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GTN 725/750

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LIMITED WARRANTY

All Garmin avionics products are warranted to be free from defects in materials or workmanship for: two years from the date of purchase for new Remote-Mount and Panel-Mount products; one year from the date of purchase for new portable products and any purchased newly-overhauled products; six months for newly-overhauled products exchanged through a Garmin Authorized Service Center; and 90 days for factory repaired or newly-overhauled products exchanged at Garmin in lieu of repair. Within the applicable period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized service provider of Garmin; or (v) damage to a product that has been modified or altered without the written permission of Garmin. In addition, Garmin reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country.

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IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

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Online Auction Purchases: Products purchased through online auctions are not eligible for warranty coverage. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

International Purchases: A separate warranty may be provided by international distributors for devices purchased outside the United States depending on the country. If applicable, this warranty is provided by the local in-country distributor and this distributor provides local service for your device. Distributor warranties are only valid in the area of intended distribution. Devices purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

To obtain warranty service, contact your local Garmin Authorized Service Center. For assistance in locating a Service Center near you, visit the Garmin web site at http://www.garmin.com or contact Garmin Customer Service at 866-739-5687.

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WARNING: Navigation and terrain separation must NOT be predicated upon the use of the terrain function. The GTN 725/750 Terrain Proximity feature is NOT intended to be used as a primary reference for terrain avoidance and does not relieve the pilot from the responsibility of being aware of surroundings during flight. The Terrain Proximity feature is only to be used as an aid for terrain avoidance and is not certified for use in applications requiring a certified terrain awareness system. Terrain data is obtained from third party sources. Garmin is not able to independently verify the accuracy of the terrain data.

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

WARNING: The Garmin GTN 725/750 has a very high degree of functional integrity. However, the pilot must recognize that providing monitoring and/or self-test capability for all conceivable system failures is not practical. Although unlikely, it may be possible for erroneous operation to occur without a fault indication shown by the GTN 725/750. It is thus the responsibility of the pilot to detect such an occurrence by means of cross-checking with all redundant or correlated information available in the cockpit.

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

WARNING: Do not use outdated database information. Databases used in the GTN 725/750 system must be updated regularly in order to ensure that the information remains current. Pilots using an outdated database do so entirely at their own risk.

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

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WARNING: Traffic information shown on the GTN 725/750 is provided as an aid in visually acquiring traffic. Pilots must maneuver the aircraft based only upon ATC guidance or positive visual acquisition of conflicting traffic.

WARNING: 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 significantly older than the indicated weather product age.

WARNING: For safety reasons, GTN 725/750 operational procedures must be learned on the ground.

WARNING: To reduce the risk of unsafe operation, carefully review and understand all aspects of the GTN 725/750 Pilot's Guide. Thoroughly practice basic operation prior to actual use. During flight operations, carefully compare indications from the GTN 725/750 to all available navigation sources, including the information from other NAVAIDs, visual sightings, charts, etc. For safety purposes, always resolve any discrepancies before continuing navigation.

CAUTION: The United States government operates the Global Positioning System and is solely responsible for its accuracy and maintenance. The GPS system is subject to changes which could affect the accuracy and performance of all GPS equipment. Portions of the Garmin GTN 725/750 utilize GPS as a precision electronic NAVigation AID (NAVAID). Therefore, as with all NAVAIDs, information presented by the GTN 725/750 can be misused or misinterpreted and, therefore, become unsafe.

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CAUTION: The Garmin GTN 725/750 does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and the pilot's authority to operate this device under FAA/FCC regulations.

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

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 GTN bezel and displays, are subject to change and may not reflect the most current GTN software. Depictions of equipment may differ slightly from the actual equipment.

NOTE: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: 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: Canadian installations: In accordance with Canadian Radio Specifications Standard 102 (RSS 102), RF field strength exposure to persons from an antenna connected to this device should be limited to 60 V/m for controlled environment and 28 V/m for uncontrolled environment.

NOTE: Do not use SafeTaxi or Chartview functions as the basis for ground maneuvering. SafeTaxi and Chartview functions have not been qualified to be used as an airport moving map display (AMMD). SafeTaxi and Chartview are intended to improve pilot situational awareness during ground operations should only be used by the flight crew to orient themselves on the airport surface.

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

- *It is the pilot's responsibility to remain familiar with all FAA regulatory and advisory guidance and information related to the use of databases in the National Airspace System.*

- *Garmin equipment will only recognize and use databases that are obtained from Garmin or Jeppesen. Databases obtained from Garmin or Jeppesen are assured compliance with all data quality requirements (DQRs) by virtue of a Type 2 Letter of Authorization (LOA) from the FAA. A copy of the Type 2 LOA is available for each database and can be viewed at http://fly.garmin.com by selecting "Type 2 LOA Status."*

- *Use of a current Garmin or Jeppesen database in your Garmin equipment is required for compliance with established FAA regulatory guidance, but does not constitute authorization to fly any and all terminal procedures that may be presented by the system. It is the pilot's responsibility to operate in accordance with established AFM(S) and regulatory guidance or limitations as applicable to the pilot, the aircraft, and installed equipment.*

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."*

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NOTE: The GTN touchscreen may not respond to touch commands if condensation or moisture accumulate on the touchscreen.

NOTE: This device complies with Part 15 of the FCC limits for Class B digital devices. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Furthermore, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by relocating the equipment or connecting the equipment to a different circuit than the affected equipment. Consult an authorized dealer or other qualified avionics technician for additional help if these remedies do not correct the problem.

Operation of this device is subject to the following 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.

To obtain accessories for your unit, please contact your Garmin dealer.

Help us better support you by completing our on-line registration form today! Registration ensures that you will be notified of product updates and new products and provides lost or stolen unit tracking. Please, have the serial number of your unit handy, connect to our web site (www.garmin.com) and look for our Product Registration link on the Home page.

The display surface is coated with a special anti-reflective coating which is very sensitive to skin oils, waxes and abrasive cleaners. It is very important to clean the lens using an eyeglass lens cleaner which is specified as safe for anti-reflective coatings and a clean, lint-free cloth.

AC 90-100A Statement of Compliance: The Garmin navigational unit meets the performance and functional requirements of AC 90-100A.

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Product Registration and Support

Help us better support you by completing your online registration today! Have the serial number of your product handy and connect to the Garmin web site (www.garmin.com). Look for the Product Registration link on the Home page. Also, be sure to record your serial number in the space provided.

If you have any questions, the Garmin Product Support department may be reached Monday through Friday, 7:00 AM to 7:00 PM Central Time.

US: 913-397-8200

US Toll Free: 1-866-739-5687

Canada Toll Free: 1-866-429-9296

Record of Revisions			
Part Number	**Revision**	**Date**	**Description**
190-01007-03	1	01/24/11	Initial Release
	A	02/04/11	Production Release
	B	03/16/11	Update information
	C	11/29/12	Updates for software version 3.0
	D	02/28/13	Updates for software version 4.0
	E	03/25/13	Updates for software version 4.10
	F	08/26/13	Updates for software version 5.0
	G	08/01/14	Updates for software version 5.11
	H	10/17/14	Updates for software version 5.12
	J	7/2015	Updates for software version 6.00

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Welcome

Welcome to the GTN era of navigation. The Garmin GTN supports airway navigation and flexible flight planning, including arrival and departure procedures and precision approaches. All of these advanced features are easily accessed with an easy-to-use touchscreen display, another first for general aviation. You can be confident in knowing that this product has been designed to meet or exceed industry performance standards and is supported through a global network of Garmin Aviation Distributors.

About This Guide

Take a little time to review the various sections of this guide to familiarize yourself with it. First, read this section and the Getting Started section as an introduction to quickly get you started with the GTN. The other sections are not meant to necessarily be read in order, but provide detailed information on the subject they contain as you need them. Do take the time to review the information before using the product to assist you in getting the most out of your avionics.

Generally, a feature will be described in a section that provides a brief description, a graphic functional diagram, and step-by-step procedures. If read cover-to-cover sequentially, the information may seem repetitive. The guide is designed as a reference and learning tool where you will generally skip around the document learning about a particular feature or function after becoming familiar with the unit.

Electronic Document Features

Versions of this guide are saved in the Adobe Portable Document Format (pdf) and have features that help the user navigate more easily through the document. The cover icons, Table of Contents, Index, and side tabs (i.e., FPL, Map, Traffic, etc.) are hyperlinks that will take you directly to the selected item.

Versions of aviation products in the pdf format are available at www.garmin.com/manuals.

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Conventions

The GTN display dynamically tailors the number and position of the controls for each function and are engaged by merely touching them.

Touch   Touch the key with your finger.

Drag   Touch the list or location on the map with your finger. Continue lightly holding your finger to the display surface and drag your finger in the intended direction to scroll through the list or move the location on the map.

In this pilot's guide, keys are noted by bold text. An image of the key used will be shown to the left of a procedure. Keys are outlined areas on the display. Figures in the guide will identify the available controls. A key may have a name of a control, such as **Enter**, **Terrain**, or **Back**. A key may also be an information field, such as a numeric value that can be changed.

Graphic Of Key   *Text Description*
                                                            Of Key Operation

Terrain   While viewing the Map Menu, touch the **Terrain** Map Overlay key to toggle the view of Terrain data.

Graphic Of Key With   *Text Description*
Numeric Value   *Of Key*

Fuel On Board   When the Fuel on Board value is selected, touch the **Fuel on Board** key to display the Fuel on Board values.

List "Keys." Touch To
Select.

Select Field Type

ESA – Enroute Safe Altitude   *Scroll Bar Indicates More*
                                           Selections Available.
ETA – Estimated Time of Arrival   *Touch Finger To An Item*
                                           In The List And Drag Your
                                           Finger To View More
                                           Selections.
ETA at Dest – ETA at Destination
                                           Selected Field Type
ETE – Estimated Time Enroute

ETE to Dest – ETE to Destination
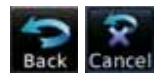
Back Cancel   Touching the **Back** key returns to the previous display. The **Cancel** key cancels any information selected or entered and returns to the previous display.

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1 GETTING STARTED

1.1 Model Descriptions

This guide covers the operation of the GTN 725 and 750. In general, all models will be referred to as the GTN 7XX, except where there are physical or operational differences. The GTN units are 6.25 inches wide and 6 inches high. The display is a 708 by 600 pixel, 6.9 inch diagonal color LCD with touchscreen controls. The units include one removable SD data card for the databases and software upgrades.

The GTN 7XX simplifies your workload with an easy-to-use touch panel that provides a visual display of both controls and functions. The required controls are displayed for the selected function. Keys on the display allow you to access and control their functions by a simple touch on the interactive display.

The GTN 7XX can integrate a variety of avionics that will not only simplify operation, but also save panel space. The GTN 725 and 750 have their own GPS/SBAS navigator and flight planning functions. The GTN 750 adds VHF Com and VHF Nav radios. Selected optional external equipment allows you to display and control active traffic systems, XM Entertainment Radio, XM Weather, audio panel, and a Mode S transponder directly from the GTN 7XX display, and more. When the optional audio panel and/or transponder are not installed, the area on the upper portion of the display is used for configurable navigation information.

1.1.1 GTN 725

The GTN 725 has a GPS/SBAS engine and is TSO C146c certified for primary domestic, oceanic, and remote navigation including en route, terminal, and non-precision approaches, and approaches with vertical guidance, such as LPV and LNAV/VNAV. The GTN 725 can simultaneously give aviators vital approach information and weather and traffic data in relation to their position on a large, color moving map display. Thanks to a high-contrast color display, the information can be easily read from wide viewing angles even in direct sunlight. Its color moving map features a built-in database that shows cities, highways, railroads, rivers, lakes, coastlines, and a complete Jeppesen database. The Jeppesen database (that can be updated with a front-loading data card) contains all airports, VORs, NDBs, Intersections, FSSs, Approaches, DPs/STARs, and SUA information.

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— *Navigation Information*

Figure 1-1 GTN 725 Upper Display Without Optional Transponder or Audio Panel

Pilots will enjoy the GTN 725 as a flexible and powerful navigator, especially when it is coupled with traffic, lightning detection, and weather interfaces. With the PC-based FDE prediction program, the GTN 725 may be used for oceanic or remote operations. For the latest in graphic and text weather information, the GTN 725 can interface to XM Satellite Radio's XM Weather Service via the Garmin GDL 69/69A datalink receiver.

1.1.2   GTN 750

The GTN 750 includes all of the features of the GTN 725, and also includes a TSO'd airborne VHF communications transceiver and TSO'd airborne VOR/Localizer and Glideslope receivers.

— *Navigation Information*

Figure 1-2 GTN 750 Upper Display Without Optional Transponder or Audio Panel

1.2   About This Pilot's Guide

1.2.1   Conventions

Bold text indicates a control. The **small right** knob is the smaller, inner knob of the two concentric rotary knobs on the lower, right corner of the bezel. The **large right** knob is the larger, outer knob.

— *Large, Outer Knob*
— *Small, Inner Knob*
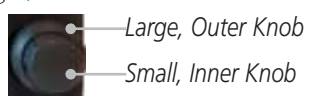
Figure 1-3 Large/Small Concentric Knobs

A graphic of a control on the side of the page refers to the control you should use for the associated step as shown below.

1.2.2   Using the Touchscreen

Most of the controls are operated by touching the display. Highlighted icons and keys may be simply touched to make a selection. A list of menu items may be scrolled by touching the screen and retaining pressure while sliding your

finger up or down. Map displays may be panned by touching the screen and retaining pressure while sliding your finger in the desired direction.

You can return to the previous page or exit the current function by touching the **Back** key.

Quickly return to the Home page by pressing the **HOME** key. Press and hold the **HOME** key to reach the Map page.

1.3   Product Description

This section provides an overview of the GTN 7XX product and a quick look at some important features. The GTN 7XX presents a full-color moving map with navigation information to the pilot through a large-format display. Controls are a combination of rotary knobs and push-keys on the bezel with the color display providing information as well as a touchscreen controls. The GTN 7XX has a 708 x 600 pixel, 6.9 inch LCD display.

Active Com Frequency   Standby Com Frequency   Active Nav Frequency   Standby Nav Frequency

Volume, Squelch On/Off, and Nav ID On/Off   Audio Panel Controls (opt)   Xpdr Panel Controls (opt)

HOME Key
Photo Sensor

SD Card

Home Page

Function Keys

Direct-To Key

Large and Small Knobs

Locking Screw

Annunciations   Dual Rotary Knob Function Hints
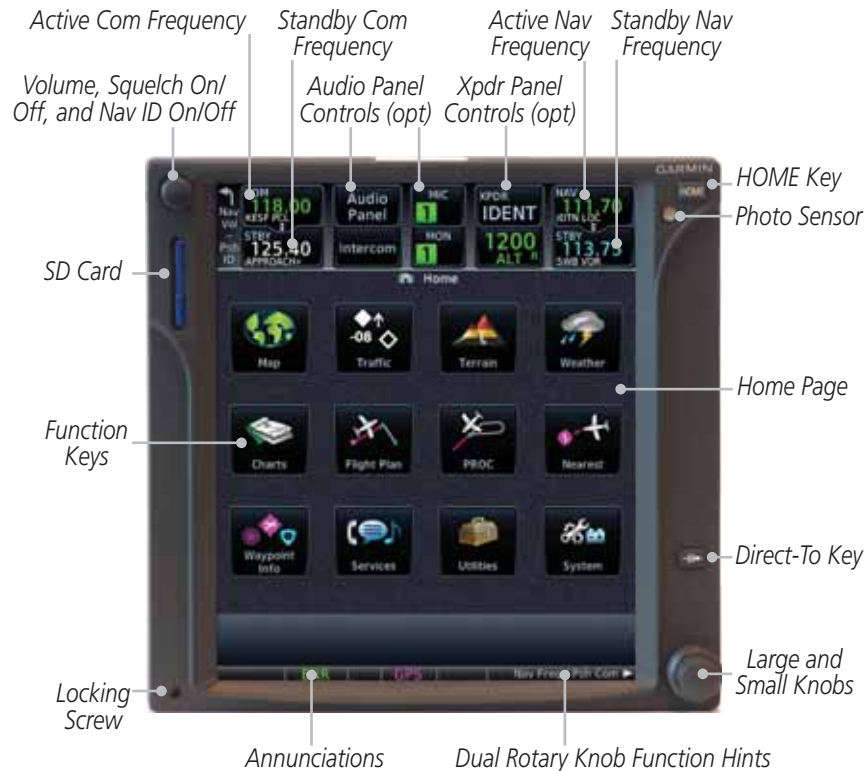
Figure 1-4 GTN 750 Front Panel

1.3.1   Secure Data Card

The GTN 7XX uses a Secure Digital (SD) card to load and store various types of data. For basic flight operations, the SD card is required for Terrain, FliteChart, and ChartView database storage. An SD card is used for Obstacle, Basemap, SafeTaxi, Aviation, and ChartView database updates.

> **NOTE**: **Do Not** remove or insert the SD card while in flight. Ensure the GTN 7XX is powered off before inserting or removing an SD card.

> **NOTE**: Refer to SD Card Use and Databases in the Appendix for instructions on updating databases.

1.3.1.1   Inserting an SD Card

1. Insert the SD card in the SD card slot (the label side of the card should face the right edge of the display bezel).

2. To eject the card, gently press on the SD card to release the spring latch.

1.3.2   Pilot Controls

The GTN 7XX controls have been designed to simplify operation of the system and minimize workload and the time required to access sophisticated functionality. Controls are located on the bezel and on the touchscreen display. Controls are comprised of dual concentric knobs, volume/squelch knob, bezel keys, and active touch areas on the display.

1.3.2.1   Volume/Squelch Knob

The **Volume** knob located in the top left corner of the bezel controls audio volume for the selected Com radio or Nav receiver and external audio input devices that are controlled via the GTN interface to the optional remote-mounted audio panel, if installed. When the Com radio is active, press the **Volume** knob momentarily to disable automatic squelch control for the Com radio. When the Nav radio is active, press the **Volume** knob momentarily to enable/disable the ident tone for the Nav radio.

Figure 1-5 Volume/Squelch Knob

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1.3.2.2 Large/Small Concentric Knobs

The **large right** and **small right** knobs are used for data entry, such as in the Waypoint or Direct-To functions, and to set the frequencies for the NAV/COM radios in units so equipped.

Figure 1-6 Large/Small Concentric Knobs

1.3.2.3 HOME Key

Pressing the **HOME** key displays the Home page, the main screen for accessing the GTN features. Pressing and holding the **HOME** key will open the Map page from any other page.

Figure 1-7 HOME Key

Page Or Function Name

Touch The Key To Access The Function

Figure 1-8 Home Page

1.3.2.4 Direct-To Key

The **Direct-To** key provides access to the direct-to function, which allows you to enter a waypoint and establishes a direct course to the selected destination.

Figure 1-9 Direct-To Key

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1.3.2.5   Touchscreen Keys

Touchscreen keys are placed at the lower portion of the display. The keys vary depending on the page selected. Touch the key to perform the function or access the described information.

Figure 1-10 Touchscreen Key Control Example

1.4   Unit Power Up

The GTN 7XX System is integrated with the aircraft electrical system and receives power directly from electrical busses. The GTN 7XX and supporting sub-systems include both power-on and continuous built-in test features that exercise the processor, memory, external inputs, and outputs to ensure safe operation.

1.4.1   Start-Up Screens

During system initialization, test annunciations are displayed. All system annunciations should disappear typically within the first 30 seconds after power-up. Upon power-up, key annunciator lights also become momentarily illuminated on the GTN 7XX display bezel.

The splash screen displays the following information:

- Copyright

- Database List and System version

- Instrument Panel Self-Test

Current database information includes valid operating dates, cycle number, and database type. When this information has been reviewed for currency (to ensure that no databases have expired), the pilot is prompted to continue. Databases that are not current will be shown in amber.

During the startup process the user may be asked if they would like to update to newer databases. Additional information on database updates can be found in section 16.1.3.1, Database Info.
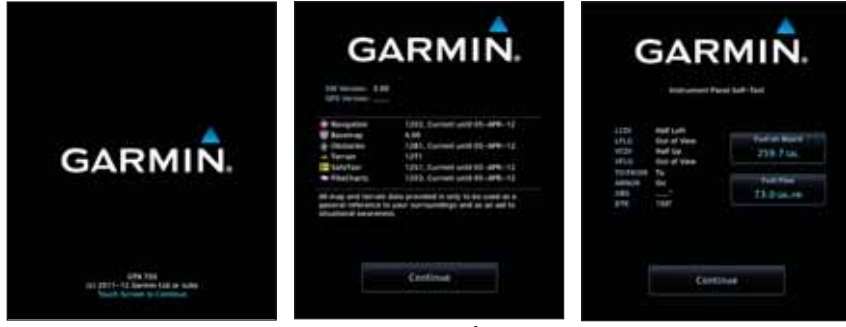
| 1 - Copyright | 2 - SW & Database Versions & Dates | 3 - Panel Self-Test |

Figure 1-11 System Startup Pages

1.4.2   Database Verification and Fuel Settings

1. When the System and Database Version page appears, check to ensure databases are current. Then, touch **Continue**.

Software and GPS Engine Versions

Check To Ensure Required Databases Are Present And Current

Check For Any Messages

Touch To Continue To Home Page

Figure 1-12 System Startup Pages

2. When the Instrument Panel Self-Test and Fuel Setting page appears, check to ensure that the CDI/HSI outputs and other displayed data are correct on the external interfaced equipment.

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3. Touch each of the Fuel value keys and set the appropriate values as desired. Fuel capacity is shown in either gallons or pounds as set in the Units feature of System mode.

NOTE: When the GTN is interfaced with a digital fuel computer the pilot may not be able to manually edit the fuel flow and fuel on board data on the Self-Test.

Start-Up Instrument Panel Test Conditions

Touch To Set Current Fuel Quantity

Touch To Set Fuel Flow

Touch To Continue To Home Page

Figure 1-13 Instrument Panel Self-Test & Fuel Settings Page

4. When the Fuel on Board value is selected, touch the Fuel on Board key to display the Fuel on Board values. Touch the Full or Tabs keys to display those values after they have been set.

Selected Fuel on Board Capacity

Touch To Delete Characters

Touch Keys To Select Fuel Capacity Values

Touch To Display Fuel Full Capacity

Touch To Display Fuel Tabs Capacity

Touch To Set Fuel Full or Tab Capacity

Touch To Accept Fuel on Board Values
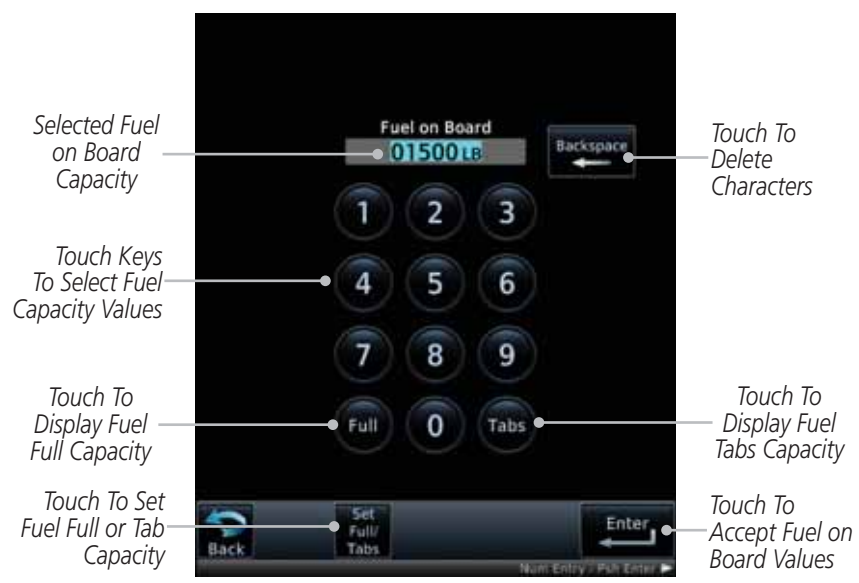
Figure 1-14 Fuel On Board Page

5. Touch the **Set Full/Tabs** key to set the fuel values for Fuel Full Capacity and Fuel Tab Capacity. After setting the fuel values, touch the **Back** and then the **Enter** keys to return to the Instrument Panel Self Test page.

Touch To Set Fuel Full Capacity

Touch To Set Fuel Tab Capacity

Touch To Return To Fuel On Board Display

Figure 1-15 Fuel Capacity Setup Page

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6. On the Instrument Panel Self Test page, touch the **Fuel Flow** key and then use the numeric keypad to set those values. Touch the **Enter** key after selecting the Fuel Flow values.

Selected Fuel Flow Value

Touch Keys To Select Fuel Flow Values

Touch To Delete Characters

Touch To Cancel Selection And Return To Previous Page

Touch To Accept Fuel Flow Values
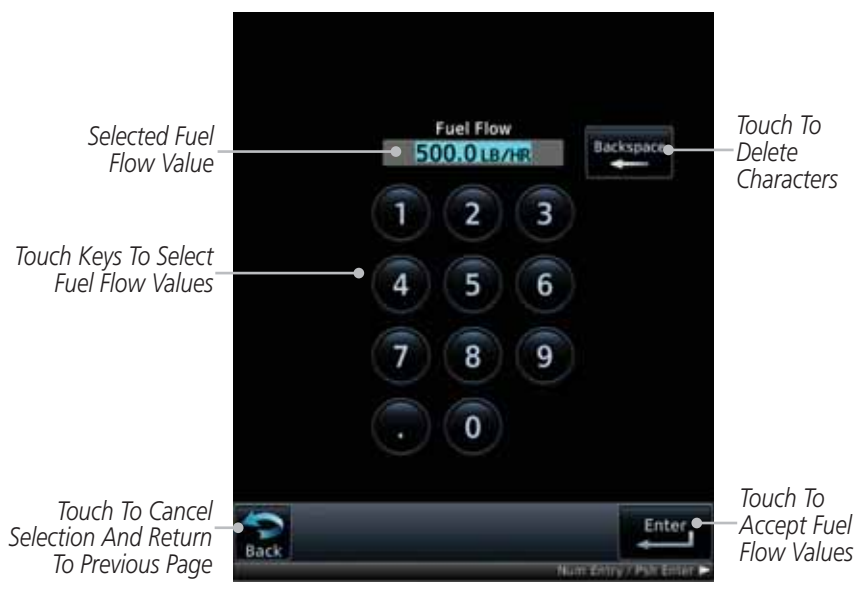
Figure 1-16 Fuel Flow Setup Page

7. Touch the **Back** key to return to the Fuel on Board page. Touch the **Enter** key to accept the fuel values and return to the Instrument Panel Self-Test page. Then, touch the **Continue** key to advance to the Home page.

Figure 1-17 Home Page

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1.5 System Operation

1.5.1 Using the Touchscreen Key Controls

Except for the knobs, the **HOME**, and **Direct-To** keys on the bezel, the controls for the GTN 7XX are located on the display and activated by touch.

Back to Previous Page

Touchscreen Keys - Touch to Toggle Activation

Touch to Zoom In and Out

Figure 1-18 On-Screen Keys and Active Display Areas

1.5.2 System Page

GTN 7XX system settings are managed on the System page. The following features are available:

- System Status
- GPS Status
- External LRUs
- Setup
- Alerts Settings
- User Fields
- Units Settings
- Audio
- Backlight
- Connext Setup
- Voice Commands

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Select System
Setup Values

Set Alert Values

Select User Fields

Set System Units
Of Measurement

Select Audio Settings

Select Voice
Command Setup

Select Backlight
Setting

Select Connext Setup

Figure 1-19 System Page

1.5.2.1   System Setup Values

1. From the Home page, touch **System** and then **Setup**.

2. Select the desired Time Format and Local Offset by touching the Time Format (**12 Hour, 24 Hour,** and/or **UTC**) keys and selecting the appropriate Local Time Offset after touching the **Local Offset** key.

3. Touch the **Com Channel Spacing** key to toggle between 8.33 and 25.0 kHz channel spacing.

4. For Nearest Airport filtering, touch the **Runway Surface** key and select the desired type of surface that will appear in the Nearest Airport list.

5. Touch the **Minimum Runway Length** key to select the minimum runway length allowed for the Nearest Airport. Selecting 0 feet will show all airports regardless of runway length.

6. Touch the **Crossfill** key to enable or disable crossfill with a second GTN unit.

7. Select the CDI and ILS CDI Capture method with the **Selected CDI** and **ILS CDI Capture** keys.

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1.5.2.2 Units Settings Values

1. From the Home page, touch **System** and then **Units**.

2. Touch the desired item key and select the desired value.

3. Continue to select the desired Units values and then touch the **Back** or **HOME** key to exit.

1.5.2.3 Alerts Settings Values

1. From the Home page, touch **System** and then **Alerts**.

2. Touch the Alert type key to toggle its active status. A lighted green bar under the label indicates that it is active.

3. Set arrival alerting. Touch the **Arrival** key. Touch the **Proximity** key and select the desired value with the keypad.

4. Touch the **Airspace Altitude Buffer** key and select the desired value for airspace alerting.

5. Continue to select the desired Alerts values and then touch the **Back** or **HOME** key to exit.

1.5.2.4 Audio Values

1. From the Home page, touch **System** and then **Audio**.

2. Touch the **arrow** keys to raise or lower the volume of key click sounds.

1.5.2.5 Backlight Values

1. From the Home page, touch **System** and then **Backlight**.

2. Touch the **arrow** keys to increase or decrease the Manual Offset of the backlight brightness.

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1.5.2.6 Connext Setup

1. From the Home page, touch **System** and then **Connext Setup**.

2. This page is used to setup Connext devices that are connected to the GTN.

1.5.2.7 Voice Commands

1. From the Home page, touch **System** and then **Voice Commands**.

2. This page is used to turn voice recognition on or off, and to view voice command history.

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1.5.3   Dual GTN Installations

Dual GTN units when connected in the aircraft may be set up to communicate and share information by "Crossfilling" or synchronizing information between the two units.

