



GTR 205

GNC 215

Pilot's Guide



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SOFTWARE VERSION

This manual reflects the operation of system software v2.10. Some differences in operation may be observed when comparing the information in this manual to later software versions.

INFORMATION & SUPPORT

For information regarding the [Aviation Limited Warranty](#), refer to Garmin's website.

For aviation product support, visit flyGarmin.com.

**WARNING**

Do not learn operational procedures for this product in the air. For safety reasons, thoroughly practice basic operation of this product on the ground before use during flight.

**WARNING**

Review and understand all aspects of this pilot's guide. Doing so reduces the risk of unsafe operation.

**WARNING**

Never use expired databases. Update databases regularly to ensure currency. Use out of date database information at your own risk.

**WARNING**

Always resolve any discrepancies between the display and other navigation sources when they occur. During flight operations, compare display indications to information from other NAVAIDs, visual sightings, charts, and other available sources before continuing navigation.

**WARNING**

Be aware that this product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our website at www.garmin.com/prop65.



CAUTION

Do not clean display surfaces with abrasive cloths or cleaners containing ammonia. They will harm the anti-reflective coating. Use a clean, lint-free cloth and anti-reflective lens cleaner.



CAUTION

Ensure that any unit repairs are made by an authorized Garmin service center. Unauthorized repairs or modifications could void both the warranty and affect the airworthiness of the aircraft.



NOTE

The COM application supports channel tuning for both 8.33 kHz and 25 kHz channels within radio-frequency range. 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.



NOTE

The COM transceiver antenna(s) of the device is (are) intended to be mounted along the fuselage of the aircraft and accessible only to aircraft maintenance personnel. To reduce RF exposure, avoid installation of antenna(s) in areas of the aircraft that provide crew or passengers direct exposure to antenna radiation. For installations that may provide direct exposure, the limits specified by FCC regulations 47 CFR 1.1310 should be referenced by the installer.



NOTE

All visual depictions contained within this document, including screen images of the system panel and displays, are subject to change and may not reflect the most current system software and aviation databases. Depictions of equipment may differ slightly from the actual equipment. Feature depictions may differ from actual unit features depending on configuration.



NOTE

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



NOTE

Use of polarized eye wear may cause the flight displays to appear dim or blank.

**NOTE**

Canadian installations: In accordance with Canadian Radio Specifications Standard 102 (RSS 102), RF field strength exposure to persons from an antenna connected to this device should be limited to 51 V/m for controlled environment and 22 V/m for uncontrolled environment.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

**NOTE**

The pilot/operator must review and be familiar with Garmin's database exclusions list, as discussed in SAIB CE-14-04, to determine what data may be incomplete.

Visit flyGarmin.com and select "Database Exclusions List."

**NOTE**

The pilot/operator must have access to Garmin and Jeppesen database alerts and consider their impact on the intended aircraft operation. To view these alerts, visit flyGarmin.com and select "Aviation Database Alerts."

**NOTE**

Contact Garmin Product Support if you want or need to adjust the database.

**NOTE**

Garmin requests the flight crew report any observed discrepancies related to database information. These discrepancies could come in the form of any displayed item used for navigation or communication in the air or on the ground. Visit flyGarmin.com and select "Aviation Data Error Report."

**NOTE**

This unit has a very high degree of functional integrity. However, the pilot must realize that providing monitoring and/or self-test capability for all conceivable system failures is not practical. Although unlikely, it may be possible for erroneous operation to occur without fault indication. It is the responsibility of the pilot to detect such occurrences by cross-checking with all redundant or correlated information available in the cockpit.

Record of Revision

REVISION	DATE	CHANGE DESCRIPTION
A	01.11.24	Production Release.

Available for Download

Electronic Pilot’s Guide

A version of this guide saved in Adobe Acrobat. Available for viewing on your computer or portable device.

Go to garmin.com/manuals.

Product Descriptions

This guide covers the operation of the following Garmin product series.

GTR 205

GNC 215

When you see	It means
a product name in bold (e.g., GNC 215)	the information pertains to that specific model only
product names separated by a forward slash (e.g., GTR 205/GNC 215)	the information pertains to both products

Unless otherwise stated, information pertaining to *the unit* is applicable to both products: GTR 205 and GNC 215

Feature Depictions

Except for cases when operational differences dictate, the GNC 215 display is shown as typical.

Special Notations

This guide uses the following message types when applicable.



WARNING

Indicates when serious injury or death will occur.



CAUTION

Indicates when equipment damage is possible.



NOTE

Emphasizes a point about a specific feature, function, or operation.

Insets

These boxes may include a list of features or application functions, references to additional information, or a useful pilot's tip.

Reference Websites

WEBSITE	QR CODE (SCAN/GO)
Aviation Limited Warranty https://www.garmin.com/en-US/legal/aviation-limited-warranty	
Declarations of Conformity https://www.garmin.com/compliance	

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1 System at a Glance

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Overview

GTR 205 and GNC 215 are panel-mount COM radio transceivers that employ a 3.2" high-resolution color liquid-crystal display. They comprise the Slimline series of 1.35" by 6.25" COM radio products.

GNC 215 shown as typical.



Each unit has 10 W of transmit power. Optional 16 W of transmit power is available with the purchase of a feature enablement.

Unit Configurations

GTR 205



COM

GNC 215



COM/NAV

Unit Features

Features vary depending on model and unit configuration.

GTR 205 COM TRANSCEIVER	GNC 215 NAV/COM TRANSCEIVER
• 8.33 kHz or 25 kHz channel spacing • 16 W transmit power capability¹ • Bearing and distance to NAVAID² • Find frequency • Flight timers • NVIS¹ • Remote COM radio frequency tuning³ • Reverse frequency look-up² • System messages • VHF radio transceiver	• 8.33 kHz or 25 kHz channel spacing • 16 W transmit power capability¹ • Bearing and distance to NAVAID² • CDI • Provide NAV frequency for DME tuning³ • Find frequency • Flight timers • NAV radio receiver • NVIS¹ • Remote COM/NAV radio frequency tuning³ • Reverse frequency look-up² • System messages • VHF radio transceiver

¹ Optional. Requires feature enablement.
² Requires Navigation database and input from a GPS navigator for location-based information.
³ Availability dependent upon aircraft interfaces.

Pilot Interface

Bezel

The bezel provides a combination of mechanical knobs and push-keys. Soft keys correspond to selectable features on the display screen.



- | | | |
|---|--|---|
| 1 microSD Card Slot
Interface for loading database, exporting log files, and updating software. | 4 Menu Key
Provides direct access to customization options and system information. | 7 Inner & Outer Knobs
Multipurpose dual concentric knob allows data entry, list scrolling, frequency look-up, NAV ident, and NAV/COM direct tuning. |
| 2 Soft Keys
Controls for navigating display pages and executing onscreen commands. | 5 Monitor Key
Allows monitoring of the active frequency while listening to the standby frequency. | |
| 3 Transfer (Flip-Flop) Key
Swaps active and standby frequency values for the active radio. | 6 Volume/Power Knob
Allows audio volume adjustment for the active COM radio. COM squelch functionality is accessible via knob push. Turning the knob past the detent powers the unit on/off. | 8 Photocell
Measures cockpit ambient light level to automatically adjust display brightness for day and night. |

Bezel Shortcuts



Pushing and holding either the volume knob or **Flip-Flop** key for 0.5 seconds automatically tunes the COM emergency frequency (121.50 MHz).

Pushing and holding the dual concentric knob for 0.5 seconds provides direct access to frequency search options.

Read more about these features in Section 3.

microSD Card Slot



NOTE

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

FEATURE LIMITATIONS

- Use only microSD cards in the FAT32 format, with memory capacity between 8 GB and 32 GB

The unit uses the microSD card slot for the following tasks.

- Capturing screen images
- Exporting data logs and configuration summary
- Updating the database
- Upgrading software

Insert Card

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

Eject 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 a microSD card if you plan to use the card as a media storage device for updating databases.

