2 Get Started

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Power Up

The unit receives power directly from the aircraft's electrical system. Upon power-up, the bezel key backlight momentarily illuminates. System failure annunciations typically disappear within the first 30 seconds after power-up.

500	Version: 20.00dd	GPS Version:	8.0
*	Navigation	1912, Current until 0	5-DEC-19
30	Basemap	19M1	
ž	Obstacle/HOT Line	19B6, Current until 0	5-DEC-19
+	SafeTaxi	19S6, Current until 0	5-DEC-19
	Terrain	16T1	
\$	FliteCharts	1912, Current until 0	5-DEC-19
	[
		Cont	nue

The start-up screen presents the unit software versions, the name and status of all installed databases, and the Database Updates page access key.

Tapping **Continue** advances to the Instrument Test page.

WI-FI SETUP ACCESS



If a Flight Stream 510 wireless datacard is present, the **WiFi Info** key appears in the controls bar. Tapping this key opens a setup page. Refer to *Wi-Fi Setup* for instructions.

Instrument Panel Self-Test

To ensure safe operation, continuous built-in test features exercise the unit's processor, memory, external inputs, and outputs. The Instrument Panel Self-Test page displays the results of all external equipment checks performed by the unit.

LCDI	Half Left	Euclon Reard
	Out of View	Fuel of Board
VELG	Out of View	0.0 GAL
TO/FROM	То	
ANNUN	On	Fuel Flow
OBS		10.1 GAL/HR
DTK	150°	
All map an	d terrain data provide ference to your surro l awareness.	ed is only to be used as a undings and as an aid to
situationa		
situationa		

Review this list to ensure that all CDI/HSI outputs and other displayed data are correct for the connected equipment.

Tapping **Continue** advances to the Home page.

If an instrument remains flagged after one minute, check the status of the associated LRU, then contact a Garmin dealer for support.

Preset Fuel Quantities



CAUTION

Ensure that estimated fuel quantity values are accurate before flight.

FEATURE LIMITATIONS

For the operating limitations of a specific aircraft, consult the POH.

GTN Xi stores preset fuel amounts for estimated full and tab amounts. These settings may not be editable if the unit is interfaced with a digital fuel computer.



Fuel on Board

Specify the current fuel quantity.

Tapping this key opens a keypad. Preset keys for "full" and "tabs" aid in fuel data entry.

Initial value automatically reduces based on current fuel flow.



Fuel Flow

Set fuel flow amount.

Tapping this key opens a keypad.

	FUEL CAPACITY ENTRY KEYS
Set Full/ Tabs	 Set Full/Tabs Opens the Fuel Capacity Setup menu. Select the appropriate data entry key and enter the estimated fuel amounts. Fuel Full Capacity: Specify the tank full amount. Fuel Tab Capacity: Specify the tank tab amount. These values vary according to aircraft type.
Full	Full Sets the fuel remaining value to the specified full amount.
Tabs	Tabs Sets the fuel remaining value to the specified tab amount.

FUEL CAPACITY UNITS



Fuel capacity units are set in the System Units app.

From the Home page:

Tap **System** > **Units** > **Fuel**, and select the preferred units.

Databases



NOTE

The navigator supports SD cards in the FAT32 format only, with capacities ranging between 8 GB and 32 GB.

Databases are stored in the unit's internal memory. To view update cycles, or to purchase individual databases or database packages, go to <u>flyGarmin.com</u>.

There are two methods for loading and updating databases. Do not attempt either of these while in flight (on ground only).

- Load databases via SD card. Once loading completes, you may power off the unit and remove the card.
- **Transfer databases from a Flight Stream 510 wireless datacard.** This method requires the Garmin Pilot app on a portable electronic device.

	SUPPORTED DATABASES
Basemap	Bodies of water, geopolitical boundary, and road information
ChartView ¹	Jeppesen terminal procedures
FliteCharts	AeroNav terminal procedures
Navigation	Airport, NAVAID, waypoint, and airspace information (Garmin or Jeppesen)
Obstacles	Obstacle and wire data
SafeTaxi	Airport surface diagrams
Terrain	Terrain elevation data

¹ Optional third-party database.

Aviation Database Errors

Visit <u>flyGarmin.com</u> to report any discrepancies in database information. These may include incorrect procedures, inaccurate depictions of terrain, obstacles and fixes, or errors with any other screen element used for navigation or communication purposes.

For information regarding third-party navigation databases, go to jeppesen.com.

Database Effective Cycles

Most databases expire at regular intervals. Exceptions include Basemap and Terrain, which neither expire nor update on a regular schedule.

🔶 Navigation	1809, Expired 13-SEP-18
🥺 Basemap	18M1
☆ Obstacle/HOT Line	18B5, Expired 08-NOV-18
A→ SafeTaxi	18S5, Expired 08-NOV-18
杰 Terrain	16T1
📚 FliteCharts	1809, Expired 13-SEP-18

☆ Obstacle/Wire	18B6, Expired 03–JAN–19
<mark>A+</mark> SafeTaxi	18S6, Expired 03–JAN–19
🔺 Terrain	Database Not Found

The start-up page lists all currently installed databases. Review this list for current database types, cycle numbers, and expiration dates.

Yellow text denotes when a database is:

- Not available
- Installed before its effective date
- Missing date information
- Past its expiration date

DATABASE EFFECTIVE STATUS

Databases with no effective date	 Effective upon release Includes Basemap and Terrain
Databases with specified effective dates	 Effective during a specific period Unit determines database status using the current date and time from GPS Automatic activation occurs on the effective date

Overwriting SD card database files

When database files are loaded to the SD card, any previously loaded database files of the same type residing on the card are overwritten. This includes loading a database of a different coverage area or data cycle than that currently residing on the SD card.

Active and Standby Databases

The navigator uses two types of databases:

Active Databases

The databases in use by the system.

Standby Databases

Databases that have not reached the effective date. These remain on the SD card until they become effective.

Database Info

WHERE TO FIND IT

Home

• System

During normal operation, you can view information about all active and standby databases from the System Status page.

ACTIVE DATABASE LIST

	Navigation	n Databas	se
Region:	WW-ADB2	Cycle:	1809
Effective:	16-AUG-18	Expires:	13-SEP-18
	Basemap	Databas	e
Version:	18M1	Created:	13-MAR-18
Ob	stacle/HOT	Line Dat	abase

View Copyrights

Selecting **Active** displays information about the databases currently in use. You can also access copyright information from here.

Tapping **View Copyrights** displays copyright information for all installed databases.

STANDBY DATABASE LIST

Navigation Database			
Source: Card			
Cycle:	1911	Effective:	10-OCT-19
	Database	available on	card
Basemap Database			
Source: Ca	rd		
Version:	19M1		

No standby databases found

Selecting **Standby** displays information about databases that are not yet effective.

GTN Xi notifies when no standby databases are available.

DATABASE NOT FOUND

DATABASE Chart function unavailable.

	SafeTaxi	Database	
Cycle:	1856		
Effective:	08-NOV-18	Expires:	03-JAN-19
	Cha	arts	
Cycle:		Effective:	
Expires:		Disables:	

Notifications for databases not present or available also display in the form of system messages.

Review the Active Database Info list to determine the status of the indicated database.

Database Not Present

Manual Updates

FEATURE LIMITATIONS

The Database Updates page is available only when:

- The aircraft is on ground
- The start-up page is active (i.e., during power up)

Database Updates Page



This page presents a list of all available databases.

To open, tap the **Databases** key on the start-up page.

Databases

DATABASE SOURCE INDICATION

Connext Icon



A Connext icon indicates when a database is from Garmin Pilot via wireless transfer.

No indication means the database is either from an SD card or the unit's internal standby queue.

SELECT ALL DATABASES



Select individual databases for transfer, or choose **Select All** if all listed databases require updating.



By default, this page displays only the databases recommended for update.

A message notifies when no such databases are available.

No recommended databases available. Press Show All button to see exhaustive list.



After all selections are made, initiate the update process by tapping **Start**.

Database Updates

Database Update Completed! Restarting... The unit automatically restarts once all updates are complete.

SHOW ALL DATABASES



Tapping **Show All** displays a complete list of all databases.

Databases from Garmin Pilot are not available. Press the WiFi Info button for more information.
Navigation: USA-ADB2 1912, Not effective until 07-NOV-19
Basemap 19M1
Obstacle: US/Canada/Europe Fixed-Wing 19B6, Not effective until 10-OCT-19

This list may include databases that are:

- Not yet effective
- Older than the currently active database(s)
- Unable to update due to an error

ERROR INFORMATION



To determine the cause of a database error, tap Error Info.



An information window provides details regarding the state of the database.

SELECT REGION



This key appears when two databases are of the same type and cycle, but pertain to different regions.



To specify a database region:

Tap **Select Region**, then select the appropriate menu option.

Automatic Updates

Automatic updates occur when:

- A newer database is detected on the SD card or in the internal standby queue
- A newer database is within its effective dates
- The aircraft is on ground

When a newer database is available, follow the on-screen prompts to complete the update process.

INSTALL OR UPDATE A DATABASE USING AN SD CARD



- 1. Download a database onto an SD card.
- 2. Insert the SD card with the most recent database(s) into the card slot.
- 3. Power on the unit.



