GARMIN

GPS 175
GNC 355
GNX 375

Pilot's Guide

Pilot Interface

Bezel

1	**Bezel** Includes the power key, mechanical knobs, photocell, and SD card slot. Ledges provide hand stability when performing data entry and making selections.
2	**Touchscreen** Multi-touch color display provides controls for unit operation.
3	**Photocell** Measures cockpit ambient light level to automatically adjust display brightness for day and night.
4	**SD Card Slot** Interface for loading database, exporting log files, and updating software. Compatibility with Flight Stream 510 allows wireless database transfer from the Garmin Pilot app via Database Concierge.
5	**Power/Home Key** Powers the unit on or off and provides direct access to the Home page.
6	**Inner & Outer Knobs** Multipurpose dual concentric knob allows data entry, list scrolling, map range control, page navigation, and COM volume and frequency tuning. [1]

[1] COM is a function of GNC 355/355A only.

Touchscreen

GESTURES

TAP

Touching the screen briefly with a single finger.

Use this gesture for:

- Opening a page or menu
- Activating a command key or data entry field
- Displaying map feature information
- Selecting an option within an application

TAP AND HOLD

Certain momentary controls (e.g., directional arrow keys) provide a secondary tap and hold function. Tap the key and hold your finger in place until the desired action occurs.

Use this gesture for:

- Scrolling with arrow keys
- Increasing/decreasing values continuously

SWIPE

A smooth motion that involves touching an object, then sliding your finger across the screen and lifting up.

Use this gesture for:

- Accessing multiple panes (right or left swipes)
- Viewing and scrolling lists
- Panning across a map display

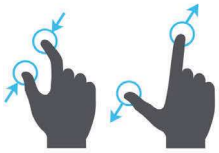
FLICK

Swiping the screen in a quick upward or downward motion. Information moves at a fast speed (faster than if holding the arrow key), then slows to a stop.

Use this gesture for:

- Scrolling an item list

PINCH & STRETCH



Touch any map with two fingers at the same time, then bring the fingers close together (pinch) or spread them apart (stretch). Just remember: stretch to zoom in and pinch to zoom out.

Use this gesture for:

- Magnifying map features

Keys

COMMON COMMANDS

Open the system messages list. A flashing icon indicates unread messages.

Cancel an active function without inputting data.

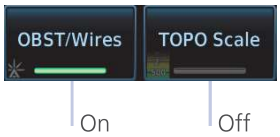
Open a context menu.

Input a specified value.

Return to the previous page.

Select the corresponding item (e.g., database update). A checkmark confirms selection.

FUNCTION KEYS



Toggle keys turn a specific function on or off. The current state of the function is indicated below the key label.

APP ICONS

Tapping one of these icons opens the corresponding application. Some apps provide additional icons for accessing functions on subpages (e.g., Utilities, System).

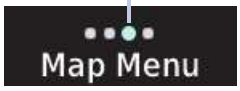
Menus

Menus group related controls into an expandable pane, allowing access to multiple functions on a single page. Depending on the number of available functions, a menu may comprise more than one pane.

Multiple panes are accessible by way of a left/right swipe or inner knob turn.

Toggle keys either enable or disable list items. In some cases, **Settings** or **Range** keys provide access to selectable setting options.

Active Pane



An indicator at the bottom of the menu shows which pane is active.

POP-UP MENUS

Pop-up menus open to the default or previously selected value.

Underlying Page Hidden

Default or Current Setting

LISTS

Scrollable lists group control keys related to a single function (e.g., FIS-B Weather). When scrolling, all keys in the list are inactive.

Scroll Bar

Tabs

Tabs group information into individual panes. Content includes scrolling lists, data fields, function keys, or a combination of controls.

Tabs are located along the left and right sides of a pane.

Keypads

The navigator employs multiple keypad types to serve specific settings and functions.

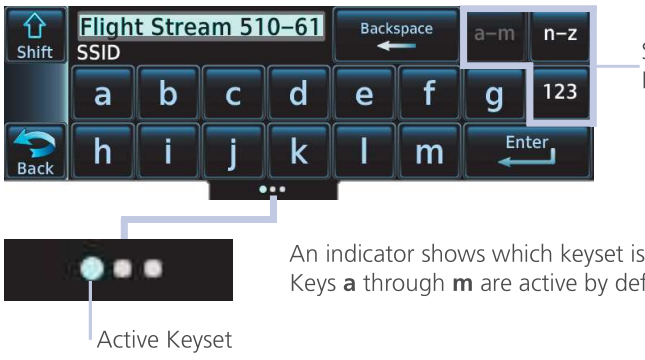
NUMERIC

Numeric keypads open on a single pane.

Backspace and **Enter** keys always appear at the right of the screen.

ALPHANUMERIC

Alphanumeric keypads comprise multiple keysets that are accessible by way of swipe or key selection.



Control Knobs

Inner and outer control knobs offer an alternative method for selecting and modifying data without the use of touch keys.

Knob Functions

GPS 175 & GNX 375	
Outer Knob	• Selecting a page shortcut • Cursor placement and initial field/page selections • Moving cursor forward or backward within data field
Inner Knob (Turn)	• Zooming, scrolling lists, and inputting data • Modifying individual characters in data entry field
Inner Knob (Push)	• Entering current or specified numerical value • Toggling Map user fields on or off • Accessing the Direct To function from the Home page
GNC 355/355A	
Outer Knob	• Selecting a page shortcut • Cursor placement and initial field/page selections • Moving cursor forward or backward within data field • Tuning major frequency digits • Adjusting COM radio volume (coarse)
Inner Knob (Turn)	• Zooming, scrolling lists, and inputting data • Modifying individual characters in data entry field • Tuning minor frequency digits • Adjusting COM radio volume (fine)
Inner Knob (Push)	• Entering current or specified numerical value • Enabling standby frequency tuning mode from most pages • Enabling COM radio volume control (push twice)

Page Navigation Labels

A locater bar works in conjunction with the outer knob, providing quick access to the indicated page. Turning the outer knob clockwise or counter-clockwise moves the locater through the available shortcut options.

Slot 1 is a dedicated Map shortcut. Slots 2 and 3 are customizable. Selectable page options are dependent upon configuration.

A cyan background and border indicate active page and available shortcuts.

Knob Function Indicators

Icons to the right of the bar indicate available knob functions. Indications include, but are not limited to, the following.

GPS 175 & GNX 375

Map Active

Available functions:

- Map zoom
- Toggle user fields on or off

Flight Plan Active

Available functions:

- Flight plan scrolling

Home Page Active

Available functions:

- Page shortcut navigation
- Access Direct To window

Direct To Window Active

Available functions:

- Direct-to waypoint editing
- Activate direct-to course

GNC 355/GNC355A

Knob focus defaults to page navigation when not in use.

Map Active

Available functions:

- Map zoom
- Set knob focus to standby frequency

Flight Plan Active

Available functions:

- Flight plan scrolling
- Set knob focus to standby frequency

STBY Frequency Tuning Active (via Knob Push)

Available functions:

- Frequency tuning
- Activate volume control

COM Volume Page Active (via VOL Key)

Available functions:

- Volume adjustment

Knob Shortcuts

For convenience, the unit allows you to access certain controls quickly via knob push.

GPS 175/GNX 375

From the Home page:

Pushing once opens the Direct To window. After a waypoint/fix is selected, pushing the knob again activates the direct-to fix.

GNC 355/355A

From most pages:

Pushing once enables standby frequency tuning mode and opens the COM volume controls. Turn the inner and outer knobs to tune the standby frequency.

Pushing twice sets the knob focus to the volume slider. Turn the inner and outer knobs to adjust the volume percentage.

Pushing again closes the menu and returns to the previous view.

A cyan border indicates changes in knob focus. This is useful when transitioning through the different control modes: page navigation > STBY frequency tuning > COM radio volume adjustment > page navigation

Screen Captures

FEATURE REQUIREMENTS

- *SD card in the FAT32 format, with memory capacity between 8 GB and 32 GB*

FEATURE LIMITATIONS

- *Not available with Flight Stream 510*

Save images to an SD card at any time using a screen capture. Images automatically save to the "print" folder in the SD card root directory.

1. Insert an SD card into the card slot.
2. Push and hold the control knob.
3. With knob depressed, push and release the **Home/Power** key.

A camera icon momentarily shows in the annunciator bar indicating a successful screen capture.

To view saved images, remove the SD card and open the "print" folder on a computer.

Color Conventions

	Red • Warning conditions
	Yellow • Cautionary conditions
	Green • Safe operating conditions • Engaged modes • Active COM frequency
	White • Scales and markings • Current data and values • Heading legs
	Magenta • GPS data • Active flight plan legs • Parallel track
	Cyan • Pilot-selectable references • Standby COM frequency
	Gray • Missing or expired data • Product unavailable
	Blue • Water

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.

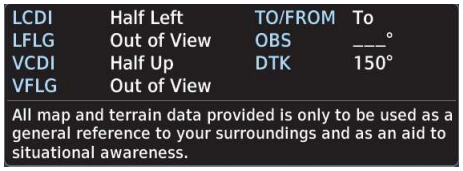
The start-up screen presents the unit software versions, the name and status of all installed databases, and the Database Updates page access key. These features are available only at power up.

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

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

Instrument Test

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



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

Power Off

WARNING

Never attempt to power off the unit while airborne unless operational procedures dictate.

Pushing and holding the **Power** key for 0.5 seconds initiates the power off sequence. Shutdown occurs once the timer reaches zero.

Power off annunciation temporarily replaces the knob function indicator.

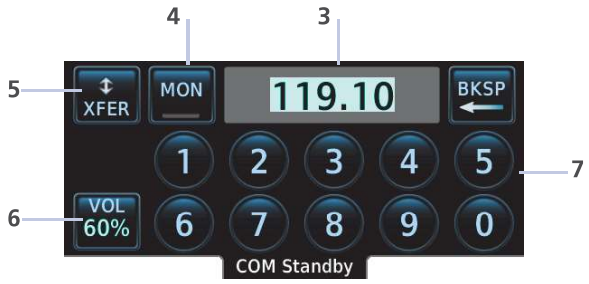
COM

AVAILABLE WITH:
GNC 355/355A

COM Standby Control Panel

VHF COM transceiver controls are accessible via the selectable standby (STBY) frequency window.

This control resides in the upper right corner of the display.

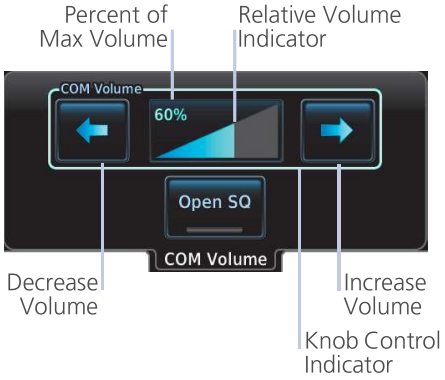


1	Active Frequency Window	**5**	Transfer (Flip-Flop) Key
2	Standby Frequency Window	**6**	COM Volume Access Key
3	Frequency Entry Field	**7**	Data Entry Keys
4	Monitor Key		

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



Adjust radio volume according to your preference. Directional keys allow volume adjustments.

A cyan border indicates current knob focus.

