GARMIN Ltd. or its subsidiaries
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1200 E. 151st Street
Olathe, Kansas 66062 U.S.A.

FAA Approved
AIRPLANE FLIGHT MANUAL SUPPLEMENT
or
SUPPLEMENTAL AIRPLANE FLIGHT MANUAL
for the
GARMIN G5 ELECTRONIC FLIGHT INSTRUMENT
as installed in

Piper PA-28-181

Make and Model Airplane

Registration Number: 47820 Serial Number: 28-7890139

This document serves as an Airplane Flight Manual Supplement or as a Supplemental Airplane Flight Manual when the aircraft is equipped in accordance with Supplemental Type Certificate SA01818WI for the installation and operation of the Garmin G5 Electronic Flight Instrument. This document must be carried in the airplane at all times.

The information contained herein supplements or supersedes the information made available to the operator by the aircraft manufacturer in the form of clearly stated placards or markings, or in the form of an FAA approved Airplane Flight Manual, only in those areas listed herein. For limitations, procedures and performance information not contained in this document, consult the basic placards or markings, or the basic FAA approved Airplane Flight Manual.

FAA approved sections of this supplement are labeled as "FAA APPROVED." Sections not labeled "FAA APPROVED" are provided for guidance information only.

FAA APPROVED BY: _____

Robert Murray

ODA STC Unit Administrator

GARMIN International, Inc

ODA-240087-CE

DATE: 12/29/2021

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Garmin International, Inc

Log of Revisions

FAA Approved AIRPLANE FLIGHT MANUAL SUPPLEMENT

or

SUPPLEMENTAL AIRPLANE FLIGHT MANUAL

GARMIN G5 ELECTRONIC FLIGHT INSTRUMENT

REV NO.	PAGE NO(S)	DESCRIPTION	DATE OF APPROVAL	FAA APPROVED
1	ALL	Original Issue	7/22/2016	Robert Murray ODA STC Unit Administrator
2	ALL	Added information regarding G5 DG/HSI.	4/28/2017	Robert Murray ODA STC Unit Administrator
3	ALL	Added interface to 3rd party autopilots.	10/18/2017	Robert Murray ODA STC Unit Administrator
4	ALL	Added note to General section.	10/26/2017	Paul Mast ODA STC Unit Administrator
5	ALL	Reformatted document. Updated system messages interface. Added DG/HSI reversion description.	12/20/2017	Robert Murray ODA STC Unit Administrator
6	ALL	Added interface description to GAD 13. Added information regarding multiple NAV source inputs.	7/19/2019	David G. Armstrong ODA STC Unit Administrator
7	ALL	Added information regarding FAA approved content. Updated SW ver. and references to GAD 29B to GAD 29B/GAD29D	9/28/2021	Paul Mast ODA STC Unit Administrator
8	3-4 4-2 4-3	Addition of NO BATT emergency procedure. Update normal procedure: *Prior to Flight in IMC.* Update Roll Steering (GPSS) emulation normal procedure.	See Cover	See Cover

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Table of Contents

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SECTION 1 – GENERAL

The G5 Electronic Flight Instrument can display the following information to the pilot depending on the installation and location of the G5 instrument.

- Primary attitude
- Primary slip and turn rate information
- Primary heading
- Secondary airspeed
- Secondary altimeter
- Secondary ground track

When installed in place of the attitude indicator, the primary function of the G5 is to provide attitude information to the pilot. When installed in place of the rate of turn indicator, the primary function of the G5 is to provide turn rate and slip ball information to the pilot. When installed in place of the directional gyro, the primary function of the G5 is to provide directional information to the pilot.

NOTE:

The pilot is reminded to perform appropriate flight and navigation instrument cross checks for the type of operation being conducted.

In case of a loss of aircraft electrical power, a backup battery (optional when installed as a DG/HSI) sustains the G5 Electronic Flight Instrument for up to four hours.

An optional GAD 29B/GAD 29D may be installed to provide course and heading datum to an autopilot based on the data selected for display on the HSI.

An optional GAD 13 and OAT probe may be installed to provide measured outside air temperature (OAT) to the G5 for display of true airspeed (TAS), outside air temperature, winds, and density altitude.

This STC allows the removal of the aircraft's vacuum system if it is not required to support any other airframe system.