Selecting **Update** opens the Database Updates page, where a list of the newest databases is available for review.



Select the databases for transfer, then tap **Start**.



Database Updates				
Databases – 5 of 5				
Terrain Database – 4%				

Terrain databases may require up to 5 minutes for transfer. Total transfer time depends on the SD card type.

All newer databases (effective and expired) transfer from the SD card to the internal standby queue.

A progress bar displays the name of each database as it uploads to the unit.

The unit automatically restarts once the update is complete. Updates are indicated in the list of currently installed databases.

Database Concierge

FEATURE REQUIREMENTS

- Flight Stream 510 wireless datacard
- Garmin Pilot app on a mobile device
- The aircraft is on ground



Database Concierge allows wireless transfer of databases from a mobile device while the aircraft is on ground.

A pilot selects and downloads databases inside the Garmin Pilot app. Transfers occur once Flight Stream 510 establishes a wireless connection inside the aircraft.

Database Concierge Transfer Function

- · Provides automatic updates for databases with effective dates
- Preloads databases that are not yet effective by placing them in the internal standby queue
- Displays database type, cycle, effective date, and transfer progress
- Allows manual operation via Start key
- Requires pilot confirmation

TRANSFER A DATABASE USING DATABASE CONCIERGE

He WiFi Information				
Database Concierge Status				
Connect to the Flight Stream WiFi network See Network Settings on portable device				
SSID	Password			
Flight Stream 510	GarminAT			

- 1. Purchase database(s) from <u>flyGarmin.com</u>.
- 2. Open Garmin Pilot and follow the download instructions.
- 3. Install Flight Stream 510 and then power on unit.
- 4. Connect to Wi-Fi.
- 5. Follow the on-screen prompts.



Database Concierge transfers databases from the app to Flight Stream 510. A progress bar shows when this process is complete.

GTN Xi either updates or preloads databases based on their effective date. A second progress bar indicates upload status.

The unit automatically restarts upon database activation.

SKIP TRANSFER

Tapping **Skip Transfer and Continue** cancels any unfinished wireless transfers and initiates the update process.

The unit activates any databases that completed transfer before the interruption. Previously selected databases on an SD card or in the internal standby update as well.

The message "Transfers interrupted" displays if no databases are available.

Database SYNC



Database SYNC minimizes database maintenance by synchronizing active and standby databases across all configured LRUs. Once a standby database becomes effective, each LRU automatically generates an update prompt.

FEATURE LIMITATIONS

Not applicable to Terrain database



disables the Chart Streaming function (if enabled).

Database SYNC Transfer Function

OK

- Enables automatic database synchronization across all capable Garmin avionics
- Includes active and standby databases
- Prompts unit restart if a new database is effective and the aircraft is ground

Chart Streaming



Chart Streaming allows streaming of individual charts on an as-needed basis until database sync is complete.

Toggling this function off has no affect on Database SYNC.

FEATURE LIMITATIONS

• Available only when Database Sync is active and a current chart database is available

WHERE TO FIND IT

This function resides in the System Status menu.

System

Home > System > System Status > Menu > Database SYNC > Chart Streaming

Chart Streaming Function

- Enables automatic streaming of individual charts from the newest chart database
- LRUs with chart streaming enabled display the most current chart information
- Current charts display on the Charts page; chart overlays are available for display on Map
- Chart database effective date displays on Charts page when chart expires
- Available for both ChartView and FliteCharts

A typical chart database may take up to one hour to synchronize across multiple LRUs.

Connectivity



Connext works via the Bluetooth data link to provide up-to-date, wireless information throughout the cockpit.

FEATURE LIMITATIONS

- Unit allows pairing of up to 13 Bluetooth enabled devices, with two simultaneous device connections
- Auto reconnect function is not available for Android devices

Connext Setup

Home System The Connext interface allows communication with Garmin Pilot from a portable electronic device.

Connext Features

The following features are available on your portable electronic device.

- GPS position and velocity information
- Uncorrected barometric pressure altitude used by transponder and ADS-B
- ADS-B In traffic data
- FIS-B weather and flight information
- AHRS data from built-in sensor^{1, 2, 3}

¹ Attitude data does not output to other installed avionics. ² Flight Stream 210 only.

³ The internal AHRS sensor is only for use with a portable electronic device. All internal AHRS functions are automatic and do not require pilot action.

Bluetooth Setup

Bluetooth Wireless Features

- FIS-B weather
- ADS-B traffic
- GPS/WAASposition, velocity, and time
- Pressure altitude
- AHRS
- Magnetic heading
- Flight plan transfer
- Flight data logs
- GSR 56 SMS messaging
- SXM weather

The unit supports wireless pairing with up to 13 portable electronic devices via the Garmin Pilot app.

Bluetooth device management options reside on the Paired Devices page. Opening this page automatically initiates device pairing.



Device information and pairing mode status display on the Connext Setup page.

Controls for enabling Flight Stream features are reside here. These include:

- Flight Plan Import
- Databases
- Phone/SMS

BLUETOOTH NAME

Bluetooth Name Flight Stream 510 This key allows you to enter the name of the Bluetooth enabled device. Use the keypad or control knobs to enter the device name.

Managing Paired Devices



To view a list of all paired devices and their connection status, tap **Manage Paired Devices**.



To enable automatic connection between the unit and a paired device at power up, tap **Auto Reconnect**.

AUTO RECONNECT

Enables automatic connection between the unit and the paired device when the two are within range.

REMOVE

Removing a device from the list means it is no longer paired with the unit. This action requires pilot confirmation.

Be sure to remove pairing on both devices before attempting to pair them again.

CONNECTION STATUS



The device is configured and communicating properly.



The device is not available and is not configured or it is not communicating properly.

Importing a Flight Plan



Allow automatic import of flight plans via Bluetooth wireless technology.

Once the transfer is complete, an advisory message informs that a new flight plan is available for preview.

To view the flight plan, acknowledge the advisory and tap **Preview**.

It may be necessary to turn this function off if a portable device application makes repeated erroneous attempts to send flight plans to the unit.

Wi-Fi Setup

WiFi Info (• Ready

Tapping **WiFi Info** opens an information page. This feature is accessible from the Database Update and start-up pages.



Information includes:

- Database Concierge connection status
- Connected device name
- Database update availability and instructions
- Wi-Fi SSID and password

When setting up Wi-Fi, use a password that contains letters in mixed case and numbers.

WI-FI INFO KEY STATUS ANNUNCIATIONS

Wi-Fi connection status annunciates on the key label when the information page is not active.



Flight Stream 510 requires power up.

Wi-Fi is active, but the unit is waiting to connect with a device.

Connection complete. Flight Stream 510 requires Garmin Pilot to be opened in order for database transfer to commence.

Garmin Pilot opened and streaming to unit.

CONNECT TO WI-FI

Follow the onscreen prompts when connecting to the Wi-Fi network.

- 1. Install Flight Stream 510 and then power on unit. Observe Wi-Fi status changes from "Offline" to "Ready."
- 2. Tap WiFi Info.
- 3. Enter the required SSID and password using the provided keypads.
- 4. Enable Wi-Fi setting on the portable device. Wi-Fi status changes to "Open App" once pairing is complete.

COM

AVAILABLE WITH: GTN 635Xi/650Xi/750Xi

COM Standby Control Panel



1	Frequency Entry Field	4	Transfer (Flip-Flop) Key
2	Find Key	5	Data Entry Keys
3	Monitor Key		

From the COM Standby control panel you can:

- Specify a standby frequency
- Swap active and standby frequency values
- Enable monitor mode
- Access radio volume controls

COM Volume Controls

Percent of Max Volume Relative Volume Indicator



Adjust radio volume with the small knob according to your preference.

The unit retains volume settings over power cycles.

Open Squelch



Push the volume/squelch knob to override the automatic squelch function. Push it again to return the squelch to automatic operation.

"SQ" annunciates in the COM active frequency window to show when the squelch is overridden (i.e., when the squelch is open).

The automatic squelch function rejects many localized noise sources. Overriding this function may be helpful when listening to a distant station or setting the volume level.

Volume/Squelch Knob Adjustments



Knob focus is determined by radio selection. Selecting the COM control sets the focus to the COM radio. Selecting the NAV control sets it to the NAV radio.

When COM radio is active:

- Pushing the knob disables automatic squelch control.
- Turning the knob adjusts the COM volume percentage. If NAV radio is active:
 - Pushing this knob enables or disables the ident tone.
- Turning the knob adjusts the NAV volume percentage.

COM Radio Setup

WHERE TO FIND IT COM radio customization options are accessible via the System Setup app. System System Setup COM/NAV 🔹 System – Setup COM / NAV COM Channel Spacing **Reverse Frequency** 1. 3 Lookup 25.0 kHz Knob Control Default Knob Control Radios 2 4 Page Navigation Local & Remote COM Sidetone Control Link to COM VOL 5 Offset +0%

1	COM Channel Spacing Key	4	Knob Control Radios Key ¹
2	Knob Control Default Key	5	COM Sidetone Controls
3	Reverse Frequency Lookup Key		



From here you can:

- Set transceiver channel spacing
- Enable reverse frequency look-up functionality
- Select the default knob control function
- Enable remote radio frequency tuning ¹
- Adjust sidetone volume offset

¹ Dual GTN Xi installations only.

