GARMIN

GPS 175/GNC 355/GNX 375

Software v3.20

Upgrade Supplement

This supplement contains revised pages from *GPS 175/GNC 355/GNX 375 Pilot's Guide*, P/N 190-02488-01, Rev. C. These pages contain new and significant information regarding the features of software v3.20 as well as changes in terminology and additional information to clarify unit operation.

Black bars adjacent to revised information correspond to changes described in the revision summary table.

Features and screen images are dependent upon the installed software version and its configuration. For more information regarding feature availability, refer to the pilot's guide.

An electronic version of the pilot's guide is available for viewing on your computer or portable device. Go to garmin.com/manuals.

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INFORMATION & SUPPORT

For information regarding the Aviation Limited Warranty, refer to Garmin's website.

For aviation product support, visit flyGarmin.com.

Overview

GPS 175/GNC 355/GNX 375 Main software v3.20 provides the following significant features:

- Automatic crossfilling of data between two connected GPS 175, GNC 355(A), GNX 375 units or one GPS 175, GNC 355(A), GNX 375 and one GTN unit
- Controls for presetting fuel on board and fuel flow quantities on the start-up page or Instrument Panel Self-Test page depending on configuration
- Fuel flow and fuel on board data display for installations equipped with TXi EIS, GI 275, or certain fuel computers
- User airport and fly-over waypoint display capability on the active flight plan and moving map
- Transition waypoint indications provide a reference on the active flight plan

Learn about crossfilled data and controls for presetting fuel quantities in Section 2, *Get Started*.

Learn about user airport, fly-over waypoint, and transition waypoint indications in Section 3, *Navigation*.

Learn more about fuel flow and fuel on board data in Section 4, *Planning*.

Change List

GPS 175/GNC 355/GNX 375 Pilot's Guide, P/N 190-02488-01, Rev. C contains the following significant changes.

REV B PAGE	REV C PAGE	DESCRIPTION
General Edit		
--	--	Changed all instances of "Flight Stream 510 wireless datacard" to "Flight Stream 510 wireless transceiver" throughout.
Front Matter		
xiv	viii	Added FAA's Dynamic Regulatory System to "Reference Websites" table.
Section 1 - System at a Glance		
1-2	1-2	Added "GNX 375" to list of units compatible with GPS 175 and GNC 355 for ADS-B weather and traffic data interface.
1-6	1-6	Added "For Mac Users" inset for readers formatting the SD card or wireless transceiver using macOS.
1-17	1-17	Added "GNX 375" to list of optional interfaces.
1-18	1-18	Added "G5/GAD 29D" to list of LRUs in ADC & AHRS function table.
	1-19	Added "GNX 375" to list of LRUs in ADS-B In Data function table.
Section 2 - Get Started		
2-2	2-2	Changed all instances of "Instrument Test page" to "Instrument Panel Self-Test page."
	2-3	Added "Preset Fuel Quantities" section.
2-3	2-4	Added "Aviation Database Errors" topic.

REV B PAGE	REV C PAGE	DESCRIPTION
2-13	2-15	Updated list of Garmin avionics compatible with Database SYNC. Now Includes: • GTN v6.72 • GTN Xi v20.20 and later
		Added "Dual GPS 175, GNC 355, GNX 375 or GTN Installations" segment.
2-38	2-41	Added information to explain the meaning of the ADS-B Out key ON state indication.
	2-49	Added clarification that Flight ID key is not selectable when the ID is received from the GDL 88.
2-46	2-50	Added "Crossfill" to list of System Setup selections.
		Added and applied note 3 regarding unit availability to CDI On Screen system setup option and second bullet in list of unit customization options.
2-49	2-54	Added "Include User Airports" segment.
2-53	2-58	Added fuel parameter and settings to unit selections table.
2-55	2-61	Added "Crossfill" section.
2-59	2-65	Added GNX 375 to note 1 regarding aural alerts in "Aural Alerts" section.
2-61	2-67	Added SBAS to condition description for D (inside bar) symbol in the signal strength indications table.
Section 3 - Navigation		
3-9	3-9	Added Fuel Flow to user field options table. Includes note 2 regarding feature availability.
3-14	3-14	Added user airport and fly-over waypoint symbols to aviation data symbols table. Includes note 2 regarding feature availability.
		Added and applied note 2 regarding feature availability to fly-over waypoint symbol.
3-27	3-31	Added "Waypoint Color" segment.

