

DA 40 AFM
DA 40 D AFM
DA 40 F AFM



Supplement A25
Audio Panel, GMA 340
VFR

**SUPPLEMENT A25
TO THE AIRPLANE FLIGHT MANUAL
DA 40, DA 40 D, DA 40 F**

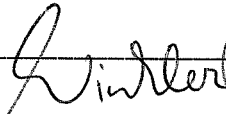

**AUDIO PANEL GMA 340
GARMIN**

VFR OPERATION

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0.2 LIST OF EFFECTIVE PAGES

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1. GENERAL

This Supplement supplies the information necessary for the efficient operation of the airplane when the Audio Panel GMA 340 is installed. The information contained within this Supplement is to be used in conjunction with the complete AFM.

This Supplement is a permanent part of this AFM and must remain in this AFM at all times when the GMA 340 is installed.

2. LIMITATIONS

The marker receiver is inoperative in this installation.

3. EMERGENCY PROCEDURES

A failsafe circuit connects the pilot's headset and microphone directly to COM 1 in case the power is interrupted or the unit is turned off.

4A. NORMAL PROCEDURES

No change.

4B. ABNORMAL PROCEDURES

No change.

5. PERFORMANCE

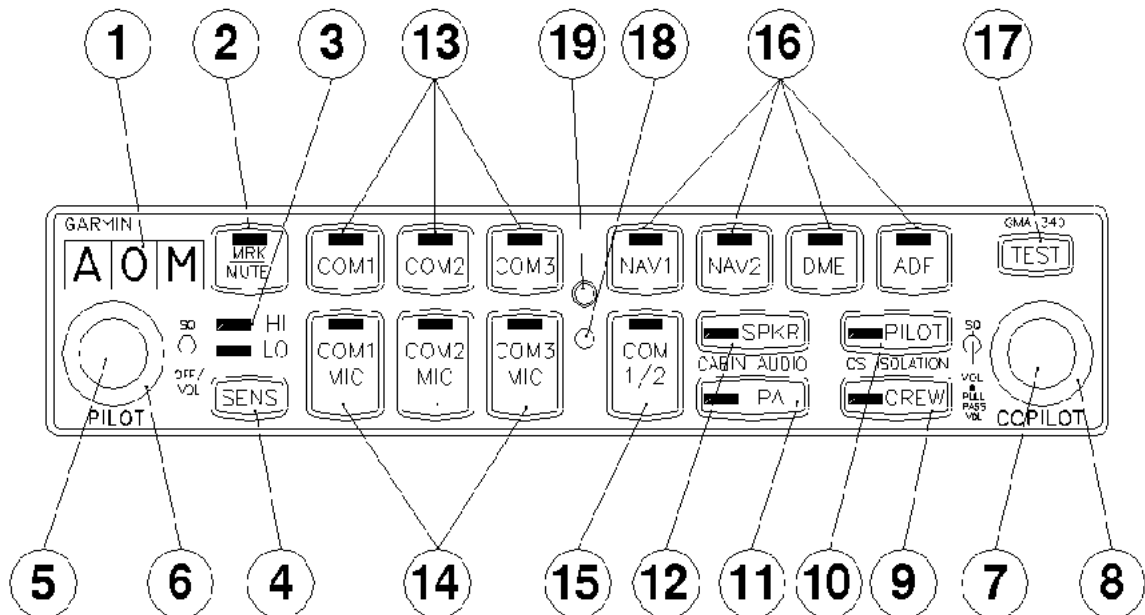
No change.

6. MASS AND BALANCE

Upon removal or installation of the GMA 340 the change of empty mass and corresponding center of gravity of the airplane must be recorded according to Chapter 6 of the Airplane Flight Manual.

7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

7.14 AVIONICS



OPERATION

FRONT PANEL CONTROLS

1. Marker Beacon Lamps
2. Marker Beacon Receiver Audio Select/Mute Button
3. Marker Beacon Receiver Sensitivity Indicator LED's
4. Marker Beacon Receiver Sensitivity Selection Button
5. Unit On/Off, Pilot Intercom System (ICS) Volume
6. Pilot ICS Voice Activated (VOX) Intercom Squelch Level
7. Copilot and Passenger ICS Volume Control (Pull out for Passenger Volume)
8. Copilot and Passenger VOX Intercom Squelch Level
9. Crew Isolation Intercom Mode Button
10. Pilot Isolation Intercom Mode Button
11. Passenger Address (PA) Function Button
12. Speaker Function Button
13. Transceiver Audio Selector Buttons (COM 1, COM 2, COM 3)
14. Transmitter (Audio/Mic) Selection Buttons
15. Split COM Button
16. Airplane Radio Audio Selection Buttons (NAV 1, NAV 2, DME, ADF)
17. Annunciator Test Button

- 18. Locking Screw Access
- 19. Photocell - Automatic Annunciator Dimming

ON, OFF, AND FAILSAFE OPERATION

The GMA 340 is powered off when the left small knob (item 5) is rotated fully counter-clockwise into the detent. To turn the unit on rotate the knob clockwise past the click. The knob then functions as the pilot's ICS volume control. A failsafe circuit connects the pilot's headset and microphone directly to COM 1 in case the power is interrupted or the unit is turned off.