Set COM Channel Spacing

The unit supports channel tuning for both 8.33 kHz and 25 kHz channels within radio-frequency range. Channel spacing is set to 25.0 kHz by default.

COM Channel Spacing 25.0 kHz Tapping **COM Channel Spacing** toggles the transceiver channel spacing between 8.33 kHz and 25.0 kHz.





8.33 kHz step configuration is available for European operations.

25.0 kHz



COM radio operates in the aviation voice band, between 118.000 and 136.975 MHz, in 25.0 kHz steps.

If flying in a region where 8.33 kHz channel spacing is available, set the COM radio to 8.33 kHz to prevent the loss of any stored or recently used frequencies.

Revert Knob Function to Radio Control

You may change the default function of the dual concentric knob to accommodate your workflow. Knob control is set to Page Navigation by default.



Tapping **Knob Control Default** changes the default setting to COM Radio for standby frequency control. Page navigation remains accessible via knob push.

From the Home page:

Tap > System > Setup > COM/NAV > Knob Control Default.

Default knob function indicators change based on selection.



Tapping the key again returns the default setting to Page Navigation.

Access Remote Unit Radio Functions

FEATURE LIMITATIONS

• Knob Control Radios option available for dual GTN Xi installations only

Remote radio frequency tuning is available for dual GTN Xi installations. The Knob Control Radios option allows you to access remote unit radio functions via the dual concentric control knob.

Knob Control Radios

Tapping **Knob Control Radios** toggles the knob function between two control options.

Local

Limits knob functionality to local unit radios and page navigation only.

Local & Remote

Sets knob control to both local and remote navigators.

For information about remote unit radio functions, read *Remote Radio Control* in this section.

Enable Reverse Frequency Look-up

FEATURE REQUIREMENTS

- Valid position data
- Active navigation database

FEATURE LIMITATIONS

• Available only for the nearest stations in the database



Enabling this option displays the facility identifier and frequency type for active and standby frequencies.

The unit verifies the displayed frequency against the database at least once per minute.



When frequency look-up is active, COM displays:

- Nearest facility identifier (if available)
- Multiple facility indication (if more than one)
- Frequency type
- Approach or Departure indications (if applicable)

When flying between airports that use the same frequency, it may take up to 2 minutes for look-up information to change after crossing the half way point.

Adjust Sidetone Volume Offset

- Availability dependent upon configuration
- Offset range: +/-25% of total COM audio volume range



If the unit is wired for audio output, set the sidetone volume offset to the preferred level. By default, the offset value is set to zero percent.

The unit retains manual offset settings over power cycles.

COM sidetone is audio spoken into the microphone that is played back in real time over the headset. The offset setting determines sidetone volume for the COM during radio transmission. Adjustments determine the amount that the sidetone volume level is offset from the COM receiver volume or the configured sidetone volume.

LINK TO COM VOLUME



Enabling this function allows you to adjust the amount that the sidetone volume level is offset from the COM receiver volume. These adjustments are dynamic in that they vary with the COM receiver volume level.

To adjust the offset from the COM receiver volume:

- 1. Enable Link to COM VOL.
- 2. Tap **Offset** and adjust as necessary.

To adjust the offset from the configured sidetone volume, disable **Link to COM VOL** and then adjust the offset as necessary. These adjustments are fixed as they are relative to the configured sidetone volume.

Tuning & Monitoring

Active Frequency

Standby Frequency



Communication frequencies are split between two selectable windows.

The upper window presents the active COM radio frequency. This is the frequency currently in use for transmit and receive operations.

The lower window presents the standby radio frequency. This frequency may be set and activated at any time.

COM STATUS INDICATIONS

Status annunciations denote active functions, modes, and frequency types.



¹ Dual GTN Xi installations only.

Direct Tuning





You may enter a standby frequency using the data entry keys on the COM Standby control panel or by turning the control knob.

Tapping **STBY** opens the control panel. From here you may specify a frequency or select one using the provided search options.

The current standby frequency value displays in the direct tuning field.

DATA ENTRY KEYS



Enter a new standby frequency using the provided data entry keys or by turning and pushing the control knob.

To cancel the entry and exit the control panel, tap **Back**.

Entering the new frequency value places it in standby.

Get Started

FREQUENCY AUTOFILL



Numeric characters autofill the first valid frequency value based on each selected digit.

Autofill characters are muted and display from the cursor position to the right of the field.



Selecting a digit that is not valid for the cursor location results in no entry.



Simplified Frequency Entry

The direct tuning field allows you the option of entering frequencies without typing the leading and/or trailing digits. For example: To enter frequency 121.50, you need only tap **2**, **1**, and **5**. The field autofills the leading "1" and trailing "0." Attempting to enter a frequency value after selecting an invalid digit generates a pop-up message.

Confirm the request by selecting **OK**.

KNOB TUNING

The dual concentric control knob allows you to enter a standby frequency without opening the control panel. Pushing the knob toggles between radio and page navigation functions.



The selected STBY window turns cyan when the knob is used to change the STBY frequency.



If no action occurs, the selected STBY window reverts to cyan text after 3 seconds. This indicates it can be controlled by the knob.



When the STBY COM frequency is no longer selected, it reverts to white text.

Get Started

Transfer Frequency to Active (Flip-Flop)

Before

After



The transfer (or *flip-flop*) function allows you to swap the active and standby frequency values.

This function is accessible multiple ways.

ACTIVE FREQUENCY WINDOW



Tapping this window swaps the active frequency value with the standby frequency displayed in the lower window.

Tap once to swap the displayed frequency values. Tap again to swap them back.



A transfer icon indicates that flip-flop functionality is available.

XFER KEY



Tapping this key on the COM Standby control panel performs the same function as tapping the COM active frequency window.

Frequency Flip-Flop via Control Knob



Pushing and holding the control knob for 0.5 seconds automatically flip-flops the active and standby frequency values.

- "Hold for flip-flop" control label appears in the annunciator bar
- Standby and active COM frequency values swap



Frequency Autofill & Transfer

If you initiate a transfer before completing frequency entry, the direct tuning field autofills the remaining characters, enters the frequency into the standby field, then swaps it with the active frequency.

Remote Radio Control

FEATURE REQUIREMENTS

• Second GTN Xi series navigator: GTN 635Xi, GTN 650Xi, or GTN 750Xi

FEATURE LIMITATIONS

- Dual GTN Xi installations only
- NAV radio options available only on GTN 650Xi/750Xi

Some dual GTN Xi installations allow you to tune radio frequencies on both units from a single navigator. Control options allow you to switch between local control (local navigator only) and remote control (local and remote navigators).

Radio ID Label -----

Standby Frequency



An inverted radio label differentiates COM/NAV 2 from COM/NAV 1.

This label always appears for COM/NAV 2 regardless of whether it is the remote or local radio.



Tapping **STBY** opens the control panel for the indicated radio.

From here you may tune the indicated radio or access controls for all radios by tapping the **Radios** key.



Get Started

Radios are listed according to navigator (local/remote). Cyan denotes the current radio selection. A frequency control key allows you to open the standby control panel for the associated radio.



Tapping **Back** closes the list and returns to the previous view.

Turning the volume knob adjusts the volume level for the active radio only.



Changes in radio selection and standby frequency are reflected in the control bar.

Remote Radio Control Knob Access



When remote radio control is active, you may toggle between multiple radios quickly via knob push. Knob focus indications on the control bar and on the Radios page change to reflect the current radio selection.

Available radio options are dependent upon unit type.

- COM only units switch between COM 1 and COM 2
- Units with COM and NAV radios scroll as follows: local COM > local NAV > remote COM > remote NAV

Direct Tuning from the Radios Page:



Knob tuning adjustments and frequency transfers are reflected in real time on the corresponding control key.
LOAD FREQUENCY OPTIONS



You can load active or standby frequency values to any radio from a search tab or waypoint information page (i.e., Airport, VOR). Selecting a frequency from one of these locations opens a pop-up.

Select the **Active** or **Standby** key for the appropriate radio.

Monitor Mode



Enabling monitor mode allows you to listen to the standby frequency while the unit continues monitoring the active COM channel.

When the COM active frequency receives a signal, the unit automatically switches back to the active frequency. Once activity on the COM active channel ceases, the unit returns to listening to the standby frequency.

Tower Transmission (Active Frequency)

ATIS Broadcast (Standby Frequency)



Monitor mode is useful when you want to listen to a recorded broadcast (e.g., ATIS) on the standby channel, but still receive control tower transmissions on the active channel.

Frequency Selection

The unit provides multiple options for finding and selecting a standby frequency from the available database frequencies.

Search Tabs



. .

The **Find** key provides access to multiple search tabs. Each tab displays a list of selectable identifiers based on specific criteria.

Nearest Airports	Lists up to 25 airports within a 200 nm radius
Nearest FSS & ARTCC	List the distance, bearing, and frequency associated with the specified facility name
Recent	Lists up to 20 of the most recently tuned frequencies
Flight Plan	Lists all frequencies contained in the active flight plan
User	Lists up to 15 user-defined frequencies

TAB ENTRIES



Frequency Key

Each entry includes general information about the associated waypoint.