REV B PAGE	REV C PAGE	DESCRIPTION
3-42	3-46	Added "User Airport Symbol" section.
	3-47	Added "Fly-over Waypoint Symbol" section.
3-56	3-63	Added information regarding user waypoint and user airport identifiers.
3-57	3-64	Added information regarding new Airport and Elevation user waypoint customization options.
		Added "Specify elevation (user airports only)" to user waypoint creation options.
		Added "Airport" and "Elevation" to list of user waypoint options.
3-80	3-87	Revised information in "RF Legs" section to specify "RNAV RNP 0.3 non-AR approaches."
Section 4 - Planning		
4-5	4-5	Added information to "Fuel Planning Page" section regarding the option to input values manually or have data supplied by connected sensors.
	4-6	Added information regarding automatic Fuel on Board and Fuel Flow data transfer via Garmin EIS or certain fuel computers.
4-6	4-7	Revised second bullet of Fuel on Board description to include sensor data as an optional input.
		Revised first bullet of Use Sensor Data description to include fuel sensor data.
		Added second bullet regarding fuel flow and fuel on board data display to Use Sensor Data description.
Section 5 - Hazard Awareness		
5-2	5-2	Updated note 1 to include GNX 375 as an optional external ADS-B In source.
5-3	5-3	Updated first bullet of datalink weather feature requirements to include GNX 375 as an optional UAT receiver.
5-10	5-10	Added website address for FAA Dynamic Regulatory System.

REV B PAGE	REV C PAGE	DESCRIPTION
5-23	5-23	Updated first bullet of traffic awareness feature requirements to include GNX 375 as an optional external ADS-B In product.
Section 6 - Messages		
6-2	6-2	Added "Dual Navigator Installations" topic.
6-3	6-4	Added "LRU Navigation DB mismatch" message and corrective action to list of database advisories.
6-14	6-14	Added the following messages along with the appropriate corrective actions to list of system hardware advisories. • "LRU Software mismatch" • "Crossfill is inoperative"
	6-15	Added "Crossfill is turned off" message and corrective action to list of system hardware advisories.

Reference Manuals

DOCUMENT	P/N
GDL 88 ADS-B Transceiver Pilot's Guide	190-01122-03
GTX 335/345 All-In-One ADS-B Transponder Pilot's Guide	190-01499-00

Reference Websites

WEBSITE	ADDRESS
ADS-B Academy	https://www.garmin.com/en-US/aviation/adsb/
Aviation Limited Warranty	https://www.garmin.com/en-US/legal/aviation-limited-warranty
Connext	http://www.garmin.com/connext
Database Concierge	Go to http://www.flygarmin.com/support and select Database Management.
FAA Dynamic Regulatory System	https://drs.faa.gov

Overview

GPS 175, GNC 355/355A, and GNX 375 are the first 2" by 6.25" panel mount navigators to employ full color capacitive touchscreen technology.

GNC 355 shown as typical.

GPS 175 is a TSO-C146e compliant GPS/WAAS navigator with en route, terminal, and precision/non-precision approach capabilities.

GNC 355/355A combines the functionality of GPS 175 with a TSO-C169a compliant VHF radio communications transceiver. GNC 355 supports 25 kHz channel spacing, while GNC 355A provides tuning for both 25 kHz and 8.33 khz channels.

Both GPS 175 and GNC 355 can receive ADS-B In weather and traffic when interfaced to either GNX 375, GTX 345, or GDL 88.

GNX 375 combines the functionality of GPS 175 with a TSO-C112e (Level 2els, Class 1) compliant mode S transponder that meets ADS-B Out requirements. A dual-link ADS-B In receiver provides the display of traffic and subscription-free weather.

Each unit is compatible with Bluetooth wireless technology, providing flight plan, traffic, weather, and position data to an available portable electronic device.

SD Card Slot

NOTE

Do not remove or insert an SD card while in flight. Always verify the system is powered off before inserting or removing an SD card.

FEATURE REQUIREMENTS

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

The navigator requires an SD card for the following tasks.

- Exporting data logs
- Capturing screen images
- Upgrading software
- Saving system configurations
- Enabling Flight Stream connectivity
- Updating databases

INSERT AN SD CARD

When inserting an SD card:

1. Verify unit power is off and the slot is empty.
2. Hold card such that label faces left edge of display screen.
3. Ensure back edge of card is flush with display bezel after insertion.

EJECT AN SD CARD

1. Power off the unit.
2. Release the spring latch by pressing lightly on exposed edge of card.

For Mac Users

Do not use macOS to format an SD card or the Flight Stream 510 wireless transceiver if you plan to use either as a media storage device for updating databases.

In the event there is a file corruption problem with the SD card (including the wireless transceiver when used as a database storage device), it may be necessary to reformat the card. This can cause an issue when formatting the SD card using macOS, where the newly formatted card will not be recognized by the avionics system. When using a Macintosh computer to format the SD card, or the wireless transceiver, Garmin recommends using the SD Memory Card Formatter application available as a download from SDcard.org. When running the application, use the Quick Format option.

