

18 APPENDIX

18.1 Glossary

ACT, ACTV	active, activate	Getting Started
ADC	Air Data Computer	Audio & Xpdr Ctrl
ADF	Automatic Direction Finder	Com/Nav
ADI	Attitude Direction Indicator	
AFM	Airplane Flight Manual	
AFMS	Airplane Flight Manual Supplement	FPL
AGL	Above Ground Level	
AIM	Airman's Information Manual	Direct-To
AIRMET	Airman's Meteorological Information	
ALT	altitude	Proc
AP	autopilot	
APR	approach	Wpt Info
APT	airport, aerodrome	
ARINC	Aeronautical Radio Incorporated	Map
ARSPC	airspace	
ARTCC	Air Route Traffic Control Center	Traffic
AS	airspeed	
ASOS	Automated Surface Observing System	Terrain
ATC	Air Traffic Control	
ATCRBS	ATC Radar Beacon System	Weather
ATIS	Automatic Terminal Information Service	
AUX	auxiliary	Nearest
AWOS	Automated Weather Observing System	Services/ Music
BARO	barometric setting	Utilities
BC	backcourse	
Bearing	The compass direction from the present position to a destination waypoint	System
BRG	bearing	Messages
C	center runway	Symbols
°C	degrees Celsius	
CDI	Course Deviation Indicator	
CHNL	channel	
CLD	cloud	

	CLR	clear
Foreword	CNXT	Connex
	CONFIG	configuration
Getting Started	Course	The line between two points to be followed by the aircraft
Audio & Xpdr Ctrl	Crosstrack Error	The distance the aircraft is off a desired course in either direction, left or right
Com/Nav	CRS	course
	CRSR	cursor
FPL	CTA	Control Area
	CTAF	Common Traffic Advisory Frequency
Direct-To	CTRL	control
	CUM	The total of all legs in a flight plan
Proc		
Wpt Info	DALT	density altitude
	DB, DBASE	database
Map	DCLTR, DECLTR	declutter
	deg	degree
Traffic	DEP	departure
	Desired Track (DTK)	The desired course between the active "from" and "to" waypoints
Terrain	DEST	destination
Weather	DFLT	default
	DIS	distance
Nearest	Distance	The "great circle" distance from the present position to a destination waypoint
Services/ Music	DME	Distance Measuring Equipment
	DP	Departure Procedure
	DPRT	departure
Utilities	DSBL	disabled
System	DTK	Desired Track
Messages	EDR	Excessive Descent Rate
	EGNOS	Provides SBAS service for most of Europe and parts of North Africa
Symbols		
Appendix	ELEV	elevation
	EMI	Electromagnetic Interference
	ENR	en route

En Route Safe Altitude	The recommended minimum altitude within ten miles left or right of the desired course on an active flight plan or direct-to	Foreword
ERR	error	Getting Started
ESA	En route Safe Altitude	Audio & Xpdr Ctrl
ETA	Estimated Time of Arrival	
ETE	Estimated Time En Route	Com/Nav
°F	degrees Fahrenheit	FPL
FAA	Federal Aviation Administration	
FCC	Federal Communication Commission	Direct-To
FCST	forecast	
FD	flight director	Proc
FIR	Flight Information Region	
FIS-B	Flight Information Services-Broadcast	Wpt Info
FISDL	Flight Information Service Data Link	
FLTA	Forward Looking Terrain Avoidance	Map
FPL	flight plan	
FREQ	frequency	Traffic
FRZ	freezing	
FSS	Flight Service Station	Terrain
ft	foot/feet	Weather
GAGAN	Provides SBAS service for India	
G/S, GS	glideslope	Nearest
GDC	Garmin Air Data Computer	Services/ Music
GDL	Garmin Satellite Data Link	
GEO	geographic	Utilities
GLS	Global Navigation Satellite Landing System	
GMA	Garmin Audio Panel System	System
GMT	Greenwich Mean Time	
GMU	Garmin Magnetometer Unit	Messages
GPS	Global Positioning System	
GPSS	GPS Roll Steering	Symbols
Ground Speed	The velocity that the aircraft is travelling relative to a ground position	
Ground Track	see <i>Track</i>	Appendix
GRS	Garmin Reference System	
GS	Ground Speed	Index

