

[\[Newsletters\]](#)[\[Cozy MKIV Information\]](#)[\[Prev\]](#) [\[Next\]](#)

COZY NEWSLETTER #49

April, 1995

Table Of Contents

- [PROPELLORS](#)
- [INFORMATION SUPERHIGHWAY](#)
- [PREFAB AND/OR FAST-BUILD COMPONENTS](#)
- [RETRACTABLE MAIN LANDING GEAR](#)
- [WHAT WE HAVE BEEN DOING](#)
- [PUBLICITY](#)
- [N22CZ IN THE EAA MUSEUM](#)
- [FIRST FLIGHTS](#)
- [ACCIDENTS/INCIDENTS](#)
- [ELECTRIC LANDING BRAKE WARNING](#)
- [SUN 'N FUN](#)
- [OSHKOSH 1995](#)
- [MARK IV CHANGES/CORRECTIONS](#)
- [UPHOLSTERY KITS](#)
- [PACIFIC NORTHWEST CANARD CLUB](#)
- [MORE ON ALLERGIES](#)
- [BUILDER TIPS](#)
- [LETTERS FROM BUILDERS](#)

[Newsletter Info.](#)[Subscription Info.](#)[Authorized Suppliers](#)

PROPELLORS

We have removed B & T Props from our list of recommended propellor suppliers because Bruce and Bonnie perished in the crash of their Long EZ on Feb. 18, 1995. We understand that Bruce had recently completed topping his engine, and the two of them set out on a cross-country trip to Mojave, CA. 30 miles out of Cottage Grove, OR, Bruce apparently experienced an engine problem and was attempting an emergency landing on a narrow road, but the left wing struck trees alongside the road, which inverted the airplane, tumbling it down an embankment and into a river alongside the road. Bruce and Bonnie were good friends of ours for over 17 years, so this is a deep personal loss. It is also a serious loss to homebuilders, because Bruce has been a major supplier of propellers. At this writing, we don't know whether anyone will take over his propellor business, but will keep you informed of future developments.

INFORMATION SUPERHIGHWAY

People have been pressuring us to get a modem and to hook up to the superhighway, to answer builder

questions and monitor other conversations. We have resisted, because we are available almost all the time by telephone and try to answer our mail promptly, but we may have to give in and find out what is going on on the superhighway.

Paul Stowitts (see his letter) said we should include his screen name (CozyBldr) for America On-Line with his address:

CozyBldr@aol.com

Marty Kansky (615) 971-4032 says to look on the Internet at; REC.AVIATION.HOMEBUILT.

Marc J. Zeitlin says he has founded a mailing list for e-mail correspondence and invites any and all to join. His e-mail address is: **marcz@burnside.ma.ultranet.com**

and the list address is:

cozy_builders@cozy.canard.com

He says this will send e-mail to all the people on the list, so only use it for general questions or information.

PREFAB AND/OR FAST-BUILD COMPONENTS

Guess what? You can now buy any or all of the components for the Mark IV either pre-fab or fast-build. For those who aren't familiar with the story, it happened this way: When we decided to market the design of the Mark IV, we were under a lot of pressure to do it as a prefab kit. We resisted and decided just to sell plans, because we knew there were a lot of people out there who want to build from plans, and there weren't many designs available to them. Besides, it's simpler to just sell plans. Next, one of our 3-place builders, Jeff Russell, decided to help other builders, first part-time, and then full time, and then got the idea to market a kit using all Mark IV components, except for the fuselage, which would be half Mark IV and half Velocity (with a much smaller canopy). He started a company called AeroCad, and called the airplane using his fuselage the "Aerocanard". We tried to talk him out of this because it represented a major deviation from our plans and the results of our flight testing might not apply. The Mark IV and the Velocity are two very different designs and perform differently. After he made molds for his "Aerocanard" fuselage, he finally decided to make a mold for the Mark IV fuselage as well. Although we still prefer that our builders build everything themselves from our plans, if they must buy fast-build or pre-fab components, we recommend that they buy Mark IV components which are interchangeable with the ones built from plans, and not a different fuselage. We have demonstrated that small differences in design can have a large and unexpected effect on performance, so we must remind everyone that our flight test results only apply to those airplanes which are built according to our plan. If you make any changes, you have an untested airplane and must conduct your own flight test program. Having made our position clear, if you wish to contact AeroCad, you can reach them at (910) 961-2238.