Compatible Equipment

Line Replaceable Units

SYSTEM REQUIRED LRUs
GPS antenna
SYSTEM OPTIONAL LRUs
ADAHRS or ADC with AHRS
Audio panel
GAD 29 adapter
GAE 12 altitude encoder (GNX 375 only)
G3X Touch
G500/G600
G500/G600 TXi
GMX 200
MX 20
OPTIONAL INTERFACES
GDL 88/GTX 345/GNX 375 ADS-B transceiver (GPS 175 and GNC 355 only)

The system consists of multiple LRUs, which are installed behind the instrument panel or in a separate avionics bay. Their modular design aids system maintenance and unit replacement.

Optional LRUs may include compatible equipment from either Garmin or a third party manufacturer.

ADC & AHRS

AHRS units have a magnetometer interface for determining magnetic heading. ADC units have a Pitot-static interface for measuring pressure altitude.

LRU	DISPLAY	FUNCTION
GDC 74 ADC	GNX	• Air temperature • Pressure altitude
G3X G500/G600	GPS GNC GNX	**ADC** • Air temperature • Pressure altitude **AHRS** • Heading
GSU 25/73 Integrated ADAHRS	GNX	
GRS 77 AHRS	GNX	• Heading
G5/GAD 29D	GPS GNC GNX	• Heading • Pressure altitude • Air temperature

Altitude Encoder

LRU	DISPLAY	FUNCTION
GAE 12 Provides pressure altitude information to the transponder.	GNX	Aircraft static pressure

ADS-B In Data

LRU	DISPLAY	FUNCTION
GDL 88 GTX 345 GNX 375 Provides datalink traffic and weather.	GPS GNC	**Traffic Services** • ADS-B • TIS-B **Weather Services** • FIS-B **Weather Products** Map & FIS-B Weather: • Precip (NEXRAD) • METARs • TFRs • Lightning FIS-B Weather only: • Center Weather Advisory • Cloud Tops • G-AIRMET • Icing Potential • PIREP • SIGMET • TAF • Turbulence • Winds/Temps Aloft

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.

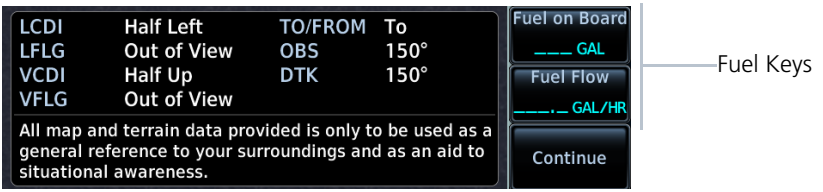
Tapping **Continue** advances to the Instrument Panel Self-Test page.

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

Instrument Panel Self-Test

To ensure safe operation, continuous built-in test features exercise the unit's processor, memory, external inputs, and outputs. The Instrument Panel Self-Test page displays the expected 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.



Instrument Panel Self-Test Page

Preset Fuel Quantities

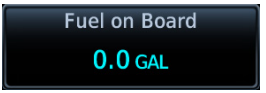
CAUTION

Ensure that estimated fuel quantity values are accurate before flight.

FEATURE LIMITATIONS

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

The unit stores preset fuel amounts for estimated full and tab amounts. These settings may not be editable if the unit is interfaced with a digital fuel computer. Fuel setup keys reside on the start-up page or the Instrument Panel Self-Test page depending on unit configuration.

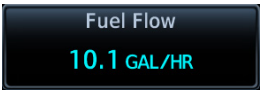


Fuel on Board

Specify the current fuel quantity.

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

Initial value automatically reduces based on current fuel flow.



Fuel Flow

Set fuel flow amount.

Tapping this key opens a keypad.

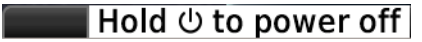
Power Off

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.



Databases

NOTE

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

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

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

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

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

Aviation Database Errors

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

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

Database SYNC

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

FEATURE LIMITATIONS

- *Not applicable to Terrain database*
- *Database SYNC does not support Chart Streaming*

To toggle the feature on and off:

Home > **System** > **System Status** > **Menu** > **DB SYNC**

Database SYNC Compatibility

The Database SYNC function enables automatic database synchronization across all capable Garmin avionics:

- GPS 175
- GI 275
- GNC 355
- GNX 375
- GDU TXi running software version 3.10 and later (GDU 700( ), GDU 1060) [1]
- GTN v6.72
- GTN Xi v20.20 and later

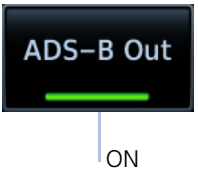
[1] Receive only. Airport directory and chart databases are not transmitted from GPS 175, GNX 375, or GNC 355.

For information regarding database packages, and individual database purchases, visit flyGarmin.com.

DUAL GPS 175, GNC 355, GNX 375 OR GTN INSTALLATIONS

To prevent crossfill errors after installing new databases, be sure to install matching databases on both navigation units and allow database synchronization to complete before departure.