MULTIPLE FREQUENCIES



Tap **Multiple FREQ** and select a frequency from associated pop-up.

This key appears when more than one frequency is available at the indicated identifier.

Applicable to functions displaying information only (Nearest Airports, FSS, and ARTCC).

Remote Frequency Selection

• Availability dependent upon configuration

On units configured for remote frequency recall, user frequencies are selectable via a remote switch.

- Pressing the switch once loads the next user frequency into the STBY window
- Pressing the switch repeatedly scrolls through the list of presets
- Some installations may have two dedicated recall switches: one to scroll up, one to scroll down
- Selections do not activate until transfered to active

Emergency Frequency

Pressing and holding the volume knob provides a quick method for remotely tuning the emergency frequency (121.50 MHz). This function also sets 121.50 MHz as the active frequency. Remote COM Lock is not activated if using this method. This feature is available any time the unit is on, regardless of GPS or display status.

Remote COM Lock

If configured, pressing and holding the remote COM transfer key for two seconds locks the COM at 121.50 MHz, preventing further changes in frequency. A message informs of the change in status. To unlock, press and hold the remote key again.

If the radio loses communication with the system, the unit automatically tunes to 121.50 MHz for transmit and receive operations, regardless of the displayed frequency.

Create User Frequencies

FEATURE LIMITATIONS

- Names may be up to seven characters in length
- Maximum number of 15 user frequencies



Name	Assign the frequency a unique identifier.
Frequency	Specify a frequency value.
Save	Add the frequency to the user frequency list.
Delete	Remove the selected user frequency from the list. Appears only for existing entries.

ADD A USER FREQUENCY

From the COM Standby page:

- 1. Tap **Find** > Select the **User** tab.
- 2. Tap Add User Frequency.
- 3. Specify the frequency name and value.
- 4. Tap Enter.



A pop-up message informs when the user frequency list is full.

EDIT USER FREQUENCY



Tapping the **Edit** key for an existing entry opens the same pop-up. From here you may modify the user frequency name and value.

Tapping **Enter** stores all changes.



Tapping **Delete** removes the selected user frequency from the list. A pop-up message requests confirmation.

COM Alert

118.15	
^{5ТВҮ} 136.97	

If the radio fails:

- Red "X" displays over the COM radio control
- Advisory message alerts
- COM control page is not available

COM radio fail annunciations are designed to be immediately recognizable. If a failure occurs while the control page is active, the display automatically returns to the previous page.

For information regarding pilot response to a COM radio failure, consult the AFMS.

Stuck Microphone

The COM transmitter automatically times out after 30 seconds of continuous broadcasting. This may occur when:

- Push-to-talk key on the microphone is stuck or accidentally left in the keyed position
- Push-to-talk function continues to transmit after releasing the key

The advisory message "COM push-to-talk is stuck" alerts for as long as the condition exists.

NAV

AVAILABLE WITH: GTN 650Xi/750Xi

Frequency Tuning & Selection



Navigation frequency tuning, transfer, and selection functions are identical to those used for communication frequencies.

Direct Tuning

Frequency Identifier from Morse Code



Frequency Identifier Based on GPS Position You may enter a standby NAV frequency using the data entry keys on the NAV Standby control panel or by turning the dual-concentric control knob.

GTN Xi automatically decodes Morse code and displays the Ident for the active frequency above it.

The reverse frequency lookup identifier displays below the frequency value. Frequency lookup results are based on GPS position and database information.

GTN 650Xi SERIES

Due to spatial considerations, only one frequency control may display at a time. COM is the default frequency control option.

STANDBY NAV FREQUENCY ENTRY



To change the standby frequency:

- 1. Push the dual concentric control knob repeatedly until the standby NAV frequency window is activated.
- 2. Rotate the inner and outer knobs or tap **STBY** and enter the frequency using the data entry keys.

Upon selection, the standby frequency window remains active for approximately 30 seconds.

You can tap **XFER** to assign the standby value as the active frequency, or select the active NAV frequency window to flip/flop values.

Navigation frequencies include:

- Glideslope
- Localizer
- VOR

Frequency Selection



The **Find** key provides access to multiple search tabs. Each tab displays a list of selectable identifiers based on specific criteria.

IDENT



When the standby NAV frequency window is active, pushing the volume knob activates the NAV IDENT function.

- "ID" annunciates in the active NAV frequency window
- Morse code tones are audible

Volume Knob Adjustments



Turning the volume knob while the NAV frequency window is activated adjusts the radio's volume percentage.

NAV Alert



If the radio fails:

- Red "X" displays over the NAV radio control
- Advisory message alerts
- NAV control page is not available

NAV radio fail annunciations are designed to be immediately recognizable. If a failure occurs while the control page is active, the display automatically returns to the previous view.

Use an alternate method of navigation in response to a NAV radio failure.

Audio Panel

AVAILABLE WITH: GTN 725Xi/750Xi

Audio Panel Controls



Audio panel controls are accessible via the **Audio Panel** key. This key is unavailable if the unit is not configured for audio or intercom LRUs, such as GMA 35.



PLAYBACK CONTROLS

The voice recorder feature records all audio heard on any MIC selected COM radio selected for transmission. Playback is heard by anyone listening on the selected radios. The clearance recorder can record up to 2.5 minutes of COM audio.



Tap Playback Controls to:

- Set volume level of recordings
- Play, pause, and cycle through recordings

CABIN SPEAKER CONTROL AND VOLUME

When cabin speakers are active, tap **Speaker Volume** to set the volume level.

HIGH SENSE

Prior to an ILS approach, tap High Sense for high marker sensitivity.

Mic Setup

MIC selection can be set in the MIC window or on the Audio Panel page.

Tap **MIC** to toggle between MIC 1 and MIC 2. Under MIC Selection, select which COM you want as your MIC selection. The selected MIC is automatically monitored as indicated by the green numbers in the MON field.



PASSENGER ADDRESS

Tap Passenger Address to toggle the passenger address system on and off.

SPLIT MODE

Active:

- Pilot uses one radio for MIC audio while the copilot uses a different radio
- Pilot and copilot can transmit simultaneously over separate radios
- Pilot can still listen to individually selected radios
- Pilot and co-pilot may talk and listen independently to the radios or PA
- Crew Intercom key is available allowing pilot and co-pilot to talk to each other

Inactive:

- Crew Intercom key is removed
- Selections are limited to Monitored Radios and MIC Selection

3D Audio

When enabled, 3D audio allows you to focus on and understand one source at a time. Depending on the selected COM channel, audio can be heard from your left, in front of you, or from your right.

To hear 3D audio, set stereo/mono headphones to the stereo position.

MARKER Audio

The GMA 35 marker beacon receiver uses an audio indicator to alert you when the aircraft passes over a marker beacon transmitter. When a green bar displays on the MRKR Audio key, the audio from the receiver can be heard on the headsets. Tap **MRKR Volume** to set the volume level of the alert.

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.

Marker beacon annunciations alternate between the standard and blinking symbol at the blink interval noted.

STANDARD SYMBOL	BLINKING SYMBOL	MARKER TYPE	BLINK INTERVAL
IM	IM	Inner	250 ms
MM	MM	Middle	333 ms
OM	OM	Outer	750 ms

Intercom

AVAILABLE WITH: GTN 725Xi/750Xi

Intercom Modes



Intercom controls are accessible via the **Intercom** key. There are different modes of operation to control communication, music, and the telephone in the aircraft.

Tap the arrow between the intercom recipients. When the arrow is green, it indicates communication is active between the recipients.



You can allow the co-pilot to hear what passengers hear.

Tap Menu > Group Co-Pilot with Passenger.

- Split mode is unavailable
- Co-pilot intercom/audio controlled by passenger

This is not recommended for multi-crew aircraft.

Intercom Setup

Setup controls allow you to access:

- Communication modes between pilot, co-pilot, and passenger
- Distribution and mute options for two music interfaces
- Distribution and volume of phone calls

Passengers cannot transmit over the active COM radio, even if equipped with a PTT key.

VOLUME AND SQUELCH ADJUSTMENTS

Volume and squelch may be set separately for the pilot, co-pilot, and passenger intercoms.

To set volume and squelch levels, tap **Pilot VOL/SQ**, **Co-Pilot VOL/SQ**, or **Passenger VOL/SQ**.

Directional keys increase or decrease volume and squelch.

Tapping **Auto Squelch** allows the unit to set squelch level automatically.



Music Setup

The GMA 35 provides two music interfaces. Select Music 1 or Music 2 to set:

- Who hears music
- When to mute music
- Music volume

At every power cycle, the "Mute music during radio" selection is active.

Telephone Setup



NOTE

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

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

Tap Telephone to set:

- The recipients of a telephone call
- The volume of the telephone call

Telephone audio distribution is retained across power cycles for the passengers. Pilot and co-pilot telephone distribution deactivates after a power cycle.

Bluetooth Audio

The GMA 35c provides an audio connection to a portable device via Bluetooth wireless technology.

