

EZ Pilot Autopilot



Features

- Precise Navigation
- Solid State MEMS Gyro
- Microprocessor Controlled
- Digital Precision
- Accurately Tracks GPS Flight Plan
- Adjustable Course Tracking
- Unique "Intercept" Mode
- Remote Auxiliary Servo Disconnect
- Selectable GPS Data Display
- Use Portable or Panel Mount GPS
- Bright PLED or LCD Display
- Weights Less than 8 oz
- Servo Weighs only 24 oz

Advanced Features

- Pilot Command Steering
- Selectable Track Offset Position
- Speed Controlled Bank Angle
- Adjustable Turn Rate Limit
- Emergency Course Reversal
- Automatic Trim Compensation
- Auto Servo Disconnect on Takeoff
- Excellent Turbulence Performance
- Fully Configurable Data Windows
- GPS Data Scan Function
- Compatible with Navaid Servos

Solid State Gyro



Mechanical gyros have been a mainstay in aircraft instruments for years. However, they are now being strongly challenged by some very impressive solid state electronic gyros that are small enough to fit into a 1/4 inch cube. These gyros are highly responsive, accurate and not subject to the effects of mechanical wear and breakage of their mechanical ancestors. The EZ Pilot utilizes these new gyros to provide fast, accurate and reliable attitude information



PLED Display



LCD Display

EZ Pilot is a modern solid-state navigation system designed to accurately track a GPS flight plan or "Go To" Course that is entered into a handheld or panel mount GPS Receiver. It also acts as a basic wing leveler when no GPS is available.

The pilot simply enters a flight plan into the GPS and presses the Servo button. The EZ Pilot then precisely tracks the flight plan.

If the pilot wishes to deviate from the programmed flight path, the Mode button is pressed to enter the Course mode and track any bearing selected with the "L-R" switch. The new bearing will display on the readout and the aircraft will track that bearing.

An Intercept mode (with an adjustable intercept angle) is available to steer the plane back to the original flight path.

A remote Servo Disconnect switch provides instant release of flight controls. Holding the switch down for three seconds or more enables Pilot Command Steering. This allows the pilot to manually fly the aircraft to any new heading and, upon releasing the switch, the autopilot will track that course.

A convenient Display switch allows the pilot to read the Waypoint Designator, Ground Speed, Distance to Waypoint, Time to Waypoint, Crosstrack error, Track Offset Position and a graphic Turn Coordinator.

LCD or PLED?

Now you have the option of choosing between two different display technologies - LCD (Liquid Crystal Display) and the newer PLED (Polymer LED). LCD is quite visible in direct sunlight. PLED has higher contrast - which makes it more readable in subdued light and it is visible in direct sunlight. PLED has wider temperature range - Works well at extreme hot and cold temperatures, where LCD likes more moderate temperatures. For most applications the PLED is the better choice.

How Accurate?

The EZ Pilot will track a flight plan entered into a host GPS receiver, typically holding to within 50 - 150 feet of the course centerline when flying in smooth air. When flying in turbulent conditions it will still hold closely to the centerline while demonstrating a remarkable ability to keep the wings level in bumpy air.

Configurable Data Windows

Most autopilots, even very expensive ones, are content to simply track a course. The EZ Pilot aspires to a higher calling. Two data "windows", the upper and lower right-hand display quadrants, can be used to present information present on the GPS data stream. Both can be configured to present user-selected, GPS derived data. Many EZ Pilot users find that they don't look at their GPS receiver (especially a hand held receiver) very much after the flight plan has been entered. It's easier to read the information from the EZ Pilot display.

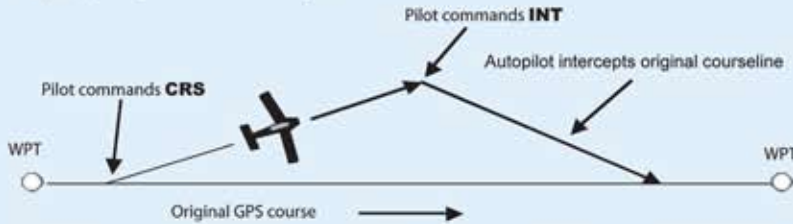
If the DISPLAY button is momentarily pressed two times in quick succession (double-clicked) the variable field on the bottom right-hand side of the display will enter or exit the "Scan Mode". In this mode the waypoint designator, RNG (Range), GS (Groundspeed), XTK (Crosstrack), TOP (Track Offset Position) and ETE(e) (Estimated Time Enroute) fields are sequenced in the display at a 1.2 second rate.