The unit retains volume settings over power cycles.

Access volume controls by tapping the **VOL** indicator key on the COM Standby control panel, or using the control knob as described below.

For convenience, COM volume functions are accessible from most pages via inner knob push.

- Pushing once opens the COM Volume controls menu.
- Pushing twice sets the knob focus to the volume slider. Turn the inner and outer knobs to adjust the volume percentage.
- Pushing again closes the menu and returns to the previous view.

OPEN SQUELCH

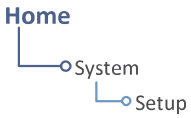
Tap once to override the automatic squelch function. Tap again to return the squelch to automatic operation.

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

The Open Squelch function is accessible from the COM Volume page and slide-out menu.

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.

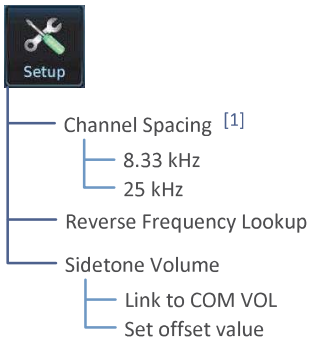
COM Radio Setup



COM radio customization options reside in the System Setup app.

Setup options for GNC 355A shown as typical.

For COM radio selections, swipe to the end of the menu.



From here you can:

- Set transceiver channel spacing [1]
- Enable reverse frequency look-up functionality
- Adjust sidetone volume offset

[1] GNC 355A only.

Channel Spacing Option

AVAILABLE WITH: GNC 355A

The GNC 355A supports channel tuning for both 8.33 kHz and 25 kHz channels within radio-frequency range. The GNC 355 supports frequency-channel pairings for 25 kHz channels only.

Tapping this key toggles the transceiver channel spacing between 8.33 kHz and 25.0 kHz.

8.33 kHz

8.33 kHz step configuration is available for European operations.

On GNC 355A, channel spacing is set to 8.33 kHz by default.

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.

Reverse Frequency Look-up

FEATURE REQUIREMENTS

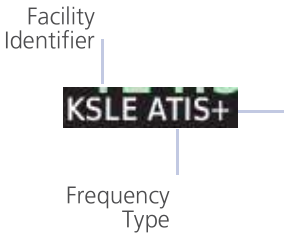
- *Valid position data*
- *Active navigation database*

FEATURE LIMITATIONS

- *Available only for the nearest stations in the database*

Display 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:

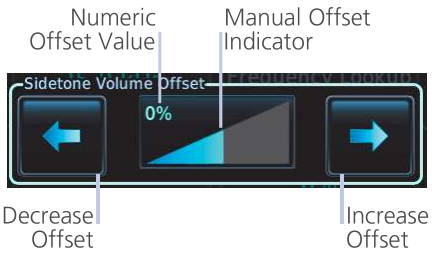
- Nearest facility identifier (if available)
- Multiple facility indication (if more than one)
- Frequency type
- Approach or Departure indications (if applicable)

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.

Sidetone Volume Offset

FEATURE LIMITATIONS

- *Availability dependent upon configuration*
- *Offset range: +/-10% 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.

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

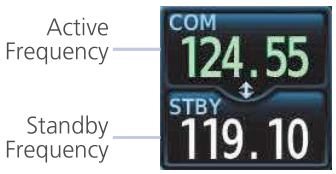
Enabling this function allows you to adjust the amount that the sidetone volume level is offset from the COM receiver volume. These adjustments are dynamic in that they vary with the COM receiver volume level.

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



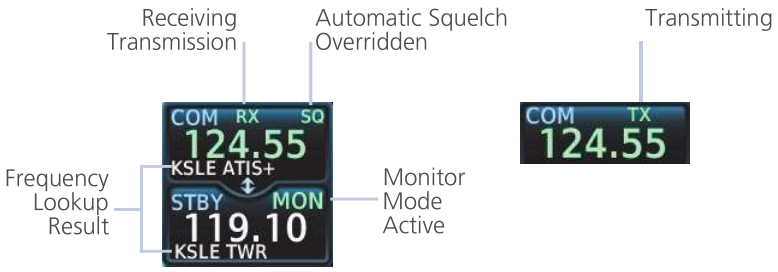
Communication frequencies are split between two selectable windows:

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.



TX	Transmitting
RX	Receiving transmission
MON	Monitor mode active
SQ	Automatic squelch is overridden (i.e., squelch is open)
KSLE TWR	Reverse frequency information (sample text)

Direct Tuning

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

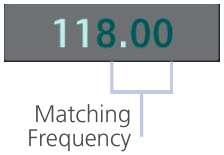
DATA ENTRY KEYS

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.

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.

Attempting to enter a frequency value after selecting an invalid digit generates a pop-up message.

Confirm the request by selecting **OK**.

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."

KNOB TUNING

The control knob allows you to enter a standby frequency without opening the control panel.

Pushing the control knob once activates frequency entry mode. The STBY window turns cyan to show it is active.

If no action occurs after 3 seconds, a cyan border appears around the window. This indicates that the function will be deselected in 10 seconds.

After 10 seconds, the window returns to an inactive state.

Transfer Frequency to Active (Flip-Flop)

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

This function is accessible multiple ways.

COM 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.

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

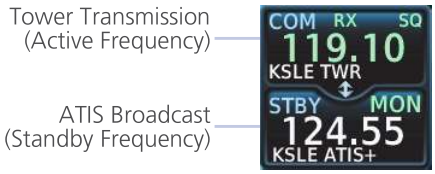
Frequency Autofill & Transfer

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

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.



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

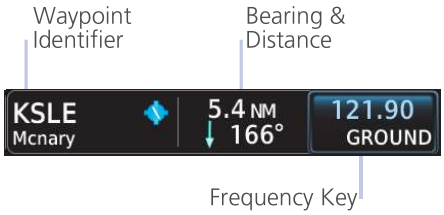
The unit provides multiple options for finding and selecting a standby frequency from the available database frequencies.

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



Each entry includes general information about the associated waypoint.

MULTIPLE FREQUENCIES

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).

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

Remote Frequency Selection

FEATURE LIMITATIONS

- *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

This function provides a quick method for remotely tuning the emergency frequency (121.50 MHz). This feature is available any time the unit is on, regardless of GPS or display status.

Remote COM Lock

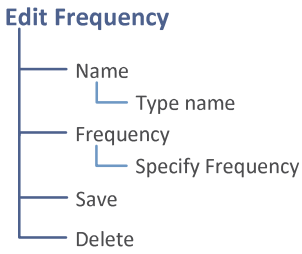
If configured, pressing and holding the remote COM transfer key for two seconds locks the COM at 121.50 MHz, preventing further changes in frequency. A message informs of the change in status. To unlock, press and hold the remote key again.

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*



Create or edit user frequencies from the Edit Frequency pop-up menu.

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.

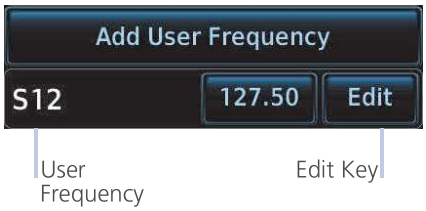
ADD A USER FREQUENCY

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 **Save**.

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 **Save** stores all changes.

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

COM Alert

If the radio fails:

- Red "X" displays over the COM key
- 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.

UNIT	CONDITION
GNC 355 GNC 355A	Invalid COM radio data.

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.

Clocks & Timers

Timers

Monitor time in flight using three available timer types.

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

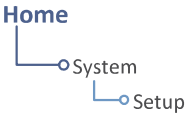
Trip/Departure Timers

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



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

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

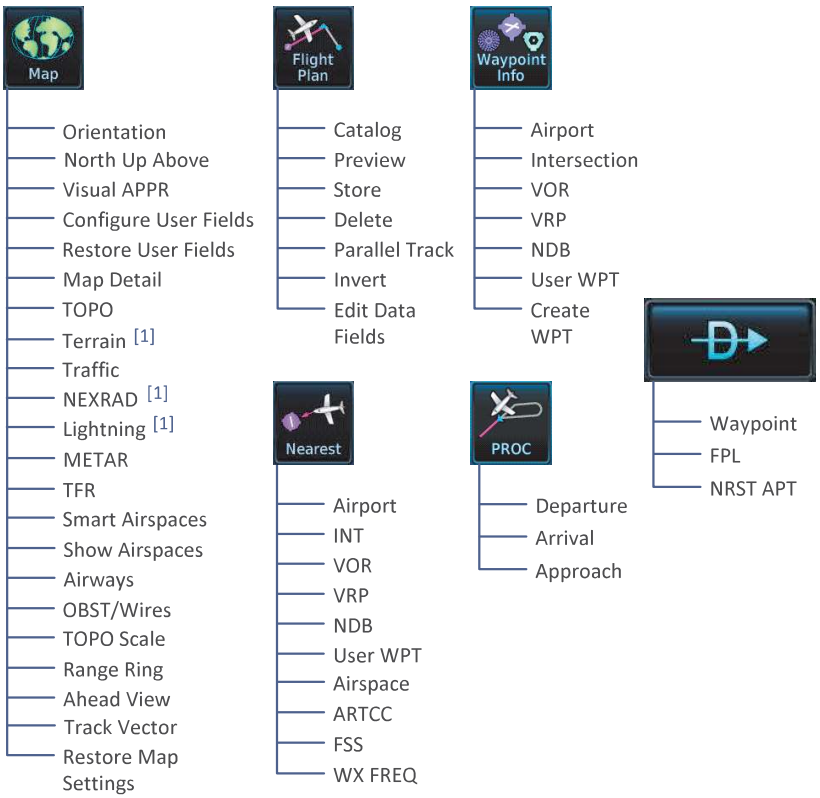
If a 12 hour or 24 hour clock is selected:

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

3 Navigation

NAVIGATION APPS & FUNCTIONS

Menu selections vary based on features and optional equipment installed with Garmin avionics.



[1] NEXRAD, Lightning, and Terrain overlays are mutually exclusive.

Map

To increase situational awareness, Map depicts the aircraft's current position relative to land, aeronautical, weather, and traffic information.

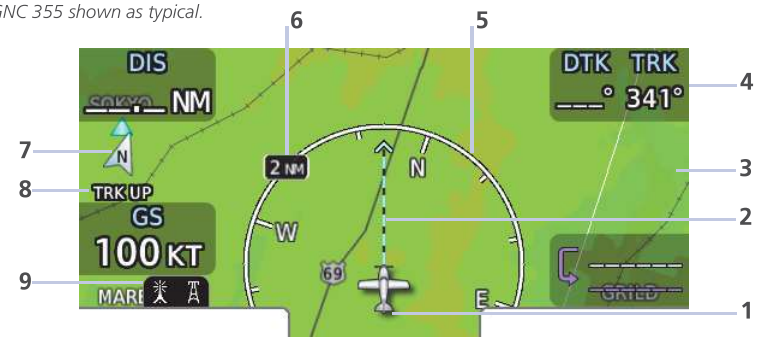
FEATURE REQUIREMENTS

- *Active GPS source (aircraft position symbol)*
- *UAT receiver (FIS-B weather)*

FEATURE LIMITATIONS

NEXRAD, Lightning, and Terrain overlay functions are mutually exclusive. Enabling one automatically disables the other.

