GTN 725/750 SOFTWARE VERSION 6.10 PILOT'S GUIDE UPGRADE SUPPLEMENT

This supplement contains the pages revised in the GTN 725/750 Pilot's Guide, P/N 190-01007-03, Rev K, regarding the new features of Software Version 6.10. Change bars are placed adjacent to the revised information as described in the revision summary table.

This supplement, in combination with the GTN 725/750 Pilot's Guide, P/N 190-01007-03, Rev J, is equivalent to the GTN 725/750 Pilot's Guide, P/N 190-01007-03, Rev K.

Current documents are available at https://fly.garmin.com/fly-garmin/support/ for free download. Printed copies may be purchased by contacting Garmin Customer Support.

***NOTE**: Depending on which version of software is installed and how it is configured, the actual features and screen images may differ from what is shown. Refer to the GTN 725/750 Pilot's Guide, P/N 190-01007-03 for more information regarding feature availability for specific software versions.*

This manual reflects the operation of System Software Version 6.10, or later. Some differences in operation may be observed when comparing the information in this manual to later software versions.

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GTN 725/750 Pilot's Guide Revision K, Change Summary

Section	Page	Description
Section 2 – Audio and Transponder Controls (Optional)		
2.1.11	2-7	Rewrote Extended Squitter Transmission description.
Section 4 – Flight Plan		
4.2.4	4-18	Added information about the default initial track for Search and Rescue Patterns.
Section 6 – Procedures		
6.13	6-23	Added a bullet describing the differences in TO/FROM procedure legs.
Section 9 - Map		
9.1.1.5	9-8	Added GTX 345 to the list of interfaced products.
Section 10 - Traffic		
10.3	10-3	Added GTX 345 to the notes regarding TIS and TAS traffic.
10.5.2.7	10-25	Added references to GTX 345.
10.6	10-26	Added a note regarding GTX 345.
Section 12 - Weather		
12.6	12-71	Added references to GTX 345.
Section 15 - Utilities		
15.1	15-3	Added that VCALC is inhibited in OBS mode.
Section 16 - System		
16.3.2	16-21	Added GTX 345 status page.
16.4.5.1	16-28	Clarified units that are crossfilled in dual GTN installations.
16.6	16-34	Added note for units that are crossfilled in dual GTN installations.
16.6.2	16-35	Added "External" to User-Configured (Manual) Nav Angle options.
16.11.1	16-47	Added reference to GTX 345. Added information about Bluetooth devices that reconnect automatically to the Flight Stream 210.
16.12	16-48	Rewrote section to be generic for Connext Setup of other Bluetooth devices instead of being specific for the GMA 35c.

Section	Page	Description
Section 17 - Messages		
17	17-7	Changed "DATALINK – ADS-B fault: UAT receiver" to "DATALINK – ADS-B In fault: UAT receiver." Changed "DATALINK – ADS-B fault: 1090 receiver" to "DATALINK – ADS-B In fault: 1090 receiver." Added the message "DATALINK – FIS-B weather has failed."
	17-21	Changed "DATALINK – GDL 88 ADS-B traffic has failed" to "TRAFFIC – ADS-B In traffic has failed." Changed "DATALINK – GDL 88 CSA failure" to "TRAFFIC – ADS-B In traffic alerting has failed." Changed "DATALINK – GDL 88 external traffic system has a low battery" to "TRAFFIC – TCAD has a low battery."
	17-22	Added the message "TRANSPONDER 1 OR 2 - ADS-B Out system fault. Pressure altitude source inoperative or connection lost."
	17-23	Added the following messages: TRANSPONDER 1 OR 2 - Transponder has failed. TRANSPONDER 1 OR 2 - Transponder is in ground test mode. TRANSPONDER 1 OR 2 - Transponder overtemp. TRANSPONDER 1 OR 2 - Transponder undertemp.
18.8	18-8	Added "High Visibility Arrow" and "Basic Aircraft" symbols.

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

2.1.11 Extended Squitter Transmission

When interfaced with a compatible transponder, the GTN can act as a control for the Extended Squitter functions. When "Enable ES" is selected, the GTX turns on Extended Squitter (ES) transmissions.

