

GARMIN

®



GFC™ 500 AUTOPILOT

OFFERS A COST-EFFECTIVE AUTOPILOT RETROFIT SOLUTION FOR CERTIFICATED GA SINGLE-ENGINE PISTON AIRCRAFT

The cost-effective GFC 500 retrofit solution will provide pilots of today's most popular certificated light piston aircraft – initially available for the Cessna 172 in late 2017 and soon after with the Cessna 182 and Piper PA-28 series aircraft – an easy, low-cost-of-ownership, full-featured, solid-state and attitude-based digital autopilot with precise and smooth in-flight characteristics and built-in self-monitoring capabilities.

Incorporating our crisp, easy-to-read 3.5" G5 electronic flight instrument¹, a mode controller and 2 "smart" servos, the G500 pairs silky-smooth flight control with a wide range of safety-enhancing capabilities never before available as an aftermarket solution for this class of light aircraft. Advanced AHRS-based flight control technology developed by Garmin for high-end business turbine aircraft is leveraged in the GFC 500 to provide superior performance and a sophisticated feature set that includes our ESP™ (Electronic Stability and Protection) technology, underspeed and overspeed protection, automatic return-to-level (LVL) mode, flight director (FD) command cues and more.

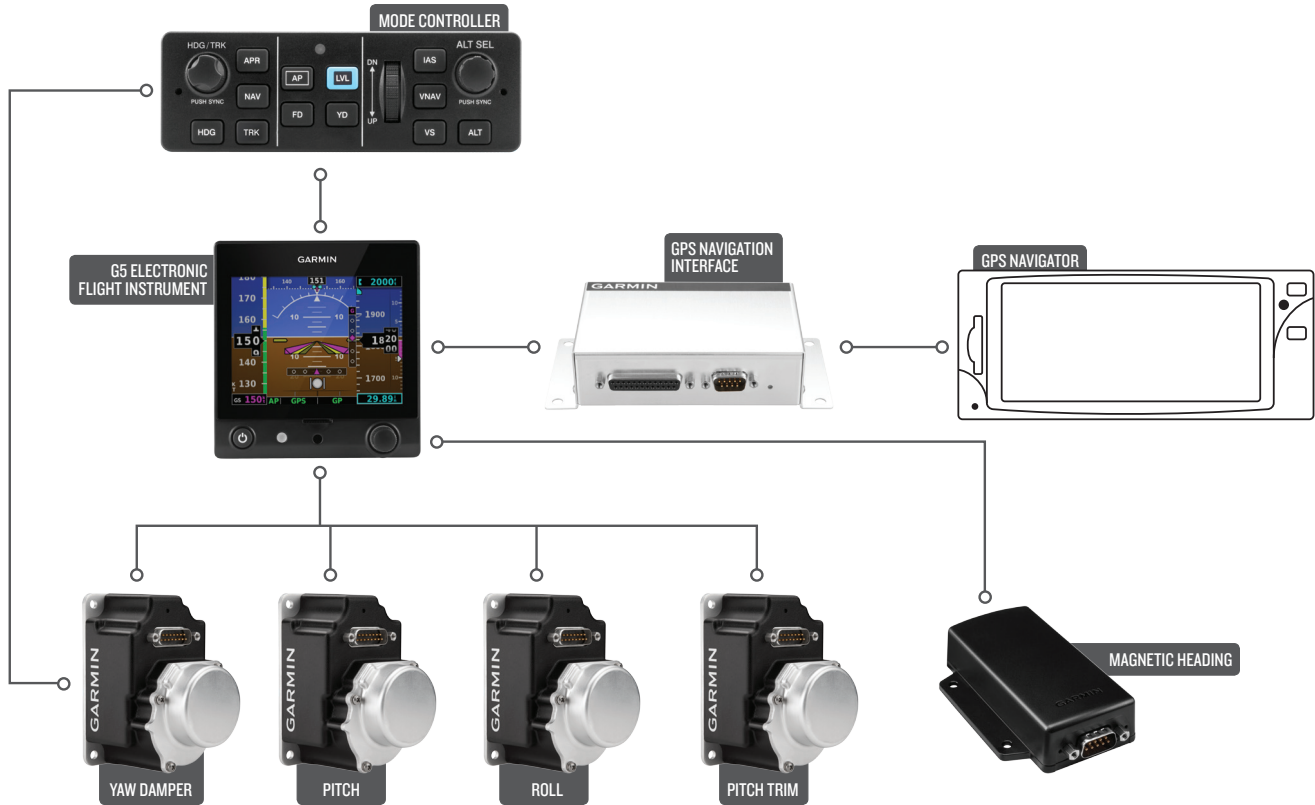
The GFC 500 autopilot's architecture supports full pitch-and-roll axis control capabilities as well as optional pitch and manual electric trim with an additional servo. By adding an optional adapter, the GFC 500 will interface with the GTN™ 650/750 and GNS 430/530 (WAAS and non-WAAS) series navigators to fly a wide range of precision, non-precision and GPS-guided approaches as well as holds, procedure turns and missed approaches. GFC 500 also includes built-in GPS roll steering capability, allowing for smoother navigation tracking and eliminating the need for external roll steering converters. Flight director cues are displayed as command bars on the G5 electronic flight instrument. The command bars are always in view when the autopilot is doing the flying – and may also be used for

