

# Experimental Aircraft Association



## TALESPINNERS

## Chapter 174

Cincinnati, OH  
Chartered since 1966  
[www.eaa174.org](http://www.eaa174.org)

Vol. 38, No. 7 << Next Meeting: Sun, Aug 15, 2:00 PM at Clermont Co. Airport >> Aug, 2004

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### Builders' Logbook

#### Review: The TruTrak Autopilot

by Scott Hersha

This is a brief initial report on the DigiTrak and AITrak autopilots from TruTrak Autopilots that I have installed in my RV-6. The DigiTrak is their base lateral control autopilot and the AITrak is a separate pitch control autopilot that will maintain an altitude once the aircraft is trimmed for level flight. I installed the AITrak a few weeks ago and used it by itself while I waited for my roll control autopilot to be sent. I purchased the Pictorial Pilot roll control autopilot, but since it isn't shipping yet, TruTrak sent me a DigiTrak to use while I waited.



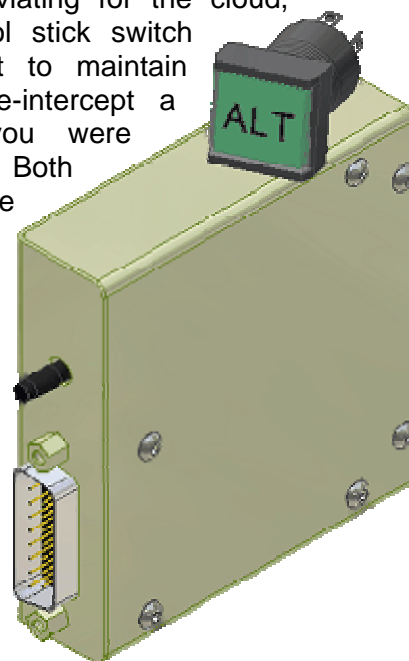
The DigiTrak Autopilot

The DigiTrak and Pictorial Pilot are identical except for the display that the pilot sees in the cockpit. The DigiTrak has an LED digital display that shows either track information similar to heading or track deviation information if it is tracking a GPS course. Pictorial Pilot displays the same digital information as the DigiTrak, but it also has a displayed horizon that shows turn-coordinator information as if it were an artificial horizon without pitch indication. It is an excellent backup for the primary artificial horizon or EFIS primary flight display you may have. After installing the two servos (one for pitch connected via a push-pull tube to my elevator control rod and other connected to my right aileron bellcrank), I made and connected the wiring harnesses as clearly spelled out in the manual, using about 250 feet of aircraft wire. On my left control stick I have a disconnect pushbutton switch to either turn off both autopilots at once or enter a 'control

wheel steering' mode. The control wheel steering mode allows me to manually fly the airplane around a cloud that's in the way while altitude hold remains engaged. After deviating for the cloud, releasing the control stick switch allows the autopilot to maintain existing track or re-intercept a GPS course if you were following one. Both

autopilot/servos are connected to the back-up battery bus via a dedicated autopilot master switch. Turning on the autopilot master allows the two autopilot controllers to go through about a 10 second self-align phase. Once aligned, it's ready to go. This past

weekend, my wife and I took the RV-6 north to Hessel, Michigan and got some good experience using the DigiTrak/AITrak. During the



The AITrak Pitch Control AP

programming prior to this weekend, I set activity levels, torque, and heading information. The manual says the DigiTrak 'loves turbulence' and they are right. The AltTrak held altitude within +/- 10 feet on my digital altimeters and DigiTrak stayed right where it was told to. I could change course or destination very easily. The accuracy and ease of use was amazing. Of course, it's pretty simple without any vertical speed or VNAV capability and it won't track any VHF nav aids, but it will track any GPS course you want to program (hint, hint).

A couple times while flying this weekend I needed to descend or climb to avoid weather and I could do so without disengaging the DigiTrak. I just turned off the altitude hold, trimmed slightly for the climb/descent, adjusted the power as necessary and let it track my course while climbing and descending. The best thing is, it allowed me to fold charts, navigate, call for weather, etc. without wandering around like I was out of control. You can add fairings to your homebuilt here and there to make your plane a knot or two faster and you'll get to your destination about a minute or two sooner. Or you can just fly straight and get the same result. I picked the latter.

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## July Chapter Meeting Minutes

The meeting of EAA Chapter 174 was called to order by V.P. Todd Winemiller at 2:13pm on Sun., July 18, 2004 in the old terminal building at Clermont Co. Airport.

There were no minutes from the previous meeting.

The treasurer's report was approved as read.

Young Eagles: Phil will match kids with pilots as requests for flights come in.

Young Builders: Don reports the building program will resume in Sept.

Tech Counselors: Gary and Howard would like to have a good set of scales in the club, for all to use.

