

Experimental Aircraft Assoc.

Chapter 302 ~ Conroe, TX



Darrell Frazier received a *1st Flight* award from Ch. 302 for the December 10, 2000 initial flight of his new RV-6A. It was presented at our January meeting by Chapter President Dick Parkans. Way to go Darrell! Nice airplane!

Thanks goes to Don Brewer for taking the lead and having the plaque available so soon.



\$ Dues \$

Shirley Park is our new Treasurer, so your 2001 dues can be sent to her or delivered in person at the meeting February 10th.

\$18.00 for 2001

Shirley Park
25523 Long Hill Lane
Spring, TX 77373

▷ **J-3 Kitten
*Super Sized***

▷ **Lockheed
Constellation**

J-3 Kitten PLUS 10%

Eddie DeSha creates a *Super Size* Kitten



Eddie DeSha

This is my scratch built J-3 Kitten. I scaled it up 10% to accept an EA-81 Subaru engine with direct drive and a 60" Precision ground adjustable prop.

As my first airplane project, it took 2 years (about 3000 hours) to build. Now, as of February 2001, I am awaiting FAA inspection.

The cowlings and fuel tanks are molded out of fiberglass. I covered it with Ceconite and finished with Randolph dope. Both the color and design were selected to simulate the look of a J-3 Cub. The total weight is 500 pounds and the wing span is 32 feet.

Thanks to Floyd Rollins for always lending a helping hand or two, Byrdell Mathews (EAA Chapter 302 Technical Counselor) for flying over and inspecting the airframe before I covered it, and Wicks Aircraft Supply. *Eddie*



Another Trip To Granbury

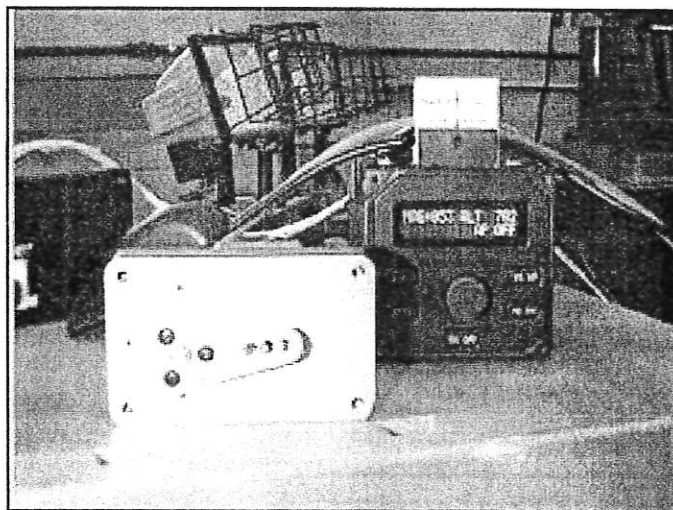
By Michael Stephan



While working feverishly on my computer one day, I noticed an email message come across my computer's desktop from the Granbury Chapter informing me that Jim Younkin was the speaker for their January meeting. Who is Jim Younkin? Come to find out that he is the creator of the *Century I*, *Century III*, and *Century IV* autopilots as well as many other navigation devices. Many of his designs are still in use today. During his retirement years, he did a little airplane building. He built replicas of the Travelair Mystery Ship, Mr. Mulligan, the super Stearman

"Golliath", the Mystery Pacer, and the Mullicuopes. But, now he is now back in the autopilot business with a new all digital autopilot. Now I'm interested. So, when David Check asked me if I was interested in going to the Granbury Chapter meeting, I said, "sure!" We planned to fly there, but the January weather forced us to use ground hugging transportation. This added a little difficulty since navigating through Pecan Plantation is no simple task. After only a few wrong turns we found ourselves at the meeting. In fact we were a few minutes early, which allowed us time to talk with a few Granbury Chapter RV Builders and a couple of 168 members, Ben and Pat Johnson, who were also there.

After the business part of the meeting, Jim Younkin began to speak. Ok Jim, sell me an autopilot. Well, it turns out that when Jim is not thinking about auto pilots he is beating metal in submission. Yes, Mr. Younkin is a self taught metal forming expert. He builds metal fairings for some very ambitious antique airplane restorations as well. So for about an hour or so, I learned how to build wheelpant fairings, cowlings, and wing attach fairings. Disappointed? No, that was just a bonus. Because when he was done showing us how he can make metal move, he showed us his new autopilot. Mr. Younkin had been out of the auto pilot business for many years before being beckoned back by the advances in solid state circuitry and digital sensors. He saw the potential and began designing. An autopilot uses three very expensive gyros to sense



movement. These gyros are mechanical devices and therefore are prone to wear. But, Jim's new autopilot, called the *Trutrak autopilot*, uses a series of transducers and rate sensors to detect rate of movement. Don't ask me how that works. I didn't do that well in my circuits courses in college. But it does work. Jim also has as a partner a software engineer that created the software that drives the unit. They use the software to interpret and retard, in some cases, the quick digital signal to give the optimum performance. Jim also designed the servo motors which drive the control linkages. These are step motors that operate with very low torque so that they can easily be overridden with manual control inputs. No need to worry about "hal" the autopilot taking over your ship. Coupled with a GPS receiver, this unit can easily get you from point A to point B. Directional control is achieved by selecting a GPS track and eliminating the need for a heading bug. The system can respond to digital guidance information so it can fly a complex navigation program. To control the vertical position the system uses a digital altimeter and is capable of altitude selection in increments of 10 ft. Altitude transitions can be made by airspeed or vertical speed selection. It would be impossible for me to describe all the features of the unit, but it is impressive; impressive enough to take a closer look. I hear that Barry Ward, a Chapter member and RV-6 driver, is taking delivery of one in February. I will find out how it works, and report back.