Abbreviations and Terminology

The following glossary is applicable within the airplane flight manual supplement

ADI	Attitude Direction Indicator
AFMS	Airplane Flight Manual Supplement
ATT	Attitude
CDI	Course Deviation Indicator
DG	Directional Gyro
DR	Dead Reckoning
FAA	Federal Aviation Administration
GPS	Global Positioning System
GPSS	GPS Roll Steering
HDG	Heading
HSI	Horizontal Situation Indicator
ILS	Instrument Landing System
LOC	Localizer (no glideslope available)
LOI	Loss of Integrity
OAT	Outside Air Temperature
TAS	True Airspeed
VFR	Visual Flight Rules
VHF	Very High Frequency
VOR	VHF Omni-directional Range

SECTION 2 – LIMITATIONS

System Software Requirements

The G5 must utilize the following or later FAA approved software versions for this AFMS revision to be applicable:

Component	Software Version
G5 Electronic Flight Instrument	8.00

Use of Secondary Instruments

The original type design approved instruments for airspeed, altitude and vertical speed remain the primary indications for these parameters.

If the G5 Electronic Flight Instrument is installed in place of the rate of turn indicator, the original type design approved instrument for attitude remains in the primary indication for attitude.

If the G5 Electronic Flight Instrument is installed in place of the directional gyro, the original type design approved instruments for attitude remains the primary indication for attitude.

NOTE:

For aircraft approved for VFR-only operations, the G5 Electronic Flight Instrument may be installed as an attitude indicator and rate of turn indicator.

Kinds of Operations

No Change except for the following:

- When a portable navigation source is selected on the G5, it shall not be used for the primary means of navigation for IFR operations.

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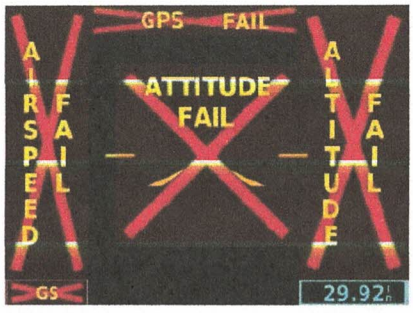
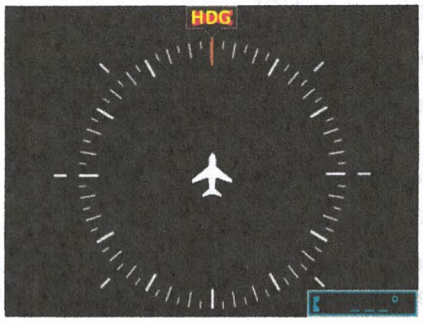
SECTION 3 – EMERGENCY PROCEDURES

G5 Failure Indications

If a G5 function fails, a large red 'X' is typically displayed over the instrument(s) or data experiencing the failure. Upon G5 power-up, certain instruments remain invalid as equipment begins to initialize. All instruments should be operational within one minute of power-up. If any instrument remains flagged and it is not likely an installation related problem, the G5 should be serviced by a Garmin-authorized repair facility.





Attitude Failure

Attitude failure is indicated by removal of the sky/ground presentation, a red X, and a yellow "ATTITUDE FAIL" on the display.

Rate-of-turn and slip information will not be available.

1. Use standby instruments.
2. Seek VFR conditions or land as soon as practical.

Heading Failure, Loss of Magnetometer Data, or Magnetic Field Error

A heading failure, loss of magnetometer data, or magnetic field error is indicated by removal of the digital heading readout, a red X, and a yellow "HDG" on the display.

1. Use standby magnetic compass.

NOTE:

If the G5 DG/HSI has a valid GPS signal the G5 DG/HSI instrument will display the GPS track information in magenta.

GPS Failure

If GPS navigation receivers and/or navigation information are not available or invalid, the G5 will display Dead Reckoning mode (DR) or Loss of Integrity mode (LOI) on the HSI in the lower left corner.

If Alternate Navigation Sources (ILS, LOC, VOR) Are Available:

1. Use alternate navigation source.

If No Alternate Navigation Sources Are Available:

If DR is Displayed on HSI:

1. Use the amber CDI for course information.
2. Fly toward known visual conditions.

If LOI is Displayed on HSI:

1. Fly toward known visual conditions.

For aircraft equipped with a GAD 29B/GAD 29D interfaced to an autopilot, GPSS will be displayed in amber text when GPSS emulation has been selected from the G5 menu.

1. Deselect GPSS from the G5 menu and select a different autopilot mode.

Attitude Aligning

During system initialization, the G5 displays the message 'ALIGNING' over the attitude indicator. The G5 will typically display valid attitude within the first minute of power-up. The G5 can also align itself while taxiing and during level flight.