GNC 355 shown as typical.



Default Map Features

1	**Aircraft Symbol** Depicts current aircraft position and orientation. • Tip represents actual aircraft location • Symbol type is dependent upon configuration • Absent if a GPS source is not available
2	**Track Vector** Current ground track indication.
3	**Basemap** Presents a graphical depiction of land and water data.

4	**User Field** Customizable data field appearing in each corner of the map. Default user fields are as follows. **GPS 175/GNX 375:** • distance • ground speed • desired track and track • distance/bearing from destination airport **GNC 355/355A:** • distance • ground speed • desired track and track • from, to, and next waypoints
5	**NAV Range Ring** Displays current direction of travel on a rotating compass. Orientation: Magnetic north
6	**Map Range Indicator** Displays current map range in the upper left quadrant of the range ring (i.e., the distance from the aircraft to the range ring).
7	**North Indicator** Indicates True north.
8	**Page Orientation Label** • **North Up** orients map to True north. • **Heading Up** orients map to current aircraft heading (requires heading data source interface). • **Track Up** orients map to current aircraft GPS track.
9	**Map Overlay Icons** Indicates status of overlays at the current map range. Includes: METAR, NEXRAD, obstacles, power lines, TFR, precipitation, Terrain, Lightning, and Traffic.

AUTOMATIC ZOOM

AIRCRAFT STATE	DEFAULT ZOOM
Ground	0.50 nm
Air	10.0 nm

Map remembers the last zoom range for each aircraft state, and automatically resumes this view when the aircraft transitions between air and ground states.

FEATURE LABELS

To maintain readability, map feature labels remain uniform at all zoom levels.

TRAFFIC UNITS

System Units page selections do not affect the display of traffic on Map.

LAND AND WATER DEPICTIONS

Land and water data are for general reference only. Data accuracy is not suitable for use as a primary navigation source. The information is intended to supplement and not replace official government charts and notices.

DATA DRAWING ORDER

The electronic map draws data in order of priority, from highest (1) to lowest (25), with higher priority features drawn atop those of lower priority.

LEVEL	FEATURE
1	Traffic
2	Ownship
3	Flight Plan Labels
4	Highlighted Record
5	Flight Plan
6	TAWS Alerts
7	Remaining labels
8	Persistent Item
9	Point Obstacles
10	Line Obstacles
11	TFR
12	Lightning
13	Graphical METAR
14	Winds Aloft
15	SIGMETs
16	Center Weather Advisory

LEVEL	FEATURE
17	G-AIRMET
18	PIREP
19	Airspace
21	User Waypoints
21	Waypoints
22	Airways
23	Turbulence
24	Icing
25	NEXRAD (FIS-B)
26	Cloud Tops
27	SafeTaxi
28	Runways
29	Terrain
30	Basemap Labels
31	Basemap
32	TOPO

Map Setup

Map Menu

- Orientation
  - North Up
  - Track Up
  - Heading Up
- North Up Above
  - Set range
- Visual APPR
  - Set selector range
- Configure User Fields
  - Select field types
- Restore User Fields
- Map Detail
  - Select detail level
- TOPO [1]
- Terrain [1] [2]
- Traffic [1]
- NEXRAD [2]
  - Select source
- Lightning [1] [2]
- METAR [1]
- TFR [1]
- Smart Airspaces [1]
- Show Airspaces
  - Select filter
- Airways
  - Select filter
- OBST/Wires [1]
- TOPO Scale [1]
- Range Ring [1]
- Ahead View [1]
- Track Vector
  - Select filter
- Restore Map Settings

Map setup options allow you to customize the display of aeronautical information. Tap **Menu** when you need to:

- Change map orientation settings
- Configure user fields
- Adjust the map detail level
- Enable map overlays
- Select a NEXRAD source
- Filter airspace data according to altitude
- Specify airway types and range values
- Expand the forward-looking view for improved situational awareness

RESTORE MAP SETTINGS

With the exception of user fields, this key restores all original factory map settings.

[1] On/off functionality only.
[2] NEXRAD, Lightning, and Terrain overlays are mutually exclusive.

Configure User Fields

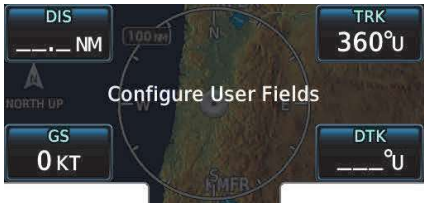
Default User Fields

- DIS - Distance
- GS - Ground Speed
- DTK/TRK - Desired Track/Track
- Flight Plan - From/To/Next [1]

[1] GNC 355/355A only

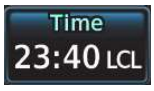
Displays Map in configuration mode, allowing you to customize the display of data in each corner of the page.

User fields are useful during time sensitive and work load intense phases of flight.

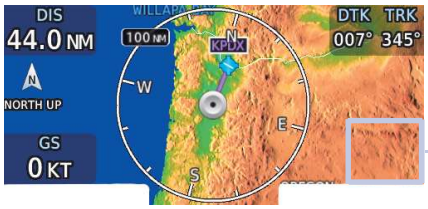


In configuration mode:

- All four data fields change to selectable keys
- All other map elements are inactive



Tap any key and select from the list of available data types. Displayed units change based on selection.



Selecting "OFF" removes the corresponding user field from the map page.

Tapping **Restore User Fields** returns all fields to their default settings and removes the TOPO scale if present.

GPS 175/GNX 375:
For convenience, Map user fields may be toggled on and off by pushing the control knob.

Fields remain hidden when you use the knob shortcut to move between Map and the Active FPL page. They reappear in their respective corners when you return to the Home page or use the knob to move between Map and any other application.*

* This functionality is not available on GNC 355/355A.

USER FIELD OPTIONS

LABEL	FIELD TYPE	LABEL	FIELD TYPE
BRG	Bearing to waypoint	GSL	GPS altitude
DIS/BRG APT	Distance/bearing from destination airport (i.e., the straight line distance)	MSA	Minimum safe altitude
DIS	Distance to waypoint	OAT (static)	Outside static air temperature
DIS to Dest	Distance to destination (i.e., the distance along the flight plan)	OAT (total)	Outside total air temperature
DTK	Desired track	Time	Current time
DTK, TRK	Desired track and track	Time to TOD	Time to top of descent
ESA	En route safe altitude	TKE	Track angle error
ETA	Estimated time of arrival	Trip Timer	Timer display
ETA at Dest	ETA at destination	TRK	Track
ETE	Estimated time en route	VSR	Vertical speed required
ETE to Dest	ETE to destination	Wind	Wind speed and direction
	From, to, and next waypoints [1]	XTK	Cross track error
Generic Timer	Timer display	OFF	Do not display data field
GS	GPS ground speed		

[1] GNC 355/355A only.

"Destination" refers to the missed approach point (if an approach is loaded) or the final airport in the flight plan.

Map Orientation

Sets the orientation of the map display.
Options include North Up, Track Up, or Heading Up.
Label below the North indicator shows the current orientation.

This label is absent when the info banner is active.

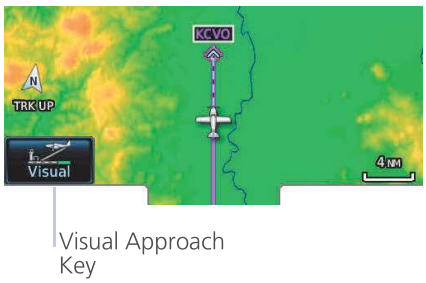
North Up is useful when zoomed out to view the entire route or a frontal system on a NEXRAD display.

North Up Above

Sets the range at which map orientation changes to North Up.

Using the North Up Above feature causes the screen to switch at certain zoom levels. This is useful as a shortcut to quickly increase situational awareness.

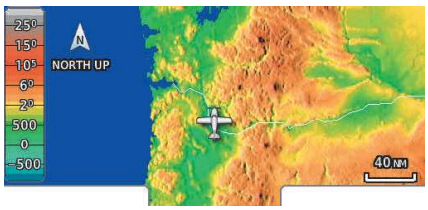
Visual Approach



Sets the distance from the destination airport at which the **Visual Approach** selector key becomes active.

To reduce page clutter, the key moves to the upper left corner of the display when the info banner is active.

TOPO Scale



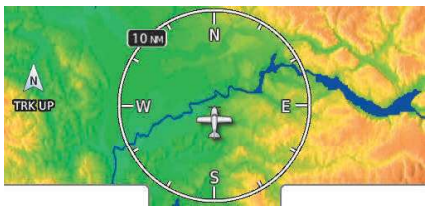
Displays a topographical elevation scale. To remove the scale:

- Toggle **TOPO Scale** off

OR

- Tap **Restore User Fields**

Range Ring



Provides a more precise indication of distance between the aircraft and map objects.

Track Vector

FEATURE LIMITATIONS

- *Indication absent when aircraft velocity is < 30 kt*

Indicates the current ground track.

Arrow tip represents aircraft position at the specified time interval (if the aircraft maintains current ground track during that time).

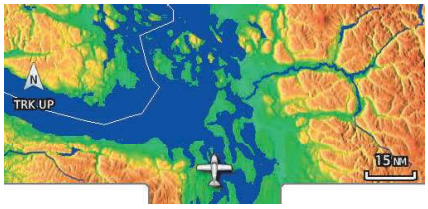
Track vector length options display as a dashed line and arrow extending from the aircraft icon, showing current track and distance the aircraft will travel in the selected time.

If the track vector is placed over a point on the map, and no data is entered into the system, the unit indicates a wind-corrected GPS track to that point. This is useful for intercepting airways and radials, making small but positive lateral corrections during approaches, and in setting up for arrivals in the terminal area.

Ahead View

FEATURE LIMITATIONS

- *Not available when page orientation is North Up*



Repositions ownship near the bottom of the page to expand the view ahead.

Map Detail

Changes to the map detail level take effect immediately. Options include full, high, medium, and low.

FEATURE	FULL	HIGH	MEDIUM	LOW
Small Cities	•			
Medium Cities	•			
Large Cities	•			
Freeways	•			
Highways	•			
Roads	•			
Railroads	•			
Basemap Labels	•			
VORs	•	•		
NDBs	•	•		
Line Obstacles	•	•		
Point Obstacles	•	•		
Airspaces that are not prohibited or restricted	•	•		
Waypoints	•	•	•	
SafeTaxi	•	•	•	
Restricted Airspaces	•	•	•	
Prohibited Airspaces	•	•	•	•

Present	•	Removed	

AVIATION DATA SYMBOLS

	Non-towered, non-serviced airport [1]		Non-towered, serviced airport [1]
	Towered, non-serviced airport [1]		Towered, serviced airport [1]
	Soft surface, non-serviced airport		Soft surface, serviced airport
	Restricted (private) airport		Unknown airport
	Heliport		ILS/DME or DME only
	Intersection		LOM
	NDB		TACAN
	VOR		VOR/DME
	VORTAC		VRP
	Runway extension		

[1] Symbol depicts orientation of longest runway.