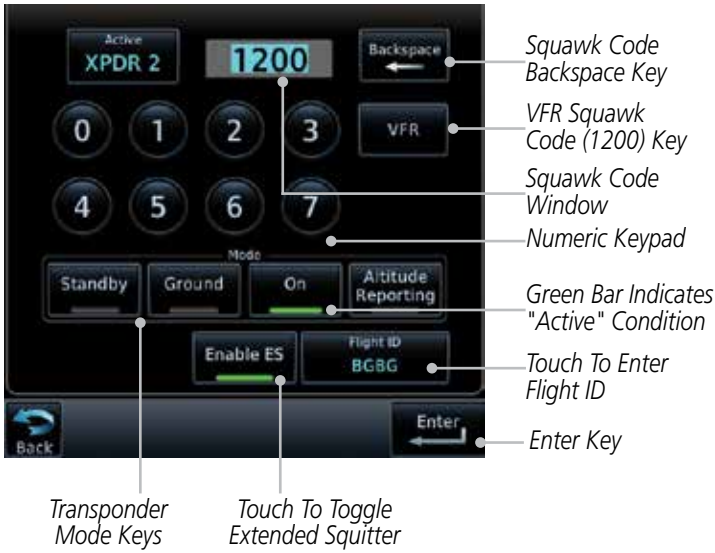


Figure 2-12 Transponder Control Panel With Extended Squitter Capability

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

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

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

4.2.4 Load Search and Rescue Patterns (Optional)

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

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

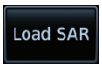
Search and Rescue Patterns may be added to existing waypoints within the active flight plan. Only one SAR pattern can exist in the active flight plan. Loading another SAR pattern into the active flight plan when one already exists will remove the first SAR pattern.

Each pattern has a default initial track. When the pilot changes the initial track on a SAR pattern, that change becomes the default initial track the next time the SAR pattern is accessed within the GTN. The pilot can always change the initial track when creating a SAR pattern in the flight plan.

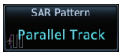
NOTE: *Flight plans cannot be stored in the catalog if they contain a SAR pattern.*

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

Figure 4-27 Active Flight Plan with Load SAR Option



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



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

6.13 Points to Remember for All Procedures

- The GTN 7XX Map page is designed to complement your approach plates and vastly improve situational awareness throughout the approach. However, *you must always fly an approach as it appears on the approach plate*.
- The active leg (or the portion of the approach currently in use) is depicted in magenta on the Map Page. As you fly the approach, the GTN 7XX automatically sequences through each leg of the approach unless "SUSP" appears at the annunciation bar at the bottom of the display. "SUSP" indicates that automatic sequencing of approach waypoints is suspended on the current leg and normally appears at holding patterns, upon crossing the missed approach point (MAP), for Climb to Altitude legs, and for Hold to Altitude legs.
- For roll steering autopilots: roll steering is terminated when approach mode is selected on the autopilot and is available once the missed approach is initiated.
- If Vectors-to-Final is activated while on the "FROM" side of the FAF, automatic waypoint sequencing is suspended and the SUSP annunciation will appear. Automatic waypoint sequencing will resume once the aircraft is on the "TO" side of the FAF and within full-scale deflection.
- For all procedures, make sure to check the runway, transition, and all waypoints.
- Most legs are "TO" legs on which the TO/FROM flag on the CDI indicates "TO" and the Distance field on the flight plan decreases as you navigate along the leg. However, some procedures include legs which are "FROM" legs. On these legs, the TO/FROM flag on the CDI indicates "FROM" and the Distance field on the flight plan increases as you navigate the leg. "FROM" legs are typically found on procedure turns and on some missed approach procedures.

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

9.1.1.5 NEXRAD (Optional)

The NEXRAD menu option allows the display of NEXRAD Precip weather information overlayed on the Map page. Terrain and NEXRAD Precip weather may not be displayed at the same time. Selecting one will disable the other. NEXRAD Precip weather is an optional feature that requires the installation of a GDL 69/69A, GDL 88, GTX 345, or GSR 56 and an appropriate Weather subscription. Only one weather source can be displayed at a time (i.e. FIS-B and XM cannot be displayed on the map simultaneously. See the Weather section for more detail.