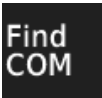
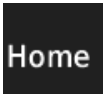
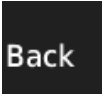
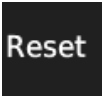
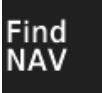
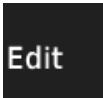
In the event there is a file corruption problem with the microSD card, it may be necessary to reformat the card. This can cause an issue when formatting the microSD card using macOS, where the newly formatted card will not be recognized by the avionics system. When using a Macintosh computer to format the microSD card, Garmin recommends using the SD Memory Card Formatter application available as a download from [SDcard.org](https://www.sdcard.org). When running the application, use the Quick Format option.

Display Features

A high-resolution color LCD display provides onscreen controls that correspond to the mechanical knobs and push-keys on the bezel. Optional night vision capability (NVIS) is available with the purchase of a feature enablement.

Soft Keys

Selections change based on the active page or function.

COMMON COMMANDS			
	Open the system messages list. A flashing icon indicates unread messages.		Display COM frequency search options.
	Return to the home page.		Return to the previous page.
	Cancel an active function without inputting data.		Reset timer.
	Start timer.		Stop timer.
	Adjust NAV radio volume. ¹		Display NAV frequency search options. ¹
	Edit a selected user frequency.		Set the manual CDI OBS selector on direct course to the VOR station. ¹

¹ GNC 215 only.

Menu Tabs

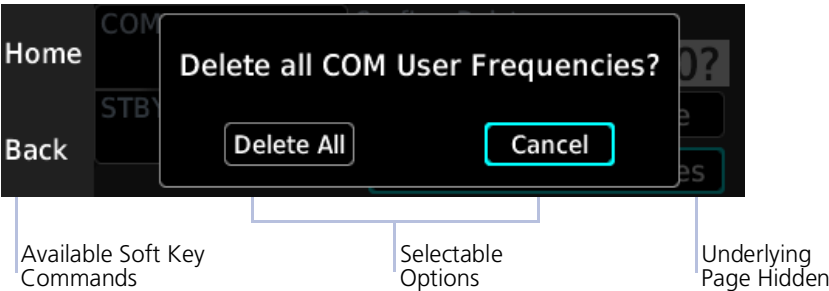
Tabs group information and related controls into individual panes. Contents may include scrolling lists, data fields, function keys, or a combination of controls.

Tabs are located along the left side of the menu pane.

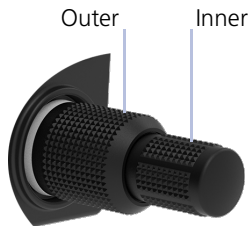


Pop-ups

Pop-ups present messages related to a function or setting that require confirmation.



Control Knobs



Dual Concentric Knob

Inner and outer control knobs offer the ability to select and modify data and settings.



Volume/Power Knob

A single volume knob controls audio volume for the COM radio and powers the unit on/off.

Pushing these knobs momentarily performs additional functions.

VOLUME/POWER KNOB FUNCTIONS

Knob Turn	• Adjusting COM radio volume
	• Powering on/off the unit (turn past the detent)
Knob Push	• Enabling/disabling the COM automatic squelch function
	• Tuning the emergency COM frequency (push & hold).

DUAL CONCENTRIC KNOB FUNCTIONS

Outer Knob Turn	• Moving cursor forward or backward within data field
	• Scrolling menu tabs
	• Tuning major frequency digits
Inner Knob Turn	• Modifying individual characters in data entry field
	• Scrolling lists
	• Tuning minor frequency digits
Knob Push	• Entering current or specified numerical value
	• Selecting a menu item
	• Initiating frequency look-up options (push & hold)
	• Enabling/disabling the ident tone for the NAV radio ¹
	• Switching between COM, Timer/OBS, and NAV functions ²

¹ GNC 215 only. ² OBS and NAV functions available with GNC 215 only.

Knob Function Indicators

Available knob functions announce at the bottom of the display. Icons indicate the associated pilot actions: knob turn and/or push.



**Outer Knob
Turn Only**



**Single or Inner Knob
Turn & Push**

Indications include, but are not limited to:

COM Standby Frequency Active, GTR 205



Available knob functions:

- Adjust COM radio volume
- Tune COM standby frequency
- Override automatic squelch
- Access frequency search options

COM Standby Frequency Active, GNC 215



Available knob functions:

- Adjust COM radio volume
- Tune active standby frequency
- Override automatic squelch
- Set knob focus to NAV standby frequency
- Access frequency search options

Find Frequency Active

Category  **Freq**

Available knob functions:

- Scroll search categories
- Select frequency
- Add user frequency

Menu Active

Tab  **Item**

Available knob functions:

- Scroll menu tabs
- Select list items

NAV Volume Active¹

NAV VOL  **Push ID**

Available knob functions:

- Adjust NAV radio volume
- Activate NAV ident

System Message List Active

Scroll 

Available knob functions:

- Scroll message list

Timer Active

Timer Type  **Edit | Push COM**

Available soft key functions:

- Reset timer
- Start/Stop timer

Available knob functions:

- Select timer type
- Set countdown timer
- Set knob focus to COM/NAV standby frequency¹
- Access frequency search options

¹ NAV radio options available with GNC 215 only.

KNOB FOCUS INDICATIONS

A cyan border around the active feature window indicates changes in knob focus. This is useful when transitioning between different control modes.



Text within the active window turns cyan to indicate that it is selectable.

Knob Focus Indicator
(COM STBY Selected)

Timer Function
Not Selected

Knob Shortcuts

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

TUNE A COM FREQUENCY

From the Home page:

Pushing the dual concentric knob once switches knob focus between the COM radio and right side features (if available). When knob focus is set to the COM radio (default), turn the inner and outer knobs to tune the COM standby frequency.



TUNE THE COM EMERGENCY FREQUENCY

Pushing and holding the volume/squelch knob for 1.5 seconds automatically tunes the COM emergency frequency (121.50 MHz) from any page or tab. The frequency automatically loads to the COM standby window and then transfers to the active COM frequency.



Prior to activation, the “Hold for 121.50” control label appears in the annunciator bar.

FIND A COM FREQUENCY

From any page or tab:

Pushing and holding the dual concentric control knob for 1.5 seconds automatically displays frequency search options. The Select Frequency menu opens from the last viewed search result.



Prior to activation, the "Hold for Find" control label appears in the annunciator bar.

Turn the outer knob to select a search category. Turn the inner knob to select a frequency, waypoint, or station.



COM volume and squelch controls remain available via the volume/power knob when a page is active.

TUNE OR FIND NAV FREQUENCY

AVAILABLE WITH: GNC 215

From the Home page:

Pushing the dual concentric knob once enables standby NAV frequency tuning. Turn the inner and outer knobs to tune the NAV standby frequency.



Find a NAV Frequency

With standby NAV frequency tuning enabled, push and hold the dual concentric knob for 1.5 seconds to display NAV frequency search options. Turn the outer and inner knobs to select a search category and frequency.

ACTIVATE TIMER

From the Home page:

If enabled, pushing the dual concentric knob once activates the timer function. Turn the outer knob to toggle between timer types. Turn the inner and outer knobs to specify a countdown time. Push knob to enter value.

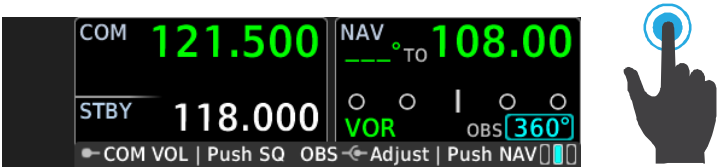
GTR 205



SET AN OBS COURSE

AVAILABLE WITH: GNC 215

From the Home page:
If enabled, pushing the dual concentric knob once activates the OBS entry field. Turn the inner and outer knobs to set a course.