LAND DATA SYMBOLS

	Railroad		National Highway
	River/Lake		Freeway
	State/Province Border		Small City
	Local Road		Medium City
	Local Highway		Large City

Map Interactions

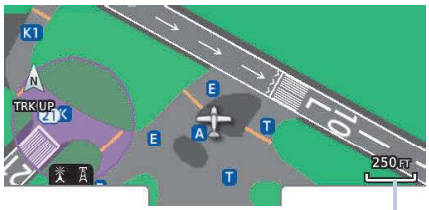
Basic Interactions

Typical map interactions include zoom, pan, and object selection.

PAN & ZOOM

Panning allows movement of the map in any direction without change to the current zoom setting. Zooming adjusts the current magnification level between pre-defined range parameters.

Maximum Scale Value



Minimum Scale Value

Before flight, consider which map scales are best for achieving the desired level of detail and map information.

Generally, use smaller map scales in and around terminal areas and whenever precise navigation is required (e.g., airway or radial intercepts).

During cruise flight, increase the map scale to better balance navigation, situational awareness, and decision making.

OBJECT SELECTION

Tapping any object or location on the map displays a map pointer and an information banner.

MAP POINTER

This symbol indicates point of contact on the map. A gray circle highlights any selected waypoint or obstacle.

MAP INFO

Available information and controls are dependent upon object or location type and proximity to other objects.

Selecting an airport icon displays the airport's highest field elevation. A map pointer icon corresponds with the touch point on the map.

An information page access key displays when you select a waypoint, airspace, airport, airport surface hot spot, or TFR.

Info

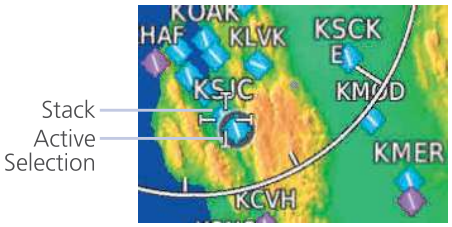
- Pan mode annunciation
- Bearing and distance from current aircraft position to map pointer
- Location elevation
- Maximum altitude AGL and MSL for obstacles

Controls

- **Map Pointer/Create Waypoint**
- **Graphical Edit**
- **Next** (for stacked objects)
- Associated information page access key, if applicable

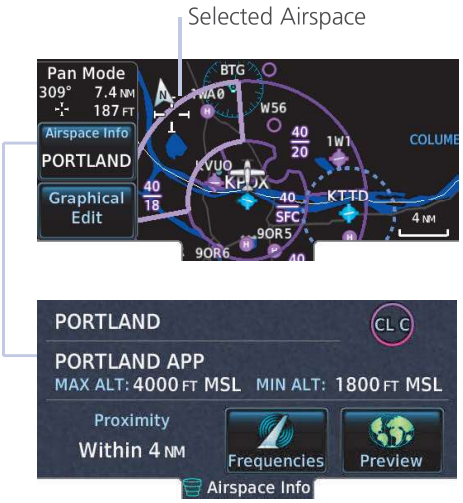
STACKED OBJECTS

To move the selector through each object in proximity of the map pointer, select an object and tap **Next**.



Overlapping objects may be difficult to identify at a given zoom level.

AIRSPACE INFO



When selected, active airspace boundaries change color.

Tapping **Airspace Info** opens the associated information page.

Data fields display information specific to the selected airspace.

Available controls reside along the bottom of the page.

Info

- Airspace name and type icon
- ATC entity responsible for the airspace, if applicable
- Floor and ceiling altitudes
- Proximity to airspace

Controls

- **Frequencies**: View a list of all related radio frequencies
- **Preview**: View the airspace boundary and a 2-D map of the surrounding area

Graphical Flight Plan Editing

FEATURE LIMITATIONS

- *Parallel track offsets do not apply to the temporary flight plan*

Graphical editing allows quick changes to the active flight plan from the map display.

Map provides identifier keys for selecting waypoints that are stacked or in close proximity. If the displayed options are not preferred, tap away or select **Cancel**.

TEMPORARY FLIGHT PLAN BANNER

An information banner displays waypoint selections made during graphical edit mode. All selections become active once you tap **Done**.

Lists up to four waypoint identifiers

Ellipse indicates additional waypoints

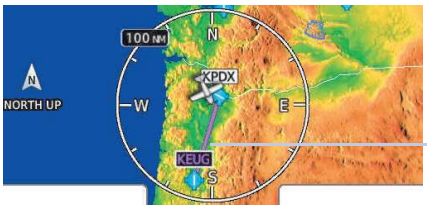
Initial waypoint in flight plan always appears first

Tapping **Undo** reverses the last edit. You may undo up to nine of the most recent actions.

On the map, dragging and releasing the leg away from any waypoints removes it from the temporary flight plan.

To exit edit mode without saving changes, tap **Cancel**.

ADD WAYPOINT TO AN EXISTING LEG



You can edit, add, or omit flight plan legs by tapping or dragging your finger directly on the map.

Existing Leg

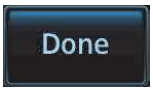
Selected Waypoint

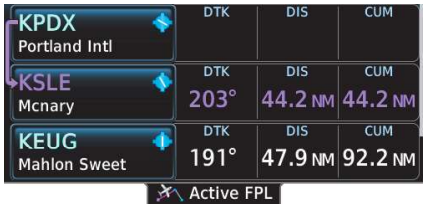
1. Tap any location on the map.
2. Tap **Graphical Edit**.

3. Tap and drag the leg to a new waypoint or airway, then release.

The temporary flight plan adjusts to show the new route.

If no other edits are necessary, tap **Done**.





The new waypoint now appears in the active flight plan.

GPS 175 & GNX 375:
Active route identifiers also appear on the **GPS NAV Status** indicator key in the lower right corner of the display.

GNC 355/355A:
If configured, a user field shows active route identifiers on Map.

Delete any existing flight plan before attempting to graphically edit a direct-to waypoint. Map does not allow the addition of an intermediate waypoint between the current position and a direct-to waypoint unless the waypoint is in the flight plan.

REMOVE WAYPOINT FROM FLIGHT PLAN

You can tap and drag any leg to another waypoint or airway, or release it away from any waypoint if an alternate destination is not preferred.

CREATE LEGS WITHOUT AN EXISTING FLIGHT PLAN

If an active flight plan does not exist, you can graphically create one without ever leaving the Map page.

1. Tap any location on the map > **Graphical Edit**.
2. Begin tapping waypoints to add them to the temporary flight plan.
3. Tap **Done**.

Map Overlays

Overlay Selections

- TOPO
- Terrain
- Traffic
- NEXRAD
- METAR
- Lightning
- TFR
- Airspaces
- Airways
- Obstacles & Wires

Overlay data controls reside in the Map menu. Changes to an overlay setting take effect immediately.

NEXRAD, Terrain, and Lightning overlays are mutually exclusive. Enabling one automatically disables the other.

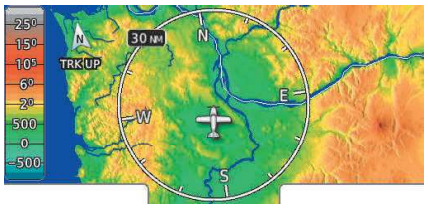
Weather product and traffic overlays are optional on GPS 175 and GNC 355. They are available only when configured for ADS-B In equipment.

Overlay Controls

Control keys enable the specified overlay function only and do not activate interfaced equipment. Control keys remain active even in the absence of required data.

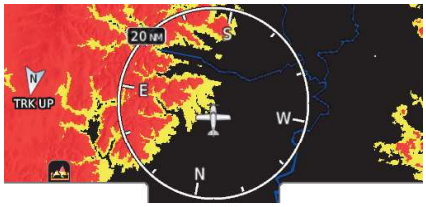
Overlay controls reside in the Map menu.

TOPO



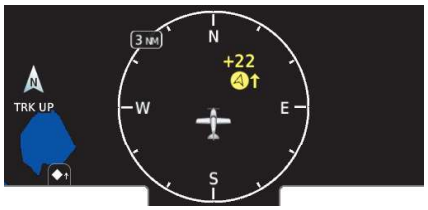
- Overlays topographical data and ground elevation scale
- Depictions are similar to a VFR sectional
- Pilot-selectable topographical elevation scale available

TERRAIN



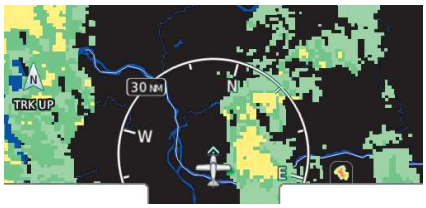
- Overlays terrain map data
- Color shading depicts terrain elevation relative to the aircraft's altitude

TRAFFIC



- Overlays traffic information
- Filter selection on the Traffic page determines altitude range
- Feature optional for GPS 175 and GNC 355

NEXRAD

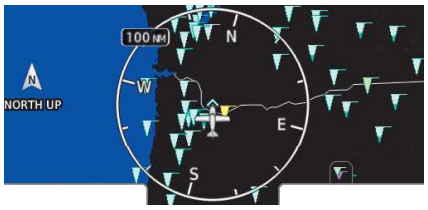


- Overlays datalink precipitation weather information
- Options include: CONUS, Regional, or off (none)
- Feature optional for GPS 175 and GNC 355

LIGHTNING

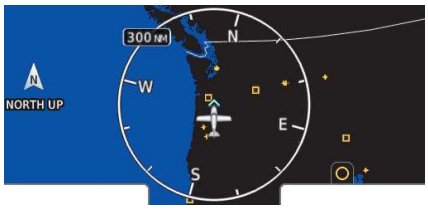
- Overlays lightning information
- Lightning strikes display as a lightning bolt or a cluster of bolts

METAR



- Overlays graphical METARs
- Tapping flag icon displays information on current and forecast conditions
- Available only in areas covered by the active navigation database
- Feature optional for GPS 175 and GNC 355

TFR

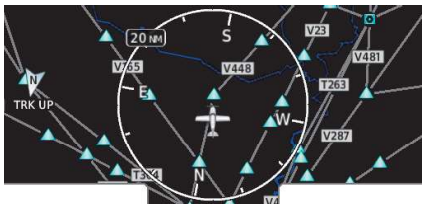


- Overlays graphical TFRs
- Tapping this airspace symbol displays details regarding the restricted area
- Feature optional for GPS 175 and GNC 355

AIRSPACES

- Overlays airspace boundaries with altitude labels
- Filter selection determines altitude range

AIRWAYS



- Overlays the selected airway type(s) with identifier labels
- Options include: low, high, all, or off (none)
- High altitude airways are green, low altitude airways are gray

OBSTACLES & WIRES

- Overlays obstacle and wire data
- Color shading depicts an object's elevation relative to the aircraft's altitude

Overlay Status Icons

Icons indicate which overlays are present at the current map range.

The absence of an overlay icon means one of two possible conditions:

1. Overlay not present at the current detail level or zoom setting.
2. Overlay control is off.

	METAR		NEXRAD
	Obstacle		Power line
	TFR		Traffic
	Terrain		Lightning

Data Not Available

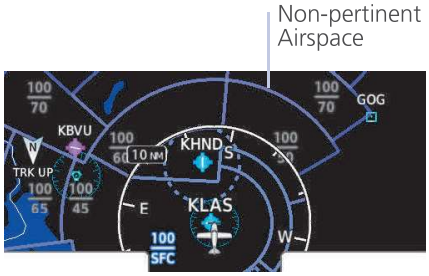
This icon means the overlay is active, but data is unavailable due to a failure, test, or standby condition (where relevant).

