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# COZY NEWSLETTER #65

## April, 1999

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### WHAT WE HAVE BEEN DOING

We are glad that 1998 is over, because it was the year for medical problems, mainly mine, although Shirley had some too. When I had my preop exam in October, before my back surgery, there was a small, new blip on my EKG. Just to make sure there was nothing wrong which would preclude operating, the Mayo gave me a stress test. I passed okay, and had the operation. Our two kids who are physcians, Matthew and Kimberly, asked to see the results of the tests, and after 2 months had passed and I was pretty well healed from the surgery, said I really ought to investigate that blip on the EKG. So back to Mayo (in Scottsdale) I went to take more and more tests, but they were all inconclusive. So when we went up to Minnesota over Christmas, Dr. Kimberly Anderson (my daughter) took me aside and lectured me. She said she wanted me to go into United Methodist Hospital in St. Paul and have an

"angiogram". For those of you who aren't familiar with these things, they put a catheter up your leg to your heart, inject a dye, and then watch the blood going through the coronary arteries. When they watched my pictures on the monitor, they saw that two of my arteries were constricted. So then they did what is called "angioplasty", where they insert and blow up this little balloon, then insert this little metal cage and expand it with the balloon, to open up the artery. They had a bit of a problem with the first one, so they postponed the second one until several days later, and then had to go in through my left arm.

I felt very fortunate that my daughter was insistant, and caught this before something worse happened, like a heart attack, and by-pass surgery. The strange thing about all this was that I never had any symptoms of a heart attack, I am in good physical condition, not overweight, and chlorestrol is a low 95. So what could have caused this? Maybe this is just an occupational hazard in the aviation business; after all, Burt had a heart attack a year ago. So how do I change my life style? Just try not to worry about our builders and avoid controversies of any kind. Mellow out, in other words. So we will give that a try.

We had a 2 weeks vacation scheduled to start on Monday, January 11th. On the Friday before, just as we were starting to pack, we were notified by the Federal Court in Greensboro, NC, that the hearing on our request for a preliminary injunction was scheduled for January 13. I had to change all my travel plans at the last minute and head to North Carolina to meet with our lawyers and get ready for the hearing. Even though we were upset because it interferred with our vacation, we had been waiting for over two years, and happy that it was finally going to happen.

When the court convened, the judge said he had read all the motions and studied all the exhibits and was familiar with the case, and he expected it was going to take a long time to hear all the evidence. He suggested that all the lawyers get together and try to arrive at a settlement. With the Plaintiffs and Defendants in separate rooms, and the lawyers going back and forth, the parties couldn't even come close to reaching agreement, so the hearing started with a 15 minute presentation by each side. Then I was called to the witness stand. I answered questions of my lawyer for the rest of the first day, and then was cross-examined by the other side the second day. Then the judge called all the lawyers into his chambers, lectured them, and asked that they try once more to reach a resolution. After seeing what I had to go through on the stand for 2 days, maybe Jeff wasn't too eager to have his turn on the stand, so after many comings and goings, we reported to the judge that the sides were approaching agreement, and we all were willing to stay up all night to resolve the remaining differences. So we did stay up most of the night and did arrive at a resolution, which we reported to the judge the next morning. The judge complimented both sides for working out the differences.

The result of all this was a "consent judgement", filed with the court. A few of the highlights are:

1. AeroCad recognizes the validity of Co-Z copyrights.
2. Co-Z agrees to grant a non-exclusive, world-wide license to AeroCad to use its design.
3. AeroCad agrees to pay royalties on both Cozy and non-Cozy parts.
4. Co-Z agrees to inspect and approve or disapprove AeroCad's proposed Cozy parts, based upon whether they meet the form, fit, and function specs in our plans.
5. AeroCad agrees that for any parts not approved by Co-Z they will have the purchasor agree that if those parts are used in an airplane, that airplane will not be registered or insured as a Cozy, or a Cozy Mark IV.

After all of this was documented and filed with the court, I headed for the airport, listed myself on

standby, and was able to catch flights down to St. Martin, to join Shirley. Needless to say, we were happy that this was finally all behind us, and we hope Jeff and Greg are too. We are in the process of making arrangements to inspect and approve as many of AeroCad's proposed Cozy parts as meet our specs.

## COZY PRE-FAB PARTS

"Cozy" and "Cozy Mark IV" are trade names of Co-Z Development and are the names given to airplanes built according to the plans and instructions of Co-Z Development. Just because you buy a set of Cozy or Cozy Mark IV plans, does not mean you have to build your airplane exactly according to plans. It is an experimental airplane and you can, in fact, make changes. But then, if the changes are significant, you shouldn't register or insure your airplane as a Cozy or a Cozy Mark IV. One of the obstacles we had to overcome in our negotiations with AeroCad, was what to do about parts which they make, but which do not conform to the Cozy designs in form (shape), fit (dimensions), and function (strength). In the past, airplanes have been registered as Cozys when they included various combinations of AeroCanard parts. They were sort of half-breeds. AeroCad maintained that they should be allowed to sell any part to any builder, regardless of what the builder was building. The resolution worked out was that AeroCad would classify their parts in either of two categories: "Cozy" and "non-Cozy". The "Cozy" parts would be those parts which were approved by Co-Z Development to be equivalent to plans-made Cozy parts in form, fit, and function. "Non-Cozy" parts would be those parts which were not approved and would carry a warning that an airplane using any of these parts could not be registered or insured as a "Cozy" or "Cozy Mark IV". After our return, we were able to inspect some AeroCad parts locally in Mesa, and we plan to visit AeroCad's facility in conjunction with Sun n Fun to review the remainder of their parts. As of this writing, the following prefab fiberglass parts are approved:

PART	FEATHERLITE AEROCAD	
Nose cone	x	x
Nose top & bottom	-	x
Turtleback	x	x
Lyc 0-360 cowlings	x	-
Lyc IO-360 cowlings	-	x
Wing pre-cut cores	x	-
Winglet pre-cut cores	x	x
Canard pre-cut cores	x	-
Strake skins	-	x
Strake kit	x	-
Nose gear strut	x	-
Luggage pods	x	-
2-blade propellers	x	-
Main landing gear strut	x	-

Wheel pants

x

-

The Featherlite cowlings are the same as ours (We have a Lycoming 0-360). AeroCad's cowlings have two extra blisters on the bottom to accommodate the tuned intake manifolds on the IO-360. We recommend the smaller cowlings for the smaller Lycomings, and AeroCad cowlings for the IO-360. We have some advance information on other AeroCad parts, and will be discussing some changes we would like to have them make to become equivalent to our plans made parts. We hope you will all observe the agreement which was reached, namely, to use only approved parts if you intend to register and/or insure your plane as a Cozy.