Three-way Toggle Indication



Locator bars work in conjunction with the inner control knob, providing a quick indication of current knob focus as you transition between multiple functions (e.g., COM standby frequency tuning > CDI/Timer > NAV standby frequency tuning).



A cyan locator bar indicates active function and knob focus.

Next Function

Active Function
Locator

System at a Glance

Pushing the inner knob moves the locator through the available functions. The COM standby frequency window is active by default.

COM Active

Push CDI 

Push to activate OBS/timer control.

OBS/Timer Active

Push NAV 

Push to activate NAV frequency control.

NAV Active

Push COM 

Push to activate COM frequency control.

Screenshots

FEATURE REQUIREMENTS

- A microSD card in the FAT32 format, with memory capacity between 8 GB and 32 GB

Save images to a microSD card at any time using Screenshot.

1. Verify that a microSD card is present in the slot.
2. Go to the page of interest.
3. Push and hold the **MON** key.
4. With the **MON** key depressed, push and release the top soft key.



A camera icon momentarily shows in the annunciator bar indicating that Screenshot was successful.

The image automatically saves to the *print* folder in the microSD card root directory.

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

For more about proper microSD card installation, read *microSD Card Slot*.

Color Conventions

	Red • Radio failure
	Green • Active radio frequency, function • Valid station ID (decoded from Morse code) • VOR/localizer data
	White • Active system message, mode • Current data and values • Menu options • Scales and markings • Standby radio frequency (non-selected radio) • Station ID (from database)
	Magenta • GPS data
	Cyan • Active selection, display feature (e.g., timer) • Standby radio frequency
	Gray • Missing or expired data • Product unavailable • Inactive display feature

Compatible Equipment

Line Replaceable Units

SYSTEM REQUIRED LRUs
COM radio antenna
NAV radio antenna ¹
OPTIONAL LRUs
DME
G500/G600
G500(H)/G600/G700 TXi
GFC 500/600(H)
GI 275
GMX 200
Garmin GPS navigator
MX20
Non-Garmin Autopilot

¹ GNC 215 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. These vary by unit and installation type (VFR or IFR).

Some LRUs provide features that require registration and/or enablement prior to activation.

Compatible LRUs are not limited to the devices shown here. Check unit software version for compatibility.

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2 Get Started

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LOAD DATABASE	2-3
CUSTOMIZE PILOT SETTINGS	2-12
VIEW SYSTEM INFORMATION.....	2-17

Power Up the Unit

The unit receives power directly from the aircraft's electrical system. Upon power-up:

- Bezel key backlight momentarily illuminates
- Navigation database automatically updates if a newer version is available

Splash Page



Garmin logo displays as the unit checks for an available database update.

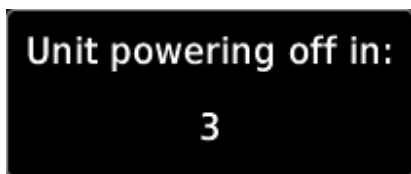
Read more about database update methods in *Load Database*.

Power Off the Unit



WARNING

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



Turning the **Volume/Power** knob past the detent for 0.5 seconds initiates the power off sequence.

Shutdown occurs once the timer reaches zero.

Load Database

Supported Database

This system uses the Navigation database for frequency related information (Garmin or Jeppesen).

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.

Active and Standby Databases

The unit uses two types of databases. Both transfer to the unit's internal storage.

Active Database

- Database currently in use by the system

Standby Database

- Database that has not reached the effective date
- Database that was installed prior to the last update

To view active and standby databases once they are installed, read *View Database Information*.

DATABASE TRANSFER & ACTIVATION

The Navigation database automatically transfers from the microSD card to the unit’s internal Standby storage if it is newer than the database currently in standby. Total transfer time depends on the microSD card type.

Activation of the standby database is required to complete the update. The manner in which this occurs depends on whether or not a GPS source is present.

If	Then
The unit is configured to receive GPS data	The database automatically updates at the next unit power cycle once the database reaches its effective date and the existing database expires.
A GPS source is absent	The database automatically updates at the next unit power cycle

Installations Equipped with a GPS Source

In some cases, automatic database updates may occur in two steps:

1. The database transfers to the internal Standby storage but is deemed not yet effective. At this point, the pilot may remove the card. The database will remain in standby until the effectivity date is reached and automatic activation can occur.
2. The unit automatically activates the standby database based on current date and database effectivity.

The unit determines effectivity status using the current date and time from the configured GPS source (if present). Read more about database effective status in *Understand Database Effective Cycles*.

Load Database from a microSD Card



NOTE

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

The unit stores all databases it receives in its internal storage. After a database updates, the microSD card is no longer required.

Do not attempt to load or update the database while in flight (on ground only).

Install or update a database using a micro SD card:

1. Download a database onto a microSD card.
2. Insert the card with the most recent database into the card slot.
3. Power on the unit.

Once loading completes, you may power off the unit and remove the card.

A unit restart is required to complete installation.

The available database is indicated in the Standby tab.

Automatic Updates

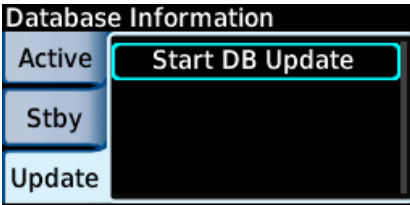
Automatic updates occur when:

- A newer database is detected on the microSD card or in the internal Standby storage
- A newer database is within its effective dates¹

¹ Applicable only if a GPS source is present.

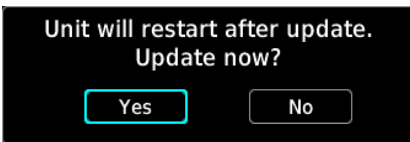
Updates occur during power up when a newer version of the database is available. The same process occurs when you load a new database for the first time.

Manual Updates



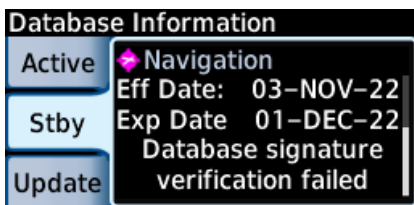
You can access the Update tab at any time for review purposes or to perform a manual database transfer.

MENU > System > Database > Update > Start DB Update



The unit automatically restarts once the update is complete.

Database Errors



If a database error occurs:

- An advisory appears in the message list
- Details regarding the state of the database display on the appropriate information tab

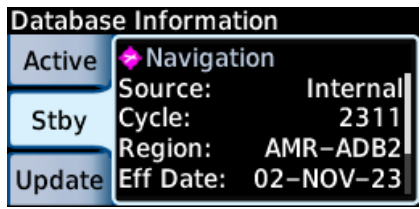
Aviation Database Errors

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.

Revert to Previous Database Version

Updating a database does not overwrite its previous version. Once the update process completes, the previously active version of the database transfers to the unit’s internal Standby storage. In the event that an automatic update is undesirable, you can revert to the previous version using the manual update feature.



Source field displays "Internal" for the previous database version.

The previous database version appears in the Standby tab. It remains available for manual install until a newer version transfers to the unit’s internal Standby storage.

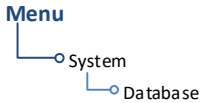
To revert to a previous database version:

- 1. Ensure that the card slot is empty.
- 2. Verify that the previous database version is in standby (**Menu > System > Database > Standby**).
- 3. Open the Update tab.
- 4. Select **Start DB Update**.

The unit restores the previous database version and transfers the newer database to the standby storage. The unit automatically restarts once the swap is complete.

View Database Information

WHERE TO FIND IT



During normal operation, you can view information about active and standby databases from the Database Information page.

MENU > System > Database

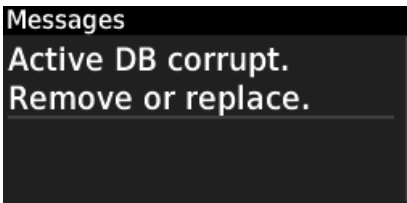
Select the appropriate menu tab to view information about active and standby databases.