Stale Data

This icon means overlay data is not current but remains displayed.

Smart Airspace

Smart Airspace Off



Smart Airspace On

Garmin's Smart Airspace feature automatically de-emphasizes non-pertinent airspace away from the aircraft's current altitude.

When an airspace's vertical proximity to the aircraft is >1,000 ft:

- Its boundary becomes transparent
- All associated altitude labels turn gray

This range increases linearly to 2,000 ft as the aircraft ascends to 10,000 ft.

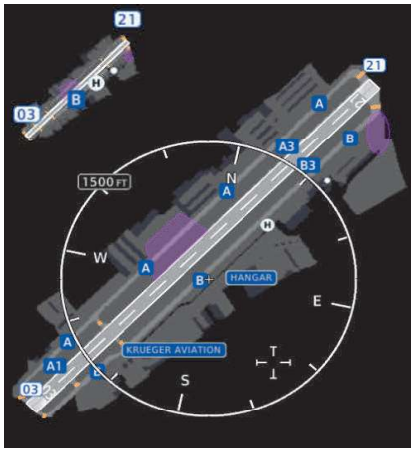
SMART AIRSPACE CRITERIA	
AIRCRAFT ALTITUDE	**AIRSPACE PROXIMITY TO AIRCRAFT** [1]
Sea level	>1,000 ft
>10,000 ft	2,000 ft

[1] Vertical distance above and below aircraft altitude.

AIRSPACE DATA SYMBOLS

100 / 25	Class B Altitude Label (ceiling/floor)		Class C/TCA
48 / SFC	Class C Altitude Label (ceiling/floor)		Class D
30	Class D Altitude Label (ceiling only)		Restricted/Prohibited
	TFR		MIL
	Class B/TMA		Other/ADIZ

SafeTaxi



SafeTaxi provides greater map detail and higher image resolution at lower zoom levels.

Feature labels denote:

- Runways
- Taxiways
- Airport landmarks

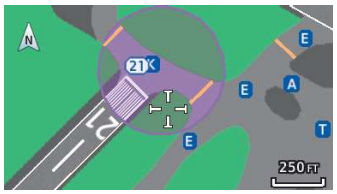
SafeTaxi Features

- Airport diagram overlay that includes hot spot information
- Aircraft position relative to taxiways, runways, and airport landmarks
- Pilot selectable range options

SAFETAXI DATA SYMBOLS

24R	Runway	E6	Taxiway
H	Helipad		Construction Area
	Airport Beacon		Unpaved Parking

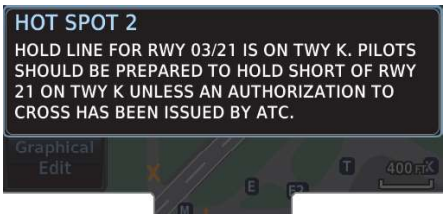
HOT SPOTS



SafeTaxi hot spots identify locations on an airport surface where positional confusion or runway incursions are likely to occur. These known problem areas require heightened attention by pilots.

Selecting the border of a hot spot displays a brief summary of the indicated hazard and an information key.

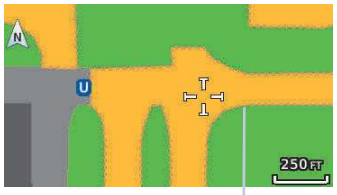
Tapping this key provides additional location information. Numbering corresponds to a list on the airport diagram.



The following airport features may be deemed hot spots by aviation authorities.

- Intersecting taxiways and runways
- Complex ramp areas
- Directional limitations
- Limited wing-tip clearance
- Overflight risk

CONSTRUCTION SPOTS



There are no expanded detail keys or notes associated with construction areas.

Construction Area Border

Active Flight Plan

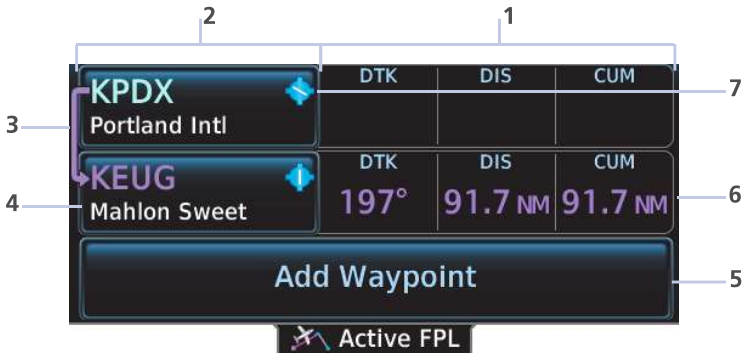
Current flight plan information displays as a scrolling list on the Active Flight Plan (FPL) page.

FEATURE REQUIREMENTS

- *Active flight plan*

FEATURE LIMITATIONS

- *Displays up to 100 waypoints for an active flight plan*



Active Flight Plan Page

1	Selectable Data Field Columns	**5**	Add Waypoint Key
2	Waypoint Identifier Column	**6**	Leg Data
3	Active Leg Indicator	**7**	Waypoint Type Icon
4	Current Waypoint		

AIRPORT INFO

For convenience, airport information is directly accessible from the procedure header. This includes airports specified in active approaches, arrivals, and departures.

Tap **Airport Info** to open the corresponding information page.

FIX TYPE INDICATIONS

LABEL	FIX TYPE
iaf	Initial Approach Fix
faf	Final Approach Fix
map	Missed Approach Point
mahp	Missed Approach Hold Point
-p	Parallel Track (no fix)

When applicable, labels indicate the fix type associated with an identifier.

ACTIVE LEG STATUS INDICATIONS

Magenta symbols denote active leg status on from/to/next waypoint indications. Fix type symbols (e.g., FAF, MAP) correspond with labels appearing on the flight plan.

	IAF		Arc Left
	FAF		Holding Pattern (Right Turns)
	MAP		Holding Pattern (Left Turns)
	MAHP		Active Leg Arrow
	Parallel Track		Direct To
	Arc Right		

GNC 355/355A:

Activating a direct-to course displays the corresponding fix symbol and waypoint identifier in two locations:

Map User Field

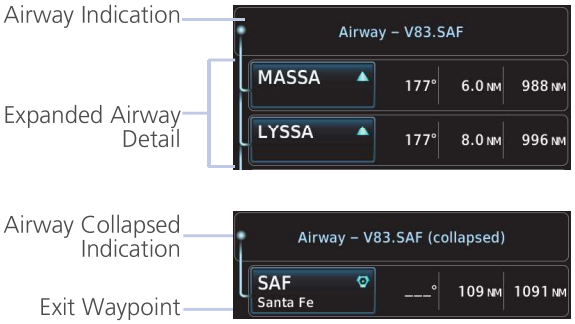
If configured, a user field shows the active waypoint identifier and fix type on Map.

Active Direct To Fix Indicator

Direct To key changes to show the active waypoint identifier and fix type.

Collapse All Airways

Airways automatically display as flight plan legs. A single airway may contain numerous legs. Airways without an active leg collapse for simplification. This does not affect airway legs shown on the external navigator(s).



All airways begin with an indicator field and end with an exit identifier.

To hide all waypoints along an airway, but not the airway's exit waypoint, tap **Collapse All Airways.**

OBS

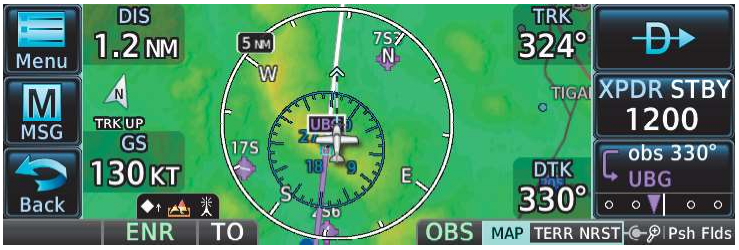
The Omni Bearing Selector (OBS) allows you to select between manual or automatic sequencing of waypoints.

When active, this function allows you to set the desired course To/From a waypoint using the provided controls or with an external OBS selector on HSI or CDI.

1. Tap **OBS**.
2. Specify a heading course.

CDI indicates the OBS heading. The mode displays on the annunciator bar.

GNX 375 shown as typical.



The unit retains the active To waypoint as a navigation reference even after passing the waypoint (i.e., prevents sequencing to the next waypoint).

Tapping the key again resumes automatic sequencing of waypoints (normal mode).

SUSPEND/UNSUSPEND

SUSP

This key displays for leg types that do not support OBS.

UNSUSP

This key displays for legs that auto suspend (e.g., leg holds, missed approaches).

Dead Reckoning

WARNING

Do not use projected position data as the only means of navigation.

Points About Dead Reckoning

- Provides limited navigation using the last known position and speed following the loss of GPS navigation while on an active flight plan
- Becomes active after a loss of GPS position while navigating using an active flight plan and the flight phase is either En Route or Oceanic
- Allowed only during en route and oceanic phases of flight

When dead reckoning mode is active:

- Map reports "No GPS Position"; overlays are not available
- DR mode annunciation replaces ENR or OCN
- Terrain functionality is not available
- Traffic displays on its dedicated page only
- CDI is not available

Dead reckoning mode ends once GPS position is restored.

Parallel Track

Create a parallel course offset relative to the current flight plan. Setup controls provide offset distance and direction setting (left of track or right of track).

FEATURE REQUIREMENTS

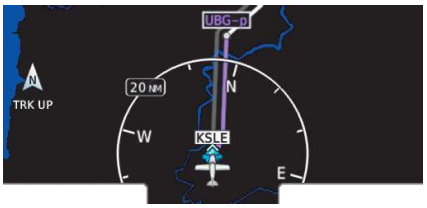
- *Active flight plan*

FEATURE LIMITATIONS

- *Function not available when Direct-to is active.*
- *Graphical editing of the active leg cancels the parallel track function*
- *Offset range: 1 nm to 99 nm*
- *Large offset values combined with certain leg types (e.g., approach) or leg geometries (i.e., changes in track >120°) do not support parallel track*

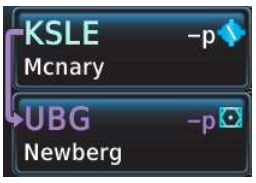
TRACK	COLOR
Offset	Magenta
Original	Gray

Once activated, a new track line appears to the left or right of the original course line at the specified distance. The aircraft navigates to the offset track with external CDI/HSI guidance now driven from the parallel track.



