

FAA APPROVED

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

Make and Model Airplane

Registration Number: _____ Serial Number: _____

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.

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LOG OF REVISIONS				
Rev	Page	Description	Date of Approval	FAA Approval
1	All	Original Issue	See Cover	See Cover
2	All	Added information regarding G5 DG/HSI	See Cover	See Cover

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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.

In case of a loss of aircraft electrical power, a backup battery sustains the G5 Electronic Flight Instrument for up to four hours.

Section 2. LIMITATIONS

2.1 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	3.00

2.2 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

2.3 Kinds of Operations

No Change.

Section 3. EMERGENCY PROCEDURES

3.1 Emergency Procedures

3.1.1 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.

3.1.2 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.

3.1.3 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.

3.1.4 Loss of Electrical Power

In the event of a loss of aircraft electrical power to the G5, the indicator will continue to function on its internal battery. 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.

3.2 System messages

The G5 has the capability to display system messages to the crew along the bottom of the display. The following table shows the meaning of each message. System messages are displayed in white text.

<i>Message</i>	<i>Meaning</i>
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 - contact Garmin if it persists.
Battery charger fault	Battery charger has a fault condition - contact Garmin if it persists.
Low battery	Battery charge level is low
Hardware fault	Unit has a hardware fault - contact Garmin for service
Power supply fault	Unit power supply fault detected - contact Garmin for service if it persists
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 - return to Garmin
Magnetic field model database out of date	Internal magnetic field database is out of date - software update required
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

No specific pilot action is required for any of the displayed system messages. As long as attitude is displayed, the system is adequate for flight in instrument conditions.

These messages remain while the condition persists, or until cleared by pressing the knob.

Section 4. NORMAL PROCEDURES

4.1 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.

4.2 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.

4.3 Prior to Flight in Instrument Meteorological Conditions

1. Verify the battery status indicator is green.

Section 5. PERFORMANCE

No change.

WEIGHT AND BALANCE

See current weight and balance data.

Section 6. SYSTEM DESCRIPTIONS

Refer to Garmin G5 Pilot's Guide P/N 190-01112-12 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).