Foreword	GTX	Garmin Transponder
Getting Started	HDG	heading
Audio & Xpdr Ctrl	Heading	The direction an aircraft is pointed, based upon indications from a magnetic compass or a properly set directional gyro
Com/Nav	HFOM	Horizontal Figure of Merit
	Hg	mercury
FPL	hPa	hectopascal
	HPL	Horizontal Protection Level
Direct-To	HSDB	High-Speed Data Bus
	HSI	Horizontal Situation Indicator
Proc	HTAWS	Helicopter Terrain Awareness and Warning System
	Hz	Hertz
Wpt Info		
Map	IAF	Initial Approach Fix
	ICAO	International Civil Aviation Organization
Traffic	IFR	Instrument Flight Rules
	IGRF	International Geomagnetic Reference Field
Terrain	ILI	Imminent Line Impact
	ILS	Instrument Landing System
Weather	IMC	Instrument Meteorological Conditions
	IOI	Imminent Obstacle Impact
Nearest	INFO	information
	in HG	inches of mercury
Services/ Music	INT	intersection(s)
	INTEG	integrity (RAIM unavailable)
Utilities	ITI	Imminent Terrain Impact
System	L	left, left runway
Messages	LAT	latitude
	LCD	Liquid Crystal Display
Symbols	LCL	local
	LED	Light Emitting Diode
Appendix	Leg	The portion of a flight plan between two waypoints
	LIFR	Low Instrument Flight Rules
	LNAV	Lateral Navigation
Index	LOC	localizer

LOI	loss of integrity (GPS)	
LON	longitude	Foreword
LPV	Localizer Performance with Vertical guidance	
LRU	Line Replacement Unit	Getting Started
LT	left	
LTNG	lightning	Audio & Xpdr Ctrl
MAG	Magnetic	Com/Nav
MAG VAR	Magnetic Variation	FPL
MapMX	A proprietary data format used to forward navigation information between Garmin units	Direct-To
MAX	maximum	
MAXSPD	maximum speed (overspeed)	Proc
MDA	barometric minimum descent altitude	
METAR	Aviation Routine Weather Report	Wpt Info
MGRS	Military Grid Reference System	
MIN	minimum	Map
Minimum Safe Altitude	Uses Grid MORAs to determine a safe altitude within ten miles of the aircraft present position	Traffic
MKR	marker beacon	
MOA	Military Operations Area	Terrain
MOT	Mark On Target	
MOV	movement	Weather
mpm	meters per minute	
MSA	Minimum Safe Altitude	Nearest
MSAS	Provides SBAS service for Japan only	
MSG	message	Services/ Music
MSL	Mean Sea Level	
MT	meter	Utilities
mV	millivolt(s)	
MVFR	Marginal Visual Flight Rules	System
NAV	navigation	Messages
NAVAID	NAVigation AID	
NCR	Negative Climb Rate	Symbols
NDB	Non-Directional Beacon	
NEXRAD	Next Generation Radar	

	OAT	Outside Air Temperature
Foreword	OBS	Omni Bearing Selector
Getting Started	PA	Proximity Advisory
	PC	personal computer
Audio & Xpdr Ctrl	PDA	Premature Descent Alert
	P. POS	Present Position
Com/Nav	PTK	parallel track
FPL		
	QTY	quantity
Direct-To		
Proc	R	right, right runway
	RA	Resolution Advisory
Wpt Info	RAIM	Receiver Autonomous Integrity Monitoring
	RAM	random access memory
Map	REF	reference
	REQ	required
Traffic	REV	reverse, revision, revise
	RLC	Reduce Required Line Clearance
Terrain	RMI	Radio Magnetic Indicator
	RNG	range
Weather	RNWX	runway
	ROC	Reduced Required Obstacle Clearance
Nearest	RT	right
	RTC	Reduced Required Terrain Clearance
Services/ Music		
Utilities	SAR	Search and Rescue
	SBAS	Satellite-Based Augmentation System
System	SCIT	Storm Cell Identification and Tracking
	SD	Secure Digital
Messages	SFC	surface
	SIAP	Standard Instrument Approach Procedures
Symbols	SID	Standard Instrument Departure
	SIGMET	Significant Meteorological Information
Appendix	SLP/SKD	slip/skid
	SMBL	symbol
	SPD	speed
Index	SRVC, SVC	service