Map

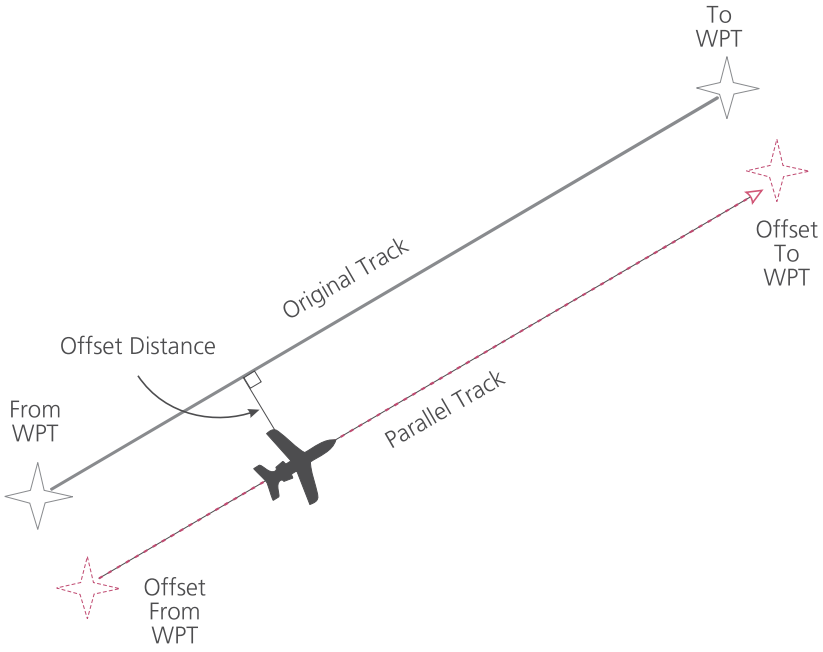
A graphical depiction overlays on the map.



Corresponding fix symbols on the flight plan indicate when the active leg is on a parallel track.

GPS 175 & GNX 375:
Active route identifiers also appear on the **GPS NAV Status** indicator key in the lower right corner of the display.

GNC 355/355A:
If configured, a user field shows active route identifiers on Map.



ACTIVATE A PARALLEL TRACK

1. Tap **Menu** > **Parallel Track**.
2. Tap **Offset** and specify a distance between 1 nm and 99 nm.
3. Tap **Direction** and select left of track or right of track.
4. Tap **Activate**.

To deactivate parallel track, tap **Menu** > **Deactivate PTK**.

Edit Data Fields

To select a flight plan data column, tap **Edit Data Fields**. Columns are arranged in numerical order (1 - 3).

To restore columns to default display settings, tap **Restore Defaults**.

DATA FIELD SELECTIONS	
CUM	Cumulative Distance
DIS	Distance
DTK	Desired Track
ESA	En Route Safe Altitude
ETA	Est. Time of Arrival
ETE	Est. Time En Route

Selections are identical for each column. By default, flight plan information fields display:

Column 1: DTK

Column 2: DIS

Column 3: CUM

Flight Plan Catalog

Create, activate, edit, copy, and delete flight plans within the catalog.

FEATURE LIMITATIONS

- *Stores up to 99 flight plans with a maximum of 100 waypoints each*

Each catalog entry includes a route identifier, the route distance, and en route safe altitude.

The identifiers of the departure and destination waypoints comprise the route identifier.

Catalog Route Options

Route Options

- Activate
- Invert & Activate
- Preview
- Edit
- Copy
- Delete

Selecting a flight plan opens a menu. Changes to the active flight plan take effect immediately.

- Activate the selected flight plan (replacing the active flight plan)
- Reverse and activate the selected flight plan
- Preview a selected flight plan
- Make changes to a flight plan
- Copy the flight plan and modify it to create a similar one
- Remove individual or multiple flight plans

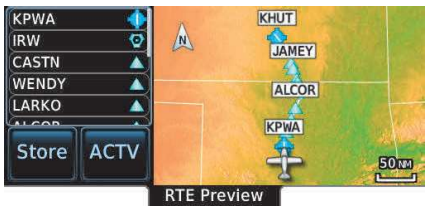
ACTIVATE

Activating a stored flight plan overwrites the active flight plan.

INVERT & ACTIVATE

Reverse and activate the selected flight plan for guidance back to your original departure point. The inverted flight plan is a copy. Changes do not affect the original flight plan, which remains stored in the catalog.

PREVIEW



View the flight plan route as it will appear on Map and on the Active FPL page.

Options include **Store**, **Edit**, and **ACTV** (**Activate**).

EDIT

Modify the selected flight plan on the Edit Catalog Flight Plan page.

COPY

Create a copy of the selected flight plan. A copy may be used as a starting point for creating a similar flight plan. Select the copy and tap Edit to make modifications.

DELETE A FLIGHT PLAN

Deleting the active flight plan does not delete the stored flight plan in the catalog.

From the FPL menu:

1. Tap **Menu** > **Delete**.
2. Confirm the request.

From the catalog:

1. Select a flight plan.
2. Tap **Delete**.
3. Confirm the request to delete all waypoints.

DELETE ALL CATALOGED FLIGHT PLANS

To remove all flight plans from the catalog:

1. Open the catalog.
2. Tap **Menu** > **Delete All**.
3. Confirm the request to clear the catalog.
4. Tap **Delete Pending**.
5. Confirm the request to remove all flight plans pending preview.

Create a Flight Plan

NOTE

The unit cannot verify the accuracy of cataloged flight plans with modified procedures.

There are three methods for creating a new flight plan.

CREATE FROM THE ACTIVE FLIGHT PLAN PAGE

1. Tap **Flight Plan**.
2. Delete the existing flight plan if necessary (**Menu** > **Delete**).
3. Tap **Add Waypoint**.
4. Select an identifier using the provided search options.
5. Repeat steps 3 - 4 for each waypoint in the route.

CREATE FROM MAP

Build a flight plan by selecting waypoints directly on the map using the Graphical Edit feature. For more about this method, read *Graphical Flight Plan Editing*.

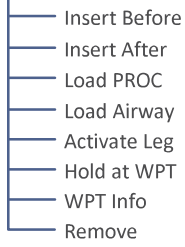
CREATE FROM THE FLIGHT PLAN CATALOG

1. Tap **Flight Plan** > **Menu** > **Catalog**.
2. Scroll to the end of the flight plan list.
3. Tap **Create New Catalog Route** > **Add Waypoint**.
4. Add waypoints using the provided search options.
5. Tap **Menu** > **Preview** > **Store** or **ACTV** (**Activate**).

As a general practice, never save flight plans with modified procedures in the catalog.

Flight Plan Waypoint Options

Options Menu



Selecting a waypoint identifier opens a menu. Changes to the active flight plan take effect immediately.

- Insert a new waypoint into a flight plan
- Add an airway or procedure
- Change the active leg
- Remove a selected waypoint
- Add a holding pattern to an existing waypoint
- View information about a waypoint

Insert Before	Insert a new waypoint before the selected waypoint.
Insert After	Insert a new waypoint after the selected waypoint.
Load PROC	Open the Procedures app to specify a departure, arrival, or approach for loading. Available controls are dependent upon the relative position of the aircraft to the active flight plan. Options may include: • Activate Approach • Vectors to Final • Activate Missed Approach
Load Airway	Assign an airway and exit waypoint to the selected entry waypoint (e.g., intersection, VOR).
Activate Leg	Designate any TO waypoint as the active flight plan leg. Requires an active catalog flight plan.
Hold at WPT	Create a user-defined hold at the selected waypoint. Specify hold parameters and preview holding patterns from a dedicated menu page.
WPT Info	Open the dedicated information page for the selected waypoint.
Remove	Remove the selected waypoint or hold from the active flight plan.

You may also set a direct-to course to any existing waypoint in the active flight plan. Select an identifier and tap the **Direct To** key.

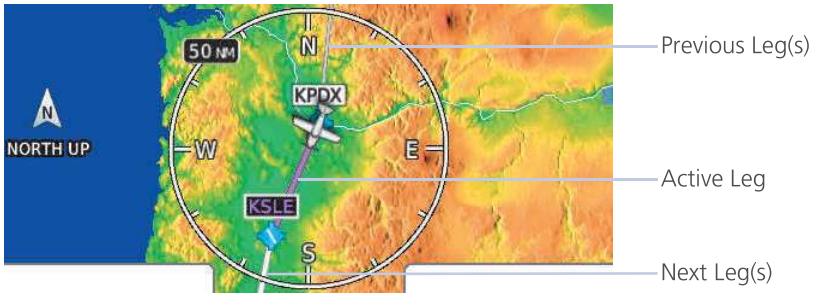
For details about Direct To features, refer to *Direct To Basics*.

Flight Plan Map Overlays

Leg Status Indications

LEG STATUS	COLOR
Active	Magenta
Next & Future	White
Past or Inactive	Gray

Active, next, and previous flight plan legs overlay on the Map page and are display only.



Leg Status Indications

Flight Plan User Field

AVAILABLE WITH:
GNC 355/355A

FEATURE REQUIREMENTS

- *Active flight plan for from-to-next route information*

If configured, a user field shows active route identifiers (from-to-next) on Map.

From, To, and Next Identifiers

Map User Fields

No Flight Plan Exists

Underscores denote the absence of an active leg.

Active Route Display

Field shows active route identifiers (from-to-next) and leg types when a flight plan exists.

GPS NAV Status Key

AVAILABLE WITH:
GPS 175 | GNX 375

Located in the lower right corner of the display, the **GPS NAV Status** indicator key displays from-to-next route information when an active flight plan exists. Indications change based on active leg status.

No Flight Plan Exists

Tap for direct access to the active flight plan.

Page icon means an active flight plan does not exist.

Route Indicator Only

Once the page is open, the indicator is display only.

Underscores denote the absence of an active leg.

Active Route Display

Label changes to show active route identifiers (from-to-next) and leg types.

CDI Scale Active

Only from-to waypoints display when the CDI scale is active. This function is controlled via the System Setup screen.

Direct To

Tapping this key opens the Direct To function. Search tabs provide three different methods of waypoint selection.

FEATURE LIMITATIONS

- *Not all flight plan entries are selectable using Direct To (e.g., holds, course reversals)*

Direct To Basics

Direct To is useful for quickly navigating to:

- New waypoints
- An existing waypoint in the active flight plan
- Nearby airports
- Map waypoints
- An off-route course
- User-defined holds

Set a course to any waypoint using Direct To.

Selecting an identifier automatically displays information about the waypoint.

When navigating to a single waypoint (e.g., a nearby airport), the Direct To function provides a quicker alternative to using the active flight plan.

Direct To Search Tabs

Search tabs include: Waypoint, FPL, and NRST APT

Direct To Window

WAYPOINT

Similar to an information page, but with course and hold options. This tab is active by default.

Info	Controls
• Distance and bearing from current aircraft position • Applicable city, state, country and/or region (e.g., "NW USA") • Identifier and type icon	• **Waypoint Identifier** key with access to multiple search tabs • **Course To** key for specifying he course angle for the navigation path • **Hold** key for creating, loading, and activating user-defined holds

FPL & NRST APT

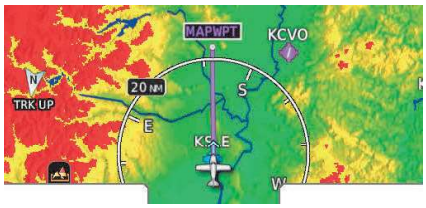
FPL and NRST APT tabs provide a list of selectable identifiers. These tabs have a uniform layout.

FPL: Lists all waypoints contained in the active flight plan.

NRST APT: Lists up to 25 waypoints within a 200 nm radius. The closest airport appears at the top of the list.

Direct To Activation

Activating a direct-to course establishes a point-to-point line from the aircraft's present position to the selected destination. The unit provides course guidance until you remove the direct-to waypoint, or replace it with a new direct-to course or flight plan.