Active Database



Selecting **Active** displays information about the database version currently in use.

ACTIVE DATABASE CORRUPT



A message informs you when the active database is corrupt and requires removal or replacement.

Active Database Info

- Database name
- Cycle number
- Region
- Effective & expiration dates
- Copyright information

Standby Database



"Standby database OK" appears at the bottom of the Standby tab whenever a valid database is present on the installed microSD card or in the internal memory.

Selecting **Standby** displays information about the database that is not currently in use by the system.

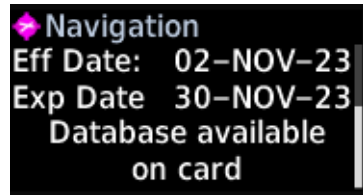
The previously installed database also appears here once an update completes.

DATABASE AVAILABLE ON CARD

The Standby tab informs you when a valid database is available on the installed microSD card.



Check the Source field for the current location of the standby database: "Card" or "Internal."



Scroll to the bottom of the tab to see if a standby database is available.

To view and update the database from the internal standby:

1. Ensure that the card slot is empty.
2. Verify that a valid database version is in standby (**Menu > System > Database > Standby**).
3. Open the Update tab.
4. Select **Start DB Update**.

Standby Database Info

- Database name
- Source (e.g., Internal)
- Cycle
- Region
- Effective & expiration dates
- Status

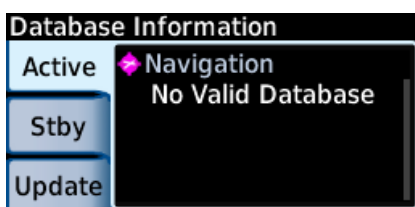
Understand Database Effective Cycles

DATABASE EFFECTIVE STATUS

Database with specified effective dates

- Effective during a specific period
- Unit determines database status using the current date and time from GPS
- Automatic activation occurs on the effective date during unit power cycle

NO VALID DATABASE



A message informs you when no valid database is available.

When the Navigation database is absent, the radio is still usable but with reduced functionality. Lost features include:

- Waypoint names
- GPS-based distance to station
- Frequency lookup for tuning

Overwriting microSD Card Database Files

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

Customize Pilot Settings



Unit customization options are accessible via the **MENU** key. For details about specific radio settings and timer functions, refer to the respective section.

MENU SELECTIONS	
Display Tab	• Enable flight timer • Return to basic display format¹ • Enable CDI option²
Setup Tab	• Set the display units • Access COM radio settings
System Tab	• Adjust display brightness • Access database information and update/sync options • View system messages • View system information and COM status

¹ GTR 205 only. ² GNC 215 only. CDI and flight timer functions are mutually exclusive; enabling one automatically disables the other.

Customize Display Layout

AVAILABLE WITH: GNC 215



Knob focus is set to Off by default.

Choose any combination of features for display in the active and/or standby areas of the NAV radio. Options are accessible from the Display tab (**MENU > Display**).

To enable a display feature, select it from the menu. Features that require pilot interaction are active by default (e.g., timer).

Re-open the Display tab to choose a feature for the other area.

AREA	AVAILABLE DISPLAY FEATURES	
VOR Info	• To • From	• Off
Standby	• CDI¹	• TMR
	• STBY (with Reverse Frequency Look-up)	

¹ Availability dependent upon configuration.

To



Adds decoded “to” bearing information to the active NAV frequency.

From



Adds decoded “from” radial information to the active NAV frequency.

“To” and “from” information includes distance to station when an internal database and GPS source are present.

TMR



Adds an active timer to the lower right of the display. Use the outer knob to select timer type or select **Start**. Select **Reset** to stop and clear the timer.

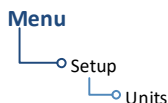
CDI



Replaces NAV STBY window with a CDI scale. COM radio is active by default when the frequency is a LOC/LS or a VOR with decoded OBS heading. OBS field is active when manual entry is required.

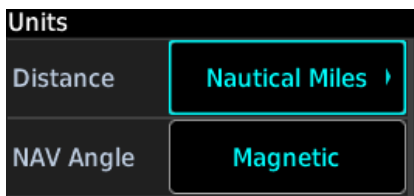
Customize Unit Settings

WHERE TO FIND IT



Customize the display unit settings. Selecting **Units** opens a menu of available unit types.

MENU > Setup > Units



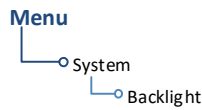
To specify unit type:

1. Review the current unit selections.
2. Select a parameter using the outer control knob.
3. Select a unit type using the inner control knob.

PARAMETER	UNIT SETTINGS	
Distance	• Nautical Miles (NM/kt) • Statute Miles (sm/mpH)	• Kilometers (km/kph)
NAV Angle	• Magnetic (°)	• True (°T)

Adjust Display Brightness

WHERE TO FIND IT

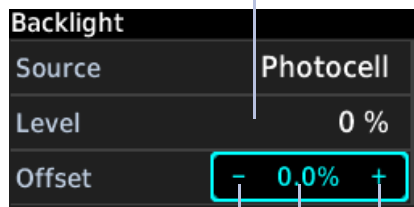


Depending on configuration, display brightness is controlled using inputs from the built in photocell, aircraft dimmer bus, or both.

Automatic Brightness Control

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

Backlight Intensity Level



Decrease Backlight

Increase Backlight

Manual Offset Indicator

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

The unit retains manual offset settings over power cycles.

Manual Brightness Control

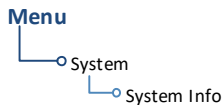
Optionally, the unit is configurable to use an aircraft dimming bus for display brightness control. Upon reaching minimum input level, display brightness reverts to the photocell. This prevents the display from going black in the event of a dimmer input failure.

Installer configured curves determine the amount of change in brightness that occurs in response to a control adjustment. If brightness control is not satisfactory, contact a Garmin dealer to adjust the lighting curves.

View System Information

WHERE TO FIND IT

View information specific to the unit and its software.



System Info	
Serial Number	000000000
System ID	E7900ABC12345
SW Version	2.10

Refer here when contacting customer service.

System Info

- Serial number
- System ID
- Main software version

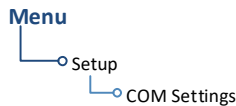
INTENTIONALLY LEFT BLANK

3 COM

- SET UP COM RADIO 3-2
- ADJUST COM RADIO VOLUME & SQUELCH..... 3-5
- TUNE A COM FREQUENCY 3-6
- MONITOR A COM FREQUENCY..... 3-9
- FIND A COM FREQUENCY 3-10
- CREATE COM USER FREQUENCIES..... 3-16
- VIEW COM STATUS 3-19
- RESPOND TO A COM ALERT 3-20

Set Up COM Radio

WHERE TO FIND IT



VHF COM radio customization options are accessible via the Setup tab.

MENU > Setup > COM Settings

COM RADIO SETTINGS	
COM Squelch	Set transceiver squelch to Auto or adjust the threshold manually.
COM Spacing	Set transceiver channel spacing. Options: • 8.33 kHz • 25 kHz (default)
Sidetone Volume	Enable offset adjustments from the COM receiver volume. Options: • Fixed+Offset • Link to COM
Sidetone Offset	Adjust sidetone volume offset. Default setting: 0%

Set COM Channel Spacing

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

COM Spacing

25 kHz

Turning the inner knob toggles the transceiver channel spacing between 8.33 kHz and 25.0 kHz.

8.33 kHz

◀ 8.33 kHz

8.33 kHz step configuration is available for European operations.

25.0 kHz

25 kHz ▶

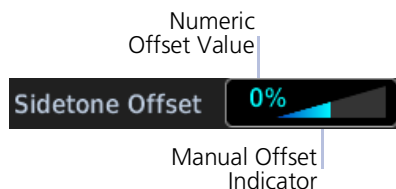
COM radio operates in the aviation voice band, between 118.000 and 136.975 MHz, in 25.0 kHz steps.