The following Crossfill information is always synchronized between both GTN units:

- User Waypoints
- Flight Plan Catalog
- Alerts (traffic pop-up acknowledgement, missed approach waypoint pop-up acknowledgement, altitude leg pop-up acknowledgement)
- External sensors (transponder status and commands, synchro heading)
- System setup:
    – User-defined NAV frequencies to store favorites
    – Date/Time convention
    – Nearest airport criteria
    – Units (Nav angle, Fuel, and Temperature)
    – User-defined COM frequencies to store favorites
    – CDI Scale setting
    – ILS CDI Capture setting

This data is crossfilled only if crossfill is turned on by the pilot:

- Active navigation (flight plan)

✓ **NOTE:** *In dual GTN installations with crossfill on, the OBS course will only be updated in real time on the GTN that is receiving the new OBS course. The course will be transferred to the other GTN when OBS is exited.*

✓ **NOTE:** *There is an installer option to turn on a system message that will be provided anytime crossfill is turned off to alert the pilot that flight plans are not being crossfilled.*

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1.6 Direct-To Navigation

Press the **Direct-To** key to quickly navigate from your present position directly to a selected waypoint, flight plan waypoint, or nearest airport.

1.6.1 Direct-To a Waypoint

1. Press **Direct-To**.

2. Touch the Waypoint Identifier field and select the characters for the desired waypoint with the **large** and **small right** knobs or the touch keypad.

3. Touch **Activate** or press the **small right** knob. Text near the **small right** knob indicates its current function.

OR

1.6.2 Direct-To a Flight Plan Waypoint

1. Press **Direct-To**.

2. Touch the **FPL** tab and then the desired Flight Plan waypoint.

3. Touch **Activate** or press the **small right** knob.

OR

1.6.3 Direct-To a Nearest Airport

1. Press **Direct-To**.

2. Touch the **NRST APT** tab and then the desired airport from the Nearest Airport list. Touch the **Up** or **Down** keys as needed to show more of the list.

3. Touch **Activate** or press the **small right** knob.

OR

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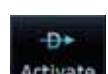
1.7 Selecting Com/Nav Frequencies
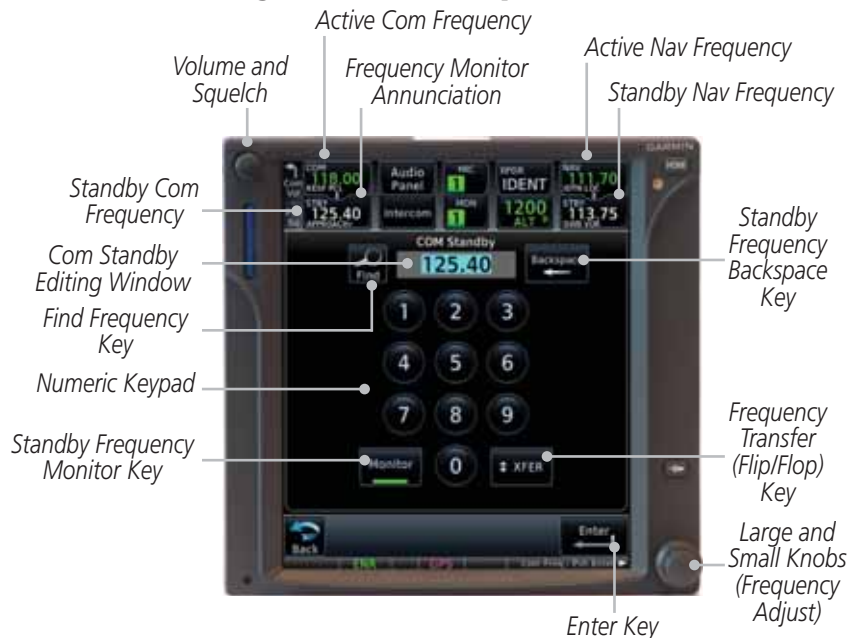
Figure 1-20 Com Radio Frequency Selection Page

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To switch between Com and Nav frequency selection

Tuning control normally remains in the Com window and will return after 30 seconds of inactivity. If you wish to select a Nav frequency, press the **small right** knob momentarily to make the Nav window active for editing. The Standby Nav frequency will be highlighted briefly to indicate that it is active for editing. The standby frequency in blue is active for editing by the **large** and **small right** knobs.

Method 1: Select a Nav/Com frequency using the small and large right rotary knobs

1. Turn the **large right** knob to select the desired megahertz (MHz) value. For example, the "118" portion of the frequency "118.30".

2. Turn the **small right** knob to select the desired kilohertz (kHz) value. For example, the ".30" portion of the frequency "118.30".

3. Touch the Com or Nav window to flip/flop the Active and Standby frequencies. You can also press and hold the **small right** knob to transfer the standby frequency to the active window.

Method 2: Select a Nav/Com frequency using the numeric keypad

1. Touch the Standby window. A pull down keypad will appear with the current Standby frequency highlighted.

2. Touch the numeric keys to add the desired values and touch **Enter** to accept the displayed value and place it into the Standby window.

3. Touching the **XFER** key will place the selected frequency directly into the Active window.

To transfer the standby frequency to the active frequency

1. Touch the Active (top) frequency window.

Airport Identifier and Type Shown for the Selected Frequency

Active Com Frequency (Touch to Flip/Flop)

The "+" Sign Indicates More Stations Associated With This Frequency

Standby Com Frequency
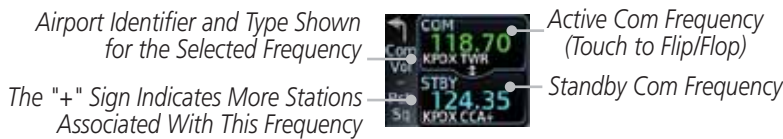
Figure 1-21 Com Radio Frequency Windows (Touch Active to Flip/Flop)

2. Each touch of the Active window will flip/flop the Active and Standby frequencies.

3. The identifier and frequency type will be shown for the selected Com and Nav frequencies for the nearest stations that are in the database when the unit is receiving a valid position input.

Remote Frequency Selection Control

On units configured for remote Com frequency Recall, pressing the remote recall switch will load the next preset Com frequency into the unit's Standby frequency window. The remote recall switch can be pressed multiple times to scroll the entire preset frequency list through the Standby frequency box (the list will "wrap" from the bottom of the list back up to the top, skipping any empty preset positions).

The standby frequency isn't activated until a Com **FLIP/FLOP** switch (either bezel-mounted or remote (COM RMT XFR) is pressed. Remote Frequency Selection only functions on units configured for a remote Com Frequency recall switch.

> **NOTE:** *Frequencies must be stored in the User Frequency List prior to utilizing the remote channel select switch.*

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1.8   Flight Planning

1.8.1   Creating a Flight Plan

1. From the Home page, touch the **Flight Plan** key. The Active Flight Plan page will be displayed.

2. If there is already an Active Flight Plan, touch **Menu** and then the **Delete** key to clear the existing flight plan. If there is not an Active Flight Plan, continue to the next step.
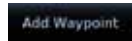
3. Touch **Add Waypoint.** Use the alphanumeric keypad to select the Waypoint Identifier for the first leg in your flight plan and then touch **Enter**.

4. Touch the next Waypoint Identifier field. Use the alphanumeric keypad to select the Waypoint Identifier for the first leg in your flight plan and then touch **Enter**.

5. Continue entering waypoints to complete the flight plan.

6. Touch the **Menu** key and then touch **Store**.
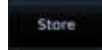
7. The screen will now display the Flight Plan Catalog and show the new flight plan. Flight plans are listed by the Departure and Destination waypoints.

NOTE: The destination waypoint is the last airport in the flight plan.

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1.9   IFR Procedures

Departures (SIDs), arrivals (STARs), non-precision and precision approaches are available using the **PROC** (Procedures) key.

Select an Approach

1. Touch the **PROC** key on the Home page.

2. Touch the **Approach** key and then touch the Airport key to select the desired airport if it is not present.

3. Touch the **Approach** key, if necessary. Select the desired approach.

4. Touch the **Transition** key and then touch the key for the desired transition.

5. Touch the **Load Approach** key to load the approach at the end of the active flight plan. The Active Flight Plan page will be displayed.

6. Or, touch the **Load Approach & Activate** key for the flight plan to go Direct-To the selected transition or provide guidance on the final approach course for vectored approaches.

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1.10   Dead Reckoning

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Dead reckoning is a feature that enables the GTN to provide limited navigation using the last known position and speed after a loss of GPS navigation while on an active flight plan.

⚠️ **CAUTION:** *Navigation using dead reckoning is only an estimate and should not be used as the sole means of navigation. Use other means of navigation, if possible.*

Dead reckoning becomes active after a loss of GPS position while navigating using an active flight plan and the flight phase is either En Route (ENR) or Oceanic (OCN).

"DR" will be overlayed on the ownship icon. The To/From flag is removed from the CDI. The Dead Reckoning annunciator (DR) appears on the lower left side of the map display and will replace ENR or OCN when a GPS position is unavailable and the unit is in Dead Reckoning mode. All external outputs dependent on GPS position are flagged.

Terrain will be noted as not available and new terrain advisory pop-ups will not occur. Traffic and StormScope information will not be shown on the Map page, but will continue to be available on their own dedicated pages. XM weather will still be available on the Map page.

Dead Reckoning mode will continue until GPS position is restored, when GPS navigation is restored Dead Reckoning mode is exited. The DR annunciations will be removed and GPS information will be used to compute navigation related information for the current flight phase.

Dead Reckoning is only allowed in En Route and Oceanic phases of flight. If the unit is in a Terminal or Approach phase of flight when Dead Reckoning takes place, "No GPS Position" will be displayed on the map pages and all navigation data will be dashed. If you are operating in Dead Reckoning mode and a transition to Terminal or Approach phases of flight would occur from the projected Dead Reckoning position, Dead Reckoning mode will be discontinued. "No GPS Position" will be displayed on the map pages and all navigation data will be dashed.

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1.11   FastFind Predictive Waypoint Entry

FastFind provides the pilot with a shortcut to the nearest waypoint with an identifier that starts with the typed letters. As a result, the GTN can predict the pilot's entry within as little as one key press.

FastFind predictions are shown in the top right-hand corner of the keypad display. Touching the FastFind field will select the predicted waypoint. If the FastFind prediction is not what the pilot is looking for, keep typing until the desired waypoint is displayed.

1.11.1   FastFind With Waypoint Info

1. Use the alphanumeric keypad to begin selecting characters for the desired waypoint.

Selected Wpt Characters ——— ——— *Predicted Wpt*
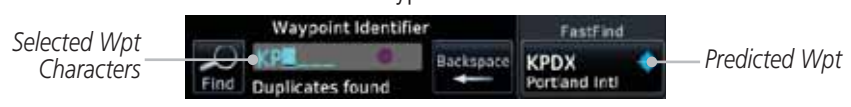
Figure 1-22 Select Characters for FastFind to Predict a Waypoint - KP Selected

Selected Wpt Characters ——— ——— *Predicted Wpt*

Figure 1-23 Select Characters for FastFind to Predict a Waypoint - KPA Selected

2. After selecting the desired waypoint, touch the **FastFind** key.

Complete Wpt Selection ——— ——— *Touch to Select Displayed Wpt*

Figure 1-24 Select Characters for FastFind to Predict a Waypoint - KPAE Selected

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1.11.2   FastFind With A Flight Plan

When creating a new flight plan or searching for a waypoint, the GTN will search for waypoints closest to the current GPS position. When adding waypoints in the middle of the flight plan, the GTN will search halfway between the previous and next waypoints. When adding waypoints at the end of the flight plan, the GTN will search for waypoints closest to the last waypoint in the flightplan.

1. When the aircraft is located in KSLE, and the last waypoint in the flight plan is "DRK", the GTN will search for waypoints nearest "DRK".

2. Typing **K**, will result in "KPRC" being displayed as the FastFind prediction because it is the nearest waypoint to "DRK" that starts with "K".

Selected Wpt Characters —

Predicted Wpt

Figure 1-25 Using FastFind to Predict a Waypoint in a Flight Plan

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2   AUDIO AND TRANSPONDER CONTROLS (OPTIONAL)

The GTN 7XX can perform the control and display for a remotely mounted audio panel (such as the GMA 35) and a transponder (such as one of the GTX family of transponders) functions. See your dealer for more information.

2.1   Transponder Operation

The GTN 7XX will operate as a control head for remotely connected optional, compatible transponders.

> **NOTE:** The transponder control panel on the GTN will not contain the Ground key when the GTN is interfaced with a GTX 33/330 with software version 8.00, or later.

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Figure 2-1 XPDR Control Display

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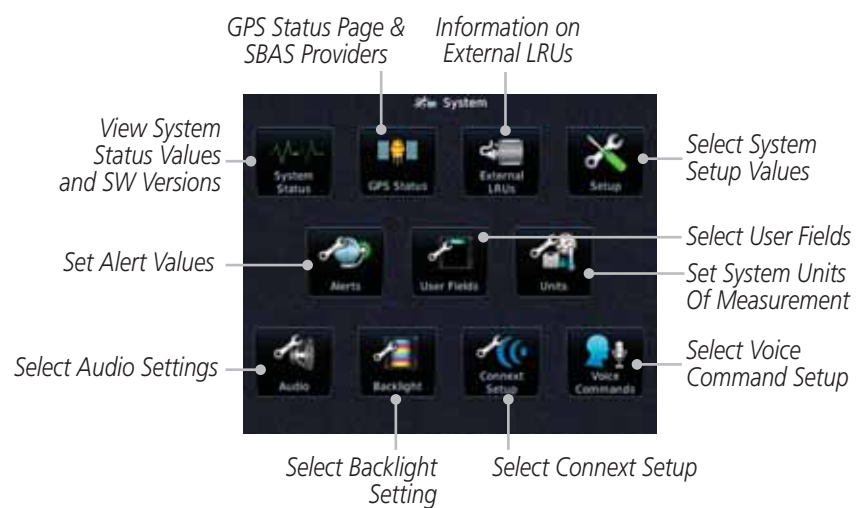
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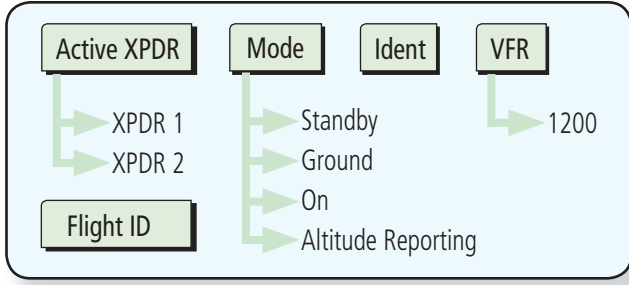
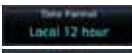**Figure 2-2 XPDR Functional Diagram**

2.1.1   Select Transponder

1. Touch the **Active XPDR** key to activate the desired transponder by stepping through the available transponders.

Active Transponder ———

Figure 2-3 Active Transponder Indication

2. The active transponder will be shown on the key.

2.1.2   IDENT

1. Touch the **IDENT** key once to reply with an identifying squawk code.

2. The **IDENT** key will show a green "ID" in the top right corner of the key to indicate active Ident.

2.1.3   Standby

Touch the **Standby** key to place the transponder into Standby mode. The transponder will still be powered, but will not transmit information. The active transponder indication and Ident annunciation will be grayed to show they are disabled.

Active XPDR and IDENT Disabled ———

Transponder Operation "Standby" Mode ———

Figure 2-4 Transponder Mode "Standby" Indication

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2.1.4 Ground

Ground

Touch the **Ground** key to place the transponder into Ground mode. Mode S replies will be allowed in Ground mode.

Active XPDR and IDENT Enabled —— XPDR1 **IDENT**

Transponder Operation "Ground" Mode —— 1200 GND

Figure 2-5 Transponder Mode "Ground" Indication

NOTE: *Ground mode is not available with GTX 33/330 software version 8.00 or later. The GTN will automatically transition to Ground mode when the aircraft is on the ground.*

2.1.5 On

On
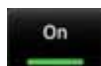
Touch the **On** key for Mode A operation. The transponder is "On" and will transmit its squawk code when interrogated.

Transponder Operation "ON" Mode —— 1200 ON

Figure 2-6 Transponder Mode "ON" Indication

2.1.6 Altitude Reporting

Altitude
Reporting

1. Touch the **Altitude Reporting** key for Mode C operation.

2400
ALT

2. The transponder will be "On" and will transmit its squawk code and altitude when interrogated. An "ALT" annunciation will appear when the squawk code is transmitted.

2.1.7 VFR

VFR

Touch the **VFR** key to set the VFR squawk code (1200).

VFR (1200) Transponder Squawk Code —— 1200 ON

Figure 2-7 Transponder VFR Squawk Code

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2.1.8   Selecting a Squawk Code

The selected squawk code will always be in use. As you change a squawk code, the original code will be used until you are finished selecting the new code.

Squawk Code	Description
1200	Default VFR code in the USA
7500	Hijacking
7600	Loss of Communications
7700	Emergency

Table 2-1 XPDR Special Squawk Codes

1. Touch the transponder squawk code window at the top of the display.

2. The XPDR page will be displayed. The Squawk Code value will be active for selection for use by the active Transponder.

*Active Squawk
Code Selection*

*Transponder Is In
Standby Mode*

Figure 2-8 XPDR Squawk Code Selection Display

3. Touch the numeric keypad, or use the rotary knobs, to select the desired Squawk Code.

*Squawk Code Character
Selected For Editing*

Figure 2-9 Selected XPDR Squawk Code

![Garmin logo]

4. Then, touch **Enter** or press the **small right** knob.

5. The selected Squawk Code will be shown in the XPDR window at the top of the display.

2.1.9 Flight ID

1. While viewing the transponder page, touch the **Flight ID** key.

2. Touch the numeric keypad, or use the rotary knobs, to select the desired Flight ID number and then press **Enter**. The selected number will be shown in the Flight ID key.

2.1.10 GDL 88 ADS-B Reporting

The GDL 88 is a remote-mount ADS-B transceiver that sends ADS-B out messages to ATC and other aircraft and communicates ADS-B In data to panel-mounted avionics for the display of traffic and weather. Reference the GDL 88 Pilot Guide for a full description of GDL 88 functions. When a GTN is interfaced to a GDL88 transceiver for ADS-B Out functions the GTN can control some aspects of the ADS-B Out message and the GTN may provide position information to the GDL88. The display and control of the information sent depends on the equipment installed and how it is configured. Some installations allow control by the pilot of the information sent, while others do not.

The Anonymous Mode, when armed, will replace the identifying information in the ADS-B Out message with a temporary randomized number for privacy while the position information will still be provided. The call sign will be sent as "VFR." To enable Anonymous Mode, the Squawk Code must be set to the VFR code (based on the GDL 88 configuration) and the **Anonymous** key must be selected.

Viewing the ADS-B Control Panel Without Integrated Transponder Control

1. Touch the Transponder window to view the ADS-B control panel.

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Altitude Reporting Status

Touch To Toggle Anonymous Mode

Touch To View ADS-B Control Panel

Touch To Select Flight ID

Figure 2-10 ADS-B Control Panel

2. Touch the ADS-B window again to return to the previous display.

Viewing the ADS-B Control Panel With Integrated Transponder Control

1. Touch the Transponder window to view the ADS-B control panel.

Touch To View Transponder and ADS-B Control Panel

Touch To Toggle Anonymous Mode

Touch To Select Flight ID

Figure 2-11 ADS-B/Transponder Control Panel

2. Touch the **Anonymous Mode** key to toggle arming the Anonymous mode.

3. While viewing the transponder page, touch the **Flight ID** key.

4. Touch the numeric keypad, or use the rotary knobs, to select the desired Flight ID number and then press **Enter**.

✓ **NOTE:** *Changing the flight ID while in anonymous mode wouldn't actually change the flight ID because a randomized ID is being broadcast. If the ANONYMOUS key is armed, change the squawk code to the VFR code to activate Anonymous mode.*

2.1.11 Extended Squitter Transmission

The GTX 33ES is a remote mount transponder that functions as a transponder and also sends ADS-B Out message to ATC and other aircraft. The GTN can act as a control for a GTX 33 transponder including Extended Squitter functions. When "Enable ES" is selected, the GTX 33/330 turns on Extended Squitter (ES) transmissions.

Squawk Code Backspace Key

VFR Squawk Code (1200) Key

Squawk Code Window

Numeric Keypad

Green Bar Indicates "Active" Condition

Touch To Enter Flight ID

Enter Key

Transponder Mode Keys

Touch To Toggle Extended Squitter

Figure 2-12 Transponder Control Panel With Extended Squitter Capability

1. While viewing the Transponder (XPDR) page, touch the **Enable ES** key to toggle Extended Squitter Off and On.

2. Touch the **Flight ID** key and use the keypad to select a Flight ID and then touch **Enter**.

3. After selecting a Flight ID, the selected value will be shown in the **Flight ID** key.

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2.2   Audio Panel Operation

The GTN 7XX can operate as a control head for remotely connected compatible audio and intercom equipment (such as the Garmin GMA 35).

Audio Panel Controls Touch To Display

Mic Selection: 1, 2 or 3

Intercom Setup

"+" Indicates Additional Audio Source Monitoring (Nav, DME, or ADF)

Mon Selection: 1, 2 or 3

Activates Split Mode

Recorder Playback Control

Cabin Speaker Select & Vol

Marker Audio And Volume

3D Audio

Monitor and Mic Selections
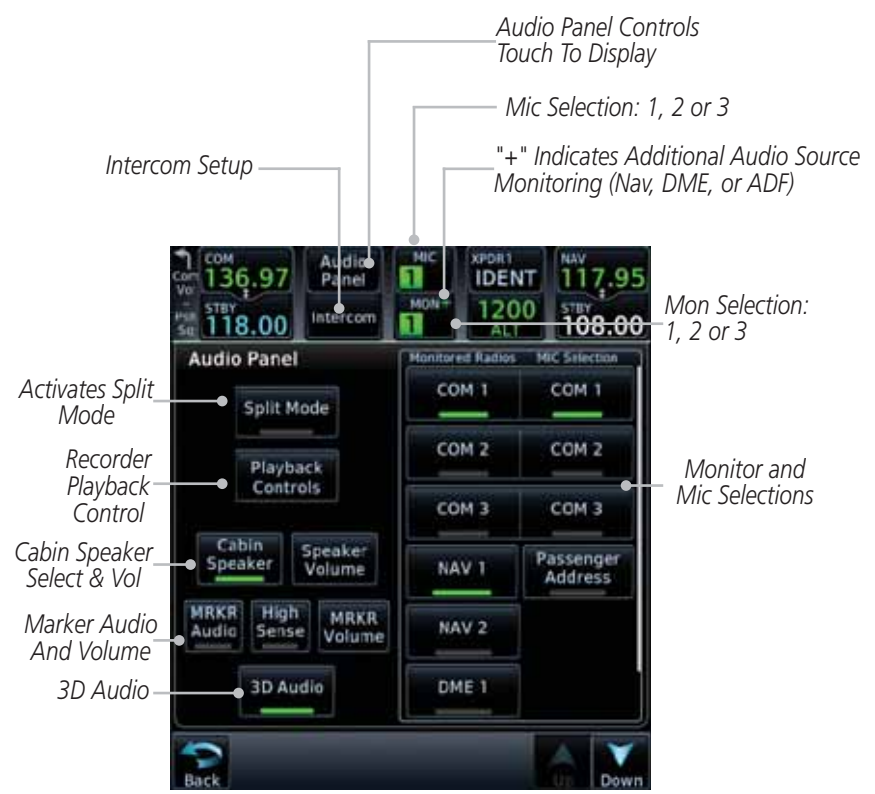
Figure 2-13 Audio Panel Controls

190-01007-03-Final.indb 8   7/9/2015 2:06:54 PM
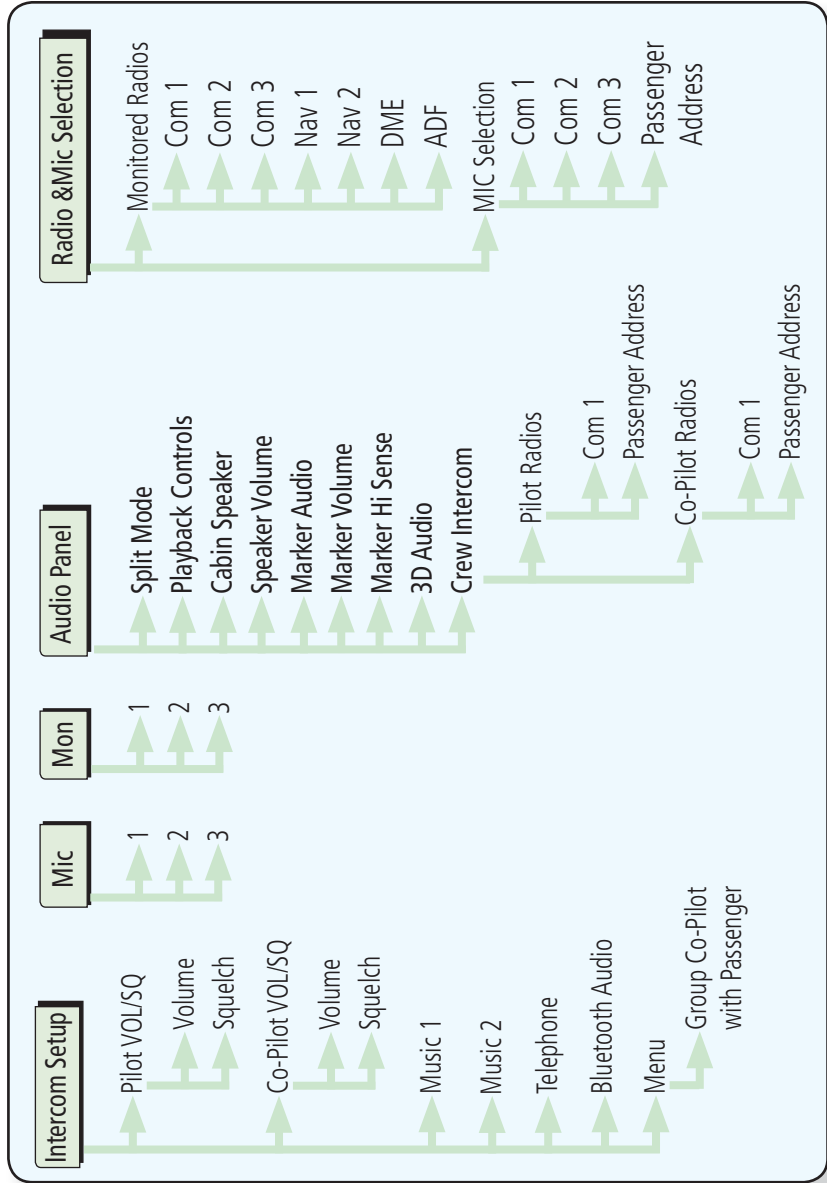
Figure 2-14 Audio Panel Functional Diagram

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2.2.1 Mic Selection

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Mic selection can be determined by two methods: the Mic window or by the Audio Panel page.

2.2.1.1 Mic Window Mic Selection

1. Touch the **Mic** window to toggle between Mic 1 and Mic 2.

2. Note that the selected Mic is automatically monitored.

3. If Mic 3 or Passenger Address (PA) are selected, touching the Mic window will revert to toggling between Mic 1 and Mic 2.

2.2.1.2 Audio Panel Page Mic Selection

1. Touch the **Audio Panel** key at the top of the display.

Mic Selection: 1, 2 or 3

Selected Mic

Passenger Address Mic Selection
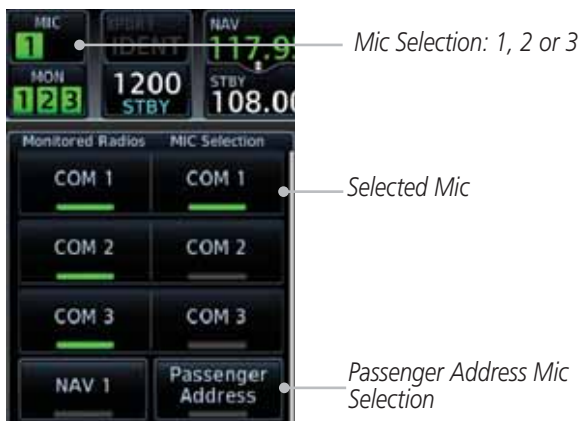
Figure 2-15 Audio Panel MIC Selection

2. Touch the desired Mic (Com 1, Com 2, or Com 3) from the MIC Selection list on the right side of the display.

3. The selected Mic will be shown in the Mic window.

2.2.2 Monitor

The Monitor function indicates which radios are being listened to.

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1. Monitor is automatically selected for the associated Com Mic Radio (1, 2, or 3). For example, when Com 1 is selected, Mon 1 is automatically active.

2. Touch the **Mon** key to toggle between the automatically selected monitored channel (selected Mic) and the other channels.

2.2.3 Passenger Address

The **Passenger Address** key toggles the passenger address system on and off.

Touch the **Passenger Address** key to toggle the passenger address system on and off.

2.2.4 3D Audio

Advanced processing adjusts audio in the headset to mimic how the human ear normally hears and registers sounds in space. This 3-D Audio feature makes it seem as though different audio sources are coming from different directions around you. Now it's much easier to focus on and understand one particular source from among many. For example, COM 1 will seem to be coming from the left while COM 2 will seem to be coming from the right. When 3D Audio is disabled, balance is restored.

> **NOTE:** The stereo/mono headsets must be in the stereo position in order for 3D audio to function.

Touch the **3D Audio** key to toggle the 3D Audio function on and off.

This is currently done such that audio sources will either be 30 degrees to your left (330 degrees), 30 degrees to your right, and directly in front (0 degrees). The following table details the left/right balance of the audio level depending on the selected Com:

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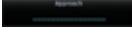
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Active Com	1	2	3
1,2,3	330	0	30
1,2	330	30	N/A
1,3	330	N/A	30
2,3	N/A	330	30
1	0	N/A	N/A
2	N/A	0	N/A
3	N/A	N/A	0

Table 2-2 3D Audio Left/Right Balance

2.2.5   Cabin Speaker Selection and Volume

The **Cabin Speaker** key turns the cabin speaker on and off. The **Speaker Volume** key sets the volume level.

