TRAFFIC		Displays traffic information on Navigation Map
	PROFILE		Displays/removes Profile View on Navigation Map Page
	TOPO		Displays topographical data (e.g., coastlines, terrain, rivers, lakes) and elevation scale on Navigation Map
	TERRAIN		Displays terrain information on Navigation Map

Flight Instruments

EIS

Nav/Com/XPDR/Audio

AFCS

GPS Nav

Flight Planning

Procedures

Hazard Avoidance

Additional Features

Abnormal Operation

Annun/Alerts

Appendix

Index

Level 1	Level 2	Level 3	Description
	AIRWAYS		Displays airways on the map; cycles through the following: AIRWAYS: No airways are displayed AIRWY ON: All airways are displayed AIRWY LO: Only low altitude airways are displayed AIRWY HI: Only high altitude airways are displayed
	STRMSCP		Displays Stormscope weather and coverage information on Navigation Map (optional feature)
	NEXRAD		Displays NEXRAD weather and coverage information on Navigation Map (optional feature)
	XM LTNG		Displays XM lightning information on Navigation Map (optional feature)
	METAR		Displays METAR flags on airport symbols shown on the Inset Map (optional)
	LEGEND		Displays the legend for the selected weather products. Available only when NEXRAD, XM LTNG, and/or METAR softkeys are selected.
	BACK		Returns to top-level softkeys
DCLTR			Selects desired amount of map detail; cycles through declutter levels: DCLTR (No Declutter): All map features visible DCLTR-1: Declutters land data DCLTR-2: Declutters land and SUA data DCLTR-3: Removes everything except the active flight plan

Level 1	Level 2	Level 3	Description
SHW CHRT			When available, displays optional airport and terminal procedure charts
CHKLIST			When available, displays optional checklists

DATABASE UPDATES



CAUTION: *Never disconnect power to the system when loading a database. Power interruption during the database loading process could result in maintenance being required to reboot the system.*

The system uses Secure Digital (SD) cards to load and store various types of data. For basic flight operations, SD cards are required for database storage as well as Jeppesen navigation and Jeppesen ChartView database updates. Not all SD cards are compatible with the G1000 system. Use only SD cards supplied by Garmin or the aircraft manufacturer.



CAUTION: *When downloading updates to the Jeppesen Navigation Database, copy the data to an SD card other than a Garmin Supplemental Data Card. Otherwise, data corruption can occur.*



NOTE: *When loading database updates, the 'DB Mismatch' message will be displayed until database synchronization is complete, followed by turning system power off, then on. Synchronization can be monitored on the AUX-SYSTEM STATUS Page.*



NOTE: *Loading a database in the system prior to its effective date will result in the expiration date on the power-up screen and the effective date on the AUX-System Status Page being displayed in amber.*




NOTE: *Loading a database in the system prior to its effective date will result in the expiration date on the power-up screen and the effective date on the AUX-System Status Page being displayed in amber.*

Information regarding the various databases may be viewed on the AUX-System Status Page.

Jeppesen Databases

The Jeppesen navigation database is updated on a 28-day cycle. 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. Both of these databases are provided directly from Jeppesen.

The ChartView database should be copied to the Garmin supplied Supplemental Data Card which will reside in the bottom card slot on the MFD. The navigation database must be installed from the Jeppesen or user supplied SD data card. Contact Jeppesen (www.jeppesen.com) for subscription and update information.

 **NOTE:** After the navigation database is installed, the card may be removed.

Updating the active Jeppesen navigation database (not using the Dual Navigation Database or Automatic Database Synchronization Features):

- 1) With the system OFF, insert the SD card containing the new navigation database version into the top card slot of the display (PFD1, PFD2 or MFD) to be updated (label of SD card facing left).
- 2) Turn the system ON.
- 3) Press the **NO** Softkey to proceed to loading the active database.
- 4) Press the **YES** Softkey to update the active navigation database.
- 5) After the update completes, the display starts in normal mode. Do not remove power while the display is starting.
- 6) Turn the system OFF and remove the SD card from the top card slot.
- 7) Repeat steps 1 through 6 for the other display (PFD or MFD). Remove the SD card when finished.
- 8) Apply power to the system and press the **ENT** Key to acknowledge the startup screen.
- 9) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 10) Turn the small **FMS** Knob to select the System Status Page.
- 11) Press the Display Database Selection Softkey to show active navigation database information for each display (**MFD1 DB** and **PFD1 DB**). Verify the correct active navigation database cycle information is shown for each display.