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## BUILDER SUPPLIED OPTIONS

We can recommend the following builder supplied items:

1. Improved Rudder pedals for lay-down brake cylinders, adjustable both sides. Dennis Oelmann (319) 234-6109.
  2. Improved MKNG-6 and NG-6 Pivots with tapered roller bearings. Jack Wilhelmson (834) 884-5061.
  3. Electric speed brake actuator kit. Wayne Lanza (561) 664-9239.
  4. Switching and breaker panel. Wayne Lanza (561) 664-9239.
  5. Fuel sight gages. Vance Atkinson (817) 354-8064.
  6. Electric nose-lift. Steve Wright (615) 373-8764.
  7. Electric pitch trim. Alex Strong (760) 254-3692.
  8. Rebuilt flight instruments. Howard Francis (not a Cozy builder) (602) 820-0405.
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## PROJECT FOR SALE

1/14/99

Hello, I'm a medical professional building a Cozy Mark IV since 1995. I love this plane, but have to sell because of a change of marital status. It is finished through chapter 15, the canopy is on but not the mounting hardware. The centersection spar is built and drilled and the wings are finished except for ailerons and winglets. Tail cone/baggage pods and wheel pants are included. Also Whelen strobes, wiring, and Lanza switch panel. I have received many compliments on the quality of my construction. I have over \$25k invested and 1000 hours construction time, and I'll cry when it goes. Will consider serious offers. Plane is in Maryland. Email: Normbal@erols.com or call Norm Balog (301)879-1777.

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## \$\$\$\$\$\$\$ 4 U - \$100, STRONG PITCH TRIM OR HANDHELD GPS

Readers of Sport Aviation and Kitplanes magazines love to read about what other builders are building and flying. We have a lot of builders who are flying, but never sent in pictures to any of the magazines. Maybe they didn't think it was worth the effort. So we decided to increase the ante. When we mentioned this to Alex Strong, he suggested we offer builders a free "Strong" electric pitch trim, or, if they have already purchased one, \$100.00, for any pictures and descriptions or articles published in Sport Aviation or Kitplanes Magazines. Let us know when you submit (so we can watch for it to be published) and let us know what you wish to receive.

### Publicity Addresses

NOTE: SPECIAL KITPLANE DRAWING FOR A HANDHELD GPS from submissions received by them before June 4, 1999. Send a typed, double spaced description of your project and details on your finished aircraft and a sharp photo or slide, and your daytime phone number and e-mail address, and permission to publish your address if builders wish to contact you. Submissions received after June 4 will be eligible for the 2000 prize.

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## AWARDS

Since our last newsletter, the following builders have received awards:

1. David Domeier (March '99 Sport Aviation)
  2. Kevin Funk (still another referral)
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## FIRST FLIGHTS

Since our last newsletter, we learned of 5 first flights, one of which actually occurred 2 years ago.

1. 12/11/98  
Dear Nat and Shirley,

Enclosed is a picture of Cozy Mark IV N204TJ with my son Eric (before wheel pants installed this last summer). I have flown it just over 350 hours now. Performance 3 blade prop on an LIO-360 C1E6 pushes it at 190 kts true at 2600 rpm and 7500 ft. I haven't yet opened it to full throttle in level flight to test top speed. Amateur paint job. I really like the Vision Micro engine monitor. Radios are King KLX-135, GPS/Com, Terra Nav/Com/NDB/Audio Panel. 1 magneto and Jeff Rose's electronic ignition. Navaid Devices wing leveler slaved to the GPS and Nav. I had always

envisioned building and flying the plane but hadn't really thought about the first flight. After what seemed like a 100 miles of high speed taxi tests over a 2 week period, N204TJ's first flight was August 15,1996. I have a new found respect for those individuals who build and fly their own airplanes.

Thank you for a wonderful experience building and flying the Cozy Mark IV.

Timothy P Jones  
Jefferson SD

2. 12/22/98

Hi Guys,

Well, after waiting weeks for a gap in the weather here, my test pilot finally got my bird into the air. What a feeling watching this plane through its paces. Keep building, it is the most rewarding experience you will ever have!!! The engine wouldn't rev beyond 2100 rpm (0-320 E2A) ex Cherokee 140. The prop must be too hi-pitched. Also the CHTs were all at 475 degrees. Also the forward opening canopy (Uli's Cosy Classic) was lifting an inch at the rear against the latches. Everything else worked perfectly and the aircraft was extremely stable. Keep building, your efforts will be rewarded many fold.

Glenn Murray

3. 1/15/99

Dear Nat,

Cozy III S/N 377 is now flying after a loooooong building process. She was mainly built in Denmark, but had to move with us to California last spring. She weighs 997 lbs. with a Lycoming 0-320 150 hp swinging a 68 x 74 Prince P-Tip propeller. The registration is N655DK. Looking forward to seeing you around.

Jorgen Skovbjerg  
Joergens@gte.net

4. Jim Wickstrum's Cozy III N5CZ made its first flight on February 22,1999. It has about 5 hours on it now. He has been flying with an instructor pilot at Falcon Field, Mesa.
5. We received a short note for Piere Yves PINA, in France, that his Mark IV is completed now, everything is going well, and he has 150 flight hours on it now.