STAR	Standard Terminal Arrival Route	
STATS	statistics	Foreword
STBY	standby	
STD	standard	Getting Started
SUA	Special Use Airspace	
SUSP	suspend	Audio & Xpdr Ctrl
SW	software	
SYS	system	Com/Nav
		FPL
T	true	
TA	Traffic Advisory	Direct-To
TACAN	Tactical Air Navigation System	
TAF	Terminal Aerodrome Forecast	Proc
TAS	True Airspeed	
TAS	Traffic Advisory System	Wpt Info
TAT	Total Air Temperature	
TAWS	Terrain Awareness and Warning System	Map
TCA	Terminal Control Area	
TCAS	Traffic Collision Avoidance System	Traffic
TEMP	temperature	
TERM	terminal	Terrain
TFR	Temporary Flight Restriction	
T HDG	True Heading	Weather
TIS	Traffic Information System	
TMA	Terminal Maneuvering Area	Nearest
Topo	topographic	
Track	Direction of aircraft movement relative to a ground position; also 'Ground Track'	Services/ Music
TRK	track	
TRSA	Terminal Radar Service Area	Utilities
		System
UNAVAIL	unavailable	
USR	user	Messages
UTC	Coordinated Universal Time	
UTM/UPS	Universal Transverse Mercator/ Universal Stereographic Grid	Symbols
		Appendix
V, Vspeed	velocity (airspeed)	Index

	VAR	variation
Foreword	VFR	Visual Flight Rules
	VHF	Very High Frequency
Getting Started	VLOC	VOR/Localizer Receiver
	VMC	Visual Meteorological Conditions
Audio & Xpdr Ctrl	VNAV, VNV	vertical navigation
	VOR	VHF Omni-directional Range
Com/Nav	VORTAC	very high frequency omnidirectional range station and tactical air navigation
	VRP	Visual Reporting Point
FPL	VS	Vertical speed
	VSI	Vertical Speed Indicator
Direct-To		
Proc	WAAS	Wide Area Augmentation System
	WGS-84	World Geodetic System - 1984
Wpt Info	WPT	waypoint(s)
	WX	weather
Map		
Traffic	XPDR	transponder
	XTK	cross-track
Terrain		
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18.2 Database Information and Updates

The GTN uses several databases to provide up-to-date aviation information. GTN databases can be updated by the pilot using an SD card or Flight Stream 510 wireless database card. The GTN can also synchronize databases in the cockpit with other displays using Database SYNC and Chart Streaming.

Information about the installed and standby databases can be viewed on the System Status page. Database SYNC and Chart Streaming can be configured in the menu on the System Status page.

The database card should not be removed except to update the databases stored on the card. For basic flight operations, a database card is required for database storage. The database cards cannot be shared between units.

18.2.1 GTN Databases

- **Navigation** - The navigation database contains information for waypoints and airports, such as procedures, runways, airways, airspaces, frequencies, and visual reporting points. For helicopter applications, a navigation database that includes additional heliports is available.
- **Basemap** - The Basemap database contains land and water data, such as roads, boundaries, rivers, and lakes.
- **SafeTaxi** - The SafeTaxi database contains detailed airport diagrams for selected airports. These diagrams aid in following ground control instructions by displaying the aircraft position on the map in relation to taxiways, ramps, runways, terminals, and services.
- **Obstacles** - The obstacle database contains data for obstacles, such as towers, that pose a potential hazard to aircraft. Obstacles 200 feet and higher are included in the fixed-wing obstacle database. The rotorcraft database includes all reported obstacles regardless of height. It is important to note that not all obstacles are necessarily charted and therefore may not be contained in the obstacle database. Several obstacle database options are available. Obstacle databases created for GTN software v5.10 or later include all power lines or only Hazardous Obstacle Transmission (HOT) lines depending on the type of obstacle database installed. HOT lines are those power lines that are co-located with other FAA-identified obstacles. The obstacle database is required for the TAWS and HTAWS functions.

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- **Terrain** - The terrain database contains terrain mapping data. The terrain database is required for the TAWS and HTAWS functions. Systems using HTAWS require a 2.5 arc second database while non-HTAWS applications can use a 9 arc-second database.
- **FliteCharts** - FliteCharts resemble the paper version of AeroNav Services (Formerly named National Aeronautical Charting Office) terminal procedures charts. The charts are displayed with high-resolution and in color for applicable charts. The GTN depiction shows the aircraft position on the moving map in the plan view of the approach charts and on airport diagrams.
- **Chartview** - ChartView resembles the paper version of Jeppesen terminal procedure charts. The charts are displayed in full color with high-resolution. The GTN depiction shows the aircraft position on the moving map in the plan view of approach charts and on airport diagrams.