Election Committee: The by-laws state we must have a nominating committee named prior to the Aug. meeting. Gary Collins, Howard Wells and Jerry Hellmann volunteered for the nominating committee.

Picnic: Todd will chair the picnic committee. He requests assistance in moving tables, chairs, etc. Members are to bring covered dishes and desserts to the picnic. The picnic will again be held at the Winemillers' farm and airfield.

Meeting guest Joanna Robinson and member Dave McDonald announced plans to marry in two weeks. Congratulations were extended to the happy couple.

Meeting Location: Hal will provide space for 174's grill and equipment. Much discussion regarding 174's future meeting site. Doug Auxier moved that the President appoint a task force to research meeting needs and meet with Hal Shevers. The motion was seconded by Bill and passed.

Old Business: A "thank you" token of appreciation is needed for Bill Fortney for his presentation, to the chapter, of "America From 500 Feet". The board will take this under advisement and deal with an appropriate "thank you".

Doug spoke regarding the progress of the new Warbird Museum located on the grounds of Clermont Co. Airport.

The meeting was adjourned at 3:08pm. The program followed with Gary Collins' presentation and demonstration of Corvair engine conversions.

Respectfully submitted by Lee Jewell, secretary

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## On the Radar

The months ahead are going to be busy ones for the Chapter. Here's a rundown of what's on the radar screen...

**September** – Chapter picnic

**October** – nominations and chili fly-in

**November** – elections

**December** – party and installation of officers

And here are some of the perennial favorite aviation events that are coming up:

- Ohio Aeronca Aviators Fly-In, Alliance, OH
- WACO Fly-In, Troy, OH
- MERFI, Marion, OH
- Lunken Air Show, Cincinnati
- Wood, Fabric and Tailwheels Fly-In, Lee Bottom Flying Field

Check the back page for dates and times.

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## Roster Update

Jim Moore – change of address, to \*\*\*\*\*, Alexandria, KY 41001.



## Picnic Volunteers Needed

Our annual picnic is scheduled for September 19<sup>th</sup> this year, at Winemiller Farm Airstrip in Goshen. We'll have more on the picnic in the September newsletter, but for now we need volunteers! Take a look at the list below and be prepared to volunteer to be responsible for one of these picnic needs at the August meeting. We also need a picnic coordinator, whose main responsibility will be to ensure that someone is covering each of these items. Any event like this is only as good as its volunteers make it. Is it time for you to step up to the plate and pitch in?

Check the web site in late August for an update on who's volunteering what. And remember to keep your receipts, for reimbursement.

Note: Quantities below are suggestions, and may actually be a bit on the high side. They should be discussed at the August meeting.

### Item 1: Fried Chicken.

### Item 2: Snacks and condiments.

- potato chips, 5 large bags
- ketchup, 2 lg squeeze bottles
- mustard, 2 jars
- mayo, 1 lg jar
- relishes, pickles, salt, pepper

### Item 3: Coffee service.

**Item 4: Soft drinks.** (Note: There may be a few sodas remaining in the clubhouse from previous events.)

- 7 Up, 24 cans
- Diet 7 Up, 24 cans
- Coke, 48 cans
- Diet Coke, 36 cans
- Pepsi, 36 cans
- Orange, 24 cans
- Root Beer, 24 cans
- Fruit juices, 24 cans/bottles
- Bottled Water, 48 bottles      total: 288 drinks

**Item 5: Paper/plastic consumables.** (Note: There are a few supplies remaining in the clubhouse from previous events.)

- paper plates, 350
- plastic knives, forks, spoons, 250 ea

- cold cups, 250
- hot cups, 200
- napkins, 750
- table cloths, 12 @ 96"x48"

### Item 6: Cooling for refreshments.

- coolers (3, borrow from Sporty's?)
- ice, 10-15 bags ?
- potable ice (use a separate bag)
- Keep tabs on supply.

### Item 7: Trash care.

- trash boxes, 5 (Kroger)
- trash bags, lots

### Item 8: Transport clubhouse items.

- tables, 5
- chairs, all folding
- extension cords, EAA banner
- additional tables needed ?

**Item 9: Maps and directions.** Norm Beaudette will supply on the web and in the newsletter.

**Item 10: Signs.** (must place hr before start of event.)

- Prepare "EAA ⇌" direction signs.
- Prepare warning signs to keep children off runways.
- Place EAA banner at entrance.
- Place direction signs along Taylor Pike at 2 intersections (Marathon-Edenton Rd and SR-133).
- Place warning signs along runway.

### Item 11: Hospitality items.

- name badges and pens
- toy item for children (optional)
- Set up table for members to print names on badges.
- Set up an attendance sheet (members and guests sign)

### Item 12: Contests.

- Measure and make line markings with flour.
- Responsible for contest supplies.