If the "ALIGNING" indication occurs during flight and attitude remains displayed, the attitude display is acceptable for use for flight in instrument conditions. The message will clear when the attitude solution is within the systems internal accuracy tolerances. It is recommended to maintain wings level to reduce the time for the system to align.

Attitude Aligning / Keep Wings Level

If the "ALIGNING KEEP WINGS LEVEL" indication occurs during flight, the G5 has detected an invalid attitude solution and will not display any attitude information.

1. Use standby instruments to maintain wings level flight. The system will display attitude when internal accuracy tolerances have been met.
2. If attitude does not return, seek VFR conditions or land as soon as practical.

Loss of Electrical Power to the G5 Display

In the event of a loss of aircraft electrical power to the G5 attitude display, the indicator will continue to function on its internal battery. If an internal battery is installed on the optional G5 HSI, the indicator will continue to function on the internal battery if aircraft power is lost. Internal battery endurance is indicated on the G5 display in hours and minutes. The charging symbol will be removed and the internal battery will not be charged.

In the event the G5 attitude display powers down, the optional G5 HSI will automatically revert to displaying attitude information. It will not revert back to the DG/HSI format if the G5 attitude unit regains power. The DG/HSI presentation may be selected from the G5 menu on the G5 DG/HSI unit after reversion to the attitude display.

Loss of Electrical Power to the GAD 29B/GAD 29D (If Installed)

In the event of a loss of aircraft electrical power to the optional GAD 29B/GAD 29D, the heading and course datum will be unavailable to the autopilot and the autopilot may deviate from the intended path or may disconnect. GPS flight plan course information may be displayed on the HSI and VFR will be displayed in amber text on the HSI. GPSS will be displayed in amber text, if GPSS mode is selected.

1. Deselect GPSS from the G5 menu and select a different autopilot mode.
2. Lateral GPS course guidance may only be used in VFR conditions.

Loss of Electrical Power to the GAD 13 (If Installed)

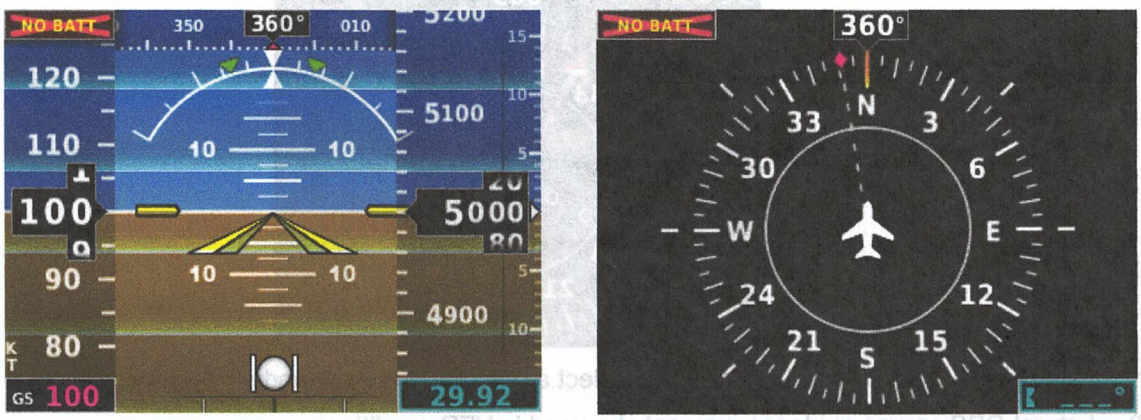
In the event of a loss of aircraft electrical power to the optional GAD 13, the OAT and TAS indications will be replaced with a red X. The Density Altitude indication will be removed, and "No Wind Data" will be displayed in the wind field.

1. Use an alternate source of outside air temperature to calculate true airspeed, density altitude, and winds.

Internal Battery Failure

In the event of a failure of the G5 internal battery, "NO BATT" will be displayed with a red X. This indicates that the G5 internal battery is not functional.

1. If "NO BATT" is displayed on the G5 attitude indicator, do not fly in instrument meteorological conditions.



WARNING

If NO BATT is displayed on the G5 attitude indicator, the unit will not function in the event of a loss of aircraft electrical power to the G5 attitude indicator. Do not fly in instrument meteorological conditions if NO BATT is displayed on the G5 attitude indicator.