Dual Navigation Database Feature

The dual navigation database feature allows each display to store an upcoming navigation database on the bottom SD card so that the system can automatically load it to replace the active database when the new database becomes effective (the next cycle becomes available seven days prior to its effective date).

Loading a standby navigation database:

- 1) With the system OFF, insert the SD card containing the new navigation database version into the top card slot of the MFD.
- 2) Verify that an SD card is inserted in the bottom slot of each PFD and the MFD.
- 3) Turn the system ON.
- 4) Press the **YES** Softkey. The navigation database is copied to the SD card in the bottom card slot of the MFD.
- 5) After the navigation database files are copied to the bottom SD card, a display will appear.
- 6) As instructed on the display, press any key to continue.
- 7) Press any key to continue. A display will now appear.
- 8) Press the **NO** Softkey. The display now starts in normal mode. Since the database effective date is not yet valid, it should not be loaded as the active database. The display now starts in normal mode. Do not remove power while the display is starting.
- 9) Press the **ENT** Key to acknowledge the startup screen.
- 10) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 11) Turn the small **FMS** Knob to select the System Status Page.
- 12) The new database is copied to the SD card in the bottom card slot of each PFD. Progress can be monitored in the SYNC STATUS field. When copying is finished, 'Complete' is displayed.
- 13) Turn system power OFF.
- 14) Remove the SD card from the top card slot of the MFD.
- 15) Turn system power ON.
- 16) Press the **ENT** Key to acknowledge the startup screen.

- 17) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 18) Turn the small **FMS** Knob to select the System Status Page.
- 19) Press the Display Database Selection Softkey to show standby navigation database information for each display (**MFD1 DB** and **PFD1 DB**). Verify the correct standby navigation database cycle information is shown for each display.



NOTE: The system compares the active databases on each PFD and the MFD, and displays a system alert message 'DB Mismatch' if they are not identical. Similarly, if the standby databases on each PFD and the MFD are not identical, the system will display a 'DB Mismatch' alert for the standby navigation databases.

Garmin Databases

The following databases are stored on Supplemental Data Cards provided by Garmin:

- Expanded basemap
- Terrain
- Airport terrain
- Obstacle
- SafeTaxi
- FliteCharts
- Airport Directory (AOPA)

After subscribing to the desired database product updates, these updated databases are copied to each Supplemental Data Card for each display (the card that contains the FliteCharts or ChartView database resides in the MFD). Since these databases are not stored internally in the displays, these Supplemental Data Cards must remain in the bottom card slot of each display.



NOTE: The data contained in the terrain and obstacle databases comes from government agencies. Garmin accurately processes and cross-validates the data, but cannot guarantee the accuracy and completeness of the data.

Obtaining Garmin Database Updates

The Garmin database updates can be obtained by following the instructions detailed in the 'Aviation Databases' section of the Garmin website (fly.garmin.com). Once the updated files have been downloaded from the website, a PC equipped with an appropriate SD card reader is used to unpack and copy the new databases onto the appropriate Supplemental Data Cards. Equipment required to perform the update is as follows:

- Windows-compatible PC computer (running Windows XP, Vista, or Windows 7)
- SD Card Reader: SanDisk SDDR-93, SanDisk SDDR-99, Verbatim #96504, or equivalent
- Updated database obtained from the Garmin website
- Existing Supplemental Database SD Card (010-00330-41, -42, or -43) from the MFD. The supplemental data card from the MFD should be used because all databases (except the active navigation database) are required to reside on this card.