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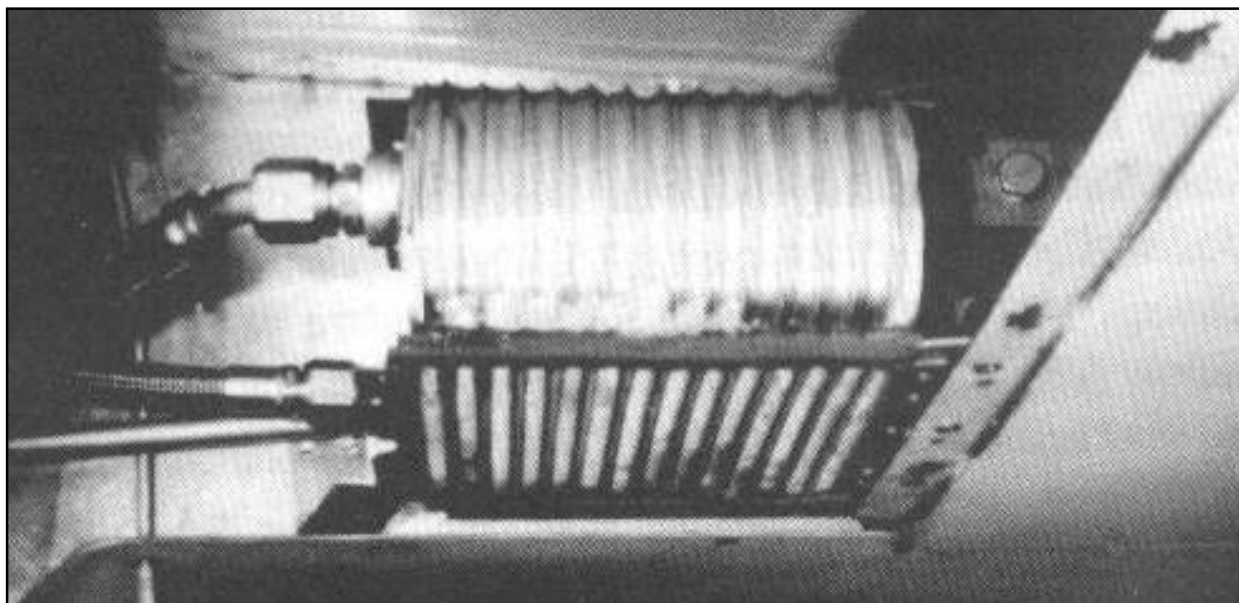
[PLANS CORRECTIONS/CLARIFICATION](#)

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## BUILDER HINTS

1. The 3 inch spar cap material presently being supplied is only 2-3/4 inches wide, but not to worry. If you pull out the cross threads as instructed for the canard, centerspar, and wings, and then squeegee after applying epoxy, the strands spread out to 3 inches, and you will be able to fill up the troughs with the maximum amount of glass they can hold.
2. John Epplin tested the adherence of fiberfrax to plywood and aluminum with the recommended cement from Wicks and also with a 3M product called Fire Barrier CP 25WB+ caulk. He reported the fiberfrax cement adhered to plywood OK but it does not adhere well to aluminum. The 3M product was good enough that when he separated the parts, the fiberfrax failed before the adhesive. He said the 3M product expands when heated with a propane torch flame, but does not burn at all.
3. Our



preferred location for the oil cooler. Mounted on the cowling flange on the right wing root and exhausting under-neath the right side of the cowling.

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## OWNERS MANUAL ADDITIONS

Page 35, Main landing gear: Check wheel camber. When aircraft is empty, wheel camber should be between 2.5 to 3.0 degrees negative (bottom of wheel tilted in). Measure after pushing aircraft forward at least 5', then aft 5' and take average. Record in aircraft log book.

When checking for proper toe-in, wheel camber should increase slightly when pushing forward and decrease slightly when pushing aft.

Page 50, Annual inspection: Check wheel camber and toe in as prescribed on page 35 and record in aircraft log book.

## **WINGLETS (Nov. '98 Aerospace International)**

"Aviation Partners' flight testing of the BBJ with winglets has increased range by 7%, claims the company, helping the aircraft to fly more than 6,000nm without an underfloor tank. Boeing is investigating applying the winglets to all new-build 737s".

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## **AUSTRALIAN BUILDERS**

Through the efforts of Mark IV builders Khalid Shuwayhat and Allan Aaron, the Cozy Mark IV is now approved in Australia. Thanks guys!

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## **FLAT TIRES**

A few days ago I went out to the airport and aired my tires. The next day, when I went out to fly, I found one of my main tires completely flat. I had to take off the wheel pant, to check the tire. I knew I hadn't run over a nail, because the plane was just sitting in the hangar. This scared me. What if I had been flying? So I inflated it to check for a leak with soapy water and found out the valve was leaking! After cycling air in and air out a few times, the leak stopped.

A lot of dirt collects inside the wheel pants, from taxiways, runways, tire wear, and brake wear. If the valve is uncovered, some collects in the valve and can prevent the valve from seating after filling. It seemed like a good idea to keep the valve capped, but how to do so if one couldn't reach into the wheel pant with ones fingers to do it? Voila! The valve caps from my minivan just fit inside a 3/8 in. 12-point socket, and I can put them on the valves through a 1 inch hole in my wheel pants. Now I can protect my tire valves from dirt!

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## **ENGINES**

In 1997 at Oshkosh we were impressed with a Canadian company, Aero Sport Power, selling rebuilt 0-360 Lycomings with light weight accessories for \$14,000. I called to get their current pricing. They said their fixed pitch 0-360s, with new cranks, new Slick mags, new lightweight alternator and starter, and



carburetor, rebuilt to new specs is priced at \$15,800, with no trade in. Without carburetor, \$625 less. They said they run them 3 hours before shipping. Sounds pretty good to me. Several of our builders have ordered engines from them. Don't know if any are flying yet. Their number is (250) 376-1995.