1. Touch the **Cabin Speaker** key to toggle the cabin speaker on and off.

2. Touch the **Speaker Volume** key to set the Cabin Speaker volume. Touch the **Speaker Volume** arrows to set the volume.

Percent Of Maximum Volume   *Graphic Scale Showing Volume*

*Touch To
Decrease Volume*   *Touch To
Increase Volume*
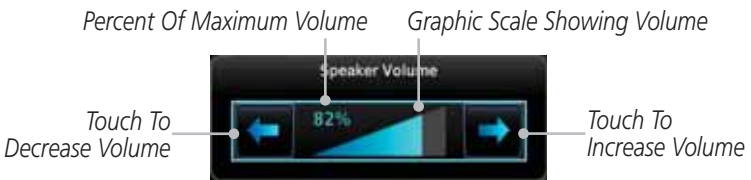
Figure 2-16 Cabin Speaker Volume Selection

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2.2.6   Marker Audio and Volume

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The optional Marker Beacon Receiver uses an audio indicator to alert you when the aircraft passes over a Marker Beacon transmitter. The audio from the Marker Beacon Receiver can be heard unless disabled by selecting Marker Audio. When Marker is selected (green bar shown), the tones for Marker Beacons are heard. When Marker is not selected (green bar not shown), the tones for Marker Beacons are not heard.

The GMA 35 marker beacon receiver and indicators are part of the ILS system. The marker beacon lamps operate independently of any audio selection and cannot be turned off. The GMA 35 can drive external marker lamps if required and also provides an autopilot middle marker sense output.

Prior to beginning an ILS approach, select high or low marker sensitivity with the **Marker Hi Sense** key. The lighted green bar in the key illuminates for high sensitivity and remains off for low sensitivity.

Touching the **Marker Audio** key prior to an approach allows the marker audio tones to be heard in the headsets. When the green bar in the **Marker Audio** key shows, the marker audio will be heard when available. The **Audio Panel** key will change to a **Mute** key. Touching the Mute key while audio is heard will mute the marker audio until the next beacon is received. The marker beacon signal sensitivity threshold can be set in Configuration mode. Contact a Garmin-authorized service center for adjustment.

1. While the Audio Control page is displayed, touch the **Marker Audio** key to hear the current Marker Beacon tones.

2. Touch the **Marker Audio** key again to disable Marker Beacon tones.

3. Touch the **Marker Volume** key to set the Marker Beacon tone volume. Touch the **Marker Volume** arrows to set the volume.

Percent Of Maximum Volume   *Graphic Scale Showing Volume*

Touch To Decrease Volume   *Touch To Increase Volume*
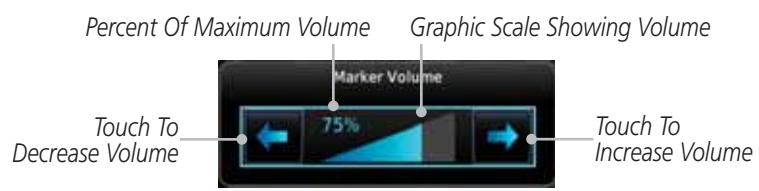
Figure 2-17 Audio Panel Marker Beacon Tone Volume Selection

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2.2.7 Marker Hi Sense

The Marker Hi Sense setting allows detecting the outer Marker Beacon from a greater distance.

1. While the Audio Control page is displayed, touch the **Marker Hi Sense** key to activate greater Marker Beacon sensitivity.

2. Touch the **Marker Hi Sense** key again to return to normal sensitivity.

2.2.8 Marker Beacon Annunciations

A visual annunciation of marker beacons will be shown on the display when the aircraft flies over a marker beacon. The annunciation will appear in the lower left of the display.

Current Beacon	Icon (Standard)	Icon (Blink)	Blink Interval
Inner Marker	IM	IM	250 ms
Middle Marker	MM	MM	333 ms
Outer Marker	OM	OM	750 ms
The marker beacon alternates between the standard icon and the blink icon at the blink interval corresponding to the current beacon.			

Table 2-3 Marker Beacons

2.2.9 Audio Split Mode

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In Split Mode the pilot uses one radio for MIC audio while the copilot uses a different radio. The pilot and copilot can transmit simultaneously over separate radios. The pilot can still listen to their individually selected radios. In the Split mode, the pilot and co-pilot may talk and listen independently to the radios (or PA) as selected.

Figure 2-18 Audio Panel Split Mode Controls
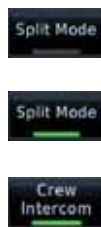
1. While the Audio Control page is displayed, touch the **Split Mode** key to display the Crew Intercom selections.

2. Touch the **Split Mode** key again to toggle the Crew Intercom selection off.

3. Touch the **Crew Intercom** key to toggle activation of the Crew Intercom allowing the Pilot and Co-Pilot to talk to each other.

4. Touch the desired Pilot and Co-Pilot Radio selections.

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2.2.10   Playback Controls

The voice recorder feature records all the audio heard on any selected COM radio that is selected for transmission (the MIC selected COM) and not others selected for monitoring only. Playback is heard by anyone listening on the selected radios. The Clearance Recorder can record up to 2.5 minutes of Com audio.

1. While the Audio Control page is displayed, touch the **Playback Controls** key to display the Playback Control selections.

Percent Of Maximum Volume   *Graphic Scale Showing Volume*

Touch To Decrease Volume

Heavy Outline Indicates The Upper Left Rotary Knob Controls Volume

Number Of Recordings Made Before The Current Selection

Touch To Increase Volume

Recording Time Line

Playback Controls

Number Of Recordings Made After The Current Selection
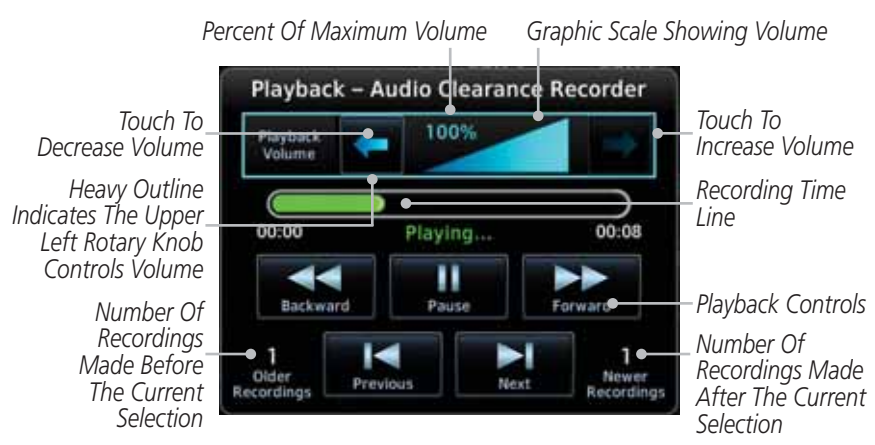
Figure 2-19 Audio Panel Playback Controls

2. Touch the **Playback Volume** arrows to set the volume.

3. Touch the **Backward**, **Play**, or **Forward** keys to control the playback of the currently selected recording.

4. Touch the **Previous** or **Next** keys to select a recording.

5. Touch the **Back** key to return to the Audio Panel page.

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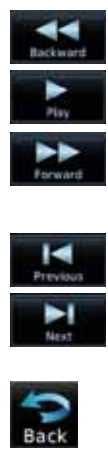
2.3 Intercom Setup

The GTN 7XX can operate as a control head for remotely connected compatible intercom equipment. The Internal Communication System (ICS) has several modes of operation that are selected on the display of the GTN 7XX to control communication in the aircraft. Passengers cannot transmit over the active Com radio, even if equipped with a PTT key.

Depending on the installation and aircraft, the pilot and co-pilot positions on this page may be reversed (such as configured for rotorcraft).

1. Touch the **Intercom** window at the top of the display to display the Intercom Setup page.

Touch To Display Intercom Setup

Touch To Configure Co-Pilot Volume And Squelch

Touch To Configure Pilot Volume And Squelch

Selected Intercom Mode

Touch To Configure Passenger Volume And Squelch

Touch Source To Configure

Figure 2-20 Intercom Setup

2. Touch the arrow between the intercom recipients to activate communication between those recipients. The arrow will be green when communication is active. Touch the arrow again to deactivate communication. Detailed information is shown in the Intercom Modes table.

3. Touch the key for a function to the make the desired changes to their setup. Then, touch the **Back** key to return to the Intercom Setup page.

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Mode	Pilot Hears	Co-Pilot Hears	Passengers Hear
	Selected radios, pilot	Selected radios, co-pilot	Passengers
	Selected radios, pilot, co-pilot	Selected radios, pilot, co-pilot	Passengers
	Selected radios, pilot, co-pilot	Selected radios, co-pilot, pilot, passengers	Co-pilot, passengers
	Selected radios, pilot, passengers	Selected radios, co-pilot	Pilot, passengers
	Selected radios, pilot	Selected radios, co-pilot, passengers	Co-pilot, passengers
	Selected radios, pilot, co-pilot, passengers	Selected radios, pilot, co-pilot	Selected radios, pilot, passengers
	Selected radios, pilot, passengers	Selected radios, co-pilot, passengers	Selected radios, pilot, co-pilot, passengers
	Selected radios, pilot, co-pilot, passengers	Selected radios, pilot, co-pilot, passengers	Selected radios, pilot, co-pilot, passengers

Table 2-4 Intercom Modes
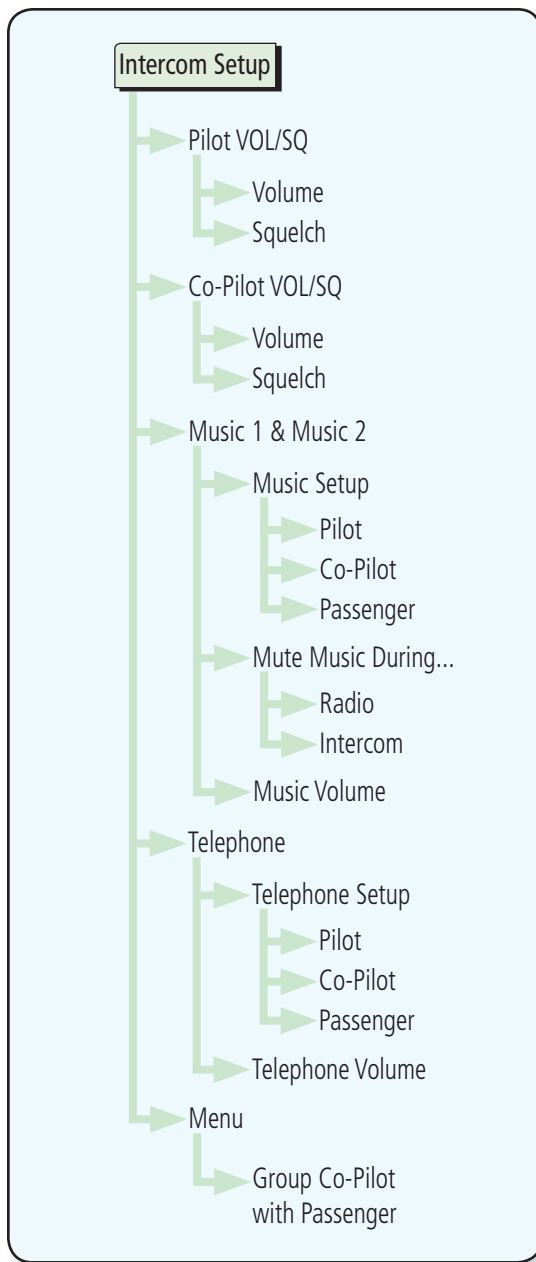
Figure 2-21 Intercom Setup Functional Diagram

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2.3.1 Set Pilot, Co-Pilot, & Passenger Volume and Squelch

In the Intercom Setup function, the Volume and Squelch may be set separately for the Pilot, Copilot, and Passenger intercoms.

1. While viewing the Intercom Setup page, touch the **Pilot**, **Co-Pilot**, or **Passenger VOL/SQ** keys to set the Volume and Squelch for the selected item.

Heavy Outline Indicates The Upper Left Rotary Knob Controls Volume

Touch To Decrease Volume

Touch To Select Manual Or Auto Squelch

Touch To Increase Volume

With Manual Squelch, Touch To Increase Squelch

With Manual Squelch, Touch To Decrease Squelch

Figure 2-22 Pilot Audio Setup

2. Touch the **Volume** arrows to set the desired Volume level.

3. Touch the **Auto Squelch** key to allow the unit to set the Squelch level automatically. When enabled, the **Auto Squelch** key will display a green bar.

4. Touch the **Squelch** arrows to set the desired Squelch level.

5. Touch the **Back** key to return to the Intercom Setup page.

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2.3.2 Co-Pilot is Passenger

When the GTN 7XX is installed with a GMA 35, the GTN can place the GMA into "Co-Pilot is Passenger" mode. While in this mode, the GMA 35 treats the copilot headset as a passenger headset and the co-pilot only hears what the other passengers hear. This applies to intercom audio, alerts (if configured for the passengers), selected audio (if configured for passengers), and music/telephone distribution. "Co-Pilot is Passenger" mode allows simpler audio control for the pilot when the co-pilot is just a passenger and not involved in flying the aircraft.

1. To activate "Co-Pilot is Passenger" mode, open the Intercom Setup page and touch **Intercom**.

2. Touch **Menu**, to display the Intercom Menu, and then touch **Group Co-Pilot with Passenger** to enable "Co-Pilot is Passenger" mode.

Selected Intercom
Configuration

Set Co-Pilot as
Passenger
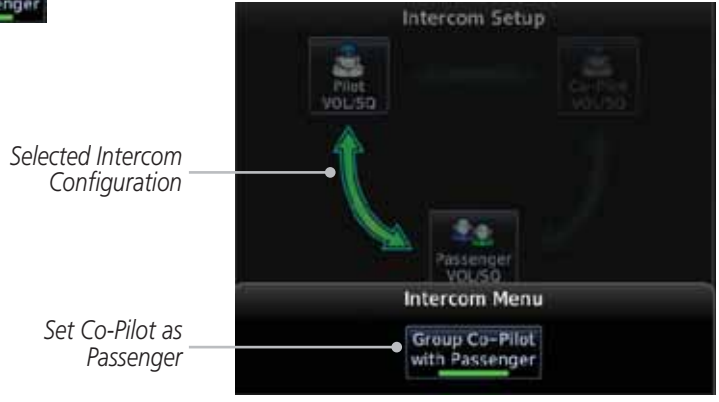
Figure 2-23 Set Co-Pilot as a Passenger in Intercom

NOTE: This feature should not be used for multi-crew aircraft. When the co-pilot is treated as a passenger, co-pilot position may not hear audio alerts or radios.

NOTE: While this mode is active, the co-pilot intercom and audio controls are unavailable because the co-pilot intercom/audio is controlled by the passenger controls. Split mode is also unavailable.

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2.3.3 Music 1 and Music 2 Setup

The GMA 35 provides two music interfaces. Operation depends on the state of the music distribution.

1. While viewing the Intercom Setup page, touch the **Music 1** or **Music 2** keys to set their setup.

Heavy Outline Indicates The Upper Left Rotary Knob Controls Volume

Touch To Select Music Recipients

Touch To Select Source That Will Mute Music

Touch To Decrease Volume

Touch To Increase Volume

Percent Of Maximum Volume   *Graphic Scale Showing Volume*
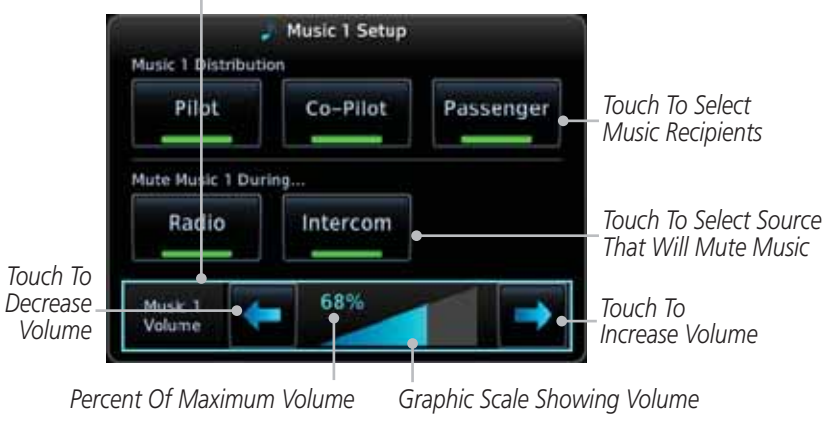
Figure 2-24 Music 1 Setup

2. Select the recipients for Music Distribution by touching any combination of the **Pilot**, **Co-Pilot**, or **Passenger** keys.

3. Touch the **Radio** and/or **Intercom** keys to select the function that, when active, Music will be muted.

4. Touch the **Volume** arrows to set the desired Volume level.

> NOTE: At every power cycle, the "mute music during radio" selection will be active.

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2.3.4 Telephone Setup

The GMA 35 provides a 2-way telephone interface. Operation depends on the state of the telephone distribution. Telephone communication is much like using the intercom, allowing both parties to talk at once.

> **NOTE:** *Garmin recommends when using the GSR 56 Iridium phone system that the audio only be activated when on a phone call.*

The telephone channel may be disabled in Configuration mode. Contact a Garmin-authorized service center for details.

1. While viewing the Intercom Setup page, touch the **Telephone** key to set its setup.

Heavy Outline Indicates The Upper Left Rotary Knob Controls Volume

Touch To Decrease Volume

Touch To Select Telephone Recipients

Touch To Increase Volume

Percent Of Maximum Volume   *Graphic Scale Showing Volume*
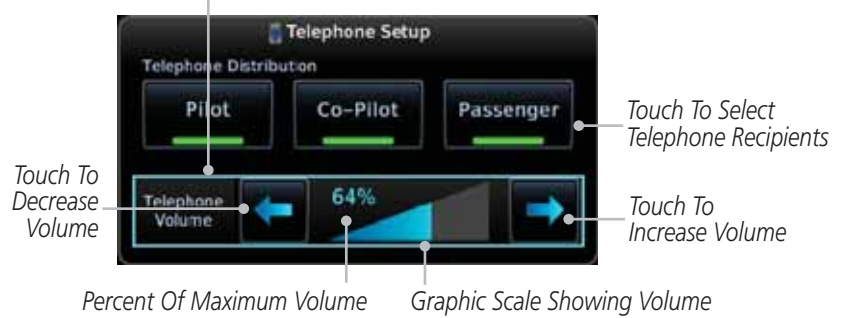
Figure 2-25 Telephone Setup
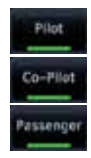
2. Select the recipients for Telephone Distribution by touching any combination of the **Pilot**, **Co-Pilot**, or **Passenger** keys.

3. Touch the **Volume** arrows to set the desired Telephone Volume level.

> **NOTE:** *Telephone audio distribution is retained across power cycles for the passengers, however, pilot and co-pilot telephone distribution will default to OFF over power cycles.*

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2.3.5 Bluetooth Setup

The GMA 35c provides a Bluetooth audio connection to a portable device. Operation depends on the state of the Bluetooth Audio Distribution.

1. While viewing the Intercom Setup page, touch the **Bluetooth** key to access its setup.

Figure 2-26 Audio Bluetooth Setup

2. Select the recipients for Bluetooth Distribution by touching any combination of the **Pilot**, **Co-Pilot**, or **Passenger** keys.

3. Touch the **Radio** and/or **Intercom** keys to select the function that, when active, will mute the Bluetooth audio.

4. Touch the **Volume** arrows to set the desired Volume level.

> **NOTE:** At every power cycle, the "mute Bluetooth during radio" selection will be active.

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2.4 Telligence™ Voice Command

Garmin's Telligence Voice Command voice recognition feature allows the pilot (and optionally copilot) to control the GTN 7XX connected to a GMA 35 using spoken commands. To activate Voice Recognition, push and hold the Push-to-Command (PTC) button while speaking a command. When the Push-to-Command button is released, the GTN 7XX and/or the audio panel will respond.

If a command is understood by the GMA, a positive acknowledgement chime will be played, and the relevant information will be displayed to reflect the change (if applicable). The pilot should verify that the correct response has occurred.

If a command is not understood by the GMA or the GTN is unable to complete the requested action, a negative acknowledgement tone will be played. The pilot should repeat the command by using the Push-to-Command button, or by manually using the GTN 7XX touch screen. In the event of any abnormal Voice Recognition operation, the front panel controls and touch screen may be used to override Voice Recognition and manually control the GTN 7XX.

> **NOTE 1:** *If Telligence Voice Command malfunctions and needs to be disabled, remove power to the GMA 35 audio panel. This will force the audio panel into the fail-safe mode. The pilot will be able to communicate using the COM 2 radio only.*

The following table lists the available Voice Recognition commands, the associated actions, and the voice response if applicable:

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Control	Example Phrase	Action
COM (see Note 4)	"COM one"	Toggles COM1 audio
	"MIC one"	Selects MIC1/COM1 audio
	"COM one MIC"	Selects MIC1/COM1 audio
	"COM two"	Toggles COM2 audio
	"MIC two"	Selects MIC2/COM2 audio
	"COM two MIC"	Selects MIC2/COM2 audio
	"COM three"	Toggles COM3 audio
	"MIC three"	Selects MIC3/COM3 audio
	"COM three MIC"	Selects MIC3/COM3 audio
	"Split COM" OR "Split Mode"	Toggles split COM mode
NAV (see Note 4)	"NAV one"	Toggles NAV1 audio.
	"NAV two"	Toggles NAV2 audio.
MUSIC	"MUSIC one mute" OR "Mute MUSIC one"	Mutes Music 1 on radio reception.
	"Disable MUSIC one mute" "MUSIC one mute disable" "Disable mute MUSIC one" OR "Mute MUSIC one disable"	Disables Music 1 mute on radio reception.
	"MUSIC two mute" OR "Mute MUSIC two"	Mutes Music 2 on radio reception.
	"Disable MUSIC two mute" "MUSIC two mute disable" "Disable mute MUSIC two" OR "Mute MUSIC two disable"	Disables Music 2 mute on radio reception.
Speaker	"Speaker" OR "Cabin Speaker"	Toggles Cabin Speaker on/off.

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Control	Example Phrase	Action
COM Clearance Recorder (see Note 4)	"Play" "Read back" OR "Say again"	Opens Audio Clearance Recorder and plays the last received radio transmission. If the Say Again command is repeated while a prior recording is being played then the clearance recorder will play the next prior recording. The Say Again command can thus be used in a repeated manner to back up through the recordings.
PA	"P - A" OR "Passenger Address"	Toggles PA on/off.
Marker Beacon	"Marker" OR "Marker Beacon"	Same action as pressing Marker Audio.
Volume Adjustments (see Note 4)	"(Desired selection*****) volume up"	Increases volume of desired selection.
	"(Desired selection*****) volume down"	Decreases volume of desired selection.
	"(Desired selection*) volume	Displays the current volume but does not change it.

* Desired selection: "Speaker", "pilot", "copilot", "passenger", "pass", "phone", "marker", "telephone", "music one", or "music two".

NOTE 2: Finer volume adjustment may be made using the Volume knob on the GTN 7XX. The voice command "Up" or "Down" is equivalent to five clicks of the Volume knob.

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Control	Example Phrase	Action
Distribution	"Distribute telephone to (desired position(s) **)" OR "Distribute phone to (desired position(s) **)"	Distributes Telephone to desired positions.
	"Distribute music one to (desired position(s) **)"	Distributes MUS1 to desired position(s).
	"Distribute music two to (desired position(s)**)"	Distributes MUS2 to desired position(s).

** Desired position(s): "All", "none", "pilot", "copilot", "passenger", "pass", or any combination of pilot, copilot, passenger, or pass.
NOTE 3: The word "to" may be omitted from distribution phrases.

Control	Example Phrase	Action
3D Audio	"Three-D audio"	Enables 3D audio Voice Response: "Three-D audio left, three-D audio right".
	"Standard audio"	Enables standard audio (disables 3D audio) Voice Response: "Standard Audio".

Table 2-5 Voice Recognition Commands

NOTE 4: Some installations may use an alternate set of command categories. This set of categories includes: COM, NAV, COM Clearance Recorder, and Volume Adjustments. In the Volume Adjustments category, the commands are: "Speaker", "pilot", "co-pilot", "passenger", and "pass".

NOTE 5: All of the listed commands may not be available in all installations, including some rotorcraft.

3   NAV/COM (GTN 750 NAV/COM)

The GTN 750 features a digitally-tuned VHF Com radio and digitally-tuned Nav/localizer and glideslope receivers. The GTN 750's Com radio operates in the aviation voice band, from 118.000 to 136.975 MHz, in 25 kHz steps (default). For European operations, a Com radio configuration of 8.33 kHz steps is also available.

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Figure 3-1 Nav/Com Controls

Figure 3-2 Nav/Com Functional Diagram

3.1   Volume

Com radio volume is adjusted using the **Volume** knob. Turn the **Volume** knob clockwise to increase volume, or counterclockwise to decrease volume. The level will be maintained until changed.

1. Turn the **Volume** knob to set the Com volume.

Percent Of Maximum Volume   *Graphic Scale Showing Volume*

Figure 3-3 Com Volume Setting

2. A bar graph showing the relative volume level will indicate the selected level and will disappear a few seconds after releasing the **Volume** knob.

3.2   Squelch

The Com radio features an automatic squelch to reject many localized noise sources. You may override the squelch function by pressing the **Volume** knob. This facilitates listening to a distant station or setting the desired volume level.

To override the automatic squelch, press the **Volume** knob momentarily. Press the **Volume** knob again to return to automatic squelch operation. A "SQ" indication appears above the active Com frequency window in the upper left corner of the display when automatic squelch is overridden.

Com Control Text

Receive Annunciation

Squelch Annunciation

*Active Com Frequency
(Touch to Flip/Flop)*

Standby Com Frequency
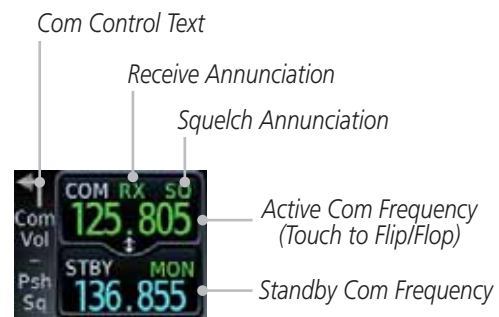
Figure 3-4 Com Controls

While receiving a transmission, an "RX" indication appears in the Com frequency window to the immediate right of "Com." A "TX" indication appears at this location while you are transmitting.

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3.3   Com Window and Tuning

Communication frequencies are selected by using the **large** and **small right** knobs or by touching the value in the *standby* Com frequency field and using the displayed keypad. The standby frequency always appears below the active frequency. The active frequency is the frequency currently in use for transmit and receive operations.

Once a frequency is selected in the standby field, it may be transferred to the active frequency by touching the active frequency field.

> **NOTE:** *The Com window is normally active for adjustment, unless the NAV window is made active by pressing the **small right** knob. The active state automatically returns to the Com window after 30 seconds of inactivity.*

To select a Com frequency using the small and large right knobs:

1. If the tuning cursor is not currently in the Com window, press the **small right** knob momentarily. The Standby Com frequency will be highlighted to indicate that it is active for editing.

2. Turn the **large right** knob to select the desired megahertz (MHz) value. For example, the "118" portion of the frequency "118.30".

3. Turn the **small right** knob to select the desired kilohertz (kHz) value. For example, the ".30" portion of the frequency "118.30".

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To select a Com frequency using the numeric keypad:

1. Touch the Standby window.

2. A pull down keypad will appear with the current Standby frequency highlighted.

Figure 3-5 Com Standby Frequency Numeric Keypad

3. Touch the numeric keys to add the desired values and touch **Enter** to accept the displayed value and place it into the Standby Com window.

4. Touching the **Xfer** key will place the selected frequency directly into the Active window.

To make the standby frequency the active frequency:

1. Touch the Com active frequency (top) window.

2. The Active (top) and Standby frequencies will flip/flop.

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3.3.1   Com Frequency Finding

The GTN 750's frequency finding feature allows you to quickly select any displayed database Com frequency as your standby frequency. The following are some examples of selecting Com frequencies from some of the main GPS pages.

To select a Com frequency for a User created frequency, Recent selected frequency, Nearest airport, or from your Flight Plan:

1. While viewing the numeric keypad touch the **Find** key. Categories for User, Recent, Nearest, and Flight Plan are available.

2. Touch **Recent**, **Nearest**, **Flight Plan**, or **User**.
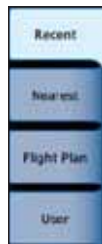
Selected Frequency Category

Selected Frequency for Nearest Airport

Touch to Select Nearest List

Figure 3-6 Com Nearest Airport Frequency

3. Touch the desired Com frequency to select it and place it into the Com Standby window.

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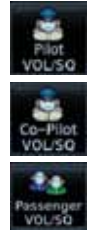System

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3.3.1.1   Find Recent Frequencies
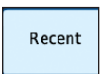
1. While viewing the **Find** results, touch the **Recent** tab. A list of the recently selected frequencies will be displayed.

Recent Frequency Category

Selected Frequency Category

Touch Frequency From Recent List To Select Standby Frequency

Figure 3-7 Recent Com Frequency List

2. Touch the desired frequency to select it and place it into the Standby window.

3.3.1.2   Find Nearest Frequencies

1. While viewing the **Find** results, touch the **Nearest** key. A list of the nearest airport Com frequencies will be displayed.

Selected Frequency Category

Selected Frequencies For Nearest Airport

Figure 3-8 Com Nearest Airport Frequency

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2. Touch the **Multiple FREQ** key to show the available frequencies.