Database Name	Where Stored	Update Cycle	Provider	Notes
Navigation	Internal memory	28 days	www.flyGarmin.com	
Basemap	Internal memory	As required	www.flyGarmin.com	
SafeTaxi	Internal memory	56 days	www.flyGarmin.com	
Obstacle	Internal memory	56 days	www.flyGarmin.com	
Terrain	Database card	As required	www.flyGarmin.com	
FliteCharts	Database card	28 days	www.flyGarmin.com	Disables 180 days after expiration date.
Chartview	Database card	14 days	Contact Jeppesen	Disables 70 days after expiration date.

Table 18-1 Database List



NOTE: Garmin requests that the flight crew report any observed discrepancies related to database information. These discrepancies could come in the form of an incorrect procedure, incorrectly identified terrain, obstacles and fixes, or any other displayed item used for navigation or communication in the air or on the ground. To report a database error, visit www.flyGarmin.com.

18.2.2 Updating Databases with a SD Card

To update the GTN database use an SD card. Instructions on updating the GTN database and the required equipment is found at www.flyGarmin.com.

The ChartView database is provided directly from Jeppesen. Contact Jeppesen (www.jeppesen.com) for ChartView subscription and update information. An enablement card that is purchased from Garmin is separate from the Jeppesen database and is required to enable ChartView.

1. Download the database updates to the Garmin Database Card from the appropriate website.
2. Insert the database card into the slot of the GTN.
3. Apply power to the GTN.
4. The database update page will be displayed, listing all effective database updates on the database card. Databases cycles that are not effective or already installed will be kept on the Garmin Database Card as standby databases until they become effective. Hold down the dual-concentric knob while applying power to the GTN to force the update of these databases.



Figure 18-1 Updated Databases

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5. Select the desired database updates and press the **Update** key.

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NOTE: *Do not remove power to the GTN while updating databases.*

Audio & Xpdr Ctrl

6. The GTN will begin the update process and then verify the integrity of the installed databases.

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7. Check that all databases are current and there are no errors. If a database is highlighted in yellow, it is either expired or missing.

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Figure 18-2 Currently Installed Software/Databases

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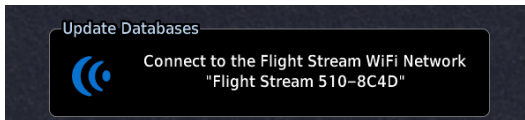
Index

18.2.3 Updating Databases with a Flight Stream 510

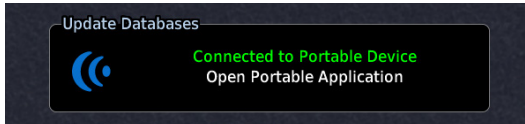
GTN databases can also be updated using the Flight Stream 510 wireless database card with a portable device and the Garmin Pilot application.

1. Follow the instructions within the app to purchase and download the database updates.
2. Ensure the Flight Stream 510 is inserted into the database card slot and apply power to the GTN.
3. When prompted on the database verification screen, connect the portable device to the Flight Stream 510 Wi-Fi network. The network name and password can be displayed by pressing the **Show WiFi Info** key.

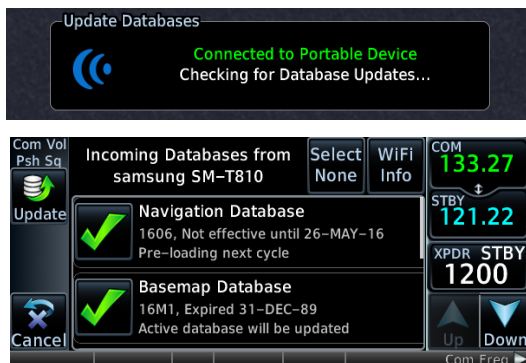
Show WiFi Info



4. Once connected, open Garmin Pilot on the portable device.



5. The Flight Stream 510 will check for database updates on the portable device and display the database update page or notify the pilot that no database updates are available.