Enabling Extended Squitter Transmissions



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

The ON state indicates that ADS-B Out messages and position information are being transmitted.

Assigning a Flight ID

FEATURE LIMITATIONS

- *Availability dependent on configuration*

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

Flight IDs are alphanumeric (upper-case only) and have an eight character limit.

The active flight ID displays by default.

Assigning a Flight ID

FEATURE LIMITATIONS

- *Availability dependent on GDL 88 configuration*

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

Flight IDs are alphanumeric (upper-case only) and have an eight character limit.

The active flight ID displays by default.

GDL 88 Alert

If the GDL 88 fails:

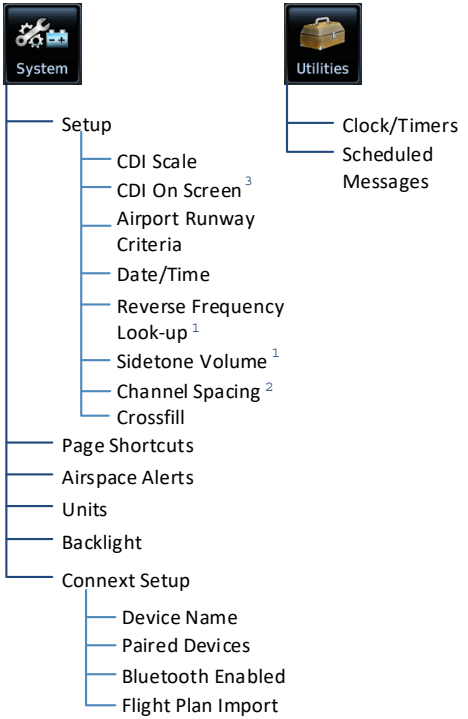
- Red "X" displays over the IDENT key
- Advisory message alerts
- ADS-B reporting functions are not available

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

UNIT	CONDITION
GPS 175 GNC 355	GDL 88 failure.

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

Pilot Settings



[1] GNC 355/355A only.
[2] GNC 355A only.
[3] GPS 175 and GNX 375 only.

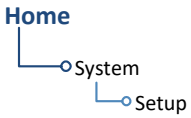
Unit customization options allow you to:

- Set the CDI scale
- Display the CDI on-screen[3]
- Specify runway criteria
- Set the date and time
- Specify COM radio settings [1]
- Create shortcuts
- Set the display units
- Adjust display brightness

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

For details about COM radio settings and Connext Setup options, refer to the respective section.

Airport Runway Criteria



Specify runway criteria from the System Setup app. Selections determine which airports are suitable when using the nearest airport search feature.

During an approach, the terrain alerting algorithm uses airport runway settings to avoid nuisance alerts.

Runway Surface

Runway Surface Options

- Any
- Hard Only
- Hard/Soft
- Water

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

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

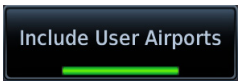
Minimum Runway Length

Specify a minimum runway length to:

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

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

INCLUDE USER AIRPORTS



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

Unit Selections

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

PARAMETER	SETTINGS
Distance/Speed	• Nautical Miles (nm/kt) • Statute Miles (sm/mph)
Fuel	• Gallons (gal) • Imperial Gallons (lg) • Kilograms (kg) • Liters (lt) • Pounds (lb)
Temperature	• Celsius (°C) • Fahrenheit (°F)
NAV Angle	• Magnetic (°) • True (°T) • User (°U)
Magnetic Variation	• Specify number of degrees for east or west (°E, °W) • Available only when "User (°U)" is the active NAV angle

SPECIFY UNIT TYPE

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

Crossfill

NOTE

GPS 175/GNC 355(A)/GNX 375 units are not compatible that have GTN units with Search and Rescue enabled for crossfill.

FEATURE REQUIREMENTS

- *Dual Garmin GPS navigator configuration*
- *GTN Xi software v20.30 or later (if crossfilling to GTN Xi unit)*

Enable the crossfilling of information between two GPS 175, GNC 355(A), GNX 375 units or one GPS 175, GNC 355(A), GNX 375 and one GTN unit.

Crossfill Features

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

Crossfill Data

Alerts:

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

Flight Plan Catalog

System Setup:

- Date/Time Offset
- Nearest airport criteria
- Units (Nav angle, Fuel, and Temperature)
- User-defined COM frequencies (GNC 355(A)/GTN only)
- CDI Scale setting

User waypoints

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

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

To enable or disable crossfilling:

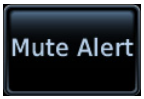
Home > **System** > **Setup** > **Crossfill** > **OK**

Aural Alerts

FEATURE LIMITATIONS

- *GNX 375 only (traffic alerts)*[1]
- *Mute alert function is applicable only to the active aural alert (does not mute future alerts)*

Traffic alerts are accompanied by an aural voice message. Voice gender is configured during installation.



