Getting Started Guide to the Avionics in N1363H

Purpose

The following is an overview of the new avionics that have been installed in N1636H and how to use the basic functionality for VFR flight. To take full advantage of the new avionics, you should carefully study the Pilot's Guides for each unit and become familiar with their more advanced features.

Contents

N1636H Panel Layout

The newly installed items are noted below in **Error! Reference ource not found.**. In addition to this, push-to-talk switches were installed in the yoke, stereo headset jacks were installed, and all new coax cables were installed for the new COM radios.

Figure 1: Avionics in N1636H

Headset Jacks

N1636H has been rewired with all new stereo headset jacks. Be sure to set your headsets to "Stereo" to fully enjoy the audio experience that the GMA 350 audio panel offers.

- The passengers' phone and mic jacks are located in the plastic overhead panel.

  NOTE: Please be careful when inserting/removing the passenger plugs to avoid damage to the overhead panel. It is best to support the plastic panel when removing the headset plugs.

Avionics Power

Unlike the other club planes, N1636H does NOT have an Avionics Master Switch. It is important to remember that the avionics should remain off until AFTER the engine is started. This helps to prevent under voltage conditions that can occur when starting the engine, especially on 14V electrical systems, that can lead to damage to the avionics.

Also, when preparing to power down the aircraft, the avionics should be turned off BEFORE the engine is shut off.

GMA 350 Audio Panel

The following instructions include the basics of using the GMA 350 audio panel.

Figure 2: GMA 350 Controls

NOTE: When a key is selected, a triangular annunciator above the key is illuminated.

NOTE: The GMA 350 was installed with 3D Audio turned on. Just set your headset to Stereo to take advantage of the 3D Audio. If you do not want 3D Audio, it can be toggled on/off by pressing and holding the PILOT key.

NOTE: AUX, MUS1, MUS2, Voice Recognition, and the Marker Beacon (MKR) are not connected in N1636H's installation.

NOTE: There are cables located in N1636H for connecting your auxiliary music/phone to the 3.5mm input jack on the front of the GMA 350 for bringing music into you and your passengers.

COM Radios

- Illuminated annunciators above the COM keys indicate which COM radio(s) are currently being heard. The top GTR 225 is COM1 and the bottom GTR 225 is COM2.
- Illuminated annunciators above the MIC keys indicate the COM radio that is currently selected to transmit. The top GTR 225 is MIC1 and the bottom GTR 225 is MIC2.

  NOTE: If the annunciators above both MIC keys are illuminated, then the GMA is in SPLIT-COM mode and the Pilot is transmitting/receiving on radio 1 (top GTR 225) and the Co-Pilot is transmitting/receiving on radio 2 (bottom GTR 225).

NAV Radios

- When selected, audio from the selected NAV can be heard. The top NAV indicator/receiver is NAV1 and the bottom NAV indicator/receiver is NAV 2.

Intercom

- Press the PILOT, COPLT, and PASS keys to distribute as required. If the annunciators are lit, those positions will share intercom audio. If an annunciator is NOT lit, that position is isolated from the others.

Intercom Volume and Squelch

- The **VOL/CRSR** Knob controls selection and volume or manual squelch adjustment for audio sources that may not be adjustable anywhere else in the system. The small knob controls the volume or squelch. Turning the large knob activates and/or moves the cursor (flashing white annunciator/ or flashing blue annunciator in Blue-Select Mode) to select the audio source to adjust. The cursor will time-out after a few seconds and the position of the cursor will always default back to the **PILOT** Key. Pressing the small knob cancels the cursor.

Blue-Select Mode (Telephone/Entertainment Distribution)

- The telephone/entertainment () audio are distributed using the Blue-Select Mode. The Blue-Select Mode is entered by pressing the small knob when the volume control cursor (flashing white annunciator) is not active. If the volume control cursor is active, press the small knob twice. The first press will cancel the volume control cursor, the second will activate Blue-Select Mode.
- The annunciator over the Keys will be flashing blue. Any combination of the annunciators over the PILOT, COPLT, and PASS buttons may be blue. Select the desired button to turn the blue annunciator on or off to distribute the telephone/entertainment audio to selected crew/passenger positions.
- Selecting any key other than PILOT, COPLT, PASS, MUS1, MUS2, or  will cancel Blue-Select Mode. Pressing the small knob will also cancel Blue-Select Mode. After approximately ten seconds with no input, the Blue-Select Mode will automatically cancel.

Clearance Recorder and Player

- The GMA 350 contains a digital clearance recorder that records up to 2.5 minutes of the selected COM radio signal. Recorded COM audio is stored in separate memory blocks. Once 2.5 minutes of recording time have been reached, the recorder begins recording over the stored memory blocks, starting from the oldest block.
- Pressing the PLAY Key once plays the latest recorded memory block.
- Pressing the MKR/MUTE Key during play of a memory block stops play. If a COM signal is detected during play of a recorded memory block, play is halted.
- Pressing the PLAY Key while audio is playing begins playing the previously recorded memory block. Each subsequent press of the PLAY Key selects the previously recorded memory block.
- Powering off the unit automatically clears all recorded blocks.