visual guidance when you're hand-flying the aircraft. With support for a remotely installed Takeoff/Go-around (TOGA) button, the flight director can be cued to automatically indicate and capture the correct pitch attitude required to fly a missed approach and then follow the missed approach procedure loaded in your compatible GPS navigator.

Any pilot who's ever been startled to attention by a stall warning horn in a busy cockpit will appreciate the proactive stability augmentation of ESP, standard on the GFC 500 system. When the aircraft is being hand-flown, ESP functions independently of the autopilot – although it uses the same control servos – to nudge the controls toward stable flight whenever pitch or roll deviations exceed the recommended limits or underspeed/overspeed conditions occur. In the event of pilot incapacitation, after the system detects that it has been activated for a specified period of time, the autopilot engages with the flight director in level mode, bringing the aircraft back to level flight and helping to avoid the onset of inadvertent stall/spins, steep spirals or other loss-of-control scenarios. Additionally, ESP can be manually disabled to allow for intentional flight maneuvers.

With the autopilot engaged, GFC 500 also provides overspeed and underspeed protection. In a high airspeed situation – for example, if you're descending and your aircraft is approaching VNE or VMO – the system will increase the aircraft's pitch attitude, preventing a further increase in airspeed and potential structural damage. Likewise, at the other end of the speed spectrum, GFC 500 provides underspeed (stall) protection. For example, in the event the pilot does not immediately advance the throttle to full power, with the autopilot engaged while flying a missed approach sequence, the autopilot will help prevent an aircraft stall by reducing pitch attitude and provide the pilot with an "airspeed, airspeed" audible alert.

¹ Required. G5 sold separately.



In addition to traditional autopilot capabilities such as altitude hold, vertical speed and heading modes, the GFC™ 500 also includes:

- Premium functions and advanced capabilities such as altitude preselect and indicated airspeed hold mode. VNAV will be a growth function when appropriately equipped.
- Pilots can select, couple and fly various instrument approaches, including GPS, ILS, VOR, LOC and back course approaches with a compatible navigator.
- Built-in GPS roll steering capability eliminates the need for external roll steering converters, allowing for smoother navigation tracking when installed with a compatible navigator.
- Level Mode button, which automatically engages the autopilot to restore the aircraft to straight and level flight.

- Underspeed and overspeed protection helps prevent the pilot from stalling the aircraft or exceed the maximum aircraft speed (VNE), respectively.
- Flight Director command bars can be displayed on the G5.
- Pilots can fly coupled 'go-arounds' during missed approach sequencing when paired with a GTN™ 650/750 navigator.
- An optional pitch-trim servo adds automatic trim and manual electric trim.

Backed by a comprehensive warranty and the industry's No. 1-rated product support team, the Garmin GFC 500 autopilot system is a price and peace-of-mind breakthrough for pilots who want to add this valuable capability to their existing light piston GA aircraft.

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