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

Figure 9-7 Map Menu NEXRAD Map Overlay "On" Selection

10.3 Traffic Information Service (TIS) (Optional)

***WARNING**: The Traffic Information Service (TIS) is intended for advisory use only. TIS is intended to help the pilot locate traffic visually. It is the responsibility of the pilot to see and maneuver to avoid traffic.*

***NOTE:** TIS is available only when the aircraft is within the service volume of a TIS-capable terminal radar site. Aircraft without an operating transponder are invisible to both Traffic Advisory Systems (TAS) and TIS. Aircraft without altitude reporting capability are shown without altitude separation data or climb/descent indication.*

***NOTE:** TIS and Traffic Advisory System (TAS) may not both be configured at the same time.*

***NOTE:** GDL 88 equipped aircraft only: When the radio tower symbol is crossed out, the aircraft is not a participant in the TIS-B system – i. e. not visible to other TIS-B clients. The GDL 88 will, however, continue to receive available TIS-B and FIS-B ground station up-links and continue to display TIS-B and FIS-B data along with available ADS-B and ADS-R data.*

***NOTE:** Except for GDL 88 or GTX 345 equipped aircraft, TIS, and Traffic Advisory System (TAS) may not both be displayed at the same time.*

***NOTE:** More information is available about the GDL 88 in the "Garmin GDL 88 ADS-B Transceiver Pilot's Guide" and the GTX 345 in the "Garmin GTX 335/345 Pilot's Guide."*

Traffic Information Service (TIS) is designed to help in detection and avoidance of other aircraft. TIS uses the Mode S transponder for the traffic data link. TIS receives traffic information from ground stations, and is updated every five seconds. The GTN 7XX displays up to eight traffic targets within a 7.5 NM radius, from 3000 feet below to 3500 feet above the requesting aircraft.

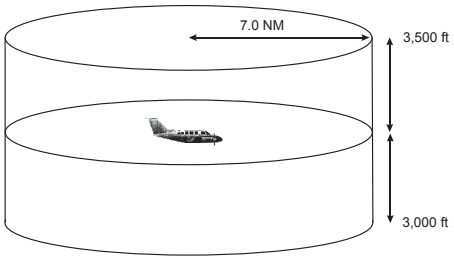


Figure 10-3 TIS Coverage Volume (not to scale)

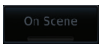
Altitude Mode	Displayed Traffic Range
Below	-9900 ft to 2700 ft
Normal	-2700 ft to 2700 ft
Above	-2700 ft to 9900 ft
Unrestricted	All Traffic Shown

Table 10-13 Displayed Traffic Range

10.5.2.7 On Scene Mode

When a GDL 88 (with software version 3.00, or later) or GTX 345 is installed with a GTN in a helicopter, the GTN provides controls for enabling/disabling "On Scene" mode. "On Scene" mode decreases traffic alerts when operating near other helicopters (e.g., news reporting).

1. While viewing the Traffic page, touch the **Menu** key.



2. Touch the **On Scene** key to enable/disable On Scene mode.

10.5.3 Rotorcraft Traffic Page Orientation

***NOTE**: Rotorcraft Traffic Page Orientation functionality is available in software version 5.12 or later.*

When flying at low speeds in a helicopter, heading may not always be closely aligned with track (it could easily be up to 180 degrees different). If the GTN is interfaced with a heading source, the ADS-B traffic page will remain fixed with the ownship heading pointed up. However, if heading is not being received by the GTN, the display of ADS-B traffic will be unavailable.

When one of the following conditions is true, the ADS-B traffic page will be unavailable:

- Ownship directionality is invalid (no valid heading or track)
- GPS ground speed is less than 15 knots and ownship heading is not available

While the traffic display is unavailable due to these conditions, traffic alerts will be provided in a non-bearing textual form at the top of the traffic page.