SECTION 4 – NORMAL PROCEDURES

G5 Power Button and Knob

The G5 display will power on with the application of aircraft power. The G5 power button is used to turn the display on and off. Press and hold the power button to turn the display off.

The knob performs the following functions:

Press	Press to access the Menu. From the Menu, press to select the desired menu item. Press to accept the displayed value when editing numeric data or selecting from a list. Press to sync the heading or track bug for the HSI.
Turn	From the Menu, turn the Knob to move the cursor to the desired menu item. For the ADI, rotate to adjust the baro setting on the secondary altitude display. For the HSI, rotate to adjust the heading or track bug. Turn to select the desired value when editing numeric data or selecting from a list.

Backlight Intensity Adjustment

The power up state of the G5 backlight is in Auto adjustment mode.

To adjust the backlighting:

To select Manual mode from Auto mode:

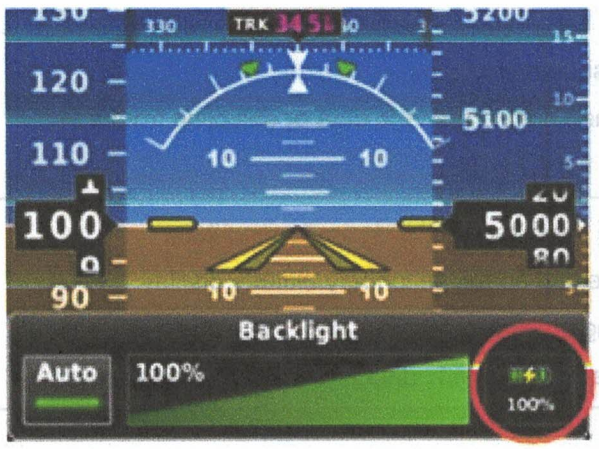
1. While the unit is turned on, press the Power button.
2. Turn the knob to manually adjust the backlight intensity.
3. Press the knob to close the backlight page.

To select Auto mode from Manual mode:

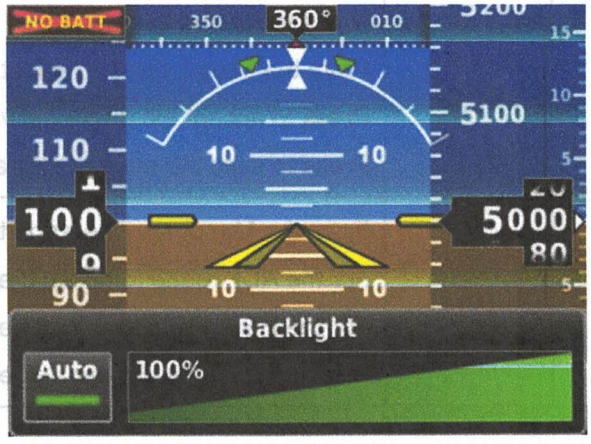
1. While the unit is turned on, press the Power button.
2. Press the Power button again to select Auto.
3. Press the knob to close the backlight page.

Prior to Flight in Instrument Meteorological Conditions

1. Press the Power button on the G5 attitude indicator.
2. Verify the battery status indicator is green on the G5 attitude indicator.
   (The battery status indicator will change from green to amber or red when battery status has decreased below 41%).



Valid Battery Indication



No Battery Detected

WARNING

If NO BATT is displayed on the G5 attitude indicator, or green battery status is not shown after pressing the power button on the G5 attitude indicator, do not fly in instrument meteorological conditions.

Autopilot Operations with the G5

The G5 and optional GAD 29B/GAD 29D offer various integration capabilities dependent upon the type of autopilot installed in a particular aircraft.

The G5 Electronic Flight Instrument installation in this aircraft provides the following autopilot functions (appropriate boxes will be checked):

- ☐ This installation does not interface with the autopilot (basic wing leveling autopilot or no autopilot is installed in the aircraft).
- ☒ A GAD 29B/GAD 29D Adapter is installed in this aircraft.
  - ☐ Course Selection coupling to the autopilot.
  - ☐ NAV Selection coupling to the autopilot.
  - ☒ Heading Bug coupling capability to the autopilot.
  - ☐ Roll Steering (GPSS) emulated via heading mode.

    OR
  - ☐ Roll Steering capable autopilot (GPSS menu function for emulation not applicable).

Course / NAV Selection Coupling to the Autopilot (If Configured)

When operating the autopilot in NAV mode, the deviation information from the installed navigation sources (i.e. GPS or NAV) is switched via the navigation source. The NAV source displayed on the HSI is the NAV source the autopilot is following. Many autopilots also use the course datum to determine the best intercept angles when operating in NAV mode.