Touch A Frequency Key To Place It In The Standby Window

Figure 3-9 Nearest Airport Multiple Frequency List

3. Touch the **Filter** key to filter the Nearest List by Airports, FSS, or ARTCC.
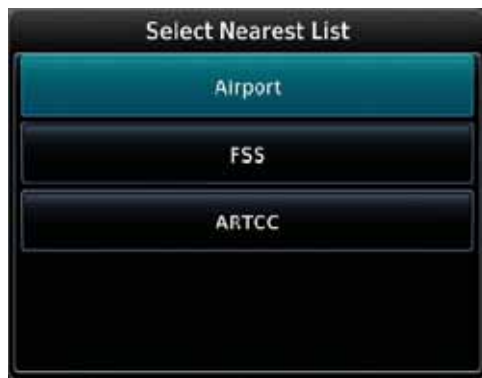
Figure 3-10 Nearest Com Frequency List

4. Touch the desired Frequency List. Then, touch the desired frequency to load it into the Standby window.

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5. Some frequencies will have more information detail available. Touch the key that shows "More Information."

Touch For More Information

Figure 3-11 More Information Is Available For Some Frequencies

6. More detailed information is shown on the display. Touch the frequency key to load it into the Standby window.

Touch To Insert Into Standby Window

Additional Information Narrative

Figure 3-12 More Frequency Detail

3.3.1.3 Find Flight Plan Frequencies

| Flight Plan |

1. While viewing the **Find** results, touch the **Flight Plan** tab. A list of Com or Nav frequencies associated with the active flight plan will be displayed.

Selected Frequency Category

Selected Frequency Category

Touch To Select Frequency From List For Nearest Airport

Figure 3-13 Flight Plan Frequency List

| Multiple FREQ |

2. Touch the **Multiple FREQ** key to show the available frequencies, if present.

3. Touch the desired frequency to select it and place it into the Standby window.

3.3.1.4 Find User Frequencies

| User |

1. While viewing the **Find** results, touch the **User** tab. A list of User-created frequencies will be displayed.

2. Touch the desired frequency to load it into the Standby window.

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3.3.2 Simple Frequency Entry

Frequencies can be entered on the GTN without the leading one and/or trailing zero(s). As a result, the pilot can touch "2", "1", and "5" for 121.50. If a number is pressed that is not valid for the cursor location, the pilot is presented with a confirmation pop-up upon selecting the typed frequency. Frequency entry can be accomplished by typing every digit in the frequency or by leaving off the leading one and/or trailing zero(s). The frequency that will be entered is always displayed in the cursor window.

1. Touch the Standby frequency field and then touch the **2** key.

Figure 3-14 Simplified Frequency Entry Without Leading Number

2. Touch the **7** key.

Figure 3-15 Second Frequency Number

3. Touch the **2** key.

Figure 3-16 Final Frequency Without Trailing Number

4. Touch **Enter**.

Entered Frequency Value

Figure 3-17 Completed Frequency Entry

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3.3.3 Adding a New User Frequency

1. While viewing the numeric keypad touch the **Find** key at the bottom of the display.
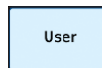
2. Touch the **User** tab and then touch the **Add User Frequency** key.

Add User Frequency

User Frequency Selection
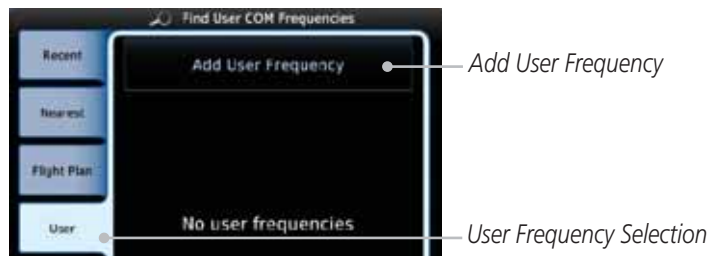
Figure 3-18 Add New User Frequency

3. The Add New User Frequency information window will now be displayed. Touch the **Name** key to select a name for the User frequency.

User Frequency Name

User Frequency Value
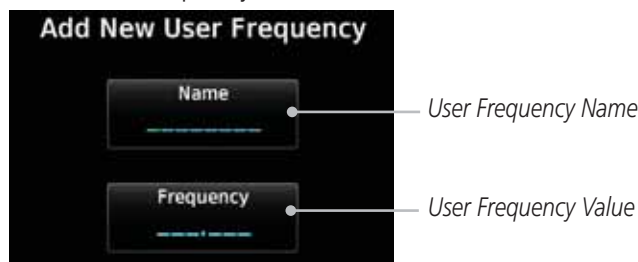
Figure 3-19 Add New User Frequency Detail Window

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4. Select the characters from the alphanumeric keypad for the desired name. Touch the **Enter** key to accept the displayed Name.

User Frequency Name

Cursor Movement

Backspace

Alphanumeric Keypad

Figure 3-20 Select a Name for the New User Frequency
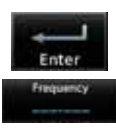
5. Touch the **Frequency** key and select the characters from the keypad for the desired frequency. Touch the **Enter** key to accept the displayed frequency.

Figure 3-21 Select a Frequency Value for the New User Frequency

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6. Touch the **Enter** key to accept the displayed name and frequency. The new User Frequency will be added to the list. The list can store up to 15 user frequencies.

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User Frequency Name   *User Frequency Value*

Touch to Add Another User Frequency

Touch to Edit/Remove the User Frequency
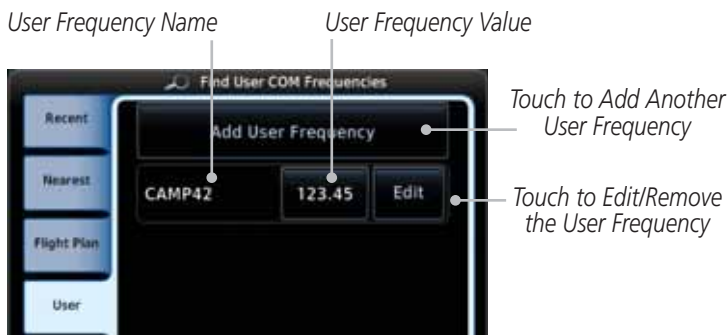
Figure 3-22 Completed New User Frequency

3.3.4   Emergency Frequency

The GTN 750's emergency frequency select provides a quick method of selecting 121.50 MHz as the active frequency in the event of an in-flight emergency. The emergency frequency select is available whenever the unit is on, regardless of GPS or cursor status, or loss of the display.

To quickly tune and activate 121.50, press and hold volume knob or the remote Com flip-flop key for approximately two seconds.

NOTE: Pressing and holding the remote Com FLIP/FLOP key for approximately two seconds, on units so configured, will lock the COM board, preventing further changes in Com frequency until the Com board is unlocked, by pressing the remote Com FLIP/FLOP key again for two seconds. The following message will notify the pilot that the Com board has been locked: "COM LOCKED TO 121.5 MHZ. HOLD REMOTE COM TRANSFER KEY TO EXIT."

NOTE: Under some circumstances if the Com system loses communication with the main system, the radio will automatically tune to 121.50 MHz for transmit and receive regardless of the displayed frequency.

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3.3.5 Stuck Microphone

Whenever the GTN 750 is transmitting, a "TX" indication appears in the Com window. If the push-to-talk key on the microphone is stuck or accidentally left in the keyed position, or continues to transmit after the key is released, the Com transmitter automatically times out (or ceases to transmit) after 30 seconds of continuous broadcasting. You will also receive a "Com push-to-talk key stuck" message as long as the stuck condition exists.

3.3.6 Remote Frequency Selection Control

On units configured for remote Com frequency Recall, pressing the remote recall switch will load the next preset Com frequency into the unit's Standby frequency box. The remote recall switch can be pressed multiple times to scroll the entire preset frequency list through the Standby frequency box (the list will "wrap" from the bottom of the list back up to the top, skipping any empty preset positions).

The standby frequency isn't activated until a Com **FLIP/FLOP** switch (either bezel-mounted or remote (COM RMT XFR) is pressed. Remote Frequency Selection only functions on units configured for a remote Com Frequency recall switch.

> **NOTE:** For software prior to version 5.00, frequencies must be stored in the User Frequency List prior to utilizing the remote channel select switch.

3.3.7 Reverse Frequency Look-Up

When the Reverse Frequency Look-Up feature is enabled in System-Setup, the identifier and frequency type will be shown for the selected Com and Nav frequencies for the nearest stations that are in the aviation database when the unit is receiving a valid position input. Station Identifiers with a "+" sign will have more stations associated with this frequency than just the type displayed.

Identifier and Type Shown for the Selected Frequency

The "+" Sign Indicates More Stations Associated With This Frequency

Figure 3-23 Reverse Frequency Look-Up

> **NOTE:** It can take up to 2 minutes for the RFL frequency to change after crossing the half way point when flying from one airport to another that both use the same frequency.

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3.4 Com Frequency Monitoring

The Frequency Monitoring function allows you to listen to the Standby frequency in the Com radio, while monitoring the Active frequency for activity.

Monitor

1. Touch the **Monitor** key to listen to the standby frequency. A small "MON" annunciation is displayed to the right of the Standby frequency. A green bar will show on the **Monitor** key. When the Active frequency receives a signal, the unit will switch automatically to the Active frequency and then switch back to the standby frequency when activity ceases.

Frequency Monitor Annunciation

Standby Frequency Clear Key

Com Standby Editing Window

Frequency Monitor Key

Frequency Transfer (Flip-Flop) Key
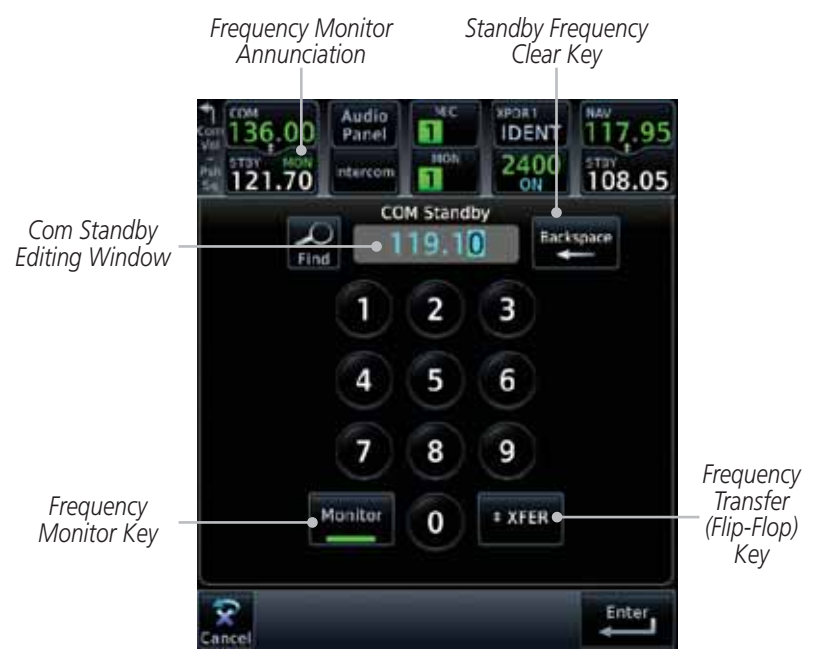
Figure 3-24 Com Frequency Monitoring
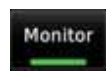
Monitor

2. The Monitor function is deactivated when you touch the **Monitor** key again and the green bar is extinguished.

> *NOTE: The Com radio Monitoring function is different than the Monitor function of the Audio Panel.*

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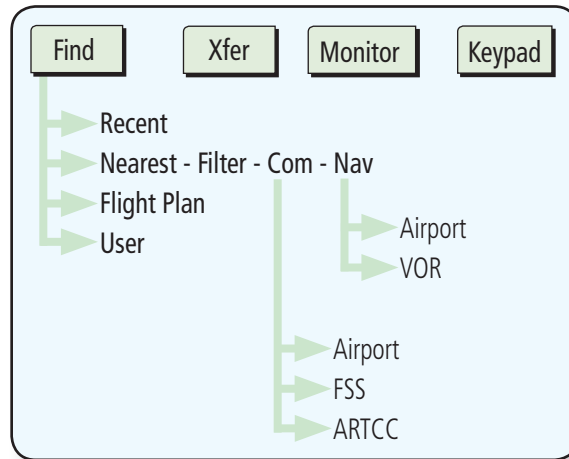
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3.5   NAV (VOR/Localizer/Glideslope) Receiver Operations

The GTN 750 includes digitally-tuned Nav/localizer and glideslope receivers with the desired frequency selected on the *Nav window*, along the top right-hand side of the display. Frequency selection is performed by pressing the **small right** knob to activate Nav Standby frequency editing and then turning the **small** and **large right** knobs or keypad to select the desired frequency.

Figure 3-25 Nav Frequency Window

3.5.1   Ident Audio and Volume

Nav ident is enabled by pressing the **Volume** knob when the Nav window is active. When Nav ident is enabled, the ID annunciation will appear in the active Nav window and Morse code tones will be heard. When the Nav function is enabled, the Nav Standby channel window will highlight briefly and then turn to blue text. The Nav Standby frequency will be active for editing for about 30 seconds before the Com Standby frequency becomes active for editing.
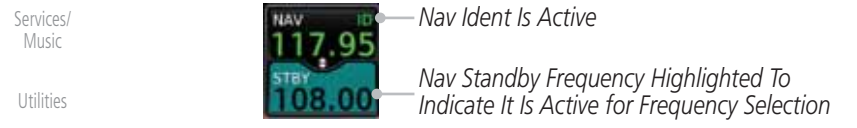
Figure 3-26 Nav Standby Frequency Window and Ident is Active

Nav audio volume is adjusted using the **Volume** knob. Turn the **Volume** knob clockwise to increase volume, or counterclockwise to decrease volume.

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3.5.2   Nav Tuning Window

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Nav frequencies are selected with the tuning cursor in the standby Nav frequency field, and using the small and large right knobs to dial in the desired frequency. The keypad may also be used for frequency entry after touching the Standby window. The standby frequency always appears below the active frequency. The active frequency is the frequency currently in use. The GTN will automatically decode Morse code and display the Ident for the active frequency above it. The RFL (reverse frequency lookup) Identifier is displayed below the frequency and is only dependent on GPS position and database information.

> ✓ **NOTE:** *Tuning is normally active in the Com window, unless placed in the Nav window by pressing the **small right** knob. When the tuning cursor is in the Nav window, it automatically returns to the Com window after 30 seconds of inactivity. The active frequency in either window cannot be accessed directly — only the standby frequency is active for editing.*

To select a VOR/localizer/ILS frequency:

1. Touch the **small right** knob momentarily to make the Nav Standby frequency value active for editing. The window will be highlighted momentarily.

2. Turn the **large right** knob to select the desired megaHertz (MHz) value. For example, the "117" portion of the frequency "117.80".

3. Turn the **small right** knob to select the desired kiloHertz (kHz) value. For example, the ".80" portion of the frequency "117.80".

4. Touch the Nav active (top) frequency to make the standby frequency.

5. The Active (top) and Standby frequencies will switch.

Nav Frequencies In The Database Will Display The Ident Based on GPS Position

Nav Frequencies Will Automatically Decode Morse Code And Display The Ident

Figure 3-27 Automatic Nav Frequency Ident Decoding

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3.5.3   Nav Frequency Finding

The GTN 750's frequency finding feature allows you to quickly select any displayed database Nav frequency as your standby frequency.

To select a Nav frequency for a User created frequency, Recent selected frequency, Nearest airport, or from your Flight Plan:

1. While viewing the numeric keypad touch the **Find** key at the bottom of the display. Categories for User, Recent, Nearest, and Flight Plan are available.

2. Touch the **User**, **Recent**, **Nearest**, or **Flight Plan** key.

Active Nav Frequency Key

Nearest Nav Frequency List Is Selected

Touch To Select For Standby Nav Frequency

Nearest Nav Frequency List

Touch to Filter Nearest List

Figure 3-28 Nearest Airport Nav Frequency

3. Touch the desired Nav frequency to select it and place it into the Nav Standby window.

OR

4. Touch the **Filter** key to narrow the list by category, such as Airport and VOR, and then select a given frequency.

Touch To Select Nearest Frequency List Type

Figure 3-29 Nearest Nav Frequency List

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4   FLIGHT PLANS

The GTN 7XX lets you create up to 99 different flight plans, with up to 100 waypoints in each flight plan. The Flight Plan function is accessed by touching the **Flight Plan** key on the Home page. The Flight Plan function allows you to create, store, edit, and copy flight plans.
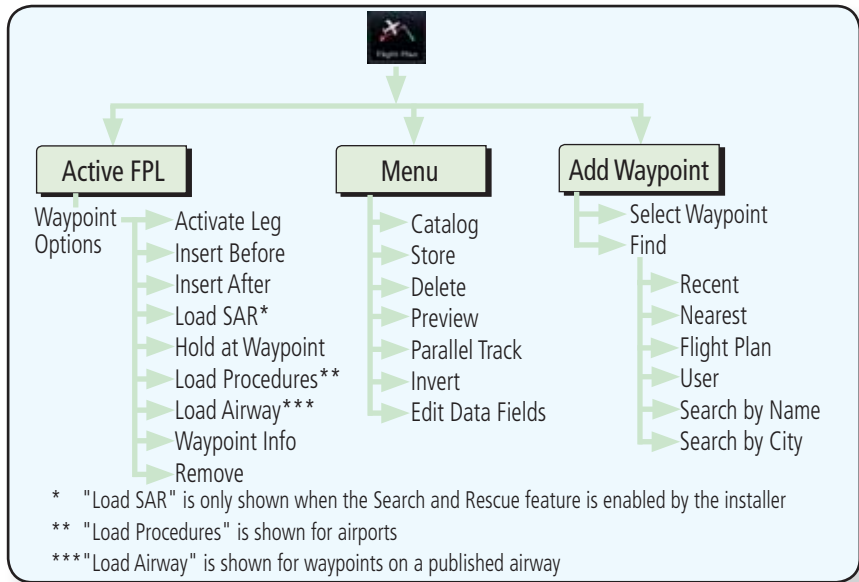
Figure 4-1 Flight Plan Functional Diagram

> ✓ **NOTE:** Navigation is provided for fixed wing aircraft above 30 kts and for rotorcraft above 10 kts.

> ✓ **NOTE:** The Chart feature provides a digital representation of a paper chart and provides no vertical or lateral course guidance. Flight Plan and Procedures are separate from Charts, and do provide vertical and lateral course guidance for the loaded route or procedure shown on the Flight Plan page. The term "Chart Unavailable" means that the chart cannot be viewed on the Charts due to either a chart not being published, or an error in the Chart database, but does not preclude its availability or inclusion of the procedure in the Flight Plan or Procedures portion of the system. The absence of a chart for a particular Departure, Arrival, or Approach does not preclude its availability or inclusion in the Flight Plan or Procedures portion of the system. The absence of a particular Departure, Arrival, or Approach under the Flight Plan or Procedures portion of the system does not preclude the ability to view the Chart for that procedure under the Chart feature.

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4.1　Creating a New Flight Plan

4.1.1　Creating a New Flight Plan in the Catalog

1. From the Home page, touch **Flight Plan**.

2. Touch **Menu** and then the **Catalog** key.

3. Touch the **Create New Catalog Route** key at the end of the flight plan list in the Catalog.

Touch To Create New Flight Plan

Figure 4-2 Create a New Catalog Route (Flight Plan)

4. Touch the **Add Waypoint** key and select a waypoint identifier with the alphanumeric keypad. Then, touch **Enter**.

Selected Flight Plan Waypoint

Figure 4-3 Select a Waypoint for the New Flight Plan

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> ✓ *NOTE: If a flight plan that includes a procedure that has been modified by the pilot is saved into the flight plan catalog, the GTN cannot check the accuracy of that procedure when that flight plan is used on a later flight. It is recommended that flight plans with modified procedures not be saved in the flight plan catalog.*

4.1.2 Creating a New Flight Plan from the Active Flight Plan

1. From the Home page, touch **Flight Plan**.

Figure 4-4 Create New Flight Plan by Clearing Active Flight Plan

2. If there is already an Active Flight Plan, touch **Menu** and then the **Delete** and **OK** keys to delete the existing active flight plan. The stored flight plan in the Catalog will not be deleted.

3. Touch the **Add Waypoint** key and select a waypoint identifier with the alphanumeric keypad. Then, touch **Enter**.

4. Touch the **Add Waypoint** key and select the waypoint identifier with the keypad for the next waypoint. Touch **Enter**.

5. Continue adding waypoints as needed.

6. Touch **Menu** and then touch **Store** to store the flight plan in the Catalog. The screen will now display the Flight Plan Catalog and show the new flight plan. Flight plans are listed by the Departure and Destination waypoints.

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4.2   Active Flight Plan Page

The Active Flight Plan Page provides information and editing functions for the flight plan currently in use for navigation. Once you have activated a flight plan, the Active Flight Plan Page shows each waypoint for the flight plan, along with the Desired Track (DTK), Distance (DIST) for each leg and Cumulative Distance (CUM). The data fields are user-selectable and may be changed to display Cumulative Distance (CUM), Distance (DIST), Desired Track (DTK), En Route Safe Altitude (ESA), or Estimated Time of Arrival (ETA).

Cumulative Dist Between
Current Position and Next Wpt *

DIST Between Legs *

DTK Between Legs *

Origin and Destination Waypoints

Active Leg Navigation

Parallel Track Active

Flight Plan Menu Options

Up/Down Keys to Scroll FPL
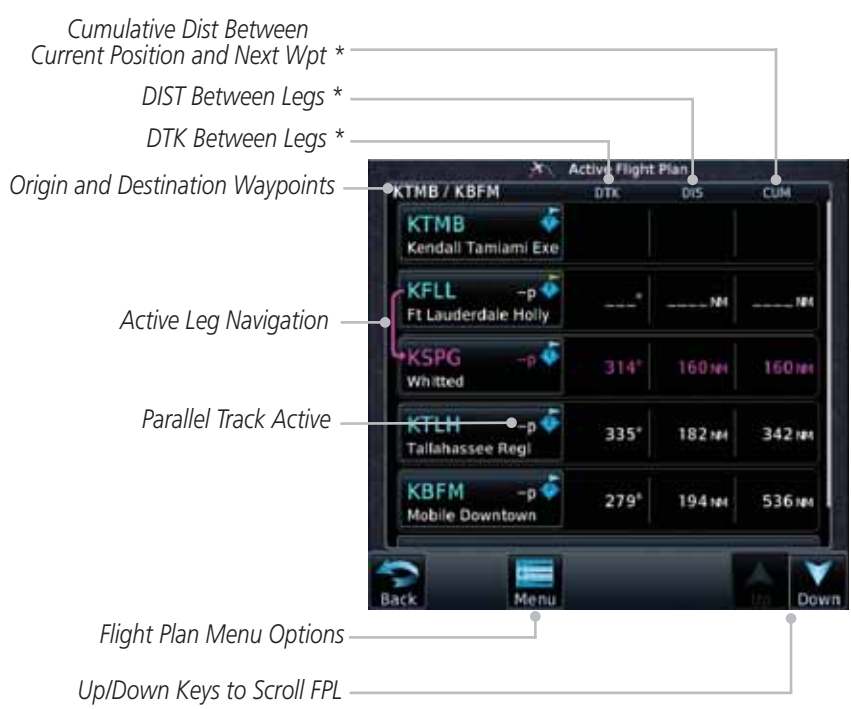
Figure 4-5 Active Flight Plan Page

* The field types may be changed using the Edit Fields function in the Flight Plan page Menu.

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4.2.1 Waypoint Options

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1. While viewing the Active Flight Plan page, touch the desired flight plan waypoint. The Waypoint Options window will be shown.

Greyed Options Are Not Available

Touch Key To Select Option

Waypoint Options List

Figure 4-6 Active Flight Plan Wpt Options with SAR Available

2. Touch one of the options to perform the selected action. Cancel the option selection by touching the **Back** key.

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4.2.1.1 Activate Leg

The Activate Leg option allows you to change the active leg of a flight plan.

Activate Leg

1. On the Waypoint Options menu, touch the desired TO waypoint and then the **Activate Leg** key to select the TO waypoint as the active leg for navigation.

Current Leg

Current TO Wpt

Touch to Select As New TO Wpt and To Activate Leg

Figure 4-7 Active Flight Plan Activate Leg Option

OK

2. Touch the **OK** key to set the selected leg as the Active Leg, or **Cancel** to not select it.

Activate Leg Option Was Selected

Touch OK To Activate Leg

Touch Cancel To Cancel The Operation And Return To the Flight Plan View
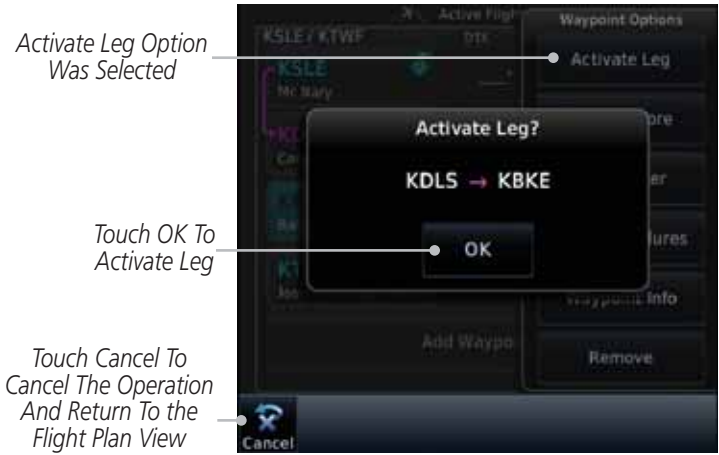
Figure 4-8 Active Flight Plan Activate Leg Option

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4.2.1.2   Insert Before

The Insert Before option allows you to insert a new waypoint into the active flight plan before the selected waypoint.

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will be displayed.

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*Option Will
Insert New
Waypoint
Before This
Selected Flight
Plan Waypoint*

*Insert Before
Option Was
Selected*

Figure 4-9 Active Flight Plan Insert Waypoint Before Option

2. Touch the **Insert Before** key to select a new waypoint before the selected waypoint.

3. Select a waypoint identifier with the alphanumeric keypad.

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*Choose New Waypoint
To "Insert Before" The
Selected Flight Plan
Waypoint*

Figure 4-10 Use the Alphanumeric Keypad to Select Waypoint to Insert Before

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4. Then, touch **Enter** to confirm the selection, or touch **Cancel** to cancel any changes. The new flight plan will be shown.

New Waypoint Inserted Before The Selected Flight Plan Waypoint

Figure 4-11 New Waypoint Is Inserted Before the Selected Waypoint

Selected Flight Plan Waypoint   *New Flight Plan Waypoint*
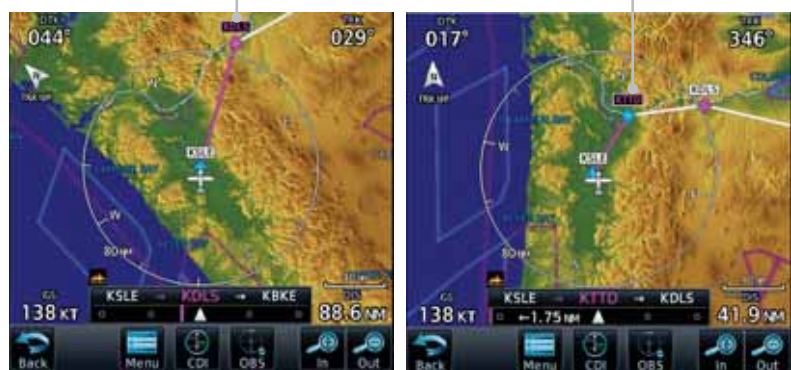
Figure 4-12 Flight Plan Before and After New Waypoint Inserted

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4.2.1.3   Insert After

The Insert After option allows you to insert a new waypoint into the active flight plan after the selected waypoint.

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1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will be displayed.

2. Touch the **Insert After** key to select a new waypoint after the selected waypoint.

3. Select a waypoint identifier with the alphanumeric keypad. Then, touch **Enter** to confirm the selection, or touch the **Cancel** key to cancel the operation and return to the Waypoint Options window.

4.2.1.4   Remove

The Remove option allows you to remove the selected waypoint from the active flight plan.

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will be displayed.

2. On the Waypoint Options menu, touch the **Remove** key to delete the selected waypoint from the active flight plan.

Waypoint Selected
To Be Removed

Touch OK
To Remove
Waypoint

Touch Cancel To
Cancel The Operation
And Return To the
Flight Plan View
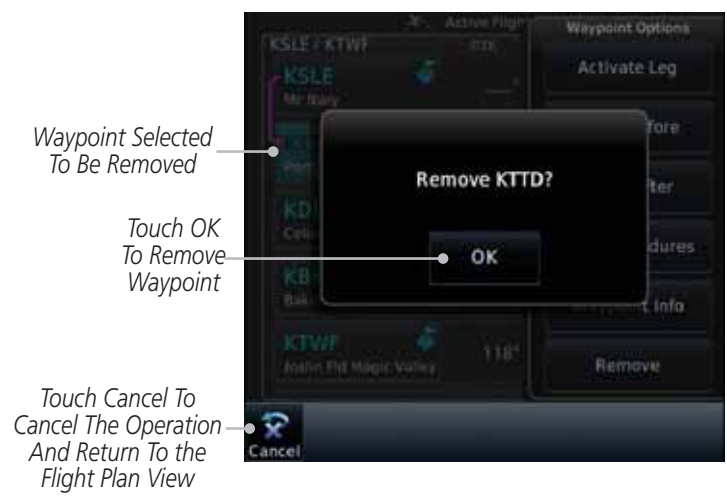
Figure 4-13 Active Flight Plan Remove Waypoint Option

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4.2.1.5   Load Procedures

The Load Procedure selection from the Waypoint Options will start the Procedures function. See the Procedures section for complete information.

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will be displayed.