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## PROPELLERS

3/10/99

Marc Parmelee writes:

I'm getting ready to order the propeller for a Cozy MKIV and called Performance Propeller about a June delivery and was told that the three blade goes for \$2150. I remembered reading a recent Cozy newsletter about Catto, who was also selling props for the Cozy. I called and got a quote for \$1200 for the Catto 3 blade prop. I know that Performance makes a good product, does anyone have any experience with Catto? The price is very good.

3/11/99

Dewey Davis answers:

One of the biggest advocates for the Performance three-blade has been Ken Miller. He praised them endlessly, and convinced quite a few other builders to go for it (me included). Now, after a few reported problems with Performance props, plus the extraordinary price difference, Ken Miller has switched to Catto. He sent some e-mail recently to all his three-blade disciples explaining his decision. The Catto three-blade has a fiberglass surface over the wood core. Might be less prone to cracking. It certainly is less expensive. Several people that have tried them, report good performance.

**Editor:** I have been flying canard pusher airplanes now for 21 years, using wooden propellers from at least 5 different manufacturers, and the last 7 years with a Performance prop. I have NEVER had a problem cracking a blade by pulling up debris. I doubt that it is the fault of the propeller; rather, I think the fault of the airport or the pilot. When we were based at Anoka airport in Minnesota, Shirley and I used to sweep the stones off the taxiways ourselves, because the airport didn't do it. One time at Chino, where the taxiways were very dirty, I used a burst of throttle when I shouldn't have, and sucked up an AN3 bolt into my Performance prop, but it didn't split a blade. Taxiing speed also affects whether the nosewheel throws up debris into the prop. Burt Rutan used to suggest leaving the landing brake down to block debris thrown up by the nosewheel.

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## RECERTIFICATION

Ben Ellison posted on the net:

"An interesting decision has recently been handed down by the 9th appellate court invalidating the liability insurance of a Long EZ owner because he had failed to advise the FAA after making changes to his aircraft.

I don't know about anyone else, but I know if this decision were applied to my Long, my insurance company would deny coverage if I submitted a claim. As a result, I am considering surrendering the airworthiness certificate of my aircraft and requesting the FAA to issue a new one for the aircraft in its current configuration. I would welcome other opinions on the gravit of this case."

12/9/98

Bryan Giesler writes:

"I did get N117CZ recertified by the FAA. I had previously talked with the FAA agent at Copperstate and explained the changes that I had made over the years. Using a second propeller and moving the engine were both major changes. I then sent a letter to the FAA at Scottsdale requesting recertification and listing all changes that I had made since initial certification. I wanted to make certain that the present configuration (including use of either prop) would be covered in the recertification. The aircraft was reinspected by the FAA and a new certification was issued (I had to fly 5 hours in a box). This might be something you would want to cover in your next newsletter. Primarily to ensure insurance coverage."

**Editor:** Shortly after Bryan sent this, I went to the FAA in Scottsdale and told them that I changed from a Warnke to a Performance prop right after my airplane was certified in 1992. They recertified it and told me to write in my log book that I had already flown off the required 5 hours.

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## SUN N FUN

This year Sun n Fun starts on April 11th and will run through the 18th. We expect to be there, exhibiting our Mark IV just north of the FAA building. David Higgins has agreed to be our backup, and Jack and Donna Wilhelmson always help out. Steve Wright said he will be there with his nose lift, and maybe Alex Strong with his pitch trim. Bill Walsh has made dinner reservations again for all Cozy builders and friends at the Red Mountain Steak House Sunday evening, the 11th at 6:00 pm happy half-hour and 6:30 pm dinner. If you need a ride, or have room for one or more friends, check in at our airplane during the day.

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## OSHKOSH

We have asked for an exhibition space in the same place as last year, just south of exhibition building A. It hasn't been confirmed yet, but we expect it will be. Our Cozy builders Forum is scheduled for Friday,

July 30, Tent 6, 1:00 - 2:15pm. Gary Hunter, Cozy builder and epoxy expert from Shell Oil Co. has agreed to be a guest speaker. Think of some good questions for him. We expect there will be a Cozy banquet same time, same place as last year. Don't miss it!

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## OSHKOSH COMPLAINTS

Correspondence with Mr. Alan Shackleton regarding Oshkosh complaints:

12/7/98

Dear Alan,

We have been averaging about 15 Cozys at Oshkosh, even though there are more and more flying each year. We estimate the entire fleet to be around 250. If accommodations were made to overcome some of the past problems, we might be able to get more to attend. I think at one time there were almost 100 canard types (Variezes, Long Ezs Cozys, etc.) attending, but fewer and fewer repeats each year. We appreciate your efforts to increase attendance of homebuilts. Many of us feel the emphasis has been away from homebuilts in recent years.

Respectfully yours,  
Nat Puffer 12/7/98

Dear Nat and builders,

I have been contacted by some EAA'ers regarding the special needs of the builders and pilots of canard-type airplanes attending EAA AirVenture-Oshkosh. I have taken your concerns into Tom Poberezny's office as well as the boardroom. I am pleased to report that we are making some site changes that will allow a special area be set aside specifically for the canard-type airplanes. Without going into specifics, the area will allow a hard-surface taxiway, keeping turf taxiing to a minimum. The area will be off the main north-south flightline, so that there would be less concentration of people - meaning less opportunity for damage. With all or most of the canard airplanes in a single location, it should be easier for you to self-police the area. That should reduce the need for constant vigilance by each owner, thereby allowing you all to enjoy and see more of your convention.

At this time, the area we are looking at will be the south side of the new P1 taxiway. (Sort of near the old flymarket area.) One of our initial concerns is, how big should we make it? If we can get a good estimate of the number of airplanes to expect, we will do our best to accommodate everyone. We will keep you all informed of our progress as the details are worked out.