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6. Select the desired database updates. All selected databases will be transferred to the GTN, but the GTN may choose to not install all databases. Database cycles that are not yet effective will be preloaded and kept as standby databases until they become effective. Databases that are not supported by this GTN may be transferred and then SYNC'd to other Garmin displays.
7. Press the **Update** key.

NOTE: *Do not remove power to the GTN while updating databases.*

8. The GTN will begin the transfer, update, and verification process. The terrain and charts databases can take up to 5 minutes each to transfer over Wi-Fi to the Flight Stream 510.
9. Check that all databases are current and there are no errors. If a database is highlighted in yellow, it is either expired or missing.



18.2.4 Database SYNC

Database SYNC allows the GTN to synchronize databases from a single unit to other Garmin avionics. The pilot only needs to update a single database card (SD card or Flight Stream 510) and the new databases are automatically SYNC'd through the units connected in the cockpit and configured for Database SYNC. Databases must be purchased for all avionics in the cockpit.

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Database SYNC is supported by these database types:

- Navigation
- Basemap
- SafeTaxi
- Obstacle
- FliteCharts
- Airport Directory

The database SYNC process may take several minutes, depending on how many databases have been updated. The status of the database transfers to a unit can be viewed on the System Status page under the “Standby” tab. The GTN will display the source of the received databases (for example: “Database SYNC - GTN #2”). If a database SYNC is pending, completed, or not authorized, the status will also be indicated.

When the SYNC is complete, if the aircraft is stopped and has yet to takeoff, the pilot will be prompted with the option to restart and update to the newly transferred databases.



NOTE: *Restarting the GTN must only be performed when the aircraft is on the ground as navigation and communication from the restarted unit will be lost for a period of time.*

18.2.4.1 Resolving Database SYNC Conflicts

Database conflicts must be resolved for synchronization to occur. Conflicts exist when multiple LRUs have a database of the same cycle, but with different regions or types (e.g., fixed wing vs. rotorcraft navigation database, different regions of the navigation database, or different obstacle database types). The GTN attempts to resolve these by automatically synchronizing the most recently installed database across all other LRUs (software v6.30 and later). Pilot intervention is required when conflicts cannot be resolved automatically. Conflicts occurring with earlier software versions also require manual intervention.

To manually resolve database conflicts, touch the **Resolve Conflicts** key on the display containing the desired database version. This key is located on the Conflicts tab of the System Information page.

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18.2.5 Chart Streaming

While the Chart database is SYNCing in the background, the GTN will stream individual charts to other compatible displays. This enables all Garmin displays to use the latest chart database information even though the database is currently installed only on a single unit. Chart Streaming will begin after the chart database has begun SYNCing.

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18.2.6 Database Troubleshooting Tips

Problem	Action
Unable to download databases to the SD card	<ul style="list-style-type: none"> • Ensure you have a high capacity SD card programmer • Ensure that your card programmer is plugged directly into your computer and not into a USB hub, computer screen, or keyboard • Ensure the sliding lock tab is in the unlocked position (up, when viewing the card label-side up)
Database update fails	<ul style="list-style-type: none"> • Restart the GTN and retry the update • Download the databases to the database card again • Ensure that the databases were purchased for the system ID of the GTN that the database card is being used to update
Database SYNC fails	<ul style="list-style-type: none"> • Ensure that the databases were purchased for all the GTNs and GDUs in the cockpit • Ensure that all conflicts have been resolved (section 18.2.4.1)
Database cannot be selected for update	<ul style="list-style-type: none"> • Restart the GTN while pressing the dual-concentric knob until the Garmin logo is fully illuminated to view all database updates on the database card, regardless of effectivity • Download the databases to the database card again • Ensure that the databases were purchased for the system ID of the GTN that the database card is being used to update
Database cannot be transferred to Flight Stream 510	<ul style="list-style-type: none"> • Ensure that the databases were purchased for the system ID of the GTN that the database card is being used to update • Ensure that the database transfers are enabled for the Flight Stream 510 (section 18.2.3) • Ensure that all database updates have been downloaded to the Garmin Pilot application • Press the Show All DBs key on the database verification page to view all database updates on the portable device, regardless of effectivity
Database is transferred to Flight Stream 510 but cannot be selected for update	<ul style="list-style-type: none"> • Ensure that the databases were purchased for the system ID of the GTN that the database card is being used to update • Ensure that the transferred database is currently effective • Restart the GTN while pressing the dual-concentric knob until the Garmin logo is fully illuminated to view all database updates on the Flight Stream 510, regardless of effectivity