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.

Adjust Sidetone Volume Offset

FEATURE LIMITATIONS

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

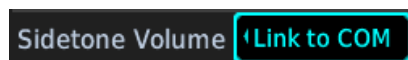


If the unit is wired for audio output, set the sidetone volume offset to the preferred level. By default, the offset value is set to zero percent.

The unit retains manual offset settings over power cycles.

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

Link To COM Volume



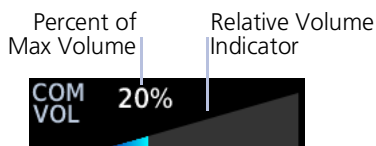
Enabling this function allows you to adjust the amount that the sidetone volume level is offset from the COM receiver volume. These adjustments are dynamic in that they vary with the COM receiver volume level.

To adjust the offset from the COM receiver volume:

1. Enable **Link to COM**.
2. Adjust the offset as necessary.

To adjust the offset from the configured sidetone volume, disable the Link to COM function by selecting **Fixed+Offset** and then adjust the offset as necessary. These adjustments are fixed as they are relative to the configured sidetone volume.

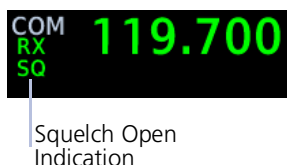
Adjust COM Radio Volume & Squelch



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

The unit retains volume settings over power cycles.

Open Squelch

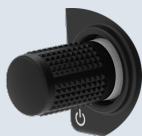


Push the volume/squelch knob to override the automatic squelch function. Push it again to return the squelch to automatic operation.

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

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

Volume/Squelch Knob Adjustments

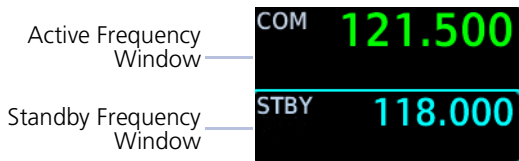


Pushing the volume knob disables automatic squelch control. Turning the knob adjusts the COM volume percentage.

Tune a COM Frequency

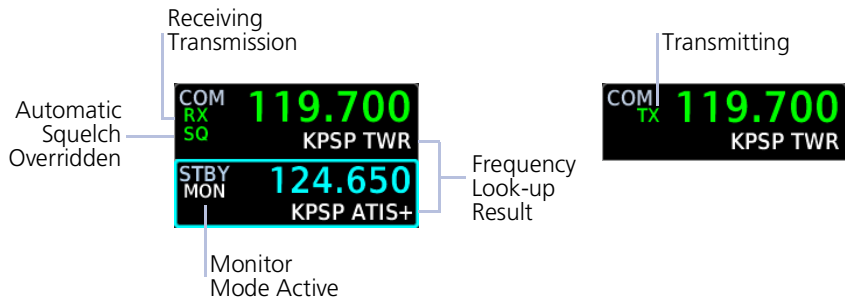
Communication frequencies are split between two selectable windows:

- The upper window presents the active COM radio frequency. This is the frequency currently in use for transmit and receive operations.
- The lower window presents the standby radio frequency. This frequency may be set and activated at any time.



COM STATUS INDICATIONS

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



RX

Receiving transmission

TX

Transmitting

SQ

Automatic squelch is overridden (i.e., squelch is open)

MON

Monitor mode active

MON

Standby frequency is receiving

KPSP ATIS+

Reverse frequency look-up information (sample text)

Tune a Standby Frequency



The dual concentric control knob allows you to enter a standby frequency. Pushing and holding the dual concentric control knob for 0.5 seconds automatically displays frequency search options.



The selected STBY window turns cyan when you use the control knob to change the standby COM frequency.



If no action occurs, the STBY window reverts to cyan text after 3 seconds. This indicates that the standby COM frequency is still adjustable using the control knob.



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

Transfer Frequency to Active (Flip-Flop)



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



Monitor a COM Frequency



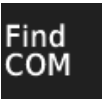
Enabling monitor mode allows you to listen to the standby frequency while the unit continues monitoring the active COM channel.

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.

Find a COM Frequency



Find and select a standby COM frequency from a list of available database frequencies.

Pushing the **Find COM** soft key while the COM radio is active provides access to multiple search options. Each category displays a list of selectable identifiers based on specific criteria.

FEATURE REQUIREMENTS

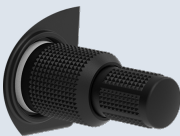
- *GPS source for Nearest waypoint search options*

FEATURE LIMITATIONS

- *Database search option available only when Navigation database is present*

FREQUENCY SEARCH OPTIONS	
Recent	Lists up to 20 of the most recently tuned frequencies.
User	Lists up to 20 user-defined frequencies.
Database	Lists the frequencies associated with the specified 5-character facility identifier.
Nearest Airport	Lists up to 20 airport frequencies within a 200 NM radius.
Nearest ARTCC	Lists up to 20 area control center frequencies within a 200 NM radius.
Nearest FSS	Lists up to 20 flight service center frequencies within a 200 NM radius.
Nearest WX	Lists up to 20 weather frequencies within a 200 NM radius.

Find Frequency via Control Knob



Pushing and holding the dual concentric control knob for 0.5 seconds automatically displays frequency search options from any page or tab.

- "Hold for Find" control label appears in the annunciator bar
- Select Frequency menu opens from the last viewed search result

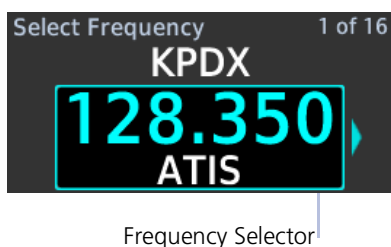


SEARCH RESULTS

Each frequency includes general information about the associated waypoint.



MULTIPLE FREQUENCIES



A selector appears when more than one frequency type is available at the indicated identifier.

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

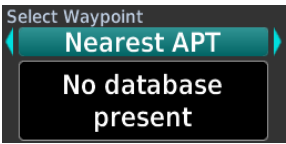
FREQUENCY SEARCH ERRORS

Search errors may display if any one of the following conditions exist.

Nearest Frequency Search Options



The unit is configured for GPS but is not receiving a position.



The unit is configured for GPS but no database is present.

Database Search Option



No database is present.

Reverse Frequency Look-up



This function automatically displays the facility identifier and frequency type for active and standby frequencies. The unit verifies the displayed frequency against the database at least once per minute.

Facility
Identifier

KPSP ATIS+

Frequency
Type

“+” denotes more than one type associated with the frequency.

Reverse frequency look-up results are based on GPS position and database information. If no GPS navigator is present in the system, reverse frequency look-up text will only appear if the frequency was recently loaded via the Find function.

When Reverse 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 halfway point.

DATA SIZE & POSITION

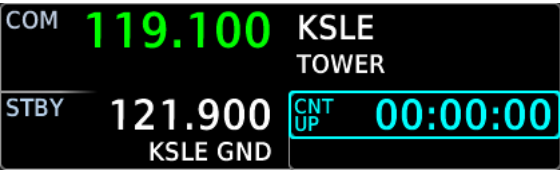
The size and location of Reverse Frequency Look-up text is dependent upon the status of right side features.

Default View



Text is larger for easier viewing.

Timer Enabled



Text shifts beneath the frequency value when you enable right side features.

DATA SOURCE PRIORITY

RFL information is received from the following sources in order of priority, from highest (1) to lowest (3), and dependent upon certain required conditions.

SOURCE		REQUIRED CONDITIONS
1	Proximity search of database	Navigation database and GPS are present.
2	Recent database selection	Navigation database present; no GPS.
3	User frequency list	No required conditions.