Other Features

The GMA 350 includes other functions/features as well. For more details about the above functionality, or to learn more about the other GMA 350 features, please review the GMA 350 Pilot's Guide that can be downloaded from www.garmin.com (select *Explore → In the Air → Avionics & Safety → Audio Panels*, and select the *GMA 350*). The link to download the manual is on the right side of the screen.

GTR 225 COMM

The GTR 225 provides COM capabilities. In N1636H, the top GTR 225 is wired as COM 1 and the bottom GTR 225 is COM 2. The following instructions include the basics of using the GTR 225 as a primer to get started for VFR usage.

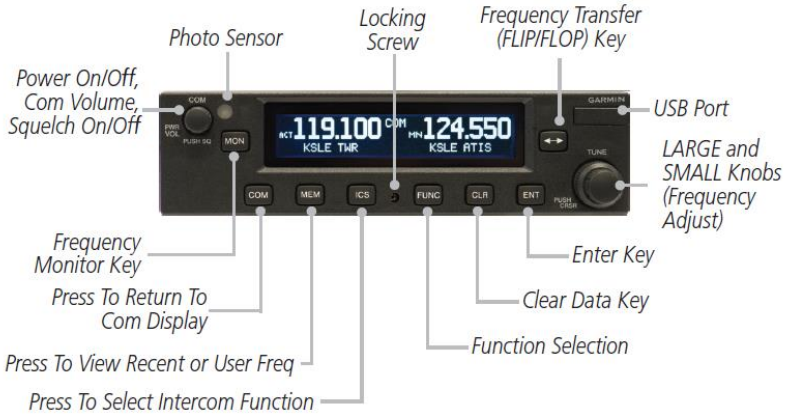

Figure 3: GTR 225 Front Panel Description

Power/Com Volume/Squelch Knob

- Rotate the knob clockwise to turn the power on. Make sure the Avionics Master Switch is on.
- The **Power/Com Volume/Squelch** controls audio volume for the Com radio.
- When the Com radio is active, press the **Power/Com Volume/Squelch** knob to toggle automatic squelch control On/Off.

Tuning Large/Small Concentric (Cursor) Knobs

- The concentric knobs are used for tuning frequencies and data entry.
- When selecting a frequency, turn the **LARGE** knob to select the MHz value and the **SMALL** knob to select the kHz value.
- When entering text, use the **SMALL** knob to select characters and the **LARGE** knob to move the cursor.
- Pressing the SMALL knob (Cursor) from the COM display allows you to enter an identifier to look up the associated frequencies.

FLIP/FLOP Key

Press and release the **FLIP/FLOP** key to switch between the active (left-most) and standby (right-most) frequency. Switching between Com frequencies is disabled while you are transmitting.

COM Key

Press the **COM** key to return to the Com radio mode.

MEM Key

Press the **MEM** key to recall and toggle between the Com Recent and User Frequency lists.

ICS Key

The **ICS** key is to control the GTR 225's built-in two-place intercom functionality. Because N1636H has the GMA 350 installed, the **ICS** key is not utilized in N1636H.

CLR (Clear) Key

Pressing the **CLR** key erases information, cancels entries, and resets timers.

ENT (Enter) Key

Press the **ENT** key to save selected values, to confirm a prompt, or to save the Standby frequency.

FUNC (Function) Key

The **FUNC** (Function) key access function categories for the following: the COM Radio, System Configuration, and Timer (the ICS Configuration is not utilized in N1636H's installation). Pressing the **FUNC** key once displays the Function mode. Pressing the **FUNC** key a second time exits the Function mode.

MON (Monitor) Key

The **MON** (Monitor) key will engage the monitor function where the Standby frequency may be monitored while still listening to the Active frequency.

Other Features

The GTR 225 contains a lot more functionality and useful features, including timers and Com Database look-up for looking up Com frequencies. For detailed information and to learn how to use the more advanced functionality of the GTR 225, please review the GTR 225 Pilot's Guide that can be downloaded from www.garmin.com (select *Explore → In the Air → Avionics & Safety → NAV/Comm*, and select the *GTR 225*). The link to download the manual is on the right side of the screen. After clicking on *Manual*, choose *Appliance Data* from the *Choose product version* menu.

Course Deviation Indicators

Name	MD200-306	GI-102A
Location	Top	Bottom
Label	NAV 1	NAV 2
Connected To	GTN 650	GNC 255
Rectilinear Needle Movements	Yes	Yes
Integral GPS, NAV, and VLOC Mode Lights	Yes	Yes
Integral Resolver for VOR/GPS OBS Feedback	Yes	Yes
VOR/LOC/GPS Needle	Yes	Yes
TO/FROM Arrow	Yes	Yes
NAV Warning Flag	Yes	Yes
Glideslope Needle	Yes	No

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