Tapping **Mute Alert** silences the active traffic alert voice message.

[1] Aural alerts are available for GPS 175/GNC 355 systems interfaced to a traffic system (GDL 88, GTX 345, or GNX 375). They are provided directly from the traffic system LRU to the audio panel.

SIGNAL STRENGTH INDICATIONS

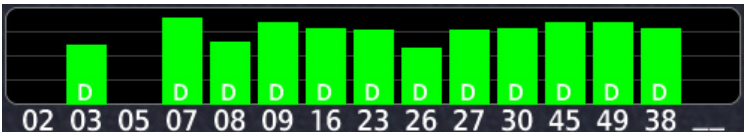
Satellite SVIDs

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

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

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

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



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

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

USER FIELD OPTIONS

LABEL	FIELD TYPE	LABEL	FIELD TYPE
BRG	Bearing to waypoint	GS	GPS ground speed
DIS/BRG APT	Distance/bearing from destination airport (i.e., the straight line distance)	GSL	GPS altitude
DIS	Distance to waypoint	MSA	Minimum safe altitude
DIS to Dest	Distance to destination (i.e., the distance along the flight plan)	OAT (static)	Outside static air temperature
DTK	Desired track	OAT (total)	Outside total air temperature
DTK, TRK	Desired track and track	Time	Current time
ESA	En route safe altitude	Time to TOD	Time to top of descent
ETA	Estimated time of arrival	TKE	Track angle error
ETA at Dest	ETA at destination	Trip Timer	Timer display
ETE	Estimated time en route	TRK	Track
ETE to Dest	ETE to destination	VSR	Vertical speed required
	From, to, and next waypoints [1]	Wind	Wind speed and direction
Fuel Flow	Total fuel flow [2]	XTK	Cross track error
Generic Timer	Timer display	OFF	Do not display data field

[1] GNC 355/355A only. [2] Available when a fuel sensor is present.

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

AVIATION DATA SYMBOLS

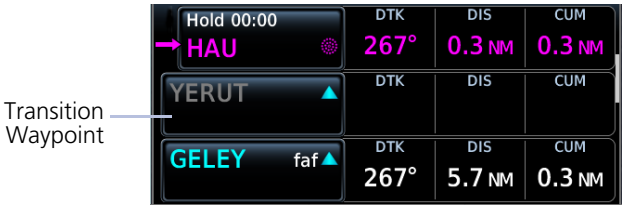
	Non-towered, non-serviced airport[1]		Non-towered, serviced airport[1]
	Towered, non-serviced airport[1]		Towered, serviced airport[1]
	Soft surface, non-serviced airport		Soft surface, serviced airport
	Restricted (private) airport		Unknown airport
	Heliport		ILS/DME or DME only
	Intersection		LOM
	NDB		TACAN
	VOR		VOR/DME
	VORTAC		VRP
	Runway extension		User Airport
	Fly-over Waypoint[2]		User Waypoint

[1] Symbol depicts orientation of longest runway.
[2] Available with system software v3.20 and later.

WAYPOINT COLOR

FLIGHT PLAN STATUS	COLOR
Active	Magenta
Past & Future	White
Transition	Gray

A waypoint's color indicates whether it is active, past, future, or a transition.



Transition Waypoints

Certain procedures require a transition waypoint to complete the procedure; however, that waypoint may not be navigable due to the geometry of the procedure. In such cases, the waypoint will be gray to indicate that it is a transition. No special pilot actions are required to navigate these procedures.

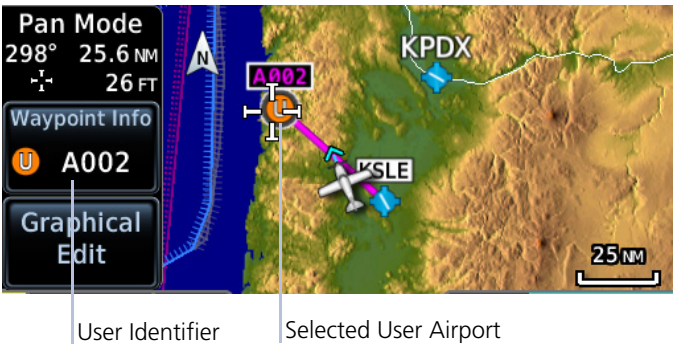
User Airport Symbol

A dedicated icon indicates user created airport waypoints. User airport indications display on Active Flight Plan and Map.

When selected, the user identifier annunciates in the info banner.

FEATURE REQUIREMENTS

- *System software v3.20 or later*



Fly-over Waypoint Symbol

This symbol appears on instrument procedures when a waypoint is coded as a *fly-over* in the navigation database.

FEATURE REQUIREMENTS

- *System software v3.20 or later*

The unit automatically creates a course that takes into account the waypoint type: fly-over or fly-by.