Tap **Bluetooth** to set:

- Who can hear the Bluetooth enabled device
- When to mute audio
- Volume level

Telligence Voice Command

FEATURE REQUIREMENTS

Compatible audio panel

Garmin's Telligence Voice Command voice recognition feature allows the pilot and co-pilot to control the GTN Xi connected to a required GMA 35/350 using spoken commands. To activate Voice Recognition, push and hold the Push-to-Command (PTC) switch and speak a command. Release the PTC switch and the GTN Xi and/or the audio panel responds with a positive acknowledgment chime.

A negative acknowledgment tone plays if a command is not understood or the GMA and/or GTN Xi is unable to complete the request. Repeat the command by using the PTC switch, or by manually using the GTN Xi touchscreen. In the event of any abnormal voice recognition operation, the front panel controls and touchscreen may be used to override voice recognition and manually control the unit.

If Telligence Voice Command malfunctions and needs disabling, remove power from the GMA audio panel. This forces the audio panel into the fail-safe mode. The pilot can communicate using the COM 2 radio only.

AUDIBLE TONE DEFINITIONS		
Ascending (low to high)	Pass Command recognized and executed. Example: "Show Map page" is spoken and moving map displays	
Descending (high to low)	Fail Command unrecognizable or invalid. Example: "Show Map page" is spoken and the page does not change	

PASS/FAIL INDICATIONS

Voice Command Setup

To enable voice recognition, tap **System** > **Voice Commands** > **Voice Commands**.



VOICE COMMAND HISTORY

Tap **Command History** to view a list of recently spoken commands.

🚯 System – Voice Command History		
Voice Command His	tory	
Command Executed	Pilot	00:05:44 LCL
Tune Nearest Weath	ner Freque	ncy
Command Executed	Pilot	00:05:39 LCL
Select MIC One		
Command Executed	Pilot	00:05:23 LCL
Tune Nearest Tower	· Frequenc	V
Command Executed	Pilot	00:05:17 LCL
Back		
Command Executed	Pilot	00:05:09 LCL
Zoom In		
Command Executed	Pilot	00:05:06 LCL
Мар		
Command Executed	Pilot	00:05:02 LCL

For a list of available voice recognition commands, consult *Telligence Voice Command Guide*.

Audio Panel Alert



If the audio panel fails:

- Red "X" displays over all audio panel-related controls
- Advisory message alerts
- Audio panel, intercom, and Telligence Voice Command functions are not available

Audio panel fail annunciations are designed to be immediately recognizable. If a failure occurs while a control page is active, the display automatically returns to the previous view.

For information regarding pilot response to a GMA 35 audio panel failure, consult the AFMS.

XPDR

XPDR Control Panel



Transponder controls are accessible via the **XPDR** key. This key is unavailable when the control panel is active.



1	Squawk Code Entry Field	3	XPDR Mode Selection Keys
2	Squawk Code Entry Keys	4	VFR Key

The XPDR key becomes available when you:

- Enter a squawk code
- Open the XPDR menu
- View a message
- Select the Mode key
- Leave the control panel

XPDR Setup

XPDR Menu Data Field PRESS ALT FLT ID ADS-B Out Flight ID (if configurable)

Tap **Menu** to access the transponder setup options. From here you can:

- Change the display of data
- Enable 1090 ES ADS-B Out functionality (if configured)
- Assign a unique flight ID

Enable ADS-B Out Transmissions



Tapping **ADS-B Out** allows the transmission of ADS-B Out messages and position information.

Assign a Flight ID

FEATURE LIMITATIONS

• Availability dependent on configuration

FLY4GA	
Flight ID	

If the flight ID is editable, tap **Flight ID** and assign a unique identifier.

Flight IDs are alphanumeric (upper-case only) and have an eight character limit. The active flight ID displays by default.

XPDR Modes

Tapping **Mode** opens a menu of the available transponder modes. Options include Standby, On, and Altitude Reporting.

MODE OF HONS				
Standby	 Transponder does not reply to interrogations or transmit ADS-B Out Bluetooth wireless functions remain operational Unit continues to receive ADS-B In information, but is not a TIS-B participant 			
On	 Transponder replies to interrogations. Replies do not include pressure altitude Reply (R) symbol on the display indicates the transponder is responding Transmitted ADS-B Out does not include pressure altitude 			
Altitude Reporting	 Transponder replies to identification and altitude interrogations Reply (R) symbol indicates the transponder is responding Transmitted ADS-B Out includes pressure altitude 			

During Altitude Reporting mode, all aircraft air/ground state transmissions are handled via the transponder and require no pilot action. Always use this mode while in the air and on the ground, unless otherwise requested by ATC.

Squawk Code Keys

SPECIAL SQUAWI	K CODES
----------------	---------

1200	Default VFR code (USA)
7500	Hijacking
7600	Loss of communications
7700	Emergency

Eight squawk code entry keys (0 - 7) provide access to all ATCRBS codes. Tapping one of these keys begins the code selection sequence.

Use the **Backspace** key or outer control knob to move the cursor.



Digits that are not yet entered appear as underscores.

Activate the new code by tapping **Enter**. To cancel the code entry and exit the page, tap **Cancel**.



Active squawk codes remain in use until a new code is entered.

VFR



Tapping this key once sets the squawk code to the preprogrammed VFR code.

This code is factory set to 1200, but may be changed during configuration.

XPDR Key



Tapping the **XPDR** key activates the IDENT function for 18 seconds. This signal distinguishes the transponder from others on the air traffic controller's screen.

Tapping this key when another page is active immediately opens the control panel.

TRANSPONDER STATUS INDICATIONS

IDENT



- Reply active
- IDENT function active
- No change to transponder code

IDENT with New Squawk Code

XPDR R ENT+ID

- Reply active
- Transponder code
 modified

Standby Mode



- Standby mode
- Current squawk code (inactive)

Altitude Reporting Mode



- Altitude reporting mode
- Reply active
- Identify function active
- VFR squawk code (active)

R	Reply active
ID	IDENT function active
ON	Transponder in operation
ALT	Altitude Reporting
STBY	Standby
IDENT	Tap to initiate the IDENT function (code unmodified)
ENT+ID	Tap to accept modified code and initiate IDENT function

XPDR Alert



If the transponder fails:

- Red "X" displays over the IDENT key
- Advisory message alerts
- XPDR control page is not available

Transponder fail annunciations are designed to be immediately recognizable. If a failure occurs while the control page is active, the display automatically returns to the previous view.

For information regarding pilot response to a transponder failure, consult the AFMS.

ADS-B Altitude Reporting

FEATURE REQUIREMENTS

• GDL 88

FEATURE LIMITATIONS

• Display and control functionality dependent on GDL 88 configuration

ADS-B Control Panel



ADS-B Out controls are accessible via the **ADS-B** key. The location of this key varies by unit type.

GDL 88 Features

- Remote-mount ADS-B
 transceiver
- Transmits ADS-B Out messages to ATC and other aircraft
- Communicates ADS-B In data to panel-mounted avionics for the display of traffic and weather

When interfaced to a GDL 88 transceiver, GTN Xi allows control over some aspects of the ADS-B Out message and provides position information to the GDL 88.

Not all installations allow pilot control of ADS-B Out transmissions.

For more information, consult the *GDL 88 ADS-B Transceiver Pilot's Guide*.

ADS-B Key FEATURE LIMITATIONS

• Functionality dependent upon GDL 88 configuration

Transponder



Squawk Code (as reported by GDL 88) Depending on the configuration of your GDL 88, tapping the **ADS-B** key:

• Reports GDL 88 altitude reporting status

OR

• Allows on/off control of the GDL 88's altitude reporting function



Control Panel Annunciation "ALT" indicates that the unit is in altitude reporting mode.

This indication corresponds to the function status annunciation on the control panel.

Enable Anonymous Mode

FEATURE LIMITATIONS

• Availability dependent on GDL 88 configuration

During anonymous mode, the unit replaces identifying information in the ADS-B Out message with a temporary randomized number for privacy while providing position information. Instead of a flight ID, the unit transmits the call sign "VFR."



Tap **ADS-B** > **Anonymous**.

The key label changes from "Off" to "Armed."

Tapping **Anonymous** again toggles the mode off.

Assign a Flight ID

• Availability dependent on GDL 88 configuration



If the flight ID is editable, tap **Flight ID** and assign a unique identifier. The key is not selectable (read-only) when the ID is received from the GDL 88.

Flight IDs are alphanumeric (upper-case only) and have an eight character limit. The active flight ID displays by default.

GDL 88 Alert

ADS-B	
\nearrow	

If the GDL 88 fails:

- Red "X" displays over the ADS-B key
- Advisory message alerts
- ADS-B reporting functions are not available

Failure annunciations are designed to be immediately recognizable. If a failure occurs while the control page is active, the display automatically returns to the previous view.

For information regarding pilot response to ADS-B failures, consult the AFMS.

Pilot Settings



Unit customization options are accessible via the System menu. For details about COM/NAV radio settings and Connext Setup options, refer to the respective section.



Setup

- Set CDI scale and capture type
- Specify nearest airport runway criteria
- Set time format & local offset
- Select a new start-up page
- Select a keyboard type
- Enable crossfill functionality
- Access NAV radio settings (GTN 650Xi/750Xi only)
- Access COM radio settings (GTN 635Xi/650Xi/750Xi only)



Units

• Set the display units



User Fields

Select user fields¹

¹ Availability dependent upon unit configuration.