Load Procedures

2. Touch the **Load Procedures** key to go to the Procedure function for adding procedures to the selected flight plan.

Touch to Select a Departure

Touch to Select an Arrival

Touch to Select an Approach

Figure 4-14   Load Procedures Wpt Option

> **NOTE:** In software version 5.13 and earlier, for some procedures, due to very small position differences in the database, consecutive flight plan legs do not match up. The total effect on navigational guidance is negligible. The LOC BC 13 at KSLE via UBG shown below is an example of this.

Procedure Flight Plan Leg Discrepancy

Figure 4-15   Procedure Flight Plan Leg Position Difference

4.2.1.6 Waypoint Info

The Waypoint Info option allows you to view information about the selected waypoint. See the Waypoint Info section for complete information.

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will be displayed.

2. One Waypoint Options menu, touch the **Waypoint Info** key to view information about the selected waypoint.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Type

Airport Lat/Lon

Waypoint Info Page Tab

Airport Information

Touch To View Airport Charts

Figure 4-16 Active Flight Plan Wpt Info

3. Touch the **Back** key to return to the Active Flight Plan page.

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4.2.2 Airways

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Airways may be added as legs in flight plans with any waypoint that is part of an airway, such as a VOR.

1. On the Active Flight Plan page, touch the desired airway entry waypoint in the flight plan. The Waypoint Options list will then be displayed.

Touch VOR Entry Wpt To Insert Airway

Figure 4-17 Active Flight Plan with VOR Entry Wpt

Load Airway

2. Touch the **Load Airway** key to select an airway for the selected entry waypoint.

Touch To Insert Airway

Figure 4-18 Select Load Airway from the Waypoint Options

3. Touch the desired airway to select it.

Touch To Insert Selected Airway

Figure 4-19 Select an Airway from the List

4. Scroll through the list and touch the desired exit point from the airway. The Airway list can be sorted by distance or alphabetically. Touch the **Sort Alpha** key to toggle the sort setting.

Touch To Select Exit Waypoint

Figure 4-20 Select an Exit Waypoint for the Airway

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5. Confirm the airway information and then touch **Load** to insert the selected airway into the flight plan. Use the **In** and **Out** keys, and drag the map with your finger to view the airway detail. If changes are desired, touch the **Airway** or **Exit Waypoint** keys to select alternate choices.

Airway Waypoint List

Map Preview Of Airway Waypoints

Entry Waypoint

Selected Airway

Touch To Select Exit Waypoint

Touch To Load Airway Into FPL

Figure 4-21 Airway Information

6. After loading the airway, it is inserted into the flight plan. The airway waypoints are shown below the **Airway** key on the display. Touch the airway to make any changes.

Entry Waypoint

Selected Airway. Touch To Edit.

Selected Airway Waypoints
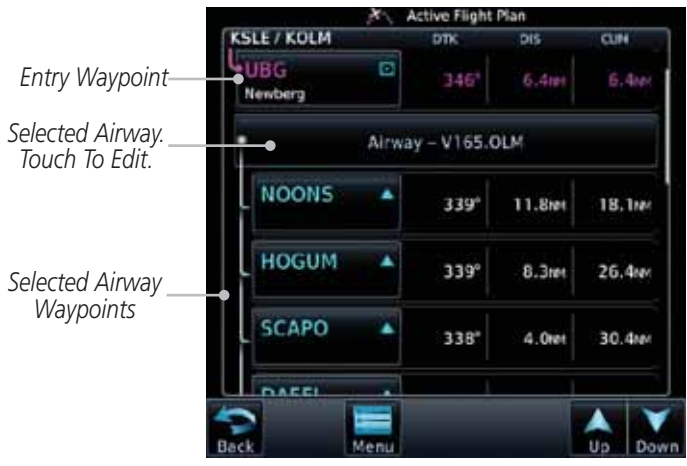
Figure 4-22 Airway Waypoints in the Flight Plan

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7. Touch the **Airway** key to display the Airway Options. Make the desired choice or touch **Back**.

Airway Detail Shown

Touch To Collapse Airway Waypoints

Touch To Select New or Change Current Airway

Touch To Remove Airway From Flight Plan

Figure 4-23 Airway Options

8. Touch the **Collapse All Airways** key to collapse the list of points along the airway. Touch the **Collapse All Airways** key again to toggle the display of airway detail back on.

Touch To Expand Airway Waypoints

Figure 4-24 Airways Collapsed In Flight Plan

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4.2.3   Load Hold at Waypoint

> ✎ **NOTE:** This feature is available in software version 6.00 and later.

4.2.3.1   Hold at Waypoint

Holding patterns may be added to existing waypoints within the flight plan.

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will then be displayed.

Option Will Hold At This Waypoint

Hold At Waypoint Option Selected

Figure 4-25   Active Flight Plan with Hold At Waypoint Option

2. Touch the **Hold At Waypoint** key to open the Hold at Waypoint dialog window.

Touch To Select Hold Course

Touch To Select Course Direction

Touch To Select Turn Direction

Touch To Select Leg Length Type

Touch To Enter Leg Length

Touch To Select EFC Time

Touch To Use Selections To Create A Hold At The Selected Waypoint
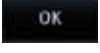
Figure 4-26   Creating a User-Defined Hold

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3. Touch the **Course** key to open the keypad. Use the keypad and **Enter** to select the inbound or outbound course.

4. Touch the **Direction** key to select between Inbound or Outbound for the course direction.

5. Touch the **Turn** key to select between Left or Right for the turn direction.

6. Touch the **Leg Type** key to select between Time or Distance for the leg type.

7. Touch the **Leg Time** or **Leg Distance** key to display the keypad. Use the keypad and the **Enter** key to select the length of the leg.

8. Touch the **Expect Further Clearance** key to display the keypad. Use the keypad and the **Enter** key to select the time for a reminder.

9. Touch the **Load Hold** key to add the hold into the flight plan.

4.2.3.2 Removing a Hold

1. On the Active Flight Plan page, touch the hold to be removed. The Hold Options window is displayed.

2. Touch the **Remove** key.

3. Touch the **OK** key in response to "Remove Holding Pattern?" The holding pattern is removed. To cancel the request, touch the **Cancel** key.

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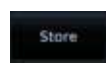Services/ Music

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4.2.4 Load Search and Rescue Patterns (Optional)

NOTE: *This feature is available in software version 6.00 and later.*

NOTE: *Turn smoothing may result in SAR coverage being different than intended. The flight crew should always verify that the SAR pattern created conforms to the specific mission requirements.*

Search and Rescue Patterns may be added to existing waypoints within the active flight plan. Only one SAR pattern can exist in the active flight plan. Loading another SAR pattern into the active flight plan when one already exists will remove the first SAR pattern.

NOTE: *Flight plans cannot be stored in the catalog if they contain a SAR pattern.*

1. On the Active Flight Plan page, touch the desired waypoint in the flight plan. The Waypoint Options list will then be displayed.

Option will initiate SAR pattern from this waypoint

Load SAR Option Was Selected

Figure 4-27 Active Flight Plan with Load SAR Option

2. Touch the **Load SAR** key to open the Search and Rescue Patterns page.

3. Touch the **SAR Pattern** key to select between Parallel Track, Sector Search, Expanding Square, or Orbit for the SAR pattern type. The available patterns can be configured by the installer and all of the listed pattern types may not be available.

4. Confirm the SAR pattern information and then touch the **Load Pattern** key to load selected pattern to the active flight plan or touch the **Load Pattern & Activate** key to load selected
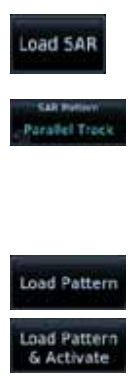
pattern to the active flight plan and go direct-to the initial waypoint.

5. The SAR pattern waypoints are shown below the **SAR** key on the display. Touch the SAR pattern to make any changes.

Initial Waypoint

SAR Key. Selected Pattern. Touch To Edit.

Selected SAR Pattern Waypoints

Figure 4-28 SAR Pattern Waypoints in the Flight Plan

6. Touch the **SAR** key to display the Search & Rescue Options. Make the desired choice or touch the **Back** key.

SAR Key

SAR Pattern Detail Shown

Touch To Collapse SAR Pattern

Touch To Insert Wpt Before SAR Wpts

Touch To Edit SAR Pattern Parameters

Touch To Remove SAR Pattern

Figure 4-29 Search & Rescue Options

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7. Touch the **Collapse Search Pattern** key to collapse the list of the points along the SAR pattern. Touch the **Collapse Search Pattern** key again to toggle the display of SAR pattern detail back on.

Figure 4-30 SAR Pattern Collapsed in Flight Plan

4.2.4.1   Creating a Parallel Track Pattern

The Parallel Track SAR pattern starts at the initial waypoint and follows the initial track for the length of the first parallel track leg. A 90° turn in the initial turn direction leads to the spacing leg with a length equal to the track spacing. Another 90° turn leads to the second parallel track leg. The turns at the end of the second parallel track leg are in the opposite direction as the previous parallel track leg. The parallel track pattern terminates once the desired number of parallel track legs have been flown.
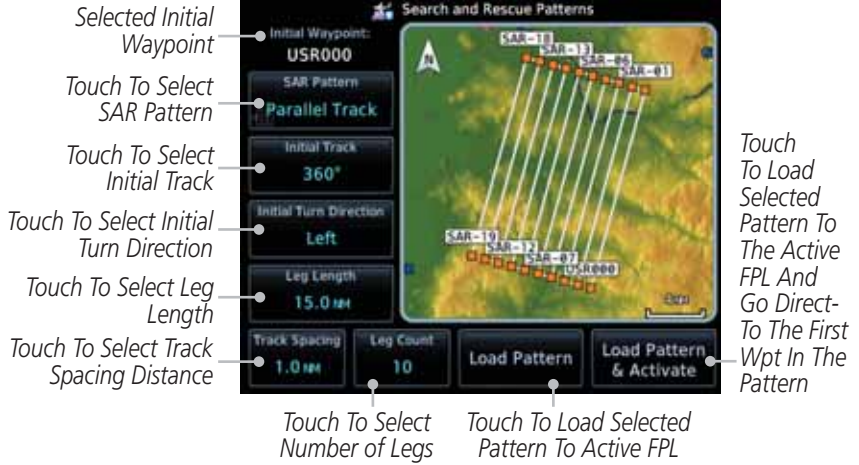
Figure 4-31 Search and Rescue Parallel Track Pattern Page

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1. Touch the **SAR Pattern** key and select Parallel Track as the pattern type.

2. Touch the **Initial Track** key to open the keypad. Use the keypad and **Enter** to select the initial course.

3. Touch the **Initial Turn Direction** key to select between Left or Right as the initial turn direction.

4. Touch the **Leg Length** key to open the keypad. Use the keypad and **Enter** to select the length of the parallel track legs.

5. Touch the **Track Spacing** key to open the keypad. Use the keypad and **Enter** to select the desired spacing between the parallel track legs.

6. Touch the **Leg Count** key to open the keypad. Use the keypad and **Enter** to select the desired number of parallel track legs.

7. Touch the **Load Pattern** key to load selected pattern to the active flight plan.

Or

8. Touch the **Load Pattern & Activate** key to load selected pattern to the active flight plan and go direct-to the initial waypoint.

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4.2.4.2   Creating a Sector Search Pattern

The Sector Search SAR pattern starts at the initial waypoint and follows the initial track for the desired leg length. A 60° turn in the initial turn direction is followed by another leg with the desired leg length, another 60° turn, and then a leg back to the initiating waypoint. The next sector starts with a leg continuing on the same course outbound from the initiating waypoint and is followed by the same sequence of legs and turns. The third sector follows the same pattern.

Selected Initial Waypoint

Sector Search Pattern Selected

Touch To Select Initial Track

Touch To Select Initial Turn Direction

Touch To Select Leg Length

Touch To Load Selected Pattern To Active FPL

Touch To Load Selected Pattern To Active FPL & Go Direct-To Initial Wpt

Figure 4-32 Search and Rescue Sector Search Pattern Page

1. Touch the **SAR Pattern** key and select Sector Search as the pattern type.

2. Touch the **Initial Track** key to open the keypad. Use the keypad and **Enter** to select the initial course.

3. Touch the **Initial Turn Direction** key to select between Left or Right as the initial turn direction.

4. Touch the **Leg Length** key to open the keypad. Use the keypad and **Enter** to select the length of the parallel track legs.

5. Touch the **Load Pattern** key to load selected pattern to the active flight plan.

Or

6. Touch the **Load Pattern & Activate** key to load selected pattern to the active flight plan and go direct-to the initial waypoint.

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4.2.4.3   Creating an Expanding Square Pattern

The Expanding Square SAR pattern starts at the initial waypoint and follows the initial track for a distance equal to the track spacing. All turns in the expanding square pattern are in the initial turn direction. All legs in the expanding square pattern are separated by the track spacing distance.

Selected Initial Waypoint

Expanding Square Pattern Selected

Touch To Select Initial Track

Touch To Select Initial Turn Direction

Touch To Select Track Spacing Distance

Touch To Select Number of Legs

Touch To Load Selected Pattern To Active FPL

Touch To Load Selected Pattern To Active FPL & Go Direct-To Initial Wpt
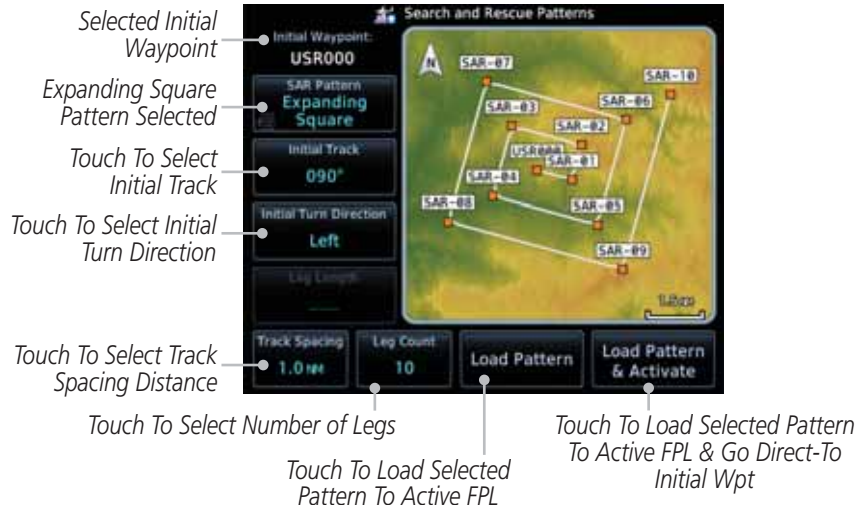
Figure 4-33 Search and Rescue Expanding Square Pattern Page

1. Touch the **SAR Pattern** key and select Expanding Square as the pattern type.

2. Touch the **Initial Track** key to open the keypad. Use the keypad and **Enter** to select the initial course.

3. Touch the **Initial Turn Direction** key to select between Left or Right as the initial turn direction.

4. Touch the **Track Spacing** key to open the keypad. Use the keypad and **Enter** to select the desired spacing between the parallel track legs.

5. Touch the **Leg Count** key to open the keypad. Use the keypad and **Enter** to select the desired number of legs.

6. Touch the **Load Pattern** key to load selected pattern to the active flight plan.

   OR

7. Touch the **Load Pattern & Activate** key to load selected pattern to the active flight plan and go direct-to the initial waypoint.

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4.2.4.4   Creating an Orbit Pattern

The Orbit SAR pattern is a fixed radius turn around the specified center waypoint. Automatic waypoint sequencing will be suspended while flying the orbit pattern.

Selected Initial Waypoint

Orbit Search Pattern Selected

Touch To Select Initial Turn Direction

Touch To Select Radius

Touch To Load Selected Pattern To Active FPL   *Touch To Load Selected Pattern To Active FPL & Go Direct-To Initial Wpt*
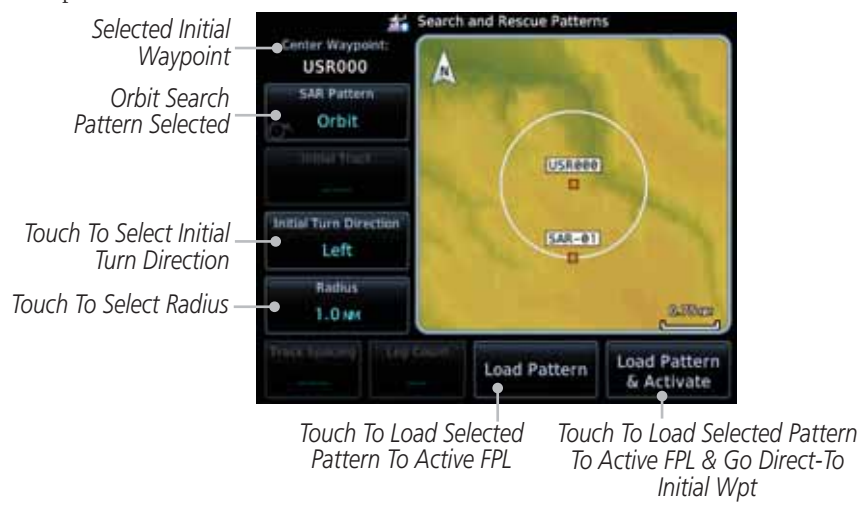
Figure 4-34 Search and Rescue Orbit Pattern Page

1. Touch the **SAR Pattern** key and select Orbit as the pattern type.

2. Touch the **Initial Turn Direction** key to select between Left or Right as the turn direction.

3. Touch the **Radius** key to open the keypad. Use the keypad and **Enter** to select the radius of the orbit pattern.

4. Touch the **Load Pattern** key to load selected pattern to the active flight plan.

   OR

5. Touch the **Load Pattern & Activate** key to load selected pattern to the active flight plan and go direct-to the first waypoint in the pattern.

4.3   Flight Plan Menu

The Flight Plan Menu provides access to functions to manage your flight plans. The functions included are: View Catalog, Store Flight Plan, Delete Flight Plan, Preview Flight Plan, Parallel Track, Invert Flight Plan, and Edit Data Fields.

[Menu]

Touch the **Menu** key to access the Flight Plan Menu options: View Catalog, Store Flight Plan, Delete Flight Plan, Preview Flight Plan, Parallel Track, Invert Flight Plan, and Edit Data Fields.

Touch To Store The Active Flight Plan

Touch To Add Parallel Track Course Offsets

Touch To View List Of Stored Flight Plans

Touch To View A Map And A List Of Waypoints For The Active Flight Plan

Touch To Delete The Active Flight Plan

Touch To Invert The Active Flight Plan

Touch To Edit The Active Flight Plan Information Fields

Figure 4-35 Flight Plan Menu
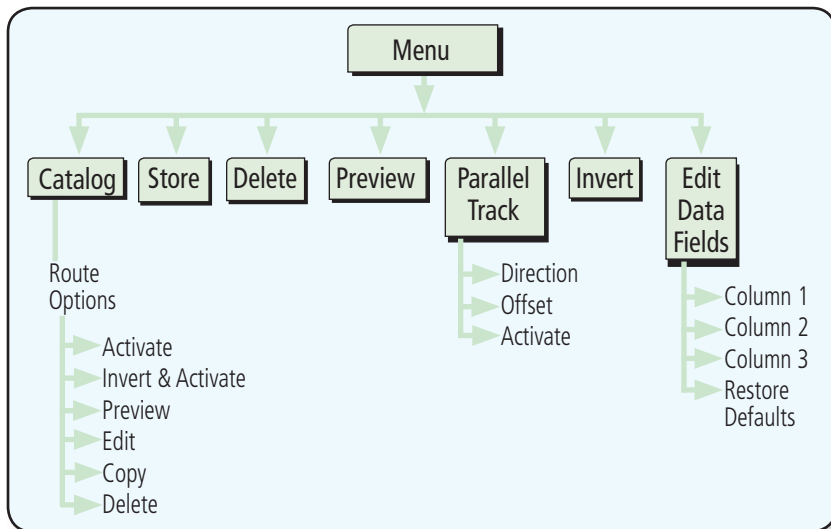
Figure 4-36 Flight Plan Menu Functional Diagram

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4.3.1   Store Flight Plan

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A flight plan must be saved to the Catalog to be used in future flights. The Store Flight Plan function will save the Active Flight Plan to the Catalog.

> **NOTE:** *If a flight plan that includes a procedure that has been modified by the pilot is saved into the flight plan catalog, the GTN cannot check the accuracy of that procedure when that flight plan is used on a later flight. It is recommended that flight plans with modified procedures not be saved in the flight plan catalog.*

1. While viewing the Active Flight Plan page, touch the **Menu** key. The Flight Plan Menu will be displayed.

2. Touch the **Store** key to store the current Active Flight Plan into the Catalog. The flight plan will be named by the beginning and ending waypoints.

3. When a duplicate flight plan is created, a warning dialog will appear and the flight plan will be saved with a numeral at the end of the destination waypoint.

COMMENT MODIFIED

KNOX / KFLL already exists, flight plan saved as KNOX / KFLL 2. —— *Duplicate Flight Plan*

OK

Flight Plan Catalog		Used: 5 Empty: 94

Original Flight Plan ——

Duplicate Flight Plan ——

Figure 4-37 Duplicate Flight Plan Naming

4.3.2   Invert Flight Plan

The Invert Flight Plan option allows you to reverse the Active flight plan and use it for navigation guidance back to your original departure point. The original flight plan stored in the catalog is not affected.

1. While viewing the Active Flight Plan page, touch the **Menu** key. The Flight Plan Menu will be displayed.

| Invert | 2. Touch the **Invert** key to invert the current Active Flight Plan. |

4.3.3　Parallel Track

Parallel Track allows you to create a parallel course offset of 1 to 99 NM to the left or right of your current flight plan. After setting a parallel track to your current flight plan, a magenta parallel track line will be drawn offset from the original by the selected distance. The original course line will be drawn in grey. The aircraft will navigate to the parallel track course line and external CDI/HSI guidance will be driven from the parallel track.

When you reach the end of the flight plan, a message will state, "Parallel offset terminating in X seconds." The message will be given when the aircraft reaches the offset distance from the end of the parallel track. This will give the pilot sufficient time to intercept the original course.

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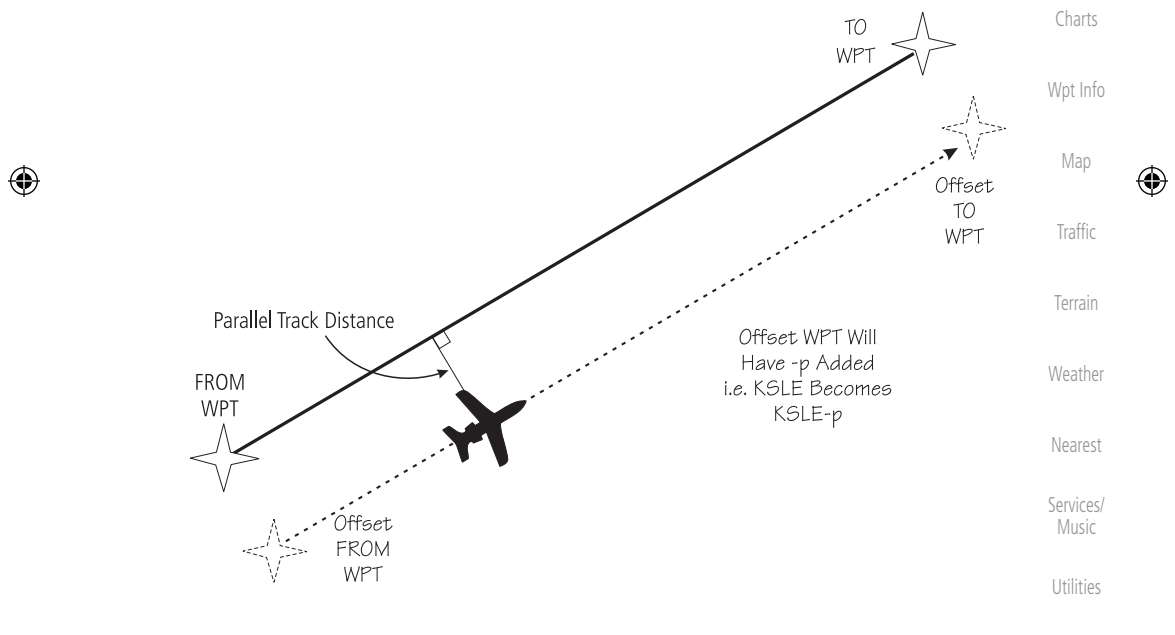
Figure 4-38 Parallel Track Description

> **NOTE:** *Parallel track will be cancelled when graphically editing a flight plan.*

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NOTE: Certain leg types (such as approach) or leg geometries (changes in desire track greater than 120 degrees), combined with large offset values do not support parallel track. Default direction and offset values may result in the status indicating that parallel track is not supported. The user must enter the desired parallel track offset and distance to determine whether that flight plan, combined with the offset and distance, support parallel track.

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **Parallel Track** key.

Touch To Set PTK Direction

Touch To Set PTK Distance

PTK Status

Touch To Cancel Settings

Touch To Activate PTK Settings

Figure 4-39 Parallel Track Selection

2. Touch the **Direction** key to toggle the Parallel Track to be Left or Right of the current Flight Plan.
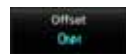
3. Touch the **Offset** key to select the Parallel Offset from the current Flight Plan. Select the desired distance on the numeric keypad. Touch **Enter** when finished.

4. Touch the **Activate** key. A magenta "-P" indication will appear to the right of the waypoint name on the Active Flight Plan page.

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Figure 4-40 Parallel Track Shown in the Active Flight Plan Page

5.   To deactivate Parallel Track, while viewing the Active Flight Plan touch the **Menu** key. With the Flight Plan Menu displayed, touch the **Parallel Track** key.

Figure 4-41 Deactivating Parallel Track

6.   Touch the **Deactivate** key to cancel Parallel Tracking.

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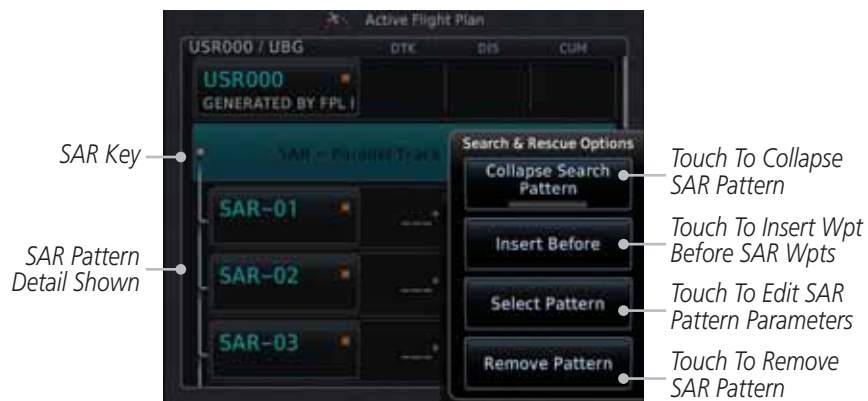
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4.3.4   Edit Data Fields

The Active Flight Plan Page shows each waypoint for the flight plan, along with the Desired Track (DTK), Distance (DIS) for each leg and Cumulative Distance (CUM). The data fields are user-selectable and may be changed to display Cumulative Distance (CUM), Distance (DIS), Desired Track (DTK), En Route Safe Altitude (ESA), Estimated Time of Arrival (ETA), or Estimated Time En route (ETE).

Cumulative Dist Between Current Position and Next Wpt

DIST Between Legs

DTK Between Legs

Origin and Destination Waypoints

Current Flight Plan Leg
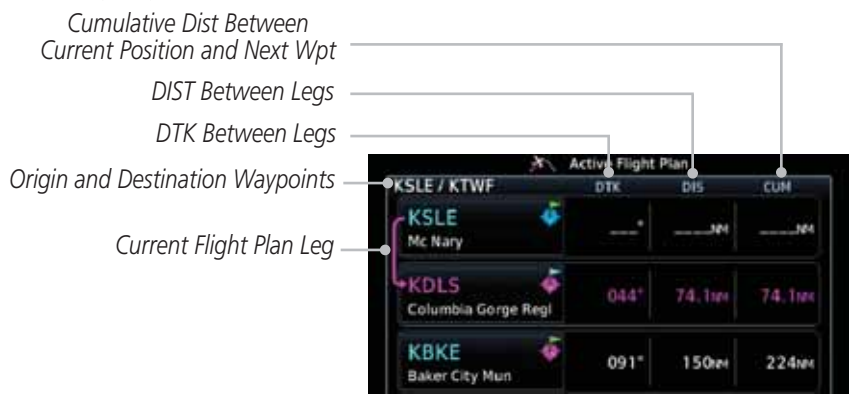
Figure 4-42 Flight Plan Data Fields

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **Edit Data Fields** key.

Touch To Select Field Types

Current Field Types

Touch To Restore Original Default Types
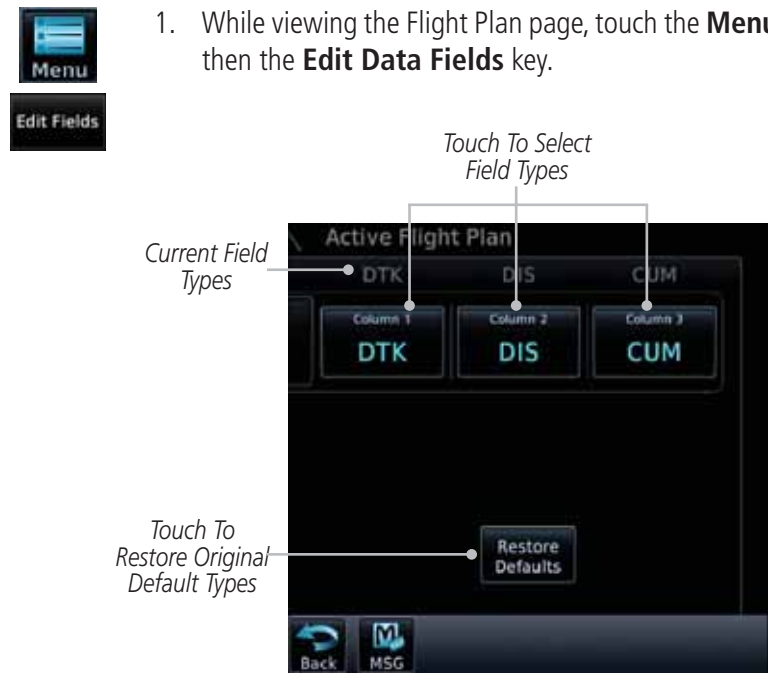
Figure 4-43 Flight Plan Edit Data Fields Page

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 DTK

2. Touch one of the field keys to select from the list.

Select Field Type

CUM – Cumulative Distance

DIS – Distance

Selected Field Type ──● DTK – Desired Track

ESA – Enroute Safe Altitude

ETA – Est Time of Arrival

Figure 4-44 Flight Plan Data Fields List

 Up Down

3. Touch the **Up** or **Down** keys as needed, or touch and drag the list, to scroll through the list. Touch the desired Field Type to set it for the selected field.