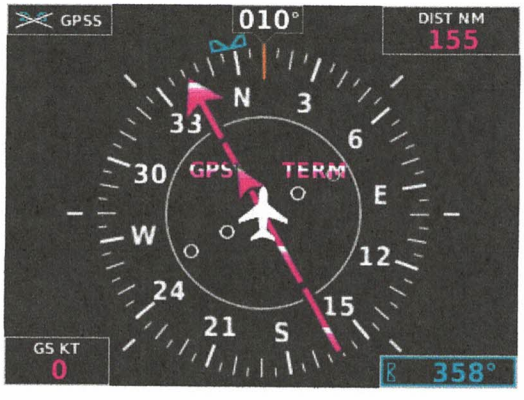
Heading Bug Coupling Capability to the Autopilot (If Configured)

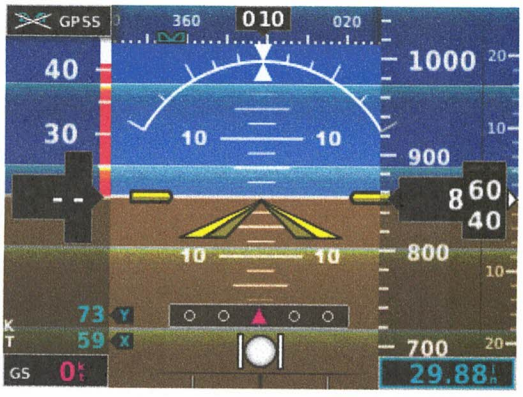
When operating the autopilot in HDG mode, the difference between the HDG bug location on the HSI and the actual aircraft heading creates an error signal which the autopilot will minimize by turning in the direction of the bug. If the bug is turned more than 180 degrees, the autopilot may turn the airplane in the opposite direction of the desired turn.

Roll Steering (GPSS) Emulated via HDG Mode (If Configured)

For autopilots that do not support digital GPSS signals, GPSS functionality may be emulated by operating the autopilot in HDG mode and selecting GPSS from the G5 menu. If the autopilot is already designed to receive roll steering information, the data is transmitted digitally from the navigator to the autopilot.

When GPSS is selected on the G5 menu, the heading bug on the ADI and HSI changes to a hollow outline and a crossed-out heading bug appears on the G5 ADI and HSI display indicating that the autopilot is not coupled to the heading bug. The bug is still controllable and may still be used for reference.

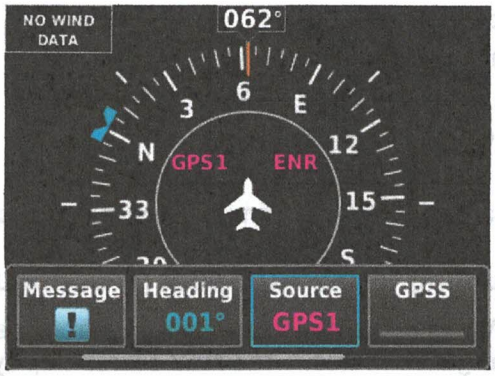




When GPSS is selected on the G5, GPSS turn commands are converted into a heading error signal to the autopilot. When the autopilot is operated in HDG mode, the autopilot will fly the turn commands from the GPS navigator. If the GPSS data is invalid (for example, if there is no active GPS leg) or the selected navigation source on the G5 ADI and HSI is not GPS, the annunciated GPSS text will be yellow and a zero turn command will be sent to the autopilot.

HSI Source Selection (If Configured)

For aircraft configured with two navigation inputs to the G5, the desired source may be selected using the G5 knob and menu selection. Press the G5 knob to cycle between the NAV1 and NAV2 input.



HSI Portable Navigation Device GPS VFR Annunciation (If Configured)

For aircraft configured for a portable navigation device input to the G5, a GPS VFR indicated in magenta will be displayed on the HSI. When the G5 with a portable navigation device is interfaced there is not enough guidance data for IFR use.

SECTION 5 – PERFORMANCE

No change.

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SECTION 6 – WEIGHT AND BALANCE

See current weight and balance data.

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SECTION 7 – SYSTEM DESCRIPTION

Refer to Garmin G5 Electronic Flight Instrument Pilot's Guide for Certified Aircraft, part number 190-01112-12 Rev A (or later approved revisions), for a description of the G5 electronic flight instrument. This reference material is not required to be on board the aircraft but does contain a more in-depth description of all the functions and capabilities of the G5.