Upon activation, Map automatically opens to show a graphical representation of the active direct-to leg.

GPS 175 & GNX 375

GPS NAV Status key changes to show active leg status.

GNC 355/355A

Direct To key changes to show the active direct-to fix. Indication includes the corresponding fix symbol and waypoint identifier.

If configured, a user field shows the active waypoint identifier and fix type on Map.

GPS 175/GNX 375:
For convenience, you may activate a direct to course using the control knob. This option is available only when the Home page is active.

Push the knob once to access the Direct To function. After selecting a waypoint, push the knob again to activate the direct-to course.

The window closes and Map opens to show the active leg.

Navigating Direct To

While most direct-to operations follow the same basic steps, the method for selecting a waypoint may vary.

DIRECT TO A NEW WAYPOINT

1. Tap **Direct To**.
2. Select a waypoint identifier.
3. Tap **Course** and specify the course heading (if a specific course is necessary).
4. Activate the selection.

DIRECT TO A FLIGHT PLAN WAYPOINT

Flight Plan Waypoints

If a flight plan exists, waypoint sequencing resumes once you reach the direct-to waypoint. If the waypoint is not in the flight plan, the flight plan is no longer active but remains available.

Direct To options are not available for all flight plan entries. Some entries include holds and course reversals which are not selectable using Direct To.

1. Tap **Direct To**.
2. Select **FPL** tab.
3. Select a flight plan leg.
4. Activate the selection.

DIRECT TO THE NEAREST AIRPORT

1. Tap **Direct To**.
2. Select **NRST APT** tab.
3. Select an airport.
4. Activate the selection.

DIRECT TO A MAP WAYPOINT

MAPWPT

For map locations without an existing name, Direct To assigns the "MAPWPT" identifier. Bearing, distance, and map coordinates display on the Waypoint tab.

Apply a direct-to course to any location on the map.

1. Tap a location on Map.
2. Tap **Direct To**.
3. Activate the selection.

You can modify direct-to routes on Map using the **Graphical Edit** function the same as you would a flight plan.

DIRECT TO AN OFF-ROUTE COURSE

You may activate an off-route course using any of the described direct-to methods.

Activating an off-route direct-to course automatically deactivates the current leg of the active flight plan.

Direct To & Procedure Fixes

Approach guidance is not available for procedure fixes. An example would be activating a direct-to course to a waypoint between the final approach fix and missed approach point. Upon arriving at the waypoint, approach guidance does not become active.

Removing a Direct-to Course

To cancel the current direct-to course, tap **Remove**.

Removing a direct-to course:

- Reactivates the original active flight plan
- Assigns the leg nearest to the aircraft's position as the active leg
- Resumes waypoint sequencing

If no active flight plan exists, the aircraft continues on its current heading without any navigation guidance.

User Holds

You may define a holding pattern for any direct to waypoint. User holds suspend automatic waypoint sequencing until they expire or are removed.

Tapping **Hold** displays available hold options.

GPS 175 shown as typical.

Load Hold	Accept the specified hold parameters and return to the Direct To window.
Hold Activate	Activate the loaded holding pattern.
Course	Specify the course angle.
Direction	Select between Inbound or Outbound.
Turn	Select between Left Turn or Right Turn.
Leg Type	Select Time or Distance.
Leg Time	Specify the leg time in minutes and seconds (MM:SS).
Leg Distance	Specify the leg distance.
EFC	Specify a time for the Expect Further Clearance reminder.
Preview	View the defined holding pattern as it will appear on Map and on the Active FPL page.

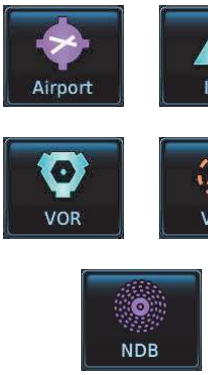
CREATE & ACTIVATE A HOLD

Create a hold for a direct-to waypoint. From the Waypoint tab:

1. Tap **Hold**.
2. Specify hold parameters.
3. Tap **Load Hold** > **Hold Activate**.

Waypoints

There are two types of waypoints: database and user



Database waypoints (i.e., waypoints contained in the navigation database) are organized into the following groups.

- Airport (APT)
- Intersection (INT)
- Very High Frequency Omni-directional Range (VOR)
- Visual Reporting Point (VRP)
- Non-Directional Beacon (NDB)

The Airport page is a great place to start when performing an approach brief, checking weather, or considering a diversion.

You also have the ability to define any point in space and store it. Unlike database waypoints, these "user" waypoints are editable.

Waypoint Information

Dedicated information pages provide waypoint search functions and details not available on the Map page.

FEATURE REQUIREMENTS

- *FIS-B (viewing NOTAMs)*
- *Navigation database containing VRP waypoint data*

FEATURE LIMITATIONS

- *2-D maps provide zoom functionality only*
- *FIS-B transmits distant and FDC NOTAMs within 100 nm of radio station position*

Intersection, VOR, VRP, and NDB information pages have a uniform layout.

VOR Information Page

1	Waypoint Identifier key	**5**	Nearest NAVAID information
2	Location Information	**6**	Waypoint coordinates
3	Preview key	**7**	Waypoint distance and bearing
4	Waypoint specific information (e.g., class, station declination, frequency)		

COMMON PAGE FEATURES

All waypoint information pages share the following features.

Data

- Distance and bearing from current aircraft position
- Latitude and longitude
- Applicable city, state, country and/or region (e.g., "NW USA")
- Identifier and type icon

Controls

- **Waypoint Identifier** key with access to multiple search tabs
- **Preview** key for displaying a 2-D map of the surrounding area (includes SafeTaxi airport depictions)

As you approach an airport, use the Preview function to orient yourself for such things as pattern entry or runway alignment.

WAYPOINT SPECIFIC PAGE FEATURES

Features listed here are unique to the corresponding waypoint.

Airport

Selectable abs:

Info: Airport location, elevation, time zone, and fuel availability.

Procedures: Available approach procedures.

Runways: Identifiers, size, surface type, and traffic pattern direction.

Tapping **Runway** opens a list of available runways.

Frequencies: Available communication and localizer frequencies. The "c" symbol denotes frequencies that function as the CTAF.

View additional frequency information by tapping **More Information**, if available.

WX Data: Applicable METARs, city forecasts, and TAF weather information.

NOTAMs: Applicable distant and FDC NOTAMs.

VRPs: Nearest VRPs.

Intersection

Data fields:

- Nearest VOR (identifier, type icon, bearing, and distance)

Very High Frequency Omni-directional Range

Data fields:

- Frequency
- Nearest airport (identifier, type icon, bearing, and distance)
- Station declination
- VOR class

Visual Reporting Point

Data fields:

- Nearest VRP (identifier, type icon, bearing, and distance)

Non-Directional Beacon

Data fields:

- Frequency
- Nearest airport (identifier, type icon, bearing, and distance)
- Marker description

User Waypoint

Selectable functions:

Edit: Opens the Create User Waypoint page for editing purposes.

View List: Displays a list of all user waypoint identifiers.

Delete: Removes the selected user waypoint from the list.

Delete All: Removes all user waypoints from the list. All deletions require user confirmation. User waypoints in the active flight plan cannot be edited or deleted.

Data fields:

- Reference position or nearest waypoint (identifier, type icon, radial, and distance), whichever is applicable
- Number of waypoints used out of 1,000

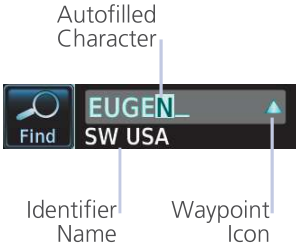
The User WPT page is the only page that allows you to view an entire list of all user waypoints created and saved in the database.

Waypoint Selection

The **Waypoint Identifier** key provides access to different waypoint search options. Enter a specific identifier or select one from the available search tabs.

FastFind Predictive Waypoint Entry

FastFind predicts a waypoint based on the characters you select. As you type, the key label changes to reflect the identifier of the nearest matching entry.



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

Tap to select the predicted waypoint and open the corresponding information page.

Because it relies on your GPS position, FastFind can make predictions based on a single key press.

"No matches found" and "Duplicate found" annunciate when applicable. If no matches are found, "No suggestion" annunciates and the key is not selectable.

FastFind & Flight Plan

For convenience, use FastFind when creating your flight plan. The unit will search for waypoints closest to the current GPS position.

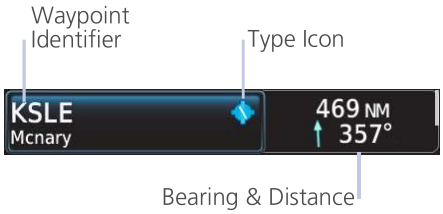
- If inserting a waypoint in the middle of the flight plan, the unit searches for waypoints between the next and previous waypoints.
- If adding a waypoint to the end, the unit searches for waypoints closest to the last waypoint in the flight plan.

FastFind is a convenient shortcut when you are adding waypoints to a flight plan or trying to find a waypoint in a hurry.

Search Tabs

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

Waypoint Search Tabs



Each entry includes general information about the associated waypoint.

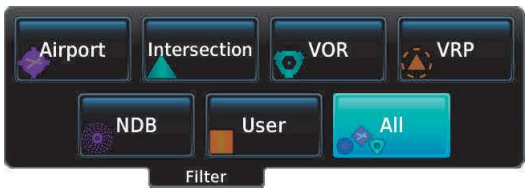
RECENT

Lists up to 20 of the most recently viewed waypoints.

NEAREST

Lists up to 25 waypoints within a 200 nm radius.

Tap **Filter** and select from the available filter options. Only waypoints belonging to the selected class appear in the list.



To list all classes, select **All**.

FLIGHT PLAN

Lists all waypoints contained in the active flight plan.

USER

Lists up to 1,000 user-defined waypoints.

SEARCH BY NAME

Lists all airports, NDBs, and VORs associated with the specified facility name.

Tap **Search Facility Name** to begin search.

SEARCH BY CITY

Lists all airports, NDBs, and VORs found in proximity of the city.

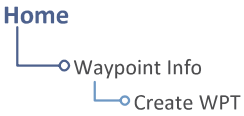
Tap **Search City Name** to begin search.

Create User Waypoints

Create and store up to 1,000 user defined waypoints.

FEATURE LIMITATIONS

- *Duplicate user waypoint identifiers are not allowed*
- *Names may be up to six characters in length*
- *Comment may be up to 25 characters*
- *Maximum waypoint limit: 1,000*



Access this page from one of two places:

- Waypoint Info page
- Map page

MAP POINTER KEY

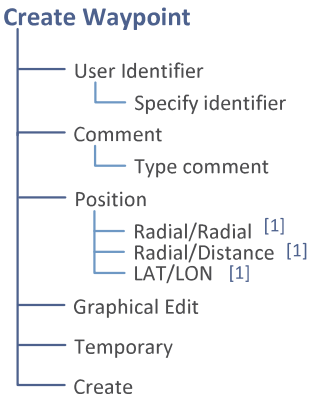
Tapping any location on the map that is not a existing waypoint displays the Create Waypoint access key.