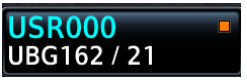
Identifier Type Symbol

Fly-over Map Symbol

For information about fly-over and fly-by waypoints, consult the AIM.

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 Waypoint

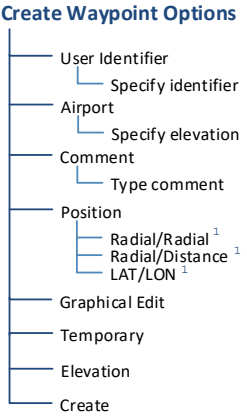
By default, the identifier format is "USR" followed by a sequential three digit number.

User Airport

Identifier format is "A" 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
- Specify elevation (user airports only)

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

User Identifier	Assign a unique identifier.
Airport	Label the user waypoint as a user airport. Inhibits terrain alerting in the vicinity of that waypoint.
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.
Elevation	Specify the elevation of the user airport. Available only when the **Airport** key is active.
Create	Add the new identifier to the used waypoints list. The associated information page opens automatically for viewing and editing purposes.

RF Legs

AC 90-101A - RF Legs

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

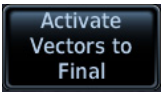
The unit supports radius-to-fix (RF) legs associated with RNAV RNP 0.3 non-AR approaches, when approved by the installation.

Flying a radius-to-fix approach is similar to flying a DME arc approach (status indications are identical).

Unlike DME arcs, however, RF legs are not based on a VOR. They may have varying radii, making them larger or smaller than arc legs.

For details regarding RF legs for specific aircraft, consult the AFMS.

Vectors to Final



Activating the approach with vectors to final displays an extension of the final approach course on Map.

Magenta depicts the active leg of the flight plan.

CDI needle remains off center until you are established on the final approach course. As a reminder, "vtf" annunciates as part of the active leg on the GPS Nav status key.

Activating vectors-to-final while on the From side of the final approach fix suspends automatic waypoint sequencing. "SUSP" annunciates at the bottom of the screen. Sequencing resumes once the aircraft is on the To side of the final approach fix and within full-scale deflection.

Fuel Planning

View fuel conditions along any flight plan (active or programmed) or between two waypoints (including the active direct-to).

Fuel Planning Page

Home
Utilities
Fuel Planning

The fuel planning feature computes fuel conditions based on route, ground speed, fuel on board, and fuel flow.

Input values may be entered manually or supplied by sensors, if connected.

Fuel Planning Modes

Tapping **Mode** toggles the active fuel planning mode between Point to Point and Flight Plan. Point to Point is the default mode setting.

Point-to-Point Mode

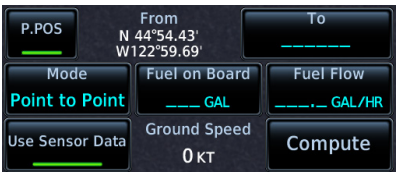
Calculate fuel between two waypoints in the database, or between the aircraft's present position and a selected waypoint.

Flight Plan Mode

Calculate fuel for a specific flight plan leg, or for the cumulative flight plan.

Use the mode specific controls to define the flight path (leg or route). Required input values are dependent upon mode selection.

Fuel on board, fuel flow, and ground speed data are required independent of mode selection.



Point-to-Point Mode Controls

Flight Plan Mode Controls

For Planning Purposes Only

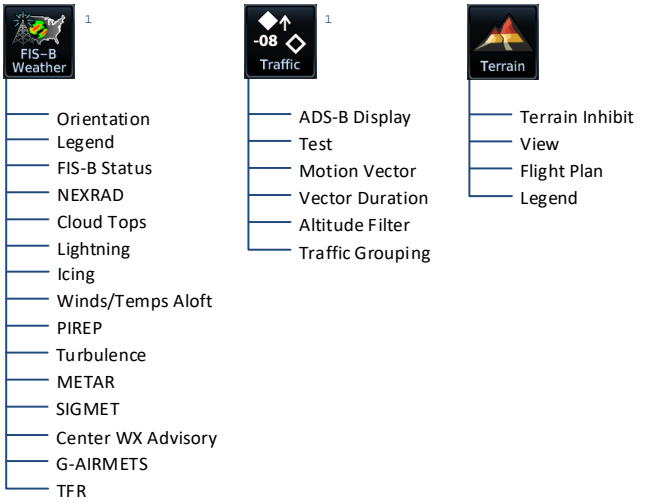
- When interfaced with a Garmin EIS or certain fuel computers, Fuel on Board and Fuel Flow values are supplied by EIS or the fuel computer. If an EIS or fuel computer is not present, or if the Use Sensor Data function is not active, these values are specified by the pilot and are not an indication of actual fuel on board or fuel flow.
- Fuel Required to <destination> is a calculated prediction. It is not a direct indication of actual fuel quantity once the aircraft reaches its destination.
- All data entries on this page are used exclusively by the Fuel Planning app.
- Fuel computations are for planning purposes only.