4. Continue as desired for the other fields.

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4.3.5 Flight Plan Catalog Route Options

The Flight Plan Catalog allows you to create, edit, activate, delete and copy flight plans. The catalog can hold up to 99 flight plans of up to 100 waypoints each. Flight plans are named by the Departure and Destination waypoint. Any time you activate a flight plan, a copy of the flight plan is automatically transferred to Active Flight Plan page and overwrites any previously active flight plan.

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **Catalog** key. The list of currently stored flight plans will be displayed.

Flight Plan Catalog Total

Flight Plan Name

Flight Plan Comment

Touch To Create New Catalog Route (Flight Plan)

Touch Up/ Down Keys To Scroll List

Figure 4-45 Flight Plan Catalog

2. Touch a flight plan to display the Route Options.

Flight Plan Route Options

Selected Flight Plan

Figure 4-46 Flight Plan Catalog Route Options

3. Touch the Route Option key for the desired option to act on the selected flight plan.

4.3.5.1 Catalog Route Option - Activate

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

2. Touch the **Activate** key and then touch **OK**. The selected flight plan will be activated.
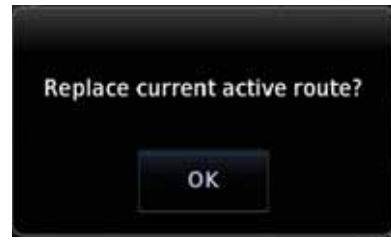
Figure 4-47 Touch OK to Replace the Existing Active Flight Plan

3. The Active Flight Plan page will now be displayed.

4.3.5.2 Catalog Route Option - Invert & Activate

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

2. Touch the **Invert & Activate** key and then touch **OK**. The selected flight plan will be inverted and activated.
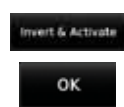
Figure 4-48 Touch OK to Invert and Activate the Selected Flight Plan

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4.3.5.3   Catalog Route Option - Preview

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

2. Touch the **Preview** key. A map view of the flight plan and list of the waypoints will be displayed.

3. Touch the **Back** key to return to the Flight Plan Catalog.

4.3.5.4   Catalog Route Option - Edit

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

2. Touch the **Edit** key. The flight plan will be displayed. Make any changes necessary by touching the desired waypoint and using the Waypoint Options.

Selected Waypoint

Waypoint Options List

Figure 4-49 Use Waypoint Options to Edit the Selected Flight Plan

3. Touch the **Back** key to return to the Flight Plan Catalog.

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4.3.5.5 Catalog Route Option - Copy

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

Copy

2. Touch the **Copy** key. You will be prompted to copy the selected flight plan.
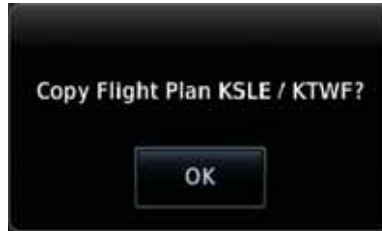
Figure 4-50 Flight Plan Catalog Route Copy Option

3. A copy of the selected flight plan will now be listed. If any changes are required for the copy, it can be used as a starting point for a similar flight plan. Use the Edit Route option to make the desired changes.

Duplicate Copy Of Selected Flight Plan

Figure 4-51 Copied Flight Plan

4. Touch the **Back** key to return to the Active Flight Plan.

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4.3.5.6 Catalog Route Option - Delete

1. While viewing the Flight Plan Catalog page, touch the desired flight plan to select it. The Route Options menu will be displayed.

2. Touch the **Delete** key and then touch **OK**.

Delete

OK

Delete Flight Plan KSLE / KTWF?

OK
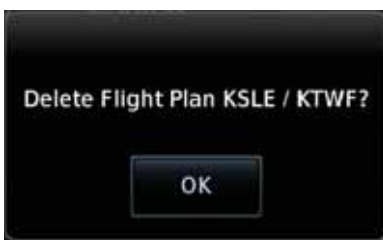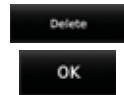
Figure 4-52 Delete the Selected Flight Plan from the Catalog

3. Touch the **Back** key to return to the Active Flight Plan.

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4.3.6 Delete Flight Plan

There are two methods for deleting a flight plan. Deleting the selected flight plan from the Catalog using the Route Options completely removes the flight plan. Deleting the Active Flight Plan using the Delete Flight Plan key on the Flight Plan menu clears the waypoints from the Active Flight Plan, but does not remove the flight plan from the Catalog.

4.3.6.1 Delete Flight Plan from Catalog

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **View Catalog** key. The list of currently stored flight plans will be displayed.

Selected Flight Plan

Touch Delete To Remove The Waypoint From The Catalog

Figure 4-53 Select a Flight Plan from the Catalog
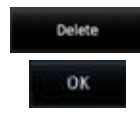
2. Touch the **Delete** and then the **OK** key. The selected flight plan will be removed from the Catalog.
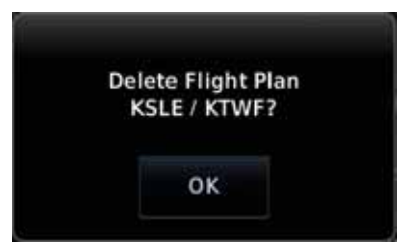
Figure 4-54 Delete a Flight Plan from the Catalog

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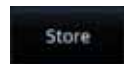Getting Started

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4.3.6.2   Delete Active Flight Plan

1. While viewing the Active Flight Plan page, touch the **Menu** key, and then the **Delete Flight Plan** key.

Figure 4-55 Delete a Flight Plan from the Active Flight Plan

2. Touch **OK** to clear the waypoints from the Active Flight Plan. The flight plan will not be removed from the Catalog.

4.3.7   Preview Flight Plan

The Preview Flight Plan function provides a summary of a flight plan. A preview of the Active Flight Plan can be selected from the Flight Plan Menu's **Preview Flight Plan** key or selecting a flight plan from the catalog and choosing Preview from the Route Options menu.

4.3.7.1   Previewing the Active Flight Plan

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **Preview** key. A preview of the Active Flight Plan will be shown.
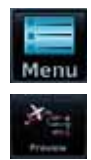
Flight Plan Waypoint List

Current Dest Waypoint

Map View of Flight Plan Legs

Current Aircraft Position On Current Leg of Active Flight Plan

Figure 4-56 Active Flight Plan Preview

2. Touch the **Back** key to return to the Active Flight Plan page.

4.3.7.2 Previewing a Flight Plan in the Catalog

1. While viewing the Flight Plan page, touch the **Menu** key, and then the **Catalog** key. The list of currently stored flight plans will be displayed.

2. Touch the desired flight plan. The Route Options will now be displayed.

3. Touch the **Preview** key to display a preview of the selected flight plan.

4. Touch the **Back** key to return to the Flight Plan Catalog.

4.4 Graphically Editing a Flight Plan

The Active Flight Plan may be edited graphically on the Map page. See Section 9.3.3 for details.

4.5 Import Flight Plans with Connext

When the GTN is interfaced with a compatible Flight Stream device, flight plans can be wirelessly imported into the GTN from supported Apps (i.e. Garmin Pilot). The imported flight plans can then be activated or stored to the flight plan catalog once they are previewed by the pilot.

> **NOTE:** Flight plans over 99 waypoints long are truncated at 99 waypoints and the last waypoint in the imported/uploaded flight plan may not be the destination airport.

> **NOTE:** Flight plan information and user waypoints included as part of a flight plan will not necessarily retain their names when the flight plan is transferred from the portable device to the GTN via a Flight Stream device. Whenever a User Waypoint is imported, it is compared to the existing User Waypoint catalog. If it matches locations with an existing User Waypoint, the waypoint will utilize the name saved in the GTN for that waypoint. If there is not a location match, the waypoint is imported but without the name label that the import software may have used. Therefore all new User Waypoints will come in as USR### where the number is the lowest open User Waypoint slot in the catalog.

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NOTE: *This feature is available in software version 5.10 and later.*

4.5.1   Operation

On the portable device, select the option to send a flight plan to the GTN. The GTN **MSG** key will appear and begin to flash.

1. Pressing the **MSG** key will open the message page with a message showing how many flight plans are ready to preview.

Touch To Preview
Flight Plan

Figure 4-57 Flight Plan Import Message

2. Touch the **New FPL** key to open the flight plan preview page when only one flight plan is imported, or the flight plan catalog when more than one flight plan is imported.

Figure 4-58 Preview for Single Flight Plan Import

Figure 4-59 Catalog for Multiple Flight Plan Import

Touch To Select The Desired Catalog

3. Selecting a flight plan in the catalog that is "Pending Preview" will slide out a menu to preview or delete the flight plan. Once the flight plan has been previewed and then stored or activated, the other Route Options in the menu will be available.

Figure 4-60 Route Options by Selecting Flight Plan with Pending Review

4.5.2 Potential Errors

If the GTN is unable to import a flight plan due to errors in the flight plan or a full catalog, the pilot will be alerted with a system message.

FLIGHT PLAN IMPORT
Flight plan import failed. Catalog is full.

Figure 4-61 Flight Plan Import Error Messages

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If an imported flight plan contains any errors, pop-up messages will be displayed alerting the pilot of the issues and the resulting changes to the flight plan.

When the imported flight plan is too long, the GTN will truncate the flight plan to the correct length. The pilot should be aware that waypoints are missing from the end of the flight plan, including the destination waypoint.

Figure 4-62 Pop-Up Message Reporting Flight Plan Errors

When the imported flight plan contains waypoints (non-user waypoints), procedures, or airways that are not found in navigation database, the GTN will replace those waypoints with locked (lockd) waypoints. These locked waypoints must be resolved prior to activating the flight plan to provide navigation along the flight plan.

When more than one error occurs during the flight plan import, the pilot will need to cycle through the errors by touching the **Next** key on the pop-up.

Figure 4-63 Pop-Up Message Reporting Unknown Waypoints

Figure 4-64 Pop-Up Message Reporting Unknown Procedure

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Figure 4-65 Pop-Up Message Reporting Unknown Airway

4.6   Import Flight Plans with an SD Card

Flight plans can be created on a computer using compatible flight planning software and saved to the SD card to be imported into the GTN. The imported flight plans can then be activated or stored to the flight plan catalog once they are previewed by the pilot.

> **NOTE:** *Flight plans over 99 waypoints long are truncated at 99 waypoints and the last waypoint in the imported/uploaded flight plan may not be the destination airport.*

> **NOTE:** *This feature is available in software version 5.10 and later.*

> **NOTE:** *The flight plan file format used by the GTN is different than the file format used by the GNS 400W/500W Series navigators.*

1. While viewing the Flight Plan page, touch the **Menu** key and then the **Catalog** key to display the Flight Plan Catalog.

Flight Plan On SD Card

Touch To Import Flight Plan
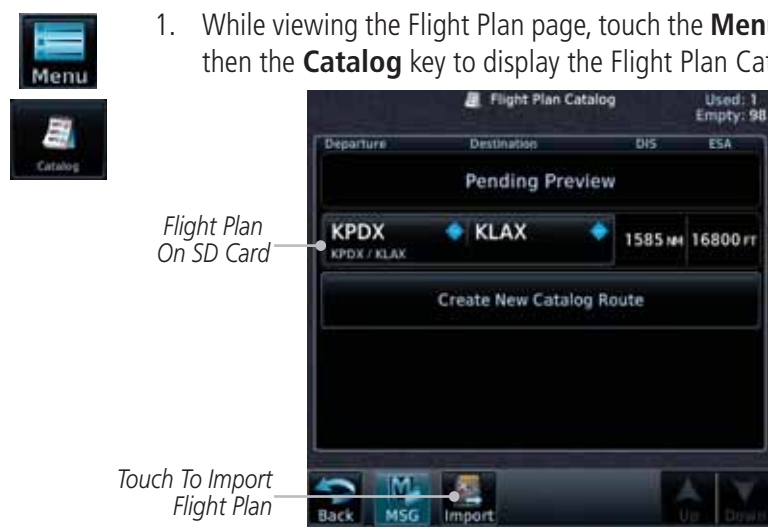
Figure 4-66 Catalog for SD Card Flight Plan Import

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2. An **Import** key will be present in the menu bar when flight plans are present on the SD card. Touch the **Import** key to open a pop-up with a list of the file names of the flight plans on the SD card.

*Touch To Import
Flight Plan From
SD Card*
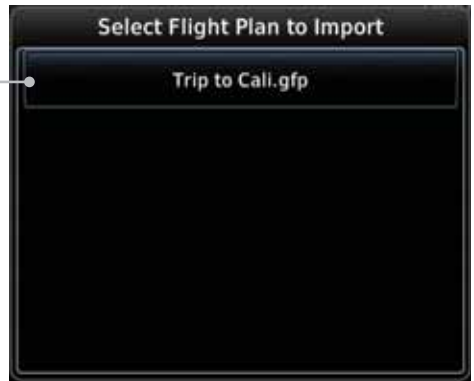
Figure 4-67 Flight Plan To Import From SD Card

3. After selecting the desired flight plan to import, the GTN will attempt to import the flight plan and open the Route Options slide out menu. The imported flight plan must be previewed before being activated. Touch **Preview** to view the flight plan.

*Touch To Preview
Flight Plan From
SD Card*

Figure 4-68 Route Options For SD Card Flight Plan Import

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4. Press **Store** to save the flight plan to the catalog. Press **Activate** to make the imported flight plan the active route.

Store

Activate

Touch To Store To Save Flight Plan To The Catalog

Touch To Make The Imported Flight Plan The Active Route

Figure 4-69 Route Options For SD Card Flight Plan Import

4.6.1   Potential Errors

If the GTN is unable to import a flight plan due to errors in the flight plan or a full catalog, the pilot will immediately be alerted with a pop-up.

OK

1. Touch OK at the prompt to continue.

Figure 4-70 Flight Plan Import Fault

Figure 4-71 Flight Plan Import Fault - Catalog Full

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2. If an imported flight plan contains any errors, pop-up messages will be displayed alerting the pilot of the issues and the resulting changes to the flight plan. These pop-ups are presented the first time that the flight plan is viewed on the Flight Plan Preview page.

   When the imported flight plan is too long, the GTN will truncate the flight plan to the correct length. The pilot should be aware that waypoints are missing from the end of the flight plan.

Figure 4-72 Flight Plan Import Issue - Flight Plan Too Long

3. When the imported flight plan contains waypoints (non-user waypoints), procedures, or airways that are not found in navigation database, the GTN will replace those waypoints with locked waypoints. These locked waypoints must be resolved prior to activating the flight plan.

   When more than one error occurs during the flight plan import, the pilot will need to cycle through the errors by touching the **Next** key on the pop-up.

Figure 4-73 Flight Plan Import Issue - Flight Plan Contains Unknown Waypoints
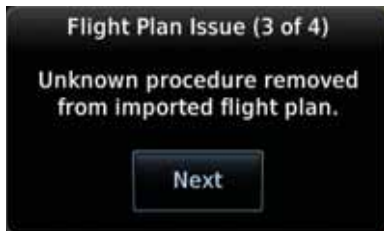
Figure 4-74 Flight Plan Import Issue - Unknown Procedure Removed From Flight Plan

Figure 4-75 Flight Plan Import Issue - Unknown Airway Removed From Flight Plan

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5 DIRECT-TO

The GTN 7XX Direct-To function can quickly set a course to any waypoint. If the pilot selects Direct-To to a waypoint that is in the flight plan, waypoint sequencing in the flight plan will resume upon reaching that waypoint. If the pilot selects Direct-To for a waypoint that is not in the flight plan, the flight plan will no longer be active but remains available. There are some fixes within procedures for which if a Direct-To is selected then the approach will not be active. For example, if you activate a Direct-To course to a waypoint between the FAF and the MAP and go Direct-To to that waypoint then approach guidance will not become active.

5.1 Direct-To Navigation

1. Press the **Direct-To** key on the right side of the unit.

Figure 5-1 Direct-To Wpt Page

2. Select **Waypoint**, **FPL**, or **NRST APT** from the Direct-To window by touching the desired tab.

3. If a specific course is desired, touch the **Course To** key.

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4. Use the numeric keypad to select the course and then touch the **Enter** key.

Selected Course — Course To — 037 — *Backspace Key*

Numeric Keypad

Figure 5-2 Direct-To Course Selection

5. Touch the desired waypoint and touch the **Activate** key or press the **small right** knob.

Waypoint Tab

KFLL
Ft Lauderdale Hollywoo

Ft Lauderdale, FL
SE USA — *Waypoint Detail*

Bearing: 194°
Distance: 18.5 NM
Position: N 26°04.30'
W080°08.98'

Course To 194° — Hold — *Touch To Select A Specific Course*

Remove — Activate — *Touch To Activate Direct-To This Waypoint*
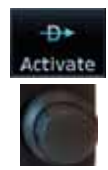
Figure 5-3 Direct-To Selection

6. The Map page will now be displayed with the new Direct-To course.

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5.2 Direct-To a Flight Plan Waypoint

1. Press the **Direct-To** key on the right side of the unit.

2. Touch the **FPL** tab at the top of the Direct-To window.

Flight Plan Tab

Flight Plan Waypoint List

Touch Waypoint Key To Select

Figure 5-4 Direct-To Flight Plan Leg Selection

3. Touch the flight plan waypoint you want to navigate directly to. The Direct-To Waypoint page will display information about the selected flight plan waypoint.

Waypoint Tab

Waypoint Detail

Touch To Select A Specific Course

Touch To Activate Direct-To This Waypoint
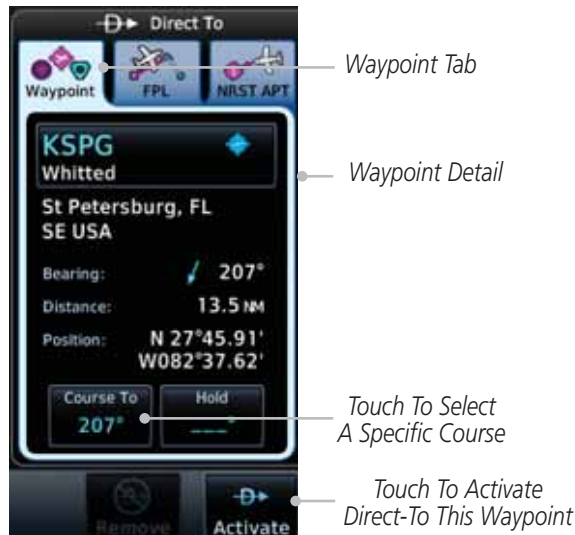
Figure 5-5 Selected Direct-To Flight Plan Leg

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4. Touch the **Activate** key or press the **small right** knob to activate the selection.

5. The Map page will now be displayed with the new Direct-To course.

5.3   Direct-To a Nearest Airport

1. Press the **Direct-To** key on the lower right side of the unit.

2. Touch the **NRST APT** tab at the top of the Direct-To window. The nearest 25 airports within 200 NM will be listed. The airport at the top of the list is the nearest airport. To review the other nearest airports, touch the **Up** and **Down** keys to scroll through the list.

Nearest Tab

Touch List And Drag Finger To Scroll List

Nearest Airport List
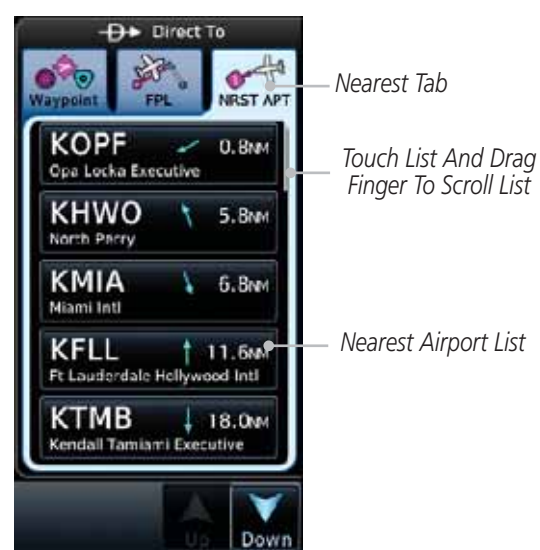
Figure 5-6 Direct-To Nearest Airport Selection

3. Touch the desired airport to select it. The selected airport will be displayed in the Waypoint page.

Direct-To Waypoint

Activate Direct-To Course

Figure 5-7 Selected Direct-To Nearest Airport
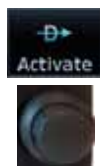
4. Touch the **Activate** key or press the **small right** knob to activate the selection.

5. The Map page will now be displayed with the new Direct-To course.

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5.4 Removing a Direct-To Course

When a Direct-To course is cancelled, the previously active flight plan will be reactivated and the nearest leg to the aircraft position will become the active leg. If there was no active flight plan, after cancelling the Direct-To course the aircraft will continue with the current heading.

1. Press the **Direct-To** key to display the Direct-To page.

Waypoint Tab

Direct-To Waypoint

Touch To Remove (Cancel) The Direct-To Course

Figure 5-8 Cancel the Direct-To Course

2. Touch the **Remove** key.

3. Navigation will now return to the active flight plan.

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5.5 Direct-To Map Waypoint

A Direct-To course may be set to any waypoint selected on the Map page. The waypoint is selected by touching an item such as an airport, VOR, or NDB or any other location. Touching the map page at any place not having an existing location name will create a waypoint with the name "MAPWPT." Touching the **Direct-To** key will automatically insert the selected waypoint as the Direct-To waypoint. The MAPWPT will be saved as a User Waypoint.

1. On the Map page, touch the map at the location intended to be the Direct-To waypoint.

2. Press the **Direct-To** key on the right side of the unit.

Waypoint Tab

Direct-To Waypoint Name

Direct-To Waypoint Map Symbol

Touch To Remove The Direct-To Course

Touch To Activate The Direct-To Course

Figure 5-9 Touch the Map to Create a MAPWPT as the Direct-To Course Destination
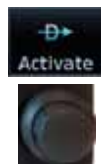
3. Touch the **Activate** key or press the **small right** knob to activate the selection.

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5.6 Off-Route Direct-To Course

An off-route Direct-To course may be selected by using the Waypoint tab, Nrst Apt tab, or selecting a waypoint on the map. When an off-route Direct-To course is activated, the existing active flight plan will be deactivated. The original active flight plan and waypoint sequencing is reactivated when the Direct-To course is removed.

Direct-To Waypoint ────

Flight Plan Waypoint List ────

Flight Plan Data Is Cleared

Figure 5-10 Active Flight Data is Removed When a Direct-To Course is Activated

5.7 Graphically Editing a Direct-To Route

Direct-To routes may be edited graphically on the Map page the same as a regular flight plan. See Section 9.3.3 for details.

5.8 Direct-To a User-Defined Hold

> **NOTE:** This feature is available in software version 6.00 and later.

> **NOTE:** Any time a user hold is changed with the Direct-To key, upon pressing the "Activate the Direct-To Hold" key, navigation guidance will be given back to the holding fix and the new hold re-initiated.

A user-defined hold can be created as part of a Direct-To to any waypoint. Automatic waypoint sequencing will be suspended during the hold.

1. Press the **Direct-To** key to display the Direct-To page.

Waypoint Tab

Direct-To
Waypoint Name

Touch To Select A
Specific Course

Touch To Create
A Hold At
Direct-To Wpt

Figure 5-11 Create Hold at Direct-To Waypoint

2. Touch the **Hold** key. The Direct-To Hold page is displayed.

Touch To Select A
Specific Course

Touch To Select
Course Direction

Touch To Select
Turn Direction

Touch To Select
Leg Length Type

Touch To Select
Leg Length Time

Touch To Select EFC Time   *Touch To Accept Hold*
Parameters
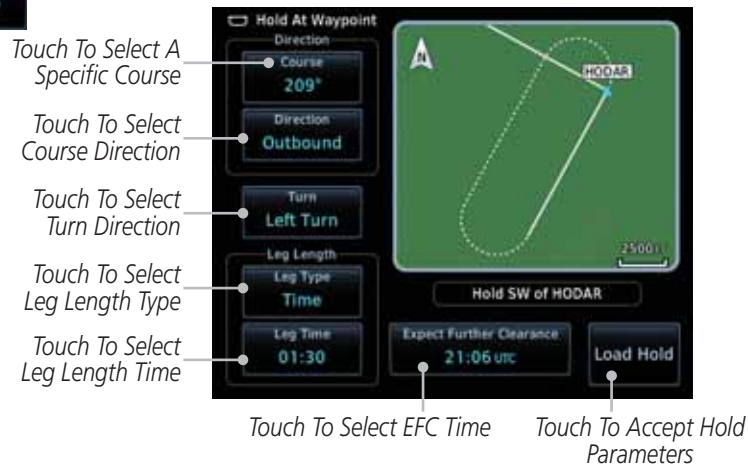
Figure 5-12 Entering Direct-To Hold Parameters

3. Touch the **Course** key to open the keypad. Use the keypad and the **Enter** key to select the inbound or outbound course.

4. Touch the **Course Direction** key to select between Inbound or Outbound for the course direction.

5. Touch the **Turn** key to select between Left or Right for the turn direction.

Leg Type
Time

6. Touch the **Leg Type** key to select between Time or Distance for the leg type.

Leg Time
01:30

7. Touch the **Leg Time** or **Leg Distance** key to display the keypad. Use the keypad and the **Enter** key to select the length of the leg.

Expect Further Clearance
21:06 utc

8. Touch the **Expect Further Clearance** key to display the keypad. Use the keypad and the **Enter** key to select the time for a reminder.

Load Hold
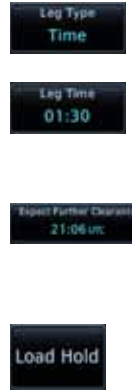
9. Touch the **Load Hold** key to accept the hold parameters and return to the Direct-To page.

Specified Course To Direct-To Wpt   *Hold Pattern Course*

Touch To Activate The Direct-To Course And Hold

Figure 5-13 Direct-To Page with Hold Selected

⊕ Hold Activate

10. Touch the **Hold Activate** key or press the **small right** knob to activate the selection.

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5.9 Direct-To a Search and Rescue Pattern

✓ **NOTE:** *This feature is available in software version 6.00 and later.*

A search and rescue pattern can be created as part of a Direct-To for a flight plan, off-route, or map waypoint. Creating a SAR pattern as part of an an off-route Direct-To will insert the SAR pattern waypoints at the end of the En Route portion of the active flight plan.

1. Press the **Direct-To** key to display the Direct-To page.

Direct-To Wpt

Touch To Select A Specific Course

Touch To Create SAR Pattern At Direct-To Wpt

Figure 5-14 Create SAR Pattern at Direct-To Waypoint

2. Touch the **SAR** key. The Direct-To Search and Rescue Patterns page is displayed.

Selected Initial Wpt

Touch To Select Desired SAR Pattern

Touch To Select Initial Track

Touch To Select Initial Turn Direction

Touch To Select Leg Length

Touch To Select Track Spacing Distance

Touch To Select Number Of Legs

Touch To Load Selected SAR Pattern to Direct-To
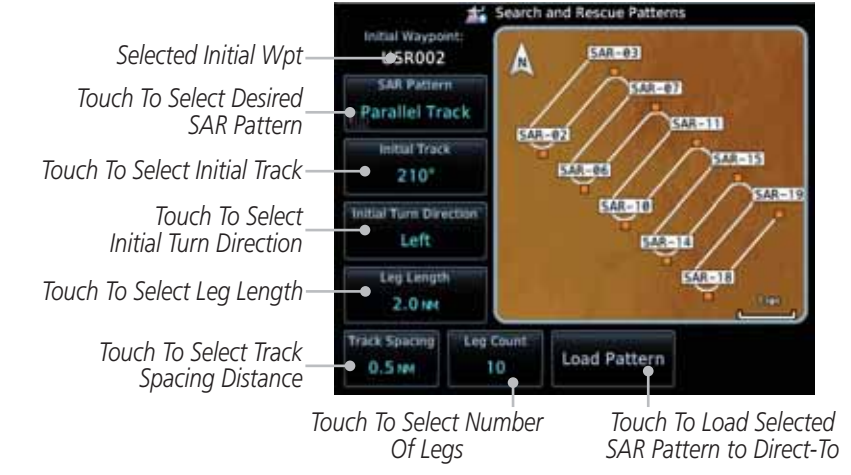
Figure 5-15 Direct-To Search and Rescue Pattern Page

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SAR Pattern
Parallel Track

3. Touch the **SAR Pattern** key to select between Parallel Track, Sector Search, Expanding Square, or Orbit for the SAR pattern type. The available patterns can be configured by the installer and all of the listed pattern types may not be available. See the Section 4.2.4 Load Search and Rescue Pattern for more details on configuring each pattern type.

Load Pattern

4. Confirm the SAR pattern information and then touch the **Load Pattern** key to accept the SAR parameters and return to the Direct-To page.