My thanks to those of you who have written to me. Your thoughtful comments and suggestions are what we need to make your convention better.

Alan Shackleton, EAA Dir.  
103346.1772@compuserve.com

## EAA FLIGHT ADVISOR PROGRAM

The NTSB has addressed a call to the FAA, the EAA, and the Aviation Insurance Association for more formalized training for pilots who are transitioning to amateur-built aircraft. It cited John Denver's Long EZ accident. John had logged more than 2,700 hours, and held ratings for single and multi-engine land, single-engine sea and gliders, had an instrument and Learjet type rating. His ground and flight checkout before his Long EZ crash was only 30 minutes. According to the FAA, 20% of all accidents involving homebuilts occur during the first couple of flights. The EAA reports that of 122 builders who participated in its Flight Advisor program last year, only one was involved in an accident. That one, a nonfatal accident, occurred on the third flight, and was due to pilot error. It also estimates that less than 10% of builders participate in the Flight Advisor program. Vance Atkinson is a Flight Advisor and a number of our builder/pilots have the qualifications to be one. Please take note.

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## FOR SALE

U-Finish & Fly! Structurally complete Cozy Mark IV project for sale. Includes mid-time Lycoming 0-360 engine with mount, 3-blade performance prop, lightweight starter & alternator, battery, strobes, oil cooler, flight instruments, Ellison throttle body, plans. All for \$32,000 firm. Gary Buscombe (760) 723-5381.

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## INTERNET CHATTER

What follows is a typical exchange on the subject of side sticks. John Millington writes:

2/17/99

Builders,

I would like some input concerning the left-hand joystick. I have flown radio controlled models for years and used the flight simulator program to practice navigation. I am only a few hours toward my real pilot's license. I never gave too much thought to the stick location until tonight when I used my left hand to land a canard aircraft on my flight simulator program (thanks to Rego Burger). I doubt if a real airframe would have survived a few of my flight simulated landings. Do most people have an easy or hard time getting used to the left stick position?

2/17/99

Nat Puffer replied:

I get asked that question a lot, but only by builders who aren't flying yet. I like to ask people who need convincing if they can steer their car with their left hand. Most can. 2/17/99

Dave Domeier replied:

First of all, John, it's not a joystick in a real airplane. Joysticks come with computer games. Real airplanes have "sticks". And real pilots don't care. They get in the machine and fly it. Once you learn to fly, it won't matter.

In all likelihood you'll be flying a 152 or Tomahawk, or some other light trainer in the beginning and in each of these you'll be using an old fashioned yoke in your left hand. I believe all real airplanes have a "stick". The only reason they don't always is because years ago some marketing idiot decided airplanes would sell better if they had a wheel like a car. A really stupid conclusion. People who cannot tell an airplane from a car shouldn't be near one. Incidentally, I think all homebuilts have a "stick". Just goes to show how smart we are.

If you should be lucky enough to learn to fly in a Cub or a T-34, you'll be flying a "stick" with your right hand. All jet fighters are flown with the right hand, but all commercial jets are flown with the left hand if you are the Captain. First Officers fly from the other seat and do it with their right hand. Some guys take a day or two when switching seats to reacquaint their brain with which hand moves the throttle, but it is no big deal. I think it was originally set up like that in the old days so the Captain could swat a dumb First Officer alongside the head with his right hand so as to get his attention now and then.

I'd go out and get a license before I started building, or at least take enough instruction to make sure you want to be a pilot. If you don't, you could end up with a very expensive canoe in your garage and it will leak on both ends.

Later David Domeier writes: Retired 2/22/99 and liking it very much. Presently languishing on Sanibel Island for 30 days. Hope to have my overhauled engine reinstalled by 4/15 and flying my Cozy again soon after. Keep mixing that glue guys, you'll love flying this airplane.

2/17/99

George Graham replied:

One of the things that I dislike about my E-Racer is the right hand stick. First, the engine controls are on my left, so they are not handy for the copilot in the right seat. Second, the radio and transponder are on my right, so I have to change hands, or at least let go of the stick to change frequency, etc. Thirdly, I'm right handed, so I cannot copy ATC instructions. I have a good copilot most of the time, but my next airplane will have a lefthand stick. It only takes a few flights to get accustomed.

2/17/99

Ron Kidd replied:

These aircraft are so stable and easy to fly that it becomes natural in only a flight or two. I was concerned also, but it has not been an issue. Don't let the left stick be a factor in your decision, there are many more significant ones.

Carl Denk writes:

I have the opposite problem. I'm left handed, and copying clearances can be a problem when in the soup, and turbulence. If I can use the Navaid tracking the GPS, it works well. When flying an aircraft with a stick between the knees, like a J-3, I fly with either hand.

James Newman writes: That explains a lot :-). Todd Carrico writes:

I imagine by the time you get to that first flight, you will have countless hours in "The Seat" and the only thing missing would be aerodynamic feedback.

2/17/99

David Domeier writes:

I had the neat experience today of watching a real pro disassemble my Lycoming O-360. I've flown my MKIV a little over 60 hours with an 18+ year old engine with over 1900 hours on it, and decided it was prudent to find out what was going on inside this engine, especially since it had been on the shelf for over 6 years when I first fired it up about 10 months ago. After much research on the subject of overhauling an aircraft engine, I decided to go with Blueprint Aircraft Engines in southwest Chicago.

The first thing that happened after we arrived at their facility was a tour of the building. One part of the company is dedicated to building Indy type race car engines. They are currently taking an Olds Aurora V-8 (which I believe is a derated Northstar rated at 240 hp) and rebuilding it to run at 10,000 rpm and develop 600 hp.

Another part of the building is dedicated to the production of Avblend for aircraft engines and another product for auto engines.