Updating Basemap, SafeTaxi, Airport Terrain, Obstacle, and Airport Directory Databases

These databases may be copied to one Supplemental Data Card, then automatically synchronized to other card in the system:

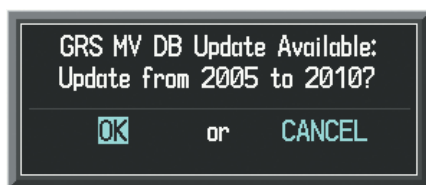
- 1) With system power OFF, remove the MFD database card from the bottom card slot of the MFD.
- 2) Update the basemap, SafeTaxi, airport terrain, obstacle and/or airport directory databases on the MFD card.
- 3) Insert the MFD database card into the bottom card slot of the MFD.
- 4) Apply power to the system, check that the databases are initialized and displayed on the power-up screen. If a 'Verifying' message is seen, wait for the system to finish loading before proceeding to step 5.
- 5) Acknowledge the Power-up Page agreement by pressing the **ENT** Key or the right most softkey.
- 6) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 7) Turn the small **FMS** Knob to select the System Status Page.
- 8) Monitor the Sync Status in the Database Window. Wait for all databases to complete syncing, indicated by 'Complete' being displayed.
- 9) Remove and reapply power to the system.
- 10) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 11) Turn the small **FMS** Knob to select the System Status Page.
- 12) Press the Display Database Selection Softkey to show database information for each display (**MFD1 DB** or **PFD1 DB**). Verify the correct database cycle information is shown for each database for each display.

Updating Terrain, FliteCharts, and ChartView Databases

- 1) With system power OFF, remove the Supplemental Data Card from the bottom card slot of the MFD and PFDs.
- 2) Copy the updated terrain database to each of the Supplemental Data Cards. Copy the updated FliteCharts or ChartView database to one Supplemental Data Card.
- 3) Insert the updated Supplemental Data Cards into the bottom card slot of the MFD and PFDs. The Supplemental Data Card containing the FliteCharts or ChartView database is inserted in the MFD.
- 4) Apply power to the system, check that the databases are initialized and displayed on the power-up screen. A 'Verifying' message may be seen. If this message is present, wait for the system to finish loading before proceeding to step 5.
- 5) Acknowledge the Power-up Page agreement by pressing the **ENT** Key or the right most softkey.
- 6) Turn the large **FMS** Knob to select the AUX Page group on the MFD.
- 7) Turn the small **FMS** Knob to select the System Status Page.
- 8) Press the Display Database Selection Softkey to show database information for each display (**MFD1 DB** or **PFD1 DB**). Verify the correct database cycle information is shown for each database for each display.
- 9) Remove power from the system.

Magnetic Field Variation Database Update

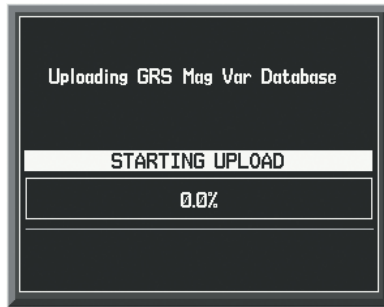
At startup, the system compares this version of the MV DB with that presently being used by the AHRS (GRS). If the system determines the MV DB needs to be updated, a prompt is displayed on the Navigation Map Page, as shown in the following figure.



GRS Magnetic Field Variation Database Update Prompt

Loading the magnetic field variation database update:

With 'OK' highlighted, as shown in the previous figure, press the **ENT** Key on the MFD. A progress monitor is displayed as shown in the following figure.



Uploading Database to GRS

When the upload is complete, the system is ready for use.

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCS
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page

A

- Activate a flight plan 18
- Active Channel 68
- Active database 112, 113
- AC-U-KWIK 67
- ADF 9, 10, 76
- ADS-B 9, 108
- AHRS 93, 94
- Airport Directory 67
- Airport Signs 63, 64
- Airways 110
- Along Track Offset 34
- ALT 54
- Altitude

- Constraints 20
- Altitude mode 54
- Altitude volume 54
- Antenna stabilization 60
- Antenna tilt 58
- AOPA 67
- AP 80
- Audio panel controls
 - NAV1, NAV2 10
- Autopilot 80, 81

B

- Barometric Altitude Minimums 3
- Barometric pressure 106
- Bearing line 59, 60

C

- CDI 1, 10, 97
- Cell 49, 50
- Cell mode 50
- Channel Presets 70
- ChartView 64, 65
- Clearance player 11

- Clearance Recorder 11
- Code selection softkeys 9
- COM 10, 11, 75

D

- Databases 111
- Database Synchronization 112
- Database updates 111, 114
- Day/Night views 67
- DB Mismatch 114
- DCLTR Softkey 64
- Dead Reckoning 77
- Declutter 76, 103, 110
- Direct-to 17
- DME 9, 10
- DR mode 77, 78
- Dual navigation database 113