Alerts

• Set airspace & arrival alerts



Audio

Adjust click volume



Backlight

• Adjust display brightness



Page Shortcuts

 Customize page shortcuts for knob access



Other setup options allow you to monitor time in flight and create custom reminder messages. These settings reside in the system Utilities.



Flight Timers

- Set departure & trip timers
- Set a generic timer for general timing needs



Alerts

• Set custom reminder messages and when they display

CDI Scale

WHERE TO FIND IT



System

Set the scale for the course deviation indicator. Scale values represent full scale deflection for the CDI to either side.

Options: • 0.30 nm • 1.00 nm • 2.00 nm • Auto

Scale selections are reflected in the annunciator bar.



Manual Setting Annunciation



CDI scale is set to "Auto" (default). At the default setting, the scale sets to 2.0 nm during the en route phase of flight.

Aircraft is within 31 nm of the destination airport (i.e., terminal area). The scale linearly ramps down to 1.0 nm over a distance of 1 nm.

Aircraft is leaving the departure airport. The scale is set to 1.0 nm once the aircraft is over 30 nm from the departure airport. It begins to gradually ramp up to 2 nm when the flight phase changes from terminal (TERM) to en route (ENR).

During GPS approach operations, the scale gradually transitions down to an angular scale.

Aircraft is 2.0 nm before the final approach fix. Scaling tightens from 1.0 nm to the angular full-scale deflection defined for the approach (typically 2.0°).

Selecting a lower value (0.3 nm or 1.0 nm) prevents the selection of higher scale settings during ANY phase of flight. Example: If you select 1.0 nm, the unit uses this setting for en route and terminal phases, and ramps down further during approach.

Horizontal Alarm Limits

Horizontal alarm limits (HAL) are used to compare against GPS position integrity. These protection limits follow the CDI scale, unless the corresponding flight phase requires a lower HAL. For example, the selected scale setting is 1.0 nm, but full-scale deflection during approach still follows the approach scale setting (0.30 nm).

FLIGHT PHASE	CDI SCALE	HORIZONTAL ALARM LIMIT
Approach	0.30 nm or Auto	0.30 nm
Terminal	1.00 nm or Auto	1.00 nm
En Route	2.00 nm or Auto	2.00 nm
Oceanic	Auto	2.00 nm

ILS CDI Capture

FEATURE LIMITATIONS

Automatic switching is not available for aircraft equipped with a KAP 140/KFC 225 autopilot.

ILS CDI Capture Auto Switch

Tapping this key sets the manner in which ILS CDI capture occurs: automatically or manually This function may not be available in certain installations.

Auto Switch

Manual Selection

GTN Xi automatically switches the external CDI from GPS to VLOC on ILS approach.

Allows you to manually switch the external CDI connection using the **CDI** key.

For more about ILS approaches, refer to the *Procedures* section.

Startup Page

WHERE TO FIND IT

Home System Customize the default display page. This option resides in the System Setup app.

Tap **Startup Page** and select from the menu of available page options.

Page Options:

- Charts¹ Connext Weather DALT/TAS/Winds Default NAV²
- Emergency FIS-B Weather Flight Plan Flight Timers Fuel Planning
- Home (default) Map Nearest Airport Procedure Radar Sirius XM
- Stormscope Terrain Traffic Trip Planning VCALC VNAV
- Waypoint Info Airport
 Waypoint Info VOR
 Weather

¹ GTN 750 Xi Series only. ² GTN 650 Xi Series only.

Keyboard Type

WHERE TO FIND IT

Home

• System

Select a preferred keyboard type for use during alphanumeric data entry operations. This option resides in the System Setup app.

Keyboard **QWERTY** Tapping this key opens a menu of available keyboard types. Options and layout vary according to display size.

	GTN Xi SERIES		
REIBOARD IIFE	650	750	
Alphabetical (ABC)	•	•	
U.S. standard (QWERTY)	•	•	
Slider	•		

Nearest Airport Runway Criteria



Specify runway criteria to determine which airports appear on the Nearest Airport page. Options reside in the System Setup app.

Home > System > Setup > Nearest Airport

To avoid nuisance alerts during an approach, separate airport runway settings may be configured for the TAWS/HTAWS alerting function. Contact your installer for information about these settings.

Nearest airport runway criteria do not affect the best glide airport indicator. Contact a Garmin dealer to adjust runway criteria for this specific feature.

RUNWAY SURFACE

Runway Surface Options

- Any Hard Only
- Hard/Soft Water

Tap **Runway Surface** and then select the runway surface type.

Selecting "Any" allows all surface types to appear in the nearest airport list and be considered for use by Terrain.

MINIMUM RUNWAY LENGTH

Specify a minimum runway length to:

- Exclude airports with shorter runways from the nearest airport list
- Inform the terrain function of which airports are available for use, so that terrain alerts do not generate when landing at one of these airports

Typing "0" allows runways of any length to appear in the nearest airport list and be considered for use by Terrain.

INCLUDE USER AIRPORTS

Include User Airports

You can include user-defined airports in your nearest airport search. Deselecting this key excludes user airports from the search criteria.

Clocks & Timers

Timers



WHERE TO FIND IT

Home

• Utilities

Timer settings are accessible via the Utilities menu page. Toggle between timer types using

Monitor time in flight using three available timer types.

the provided display key.

Clock/Generic Timer

Stopwatch style counter. Count up or count down. Specify countdown time using the preset function.

Controls:

- Direction (Up, Down)
- Start Stop Timer Preset
- Reset Timer

Trip/Departure Timers

Measure elapsed airborne time since the last ground-to-air transition. Set timer to start at unit power up or once the aircraft is in air.

Controls:

- Criteria (Power On, In Air)
- Reset Timer

Clock

WHERE TO FIND IT

Home

Specify the time format and local offset. Settings reside in System Setup.

System

Format options include Local 12 hour, Local 24 hour, and UTC.

If a 12 hour or 24 hour clock is selected:

Tap Local Offset > Specify the appropriate offset value from UTC.

Page Shortcuts



A knob shortcut option allows you to customize up to seven slots on the locater bar

FEATURE LIMITATIONS

- Available shortcut options are dependent upon unit type and configuration.
- You may assign each page to only one knob slot on GTN Xi. Duplicating a page shortcut in a second slot will turn off the existing shortcut slot.

Knob	Slot 2	
Fligh	t Plan	

Tap a slot key and assign a page to that slot. Verify shortcut operation once complete.

Slots one and nine are reserved for navigation purposes. They are not editable.

Page Options:

Not all options may be available.

APT	Airport Info	NAV	Default Navigation ⁴
СНК	Checklist	NRST	Nearest Airport ⁵
CHRT	Charts ¹	PROC	Procedure
CNXT	Connext Weather ²	SXM	SiriusXM Weather ²
E6B	DALT/TAS/Winds	TERR	Terrain
EMRG	Emergency	TIME	Flight Timers
FIS	FIS-B Weather ²	TRFC	Traffic ²
FPL	Active Flight Plan	TRIP	Trip Planning
FUEL	Fuel Planning	VOR	VOR Info
LTNG	Stormscope ²	WXR	Radar ^{1, 2}
MAP	Map ³	OFF	Do not display shortcut

RESTORE DEFAULTS



Tapping Restore Defaults returns all slots to their default settings.

This option resides in the setup menu.

- ¹ GTN 750Xi Series only. ² Dependent upon unit configuration. ³ Assigned to slot 1 by default (GTN 750Xi Series only). ⁴ Assigned to slot 1 by default (GTN 650Xi Series only).

⁵ Assigned to slot 9 by default.
Alerts Settings



Receive alert messages when nearing your destination and/or entering a specific airspace type.

FEATURE LIMITATIONS

• Alert altitudes are dependent on aircraft and airspace altitudes and the pilot-specified altitude buffer value

Arrival Alerts

Arrival alerts generate a message when the aircraft is within a specified proximity of the destination. Distance units are based on the System Units setting.

ENABLE AN ARRIVAL ALERT

Tap **Arrival** > **Proximity**, then enter a distance value.

Airspace Alerts

Airspace alerts generate a message and filtering of the Nearest Airspace list. They rely on three-dimensional data (altitude, latitude, and longitude) to avoid nuisance alerts.



Control keys allow you to select which airspace boundaries generate an alert annunciation upon entry.





Alert boundaries for controlled airspace are sectorized to provide complete information on any nearby airspace.

Alert settings do not alter the depiction of airspace, nor do they change Smart Airspace settings on the Map page.

With the exception of Altitude Buffer, airspace alert options are on/off only.

Airspace alerts for Prohibited airspace cannot be disabled.

Unit Selections



Customize the display unit settings. Tapping a parameter key opens a menu of the available unit types.

PARAMETER	SETTINGS	
Altitude/Vertical Speed	• Feet (ft/fpm)	Meters (m/mps)
Distance/Speed	• Nautical Miles (nm/kt)	Statute Miles (sm/mph)Kilometers (km/kph)
Fuel	Gallons (gal)Imperial Gallons (Ig)Kilograms (kg)	Liters (lt)Pounds (lb)
Magnetic Variation	 Specify number of degrees for east or west (°E, °W) Available only when "User (°U)" is the active NAV angle 	
NAV Angle	Magnetic (°)True (°T)	 User (°U) External¹
Position Format	 LAT/LON DD.D° LAT/LON DD°MM.M' LAT/LON DD°MM'SS" MGRS 	 UTM Swiss Grid Irish Grid British National Grid
Pressure	Inches in Mercury (in)Hectopascals (hPa)	• Millibars (mb)
Temperature	Celsius (°C)	• Fahrenheit (°F)

¹ Availability dependent upon configuration.

