

EZ-1 Altitude Hold

Trio Avionics



**Automatic Trim
Error Sensing
and Display**

**Precise Pressure
Sensing for Altitude
Control**

Solid State MEMs Gyro

**G Force Sensing
Prevents Overstress-
ing the Aircraft**

**Fine Altitude
Adjustment with
Rotary Encoder**

A True Revolution in Altitude Hold Systems

The LCD switch provides a graphical message display for system messages, alerts and warning advisories.

A rotary encoder is employed to make fine adjustments to aircraft altitude, change system settings and adjust display characteristics.

SAFETY is #1. The EZ-1 Altitude Hold system incorporates an all-new "Gold Standard" servo that was designed with safety as the prime consideration. Some safety features are:

Complete motor and geartrain disconnect when not engaged, free from any system drag.

Reliable slip clutch provides immediate pilot override.

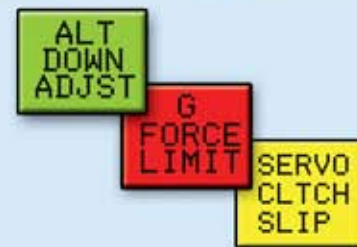
Dual microprocessors in the servo (an industry first). The main processor handles all control functions and communications to the AH (Altitude Hold) module, and has disconnect authority if it senses a problem. A second, supervisory processor monitors all system activity and communications and will also disconnect the servo if it detects irregularities.

AH module monitors G forces. Will disconnect the servo to prevent high wing stress. Also releases the servo when sensing prolonged (pilot induced) clutch slip.

Triple protected motor drivers continuously report their condition to the processors.

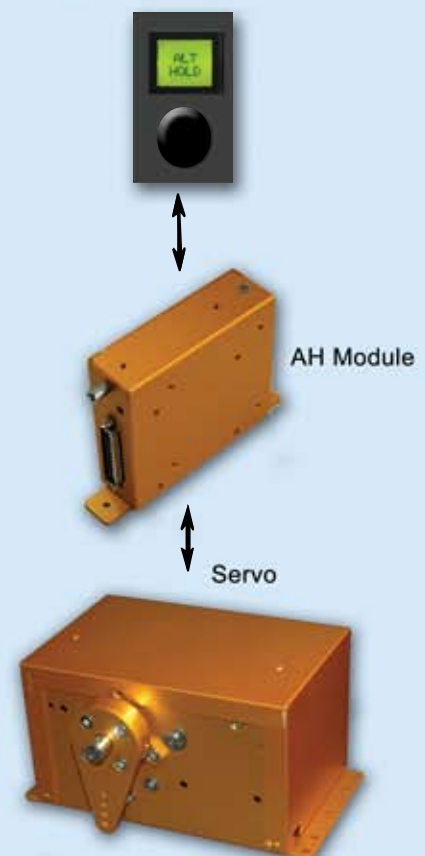
System provides for remote servo disconnect switch on control stick.

Audio alert upon servo disconnect.



Sample LCD Display Screens

LCD Switch & Encoder



New "Gold Standard" Servo

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EZ-2



Airspeed sensing to prevent the altitude hold system from stalling or overspeeding the aircraft

Easily select climb or descent rates with the rotary encoder

Vertical PCS (Pilot Command Steering)

Altitude Hold with Vertical Speed (VS) Select

The EZ-2 incorporates all of the features of the EZ-1 and adds the ability to select climb and descent rates. Vertical speeds are selectable in 100 fpm increments.

Once a desired vertical speed is entered the pilot simply presses the LCD switch and the EZ-2 will initiate the climb or descent rate that was entered.

The EZ-2 contains a sensor that monitors the aircraft airspeed and will prevent the EZ-2 from stalling or overspeeding the aircraft in climbs and descents. The owner will set these limit speeds to suit the individual aircraft by selecting a setup menu and flying the aircraft to the desired airspeed. Once that speed is achieved, a simple push of the button saves the setting in permanent memory.

Once the min and max airspeeds are entered, if the pilot sets a descent rate that causes the aircraft to reach the limit airspeed, the EZ-2 will decrease the descent rate to hold that airspeed. Likewise, if an excessive rate of climb is entered, the EZ-2 will limit the climb rate to prevent a stall.

When a climb or descent has been initiated, the pilot may easily change the commanded vertical speed by rotating the encoder knob. For instance, the climb rate may be gradually reduced as the aircraft approaches the desired altitude to avoid overshooting.

Pressing and holding a remote disconnect switch will invoke the PCS mode. Upon release, the aircraft will hold the current rate of climb or descent.

EZ-3



Select destination altitude

Programmable vertical speed

Altitude Hold with VS and Altitude Preselect

The EZ-3 contains all of the features of the EZ-1 and EZ-2 and adds the ability to pre-select a destination altitude.

Altitude pre-select is a valuable asset when flying in Positive Control airspace. It can help prevent overshooting ATC designated altitudes. It is also an aid to those flying under Class B airspace, who are concerned about inadvertent intrusion into controlled airspace.

Setting the destination altitude is easily accomplished using the rotary encoder. Once the altitude is entered, pressing the LCD switch will initiate a climb or descent to the desired altitude. Upon reaching the destination altitude, the system will sound an alert and automatically enter the "Altitude Hold" mode, level the aircraft and maintain the selected altitude.

The user may employ the setup menu to specify a default vertical speed to use once the altitude is entered. During climb or descent, the vertical speed may be altered by rotating the encoder or using the Vertical PCS mode.

The EZ-2 and EZ-3 are available as upgrades to the EZ-1