The ATT circuit breaker supplies power to the G5 instrument for normal power operation and to charge the internal battery.

The DG circuit breaker supplies power to the G5 instrument for normal power operation when configured as a DG, and to charge the internal battery (if installed).

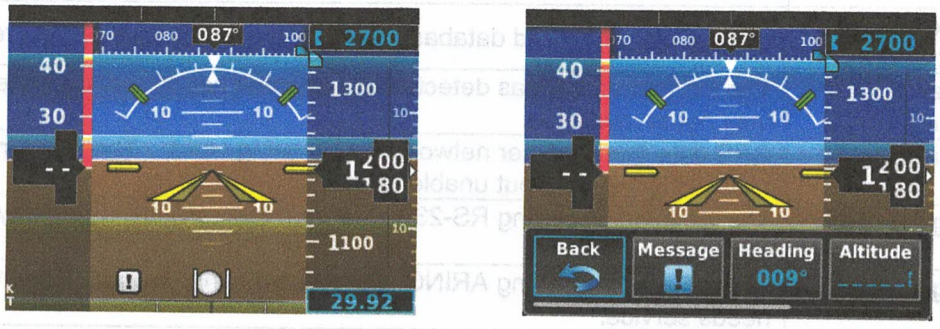
The HSI circuit breaker supplies power to the G5 instrument for normal power operation when configured as an HSI, and to charge the internal battery (if installed).

The GAD circuit breaker supplies power to the optional GAD 29B/GAD 29D adapter and optional GAD 13 adapter for normal power operation.

System Messages

The G5 has the capability to display system messages to the crew along the bottom of the display. A system message is indicated through a white ⚠ indication on the G5.

Messages can be displayed by pressing the G5 knob and selecting the Message menu item.



(For Reference Only)

The following table shows the meaning of each message. System messages are displayed in white text.

Message	Meaning
External Power Lost	Aircraft power has been removed from the G5.
Critical battery fault! Powering off	Battery has critical fault condition and the unit is about to power off to avoid damage to the battery.
Battery fault	Battery has a fault condition – unit needs service.
Battery charger fault	Battery charger has a fault condition – unit needs service.
Low battery	Battery charge level is low.
Hardware fault	Unit has a hardware fault – unit needs service.
Power supply fault	Unit power supply fault detected – unit needs service.
Unit temperature limit exceeded	Unit is too hot or too cold.
Network address conflict	Another G5 with the same address is detected on the network (most commonly a wiring error on one of the units).
Communication error	General communication error (most commonly appears in conjunction with Network Address Conflict message).
Factory calibration data invalid	Unit calibration data not valid – unit needs service.
Magnetic field model database out of date	Internal magnetic field database is out of date - software update required.
Magnetometer Hardware fault	The magnetometer has detected a fault – unit needs service. Heading data may not be available.
Using external GPS data	GPS data from another network LRU is being used. The unit's internal GPS receiver is enabled, but unable to establish a GPS fix.
Not receiving RS-232 data	The G5 is not receiving RS-232 data from the GPS navigator – system needs service.
Not receiving ARINC 429 data	The G5 is not receiving ARINC 429 data from the navigation source – system needs service.
GPS receiver fault	The G5 on-board GPS receiver has a fault.
ARINC 429 interface configuration error	The G5 ARINC 429 port is receiving information from an incorrect source – system needs service.
Software version mismatch	The G5 attitude indicator and the G5 HSI units have different software. Cross fill of baro, heading and altitude bugs is disabled.

These messages remain while the condition persists.

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4 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

4.1 Airworthiness Limitations

The Airworthiness Limitations section is FAA-approved and specifies maintenance required under §§ 43.16 and 91.403 of Title 14 of the Code of Federal Regulations, unless an alternative program has been FAA-approved.

There are no new (or additional) airworthiness limitations associated with this equipment and/or installation.

FAA APPROVED

Robert Murray
STC Unit Administrator
ODA-240087-CE

12/29/2021
Date

4.2 Servicing Information

This section addresses servicing information for the G5 Electronic Flight Display, Battery, GMU 11 magnetometer, and the GAD 29/29B/29D data bus converter.

4.2.1 G5 Electronic Flight Instrument

The G5 unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the G5.

4.2.2 GMU 11 Magnetometer

The GMU 11 unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the GMU 11.