RETRACTABLE MAIN LANDING GEAR

We are asked quite often whether we offer a retractable main landing gear option. We have to say no. The reason we never considered this is that we wanted the Mark IV to be as simple and inexpensive to build as possible, and as easy and inexpensive to maintain and insure as possible, and as light as possible. We figure that with an airfoil-shaped main gear strut and good wheelpants, retracting the gear would only add about 10 kts., but retracting it into the strakes would reduce fuel capacity and range. In our experience, you lose about an hour to let down from altitude, land, refuel, and climb back up again, so if you sacrifice fuel capacity, it doesn't seem like a little extra speed will get you to the destination faster, if as fast. There is more! Mounting the gear on the centersection spar would impose landing loads it wasn't designed to handle, would move the main gear too far aft and make rotation difficult, would add weight behind the c.g., and reduce the torsional rigidity of the wings (wing flutter?). Something else to keep in mind; if you have a retractable main gear and forget to extend it, or it collapses, you will have a big headache! If it is only the nosegear you neglect to extend, damage is usually very slight.

WHAT WE HAVE BEEN DOING

[Newsletter #48](#) was published and mailed in mid-December (that's why it was mistakenly dated 1994), just before we left for Minnesota to spend Christmas with our children and grandchildren. We monitored our answering machine; one of the calls was from a lady who was counting on giving her husband a set of plans for Christmas. We were able to impose on our neighbors to go into our office, package a set of plans, and send them out overnight delivery. Hopefully we were able to make Christmas happier for one family.

We were back for one week catching up on mail and telephone calls before leaving on what has become our annual vacation in January. We had booked a cruise on a sailing ship in the Caribbean, which got canceled at the last minute, so the travel agency put us on the Royal Caribbean Monarch instead. After a week of too much food and too many activities, we spent the second week on the beach at St. Maartens, and then returned home much rested.

This is the time of year when we have a lot of visitors popping in and have been giving quite a few demo rides. It is very satisfying when prospective builders are so impressed with the Mark IV that they purchase plans. One of the things they like is the super visibility with a full bubble canopy and no engine UP front. We list over 400 Mark IV builders to date (we hope they are building), and will have to decide sometime this year whether to publish a 2nd edition to the Mark IV Plans (any comment?).

PUBLICITY

We monitor the completions reported in Kitplanes and Sport Aviation, and noted that Gilles Desgruelles, Paris, France had a picture of his Cozy III published in December 1994 Sport Aviation. He said, "I enjoy flying a Boeing 747, it's a great plane, but flying my Cozy is a real pleasure too!" Ed

Strickland, St. Simons Island, GA, had a picture of his Cozy III published in February 1995 Sport Aviation. He reports that it took him only 24 months to build, flew hands off on the first flight, and has a top speed of 210 mph. Marc Pichot, Mimizan, France, had a picture of his Cozy in March '95 Sport Aviation and said, "flight is delightful!" And Dave Higgins' Mark IV was pictured in April '95 Kitplanes. He said that it took him less than 21 months to build and that he is very pleased with the performance and the open view he gets from the design of the canopy. Hope we didn't miss anyone else. Nice going, guys! You get a renewal to your newsletters, our compliments!

N22CZ IN THE EAA MUSEUM

A couple of years ago Tom Poberezney told us that the EAA Museum was trying to acquire as many "proto" designs as possible, and would build a new wing on the Museum to house them. As you know, we donated N22CZ to the Museum last summer and expected it to be in storage for a couple of years. You can imagine our surprise when we received 4 pictures just a couple of weeks ago showing N22CZ already on display, and very prominently at that, in the Museum. If you visit the Museum, be sure to look for it! We want to give special thanks to Hank Grudberg and others who thoroughly documented the ceremony last summer with photographs they sent to us.