Mr Younkin has no plans to certify his autopilot for production aircraft. So, for now, it is only available to the experimental market. He has mounting kits available for most of the popular homebuilt airplanes. If you want a little more information on Mr. Younkin and the *Trutrak* family of autopilots, you can find him at 1500 South Old Missouri Road, Springdale, AR 72764 (501-751-0250) or on the web at www.trutrakflightsystems.com.

For Sale

- New hangars, (CXO) spacious 33' deep, 42' wide, electric bi-fold door, insulated roof, dedicated power outlets, concrete floor. several small planes could share, or \$425 solo. Peter Tounge (832) 428-4597
- Nieuport 11, flying, Suburu power, & handheld radio. Was \$8,000. Now Reduced to \$5,000. !! Call Jim Leftwich (936) 494-2955 (2/01)
- Bakeng Deuce project, 115hp Lycoming, radio, transponder,... Fuselage built and on the gear, wings ready to cover. \$10,500. or trade. Carlton Mann (281) 364-9570 (2/01)
- Lycoming 0-320 Engine straight mount. \$8,000. Byrdell Mathews (281) 298-2691 (2/01)
- Spezio Tuholer, good flying, Dave Mason (936) 369-4362 (11/00)
- Lycoming 0-320 straight mount, 0 time since major overhaul. No accessories but available. \$11,000 outright or \$8,000 core. Yellow tagged props and several other engines. Call re inventory. Bill Teaff, Excel Aviation Services, (936) 539-2424. (2/01)
- Small 11' sailboat, new sail, ideal for Lake Woodlands size lake. \$245. Paul Loghry (936) 273-2106 (2/01)

Wanted

- Oxy-Acetylene equipment suitable for use with thin wall 4130 tubing. Interested in bottles and torch, or either. Paul Loghry (936) 273-2106.
- Members dues, just \$18.00 for 2001.

Disclaimer

NOTE: All building tips and suggestions put forth in the newsletter or at chapter meetings are informational only. The Chapter assumes no liability or responsibility for the accuracy of such material. Anyone applying such information to their flying or project, does so at their own volition and risk. Additionally, the Chapter assumes no responsibility or risk for use of products occasionally listed for sale. This is a service to members and does not constitute an endorsement of such products by the Chapter, its members or the EAA.

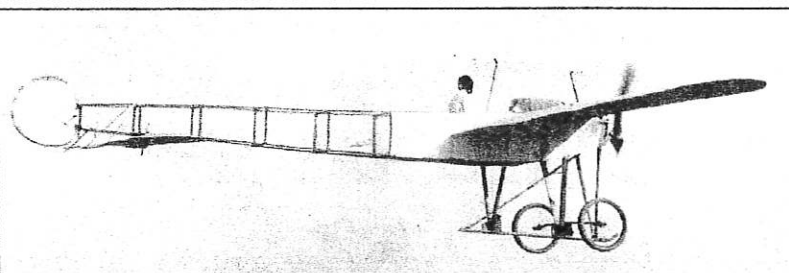
Free Flying Lessons

That was the heading as I looked at a clipping from the local newspaper of Kankakee, IL. Here is what it said.

"A licensed pilot, Richard Bergeron of Bourbonnais, has helped create a fund that pays for beginning flying lessons in memory of his late wife, Patricia. The fund monies matched and administered by the Kankakee Valley Pilot's Association will allow local young people between the ages of 17 and 25 to begin flying free of charge.

Interested prospective aviators may obtain full qualifying details from Steven Koerner at Koerner Aviation 932-4222."

What do you think? Kind of a Young Eagles, Phase II. And what a fitting memorial for someone who loved to fly and wanted to share the experience with as many people as possible. *Paul*



4/14/1912 Clyde Cessna demonstrates new landing gear design.

Dick Parkans Don Brewer Shirley Park Dave Chaplin Paul Loghry



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Technical Counselors:

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 Bill Park - - - (281) 353-3593

Flight Advisor: Jim Pohoski
 (936) 856-4197

Pay your DUES this month. Only \$18.

From the Editor:

I'm sure you have an interesting story, photo, progress to report, something For Sale, a fly-in story, an interesting destination... Please share it with others by passing it on to the Editor.

Paul Loghry, 15 Windfern Place, The Woodlands, TX 77382
 (936) 273-2106 or e-mail paulncathy@pdq.net