### Item 13: Sanitation.

- Call Rumpke to reserve Port-A-Jon with waterless hand wash, for delivery day before the event. (Must be done well in advance - they run out quickly in the summer.)

**Item 14: Airplane parking.** (1 volunteer needed.)

- Manage arriving airplane parking.

**Item 15: Car parking.** (1 volunteer needed.)

- Manage arriving automobile parking.

## Aviation Web Site of the Month

If you haven't yet checked out AOPA's Real Time Flight Planner (at [www.aopa.org/flight\\_planner/](http://www.aopa.org/flight_planner/)), you're missing out on a great flight planning tool – and it's free! (but you'll need to be an AOPA member to use it). The tool is a downloadable program, and, once installed on your PC, it provides complete route planning maps with airport and airspace information. This is a scaled down version of Jeppesen's Flight Star software, but it's got most of the basic features of the program. The program is always up-to-date with the latest TFRs, which it obtains by connecting to the Internet each time you run it. TFRs are designated in red. Clicking on a TFR brings up a window that provides all of the details, including the actual text of the TFR. There are also dozens of different weather maps that can be downloaded, once you've activated a free DUATS account. And current weather radar can be overlaid on your flight path. Best used with a high speed connection.

- submitted by Norm Beaudette

## Project for Sale

**Team Hi-Max 1700R.** Rotax provision 4 (been sitting for a while), droop tips, 2-5 gallon wing tanks, tires, wheels, push-pull control cables, cowling, nuts, bolts, wood and aluminum, all aircraft grade. Plane is on gear and 20 of 24 ribs built. Building table too. I have \$4300 in and am asking \$3200. Call Jim Moore at 859-\*\*\*-\*\*\*\*, or send an e-mail to \*\*\*\*\*@fuse.net. Located in Northern KY.



## Technical Counselor Reports

by Gary Collins and Howard Wells,  
Chapter 174 Technical Counselors

**Jon Thocker, RV-6A.** Newsletter editor's note: Last month, Gary and Howard discussed Jon Thocker's latest RV project (his third RV !). They provided photographs of the project, but these were inadvertently left out of the newsletter. So here they are!



Gary also sent in the following clipping, obtained from the Vans website...

"Just a note to let all know RV6A #25013 has flown. 1st flight July 21, 2004. It has an ECI O-360 A1A built by Penn Yan Aero, Hartzell CS, Garmin 430,330, a Dynon, 2 axis tru-trak AP, Flight Data Systems AFP 35 air data computer, Grand Rapids EIS, Classic Aero Designs leather seats, RMD enterprises landing lights, strobes, etc. All that stuff and no money left for gas now!! Empty wt. 1032 lbs. Have about 6 hrs. on plane as of 7-30-04. 2 inch air dam in front of front cyls has helped to lower rear cht's and evened all out. I might not need the richer carb that others are touting. I am a Threeppeat offender, 2 RV-4's previously. – Jon Thocker"

Nice work Jon!



# Hangar Flying

with Stu Faber

August, 2004



**NEWS FOR GEAR HEADS.** The weekend before Oshkosh the Antique Engine Historical Society (AEHS) held its first annual convention at the former air base, Chanute Field, in Rantoul, ILL. Of its approximately 700 world wide members some 50 attended the meeting including this writer and 3 others from Cincinnati. One from England and a couple from Canada and others from all over the US. A number of those there planned to go on to Oshkosh. Quite a few had received military training at Chanute Field as it had been in operation since 1917 to 1993 and trained both pilots and specialized maintenance personnel. We were quartered in the former Bachelor Officers Quarters building which is now a hotel. The meetings were held in, the close by, former Officers Club which is now a meeting and banquet facility. Part of the former Chanute Air Base has been turned into an aircraft museum. They have a number of post WW II military jets.

As people checked in late Thursday, they quickly began to gather into small casual groups to share information and discuss favorite engines. This form of exchange happened every time a scheduled program was not in session. The program consisted of 6 presentations of talks on particular historic engines over two days with Saturday afternoon a guided tour of the Museum. Between the talks there were 30-45 minute periods for informal discussions. Lunch times a catered sandwich tray was provided to save time for discussions and the last evening a more formal dinner was held.

Graham White, one of the founders of the Society, author of several books, and many articles on engines, brought with him, from Florida, a beautifully restored and operating RR Merlin engine built by Packard. He had built a special trailer which had two sturdy posts at the front to which was attached an engine mount to hold the engine. Between the posts was a panel equipped with a full set of engine controls and instruments. The Merlin had a prop cut down to 8 foot diameter and under the engine, in its normal position, was a set of new-moon shaped radiators. The engine and trailer were painted a glossy black with gold pin striping and lettering. Very impressive. On two occasions he fired it up for runs of about two or three minutes so we could hear what it sounded like. As it was loud, runs were slow and short out of respect for neighbors. He had also brought in his pickup a partly restored RR Griffon engine which was an even larger engine but was not widely used in planes. On Sunday morning, to wind up the meeting, the Merlin was taken to the country place of one member for a longer and louder run which I did not attend. A very interesting weekend.