FIRST FLIGHTS

We continue to hear, second or third hand, about Cozys that are flying that were never reported to us, How about more first flight reports and pictures? Here are some we heard about:

1. [Charles Wolcott](#), in Simi Valley, CA was reported to be flying a Mk IV.
 2. Larry Olson, in Satellite Beach FL was reported to be flying a very highly modified Mark IV.
-

ACCIDENTS/INCIDENTS

The purpose in investigating and reporting on accidents and/or incidents is to try to determine the cause and share this with our builders in the hope that it might save someone else from having a similar occurrence.

We were shocked and distressed to have another fatal crash of a Cozy, this time a Mark IV, N5037, as it approached a landing in Wauchula, FL, on New Year's Day, 1995. The pilot was Dr. Charles Larson who was also the builder. Dr. Larson was reported to be giving rides at his home airport, Avon Park, and was flying over to Wauchula to refuel. He had an adult male passenger in the right front seat and two young boys in the back seat.

We wish to thank [Mike Pinnock](#), Mark IV builder and pilot, who flew down to Wauchula to investigate the accident, along with the NTSB, and who interviewed the witnesses and took a number of photos of the runway approach, and the aircraft wreckage, and sent us a very detailed report which we have

summarized here. His transmittal letter follows our summary. There were a number of witnesses to the accident, because a gathering of helicopter pilots was being held on the ramp at Wauchula at the time. It was reported that N5037 was making too low an approach and struck the static cable of a power line approx. 1500 ft. from the runway threshold. The cable was approx. 55 ft. above the ground, but the ground at the power line was lower than runway elevation, so N5037 was estimated to be 100 - 150 ft. below the nominal glide-path on final. There were trees about the same height as the power line between the power line and the runway, so if the power line hadn't been there, the aircraft probably would have hit the trees. Runway length was 4000 ft., so there was no compelling reason to touch down on the numbers.

N5037 struck the static cable with its nose gear. It was seen to pitch up at the same time or just before. The nose gear slipped over the cable and the cable hooked the main gear legs about 6" below the fuselage. The cable did not break but was pulled off 4 poles, and N5037 impacted the ground nose down. The front of the aircraft was pretty well demolished, but from the front seatback back, the aircraft was pretty much intact. The front seat occupants were killed on impact. The two boys in the back seat survived without serious injury. The autopsy of the pilot did not reveal any physical impairment.

After the accident, the NTSB and FAA reported that the landing brake was deployed, there was fuel in both tanks and in the lines, and that the Ellison throttle body was at the idle position. The proper throttle cable had been used, and was not obstructed in any way. They removed the engine (a Lycoming O-360) and installed it on a test stand. The timing was checked and found to be okay. The engine started and ran perfectly. The prop was undamaged and full throttle static was measured at 2300 rpm. In short, no cause could be found for the accident other than pilot error.

***The lesson to be learned-** Obviously it can be very dangerous to get too low on final if there are obstructions at the approach to the runway. The final approach should not be flown so low that power is required to reach the runway. What we recommend in an approach to landing is to maintain pattern altitude on downwind to a point opposite the runway threshold, to have the nose gear deployed and to have the aircraft slowed down to below 100 kts, then to deploy the landing brake, close the throttle and apply carburetor heat, then to establish a speed of 80 kts with a constant rate of descent of 500 fpm and make a gradual turn to base and then final, clearing the engine with throttle once or twice, but always maintaining enough altitude so the runway could be reached in the event of engine stoppage. It should be remembered that in the event of an engine stoppage, drag will be increased with a wind-milling prop, but glide can be extended by retracting both the landing brake and the nose gear, which would be preferable to hitting obstructions before the runway, even if this means touchdown on the runway with nose gear retracted. A pilot should never hesitate to apply full throttle, turn off carburetor heat, retract landing brake and go around if his approach gets too far extended.*

2/14/95

Dear Nat,

Enclosed please find a summary of Chuck Larson's accident on 1/1/95, with some pictures.

Not being an expert on crash scenes, I took a few pics and interviewed people who either witnessed the accident or knew Chuck as a pilot. Having known and been considered good friends of both Chuck and his wife Sandy, I tried to show just the facts as I see them, and let others form their own conclusions.

For other Cozy builders and flyers, the only consolation is that it appears the plane was not at fault at all.

The fact that no fire occurred was a big plus; 2 more certainly would have died. The plane held up remarkably well, considering the velocity of the impact. When considering the speed, weight and almost vertical impact, it is amazing that anyone could have survived; in this respect, my hat's off to you, Nat, for designing a very strong aircraft. Had there been just a few more degrees of deflection, everyone might have lived.