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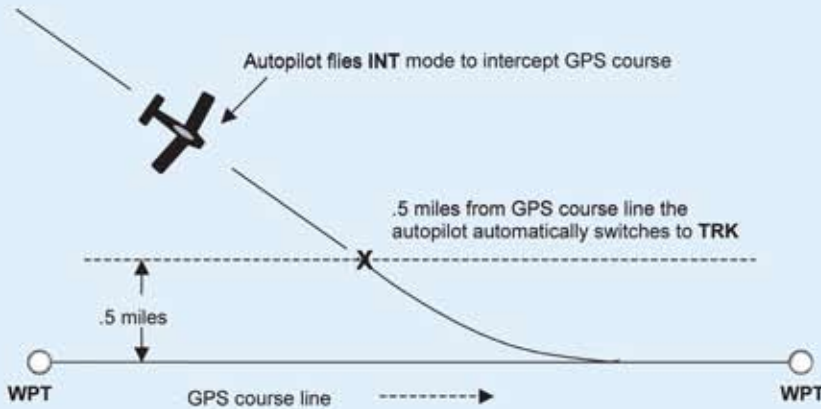
Three navigation modes allow a pilot to follow a selected GPS course or flight plan



1. Track mode (TRK) – used for area navigation tracking a host GPS flight plan (or GOTO data).



2. Course mode (CRS) – provides vector navigation as illustrated above. CRS also allows tracking an autopilot-selected course when the host GPS route function is not in use. CRS mode uses the GPS signal to provide the aircraft groundtrack. This mode can be useful for avoiding restricted airspace, weather and oncoming air traffic.



3. Intercept mode (INT) – used to intercept a predefined GPS desired track (DTK) as illustrated above. The INT mode also uses the GPS signal to provide the aircraft groundtrack. This mode is useful to regain the original flight plan track after circumnavigating the mentioned flight obstacles.



Trio Avionics designs and manufactures products engineered for outstanding performance, while keeping them attractively priced for the homebuilt / experimental aircraft market. Innovative design and the use of modern solid state sensors provides superior navigation capability at a price that was not possible until now. Our products are designed by pilots for pilots, and we fly them every day.

Trio Avionics

1820 Joe Crosson Drive Suite A1
El Cajon, CA 92020

www.trioavionics.com

What's so different about the EZ Pilot?

At the heart of the EZ Pilot is a powerful computer that executes millions of instructions each second. It analyzes information it receives from the solid state gyro, GPS receiver and the pilot, and issues commands to the servo to control the ailerons of the aircraft. This sets it apart from autopilots of the past that simply responded to analog signals from navigation receivers and heading indicators.

Comments from EZ Pilot users illustrate the differences...

A RV-6 pilot reports...

"I am amazed at how I can fly 180 degrees away from a waypoint, hit the servo switch on the EZ-Pilot, and watch the thing fly my RV-6 into a perfect teardrop intersection with the direct course to the waypoint."

From a VariEze pilot...

"My first flight and subsequent flights with this unit were sheer joy. I now have about 8 hours of flying time on the EZ Pilot and none of it has been on anything more than 50 miles out and back. But nearly every minute of those 8 hours has been in light and mostly moderate turbulence. I can report that the EZ Pilot flies turbulence much better than I can and does not overstress the flight controls. It holds a course within 200 feet of the center line in the worst conditions...."

A Long-EZ pilot adds...

"During most of the flight, the track error was 0.02 to 0.01 nm error, or about 100 feet! Though not (intended) for IFR work, we have runways wider than that! Movement is gentle, turns were within normal turn standards, and it sure spoils you."

Flying the EZ Pilot is as simple as entering a flight plan into your GPS receiver and pressing the "Servo" button. The autopilot does the rest.

Phone 619-448-4619

Fax 619-448-3181

email: info@trioavionics.com