The aft part of the building is dedicated to overhauling aircraft engines. It's a family business and there were 3 guys working on aircraft engines today. They do 8 or 10 a month. Michael Rachanski, our host, conducted the tour and then proceeded to disassemble my engine. He talked about each part as it revealed itself in the process. This cylinder is showing some wear here, the valves are in very good condition, see that lifter - it's not rotating, probably because the cam does not have the required 1 in. lobe slope to turn it. This engine is very clean - are you sure you're not using Avblend? (grin), and finally he micro measured the crank. After some 1900 hours of service, it was still in "new limits"! Wow, was I impressed! And am I pleased that I did not send this engine back to Lycoming - there's no way I would have gotten this fine crank back in a rebuilt engine. I could have gotten an engine with a crank on it's 4th run and just barely serviceable.

This entire event took about 3 hours. I will retrieve the engine sometime after April 1, and am confident it will live up to the 3 year 1000 hour warranty these guys offer.

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**News from around the world (Stallion Newsletter)**



The composite Lancair Columbia and composite Cirrus SR20 received type certification. The \$20 million certification cost of the composite Lancair Columbia was paid by the Indonesia government with investment money from the US. The composite Cirrus SR20 was paid for and is owned by the Israel Aircraft Industry. Richard Trickel sold his 4-place composite KIS Cruiser and production rights to the Chinese. Toyota is developing a 4-place composite aircraft in Long Beach, CA. And in the USA, Wichita is still building old Cessnas out of aluminum. Dick Simkanin

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## LETTERS FROM BUILDERS 12/14/98

Dear Nat,

I have read everything I can get my hands on regarding kit aircraft for the last several months as well as speaking to several kit aircraft owners and builders about their experiences. I must say, your company gives me a "Cozy" feeling I just don't get from any other manufacturer. The amount of testing, support, integrity, etc. are very apparent within your organization and network of builders. However, you must thank my wife for finally pushing me over the edge. After many nights dealing with my inattention, daydreaming, and talking in my sleep, she had DEMANDED that I order the plans and get started. Enclosed is my check. I look forward to meeting you and hope you and your family have a wonderful holiday season.

Collins Morrison  
Lubbock, TX 12/28/99  
Dear Nat and Shirley,

Eric started up the engine and taxied the airplane for the first time yesterday!! Quite a momentous occasion. All went well. No leaks, etc... He's now thinking about getting signed off in high performance flying by someone in California. He'd go with Giles Sydnor, the other Cozy builder up here. I'm so happy for him after all his hard work.

Vicky Westland  
Mulkilteo, WA 1/7/99  
Dear Nat,

You know I am an instructor and have taught my friend BARJOM, who wasn't a pilot, how to fly, and he is 64 years old!. He wanted to learn in his Cozy Mark IV. My opinion was that it wasn't a good idea, but he insisted very hard and I agreed. I permitted him to fly solo after 116 landings with me because the airfield is a little difficult (there is a little town near the beginning of the runway, and the final is very short). My friend has now more than 400 landings and is very happy with his aircraft (he is like a child with a new toy).

I taught him a classic good pattern with these speeds: climbing 90 kts, downwind 100 kts, base leg, 90 kts, and short final 80 kts. In climbing after rotation, gear up. On downwind, gear down and fuel pump on (no carb heat because it is summer) and on final, landing brake. My goal was to automate his behavior pattern. No problem. You and your wife have a good year.

Gerard MAUREL  
Quissac, France 1/19/99  
Dear Nat,

I'm four and a half years into the building process. I've had no prior building experience that means I had to learn it along the way. It's been an educational experience for family and me. 1999 will be the year to celebrate first flight. Thank you for your support and friendship. I'll be joining the FCF (Flying Cozy Family) soon.

John Vermeylen  
Lanoka Harbor NJ 12/22/99  
Dear Nat & Shirley,

I haven't been able to get much accomplished on our Mark IV because of school. Now I am in the middle of my Master's degree and may have a slight bit of extra time I am starting to put into our aircraft. I am working on the strakes now and need to finish the inside of the canopy. I can say that I have had some vivid dreams of flying my Cozy. The dreams are great, but can't be as fantastic as I know the Cozy flies in actuality. With this bird, even with breaks in construction, I just can't lose the "fever". I have much to do yet, but a labor of love is not labor at all!

I would like to say congratulations to our good friends, Jeff and Becky Rogers, who are the new owners of Airplane Plastics company with a new building and location. With their knowledge and demand for high quality canopies and windows for the homebuilt customer, they will have continued success.

Thank you again for a great aircraft. Kip & Donna Davis  
Neosho MO 12/15/99  
Dear Nat and Shirley,

I finally got underway with the project back in October. Last night I did the 6 UNI layup on the aft side of the forward LG bulkhead and I look forward to getting the fuselage bottom on by the end of the year. Like many before me, I am amazed by how well everything has gone together so far. I have also been impressed by your willingness to answer questions on Marc Zeitlin's forum and hope that you continue to participate despite the occasional flack that you end up taking!

Once again, thank you for the fantastic plans and the exceptional customer support that you provide.

Joseph H Hart IV  
Covington, LA 12/20/98  
Dear Nat,

Happy Holidays! I've gotten through Chapter 5 and have started 6. Thanks again for a great set of plans for a great airplane.

Alan Wirbisky  
Chaska, MN 12/18/98  
Dear Nat and Shirley,

It is always nice to see both of you at the airshows each year. Your support of the slow builders, myself included, is very appreciated. Great newsletter! Thank you so much for designing the Cozy, especially the Mark IV!

Flying my purchased Long EZ (1200+ hours) and building your excellent design allows me the much needed respite/distraction from my work in the ER.

Don Hanson  
Chuckey TN 12/20/98  
Dear Friends,

We've enclosed a picture of the "baby". It's been a long labor, but the end is in sight. It's hard to tell from the picture, but the bottom is now primed and ready for paint. The top is in the final finishing and sanding stages. The instrument panel is at the house and we turn it on every now and then and make airplane noises. We're working hard to fly her to Oshkosh this summer.