NOTE

After replacing or servicing electrical components near the GMU 11 magnetometer, the Magnetometer Interference Test (reference Section 7.8) and Magnetometer Calibration Procedure (reference Section 7.5.3)must be performed.

4.2.3 GAD 29/29B/29D Data Bus Converter

The GAD 29/29B/29D unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the GAD 29/29B/29D.

4.2.4 GAD 13 Data Bus Converter

The GAD 13 unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the GAD 13.

4.2.5 GTP 59 Temperature Probe

The GTP 59 unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the GTP 59.

4.2.6 Glareshield GPS Antenna

The Glareshield GPS antenna unit maintenance is 'on condition' only. See section 6 for equipment removal and installation. No component-level overhaul is required. Reference Table 4-1 for necessary tests or checks and the specific intervals for the Glareshield GPS Antenna.

4.2.7 Maintenance Intervals

Table 4-1 shows items installed by this STC which must undergo tests or checks at specific intervals.

Table 4-1, Maintenance Intervals

Item	Description/Procedure	Manual Section No.	Interval
G5 unit	Removal & Installation	6.1	On Condition
	Altimeter System Test	7.7	24 calendar months
G5 battery	Removal & Installation	6.2	On Condition
	Capacity Check	4.2.8	12 calendar months
G5 mounting ring	Removal & Installation	6.3	On Condition
GMU 11 unit	Removal & Installation	6.5	On Condition
GAD 29/29B/29D unit	Removal & Installation	6.6	On Condition
GAD 13 unit	Removal & Installation	6.7	On Condition
GTP 59 unit	Removal & Installation	6.8	On Condition
	Special Inspection Requirements	4.4	On Condition
GPS Antenna	Removal & Installation	6.4	On Condition

4.2.8 Battery Capacity Check

1. Without power applied to the aircraft, turn on the G5 by pressing the power button in the lower left corner of the unit.
2. Note the remaining battery capacity (%) at the top left corner of the display.
3. After about a minute, the remaining capacity will change from (%) to time (hour:min).
4. If the remaining capacity is less than one hour (1:00), allow the battery to charge until the capacity shows greater than 95% and repeat the check.
5. If the remaining capacity is less than one hour (1:00) after charging, the battery must be replaced.

4.3 Electrical Bonding Test

LRU electrical bonding must be checked every 2,000 flight hours or 10 years, whichever occurs first.

4.3.1 Requirements

- Disconnect any cables and connectors normally attached to the LRU.
- Resistance must be measured from a bare metal portion of the LRU (chassis or connector) to an airframe grounding location.
- The airframe grounding location should be as close to the LRU as possible, unless otherwise noted in Table 4-2.

4.3.2 Test Equipment

Calibrated 4 wire Milliohm meter and Kelvin probes are required for this test.

4.3.3 Electrical Bonding Test Procedures.

- Using a calibrated milliohm meter and Kelvin probes measure the resistance of each LRU between the locations noted in Table 4-2, and record the result of each installed LRU. Some equipment on the list are optional and may not be installed.
- Ensure the resistance does not exceed 10 milliohms except for the GTP that shall be less than 2.5 milliohms.
- If the measured resistance is greater 10 milliohms, bonding must be improved to meet applicable requirements for a new installation in accordance with Section 4 of *Garmin G5 Electronic Flight Instrument Part 23 AML STC Installation Manual* (190-01112-10).

Table 4-2, Electrical Bonding Procedure

Unit	Measurement Location (2)	Result (milliohm)
G5	J51 backshell to local structure adjacent to the ground stud **(1)**	mΩ
GMU 11	P111 backshell to local structure adjacent to the ground stud **(1)**	mΩ
GAD 29 / 29B / 29D	Chassis mounting screw to adjacent aircraft ground	mΩ
GAD 13	Chassis mounting screw to adjacent aircraft ground	mΩ
GTP 59	Probe and adjacent local metal structure for metal and tube and fabric aircraft. For composite aircraft no bonding requirement	mΩ

Notes:

(1) This is the ground stud to which the LRU bonding strap is connected.
(2) For remote LRUs bonded to the back of the instrument panel via an installed aluminum foil ground plane, the bonding measurement must be taken between the remote LRU and the instrument panel.

4.4 Special Inspection Requirements

After a suspected lightning strike, the following actions must be performed for the specific LRU.

GTP 59 Temperature Probe

Inspect the GTP 59 temperature probe for signs of lightning damage. Check the self-sealing washer (P/N 212-00026-00) used on the probe tip outside of the aircraft for any evidence of melting or lack of seal. Replace the washer if damaged. If there is evidence of lightning strike to the GTP 59 temperature probe or any lightning damage, replace the probe.