10.6 RYAN TCAD 9900BX with the GDL 88

NOTE: *When a TCAD is connected to a GTX 345, the available controls will appear as described for a TCAS in Section 10.5.2.*

Ryan TCAD is a system that provides audio and visual alerts for traffic near your aircraft. The information from this system can be interfaced through the GTN series. Operating instructions and details on the modes of operation are described in the Ryan TCAD operator's handbooks.

- TCAS-like symbols are used in the 9900BX.
- Altitude modes are available (normal, look up, look down, unrestricted).
- Ranges are manually controlled for the current shield.
- Traffic display range selections:
  - Ryan 9900BX — 1 NM, 2 NM, 2 and 6 NM, 6 and 12 NM, and 12 and 24 NM.

10.6.1 Ryan TCAD Description

NOTE: *Refer to the Ryan TCAD Pilot's Guide for a detailed description of the Ryan TCAD System.*

The Ryan TCAD (Traffic and Collision Alert Device) is an on-board air traffic display used to identify potential collision threats. TCAD computes relative altitude and range of threats from nearby Mode C and Mode S-equipped aircraft. TCAD will not detect aircraft without operating transponders or those that are beyond radar coverage. TCAD, within defined limits, creates a "shield" of airspace around the aircraft that detected traffic cannot penetrate without triggering an alert.

TA: Traffic Advisory. This is traffic with 500 feet, or less, of altitude separation that is converging or maintaining altitude separation.

PA: Proximity Advisory. This is traffic with 500 feet of altitude separation that is not a TA.

TRFC: Other traffic.

12.6 FIS-B Weather

The Flight Information Services (FIS-B) function is capable of displaying text and graphic weather information with GDL 88 and GTX 345 installations. No subscription for FIS-B services is required.

The FIS-B Function is a graphic weather display capable of displaying graphical weather information on UAT equipped installations. Graphical data is overlaid on the map indicating the rainfall detected by ground based radar for a specific area. Colors are used to identify the different NEXRAD echo intensities (reflectivity) measured in dBZ (decibels of Z). "Reflectivity" (designated by the letter Z) is the amount of transmitted power returned to the radar receiver. The dBZ values increase as returned signal strength increases. Precipitation intensity is displayed using colors corresponding to the dBZ values. Review the Limitations section in the front of this guide for the limitations that apply to the FIS-B data. An example of how rainfall data is color coded follows:

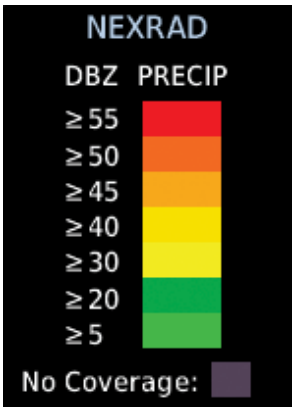


Figure 12-92 FIS-B Weather Precipitation Legend

A cyan checkerboard pattern indicates that no data is available for that area, and rainfall in that area is unknown.

The FIS-B Function is based on a ground-to-air data link and requires that the appropriate ground systems are broadcasting weather data and the aircraft is within reception range of the Ground Broadcast Transceiver (GBT).

15.1 Vertical Calculator (VCALC)

The Vertical Calculator (VCALC) function allows you to create a three-dimensional profile which guides you from your present position and altitude to a final (target) altitude at a specified location. This is helpful when you'd like to descend to a certain altitude near an airport. Once the profile is defined, message alerts and additional data can be configured on the Map Page to keep you informed of your progress.

Figure 15-3 VCALC Target

VCALC is inhibited in the following conditions:

- Groundspeed is less than 35 knots
- No active flight plan or direct-to destination
- SUSP mode
- Vectors-to-Final mode
- VLOC mode
- After the FAF on an approach
- OBS mode

WARNING: *Do not use VCALC messages as the only means of either avoiding terrain/obstacles or following ATC guidance. VCALC provides advisory information only and must be used in concert with all other available navigation data sources.*

16.3.2 GDL 88 or GTX 345 Status

The GDL 88 or GTX 345 Status page displays information about the status of the GDL 88 or GTX 345.

