



## Certified Autopilots

Product Catalog

[www.trutrakap.com](http://www.trutrakap.com)



# ***About Us***

Founded in 1999, TruTrak Flight Systems is a leader and innovator in the experimental and light sport aircraft autopilot market. TruTrak introduced the first digital autopilot and the now standard autopilot servo for use in this market. TruTrak autopilots are installed in a large variety of experimental aircraft, including, all Van's RVs, all Lancair, Cub Crafters, Epic, and Rans with new models added regularly.

TruTrak was founded by Jim Younkin and Chuck Bilbe in 1999 and by March 2000 produced the first prototypes of the DFC 250 and Digital Basic Servo. Andrew Barker (Now President & CEO) was hired as TruTrak's first employee in September 2000. In December 2001 Steve Fossett and a few people from Scaled Composites visited TruTrak to discuss an autopilot for the "Virgin Atlantic Global Flyer". The specially designed autopilot made several trips around the world on Steve's route into the history books.

TruTrak would continue introducing many new products over the following years, some of the most popular were Digiflight II (TruTrak's best selling product ever) and the Sorcerer. Since it's founding, TruTrak has sold well over 10,000 autopilots and continues to release new and innovative products. TruTrak's newest product release, the Vizion, capitalizes on the success of the DII. Vizion adds new features and improves the venerable user interface of the DII series. TruTrak will continue with product enhancements and new product releases, which will add new capabilities and safety features.

TruTrak designed and manufactured another specialty autopilot for Solar Impulse. This project was the first solar powered aircraft to fly around the world. The flight from Japan to Hawaii was nearly five days long. The TruTrak autopilot flew the aircraft very well throughout the entire trip.

Now TruTrak continues their tradition of trail blazing by bringing to market the most affordable certified autopilot ever. The new Vizion PMA autopilot and it's associated servos are cutting edge and offer unprecedented safety features at a fraction of the traditional cost of an FAA approved autopilot.

# ***PMA Vizion Autopilot***

The Vizion autopilot is a complete overhaul of our most popular autopilot offering ever, the Digiflight II. Vizion adds altitude select / altitude preselect as well as an emergency autopilot level button. Also new are a few user interface changes that simplify operation for both VFR and IFR operation.

Vizion can connect to both hand-held GPS units and IFR panel mount GPS systems. When connected to the hand-held GPS units, the autopilot can follow programmed flight plans with what we call GPS Nav. The panel mount / IFR GPS systems, the autopilot can follow roll steering commands to fly more complex flight plans. All of these amazing features mean that Vizion is one of the most versatile autopilots available today.

Brand new to the PMA Vizion autopilot is a safety feature called AEP. This feature works similar to lane assist or traction control. Anytime the autopilot is powered up and AEP is in standby mode, the autopilot is monitoring the aircraft bank angle. If the autopilot senses that the aircraft bank angle has gone beyond 45 degrees in either direction, it will send a modulated command to the roll servo, which will then input a correction force into the control system. This is not like traditional envelope protection systems, as the autopilot does not take the aircraft away from the pilot. It simply applies a corrective force into the controls, which the pilot can very easily override if needed / desired. This feature is designed to get the pilot's attention in situations when cockpit distraction is highest and to help the pilot know which way to move the controls to lower the bank angle.

The features included in the PMA Vizion autopilot are:

- Bank Angle Select (if no GPS signal)
- Track Select
- GPS Nav (Point to point type flight plans)
- GPSS (Roll steering commands)
- Vertical Speed Select
- Altitude Hold
- Altitude Select
- Altitude Pre-Select
- GPSV (LPV Approaches)
- Control Wheel Steering
- Emergency Level
- AEP (Bank Angle Protection Mode)

**Emergency Level Button**



**Vizion - 2 1/4 round**



**Vizion - 3 1/8 round**



**Vizion - flat pack**

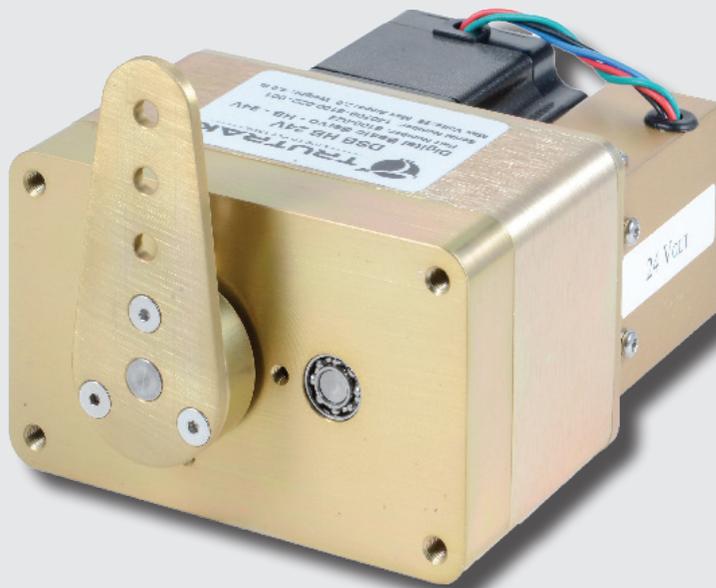


# ***PMA Servo***

TruTrak's servo design has become the standard of the industry, with many competitors designing servos which are very similar, and use the exact same mounting dimensions and output shaft location and size. The truth is, the TruTrak servo is the simplest and most robust option on the market today. It is a servo designed with no software, a simple and robust slip clutch, a disengage clutch, and the servo is designed to have velocity limited torque (which means the faster the motor runs, the lower the torque output). What this means to you is that the servo is not capable of many of the bad things that autopilot servos are known to do, for example, a hard over runaway is not possible. Because the servo uses a complex wave form in unison with limited torque capability, you are protected from this sort of malfunction.

At TruTrak, we strive to use pushrod type servo attachment to the aircraft control system in order to simplify and reduce the cost of the installation. This method also provides an increase in autopilot performance.

**60 in-lb PMA Servo**



# ***Controller and Servo Specs.***

## ***PMA Vizion 3-1/8"***

Size - 3.4" H x 3.4" W x 5.4" D

Weight - 10 oz

Volts - 12

## ***PMA Vizion 2-1/4"***

Size - 2.5" H x 2.5" W x 5.4" D

Weight - 8 oz

Volts - 12

## ***PMA Vizion Flat Pack***

Size - 1.6" H x 4.3" W x 5.4" D

Weight - 10 oz

Volts - 12

## ***PMA Servo***

Size - 4" H x 2.5" W x 5" D

Weight - 3.4 lb

Volts - 12

## ***Warranty Policy***

At TruTrak, we know how important it is for the customer to feel that they are purchasing a product that the manufacturer is going to stand behind. For this reason we want to offer more than a basic one year warranty. The warranty on all TruTrak products is three years from the date of purchase. Abuse and misuse of a product are not covered under this warranty. Modification to a product may void the warranty, as well as carry a penalty when upgrading to another product.



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