Remote Frequency Selection

FEATURE LIMITATIONS

- *Availability dependent upon configuration*

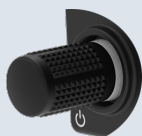
On units configured for remote frequency recall, COM user frequencies are selectable via a remote switch.

- 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 transferred to active

Emergency Frequency Selection

Pushing and holding either the volume knob or **Flip-Flop** key for 0.5 seconds 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.

Volume/Squelch Knob Shortcut



Pushing and holding the volume knob for 0.5 seconds automatically tunes the COM emergency frequency (121.50 MHz).

- "Hold for 121.50" control label appears in the annunciator bar
- Frequency automatically loads to the COM standby window and then transfers to the active COM frequency

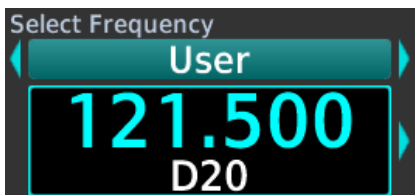
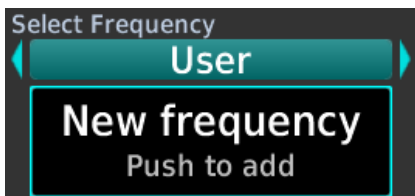
Hold for 121.50

Create COM User Frequencies

FEATURE LIMITATIONS

- Names may be up to 10 characters in length
- Maximum number of 20 user frequencies

Add a frequency to the user frequency list. Controls are accessible via the Select Frequency menu.



1. Open the Select Frequency menu.
2. Scroll to the User category.
3. Push the inner control knob to add a new frequency.
4. Specify a frequency value.
5. Assign the frequency a unique identifier.
6. Select **Save**.

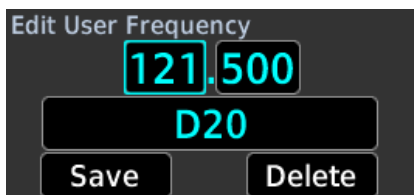
To cancel the request and close without saving, select **Cancel**.

User frequencies remain in the list until you delete them.

Edit a COM User Frequency

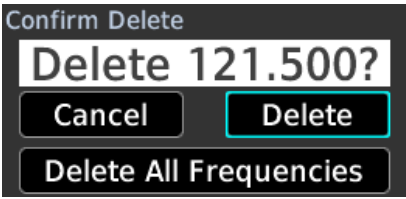
Edit

Modify an existing user frequency. Selecting a user frequency gives you the EDIT option.



1. Select the user frequency from the list.
2. Push the **Edit** soft key.
3. Modify the current frequency name and/or value using the dual concentric knob.
4. Select **Save**.

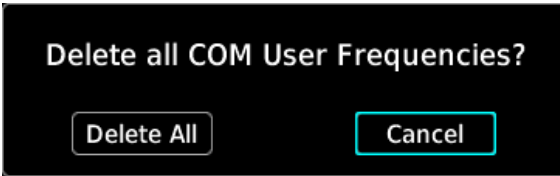
Delete a COM User Frequency



Selecting **Delete** opens a confirmation page. From here you can delete the selected user frequency or all user frequencies in the list.

Confirm the request to remove the selected user frequency from the list.

Selecting **Delete All Frequencies** opens a pop-up. Confirming the request removes all COM user frequencies from the list.



DELETE A COM USER FREQUENCY

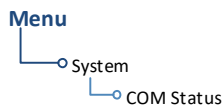
1. Select a COM user frequency from the list.
2. Push the **EDIT** soft key.
3. Select **Delete**.

From here you may:

- *Confirm deletion of the selected user frequency:* Select **Delete**.
- *Delete all COM user frequencies:* Select **Delete All Frequencies > Delete All**.
- *Cancel the request:* Select **Cancel**.

View COM Status

WHERE TO FIND IT



View COM radio transmit voltage and received noise. This information is accessible via the System tab.

MENU > System > COM Status

COM Status	
RX Noise	0
TX Power	10 W

This page is for reference only.
Information includes:

- Receiver noise
- Transmit power

Respond to a COM Alert



Radio failures are indicated by one or more of the following:

- Red “X” displays over the COM radio control
- Advisory message alerts
- COM control options are not available

COM radio fail annunciations are designed to be immediately recognizable.

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 MIC <1/2> key is stuck” alerts for as long as the condition exists.

4 NAV

ADJUST NAV RADIO VOLUME	4-2
ACTIVATE NAV IDENT	4-2
TUNE A NAV FREQUENCY.....	4-3
MONITOR A NAV FREQUENCY	4-6
FIND A NAV FREQUENCY	4-7
VIEW NAVIGATION DATA.....	4-9
SPECIFY AN OBS COURSE.....	4-11
RESPOND TO A NAV ALERT	4-13

Adjust NAV Radio Volume



Pushing the **NAV VOL** soft key while the NAV or COM radio is selected provides access to volume controls. Adjust radio volume with the inner and outer control knobs according to your preference.

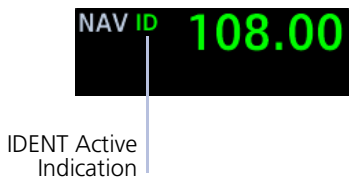
Percent of
Max Volume

Relative Volume
Indicator



You can adjust the volume by increments of ten (outer control knob) or one (inner control knob).

Activate NAV IDENT



Activate the NAV IDENT function by pushing the **NAV VOL** soft key then the inner control knob.

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

Tune a NAV Frequency



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

NAV STATUS INDICATIONS

Frequency
Identifier from
Morse Code



Frequency
Identifier Based
on GPS Position

The unit automatically decodes Morse code and displays the Ident for the active frequency above it.

The reverse frequency look-up identifier displays below the frequency value. Reverse frequency look-up results are based on GPS position and database information. If no GPS navigator is present in the system, reverse frequency look-up text will only appear if the frequency was recently loaded via the Find function.

Identifier information received via Morse code has display priority over reverse frequency look-up results.

Received from Database & GPS



Station information appears white when the identifier is inferred from the database and current location.

Received from Morse Code



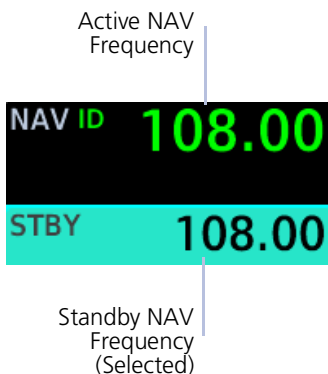
The identifier turns green when a valid ID is decoded from Morse code.

Custom User NAV Frequencies



User stored NAV frequencies may display in the absence of a remote source or internal database. These custom user NAV frequencies receive the "FARM VOR" identifier.

STANDBY NAV FREQUENCY ENTRY



To change the standby NAV frequency:

1. Activate the standby NAV frequency window by selecting **Home**, then pushing the dual concentric control knob once or twice depending on pilot settings. Upon selection, the standby NAV frequency window remains active for approximately 30 seconds.
2. Enter a standby frequency by turning the inner and outer control knobs.
3. Assign the standby value as the active frequency by pushing the **Flip-Flop** key.

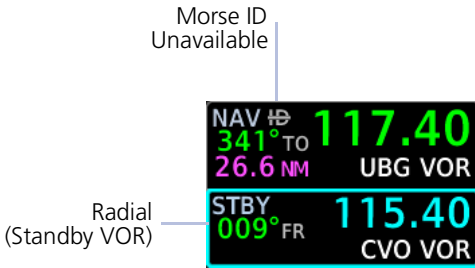
Navigation frequencies include:

- Glideslope (ILS)
- Localizer (LOC)
- VOR

Monitor a NAV Frequency



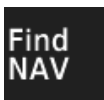
Pushing the **MON** key while the NAV standby frequency is selected allows you to listen to the standby frequency while the unit continues monitoring the active NAV channel.