E

- Edit a flight plan 39

F

- FD 80
- Flight Director 13
- Flight path marker 63
- Flight plan import/export messages 99, 100
- FliteCharts® 64, 65
- FPA 20
- Frequency Transfer 10

G

- Gain 59
- Ground mapping 60

Flight Instruments

EIS

Nav/Com/XPDR/Audio

AFCS

GPS Nav

Flight Planning

Procedures

Hazard Avoidance

Additional Features

Abnormal Operation

Annun/Alerts

Appendix

Index

- H**
- HF 10
 - Horizon heading 63
 - Horizontal scan 59
 - Horizontal Situation Indicator (HSI) 46
- I**
- Inset Map 103, 104
 - IOI 82
- J**
- Jeppesen 65
 - Jeppesen navigation database 112
- L**
- Lightning 49, 50, 104
- M**
- Map panning 51
 - Message advisories 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99
 - MET 80
 - METAR 51
 - Minimums 84
 - Mistrim 80, 81
 - MKR/MUTE 11
 - Mode selection softkeys 9
 - Multi Function Display (MFD)
 - Softkeys 108
- N**
- NAV 10
 - NAV1 1, 10
 - NAV2 1, 10
 - Navigation
 - Database 20
 - Navigation database 21
 - NEXRAD 51, 104, 110
- O**
- OBS 2
 - Obstacles 88, 90
 - Overspeed Protection 14
- P**
- Pathways 63, 64
 - Pilot Profile Import/Export Messages
 - 101
 - Pilot Profiles 70
 - Profile View 109
- R**
- Radio 68
 - Reversionary mode 75
 - ROC 82
- S**
- SafeTaxi® 64
 - SBAS 14, 45, 57, 77, 90, 91
 - Sector scan 60
 - Secure Digital (SD) cards 111
 - SiriusXM 51, 52
 - Split COM operation 10
 - STAB 60
 - Standby 58
 - Standby Navigation Database 113, 114
 - Store Flight Plan 39
 - Stormscope lightning data 49, 50, 104
 - Strike 49
 - Strike mode 50
 - Supplemental Data Card 114
 - SVS 63, 98
 - Synthetic Vision System 63

T

- TA 84
- TAF 51
- TAS 54, 84, 93
- TAWS 57, 81
- Temperature Compensated Altitude 38
- Terminal procedures charts 65
- Terrain 88, 104, 109
- Tilt line 58
- Timer 96
- Topographical data 104, 109
- Traffic 49, 54, 104, 109
- Traffic Advisory 53, 54, 84
- Traffic map page 54, 55
- Transponder 9, 107, 108
- Transponder Mode 9

U

- User Defined Holding Pattern 35
- User-Defined Holding Pattern 37

V

- Vertical navigation 20
 - Direct-to 19
- Vertical speed guidance 21
- Vertical track 84
- VNV 17, 76, 97
- VNV guidance
 - Disabling 19
 - Enabling 19
- Vspeed 2
- VS TGT 20

W

- WATCH® 60
- Waypoint Selection Submenu 31, 32
- Weather Attenuated Color Highlight 60
- Weather data link page 51
- Weather radar 57
- Wind data 105

X

- XM lightning 104, 110
- XM weather 51

- Flight Instruments
- EIS
- Nav/Com/XPDR/Audio
- AFCs
- GPS Nav
- Flight Planning
- Procedures
- Hazard Avoidance
- Additional Features
- Abnormal Operation
- Annun/Alerts
- Appendix
- Index

Blank Page



GARMIN



Garmin International, Inc.
1200 East 151st Street
Olathe, Kansas 66062, U.S.A.

Garmin AT, Inc.
2345 Turner Road SE
Salem, OR 97302, U.S.A.

Garmin (Europe) Ltd.
Liberty House, Hounsdown Business Park
Southampton, Hampshire SO40 9LR U.K.

Garmin Corporation
No. 68, Zhangshu 2nd Road
Xizhi District, New Taipei City, Taiwan

Contact Garmin Product Support or view
warranty information at www.flygarmin.com.