SPECIFY UNIT TYPE

- 1. Review the current unit selections.
- 2. Tap the applicable parameter key.
- 3. Select a unit type.

User Selected NAV Angle



NOTE

When changing NAV angle, be aware that the DTK for an approach does not change on the active flight plan until you reload the approach.

Selected NAV angle units are applied to all angular values.

Options:

Magnetic	External
Corrects all track, course, and heading information to the magnetic variation computed by the GPS receiver.	Synchronizes GTN Xi NAV angle with the local MFD. Availability is dependent upon configuration.
True	User
References all information to true north.	Allows you to manually set a magnetic variation value between 0° and 179° E or W.

Position Formats

The selected format is used in all locations where position information is available. Format detail is as follows.



REGIONAL POSITION FORMATS

By default, GTN Xi displays lat/lon for any positions outside the grid region.

British National Grid

Irish National Grid

Grid Designator Easting Value



Northing Value

Swiss National Grid

Easting Value



Northing Value

Grid Designator





Northing Value

Click Volume



Your GTN Xi is wired for audio output. Set the click volume to the preferred level.

Click Volume Control



Volume displays as a percentage of the maximum volume, with 0% being muted and 100% being maximum volume.

HTAWS Voice Alert Options

FEATURE REQUIREMENTS

• HTAWS

An optional voice callouts may be available for units configured for HTAWS alerting. To set the volume, tap **Voice Callouts** > **MAX Voice Callout**, and set a value.

Voice Callout Availability

- Down to 100 ft above terrain when HTAWS is present and GSL above terrain is used to generate callouts (no radar altimeter)
- Down to 50 ft above terrain when a radar altimeter is present and supplying the height above terrain to generate callouts

Display Brightness Control



Depending on configuration, display brightness is controlled using inputs from the built in photocell, aircraft dimmer bus, or both.

Automatic Brightness Control



Dimming is limited to prevent on-screen indications from becoming unreadable. The built in photocell automatically controls display brightness based on ambient light levels.

During automatic control, the pilot may still adjust brightness using the manual offset controls in the Backlight page.

The unit retains manual offset settings over power cycles.

Manual Brightness Control

Optionally, the unit is configurable to use an aircraft dimming bus for display brightness control. Upon reaching minimum input level, display brightness reverts to the photocell. This prevents the display from going black in the event of a dimmer input failure.

Installer configured curves determine the amount of change in brightness that occurs in response to a control adjustment.

If brightness control is not satisfactory, contact a Garmin dealer to adjust the lighting curves.

Scheduled Messages



Create custom reminder messages and set when they will display. Allows one time, periodic, and event-based message types.

WHERE TO FIND IT

Home Utilities Scheduled Messages Active reminders appear at the top of the scheduled message list. This list is accessible via the Utilities menu page.

Examples: • "Call FBO" • "Close flight plan" • "Switch fuel tanks"

CREATE A REMINDER MESSAGE

1. Tap Create Scheduled Message.

2. Specify the message type, content, and countdown timer value.

Message Types

TYPE	DISPLAYS
One time	When the timer expires, or following each power cycle until message deletion.
Periodic	After a specified duration of time. Countdown repeats once the message displays.
Event	According to a specified date and time. Message timer not applicable.

Modifying Scheduled Messages

Once created, these messages may be modified at any time. Selecting a scheduled message opens an options menu.

EDIT MESSAGE

This function is accessible from either the Scheduled Messages page or the system message list.

RESET TIMER

Restarts the countdown timer.

DELETE MESSAGE

Confirming this request removes the selected message from the list.

Crossfill FEATURE REQUIREMENTS

Dual GTN configuration

Enable the crossfilling of information between two GTN units.

Crossfill Features

- Enabling this function on one GTN automatically enables it on the other.
- Some types of data crossfill regardless of the current setting

WAYPOINT IDENTIFIERS

When crossfilled from GTN to GNS, duplicate waypoint names, or names exceeding six characters in length, are shortened. A "+" sign replaces certain characters while leaving significant characters to aid in identification (e.g., USR003 becomes US+003).

GTN to GTN Data

Alerts:

- Traffic pop-up acknowledgment
- Missed approach waypoint popup acknowledgment
- Altitude leg pop-up acknowledgment

External Sensors:

- Synchro heading
- Transponder status and commands

Flight Plan Catalog

System Setup:

- User-defined NAV frequencies
- Date/Time convention
- Nearest airport criteria
- Units (Nav angle, Fuel, and Temperature)
- User-defined COM frequencies
- CDI Scale setting
- ILS CDI Capture setting

User waypoints

Includes active flight plan navigation data if you turn on the crossfill function.

If configured, a system message alerts you when the function off (i.e., flight plans are not crossfilling).

To enable or disable crossfilling: Home > System > Setup > Crossfill > OK

GTN to GNS Data

GTN to GNS

GNS to GTN

Active flight plans Active direct to User waypoints User waypoints

To enable crossfilling:

Home > System > Setup > GNS Crossfill Settings > Auto GNS Crossfill

Status Indications

Alert Types

The unit generates annunciations in response to various conditions that may occur. These abbreviated messages include:

- Warnings
- Cautions
- Function and mode advisories

WARNINGS & CAUTIONS

Warnings require immediate attention. Cautions indicate the presence of an abnormal condition that may require pilot action. A warning may follow a caution if no attempt is made to correct the condition (e.g., altering the aircraft's path to avoid the alerted terrain or obstacle).

FUNCTION & MODE ADVISORIES

Advisories provide status and operating information.

System advisories. These display on a dedicated message list. Depending on the number of advisories, this list may be scrollable.

Function or mode specific advisories. These appear as unobstructed annunciations in the annunciator bar.

For a complete list of all system-related advisories, refer to section 8.

Alert Annunciations

Alert annunciations are abbreviated messages that indicate an alerted function or mode. The color of the annunciation depends on the alert type.

ALERT COLORS
WARNING
CAUTION
ADVISORY

- Warnings display in white text on red background
- Cautions display in black text on amber background
- Function or mode specific advisories display in black text on white background

When an alert is triggered, the annunciation flashes by alternating text and background colors. It turns solid after five seconds. All annunciations remain active (solid) until the condition is resolved or no longer a threat.

ANNUNCIATION LOCATION

Alerts and informational advisories annunciate along the bottom of the screen.



Annunciator Bar

Pop-up Alerts

If a warning or caution relating to terrain or traffic occurs, a pop-up window may display. These pop-ups only appear if the alerted function's associated page is not active.

Pop-up Alert Priority

In the event of simultaneous alerts, pop-up windows display in the following order:

- 1. Terrain alerts
- 2. Traffic alerts

Each pop-up alert provides:

- Threat indication
- Alert annunciation
- Alert inhibit or mute option depending on threat and system configuration
- Control for closing the pop-up window
- Direct access to the associated page





Terrain Pop-up Alert Layout

1	Enlarged Page View	4	Go to Terrain Page Key
2	Threat Indication	5	Alert Inhibit Key
3	Close Pop-up Window Key		



1	Enlarged Page View	4	Go to Traffic Page Key
2	Threat Indication	5	Mute Alert Key ¹
3	Close Pop-up Window Key		

To open the indicated page, tap **Go to <Page>**.

To acknowledge the alert and return to previous page view, tap **Close**.

For information about the terrain alert inhibit function, read *Alert Inhibit, TAWS & Terrain Alerting* in section 5. For information about the traffic alert mute function, read *Aural Alerts* in this section.

¹ ADS-B traffic only.

Get Started

Aural Alerts

Some alerts are accompanied by an aural voice message. Voice gender is configured during installation. To determine which alerts provide aural indications, refer to the applicable alerts table(s) in the *Hazard Awareness* section.

MUTE ALERT

FEATURE LIMITATIONS

Available only with GTX 345 and ADS-B software v3.20 or later



Tapping **Mute Alert** silences the active traffic alert. This key is available on the traffic alert pop-up.

The mute alert function is applicable only to the active aural alert. It does not mute future alerts.

System Status



View information specific to the unit and its software. Refer here when contacting customer service.

SYSTEM INFO

- Serial number
- System ID
- Main software version
- GPS/WAAS software version
- COM board software version (GTN 635Xi, 650Xi, 750Xi only)
- NAV board software version (GTN 650Xi, 750Xi)

CONTROLS

Database Info access keys:

- Active
- Standby

For more about active and standby databases, read *Databases*.

GPS Status



Monitor GPS receiver performance, establish a baseline for normal system operation, and troubleshoot weak or missing signal issues.