Tube-and-fabric aircraft must replace the GTP 59 bond strap (if installed) in accordance with Section 4 of the Garmin G5 Electronic Flight Instrument Part 23 AML STC Installation Manual (190-01112-10).

Lightning Protection Module (LPM)

The LPM shall be replaced. Reference *Garmin G5 Electronic Flight Instrument Part 23 AML STC Installation Manual*, 190-01112-10 section 4 and 5 for connector assembly and wiring requirements of LPM.

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United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SA01818WI

This certificate issued to: Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 23* *of the* Federal Aviation Regulations.

Original Product – Type Certificate Number:
Multiple - AML STC

Make:
Model: See Approved Model List (AML) SA01818WI for approved aircraft models and applicable airworthiness regulations

Description of Type Design Change:

Installation of Garmin G5 Electronic Flight Instrument
Data Required:
(1) Garmin Master Drawing List (MDL) 005-01112-01, Revision 1, dated July 22, 2016
(2) Garmin G5 STC Maintenance Manual including ICA190-01112-11, Revision 1, dated July 22, 2016
(3) Garmin G5 Airplane Flight Manual Supplement 190-01112-13, Revision 1, dated July 22, 2016
Later FAA-approved revisions to the data listed above are incorporated without amendment to this certificate

Limitations and Conditions:
(1) Compatibility of this design change with previously approved modifications must be determined by the installer.
(2) The installation of the G5 requires the retention of the mechanical airspeed indicator, altimeter, and vertical speed indicator. The installation of the G5 in configurations not approved by this STC, such as an electronic standby instrument, requires separate airworthiness approval.
(3) For installations in aircraft approved for IFR operations:
(a) If the G5 is installed as the primary attitude indicator, the existing rate of turn indicator must be retained.
(b) If the G5 is installed as the rate of turn indicator, the existing primary attitude indicator must be retained.

(continued on Page 3)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, and revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of Application: May 5, 2016

Date of Issuance: July 22, 2016

Date Reissued:

Date Amended: Apr 28, 2017; Oct 18, 2017; Mar 15, 2019, Jul 19, 2019, Sep 28, 2021

By Direction of the Administrator

Signature Paul Mast

Title Paul Mast
ODA STC Unit Administrator
ODA-240087-CE

United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SA01818WI

This certificate issued for Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

Original Product - Type Certificate Number	Make
Multiple - AML STC	Model: See Approved Model List (AML) SA01818WI for approved airoraft models and applicable airworthiness regulations

Description of Type Design Change:

Installation of Garmin G5 Electronic Flight Instrument

Data Required:

(1) Garmin Master Drawing List (MDL) 005-01112-01, Revision 1, dated July 22, 2016
(2) Garmin G5 STC Maintenance Manual including ICA190-01112-11, Revision 1, dated July 22, 2016
(3) Garmin G5 Airplane Flight Manual Supplement 190-01112-13, Revision 1, dated July 22, 2016

Later FAA-approved revisions to the data listed above are incorporated without amendment to this certificate

Limitations and Conditions

(1) Compatibility of this design change with previously approved modifications must be determined by the installer.
(2) The installation of the G5 requires the retention of the mechanical airspeed indicator, altimeter, and vertical speed indicator. The installation of the G5 in configurations not approved by this STC, such as an electronic standby instrument, requires separate airworthiness approval.
(3) For installations in aircraft approved for IFR operations:
(a) If the G5 is installed as the primary attitude indicator, the existing rate of turn indicator must be retained.
(b) If the G5 is installed as the rate of turn indicator, the existing primary attitude indicator must be retained.

(continued on Page 3)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, and revoked or a termination date or condition established by the Administrator of the Federal Aviation Administration.

Date of Application: May 5, 2016 — Date Received:

Date of Issuance: July 22, 2016 — Date Amended: Apr 28, 2017; Oct 12, 2017; Mar 18, 2019; Jul 19, 2019; Sep 28, 2021

By Direction of the Administrator

Signature

Title: Paul Mast
ODA STC Unit Administrator
ODA-240082-CE

Any alteration of this certificate is unlawful by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both. The certificate may be transferred or made available to third parties by licensing agreements in accordance with 14 CFR 21.47. Revision of this Supplemental Type Certificate (STC) document by persons other than the STC Holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written documentation acceptable to the FAA. (See 14 CFR 21.120).