Adjust fuel on board and fuel flow values as necessary to account for changes in performance.

MODE	SELECTION	DESCRIPTION
Point-to-Point	**P. Position**	• Enters the current aircraft coordinates as the departure location (or From waypoint) • Aircraft latitude and longitude fields replace the From waypoint key
	From	• Specify a waypoint from the database as the departure location (or From waypoint) • Not available when P. Position is active
	To	• Specify a waypoint from the database as the destination (or To waypoint)
Flight Plan	**Flight Plan**	• Opens a list of available flight plans • Options include the active flight plan or one from the catalog • Defaults to the active flight plan if no selection is made
	Leg	• Options dependent on flight plan selection • Defaults to cumulative leg option if no selection is made
Both	**Fuel on Board**	• Specify the amount of fuel on board (gallons) • This amount decreases once per second based on the specified fuel flow value or sensor data
	Fuel Flow	• Specify the current fuel flow rate (gallons per hour)
	Use Sensor Data	• Toggle on to utilize current GPS ground speed data and fuel sensor data (if available) • When available, the unit displays fuel flow and fuel on board data from TXi, GI 275, or the fuel computer
	Ground Speed	• Behavior based on state of **Use Sensor Data** **Use Sensor Data key inactive:** • Function selectable • Specify ground speed **Use Sensor Data key active:** • Function not selectable • Displays current GPS ground speed when the **Use Sensor Data** key is active • This value is used to calculate fuel statistics when you press the **Compute** key

HAZARD AWARENESS APPS & FUNCTIONS

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



[1] GPS 175/GNC 355: Feature availability dependent upon unit configuration. Requires external ADS-B In product (GDL 88, GTX 345, GNX 375) and FIS-B.

Weather Awareness

WARNING

Do not rely solely on datalink weather for weather information. Datalink weather provides a snapshot in time. It may not accurately reflect the current weather situation.

NOTE

Datalink weather is not intended to replace weather briefings or in-flight weather reports from AFSS or ATC.

FEATURE REQUIREMENTS

- *GPS 175/GNC 355 with UAT receiver (GDL 88, GTX 345, GNX 375) and FIS-B*

OR

- *GNX 375 and FIS-B*

The FAA provides FIS-B as a Surveillance and Broadcast Service operating on the UAT (978 MHz) frequency band. FIS-B uses a network of FAA-operated ground-based transceivers to transmit weather datalink information to the aircraft's receiver on a scheduled continuous basis.

The Flight Information Service-Broadcast (FIS-B) Weather service is freely available for aircraft equipped with a capable datalink universal access transceiver (UAT). Ground stations provide uninterrupted services for the majority of the contiguous U.S., Hawaii, Guam, Puerto Rico, and parts of Alaska. No weather subscription service is required. For the latest FAA ground station coverage information, visit: www.faa.gov/nextgen/programs/adsb/

Data Transmission Limitations

FIS-B broadcasts provide weather data in a repeating cycle which may take several minutes to completely transmit all available weather data. Therefore, not all weather data may be immediately present upon initial FIS-B signal acquisition.

Line of Sight Reception

To receive FIS-B weather information, the aircraft's datalink receiver must be within range and line-of-sight of an operating ground-based transceiver. Reception may be affected by altitude, terrain, and other factors. Per the FAA, much of the United States has FIS-B In airborne coverage at and above 3,000 feet AGL. Terminal coverage is available at altitudes below 3,000 feet AGL and is available when flying near approximately 235 major U.S. airports. Surface coverage allows FIS-B ground reception at approximately 36 major U.S. airports.

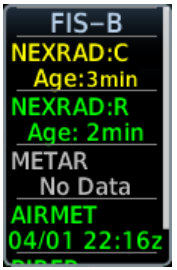
Product Age

NOTE

Data contained within a composite weather product may be older than its weather product age and should never be considered current.

A timestamp identifies the approximate time of data collection for each weather product. For quick reference, the age of each active weather product is calculated and shown in a color-coded side bar on the FIS-B Weather page.

TIMESTAMP COLOR DEFINITIONS



Yellow

Weather product considered stale. Its age is older than half its expiration time.

A weather product may be amber when its issue date and time occurs in the future by more than the complete expiration time for the requested weather product (e.g., some TFRs).

Green

Weather product considered current. Its age is newer than half its expiration time.

Tapping timestamp window displays the time for all green colored weather products.

Gray

Weather product data is one of the following:

- Expired
- Not received
- Not supported at the selected altitude

"No Data" or "ALT UNAVBL" displays next to the weather product title.