Status	Description
On	Application is on/running. Required ownship input data is available and meets the performance criteria.
Available to Run	Application is configured. Required input data is available and meets the performance criteria. This state represents that the ASA Application is manually or automatically selected off.
Unavailable – Fault	Required Input data is not available due to a failure or the ASA Application process is failed.
Unavailable to Run	Required Input data is available but does not meet the performance criteria or is not available due to Non-Computed Data (NCD) conditions.

Table 16-4 Traffic Application Status

1. While viewing the External LRUs page, touch **More Info** for the GDL 88 or GTX 345 LRU.

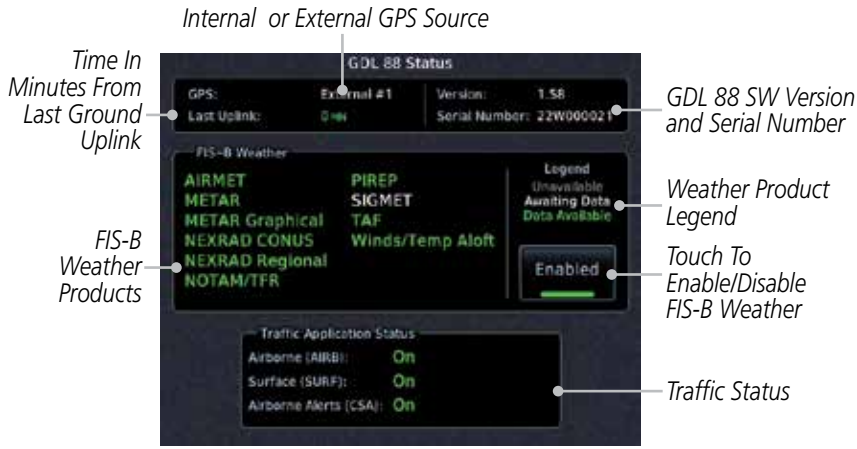


Figure 16-25 GDL 88 Status

2. Touch the **Enabled** key to toggle whether FIS-B Weather is enabled/disabled for use.

16.4.5 Crossfill

Dual units may be interfaced to crossfill information between the two units. This option will not be available unless dual units are configured.

When Crossfill is turned on with one GTN, it is automatically turned on in the other GTN. Some items are always crossfilled regardless of the crossfill setting; others are dependent on the crossfill setting.

The GTN can be can also be interfaced with the GNS 400W/500W units. The GTN can automatically send the Active Flight Plan and active Direct-To course to the GNS unit. The GTN User Waypoints can be manually sent to the GNS unit. The GNS unit can manually send its User Waypoints to the GTN unit.

Waypoint names longer than six characters, or duplicates, sent from the GTN unit to the GNS unit will replace some characters with a "+" sign, while leaving significant characters to aid in identification (such as, USR003 becomes US+003).

NOTE: *Upon crossfill being activated, the GTNs may take up to 10 seconds to crossfill the flight plans. The pilot must verify the flight plan in each unit prior to use. The GTN and GNS units must have databases with the same cycle.*

NOTE: *When GPS navigation is lost in either unit, crossfilling may not be available until GPS is restored in both units. Crossfilling will resume once the flightplan is changed on one of the units or crossfill is re-enabled.*

NOTE: *If two GTN 7XX units are crossfilled, then the same type (ChartView or FlightCharts) and version (cycle number and effective dates) for the chart database must be installed on both units in order for the correct chart to be overlaid on the main map page.*

16.4.5.1 GTN-to-GTN Crossfilling

This data is always crossfilled:

- User waypoints
- Flight plan catalog
- Alerts (traffic pop-up acknowledgement, missed approach waypoint pop-up acknowledgement, altitude leg pop-up acknowledgement)
- External sensors (transponder status and commands, synchro heading)
- System setup:
  - User-defined NAV frequencies to store favorites
  - Date/Time convention
  - Nearest airport criteria
  - Units (Nav angle, Fuel, and Temperature)

16.6 Units Settings

The Units Setup page allows you to select the conventions for the various units that are displayed.