Marc & Nadine Parmelee  
Novato, CA 12/13/98  
Dear Nat and Shirley,

I hope this letter finds you both well and your back feeling better. I wanted to let you know that Cozy MKIV project #48 had been sold to an experienced EZ builder and flyer, Kevin Gill of Massillon, OH. Kevin has been through this exercise before and I'm confident that he will be successful in completing what I was compelled to relinquish due to my losing battle with the epoxy demons. I am doing what I can to support Kevin. I also have been monitoring the builders group on the net and am constantly amazed at the number of people who want to alter the design, even before their first lay-up! I think that Kevin and I share the same philosophy in this regard, that we would rather complete and fly it before any "modifications". Must be frustrating for you with so many pseudo aeronautical engineers out there diddling with the proven product.

I had a business trip to Maryland and happened upon the Cozy Country Inn, brochure enclosed. This place is about 15 miles from Gettysburg and within a short drive (or flight) to several other historic sights, mostly Civil War. Lots of antiques and such, and the rooms are somewhat unique as you may read. I only stayed there one night and headed south to Virginia, but the room included a water bed, a gas fireplace, and it was huge. Anyway, I thought you would get a kick out of the brochure and it may be a possible destination for some of the guys who are interested in history to fly to.

So, my fiberglass adventure is over. It was a tough thing to turn it over to another person after all that time and effort. But except for the epoxy problem, I enjoyed every minute of my experience, not the least of which was having the opportunity to meet and visit with you folks. The Cozy is in a class by itself, like the people who run the corporation.

No longer a builder, but always a supporter.

Greg Smith  
San Antonio, TX 11/18/98  
Dear Nat,

As I told you through my last e-mail message, I have installed the VGs per Jim Price (he set the altitude record in a Long EZ) on my wings and GU canard. My comments are:

1. Stall: With a crew of 362 lbs. and 16 gal of avgas, an empty weight of 974 lbs., stall occurs on FMP at 60 kts or slightly above. We are far from what I read on the subject, like stall at 9 kts less than per standard on a Long with a GU airfoil, and my conclusion is: no big improvement in this domain, maybe 2 kts, I am not sure.
2. Feeling at take off and landing: It was a gentle but solid behaviour of the canard with 38 pairs of VGs installed at 5 1/8 inches from the leading edge. Not with the Jim Price ones at 12 pairs of VGs at 2 5/8 inches from the leading edge. When flying under rain water is not well flushed away by the J.P. installation and the trim action, still possible is not as good as noted on my first trial with 38 pairs. I took some pictures at different speed with red wool stuffed on my canard. The airflow is disturbed the same way at each speed. My conclusion is: It is not suitable for the GU airfoil.
3. VGs on the wings: I noted an improvement in roll behaviour at very low speeds only. Since I didn't find a divergence in stall speeds, I kept the VGs over the ailerons only. I'll go back to the previous arrangement of VGs on the canard to make some pictures to compare with the J.P. arrangement.

For the moment my conclusion is: It may be suitable on the Long EZ, but not on my Cozy with a GU airfoil.

Marc Pichot

Pont l'Abbe France 1/23/99

Hi Nat,

Just wanted you to know that the Cozy Mk IV has received provisional approval and is now an "approved type" under Australia's archaic aircraft building regulations. This means that it can be flown without significant restrictions in this country. I think the approval number is 132. Funny thing is that after 25 years of lobbying we now have an Experimental Category here as well. This means that we have a choice as to how we register and operate the Cozy Mark IV.

Khalid Shuwayhadt and I put together a very comprehensive submission to our local FAA over a year ago (it was three volumes including plans and about 60 pages of calculations and literature). Thank you for all your help in completing the designer and builder statements that afternoon I went around to your house - it paid off. Also, I owe thanks to the several builders that I wrote to requesting their experiences and photos - without their cooperation it would have been very difficult to get the approval. CASA (our FAA) didn't let us know about the approval until last week. It was actually granted back in September. Bureaucracies around the world are all the same. If you get any other Aussie enquiries about the Cozy MkIV, you can let them know that it is APPROVED!

Cheers,

Allan Aaron 2/24/99

Dear Nat,

Thanks for your response. Its nice to know you are sitting there watching over us. Great after sales service!

I have a long way to go but at least I now have something to show for my work rather than a heap of parts laying on the bench, very satisfying. My father and brother had a look at Tony Rothwell's Cozy at an airshow near Melbourne last week and were very impressed with his finished product.

Chris Byrne

Australia 10/14/98

Dear Nat and Shirley,

I really enjoyed talking with Shirley, Gene Davis, and the Strong's at the Copperstate fly-in. Gene has a very nice Mark IV and is a great guy. I left the fly-in (in my Long EZ) knowing that among all the designs represented at the fly-in, the Mark IV is the best. I look forward to the day when I finish my Mark IV and trade up from the Long EZ. The 0-235 L2C Long EZ is a fantastic plane, but I could use the extra room and performance.

After a day and a half at Copperstate, I flew back to Santa Fe via Flagstaff, the Grand Canyon and a stay over in St. George, Utah. I would encourage everyone to not be intimidated by the Grand Canyon VFR corridors. Flying the Dragon VFR Corridor over the Grand Canyon with a GPS at 11,500' is a piece of cake. Steve Wilhoite  
Santa Fe, NM

2/23/99

Hello builders,

Just wanted to share some info about the Cozy III. On a test flight, I flew the III close to gross with the c.g.=0.5inches aft of the aft c.g. limit. I was following the FAA AC on testing new experimentals and by slowing moving the c.g. aft I was ready for the aft limit test. I AM NOT A TEST PILOT and am sharing this info in the hope of helping others.