During monitor mode:

- A gray "ID" with strike-through indicates that Morse ID is unavailable on the active frequency
- The current radial of the standby VOR station appears next to the standby frequency

Find a NAV Frequency



Find and select a standby NAV frequency from a list of available database frequencies.

Pushing the **Find NAV** soft key while the NAV radio is selected provides access to multiple search options. Each category displays a list of selectable identifiers based on specific criteria.

FEATURE REQUIREMENTS

- *GPS source for Nearest waypoint search options*

FEATURE LIMITATIONS

- *Database search option available only when Navigation database is present*

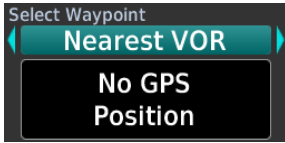
FREQUENCY SEARCH OPTIONS	
Recent	Lists up to 20 of the most recently tuned frequencies.
User	Lists up to 20 user-defined frequencies.
Database	Lists the frequencies associated with the specified 5-character facility identifier.
Nearest VOR	Lists up to 20 VOR frequencies within a 200 NM radius when interfaced with a GPS receiver.
Nearest LOC	Lists up to 20 localizer frequencies within a 200 NM radius when interfaced with a GPS receiver.

Magenta bearing info displayed for the purpose of Find NAV is based on GPS and the Navigation database, not the VHF NAV function. For more about data color indications, read *Color Conventions*.

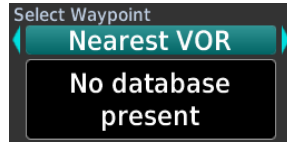
FREQUENCY SEARCH ERRORS

Search errors may display if any one of the following conditions exist.

Nearest Frequency Search Options



The unit is configured for GPS but is not receiving a position.



The unit is configured for GPS but no database is present.

Database Search Option



No database is present.

View Navigation Data

Navigation data include:

- Decoded From radial and To bearing
- Distance to station
- Lateral deviation and to/from indication on a CDI scale
- OBS course heading

Depending on configuration, you may view supplemental navigation data in the active and standby areas of the NAV radio.

Data options are selectable from the Display tab (**MENU > Display**).

Read more about data display options in *Customize Display Layout*.



NOTE

Information provided by the onscreen CDI is for backup purposes only. Do not use for primary navigation.

FEATURE LIMITATIONS

- Data availability dependent upon configuration
- OBS heading course data not available when the system is configured with a composite external indicator

VOR Info & Distance Data

To/From/Off

NAV ID 117.40
183° TO UBG

When enabled, the “from” (FR) radial or “to” (TO) bearing decoded from the active NAV frequency.

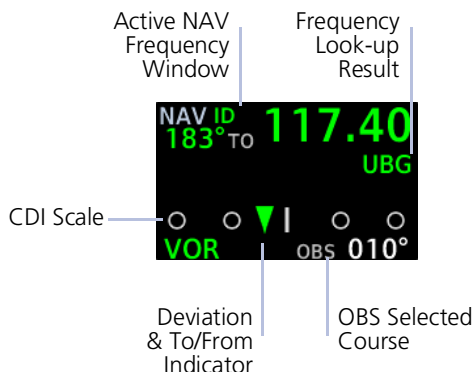
Distance to Station

NAV ID 117.40
26.6 NM UBG VOR

Distance to station appears for VORs only (not for LOC/ILS) if an internal database is present and the unit is receiving GPS position.

CDI

When enabled, a CDI replaces the NAV STBY window. It appears between the active and standby windows when you are actively monitoring the NAV standby frequency.



The CDI presents a sliding lateral deviation indicator on a horizontal scale.

A pointer moves left or right to portray aircraft position relative to the selected course. Pointer direction indicates the current leg type: To (up) From (down).

An OBS selected course field accompanies the CDI scale. Manual course adjustments are not available while receiving selected course input from the external CDI/HSI.

STBY window replaces the CDI when you tune the standby NAV frequency. The CDI is absent when course deviation data are invalid.

Each circle on the CDI scale represents 5 degrees deflection with 11 degrees full deflection to each side. Fly toward the center bar to be on-course.

TO/FROM LEGS ON THE CDI

These legs are depicted as an upright or inverted triangle based on CDI data.

"To" Legs



- Upward pointing indicator indicates "to"
- Distance to station decreases as you navigate the leg

"From" Legs



- Downward pointing indicator indicates "from"
- Distance to station increases as you navigate the leg

Specify an OBS Course

The unit allows manual entry of the OBS selected course in the absence of an external CDI/VHSI selected course input.



OBS Entry Field
Active

Specify a selected course using the dual concentric knob.

Exit entry mode by doing one of the following:

- Push the dual concentric knob.
- Allow entry mode to expire.

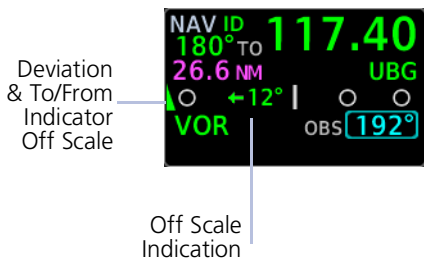
Entry mode expires after approximately 30 seconds of inactivity. The unit retains the bearing setting until you enter a new one.

DIRECT COURSE OPTION



Selecting the **Direct CRS** soft key while the OBS entry field is active sets the OBS on a direct course to the VOR station based on the current bearing.

OFF SCALE INDICATION



An arrow and value display when the deviation & to/from indicator exceeds 11 degrees. The indicator parks on the side nearest to its actual position (a partial indicator is visible at the left or right of the display).

OBS SOURCE LOST

Messages

**OBS source lost. Select
CDI from Display Menu.**

A message informs you when GNC 215 loses selected course input from the external NAV indicator. When this occurs, you may select OBS.

Respond to a NAV Alert



Radio failures are indicated by one or more of the following:

- Red "X" displays over the NAV radio control
- Advisory message alerts
- NAV control options are not available

NAV radio fail annunciations are designed to be immediately recognizable.

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

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5 Timers

ENABLE & VIEW TIMERS.....	5-2
SET COUNTDOWN TIMER.....	5-4
SET COUNT UP TIMER.....	5-4

Enable & View Timers

Set a generic timer for general timing needs. Two stopwatch style counters allow you to count up or count down.

WHERE TO FIND IT



Enable timers by selecting the Timer function on the Display tab.

MENU > Display > Timer

Activate Timer

TIMER TYPE ANNUNCIATIONS	
CNT UP	Count up timer
CNT DN	Countdown timer

Once enabled, timer appears to the right of the COM display. The timer type annunciates at the left of the timer display



Timer is grayed out until you activate the function. Count up (CNT UP) is the default timer selection.



Activate timer controls by pushing the dual concentric knob.
Activation sets the dual concentric knob focus to timer. Toggle between timer types by turning the outer control knob.

TIMER CONTROLS

ACTION	SOFT KEY
Cancel start value entry ¹	Cancel
Start timer	Start
Stop timer	Stop
Reset timer	Reset

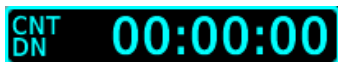
Basic timer functions are accessible via dual concentric knob push.

Control options change according to the current timer state.

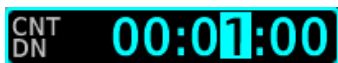
¹ Countdown timer only.

Set Countdown Timer

The unit retains the most recent count down value following a power cycle.



1. Set direction to count down (CNT DN) using the outer control knob.



2. Specify countdown time using the inner and outer control knobs.
 - Move cursor between hours, minutes, and seconds using the outer knob.
 - Set timer value using the inner knob. Pushing the knob enters the timer value.



3. Select **Start**.



Timer flashes as the value reaches zero (00:00:00).



Upon reaching zero, timer continues counting as a negative value until you select **Stop**.

To reset timer, push the **Reset** soft key.