FIS-B weather product update and transmission intervals are published in the SBS Description Document associated with TSO-C157b. This information is available electronically at the FAA's Dynamic Regulatory System: https://drs.faa.gov

Traffic Awareness

FEATURE REQUIREMENTS

- *GPS 175/GNC 355 with external ADS-B In product (GDL 88, GTX 345, or GNX 375)*

OR

- *GNX 375*

FEATURE LIMITATIONS

- *Available functions and alerting features are dependent upon the ADS-B traffic system source*

ADS-B Features

- Runway and taxiway depiction during SURF mode (< 2 nm range scale)
- Selectable traffic icons display intruder and vector information
- Customizable motion vectors (type, duration)

Traffic Applications

FEATURE REQUIREMENTS

- *Aviation database (SURF only)*

FEATURE LIMITATIONS

- *ATAS does not alert to traffic on ground*

ADS-B In traffic support three applications:

AIRB: Basic Airborne Application

ATAS: ADS-B Traffic Advisory System

SURF: Surface Situation Awareness

AIRB is considered the fundamental airborne traffic application. ATAS provides alerts when airborne traffic trajectories pose a potential collision risk. SURF provides additional situational awareness when you are on ground or within the terminal environment.

Advisory Messages

Advisories are system-related messages relative to the display.

- Most recent advisories appear at the top of list
- View-once advisories remain in queue until viewed by the pilot
- Persistent (or conditional) advisories remain active until the indicated condition is resolved

All advisories are logged in the unit's internal storage. This log may be exported to an SD card.

Dual Navigator Installations

Advisory messages are not crossfilled between navigator units. Each unit displays messages based on the data it receives. This may result in duplicate messages between units.

Always view the messages on both navigators to ensure that all information is received.

Message Key

This key displays at the left edge of the screen when an advisory condition is present. Tapping the key once displays an advisory list. Tapping it again acknowledges all active advisories and closes the list.

- Flashes when a new advisory is present
- Turns solid once all active advisories are acknowledged
- No longer displays after all active advisories are cleared

Database Advisories

ADVISORY	CONDITION	CORRECTIVE ACTION
<Terrain/Obstacle> database not available.	The indicated database is unavailable or corrupt.	Re-download and install the indicated database. Contact a Garmin dealer for support.
Terrain display unavailable for current location.	Terrain database cannot provide elevation at the current GPS position. Aircraft is outside the database coverage area.	Load appropriate coverage area onto the external datacard.
Verify user-modified procedures in stored flight plans are correct.	Navigation database updates and the stored flight plan contains user-modified procedures.	Verify the procedures are correct.
Verify airways in stored flight plan are correct.	The stored flight plan contains an airway that is inconsistent with the current navigation database.	Verify all airways are correct. If necessary, reload airways to the stored flight plan routes.
A procedure has been modified in a cataloged flight plan.	Database update causes flight plan to exceed 100 waypoint limit. Procedure is removed or truncated as a result.	Verify cataloged flight plan and procedures are correct. If necessary, reload procedures to the stored flight plan routes.
Aircraft in area with large mag var. Verify all course angles.	Magnetic variation flagged as unreliable in the MagVar database. Typically occurs when operating at high latitudes that do not support a magnetic NAV angle.	Verify that the geographical region supports navigation based on magnetic variation.
Database SYNC in progress.	Database Sync transfer in progress.	View System Status page for more info.
LRU Navigation DB mismatch.	Navigation databases do not match between crossfill navigators, resulting in a loss of communication between the two units.	Verify that the database version specified by both crossfill navigators is up to date. Update the database if necessary.

ADVISORY	CONDITION	CORRECTIVE ACTION
Transponder has failed.	For GNX 375, or GPS 175/GNC 355 configured to receive ADS-B In data from GTX 345: Transponder detects an internal failure. Functionality may be unavailable. Possible causes: • 1090ES ADS-B Out failure • Transponder failure • Communication with the transponder is lost	Contact dealer for service.
Transponder is operating in ground test mode.	For GNX 375, or GPS 175/GNC 355 configured to receive ADS-B In data from GTX 345: Transponder is being forced airborne for ground test.	Cycle power to the GNX 375 once ground test completes.
ADS-B is not transmitting position.	For GNX 375: Transponder is not receiving a valid GPS position.	If the problem persists, contact dealer for service.
<Unit> demo mode.	The unit is in demo mode. Do not use for navigation.	Power cycle the unit to exit demo mode.
LRU Software mismatch.	Crossfill function is on but not working due to a software mismatch.	Contact dealer for software update.
Crossfill is inoperative.	The unit lost communication with the other crossfill navigator.	Contact dealer for service.
	One navigator requires service.	

ADVISORY	CONDITION	CORRECTIVE ACTION
Crossfill is turned off.	Crossfill function is off.	No action necessary. To re-enable, open the System Setup page and toggle the associated function key on.

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