LIGHTING

The intensity of the LED button annunciator and marker beacon lamps are controlled automatically by a built-in photocell (19) on the front panel. Nomenclature backlighting is controlled by the airplane instrument light dimmer.

TRANSCEIVERS

NOTE

Audio level is controlled by the selected COM radio volume control.

NOTE

COM 2 and COM 3 are not used in this DA 40 (D) installation.

Selection of either COM 1 (13) for both MIC and audio source is accomplished by pressing COM 1 MIC (14). The active com audio is always heard on the headphones.

When a microphone is keyed, the active transceiver's MIC button LED blinks approximately once per second to indicate the transmitter is active.

When no airplane radio activity is detected by the GMA 340, the amount of ambient background noise from the radios is further reduced by the **MASQ™** circuit. This processing is also applied to the Nav radios.

AIRPLANE RADIOS & NAVIGATION

NOTE

Audio level is controlled by the selected nav radio volume control.

Pressing NAV 1 selects the NAV 1 audio source. A second button press deselects the audio source.

SPEAKER OUTPUT

Pressing the SPKR button (12) selects the airplane radios over the cabin speaker. The speaker output is muted when a COM microphone is keyed.

INTERCOM SYSTEM (ICS)

Intercom volume and squelch (VOX) are adjusted using the following front panel knobs:

- LEFT SMALL KNOB -** Unit on/off power control and Pilot ICS volume (5). Full counter-clockwise DETENT position OFF.
- LEFT LARGE KNOB -** Pilot squelch level (6). Clockwise rotation increases the amount of mic audio required to break squelch. Full counter-clockwise is the 'hot mic' position.
- RIGHT SMALL KNOB -** IN position: Copilot ICS volume. OUT position: Passenger ICS volume (7).
- RIGHT LARGE KNOB -** Copilot and passenger squelch level (8): clockwise rotation increases the amount of mic audio required to break squelch. Fully counter-clockwise is the 'hot mic' position.

Each microphone input has dedicated VOX circuit to ensure that only the active microphone(s) is/are heard when squelch is broken. This represents a vast

improvement over single gate systems and reduces the amount of background noise in the headphones during cockpit communications. After the operator has stopped talking, the intercom channel remains momentarily open to avoid closure between words or during normal pauses.

The GMA 340 provides three intercom modes: PILOT, CREW and ALL. The mode selection is accomplished using the PILOT (10) and CREW (9) buttons.

Pressing a button activates the corresponding ICS mode. Pressing again deactivates the mode. The operator can switch directly from PILOT to CREW or from CREW to PILOT by pressing the other mode button. ALL mode is active when neither PILOT or CREW mode is selected.

These modes allow different degrees of interaction between the crew and passengers:

PILOT mode isolates the pilot from everyone else and dedicates the airplane radios to the pilot exclusively. The copilot and passengers share communication between themselves but cannot communicate with the pilot or hear the airplane radios.

CREW mode places the pilot and copilot on a common ICS communication channel. The passengers are on their own intercom channel and can communicate with each other, but cannot communicate with the crew or hear the airplane radios.

ALL mode allows full intercom communication between everyone plugged into the GMA 340. Airplane radios are heard by all.

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The following table summarizes the different modes supported by the GMA 340.

MODE	PILOT HEARS	COPILOT HEARS	PASSENGERS HEAR
PILOT (LED LIT)	Selected Radios. Pilot.	Copilot. Passengers.	Passengers. Copilot.
CREW (LED LIT)	Selected Radios. Pilot. Copilot.	Selected Radios. Copilot. Pilot.	Passengers.
ALL (LED's OFF)	Selected Radios. Pilot. Copilot. Passengers.	Selected Radios. Pilot. Copilot. Passengers.	Selected Radios. Pilot. Copilot. Passengers.

MONO/STEREO HEADSETS

If monaural headsets are plugged into stereo jacks that do not have a switch installed, the unit will not be damaged.

One of the headset channel outputs will be shorted to ground under these conditions. The person plugging in the mono headset will hear only one channel from the GMA 340, but in both ears. However, anyone else plugging in a stereo headset at a different passenger position will have audio in one ear only unless his or her headset has a stereo/mono switch. Note that a stereo/mono switch on the headset does not prevent the mono headset from shorting one of the channels to ground. That headset only routes its tip audio to both ears.

8. AIRPLANE HANDLING, CARE AND MAINTENANCE

No change.