Units Type	Units Values
Altitude/Vertical Speed	Feet(FT/FPM), Meters (M/MPS)
Distance/Speed	Nautical Miles (NM/KT), Kilometers (KM/KPH), Statue Miles (SM/MPH)
Fuel[1]	Gallons (GAL), Imperial Gallons (IG), Kilograms (KG), Liters (LT), or Pounds (LB)
Nav Angle[1]	Magnetic (°), True (°T), User (°u)
Magnetic Variation	Enter numeric value, E or W
Position Format	LAT/LON, MGRS, UTM
Pressure	Inches of Mercury (IN), Hectopascals (HPA), Millibars (MB)
Temperature[1]	Celsius (°C) or Fahrenheit (°F)

Table 16-6 System Units Setup

Note 1: Only these unit types will be crossfilled in dual GTN installations.

16.6.1 Setup Units

Use these settings to set the units for values displayed in the unit operation.

1. While viewing the System page, touch the **Units** key.

Figure 16-44 System Units Page

2. Touch the key for the desired units. A window with a list of unit values will appear. Touch the desired value on the list.

Figure 16-45 Setup Units Selection Windows

3. After making the desired selections, touch the **Back** key to return to the Setup page.

16.6.2 Setting a User-Configured (Manual) Nav Angle

There are three variation (heading) options: Magnetic, True, and User. If "Magnetic" is selected, all track, course and heading information is corrected to the magnetic variation computed by the GPS receiver. The "True" setting references all information to true north. The "User" selection allows the pilot to enter values between 0º and 179º E or W. When configured by the installer, there may also be a fourth option: External. If "External" is selected, the GTN Nav Angle will be synchronized with the on-side MFD.

NOTE: *When changing the Nav angle, the DTK on the Flight Plan page for an approach does not change until that approach is reloaded.*

1. While viewing the System page, touch **Units** key.
2. Touch the **Nav Angle** key and then the **User** key.

Figure 16-46 Nav Angle Selections

16.11.1 Operation

Data output from the GTN and Flight Stream 210 occurs automatically and requires no pilot action (such as, flight plan, GPS position, and attitude). Additionally, ADS-B traffic and weather can be output from the Flight Stream when connected to a GDL 88 or GTX 345 and XM WX and SiriusXM satellite radio information can output when connected a GDL 69.

From the Connext Setup page, the pilot can enable/disable flight plan importing, change the Flight Stream Bluetooth name, and manage paired devices.

The device status indicates if the portable device is connected and communicating with the Flight Stream. The "Auto-Reconnect" setting determines if the Flight Stream will automatically connect to up to four devices when in range. When this setting is disabled, the pilot must initiate the connection from the device. For devices that always reconnect automatically, this setting will not be shown. Removing a device from this page by pressing "Remove" will require the device to be paired again before transferring data.

NOTE: *If the pairing is removed from either device (portable device or GTN) it must be removed on the other device before a new pairing to that same device is established again. Essentially, pairing must be removed on both devices before repairing.*

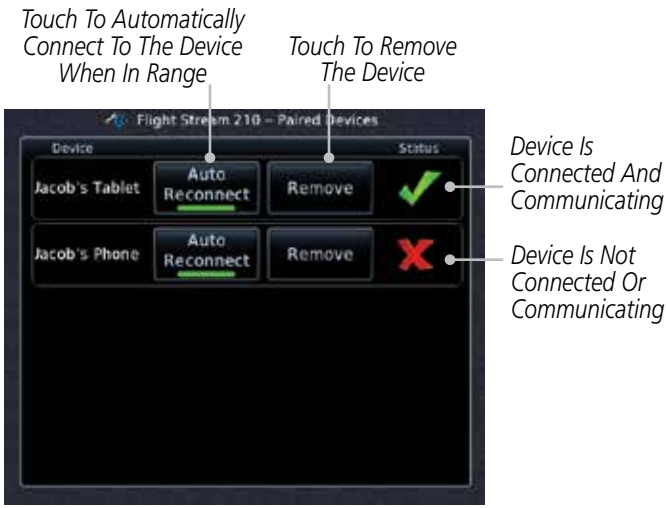


Figure 16-60 Managing Paired Devices

16.11.2 Pairing a Device

New devices can only be paired with the Flight Stream when it is in "Pairing Mode". The Flight Stream will be in pairing mode when the GTN is navigated to the Connext Setup page and/or the Manage Paired Devices page. The pairing must be initiated by the portable device. Pop-ups displayed on the portable device and GTN will be displayed to confirm the pairing.