Direct-To Wpt

Specified Course
To Direct-To Wpt

Selected SAR Pattern Type

Touch To Activate Direct-To
Course And SAR Pattern

Figure 5-16 Direct-To Page with SAR Pattern Selected

D► SAR
Activate

5. Touch the **SAR Activate** key or press the **small right** knob to activate the selection.

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6 PROCEDURES

The GTN 7XX allows you to fly non-precision and precision approaches to airports with published instrument approach procedures. All available approaches are stored on your Jeppesen NavData® card, and are automatically updated when the card's files have been updated. Approach procedures are not the same as the approach plates available in ChartView, which is a separate database. Subscription information for NavData cards is included in your GTN 7XX package.

The Procedures Page is displayed by touching the **PROC** key on the Home page. The Procedures Page provides access to approaches, departures and arrivals. Selections are also shown to: Activate Approach, Vectors to Final, and Activate Missed Approach.

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> **NOTE:** *The Chart feature provides a digital representation of a paper chart and provides no vertical or lateral course guidance. Flight Plan and Procedures are separate from Charts, and do provide vertical and lateral course guidance for the loaded route or procedure shown on the Flight Plan page. The term "Chart Unavailable" means that the chart cannot be viewed on the Charts due to either a chart not being published, or an error in the Chart database, but does not preclude its availability or inclusion of the procedure in the Flight Plan or Procedures portion of the system. The absence of a chart for a particular Departure, Arrival, or Approach does not preclude its availability or inclusion in the Flight Plan or Procedures portion of the system. The absence of a particular Departure, Arrival, or Approach under the Flight Plan or Procedures portion of the system does not preclude the ability to view the Chart for that procedure under the Chart feature.*

> **NOTE:** *Baro-corrected altitude is not required by the GTN unit to meet the requirements of TSO-C146c; however, to take full advantage of the GTN unit's capabilities, an optional baro-corrected altitude source is recommended for automatic sequencing of altitude leg types. If no baro-corrected altitude data is provided to the GTN unit, altitude leg types must be manually sequenced.*

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6.1   Basic Approach Operations

The GTN 7XX provides precision vertical guidance as well as lateral and advisory vertical guidance using its built in GPS receiver for GPS or RNAV approaches. The moving map pages can also be used as an aid to situational awareness for ILS, VOR, and NDB approaches (and non-precision localizer-based approaches), but the appropriate radio navigational aid MUST be used for primary approach course guidance for non-GPS approaches.

Approaches designed specifically for GPS are often very simple and don't require overflying a VOR or NDB. Currently, many non-precision approaches have "GPS overlays" to let you fly an existing procedure (VOR, VOR/DME, NDB, etc.) more accurately using GPS.

Many overlay approaches are more complex (in comparison to GPS-only approaches). The GTN 7XX displays and guides you through each leg of the approach — automatically sequencing through each of these legs, up to the missed approach point (MAP). Approaches may be flown "as published" with the full transition — using any published feeder route or initial approach fix (IAF) — or may be flown with a vectors-to-final transition.

Phase of flight annunciations are provided on the bottom of the display indicating the current mode of flight.

Procedures are arranged around the existing flight plan in the following order: Departure, En Route, Arrival, and Approach. For example, Departure waypoints are inserted before the En Route waypoints in the flight plan and Arrival waypoints are inserted between the En Route waypoints and the approach waypoints. Always verify that the transition waypoints between each phase are correct.

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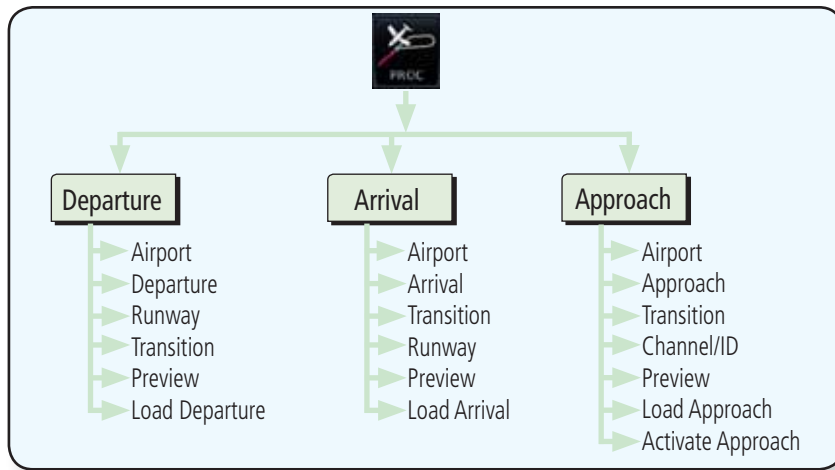
Figure 6-1 Procedures Functional Diagram

Annunciation	Description
LPV	Localizer Performance with Vertical guidance (LPV) approach. Fly to LPV minimums.
LP +V	Localizer Performance using published LP minima. Advisory vertical guidance is provided. Fly to LP minimums.
LP	Localizer Performance with no vertical guidance. Fly to LP minimums.
L/VNAV	Lateral Navigation and Vertical Navigation (LNAV/VNAV) approach. Fly to LNAV/VNAV minimums.
LNAV+V	GPS approach using published LNAV minima. Advisory vertical guidance is provided. Fly to LNAV minimums.
LNAV	Lateral Navigation approach. Fly to LNAV minimums.
MAPR	Missed Approach indicates the system is providing missed approach integrity and CDI full-scale deflection ±0.3 NM.
ENR	En route, CDI full-scale deflection is 2.0 NM or current CDI scale selection, whichever is smaller.
TERM	Terminal, CDI full-scale deflection is 1.0 NM or current CDI scale selection, whichever is smaller.
DPRT	Departure, indicates the system is using non-precision approach integrity. CDI full-scale deflection is 0.3 NM.
OCN	Oceanic, CDI full-scale deflection is 2.0 NM.
LOW ALT (lower window)	For LNAV+V, LNAV/VNAV, or LPV approaches, the LOW ALT annunciation indicates the aircraft's estimated height is lower than the Final Approach Waypoint height by approximately 50 meters. This annunciation will not be active when TAWS is operational.

Table 6-1 Phase of Flight Annunciations

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6.2 Selecting a Departure

A Departure Procedure (DP) is loaded at the departure airport in the flight plan. Only one departure can be loaded at a time in a flight plan. If a departure is loaded when another departure is already in the active flight plan, the new departure replaces the previous departure. The route is defined by selection of a departure, the transition waypoint, and a runway.

> **NOTE:** *Vector-only departures are not available in the Procedures database as the GTN 7XX cannot provide navigational guidance on vectored legs.*

1. Touch the **PROC** key on the Home page and then touch the **Departure** key to display the Departure list.

2. If necessary, touch the **Airport** key and enter the departure airport. Touch the key for the desired Departure.

Touch To Select Desired Departure
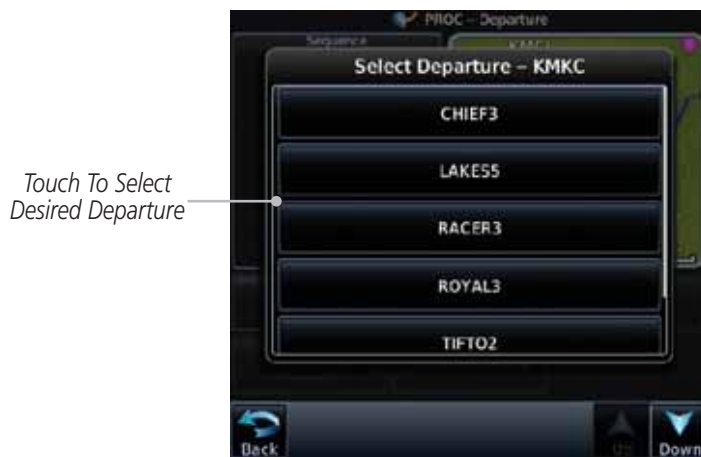
Figure 6-2 List for Selecting a Departure

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3. Touch the key for the desired Transition.

Touch To Select Desired Departure Transition

Figure 6-3 Selecting a Transition for a Departure

4. Touch the key for the desired Runway, if necessary. The Departure page with preview will be displayed.

Sequence List For The Selected Departure

Touch To Select Departure

Touch To Select Airport

Touch To Select Transition

Departure Diagram

Touch To Select Runway

Touch To Load Departure

Touch To View Charts

Figure 6-4 Departure Selected

NOTE: *If the selected runway is depicted as RW10B, for instance, this means both runways 10L and 10R.*

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5. Touch the **Load Departure** key. The Active Flight Plan page will be displayed.

Touch To Change Or Remove Departure

Touch To Edit Waypoint

Scroll To View Flight Plan With Departure Waypoints

Figure 6-5 Flight Plan After Loading a Departure

6. Remove a departure or select a new one by touching the Departure key and selecting the desired choice.
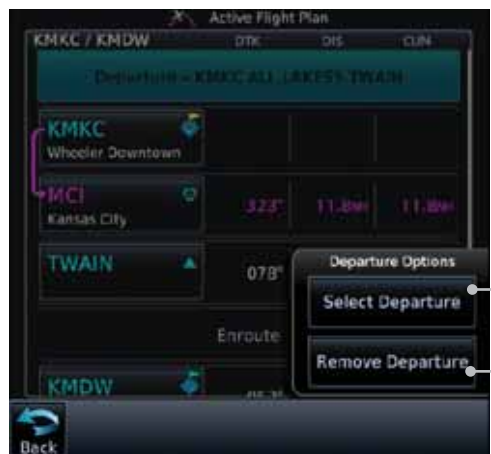
Touch To Change A Departure

Touch To Remove Departure

Figure 6-6 Editing a Departure

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6.3 Selecting an Arrival

A Standard Terminal Arrival (STAR) can be loaded at any airport with a published arrival procedure. Only one arrival can be loaded at a time in a flight plan. If an arrival is loaded when another arrival is already in the active flight plan, the new arrival replaces the previous arrival. The route is defined by selection of an arrival, the transition waypoint, and a runway.

1. Touch the **PROC** key on the Home page and then touch the **Arrival** key.

Touch To Select Airport

Touch To Show Arrival List

Figure 6-7 Arrival Page

2. Confirm that the intended airport is shown or touch the **Airport** key and select the desired airport. Touch the key for the desired Arrival.

Touch To Select Arrival

Figure 6-8 Arrival List

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3. Touch the **Transition** key and then touch the key for the desired transition.

Touch To Select Desired Arrival Transition

Figure 6-9 Select Transition

4. Touch the key for the desired Runway, if necessary.

NOTE: *If the selected runway is depicted as RW10B, for instance, this means both runways 10L and 10R.*

5. After selecting the runway, the Arrival page with map preview will be displayed.

Sequence List For The Selected Arrival

Touch To Select Arrival

Touch To Select Airport

Touch To Select Runway

Arrival Diagram

Touch To Select Transition

Touch To Load Arrival

Touch To View Charts

Figure 6-10 Previewing an Arrival

6. Touch the **Load Arrival** key. The Active Flight Plan page will be displayed.

Touch To Select Or Remove Arrival

Touch To Edit Waypoint

Scroll To View Flight Plan With Departure Waypoints

Figure 6-11 Flight Plan With Arrival Loaded

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6.4   Selecting an Approach

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Only one approach can be loaded at a time in a flight plan. If an approach is loaded when another approach is already in the active flight plan, the new approach replaces the previous approach. The route is defined by selection of an approach, the transition waypoint, and a runway.

1. Touch the **PROC** key on the Home page. The Approach, Arrival, and Departure fields will be dashed until a selection is made.

Touch To View Available Departures

Touch To View Available Arrivals

Touch To View Available Approaches

Figure 6-12 Procedures Selection Window

2. Touch the **Approach** key on the Procedures page to select an approach for the destination airport. Confirm that the intended airport is shown or touch the **Airport** key and select the desired airport.

3. Touch the **Approach** key on the Procedures-Approach page and then touch the key for the desired approach.

Select Approach – KTWF

ILS 25

VOR/DME 07

VOR 07GPS **LNAV**

VOR 25

NDB 25GPS **LNAV**

Figure 6-13 Selecting an Approach

4. After selecting the approach for the destination airport, the approach options will be displayed.

Sequence List For The Selected Transition

Final Approach Fix
Missed Approach Point

Missed Approach Hold Point

Current Dest Waypoint. Touch To Select Airport.

Touch To Select Channel/ID

Unselected Transition

Selected Transition
Approach Diagram

Touch To Select Transition

Touch To Activate Approach

Touch To Select Approach   *Touch To Load Approach*

Figure 6-14 Selected Approach Options

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5. Touch the **Transition** key and then touch the key for the desired transition. The selected Transition will be shown in white on the Procedure page Approach diagram. Unselected Transitions will be shown in grey.

Touch To Select Transition

Figure 6-15 Select Approach Transition

6. If desired, touch the **Channel/ID** key, then use the numeric keypad to select the channel number, and then touch the Enter key. The Channel and ID are typically loaded automatically if they are present.

> **NOTE:** *As an alternate means of loading an approach, the Channel ID key allows you to select the channel ID for a SBAS approach for the current destination. The channel ID for the SBAS approach is available from an approved approach chart. If duplicate numbers are available for a channel, a list will be available where you may select the desired approach.*

7. Touch the **Load Approach** key. The Active Flight Plan page will be displayed. The approach waypoints are placed at the end of the flight plan and the unit will automatically sequence to them after the en route waypoints.

Approach Waypoints

Figure 6-16 After Loading an Approach

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> **NOTE:** In software version 6.00 and later, if you build your flight plan with the destination airport at the end and then load an approach procedure, the destination airport will be removed from the end of the flight plan. If the leg to the destination airport is the active leg when loading an approach procedure, you will navigate all the way to the destination airport before joining the procedure. Be sure when LOADING and not ACTIVATING an approach procedure that the route to be flown is correct.

> **NOTE:** In software version 5.13 and earlier, if you build your flight plan with the destination airport at the end and then load an approach procedure, you will navigate all the way to the destination airport before joining the procedure. Be sure when LOADING and not ACTIVATING an approach procedure that the route to be flown is correct.

8. Touch the **Load Approach & Activate** key, which makes the active leg Direct-To the selected transition waypoint, or for Vector approaches to activate a leg that is an extended final approach course. You can also "activate" the selected procedure on the Procedures page, if the approach is not activated on this page.

Approach Waypoints

Direct-To Waypoint

Figure 6-17 After Activating the Approach

> **NOTE:** When re-activating an approach, the decision as to whether a hold is inserted at the IAF or not is assumed to be the same as the first time the approach was activated, regardless of current aircraft position. If the pilot wishes to have the hold inserted or removed from the procedure, the procedure must be re-loaded or activated from the PROC-Approach page.

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6.5 Approaches with Procedure Turns

The procedure turn portion of an approach is stored as one of the legs of the approach. For this reason, the GTN 7XX unit requires no special operations from the pilot — other than flying the procedure turn itself — beyond what is required for any other type of approach. Roll steering is provided to aircraft with compatible autopilots.

> ✅ **NOTE:** *The steering provided for the procedure turn does not guarantee that the aircraft will stay within charted procedure turn boundaries. As such the crew will need to ensure that the approach is flown within the confines of the charted procedure.*

6.6 Flying the Missed Approach

Upon reaching the Missed Approach Point, the GTN 7XX unit continues to give guidance along an extension of the final course segment (FAF to MAP) until you manually initiate the missed approach procedure (as mentioned previously in reference to the "SUSP" advisory).

> ✅ **NOTE:** *If the unit is not configured for a CDI key, then the "activate GPS missed approach" will only resume automatic waypoint sequencing. The user must switch to GPS navigation, if desired, by using their external source selection method (this is typical an EFIS system).*

1. When the MAP is reached, a pop-up will appear.

Figure 6-18 Pop-Up Upon Reaching the MAP

2. Touch the **Remain Suspended** key to continue with sequencing suspended or touch **Activate GPS Missed Approach** for guidance to the Missed Approach Hold Point.

The Activate GPS Missed Approach function is the same for the on screen controls or a remote switch. Activating the missed approach prior to the MAP can be accomplished on either the Flight Plan or Procedures pages. If using the Flight Plan page, the approach banner must be touched to display the Approach Options where Activate Missed Approach can be selected.

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*Touch the Approach Banner to
Display the Approach Options*

Touch the Desired Option

Figure 6-19 Approach Option Selection on the Flight Plan Page

*Touch the Approach Banner to
Display the Approach Options*

Touch the Desired Option

Figure 6-20 Approach Option Selection on the Procedures Page

Once an option is selected, the GTN will continue to provide guidance along the final approach course. Upon reaching the MAP, the unit will automatically sequence to the first leg of the missed approach. This is used when a pilot needs to execute the missed approach prior to reaching the MAP.

6.7　Flying an Approach with a Hold

Upon activating an RNAV GPS approach, you are given the option to skip any non-required holding patterns during the initial transitions of the approach.

The Flight Plan Page displays a timer or distance, as appropriate, during the holding pattern. Use this timer or distance to fly the outbound portion of the holding pattern. (The holding pattern is displayed on the Map Page and indicated as the active leg on the Active Flight Plan pages.)

> **NOTE:** *If you need to lose extra altitude or speed by going around the holding pattern again, touch **SUSP** to manually suspend waypoint sequencing BEFORE crossing the holding waypoint the second time. If you've already passed this waypoint, re-activate the holding pattern.*

As you cross the MAP, a "SUSP" annunciation will appear, indicating that automatic sequencing of approach waypoints is suspended at the MAP. A "from" indication is displayed on the CDI and Default NAV Page, but course guidance along the final approach course continues.

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6.8 Flying a DME Arc Approach

Approaches that contain DME arcs are supported by the GTN. The GTN will provide guidance (left / right) relative to the arc. If you wish to activate the DME arc leg manually, the aircraft must be near the arc, as shown in the shaded area below.
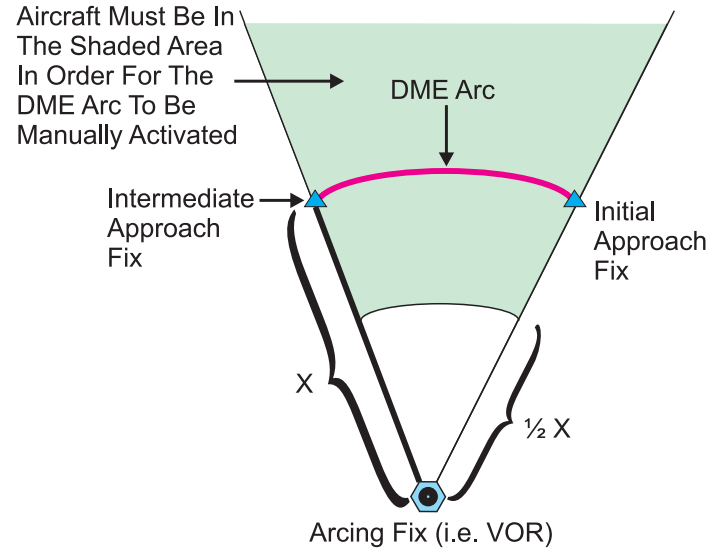
Figure 6-21 DME Arc Example

6.9 Radial-to-Fix (RF) Approaches

RF legs associated with RNAV RNP 1.0 non-AR (Approval Required) approaches are supported by the GTN in version 6.00, or later, when approved by the installation.

- AC 90-101A defines RF leg as "a constant radius circular path, around a defined turn center, that starts and terminates at a fix. An RF leg may be published as part of a procedure."

- Flying the RF leg of an approach is similar to flying a DME arc approach. All GTN annunciations and indications are identical whether flying DME arcs or RF legs with the GTN.

- RF legs may have a larger or smaller radius than DME arcs.

- Unlike DME arcs, RF legs are not based on a VOR.

- Refer to the aircraft AFMS for specific details regarding RF legs for a specific aircraft.

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6.10 Vectors to Final

With "Vectors-To-Final" (VTF) selected, the CDI needle remains off center until you're established on the final approach course. With the approach activated, the Map Page displays an extension of the final approach course in magenta (remember, magenta is used to depict the active leg of the flight plan) and "vtf" appears as part of the active leg on the Map page (as a reminder that the approach was activated with vectors-to-final).

> **NOTE:** In software version 5.13 and earlier, once VTF is activated all waypoints in the approach prior to the FAF are removed.

> **NOTE:** In software version 6.00 and later, all waypoints along the final approach course, including waypoints before the FAF, are included in the flight plan and the final approach course to the FAF is activated.

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6.11   ILS Approaches (GTN 750 Only)

Precision ILS approaches can be performed with the built-in VLOC (VOR/localizer/glideslope) receivers. The GPS receiver can be used for guidance prior to reaching the final approach fix, but once there, the proper frequency must be selected on the VLOC window (right side of screen) and the CDI output set to "VLOC".
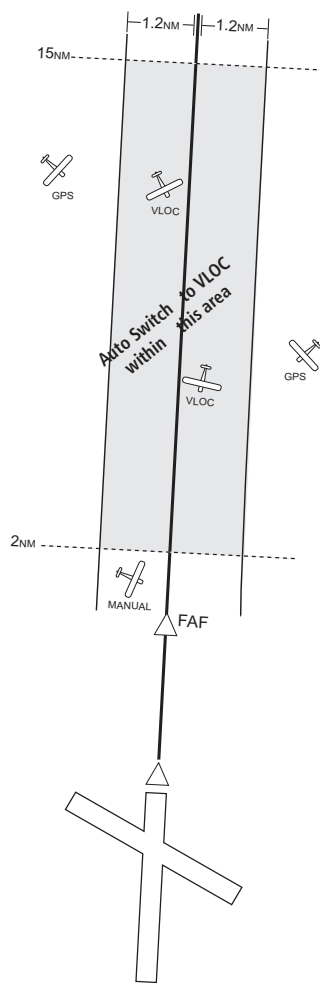
The GTN 7XX can be set to automatically switch the external CDI output from GPS to VLOC as you intercept the final approach course (if used with a KAP140/KFC225 autopilot, you will need to manually enable outputs. See instructions in the "Enabling Autopilot Outputs for the King KAP140/KFC225" section). When the ILS approach is activated and the correct ILS frequency is active in the VLOC window, the GTN 7XX automatically switches to VLOC within 1.2 NM left or right of the final approach course. This switch can take place anywhere from 2.0 to 15.0 NM from the FAF.

The illustration shows multiple locations along the approach path and the CDI selection that you can expect: GPS or VLOC. Within the area of the shaded box, the automatic switch from GPS to VLOC should occur.

NOTE: *If you attempt to intercept the approach course at a distance less than 2.0 NM from the FAF, the GTN 7XX does not automatically switch the CDI to VLOC. In this case, touch the* **CDI** *key to manually switch from GPS to VLOC.*

The automatic switch from GPS to VLOC is not immediate, but instead occurs gradually to prevent abrupt CDI changes when coupled to an autopilot. The CDI selection can also be changed manually by touching the **CDI** key.

6.12   RNAV Approach Procedures

The GTN 7XX allows for flying LNAV/VNAV, LNAV, LNAV +V, LPV, LP, and LP +V approaches according to the published chart.

Phase of flight Annunciation	Description	Minimums
L/VNAV	Lateral Navigation/Vertical Navigation. RNAV non-precision approach with vertical guidance.	Published LNAV/VNAV minimums.
LNAV	Lateral Navigation. RNAV non-precision approach.	Published LNAV minimums.
LNAV + V	Lateral Navigation with Advisory Vertical Guidance. RNAV non-precision LNAV approach with advisory vertical guidance. The glidepath is typically denoted by a light dashed line on the vertical profile (Jeppeson only) with an associated glidepath angle (usually in the 3.00 degree range) and is provided to assist the pilot in maintaining a constant vertical glidepath, similar to an ILS glideslope.	Published LNAV minimums.
LPV	Localizer Performance with Vertical guidance (LPV) approach. RNAV precision approach.	Published LPV minimums.
LP	LP indicates Localizer Performance with no vertical guidance.	Published LP minimums.
LP +V	LP +V indicates Localizer Performance with advisory vertical guidance. This annunciation is available in software version 6.00 and later. This advisory guidance follows the same nature as set by the LNAV +V as shown above.	Published LP minimums.

Table 6-2 RNAV Approach Annunciations

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6.12.1   Flying the LPV Approach

1. Within 31 NM of the destination, the GTN switches from en route mode to terminal mode and the CDI scale transitions from 2.0 to 1.0 NM, full scale deflection.

2. As you approach the IAF, a waypoint message appears on the bottom of the screen.

3. As the distance (DIST) to the IAF approaches zero, the message is replaced by a turn advisory that counts down 10 seconds prior to the turn.

4. As you approach the FAF, the GTN will begin to automatically rescale in an angular fashion. This will allow the LPV approach to be flown in an identical fashion to a standard ILS. At 2.0 NM from the FAF, CDI scaling is tightened from 1.0 NM to the angular full scale deflection (typically the angular full-scale deflection is 2.0°, but will be as defined for the approach).

5. Sixty seconds prior to reaching the FAF, the unit will check the required Horizontal Alarm Limit (HAL) and Vertical Alarm Limit (VAL) to ensure the GPS position integrity is within limits to complete the LPV precision approach. In the event the HAL or VAL limits are exceeded, the approach will be downgraded to a non-precision approach indicated by "LNAV" on the moving map, a message that the approach is downgraded ("APPROACH DOWNGRADE - GPS approach downgraded. Use LNAV minima."), and the glideslope indicator will be flagged. You may continue the approach using LNAV non-precision minimums if there are LNAV minimums for this approach. In the rare event the GPS integrity cannot meet the non-precision HAL limits, the unit will send a message to the pilot to abort the approach ("ABORT APPROACH - GPS approach no longer available."). The unit will revert to terminal limits to support navigation to the missed approach when the message is acknowledged. After the aircraft has passed the FAF, a loss of WAAS integrity will cause the approach to abort instead of downgrade.

6. Capture the glideslope as you would an ILS glideslope.

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7. As you cross the FAF, the destination sequences to the MAP (e.g. "RW31", the runway threshold). With the needle on the external CDI (or HSI) centered, fly toward the MAP, observing the altitude minimums published on the approach plate.

8. When viewing the Map Page, you'll note that the final course segment is displayed in magenta (the active leg of the flight plan always appears in magenta).

9. As you approach the MAP, a waypoint message appears on the bottom of the screen.

10. Once the unit crosses the MAP (defined as the runway end waypoint), sequencing will be suspended. Prepare the aircraft for missed approach operation. Touch the **Unsuspend** key to sequence to the Missed Approach procedure.

11. Fly the guidance provided by the unit to the MAHP and hold.

6.12.2 Flying the LP Approach

An LP approach is flown similarly to an LNAV approach, except the precision is greater as it utilizes the SBAS accuracy. It has similar lateral accuracy as an LPV approach. Angular scaling is similar to a localizer approach. Most LP approaches have step down altitudes associated with them. The approach still results in an MDA and missed approach point.

If the approach is indicated as LP +V, advisory vertical guidance will be provided. This does not change how the approach should be flown, and the pilot is still responsible for descending to the correct altitude at each step down. The approach still results in an MDA and missed approach point.

1. Within 30 NM of the destination, the GTN switches from en route mode to terminal mode and the CDI scale transitions from 2.0 to 1.0 NM, full scale deflection.

2. As you approach the IAF, a turn direction message appears on the bottom of the screen.

3. As the distance (DIST) to the IAF approaches zero, the message is replaced by a time to turn advisory that counts down 10 seconds prior to the turn.

4. As you approach the FAF, the GTN will begin to automatically rescale in an angular fashion. This will allow the LP approach to be flown in the same fashion as a standard localizer approach. At 2.0 NM from the FAF, CDI scaling is tightened from up to either 2° or 0.3 NM, full scale deflection, whichever is smaller.

5. Sixty seconds prior to reaching the FAF, the GTN will check the required Horizontal Alarm Limit (HAL) to ensure the GPS position integrity is within limits to complete the LP non-precision approach. In the event the HAL limits are exceeded, the approach will be downgraded, when available, indicated by "LNAV" on the moving map, otherwise the approach will be aborted. A message will note that the approach is downgraded and the NAV indicator will be flagged until the message is viewed. You may continue the approach using LNAV non-precision minimums if there are LNAV minimums for this approach. In the rare event the GPS HAL limits cannot meet non-precision limits, the GTN will notify the pilot with a message to abort the approach. The GTN will revert to terminal limits of 1.0 NM to support navigation to the missed approach. If the approach is indicating an LP +V, it is possible that the advisory vertical guidance could be removed without annunciation due to the vertical guidance not being within tolerances. This does not constitute a downgrade, and the approach can still be flown to LP minimums.

6. As you cross the FAF, the destination sequences to the MAP. With the needle on the external CDI (or HSI) centered, fly toward the MAP, observing the altitude minimums published on the approach plate.

7. When viewing the Map Page, you'll note that the final course segment is displayed in magenta (the active leg of the flight plan always appears in magenta).

8. As you approach the MAP, a waypoint message ("Arriving at Waypoint") appears on the bottom of the screen.

9. At the MAP initiate the missed approach, if necessary. Once the GTN crosses the MAP, sequencing will be suspended. Prepare the aircraft for missed approach operation. Touch the **Unsuspend** key to sequence to the Missed Approach procedure.

> **NOTE**: *For missed approaches with heading legs, fly manually until the first active course leg is reached.*

10. Fly the guidance provided by the GTN to the MAHP and hold.

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6.13   Points to Remember for All Procedures

- The GTN 7XX Map page is designed to complement your approach plates and vastly improve situational awareness throughout the approach. However, *you must always fly an approach as it appears on the approach plate*.

- The active leg (or the portion of the approach currently in use) is depicted in magenta on the Map Page. As you fly the approach, the GTN 7XX automatically sequences through each leg of the approach unless "SUSP" appears at the annunciation bar at the bottom of the display. "SUSP" indicates that automatic sequencing of approach waypoints is suspended on the current leg and normally appears at holding patterns, upon crossing the missed approach point (MAP), for Climb to Altitude legs, and for Hold to Altitude legs.

- For roll steering autopilots: roll steering is terminated when approach mode is selected on the autopilot and is available once the missed approach is initiated.