It's my opinion that Chuck just developed a bad habit of making low approaches, which would not be hard to do, looking at his home base (where there were no obstructions on final). This coupled with a heavier than normal load (4 people, half fuel) left him very little margin for error, and he exceeded this margin. With over 500 hours on my Mark IV now, the sink rate at idle power and low speed (to me anything below 100 mph) when weight is high is much different than with low weight. This difference can get you killed if your approach is flat. I don't understand it Nat, why pilots feel that the only way to land one of these birds is a long, low approach. Maybe in one of the next letters you ought do a section on soft correct landings. I hope the next time I write, it will be of a more pleasant nature.

Sincerely,
[Mike Pinnock](#)

Canard Pusher #80 reports that Long EZ builder/pilot Magna Liset was killed in his Long-EZ in Australia on Feb. 12, 1994 when he flew into power lines. Wes Gardner and his wife perished in their E-Racer when they flew into power lines in a similar accident about a year ago. Watch out for power lines! The static cable at the top is not insulated, and therefore much smaller in diameter and harder to see.

ELECTRIC LANDING BRAKE WARNING

Long EZ pilot Andre J. Deberdt in Brazil reported on a problem he had after modifying his landing brake to electric actuation. On a recent crosscountry, he used it to let down quickly to pass under an overcast. When he tried to retract it, it wouldn't come up because a fuse had blown. He made a quick 180 to return to his home field 15 minutes away. His Long-EZ was flyable, with the landing brake down, at low speed and 1900 rpm, but the temperatures began to rise quickly. After 5 minutes the CHT reached 700 deg. F and oil temperature reached 380 deg. F. He expected the engine to seize. The oil pressure dropped slowly from 70 psi to 40 psi and suddenly went to zero. He declared an emergency and prepared to land off the airport, but he made the runway, and landed downwind safely.

The engine didn't seize, probably due to the "Bardahl" additive he had been using at the time. The engine was opened and pistons 3 and 4 were badly burned and had to be replaced along with the rings. All the cylinders were OK however. He said he was extremely lucky, and advised that you should only use the landing brake on approach to a landing, and if you use electric actuation, use a circuit breaker rather than a fuse. Also, if you abort a landing and go around, always raise your landing brake!

SUN 'N FUN

Sun 'n Fun this year will be from April 9 - 15 in Lakeland, FL. We plan to be there, hopefully a day or

so before it starts. We didn't schedule a forum, instead, we will be on the flight line most of the time at or near our Mark IV and hope to see as many of you there as possible. [Bill Walsh](#) has again made arrangements for a private room for dinner for all Cozy builders and friends at the Red Barn on Sunday evening, 6:30 PM, April 9th. He is hoping for a good turn-out. Please come and join the cameraderie. You can make reservations by calling Bill at (407) 695-3543. If you need a ride, there should be other Cozy builders on the flight line with cars and extra room.

OSHKOSH 1995

Oshkosh 1995 will be from Thursday, July 27th to Wednesday, August 2nd. The Cozy builders forum will be on Friday, July 28th, 1:00 PM, Tent #3. The Cozy builders' dinner will be on the next day, Saturday July 29th, at Robbins' Restaurant at 6:30 PM. Last year I think there were about 100 in attendance, and a good time was had by all.

This summer will mark the 20th anniversary of the first appearance of the proof-of-concept Varieze N7EZ at Oshkosh. It was powered by a VW engine and flying non-stop from Mojave, but made a precautionary landing (high oil temperature) at Worthington, MN. News of the revolutionary design had preceeded it, and a large group of people were anxiously awaiting its arrival at Oshkosh. We were among that group 20 years ago. It was an epic moment in the history of sport aviation for several reasons. Although it wasn't the first canard design (the VariViggen preceded it), it was the design which popularized the canard configuration and its non-stall characteristic. It had the potential to eliminate stall-spin accidents, which amounted to approximately 25 % of the fatalities in general aviation. The Varieze was the first true composite design; i. e. a sandwich structure of fiberglass facings on both sides of a solid foam core. [Burt Rutan](#) selected the proper foams, the proper glass cloths, and the optimal epoxy resins, and developed the procedures and techniques which are still in use today. He developed the moldless composite method of construction. The Varieze was also significant because it became the most popular plans-built design to date. For the first time there was a design which was so ridiculously simple and so well explained that almost any first- time builder could complete a safe airplane in about 1500 hours. Yes, the Varieze indeed was a turning point in custom-built aircraft. It wasn't long before composite construction became the preferred method of construction for almost all new designs, particularly at the high-performance end of the spectrum. And moldless construction gave way to molded construction to further simplify the construction process.