This page provides a visual reference of GPS receiver functions, including:

- Current satellite coverage
- GPS solution and receiver status

- Phase of flight
- Position accuracy
- Present position (latitude and longitude)

SKY VIEW DISPLAY



- Depicts satellites currently in view as well as their respective positions
- Outer circle represents the horizon (with north at the top of the circle)
- Inner circle represents 45° above the horizon
- Center point shows the position directly overhead

SIGNAL STRENGTH INDICATIONS

Satellite SVIDs

Each bar is labeled with the SVID of the corresponding satellite. Numbers vary according to satellite type.

- GPS: 1 to 31
- SBAS: 120 to 138

A graph shows GPS signal strength for up to 15 satellites. As the GPS receiver locks onto satellites, a signal strength bar appears for each satellite in view.

Graph symbols depict the progress of satellite acquisition. Some data may not display until the unit has acquired enough satellites for a fix.



SYMBOL	CONDITION
Not present	Receiver is searching for the indicated satellites.
Gray bar, empty	Satellite located.
Gray bar, solid	Satellite located, receiver is collecting data.
Yellow bar, solid	Data collected, but satellite is excluded from position solution (i.e., it is not in use).
Cyan bar, cross-hatch	Satellite located, but FDE excludes it for being a faulty satellite.
Cyan bar, solid	Data collected, but receiver is not using satellite in the position solution.
Green bar, solid	Data collected, satellite in use in the current position solution.
D (inside bar)	Differential corrections are in use (e.g., WAAS).

If the unit has not been in operation for more than six months, acquiring satellite data to establish almanac and satellite orbit information may take 5 to 10 minutes.

POSITION ACCURACY FIELDS

LABEL	POSITION DATA
EPU	Estimated Position Uncertainty
HDOP	Horizontal Dilution of Precision
HFOM	Horizontal Figure of Merit
VFOM	Vertical Figure of Merit

EPU is the horizontal position error estimated by the fault detection and exclusion (FDE) algorithm, in feet or meters.

Information fields indicate the accuracy of the position fix.

HFOM and VFOM values represent 95% confidence levels in horizontal and vertical accuracy.

Lower values mean higher accuracy. Higher values are the least accurate.



NOTE

Under FAR parts 91, 121, 125, and 135, the FDE availability prediction program must be used prior to all oceanic or remote area flights using GTN Xi as a primary means of navigation.

Circle of Uncertainty

FEATURE LIMITATIONS

- Available only when the aircraft is on ground
- Displays only on Map

Circle of Uncertainty



- Depicts area surrounding the ownship when GPS cannot accurately determine aircraft location
- Expands as GPS horizontal accuracy degrades
- Shrinks as accuracy improves
- Translucent with minor shading so as not to obstruct other features

SBAS Providers



NOTE

Operating with SBAS active outside of the service area may cause elevated EPU values to display on the status page. Regardless of the EPU value displayed, the LOI annunciation is the controlling indication for determining the integrity of the GPS navigation solution.



SBAS supports wide area or regional augmentation through the use of additional satellite broadcast messages.

Tap this key and select from the list of providers.

PROVIDER	SERVICE AREAS
EGNOS	Most of Europe and parts of North Africa.
GAGAN	India only.
MSAS	Japan only.
WAAS	Alaska, Canada, the 48 contiguous states, and most of Central America.

GPS Status Annunciations

Once the GPS receiver determines the aircraft's position, the unit displays position, altitude, track, and ground speed data. GPS status annunciates under the following conditions.

ANNUNCIATION	CONDITION
Acquiring	GPS receiver uses last known position and satellite orbital data (collected continuously from satellites) to determine which satellites should be in view.
3D Nav	3D navigation mode. GPS receiver computes altitude using satellite data.
3D Diff Nav	3D navigation mode. Differential corrections from SBAS provider are in use.
LOI	Satellite coverage is insufficient to pass built-in integrity monitoring tests.

GPS Alerts

The following alert conditions can affect GPS accuracy.

INDICATIONS	FAULT TYPE	CONDITION
Yellow "LOI" annunciation.	Loss of Integrity	Integrity of the GPS position does not meet the requirements for the current phase of flight. Occurs before the final approach fix (if an approach is active).
Unit invalidates active course guidance. Annunciation is specific to cause.	Loss of Navigation	Aircraft is after the final approach fix and GPS integrity does not meet the active approach requirements.
		Insufficient number of satellites supporting aircraft position (i.e., more than 5 seconds pass without adequate satellites to compute a position).
		GPS sensor detects an excessive position error or failure that cannot be excluded within the time to alert.
		On-board hardware failure.
Yellow "No GPS Position" annunciation. Ownship icon not present	Loss of Position	Unit cannot determine a GPS position solution.

For information about managing limited navigation features, read *Dead Reckoning* in section 3.

LRU Status



Devices that interface to the system via Ethernet display product information and connection status on the External LRUs list.



The device is configured and communicating properly.



The device is not available and is not configured, or it is not communicating properly.

G	R 56 Status
Network Registration Registered Version: ST09005	Iridium Signal ■■■00
Serial Number: WAITINC Iridium Phone Status Idle Datalink WX Status	
ldle R	Connext gistration

Some interfaced equipment provide controls for product registration, enablement, or viewing detailed status information.

To access these features, tap **More Info**.

Logs



The data logging function is capable of storing approximately 100 hours of flight data in the unit's internal memory. This information is available for export to an SD card for later analysis.

FEATURE REQUIREMENTS

- SD card for external data logging
- Flight Stream 510 wireless datacard for data streaming
- Flight Stream 510 and GDU TXi for engine data streaming

Flight Data Log Functions

- Records log files automatically while the unit is powered up, including various parameters related to aircraft flight instruments
- Overwrites oldest file when the internal log reaches capacity
- Exports to the "logs" folder on the SD card
- Streams logged flight¹ and engine² data to Garmin Pilot

WAAS Diagnostic Log Functions

- Records log files automatically while the unit is powered up
- Overwrites oldest file when the internal log reaches capacity
- Exports to the "logs" folder on the SD card

¹ Requires Flight Stream 510. ² Requires Flight Stream 510 and GDU TXi.

FILE NAMING CONVENTIONS

Log file names provide a useful reference to aid data analysis. They include:

- Log start date and time
- Identifier of the nearest waypoint at the indicated start time

log_YYMMDD_HHMMSS_WPT.csv

Year Month Day

Hour Minute Second Nearest Waypoint Identifier (at start of log)

Files with the name "log_000101_0000XX_____.csv" do not contain a valid date and time stamp. These logs may include data recorded during installation.



Upon power up, GTN begins logging flight data automatically, storing the data in its internal memory.

If Flight Stream is present in GDU:

• GDU streams data to Garmin Pilot via Flight Stream¹

If Flight Stream is present in GTN:

- GDU transfers logs to GTN, which then streams the data to Garmin Pilot via Flight Stream¹
- GTN is the preferred location for Flight Stream installation

If an SD card is present in GTN:

Pilot uses the export function to write GTN data to the SD card

What happens if there's a power interruption?

Data logging stops if power is lost. All data recorded up to that point remains stored in the internal memory. Data is not recorded for the duration of the outage. When GTN Xi reboots, logging automatically resumes with a new log file.

¹ Pilot setup required.

Export to an SD Card



NOTE

Do not eject the SD card while the export function is in progress. Wait until the selected log key is available before ejecting the card.



Export a flight data log to an SD card for later analysis.

- 1. Insert an SD card.
- 2. Tap **Utilities** > **Logs**.
- 3. Select WAAS Diagnostic Log or Flight Data Log.

If no log files are present, these keys are not available.



During export, the selected log key is unavailable (gray). It becomes available once export is complete.

Export in Progress

What if I forget to insert my SD card before flight?

Internal flight data logging occurs regardless of whether an SD card is present. After your flight, you may insert a card and download log files using the **Flight Data Log** command.

With the aircraft safely on ground:

- 1. Power off unit.
- 2. Insert card.
- 3. Power on unit.
- 4. Tap Utilities > Logs > Flight Data Log.

Wait for the export to complete before ejecting the SD card.

Once the files are exported onto an SD card, you may transfer the log files to your personal logbook on flyGarmin.com.

Duration varies depending on the number of files present. For lengthy transfers, it may be necessary to run the engine or operate on ground power until the export is complete.

TRANSFER SD CARD DATA TO YOUR ONLINE LOGBOOK

The **Logbook** tab on <u>flyGarmin.com</u> provides functions for creating and viewing multiple logbook entries.

flyGarmin Navigation Tabs



To create a logbook:

- 1. Sign in to your <u>flyGarmin.com</u> account.
- 2. Select Logbook > Setup.
- 3. Select Add Aircraft Type.
- 4. Provide all necessary aircraft type details, then select **Save Aircraft Type**.
- 5. Provide all necessary settings and pilot information, then select **Save Settings**.

To upload flight logs to your logbook:

- 1. Select Logbook > Entries > Upload Flight Logs.
- 2. Select and upload log files according to the onscreen instructions.

Streaming to Garmin Pilot



The unit automatically streams logged flight data to the Garmin Pilot app when Flight Stream 510 is present and paired to a supported tablet or phone.



What happens if I forget to bring my tablet on the flight?

No need to worry. During flight, GTN Xi records log data to the internal storage. The next time you fly with your tablet, the data will stream to Garmin Pilot. This includes all previously recorded flights. The device downloads the data upon connecting to Flight Stream 510.

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