Set Count Up Timer



1. Set direction to count up (CNT UP) using the outer control knob (if necessary).
2. Select **Start**.

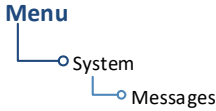
To reset timer, push the **Reset** soft key.

6 Messages

VIEW SYSTEM MESSAGES6-2

View System Messages

WHERE TO FIND IT

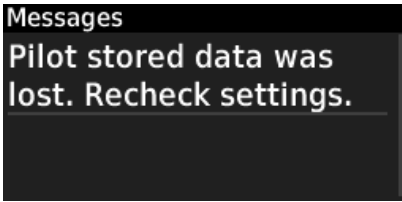


Advisories are system-related messages relative to the display. A list of active advisories is viewable from the System tab:

MENU > System > Messages

You can open the list directly by pushing the **MSG** soft key when an active message is present.

Message List



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

Active Message Indication



Flashing "MSG" annunciation appears adjacent to the bottom soft key when a new advisory is present.

Selecting **MSG** displays the advisory list. Selecting it again acknowledges all active advisories and closes the list.

It no longer displays after all active advisories are cleared.

COM Radio Advisories

ADVISORY	CONDITION	CORRECTIVE ACTION
COM radio needs service.	COM radio is reporting that it requires service. Functionality may be unavailable.	Cycle radio power. Contact dealer for service.
COM over temperature. Reducing transmit power.	COM radio is in overtemp mode. Transmitting power automatically reduces to prevent damage to the COM radio. Radio range is reduced as a result.	• Decrease length of COM transmissions. • Decrease cabin temperature and increase cabin airflow, especially near the unit. • Contact dealer for service if message persists.
COM under voltage. Reducing transmit power.	COM radio is in undervoltage mode. Transmitting power automatically reduces to prevent damage to the COM radio. Radio range is reduced as a result.	• Decrease length of COM transmissions. • Check aircraft voltage and reduce electrical load as necessary. • Contact dealer for service if message persists.
TX Interlock discrete input is stuck active.	Unit detects the TX Interlock discrete input has been active for 60 seconds.	Contact dealer for service.
COM MIC <1/2> key is stuck.	Unit detects the specified key in the pressed position for 30 seconds. The input is ignored as a result. Radio stops transmitting.	Verify that the key is not stuck. Contact dealer for service if message persists.

ADVISORY	CONDITION	CORRECTIVE ACTION
COM <name> switch is stuck.	Unit detects the specified switch is active for 30 seconds. The input is ignored as a result. Radio stops transmitting. Includes: • Standby monitor remote switch • Remote transfer switch • Remote tune up switch • Remote tune down switch	Verify that the switch is not stuck. Contact dealer for service if message persists.

Database Advisories

ADVISORY	CONDITION	CORRECTIVE ACTION
Active DB corrupt. Remove or replace.	The active database is unavailable or corrupt.	Re-download and install database. Contact a Garmin dealer for support.
Database will update on next power cycle.	The standby database completed transfer and is ready for activation at the next power cycle.	No action necessary.
Database updated successfully.	The database successfully activated upon system start-up.	

Navigation Advisories

AVAILABLE WITH: GNC 215

ADVISORY	CONDITION	CORRECTIVE ACTION
Navigation receiver needs service.	NAV radio is reporting that it requires service. Functionality may be unavailable.	Service required. Contact dealer for support.
OBS source lost. Select CDI from Display Menu.	Loss of OBS source data.	Verify that the interfaced CDI/HSI is powered on. Contact dealer for service.
Unit needs service.	The system reports one of the following conditions. • CDI interface failure • Internal failure	

Pilot Specified Advisories

These advisories display when the associated timer expires or reaches a preset value. They are informational only. Other than acknowledging the message, no action is necessary.

ADVISORY	CONDITION
Timer has expired.	Countdown timer is reaching zero.

System Hardware Advisories

ADVISORY	CONDITION	CORRECTIVE ACTION
Configuration module needs service.	The unit cannot communicate with its configuration module. Unit configuration may still be valid.	Contact dealer for service.
Unit over temperature. Limit Backlight.	Unit temperature exceeds the over temperature threshold. Backlight dims to reduce power and heat.	Decrease cabin temperature and increase cabin airflow near the unit. If the problem persists, contact dealer for service.
Unit under temperature.	The system reports that its internal temperature is below the normal operating threshold.	If the problem persists, contact dealer for service.
Pilot stored data was lost. Recheck settings.	An error occurred in the pilot stored data. The following user settings may be lost.	Recheck settings. Contact dealer for service.
MicroSD card is invalid or failed.	The microSD card has an error and is unreadable.	1. Reformat the microSD card using an external computer. 2. Re-insert the SD card in the slot. 3. Contact dealer if the problem persists.
Unit needs service.	The system reports one of the following conditions. • Volume knob failure • Light sensor failure • Invalid display calibration • Invalid main board calibration	Contact dealer for service.

ADVISORY	CONDITION	CORRECTIVE ACTION
<Name> key is stuck.	System detects the indicated bezel key is depressed for at least 30 seconds. It will now ignore this input. Includes: • Bottom soft key • Flip-flop key • Menu key • MON key • Top soft key	Push the indicated key again. If it remains stuck, contact dealer for service.
<Dual concentric inner/Volume> knob push is stuck.	System detects the indicated knob is depressed for at least 30 seconds. It will now ignore this input.	Push the knob again. If it remains stuck, contact dealer for service.

VLOC/GS Advisories

AVAILABLE WITH: GNC 215

ADVISORY	CONDITION	CORRECTIVE ACTION
Glideslope receiver needs service.	Glideslope board is reporting that it requires service. Functionality may be unavailable.	Verify glideslope deviation indications with another source and cross-check final approach fix crossing altitude. If another source is not available, fly a GPS based approach. Contact dealer for service.
VLOC remote transfer switch is stuck.	System detects the indicated remote switch is active for at least 30 seconds. It will now ignore this input.	Push the remote key again. If it remains stuck, contact dealer for service.

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7 Glossary

A

AFM	Aircraft Flight Manual
AFMS	Aircraft Flight Manual Supplement
ARTCC	Air Route Traffic Control Center
ATIS	Automatic Terminal Information Service

C

CDI	Course Deviation Indicator
-----	----------------------------

D

DB	Database
DME	Distance Measuring Equipment

F

FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FREQ	Frequency
FSS	Flight Service Station

G

GFC	Garmin Flight Controller
GNC	Garmin NAV/COM
GPS	Global Positioning System
GS	Glideslope
GTR	Garmin Transceiver Radio

H

HSDB	High Speed Data Bus
HSI	Horizontal Situation Indicator

I

IFR	Instrument Flight Rules
ILS	Instrument Landing System

L

LCD	Liquid Crystal Display
LOA	Letter of Authorization
LOC	Localizer
LRU	Line Replaceable Unit

M

MSG	Message
-----	---------

N

NAV	Navigation
NAVAID	Navigation Aid
NVIS	Night Vision Imaging System

O

OBS	Omni Bearing Selector
-----	-----------------------

R

RF	Radius to Fix
RX	Receive, Receiver

S

SD	Secure Digital
STBY	Standby

T

T	True
T/F	To/From
TX	Transmit

V

VFR	Visual Flight Rules
VHF	Very High Frequency
VLOC	VOR/Localizer
VOR	Very High Frequency Omnidirectional Range

W

WX	Weather
----	---------

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8 Regulatory Information

COMPLIANCE.....8-2

SOFTWARE LICENSE AGREEMENT8-3

Compliance

FCC Compliance Statement

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

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

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

Declarations of Conformity

Declaration of Conformity

Hereby, Garmin declares that this product is in compliance with the Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.garmin.com/compliance.

UK Declaration of Conformity

Hereby, Garmin declares that this product is in compliance with the relevant statutory requirements. The full text of the declaration of conformity is available at the following internet address: www.garmin.com/compliance.

Radio Frequency/Output Power

2.4 GHz @ 11 dBm nominal.

Software License Agreement

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