A thought occurred to me that as the prop was at the rear of the trailer it would fun to drive down the road with the Merlin running just to amaze the other drivers. Might even reverse the prop pitch.

**MORE BALLOONS.** From *SHADOW FLIGHTS*, by Curtis Peebles. The book is a history of spy flights over Russia. In spite of the urgent need it took about 5 years to settle inter-service wrangling to permit, in 1955, the CIA to get the U-2s designed and built. In the mean time the Air Force worked on Project Genetrix to develop high altitude balloons, equipped with a small gondola carrying special cameras, to drift across Russia taking photographs. They were launched from European bases from Norway to Turkey. When over the Pacific Ocean, after drifting over Russia, and with the balloons still at a very high altitude, a radio signal caused the balloon to drop the gondolas with a parachute which was to be snared by a grapple trailing behind specially equipped C-119s. Results were not good and after a number of launches it was closed down. Although propaganda was released that the flights were weather studies the Russians still protested strongly. The project was discontinued and eventually replaced by the U-2 flights.

Occasionally, the balloons were sighted and reported as flying saucers. Perhaps there is some truth to the Roswell explanation after all.

**AVIATION LIBRARY.** From *General Aviation News*, 7/9/04. A University is taking some lessons from Sporty's.

The Vorbeck Memorial Aviation Library at Sporty's Academy is serving as a model for a new Aviation Student Learning Center at Ohio Univ. at Athens, OH. The center is expected to open later this summer and will serve more than 180 students majoring in aviation. The library was founded in 1997 in memory of Joseph F. Vorbeck, an educator, and co-founder of Sporty's Academy and a member of the Flight Instructors Hall of Fame.

The Library contains hundreds of books, magazines, DVDs, and a large collection of reference material, and wireless internet access. The facility is used extensively by the nearly 200 students enrolled at Sporty's Academy and the Univ. of Cincinnati's Aviation Technology Program.

## Upcoming Events of Interest to Chapter Members

- **Every Friday in August.** Behind the Scenes Restoration Tour, USAF Museum, Wright-Patterson AFB, Dayton, OH, 12:15 pm. Free tour, pre-registration required; all visitors must be at least 12 years of age. Call 937-255-3286 for more information.
- **August 13-15, Fri-Sat.** Summer Heat Air Festival, Muncie, IN. Call 765-284-2700.
- **August 13-15, Fri-Sun.** 6th Annual Ohio Aeronca Aviator's Fly-In, Alliance-Barber Airport (2D1), Alliance, OH. Call 216-337-5643.
- **August 14, Sat.** OVO Airport Awareness Days, North Vernon Municipal Airport (OVO), North Vernon, IN. Call 812-346-5223.
- **174 August 15, Sun.** Chapter Meeting. Old Terminal Building, Clermont County Airport, 2:00 pm.
- **August 21-22, Sat-Sun.** 2004 Fly-In, Delaware Municipal (DLZ), Delaware, OH.
- **August 27-29, Fri-Sun.** Annual WACO Celebration & Reunion Fly-In, WACO Field (1WF), Troy, OH.
- **August 27-29, Fri-Sun.** EAA Mid-Eastern Regional Fly-In, 2004 (MERFI), Marion Municipal Airport (MNN), Marion, OH.
- **Sept 4, Sat.** 14th Annual Fly/In Cruise/In, Marion Municipal Airport (MZZ), Marion, IN. This annual event features antique, classic, homebuilt and warbird aircraft as well as vintage cars, trucks, motorcycles, and tractors. An all-you-can-eat Pancake Breakfast will be served, with all proceeds going to the local Marion High School Marching Band. Contact Ray Johnson at 765-664-2588 or email FlyInCruiseIn@indy.rr.com.
- **Sept 11, Sat.** Shelby Aero Co. Drive- and Fly-In, Shelbyville, IN. Rain date Sept 12. Call 317-936-5500.
- **Sept 11-12, Sat-Sun.** Lunken Air Show, Cincinnati Lunken Municipal Field (LUK), Cincinnati, OH.
- **174 Sept 19, Sun.** Chapter Picnic. Winemiller Farm Airstrip, Goshen, OH, 1:00 pm.

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### ***Next Chapter Meeting***

**Sunday, August 15<sup>th</sup>, 2004, 2:00 PM**



**Program: Howard Wells Reviews Alternators vs. Generators  
and  
Reports from Members on Oshkosh**

Old Terminal Building, Clermont County Airport  
All aviation enthusiasts welcome!

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