- If Vectors-to-Final is activated while on the "FROM" side of the FAF, automatic waypoint sequencing is suspended and the SUSP annunciation will appear. Automatic waypoint sequencing will resume once the aircraft is on the "TO" side of the FAF and within full-scale deflection.

- For all procedures, make sure to check the runway, transition, and all waypoints.

> ⚠️ **CAUTION:** *Not all autopilots will follow guidance when on a heading leg using NAV, GPSS, or APR mode on the autopilot. Heading legs for procedures can be identified by "HDG XXX°" in white on the Flight Plan page, as well as the procedure chart indicating that the aircraft must fly a particular heading. Certain autopilots will revert to a "Roll Only" or "Wings Level" mode on these leg types and the pilot must engage the heading (HDG) mode of the autopilot and set the heading bug appropriately in order to use the autopilot on these legs.*

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6.14 Points to Remember for Localizer or VOR-based Approaches

- The default factory setting allows the CDI output to automatically switch from the GPS receiver to the LOC receiver. This may be changed to manual in some installations. If the "ILS CDI Selection" setting is changed to "Manual", *you* must determine when to select "GPS" or "VLOC" guidance during the approach. Remember, "VLOC" is required for the final course segment from the Final Approach Fix (FAF) to the MAP.

> **NOTE:** *Installations with certain autopilots, such as the KAP 140 and KFC225, do not allow automatic ILS CDI switching.*

> **NOTE:** *GPS phase of flight annunciations (LPV, ENR, etc.) are not applicable to the external CDI (or HSI) when VLOC is active.*

- If the CDI output has not automatically switched from GPS to ILS upon reaching the FAF, you must manually switch to the VLOC receiver by touching the **CDI** key. Verify that "VLOC" is displayed.

- Automatic switching of CDI output is available for ILS, localizer, SDF and LDA approaches. Automatic CDI switching is <u>not</u> available for backcourse approaches or VOR approaches.

- When flying an approach with the autopilot-coupled, you must monitor system functions at all times and verify that the autopilot and external CDI (or HSI) switch to the VLOC receiver with sufficient time to capture and track the approach course. Switching to "VLOC" late in the approach may not provide the autopilot enough time to respond and intercept the approach course prior to the FAF (depending upon the performance characteristics of your autopilot and aircraft).

- When an ILS or VOR approach is first selected or executed, the frequency is automatically checked. If the frequency is incorrect, you will receive a message and you must place the correct ILS or VLOC frequency in the active frequency field.

- When flying a localizer-based approach (other than backcourse) with automatic CDI switching enabled:

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1. "GPS" guidance may be used while flying outbound and on the initial portion of the procedure turn.

2. "VLOC" guidance is used on the remainder of the approach from the time you turn inbound on the procedure turn.

3. The localizer frequency must be active to use "VLOC" guidance at the MAP.

- When flying a localizer-based approach with automatic CDI switching disabled.

  1. You may select "VLOC" guidance at any point on the approach prior to reaching the FAF.

  2. The localizer frequency must be active to use "VLOC" guidance.

6.15 Enabling Autopilot Outputs for the King KAP140/KFC225

Autopilot outputs for the King KAP140/KFC225 autopilots are activated manually by the pilot after being prompted during the approach procedure. After enabling outputs, the GTN 7XX will provide guidance information consistent with what the autopilot expects (i.e., angular CDI scaling and glideslope capture for an LPV or other vertically guided GPS approach).

*Prompt To Activate
Autopilot Outputs*

*Touch To Activate
Autopilot Outputs*
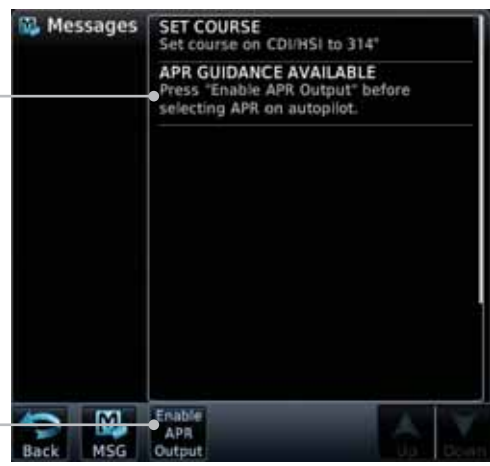
Figure 6-22 Prompt To Activate Autopilot Outputs

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7 CHARTS

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> ✓ **NOTE:** The availability of SafeTaxi, ChartView, or FliteCharts in electronic form may not preclude the requirement to carry paper charts aboard the aircraft. See the AFMS for more information.

> ✓ **NOTE:** The Chart feature provides a digital representation of a paper chart and provides no vertical or lateral course guidance. Flight Plan and Procedures are separate from Charts, and do provide vertical and lateral course guidance for the loaded route or procedure shown on the Flight Plan page. The term "Chart Unavailable" means that the chart cannot be viewed on the Charts due to either a chart not being published, or an error in the Chart database, but does not preclude its availability or inclusion of the procedure in the Flight Plan or Procedures portion of the system. The absence of a chart for a particular Departure, Arrival, or Approach does not preclude its availability or inclusion in the Flight Plan or Procedures portion of the system. The absence of a particular Departure, Arrival, or Approach under the Flight Plan or Procedures portion of the system does not preclude the ability to view the Chart for that procedure under the Chart feature.

> ✓ **NOTE**: Features that are selectable on the main map page, such as obstacles, airports, airspace, and other waypoint types that are not visible beneath the overlaid chart, remain selectable even when an approach chart is overlaid on the main map.

> ✓ **NOTE**: Do not use SafeTaxi or Chartview functions as the basis for ground maneuvering. SafeTaxi and Chartview functions do not comply with the requirements of AC 20-159 and are not qualified to be used as an airport moving map display (AMMD). SafeTaxi and Chartview are to be used by the flight crew to orient themselves on the airport surface to improve pilot situational awareness during ground operations.

The chart page will default to the nearest airport if no flight plan or destination airport is present. While you are on the ground, the displayed charts will default to the current airport location regardless of flight plan. The optional ChartView and FliteCharts provide on-board electronic terminal procedures charts. Electronic charts offer the convenience of rapid access to essential information. Either ChartView or FliteCharts may be configured in the system, but not both.

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

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approach charts and on airport diagrams. Airport Hot Spots are outlined in magenta. The ChartView database subscription is available from Jeppesen, Inc. Available data includes:

- Arrivals (STAR)
- Departure Procedures (DP)
- Airport Diagrams
- NOTAMs
- Approaches

An enablement card that is purchased from Garmin is separate from the Jeppesen database and is required to enable ChartView.

> **NOTE:** The chart for the destination airport or loaded approach will automatically be selected.

> **NOTE:** If two GTN 7XX units are crossfilled, then the same type (ChartView or FlightCharts) and version (cycle number and effective dates) for the chart database must be installed on both units in order for the correct chart to be overlaid on the main map page.
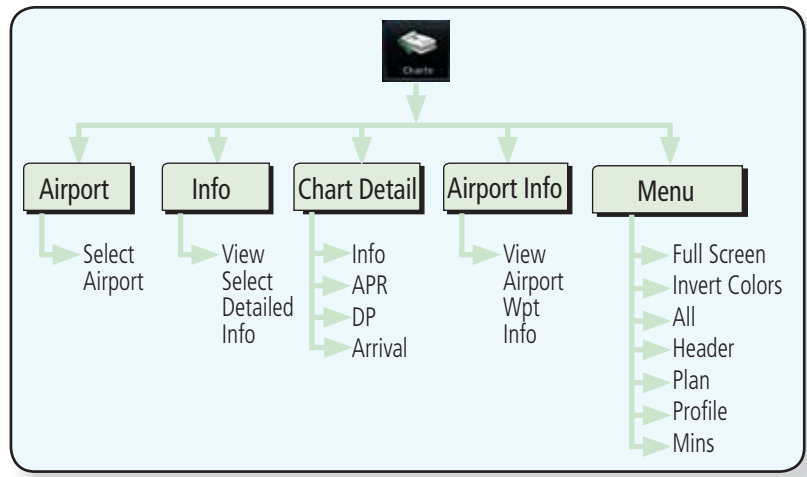
Figure 7-1 Charts Functional Diagram

The following list describes the order in priority in which charts are auto-loaded in the system when the Chart page is displayed:

1. The most-recently selected chart during the current power cycle, if valid*,

2. The airport surface chart for the nearest airport, if on ground and nearest airport is found,

3. The approach chart for the approach in the active flight plan, if approach exists in the flight plan,

4. The airport surface chart for the last airport in the flight plan, if one exists,

5. The airport surface chart for the nearest airport, if nearest airport is found (same as #2 but aircraft could be in-air),

6. The airport surface chart for the first airport in the database, if found,

7. No chart.

* "Selected" does not include charts that were auto-selected. A selection must be made while on the charts page.

The following actions will invalidate #1:

• Changing the approach in the active flight plan

• Changing the on-ground status while not viewing the Charts page

7.1 Chart Page

1. From the Home page, touch the **Charts** key.

Touch to Select Airport

Touch to Select Airport Info Chart

Touch to View The Airport Information Chart

Touch to View Airport Approach, Departure, & Arrival Charts

Touch to View Airport Wpt Info

Touch To Change Chart Scale

Touch For Full Display View Of Chart

Figure 7-2 Charts Function Page

2. Various controls allow viewing of more available detail.

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7.1.1   Airport Selection

1. Touch the **Airport** selection key to select another airport.

2. Select the desired airport identifier with the keypad and touch **Enter**.

Selected Airport

Touch to Select Airport

Figure 7-3 Airport Identifier Selection

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7.1.2   Info

1. Touch the **Info** key to select the specific information chart.

Touch To View Selected Airport Info

Figure 7-4 Airport Info Selection

2. Touch an item from the list to view the chart.

Selected Airport

Touch To View Selected Airport Info List

Detailed View Of Selected Airport Info

Figure 7-5 Airport Info Selection Detail

7.1.3   Information

1. Touch the **Information** key.
2. View the available airport information charts.

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7.1.4 Approaches

1. Touch the **Approaches** key to view available approaches.

Selected Airport

Touch To View Approach List

Touch To View Approach Charts

Detailed View Of Selected Approach

Figure 7-6 Approach Detail

2. Touch the **Approach** key to select an approach chart.

Touch To View Approach Chart

Figure 7-7 Approach List

3. Touch the desired approach to view detailed information.

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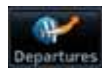
7.1.5 Departures

1. Touch the **Departures** key to view available departures.

Selected Airport

Touch To View Departure List

Detailed View Of Selected Departure

Figure 7-8 Departure Detail

2. Touch the **Departure** key to change the selected Departure chart.

Touch To View The Departure Chart

Figure 7-9 Departure List

3. Touch the desired departure to view detailed information.

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7.1.6 Arrivals

1. Touch the **Arrivals** key to view available arrivals.

Selected Airport

*Detailed View Of
Selected Arrival*

*Touch To View
Arrival Chart List*

*Touch To View
Arrival Charts*

Figure 7-10 Arrival Detail

2. Touch the **Arrival** key to change the selected Arrival chart.

*Touch To View Selected
Arrival Info*

Figure 7-11 Arrival List

3. Touch the desired arrival to view detailed information.

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7.1.7 Airport Info

Airport Info

1. Touch the Airport Info key to view the Waypoint Info for the selected airport.

Selected Airport Info

Touch Tabs To View More Details

Touch To Return To Charts Page

Figure 7-12 Selected Airport Detail

Back

2. Touch the **Back** key to return to the Charts page.

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7.1.8   Full/Split Screen

1. Touch the **Full** key to display a full screen view of the current chart page.

Full Chart Page View

*Touch To Return To
Split Chart Page View*

Figure 7-13 Full View of Chart Page

2. Touch the **Split** key to display a view of the current chart page split between the chart detail and chart page controls.

Split Chart Page View

*Touch To Display Full
Chart Page View*

Figure 7-14 Split View of Chart Page

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7.2 Chart Menu Options

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1. From the Charts page, touch the **Menu** key.

Touch To Select Chart Layer

Touch To Display Normal Or Inverted Chart Colors

Figure 7-15 Chart Options

2. Touch the **Chart Information** key to select a Chart Layer. Chart Layers are only available with ChartView.

Current Selected Chart Layer

Touch To Select Chart Layer

Figure 7-16 Select From Chart Layer List

3. Touch the desired selection to display the selected Chart Layer.

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7.2.1 Chart Layers - All

Touch the **All** key to view the composite of layers available for the selected chart.

7.2.2 Chart Layers - Header

Touch the **Header** selection from the Chart Layer list to view the header information for the selected approach chart.

Selected Airport

Detailed View Of
Selected Header

Selected Approach

Touch Menu To
Select Layers

Figure 7-17 Header View of Chart for the Selected Approach

7.2.3 Chart Layers - Plan

Touch the **Plan** selection from the Chart Layer list to view the Plan View for the selected approach chart.

Selected Airport

Detailed Plan View Of
Selected Approach

Selected Approach

Figure 7-18 Plan View of Chart for the Selected Approach

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7.2.4   Chart Layers - Profile

Touch the **Profile** selection from the Chart Layer list to view the vertical profile of the selected approach.

Selected Airport

Detailed View Of Selected Profile

Selected Approach

Touch To Display Chart Info Options

Figure 7-19 Profile View of Chart for the Selected Approach

7.2.5   Chart Layers - Minimums

Touch the **Minimums** selection from the Chart Layer list to view the minimums for the selected approach.

Selected Airport

Detailed View Of Selected Minimums

Selected Approach

Touch To Display Minimums

Figure 7-20 Minimums View of Chart for the Selected Approach

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7.2.6   Invert Colors

Invert Colors

While viewing the Charts Menu, touch the **Invert Colors** key to show an inverted color view of the display that enhances low light viewing.

Inverted Color Chart Page View

Touch For Inverted Color Chart Page View

Figure 7-21   Inverted Chart Colors View

7.2.7   Geo-Referenced Aircraft Position

The geo-referenced aircraft position is placed on the chart when a position is established. On the Map page, the chart and geo-referenced position are shown when the aircraft is in the air (such as, speed is greater than 30 knots). When a chart is viewed on the Map page, areas of the chart that do not support geo-referencing, such as expanded details and text blocks, are removed. Typically, SIDs and STARs are not geo-referenced and thus will not typically display the ownship symbol on those charts.

Geo-Referenced Aircraft Position

Figure 7-22   Areas of Chart Info Removed For Map Overlay and Geo-Reference

> **NOTE:** *The entire ownship symbol must be able to fit within the displayed chart area before it will be drawn.*

7.3 ChartView Cycle Number and Revision

The ChartView database is revised every 14 days. Charts are still viewable during a period that extends from the cycle expiration date to the disables date. ChartView is disabled 70 days after the expiration date and is no longer available for viewing upon reaching the disable date. When turning on the GTN unit, the Power-up Page indicates the criteria for ChartView availability. An enablement card that is purchased from Garmin is separate from the Jeppesen database and is required to enable ChartView. Jeppeson does not provide the Effective date.

Figure 7-23 System Status Database Information for ChartView

The database CYCLE number, EXPIRES, and DISABLES dates of the ChartView database appear in either white or yellow text. When the ChartView EXPIRES date is reached, ChartView becomes inoperative 70 days later. This is shown as the DISABLES date. When the DISABLES date is reached, charts are no longer available for viewing.

The ChartView database is provided directly from Jeppesen. Refer to Jeppesen Databases in Appendix A for instructions on revising the ChartView database.

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7.4 FliteCharts®

FliteCharts® resemble the paper version of National Aeronautical Charting Office (NACO) terminal procedures charts. The charts are displayed with high-resolution and in color for applicable charts.

Garmin FliteCharts is an electronic version of the National Aeronautical Navigation Services Charts (AeroNav Services), which was formerly NACO. FliteCharts lets pilots quickly find and view all AeroNav Services Departure Procedures (DP), Standard Terminal Arrival Routes (STARs), approach charts, and airport diagrams. If the current approach is known, the GTN 7XX automatically selects the correct chart based on the flight plan. Pilots will have access to all approach plates currently published by AeroNav, which encompasses over 15,000 charts and over 2,900 airports in the U.S. FliteCharts updates are available from Garmin every 28 days, and the new geo-referenced capability will be included with the regular updates.

FliteCharts database subscription is available from Garmin. Available data includes:

- Arrivals (STAR)
- Departure Procedures (DP)
- Approaches
- Airport Diagrams

7.4.1 FliteCharts Cycle Number and Revision

FliteCharts data is revised every 28 days. Charts are still viewable during a period that extends from the cycle expiration date to the disables date. FliteCharts is disabled 180 days after the expiration date and are no longer available for viewing upon reaching the disables date. When turning on the GTN 7XX, the Power-up page indicates the criteria for chart availability. These indications are whether the databases are not configured, not available, current, out of date, or disabled.

FliteCharts Cycle
FliteCharts Expiration Date
Date FliteCharts Is Effective
FliteCharts Will Be Disabled On This Date

Figure 7-24 System Status Database Information for FliteCharts

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7.5   SafeTaxi®

SafeTaxi® is an enhanced feature that gives greater map detail when zooming in on airports. The airport display on the map reveals runways with numbers, taxiways with identifying letters/numbers, airport Hot Spots, and airport landmarks including ramps, buildings, control towers, and other prominent features. Resolution is greater at lower map ranges (zooming in). When the aircraft location is within the screen boundary, including within SafeTaxi ranges, an airplane symbol is shown on any of the navigation map views for enhanced position awareness.

> ✓ **NOTE:** Do not use SafeTaxi or Chartview functions as the basis for ground maneuvering. SafeTaxi and Chartview functions do not comply with the requirements of AC 20-159 and are not qualified to be used as an airport moving map display (AMMD). SafeTaxi and Chartview are to be used by the flight crew to orient themselves on the airport surface to improve pilot situational awareness during ground operations.

Designated Hot Spots are recognized at airports with many intersecting taxiways and runways, and/or complex ramp areas. Airport Hot Spots are outlined to caution pilots of areas on an airport surface where positional awareness confusion or runway incursions happen most often. Hot Spots are defined with a magenta circle or outline around the region of possible confusion.

Taxiway Detail

Taxiway Identification

Aircraft Position

Figure 7-25 SafeTaxi Depiction on the Navigation Map Page

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7.5.1　Using SafeTaxi®

Any map page that displays the navigation view can also show the SafeTaxi® airport layout within the maximum configured range. Charts and SafeTaxi are mutually exclusive. So, to view SafeTaxi and Hot Spots, the Charts feature must be turned off. Charts are displayed when the aircraft is in the air, but when on the ground, charts are removed and SafeTaxi will be shown automatically.

During ground operations the aircraft's position is displayed in reference to taxiways, runways, and airport features. The nose of the ownship symbol, not the center, depicts the current location of the aircraft.

7.5.2　Hot Spot Information

Hot Spot locations are identified by a magenta circle or outline.

Hot Spot Location

Aircraft Location

Hot Spot Location
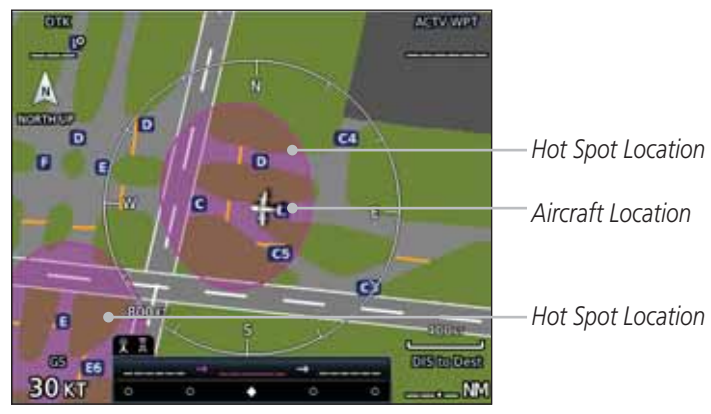
Figure 7-26 SafeTaxi Hot Spot Depiction

7.5.3 SafeTaxi® Cycle Number and Revision

The SafeTaxi database is revised every 56 days. SafeTaxi is always available for use after the expiration date. When turning on the GTN 7XX, the Power-up Page indicates whether the databases are current, out of date, or not available. The Power-up Page shows the SafeTaxi database is current when the "SafeTaxi Expires" date is shown in white. When the SafeTaxi cycle has expired, the "SafeTaxi Expires" date appears in yellow. The message "unknown" appears in white if no SafeTaxi data is available on the database card.

The SafeTaxi Region, Version, Cycle, Effective date and Expires date of the database cycle can also be found on the System - System Status page. SafeTaxi information appears in white and yellow text. The EFFECTIVE date appears in white when data is current and in yellow when the current date is before the effective date. The EXPIRES date appears in white when data is current and in yellow when expired. SafeTaxi REGION NOT AVAILABLE appears in white if SafeTaxi data is not available on the database card.

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8 WAYPOINT INFO

The Waypoint Info function allows you to view information about the selected waypoint. The Waypoint Info page can be reached from the Home page, selected from a flight plan, or selected from the Nearest page.

Touch Key to Display Waypoint Type

Figure 8-1 Waypoint Info Page

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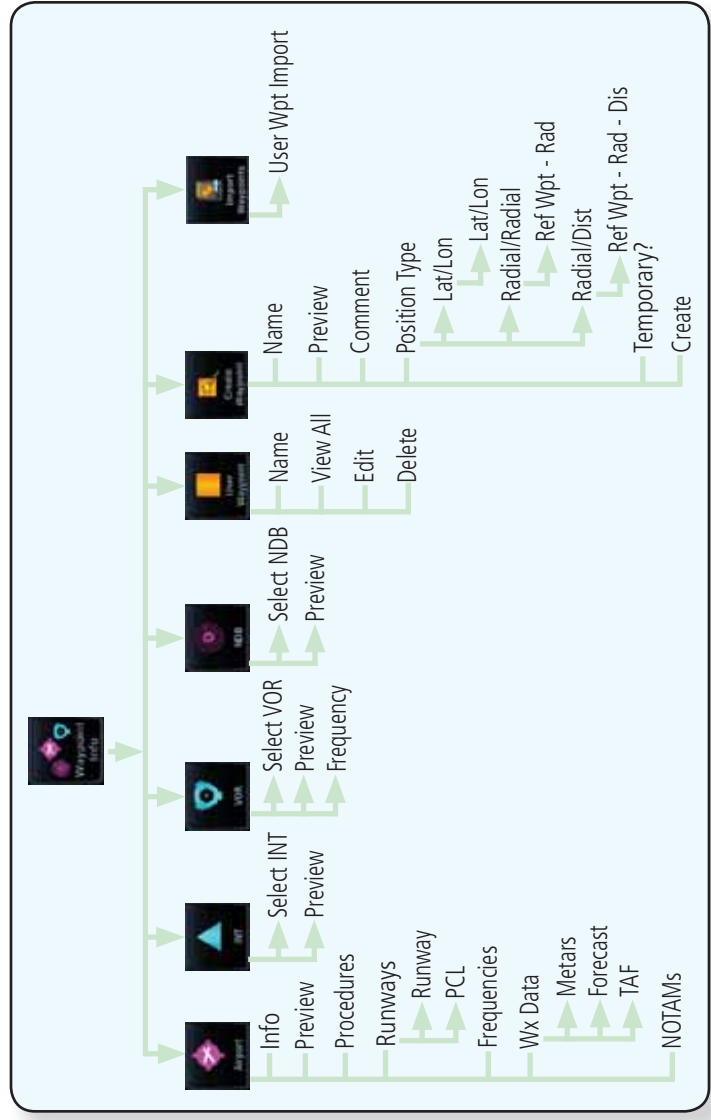
Figure 8-2 Waypoint Info Functional Diagram

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8.1 Waypoint Selection

1. Touch the **Waypoint Info** key and then touch the desired waypoint type (Airport, INT, VOR, etc).
2. Touch the waypoint identifier.
3. The waypoint identifier selection page will be shown and the waypoint identifier field will be active for selection. Touch the required keys on the alphanumeric keypad to select the desired waypoint identifier and then touch the **Enter** key.

Airport Identifier

Find Key Displays Waypoint Search

Backspace Key Clears Wpt Ident

Cursor Movement Keys

Alphanumeric Keypad

Touch To Cancel Selection And Return To Previous Page

Touch Enter After Selecting Ident

Figure 8-3 Waypoint Ident Selection

4. The information page for the selected waypoint will be displayed.

Figure 8-4 Waypoint Ident Selection Result

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8.2 Airport

The Airport page of the Waypoint Info function provides a variety of detailed information about the airport.

8.2.1 Info

The upper part of the page shows the airport identifier and type, name, city and region, the lat/lon coordinates of the airport, and the bearing (and direction arrow) and distance to the airport from your present position. The center area shows the airport elevation, fuel availability, and time zone.

1. While viewing the Waypoint Info page, touch the **Airport** key.

Figure 8-5 Waypoint Info Airport Page

2. Touch the **View Charts** key to display available charts for the airport.

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8.2.2 Preview

The Waypoint Info Airport Preview page provides detailed information about the selected airport.

1. Touch the **Preview** tab to view a map of the airport and surrounding area.

2. Use the **In** and **Out** keys to zoom in and out on the Preview map.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Area Map

Waypoint Preview Page Tab

Touch & Move Finger While Pressing To Pan Map

Airport Lat/Lon

Touch To Zoom

Figure 8-6 Waypoint Info Airport Map Page

3. You may touch the map window and while pressing the display drag your finger to move the map view.

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8.2.3   Procedures

1. Touch the **Procedures** page tab to view details about procedures for the selected airport.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Lat/Lon

Approach Name & Type

Procedures Page Tab

Touch To Scroll

Figure 8-7   Waypoint Info Airport Procedures Page

2. Touch the **Up** and **Down** keys to view additional procedures, as needed.

3. Touch one of the procedure keys to select it for the Procedures function.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Lat/Lon

Arrival Name

Procedures Page Tab

Touch To Scroll

Figure 8-8   Waypoint Info Airport Arrival Information

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8.2.4 Runways

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Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Lat/Lon

Runway Detail

Runway Number. Touch For Detail

Traffic Pattern Info

Airport Runways Page Tab

Runway Dimensions *Pilot-Controlled Lighting Freq. Touch To Place In Standby.* *Surface Type*

Figure 8-9 Waypoint Info Airport Runway Information Page

1. Touch the **Runways** tab to view information about the available runways for the selected airport. The runway identifiers, surface type, lighting with Pilot Controlled Lighting (PCL) frequency, runway size, and Traffic Pattern direction are shown.

2. Touch the **PCL** key to load the PCL frequency into the Com Standby location.

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8.2.5   Frequencies

1. Touch the **Frequencies** tab to view details about available frequencies for the selected airport.

2. Touch the **Up** and **Down** keys to view additional frequencies, as needed. A "c" symbol in a white circle will appear next to frequencies that also function as the Common Traffic Advisory Frequency (CTAF).
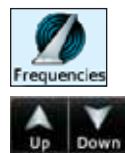
*Distance & Bearing To Airport
From Current Position*

*Airport
Identifier, City,
& Airport Type*

Frequency Name

*Airport
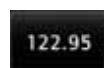Lat/Lon*

*Airport
Frequencies
Page Tab*

*"c" Indicates
CTAF*

*Touch Frequency
Key To Load Into
Com Standby*

*Touch
To Scroll*

Figure 8-10 Waypoint Info Airport Frequency List Page

3. Touch the **Frequency** key next to the frequency name to load it as the Com or Nav standby frequency, depending on frequency type.

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8.2.6 Weather (WX) Data

1. Touch the **WX Data** tab next to the center window to view textual METARs, City Forecast, and TAF weather information available for the selected airport.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Lat/Lon

Airport Weather Page Tab

Weather Information

Figure 8-11 Waypoint Info Airport Weather Page

2. Touch the **Up** and **Down** keys to scroll through the Weather page information.

Distance & Bearing To Airport From Current Position

Airport Identifier, City, & Airport Type

Airport Lat/Lon

Airport Weather Page Tab

Weather Forecast Information

Touch To Change Pages

Figure 8-12 Waypoint Info Airport Weather Forecast Page

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8.2.7   NOTAM Pages

1. Touch the **NOTAMs** tab next to the center window to view any NOTAMs available for the selected airport. This feature is supported with ChartView and FIS-B through the GDL 88.

Figure 8-13 Waypoint Info Airport NOTAMs Page

2. Touch the **Up** and **Down** keys to view additional information, as needed.

8.2.8   Helipads

1. Touch the **Helipad** tab next to the center window to view any information available for the selected helipad. Helipad information may not be complete or consistent due to the data available from the 3rd party sources.

Distance & Bearing To Helipad
From Current Position

Helipad
Identifier, City,
& Type

Helipad
Lat/Lon

Helipad Info
Page Tab

Helipad
Information

Figure 8-14 Helipad Waypoint Info

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8.3 Intersection (INT)

The Intersection page of the Waypoint Info function provides a variety of detailed information about the intersection. The top left area of the page displays the Intersection identifier and region. The top center area shows the lat/lon coordinates of the Intersection and the bearing (with direction arrow) and distance to the Intersection from your present position.

Select another Waypoint by touching the **Waypoint Identifier** key, entering the characters for the desired name with the alphanumeric keypad, and then touching the **Enter** key. You may also search through the list by touching the **Find** key and then choosing from the existing list of waypoints by touching the desired waypoint from the list.

The center area of the page shows a map with the Intersection in the center.

1. While viewing the Waypoint Info page, touch the **Intersection** key.

Distance & Bearing To Intersection From Current Position

Intersection Identifier

Intersection Lat/Lon

Nearest VOR Information

Intersection Area Map

Intersection Symbol & Identifier

Touch & Move Finger While Pressing To Pan Map

Touch To Zoom

Map

Traffic

Terrain

Weather

Nearest

Services/ Music

Utilities

Figure 8-15 Waypoint Info - Intersections

2. Use the **In** and **Out** keys to zoom in and out on the map. You may touch the map window and while lightly pressing the display, drag your finger to move the map view.