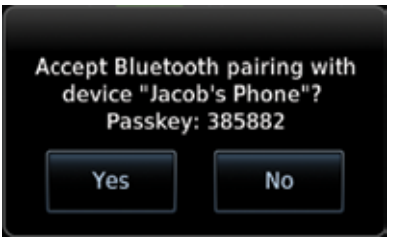


Figure 16-61 Confirm Pairing With A New Device

Selecting "Manage Paired Devices" opens a page that lists all of devices paired to the Flight Stream 210.

16.12 Connext Setup – Other Bluetooth Devices

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

The GTN can also configure the Bluetooth transceiver in other units, such as the GMA 35c and GTX 345.

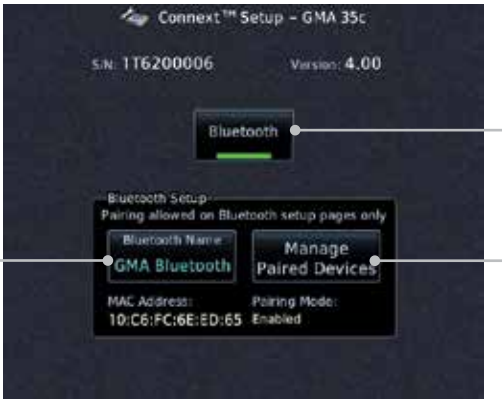


Figure 16-62 Connext Setup for GMA 35c

From the Connext Setup page, the pilot can enable/disable Bluetooth, change the Bluetooth name, and manage paired devices. On the Paired Devices page, the device status indicates if the portable device is paired and connected. To connect a different device when the maximum number are already connected, the existing connection must be ended by removing the portable device pairing or by disconnecting or disabling Bluetooth on the portable device. Removing a device from this page by pressing "Remove" will require the device to be paired again before reconnecting.

NOTE: *Only one portable device can be connected to the GMA 35c at a time.*

NOTE: *If the pairing is removed from either device (portable device or installed avionics) it must be removed on the other device before a new pairing to that same device is established again. Essentially, pairing must be removed on both devices before re-pairing.*

New devices can only be paired while the unit is in "Pairing Mode." Pairing mode is active while on the Connext Setup page or the Manage Paired Devices page. The pairing must be initiated by the portable device. A pop-up will be displayed on the portable device to confirm the pairing.

Message	Description	Action
DATABASE - Verify airways in stored flight plans are correct.	A stored flight plan contains an airway that is no longer consistent with the current navigation database.	Verify that the airways in stored flight plans are correct. Modify stored flight plans as necessary to include the current airways by re-loading those airways to the stored flight plan routes.
DATABASE - Verify user-modified procedures in stored flight plans are correct.	A stored flight plan contains procedures that have been manually updated, and a navigation database update has occurred.	Verify that the user-modified procedures in stored flight plans are correct.
DATACARD ERROR - SD card is invalid or failed.	External data card has an error and the unit is not able to read the databases.	ChartView, FlightCharts, and Terrain databases will not be accessible by the unit. Contact dealer for service.
DATACARD REMOVED - Reinsert SD card.	External data card was removed.	Reinsert data card.
DATALINK - ADS-B In fault: UAT receiver.	The ADS-B In source has detected a UAT receiver fault.	Contact dealer for service.
DATALINK - ADS-B In fault: 1090 receiver.	The ADS-B In source has detected a 1090 receiver fault.	Contact dealer for service.
DATALINK - FIS-B weather has failed.	The FIS-B receiver is reporting that it has failed. The display of FIS-B products may be unavailable.	Contact dealer for service.