Table 18-2 Database Troubleshooting Tips

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18.3 Demo Mode

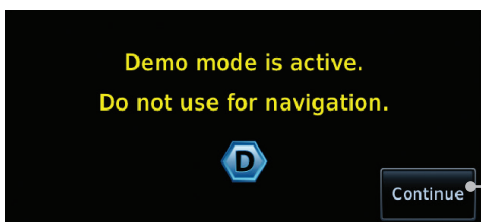
The GTN product contains a “Demo” mode that allows simulation of all operations of the product to allow practice and familiarization while staying on the ground.



WARNING: Do not use the GTN to navigate while Demo mode is active. Do not use or enter Demo mode while airborne.

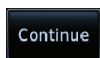


1. Press in and hold the **Direct-To** key and then apply power to the unit.



Touch To Continue

Figure 18-3 Demo Mode Start Up Display



2. Touch the **Continue** key and Fuel keys as normally needed to start operations.



3. Touch the **Demo** key in the lower part of the display to reach the Demo Setup functions.

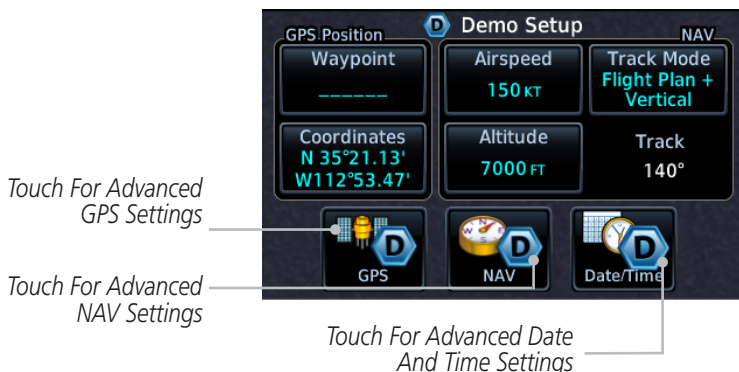


Figure 18-4 Demo Mode Setup



4. Touch the **GPS** key to reach the Demo GPS Settings page. The Position Error values (Horizontal Protection Level Fault Detection [HPL FD], HPL SBAS, and Vertical Protection Level [VPL] SBAS) may be adjusted to reflect errors induced by naturally occurring conditions, but are normally not adjusted for most Demo mode operations.

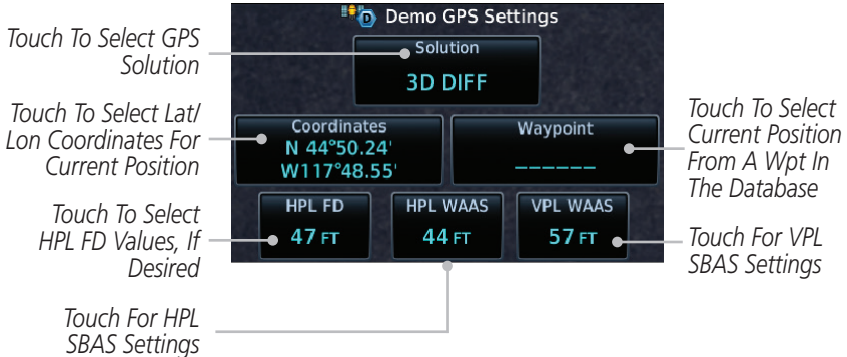


Figure 18-5 Demo Mode GPS Settings



5. Touch the **Nav** key to reach the Demo Navigation Settings page.

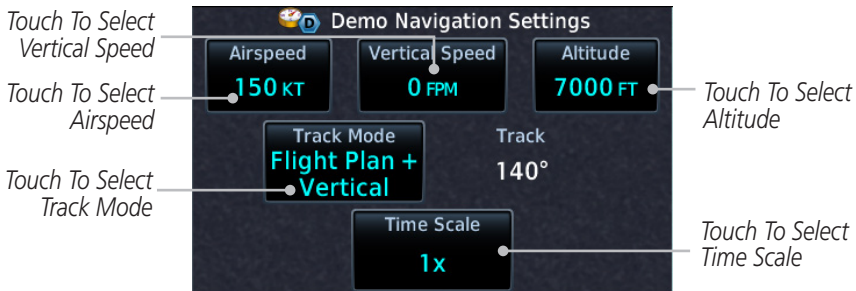


Figure 18-6 Demo Mode Navigation Settings

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6. Touch the **Date/Time** key to reach the Demo Date/Time Settings page.