Warning: If your craft pitches up dramatically on rotation - recheck your c.g. This was the result in my airplane with the c.g. aft of the 102 limit. It was like a spring shot the nose up when I rotated for take off; all other controls felt the same as on other flights. After the strong nose pitch-up, I added nose-down trim - ok we have pitch control - so keep the speed building and be careful on pitch inputs. Since I had pitch control and speed, I elected to go around and set up for a fast final and touched down 20 kts faster than usual. Everything went well and again, thanks Nat for a safe design. Needless to say, my aft c.g. test is done.

Good luck and keep building; it is worth it!

Ken Reiter

Plano TX 2/14/99

Dear Nat,

I received the info pack on Thursday and had it memorized and worn out by Friday. I had the opportunity to see a Cozy 3 at the McKinney airport last Saturday. What a thrill!

I will order plans after my wedding. My fiancée was so impressed with the one we saw, she has volunteered to help build it. The McKinney airport seemed like a hot place for canards. In one hangar was a flying Cozy 3, one being built, a set of main wings, and a Long EZ. I also saw one a Long EZ in

the pattern. You have a VERY impressive aircraft.

Bob Hassel  
Plano TX 1/10/99  
Dear Nat,

I was trying to decide which aircraft to build for some time now. A relative just finished a Long EZ, and for a while I was planning to build one. But my wife and I decided that we need more room (for baggage and little co-pilots). I have been reading builder pages and getting distribution mail from Canard.com. The Cozy seems to me to be the way to go. Considering it is a "modified" Long EZ, I feel I can trust the design.

Ryan Avendala  
Aloha, OR 3/7/99

Dear Nat,

Enclosed is a copy of my Mark IV license agreement. Sorry for the delay, but it didn't seem pertinent until now, you see my Mark IV is nearing completion and I hope to be flying before the end of the year. Thanks for a great set of plans and your continued support of the design. I look forward to seeing you and Shirley at Lakeland next month.

Ed Richards,  
St. Petersburg FL 1/22/99  
Nat,

I have shown so many people my Cozy Mk IV in progress that it seems to be making for some good advertising. Pharmaceutical representative, Trish Morrison, found out about my plane from my pictures and pieces in my office that I show to dozens of people every month. She mentioned it to her husband and he immediately wanted to see the plane. She shyly asked on her next visit and like usual, I said to come that day. I got to show Lang and Trish the plane and like usual, he was fascinated and wondered if he could do it. I reassure everyone that if I can, as a doctor with no background in building planes, do it, then they can too. She told me on the next visit to my office, that all he could talk about for the previous weeks was the Cozy. She finally just came out and told him to buy the plans. At the next medical meeting she went to, her husband wanted to know if I would be there. If I were coming, he wanted to meet me again, even though those meetings are pretty boring for non-medical people. I came with my wife and we talked to him the whole night. I don't think that the presenter liked us too much. The day of the meeting was when he received his plans in the mail (#751) and told his wife to remove from the garage all of her drug rep stuff. They had to rent a storage building for it all. It was 2 weeks later when he called with a problem, and I came over that evening and spent 4 hours with him learning to build. We did the seat back that night.

It is such a joy for me to see a part that I know well created again. Lang lives 5 blocks south of me and the Lockharts live 2 miles north. We are going to give all of those RV builders of Lubbock a run for their money. 3 Cozy Mark IVs in a town of 180,000. Currently we have a Glassair, RV4, 2 RV6as, BD5, Titan Tornado and a Lancair 235 flying. We also have 5 RVs in progress, 2 Lancairs, a Tinny Two, Soneri, Spencer AirCar, and a couple of others. Not bad for Chapter 19.



Don Lockhart has worked hard with the local TV station to get them to do a story on Cozys in progress. KMAC 28 (ABC) has called to set up an appointment to come see if there is a story for them to do. I'll hope for the best! I am installing cowling, upholstery, instruments, and polishing surfaces right now.

Thank you for the support. Lang and Don both have a very good feeling about you and the plans from their telephone conversations with you.

Dr. Kevin Funk  
Lubbock TX

Nat, Hello from France,

My bird is slowly but surely progressing. I am including a picture of the inside to show you a little bit. The fuselage is fully painted and the upholstery is done (black leather). I am in the process of reassembling everything with all the goodies and assembling for the flight needs to be done carefully. Flight controls are back in. I used ball bearings instead of phenolic on the torque tubes. Instruments are in. I added a vibration absorber on the 6 main gyro instruments holding plate. Engine baffling is done. I am left with final painting of the 2 wings and engine cowlings plus all the little tinies that always show up during the final assembly process, electrical wiring, engine full check (disassembly and reassembly). Still a lot of work!

Alain Raposo has finished the airframe including the fuel strakes; he is doing the contouring presently. We are kind of competing with each other on who is going to finish first but I am a bit farther ahead. I must admit that he is building faster than I am.

Yves Pranal (Cozy classic) is also making good progress. He is retiring in a few months and will be building a lot faster. He has finished the strakes as well, but needs to do the canopy.

Bernard Cannac is assembling the fuselage tub presently.

This group is very nice because we meet fairly often and get together very well. I am sure this group would be happy to welcome you in France if you plan to visit the area. (A very nice place indeed!!!!) Try to consider a trip to France one day during your off time.

I am hoping I would be able to fly by the end of the year, but nothing is sure because I am more and more professionally involved. I am a flight airline instructor and examiner now and that gives extra work after the flights. I am also giving lots of simulator training.

I am not very active on the newsgroup on the web because I am very busy but I read every piece of mail very carefully so I can reply by that very convenient means. Hoping everything goes well for you and looking forward to your reply.

Benoit Lecoq  
Soisy France

My birthday is January 23rd, so I am an Aquarius. Shirley clipped my horoscope from the paper on Jan. 30,1999. It read:

"--Today is a 5-You're probably in the mood to wax eloquent today, and well you might. Quite a few people out there could use a little of your wisdom. Unfortunately, they don't seem to realize how wise you are; they keep wanting to argue with you." This gave us quite a chuckle!

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