To celebrate this anniversary, the Central States Association is trying to organize as many Varieze and Long EZ pilots as possible and train them in the art of formation flying, and hopes to demonstrate the largest fly-by of homebuilt aircraft ever at Oshkosh on Saturday, and maybe also Sunday. They are talking about 60 to 200 planes! If this can be pulled off safely, it should be great to watch. Let there be no doubt about it, though, this is a high risk activity! We do not wish to encourage builders to participate in events which might put them or others at risk. We think the best tribute to Burt Rutan would be to practice safe flying and for the canard design to have a better safety record than any other design.

MARK IV CHANGES/CORRECTIONS

UPHOLSTERY KITS

The upholstery we have in our plans model Mark IV was designed and installed by Diane Davidson, while she was employed by Alexander Aeroplane. She subsequently left Alexander to start her own upholstery business. She has patterns for the Mark IV, and can supply either just cushions or complete kits for builder installation. Complete kits are nice, but add 40 lbs. to the weight of your airplane. If you want to keep the empty weight as low as possible, painting the inside with Zolatone and installing only cushions is a low-cost and very practical option. Diane can be contacted at 701 E. Taylor St., Griffin, GA. 30223 (404) 467-0038.

PACIFIC NORTHWEST CANARD CLUB

Cozy Mark IV builder Paul Kuntz asked that we mention this club in our newsletter. He says it is an informal association of EZ-type aircraft enthusiasts in the Washington-Oregon-Idaho-British Columbia area. Tom Staggs and his wife, Kay, maintain the mailing list, publish an occasional newsletter and organize a few gatherings a year for the general purpose of keeping members apprised of activities, builders' progress, and the dissemination of flying stories, travel ideas, and safety suggestions. Tom Staggs is a former Navy EA-6B pilot and actively participates in airshows with his Long EZ. Those interested in the club can reach Tom and Kay at 13416 NE 137th Place, Kirkland, WA 98034-5515 (206) 820-7281.

MORE ON ALLERGIES

Cozy Mark IV builder [Ed Richards](#) sent us a progress report on his project and wanted to share his experience working with Safety-Poxy II. He used Ply 9 diligently, but found that his finger tips became callused, and later the hardened skin would peel off and his finger tips would heal and be as good as new. He described this as a sensitivity, rather than an allergy. He tried using latex gloves, but there was little improvement. He thought he might have to give up the project, but decided to try butyl gloves. He put latex gloves over the butyl gloves to protect the butyl gloves, which were more expensive. He reports that he has had no other problems with either the old Safety-Poxy II or the new Hexcel 2427 for 6 months now, and is still using his original butyl gloves.

BUILDER TIPS

1. [Thomas Kennedy](#) suggested the following:
 1. For the fuselage sides, put a 6" wide strip of wax paper between the masonite and the foam pieces where the edges butt together. This will make the eventual removal from the

jigs MUCH easier.