Message	Description	Action
TRAFFIC - ADS-B In traffic alerting has failed.	The ADS-B traffic system is reporting to the GTN that the CSA application has failed. Traffic alerting on ADS-B traffic is unavailable.	Ensure the aircraft has a clear view of the sky. If the problem persists. Contact dealer for service.
TRAFFIC - ADS-B In traffic has failed.	The ADS-B traffic system may have lost GPS position or detected an internal fault.	Contact dealer for service.
TRAFFIC - TCAD has a low battery.	The GDL 88 is reporting that the external traffic system has a low battery.	Contact dealer for service.
TRAFFIC - Traffic device battery low. Traffic device user config settings not saved.	The TCAD system has indicated that its battery is low.	Contact dealer for service.
TRAFFIC - Traffic device has been in standby for more than 60 seconds.	The GTN is airborne and the traffic device has been in standby for more than 60 seconds.	Set the traffic device to "operate" on the traffic page if traffic alerts are desired.
TRAFFIC - Traffic device is inoperative or connection to GTN is lost.	The GTN is configured for a traffic device but is not receiving data from it. Traffic will not be displayed on the GTN.	Contact dealer for service.

Message	Description	Action
TRANSPONDER - Transponder 1 and 2 Mode S addresses do not match.	The GTN is configured for two transponders and their Mode S addresses do not match. This message is intended to assist installers and will not occur in a properly configured system.	Contact dealer for service.
TRANSPONDER 1 OR 2 - ADS-B is not transmitting position.	The transponder has insufficient data to support ADS-B.	Ensure the aircraft has a clear view of the sky. Contact dealer for service.
TRANSPONDER 1 OR 2 - ADS-B Out system fault. Pressure altitude source inoperative or connection lost.	The transponder has lost communication with the pressure altitude source.	Contact dealer for service.
TRANSPONDER 1 OR 2 - Transponder 1 or 2 is inoperative or connection to GTN is lost.	The GTN is configured for transponder 1 or 2 but is not able to communicate with the transponder.	Verify squawk code and altitude with ATC. Contact dealer for service.
TRANSPONDER 1 OR 2 - Transponder 1 or 2 needs service.	The transponder is reporting to the GTN that it needs service. The transponder may continue to function.	Verify squawk code and altitude with ATC. Contact dealer for service.

Message	Description	Action
TRANSPONDER 1 OR 2 - Transponder has failed.	The transponder has detected an internal fault and transponder functionality may be unavailable.	Contact dealer for service.
TRANSPONDER 1 OR 2 - Transponder is in ground test mode.	The transponder is operating in a mode intended for ground testing.	Cycle the power to the transponder.
TRANSPONDER 1 OR 2 - Transponder overtemp.	The transponder is reporting that its internal temperature has exceeded upper operating limits.	Decrease temperature and increase airflow near the transponder, if possible. Monitor aircraft electrical indications. Contact dealer for service if this message persists.
TRANSPONDER 1 OR 2 - Transponder undertemp.	The transponder is reporting that its internal temperature has exceeded lower operating limits.	Contact dealer for service if this message persists.
TRUE NORTH APPROACH - Verify NAV Angles are referenced to True North (T).	A procedure is loaded that is referenced to true north and the active leg has a published true north reference.	Verify the Nav Angle is set to True North.
USER WAYPOINT IMPORT - User waypoints were imported successfully.	All user waypoints were imported successfully.	No action is necessary; message is informational only.

Symbol	Description
	Twin-Engine Prop
	Single-Engine Jet
	Business Jet
	2-Blade Rotorcraft
	3-Blade Rotorcraft
	4-Blade Rotorcraft
	High Visibility Arrow
	Basic Aircraft
	Non-directional ownship is shown if there is no heading or ground track. This typically only occurs during start-up. In helicopters without a heading source, the non-directional ownship symbol will also appear below 15 kts.
	Parallel Track Waypoint
	Restricted/Prohibited/Warning/Alert
	TFR (Temporary Flight Restrictions)
	MOA
	Class B Airspace
	Class C Airspace
	Class D Airspace
	User Waypoint

Table 18-12 Miscellaneous Symbols

NOTE: *Ownship icons are configured by the installer and can be colored magenta for enhanced visibility (Software version 5.12 or later).*

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