USER WAYPOINT IDENTIFIER

Assign a unique identifier or keep the unit generated identifier. By default, the identifier format is "USR" followed by a sequential three digit number.

User waypoints are helpful when ATC requests that you fly one radial to intercept another. While the point is often defined by an intersection in the navigation database, this is not always the case. The Create User Waypoint function allows you to define the new intersection and insert it into the flight plan in advance, as opposed to using the NAV radio to tune each VOR and specify the radials to fly inbound and outbound.

Define Waypoint Criteria



Active user waypoints already existing in a flight plan are not editable.

When creating a user waypoint, you have the option to:

- Create a user waypoint
- Assign a unique identifier
- Set the waypoint as temporary
- Enter a comment
- Set the waypoint position
- Edit the waypoint graphically

[1] Waypoint position options are mutually exclusive. Enabling one disables the other.

User Identifier	Assign a unique identifier.
Comment	Type a comment regarding the new waypoint.
Position	Set the waypoint position.
Graphical Edit	Open a preview map for graphical editing purposes. User waypoint icon remains stationary as you move the surrounding map to the new location.
Temporary	Assign the waypoint a temporary status. Identifier remains available until the next unit power cycle.
Create	Add the new identifier to the used waypoints list. The associated information page opens automatically for viewing and editing purposes.

COMMENT FORMAT

Default comments display in a specific format for each reference type.

LAT/LON

<LAT> <LON>

Radial/Distance

<Waypoint><Radial> / <Distance>

Radial/Radial

<Waypoint 1><Radial 1> / <Waypoint 2><Radial 2>

POSITION OPTIONS

Set the Waypoint Position using one of the following options.

Radial/Radial:

Specify a waypoint and radial for each of the two reference points.

Radial/Distance:

Specify the reference waypoint, radial, and distance.

LAT/LON:

Specify the point's latitude and longitude.

Edit an Existing User Waypoint

FEATURE LIMITATIONS

- *User waypoints that are part of a flight plan are not editable*

OPEN EDIT WAYPOINT PAGE

You can access the edit function multiple ways.

From the dedicated information page:

Home > **Waypoint Info** > **User WPT** > Specify an identifier, or tap **View List** and select an identifier from the used waypoints list > **Edit**

From the Nearest page:

Home > **Nearest** > **User WPT** > Select an identifier from the list (e.g., USR001) > **Edit**

From the Active FPL page:

Home > **Flight Plan** > Select the identifier from the flight plan > **WPT Info** > **Edit**

MODIFY POSITION VALUES

From the Edit WPT page, you can modify a user waypoint's position one of two ways:

1. Tap **Position** > **Latitude/Longitude** > Specify the waypoint's coordinates > **Save**.

OR

1. Tap **Graphical Edit**.
2. Hold and drag the basemap until the user waypoint icon appears over the desired location.
3. Tap **Enter** > **Save**.

Import User Waypoints

The **Import Waypoints** key appears when the unit detects a user waypoint on the datacard.

FEATURE LIMITATIONS

- *User waypoint file size must not exceed 8 GB*

NOTE

The import function overwrites any existing user waypoint of the same name.

CREATE USER WAYPOINT FILE

You may create a list of new user waypoints using any spreadsheet program. Read "User Waypoint File Considerations" for limitations and formatting specifications. Organize columns as follows.

A	B	C	D
Waypoint Name	Comment	Latitude	Longitude

	A	B	C	D
1	MTHOOD	MT HOOD PEAK	45.3723	-121.69783
2	CRTRLK	CRATER LAKE	42.94683	-122.11083
3	EIFFEL	EIFFEL TOWER	48.858151	2.294384
4	OCEAN		32.68735672	-51.45543634

User Waypoint File

User Waypoint File Considerations

- Limit one waypoint per row
- Names may be up to six characters in length
- Comments may be up to 25 characters
- All letters must be upper case
- Latitude: two digits left of decimal; up to nine digits right of decimal
- Longitude: three digits left of decimal; up to eight digits right of decimal
- (-) indicates southern latitudes (column C) or western longitudes
- Express latitude and longitude coordinates in decimal degrees

Save the file in the .csv format under the name "user.csv." Change the file extension to ".wpt" before copying the file to a blank SD card.

IMPORT USER WAYPOINTS

1. Ensure that the unit power is off.
2. Insert datacard containing user waypoints.
3. Power on unit.
4. From the Home page, tap **Waypoint Info** > **Import Waypoints**.
5. Acknowledge the pop-up message.

The import function executes in the background. Once the import is complete, an advisory message informs: "User waypoints were imported successfully."

The waypoints are now available for use. You may power down the unit and remove the SD card.

If an imported waypoint is within 0.0001 degree (latitude and longitude) of an existing user waypoint, the existing waypoint and name will remain in use.

Nearest

View a list of the nearest waypoints, frequencies, or facilities within 200 nm of the aircraft's position.

From the Home page:

1. Tap **Nearest** > Select a waypoint or frequency icon.
2. Scroll through the list of entries.

Information varies according to the selected waypoint or frequency type. Nearest waypoints provide an identifier key for accessing the associated information page.

Nearest Airport
• Identifier • symbol • distance • bearing • approach type • length of longest runway

Nearest Intersection
• Identifier • symbol • distance • bearing

Nearest Very High Frequency Omni-directional Range
• Identifier • symbol • distance • bearing • frequency

Nearest Visual Reporting Point
• Identifier • symbol • distance • bearing

Nearest Non-Directional Beacon
• Identifier • symbol • distance • bearing • frequency

Nearest User Waypoint
• Identifier • symbol • distance • bearing

Nearest Airspace
• Identifier • symbol • proximity

Nearest Air Route Traffic Control Center
• Facility name • distance • bearing • frequency

Nearest Flight Service Station
• Facility name • distance • bearing • frequency
("RX" denotes receive-only frequencies)

Nearest Weather Frequency
• Facility name • distance • bearing
• frequency of nearest ATIS, ASOS, and AWOS

ENTRY LIMITS

NEAREST LIST	ENTRY LIMIT
ARTCC, FSS	05
Airspace	20
Airport, Intersection, VOR, VRP, NDB, User, Weather FREQ	25

The number of entries displayed varies according to item type.

Entries are ordered from closest to farthest.

UPDATE INTERVALS

With the exception of nearest airspace, all lists update every 30 seconds. The nearest airspace list updates once per second.

MULTIPLE FREQUENCIES

This key displays when more than one frequency is available at the indicated range.

Applicable to functions displaying information only (ARTCC, FSS, and WX FREQ).

8 Glossary

A

ACT	Altitude Compensated Tilt
ADAHRS	Air Data/Attitude & Heading Reference System
ADC	Air Data Computer
ADIZ	Air Defense Identification Zone
ADS-B	Automatic Dependent Surveillance Broadcast
AFM	Aircraft Flight Manual
AFMS	Aircraft Flight Manual Supplement
AGL	Above Ground Level
AHRS	Attitude Heading Reference System
AIM	Airman's Information Manual
AIRB	Basic Airborne Application
ALT	Altitude Hold
AP	Autopilot
ARTCC	Air Route Traffic Control Center
AR	Approval Required
ASOS	Automated Service Observing System
ATAS	ADS-B Traffic Advisory System
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATK	Along Track
AWOS	Automated Weather Observing Station

C

CDI	Course Deviation Indicator
CDU	Control and Display Unit
CRS	Course
CTAF	Common Traffic Advisory Frequency
CWA	Central Weather Advisory

D

DG	Directional Gyro
DME	Distance Measuring Equipment

E

EDR	Excessive Descent Rate
EFC	Expected Further Clearance
ENR	En Route
ESP	Electronic Stability and Protection

F

FAF	Final Approach Fix
FDC	Flight Data Center
FIS-B	Flight Information Services Broadcast
FLTA	Forward Looking Terrain Avoidance
FMS	Flight Management System
FPL	Flight Plan
FPM	Feet Per Minute
FSS	Flight Service Station

G

GCS	Ground Clutter Suppression
GDC	Garmin Air Data Computer
GDL	Garmin Data Link
GDU	Garmin Display Unit
GFC	Garmin Flight Controller

GP	Glidepath
GPS	Global Positioning System
GPSS	Global Positioning System Steering
GRS	Garmin Reference System
GS	Glideslope
GSL	Geometric Sea Level
GSU	Garmin Sensing Unit
GTP	Garmin Temperature Probe

H

HDG	Heading
HOT	Hazardous Obstacle Transmission
HPL	Horizontal Protection Level
HSDB	High Speed Data Bus

I

IAF	Initial Approach Fix
IAS	Indicated Airspeed
IAT	Induction Air Temperature
IFR	Instrument Flight Rules
IGRF	International Geomagnetic Reference Field
ILI	Imminent Line Impact
ILS	Instrument Landing System
INT	Intersection
IOI	Imminent Obstacle Impact
ISA	International Standard Atmosphere
ITI	Imminent Terrain Impact

K

KIAS	Knots Indicated Airspeed

L

LDI	Lateral Deviation Indicator
LOA	Letter of Authorization
LOC	Localizer
LRU	Line Replaceable Unit

M

MAP	Missed Approach Point
MAHP	Missed Approach Holding Point
MDA	Minimum Descent Altitude
METAR	Meteorological Terminal Aviation Routine Weather Report
MOA	Military Operations Area
MSL	Mean Sea Level

N

NAVAID	Navigation Aid
NCR	Negative Climb Rate
NDB	Non-Directional Beacon
NEXRAD	Next-Generation Radar

O

OAT	Outside Air Temperature
OBS	Omni Bearing Selector
OCN	Oceanic

P

PCL	Pilot Controlled Lighting
PDA	Premature Descent Alert
PRF	Pulse Repetition Frequency
PVT	Position, Velocity, and Time

R

RAIM	Receiver Autonomous Integrity Monitoring
RF	Radius to Fix
RLC	Reduced Line Clearance
RNAV	Area Navigation
RNP	Required Navigation Performance
ROC	Reduced Required Obstacle Clearance
RTC	Reduced Required Terrain Clearance

S

SAT	Static Air Temperature
SBAS	Satellite-Based Augmentation System
SBS	Surveillance and Broadcast Services
SD	Secure Datacard
SSID	Service Set Identifier
STAR	Standard Terminal Arrival
STBY	Standby
SURF	Surface Situation Awareness
SVID	Satellite-Vehicle Identification

T

TA	Traffic Advisory
TAF	Terminal Aerodrome Forecast
TAS	Traffic Advisory System
TAT	Total Air Temperature
TCAD	Traffic Alert and Collision Avoidance Devices
TCAS	Traffic Alert and Collision Avoidance System
TCH	Threshold Crossing Height
TERM	Terminal
TFR	Temporary Flight Restriction
TIS	Traffic Information Service

TSAA	Traffic Situational Awareness with Alerting
TSO	Technical Standard Order

U

UTC	Universal Time Coordinated

V

VCALC	Vertical Calculator
VDI	Vertical Deviation Indicator
VFR	Visual Flight Rules
VLOC	VOR/Localizer
VNAV	Vertical Navigation
VOR	Very High Frequency Omni-directional Range
VPL	Vertical Protection Level
VRP	Visual Reporting Point
VS	Vertical Speed

W

WAAS	Wide Area Augmentation System
WPT	Waypoint

X

XPDR	Transponder