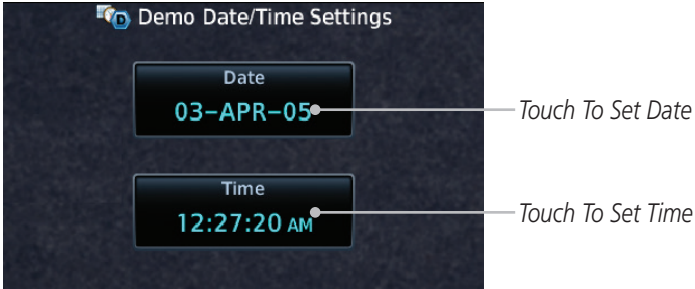


Figure 18-7 Demo Mode Date/Time Settings

7. After completing the settings for Demo mode, touch the **HOME** key or **Back** key to get started with operating the GTN.



18.4 Glove Qualification Procedure

This procedure is used to qualify a specific glove for use with the GTN system by guiding the user through a variety of tasks that use the touchscreen. Due to differences in finger size, glove size, and touchscreens between the 6XX or 7XX unit, the qualification granted by this procedure is specific to the pilot/glove and 6XX or 7XX combination. GTN 6XX and 7XX units must be evaluated separately.

The GTN touchscreen uses capacitive touch technology to sense the proximity of skin to the display. A glove increases the distance between skin and the display glass and may reduce the ability of the GTN to detect touches. Therefore, when selecting a glove for use with the GTN, thinner gloves tend to work better than thicker gloves. Leather gloves and gloves designed to work specifically with capacitive touchscreen devices are often found to be acceptable. Additionally, altering your touch technique to use the pad of your finger to touch the unit rather than the tip will increase the touchscreen sensitivity while using gloves.

This qualification must be completed on the ground. Performing this procedure in flight is not authorized. Table 18-3 contains tasks that are required to qualify a glove. Table 18-4 contains tasks that are not required to qualify a glove, but may limit the manner in which some functions are accessed while a glove is worn.

1. Sit in the pilot's seat.
2. Start the GTN in Demo mode by pressing and holding the **Direct To** key during power up.
3. Perform the tasks listed in Table 18-3 and Table 18-4 with an non-gloved hand. You do not need to record any results for this step.
4. Perform the tasks listed in Table 18-3 and Table 18-4 with a gloved hand. For each task, determine whether the operation is the same or worse as it was without the glove. Record the results in Table 18-3 and Table 18-4. Items that may cause the operation to be worse include, but are not limited to:
 - a. Multiple attempts to select a key
 - b. Unintentional selection of adjacent keys
 - c. Excessive force on the touchscreen to select a key
5. If all applicable tasks in Table 18-3 respond in the same way with and without a glove then the glove used to complete these tasks may be used by the pilot who performed this evaluation on the unit (6XX or 7XX) that was used during this procedure.

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Pilot: _____

Glove Description: _____

GTN (circle one): 6XX or 7XX

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Task	Operation With Glove (circle one)	
Navigate to the Home Screen.	NA	
Touch the Demo key.	Same	Worse
Touch the GPS key.	Same	Worse
Touch the Waypoint key.	Same	Worse
Type "KSLE" using the touchscreen, then touch Enter .	Same	Worse
Navigate to the Home Screen (Press HOME).	NA	
Touch the Flight Plan key.	Same	Worse
Enter the following waypoints using the Add Waypoint key at the bottom of the list of flight plan waypoints: KSLE KMMV KONP BTG	Same	Worse
Select BTG, then touch the Load Airway key to load the following airway: V23 ALFOR.	Same	Worse
While viewing the flight plan page, touch the Up/Down arrow keys to scroll up and down to view the flight plan waypoints.	Same	Worse
Touch the Back key to return to the Home screen.	Same	Worse
Touch the COM standby frequency to activate the com frequency entry keypad (Task applicable to 635/650/750 only).	Same	Worse
Enter a valid com frequency and touch the Enter key (635/650/750 only).	Same	Worse
Touch the active com frequency to flip/flop the com frequencies. (635/650/750 only).	Same	Worse

Task	Operation With Glove (circle one)	
Touch the active nav frequency to flip/flop the nav frequencies (750 only).	Same	Worse
Touch the Menu key (650 only).	Same	Worse

Table 18-3 Tests Required for Glove Qualification

Task	Operation With Glove (circle one)	
Navigate to the flight plan page.	NA	
While viewing the flight plan page, touch the list and drag up/down to view the flight plan waypoints.	Same	Worse
While viewing the flight plan page, touch and flick the list to view the flight plan waypoints.	Same	Worse
Navigate to the map page.	NA	
Touch the Map to enter Pan mode, then touch the Graphically Edit FPL key.	Same	Worse
Remove KONP from the flight plan graphically by touching KONP and dragging it to an area without any waypoints (Pan and zoom in/out as necessary to accomplish the task).	Same	Worse
Insert KSPB between KMMV and BTG by dragging the leg between KMMV and BTG to KSPB.	Same	Worse

Table 18-4 Tests Not Required for Glove Qualification

18.5 Telligence Voice Command Qualification Procedure

In order to enable voice command functionality crew members must successfully perform and complete 17/20 (85%) voice commands in the Telligence aircraft qualification procedure. Crew members must be comfortable speaking into an aviation headset and proficient in English.

Voice Command Guidelines



NOTE: *If a voice command is uninterpretable, verify the system is performing the intended action or displaying the desired data. If the system does not recognize a command, use the touchscreen to execute the function. The GTN Voice Command History details all commands performed.*

- Position the headset MIC approximately 1/8-inch from mouth, align with bottom lip to avoid breath sounds in the microphone.
- Speak conversationally.
- Enunciate.
- Speak in a normal tone and volume.
- Speak at a normal cadence (not too quickly or slowly).
- Pause briefly between activation of the PTC switch and when speaking the voice command.
- Review the commands prior to performing the qualification.

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Voice Command Instructions

1. Press and hold the Push to Command (PTC) switch.
2. Speak the entire command into the headset MIC.
3. Release the "PTC" switch.
 - A positive tone (low-to-high) indicates the command has been recognized and executed. (i.e., page changed, radio tuned, MIC selected, etc.)
 - A negative tone (high-to-low) indicates the command is either unrecognizable or invalid.

Successful Command Example

"Show approaches page" is spoken, the approach selection page displays immediately, and a positive tone sounds.

Unsuccessful Command Examples

"Show map page" is spoken and the traffic page displays.

"Show map page" is spoken and a negative tone sounds.

Qualification Procedure

Speak the non-bold phrase if the voice command for a procedure is not applicable to the aircraft's configuration. If the total number of successful commands is less than 17, the voice commands must be disabled. For instructions on how to activate and deactivate voice commands, refer to section 15.13.

Example: If the requirement states a COM radio is required, but your GTN does not have a COM radio, use the unbold command.

1. Start the GTN and acquire a GPS position.
2. Conduct the voice commands in sequential order while wearing an aviation headset. If necessary, a command can be attempted twice.
3. When the command is successful check the box next to the command.

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 *** Manually enter a flight plan with a towered airport as the destination ***
- Getting Started **SHOW Trip Planning PAGE**
- Audio & Xpdr Ctrl * **TUNE Nearest Ground** or SHOW Nearest Airport PAGE
- Com/Nav * **TUNE Nearest ATIS** or SHOW Nearest Weather Frequency PAGE
- FPL † **TOGGLE COM 2** or SAY Distance
- Direct-To **SHOW Map PAGE**
- Proc **ZOOM OUT**
- Wpt Info **SAY Distance to Destination**
- Map **SHOW Flight Timers PAGE**
- Traffic † **SELECT COM 2** or SAY ETA at Destination
- Terrain **SAY Active Waypoint**
- Weather **CREATE Waypoint Here**
- Nearest * **TUNE Destination Tower** or SHOW Destination Runways PAGE
- Services/ Music ‡ **SHOW Traffic PAGE** or SHOW Nearest PAGE
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- Symbols **SAY Desired Track**
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- Index **SHOW Voice Command History Page**
 * A GTN COM radio is required.
 † Two COM radios connected to the GMA are required.
 ‡ Traffic capability is required on the GTN.