2. In assembling the bulkheads to the sides, forget the ropes to tighten the whole assembly. Use threaded rods and wing much more precise control.
 3. Buy a kiln-dried board (not construction grade) for your WL 0.0, and use bolts rather than nails to secure. This will allow precise placement and later shimming if required.
 4. I had very good results mounting my WL 0.0 board on my work table which was mounted to 4x4s glued to my garage floor. There is no such thing as a level garage floor. The work table becomes your level surface.
2. Vance Atkinson has had 3 flat nose wheel tires (on landing) in 7 years. He suggests carrying a spare nose wheel tire and tube because they are hard to get. A Cozy is hard to taxi or push off the runway with a flat nose wheel. He suggests letting the engine idle, getting out, and holding the nose down while pushing. This is dangerous, and we wouldn't recommend it.
 3. Vance's fuel gauges require a 7" high flat area inside the fuselage side for mounting. The weep V holes are 5-1/2" apart, so 6" on the outside should be sufficient.
 4. [Ken Brimmer](#) sent in these tips:
 1. I flew my plane for the first year in white primer so that I would not be afraid to make as many changes as I wanted without messing up the final paint.
 2. When I first started flying my 115 hp Cozy, my top speed at 8000 ft was 160 mph, @ 2700 rpm and no wheelpants. After 6 months, I went through the whole plane narrowing all gaps around the cowling, rudders, etc., and this increased my speed to 170 mph at 8000 ft. turning 2720 rpm. After a few more modifications and wheel pants I was up to 180 mph and was turning 2740 rpm.
 3. When I put vents on top of the wheel pants I found that I lost 5 mph due to the vents. After talking with some of the EZ speed merchants, I covered the upper vents and opened the back of the wheel pants. When parked, the back of the wheel pants are higher than the wheels and the heat should exit out the rear opening (I hope!). I also added more fiberfax and foil around the gear legs just in case.
 4. Like everyone else my #4 cylinder is my hottest, by 40 deg. In talking to other EZ builders, they say vents above the cylinder do not work. I am now trying baffles inside the cowl to direct the air to the hot cylinder. *Editor; - Baffles inside the bottom of the cowling are very effective in balancing the cooling and can even result in #3 & #4 running cool and #1 & #2 running hot.*
 5. I have no heat in my plane. After talking to Rex Pershing I decided to fly without heat at all as he does. I wear bib ski pants and padded boots with a tennis shoe bottom for feel. You do not need more than a sweater on top due to the greenhouse effect of the canopy. *Editor; - With torque tube off-sets on the Roncz canard and the new 4-pipe exhaust*

system with its really good heat muff, we get plenty of heat around our feet.

6. You will need sunglasses at the altitudes we fly. I bought Raybans, threw the lens away and had the local glass shop install my prescription lenses saving \$75 on frames.
 7. On long trips the headset will cause hot spots on your head. At WalMart for less than \$2 you can get an auto equipment belt pad that is imitation sheepskin and fits perfectly over the top of the headset. Fasten it with velcro and it will protect the canopy above your head.
 8. Your recommendation to locate my GPS antenna just under the nose access panel works perfectly. I seldom receive fewer than 5 satellites at any one time.
 9. I found that sandpaper glued to the end of a tongue depressor was great for sanding in those hard to get at places. I make about 6 at a time.
5. The canard for the 3-place Cozy uses the GU airfoil, which has very pleasant flying qualities but does have a pitch trim change in rain and does require a 20%-longer take-off roll to rotate in rain. Builder Marc Pichot installed vortex generators on his GU canard and was very pleased with the results. He no longer has a pitch trim change in rain, and believes that even in dry conditions, he can rotate at a slower speed; and in landing, his flare and cross-wind handling is improved. If anyone wishes a copy of his drawings and flight test report, please write to us.

LETTERS FROM BUILDERS

12/16/94

Dear Shirley & Nat,

Happy New Year and Merry Christmas! My airplane is on halt right now because I have some professional training going on. But I am happy with the progress. Fuselage is on wheels. Canard is finished and fitted (still have to shorten it 6"). Wings are complete. Main spar is done. Next step will be to install flight controls and turtleback and canopy.

Your plans are just great. I got my engine last month; an O-360 A3A. Thanks for everything.

Yours sincerely,

Benoit LECOQ

Soisy, France

11/30/94

Dear Nat & Shirley,

Thank both of you for your hospitality, and showing me the Mark IV. I'm sorry I didn't have time to take a ride with you. Still, if your airplane flies like my Long EZ, a ride wouldn't have impressed me any more than I already was with your design and workmanship.

I'm convinced that I need a larger, more powerful version of my Long EZ (which I really like), and I anticipate getting serious about it in the early springtime, when I am settled into my job here at the Marine Corps Air Ground Combat Center. When the weather warms up a bit, we plan to order plans and convert the garage to an aircraft factory. Again, thank you for your time.

As I mentioned, I am a graduate of the US Navy Test Pilot School (class 90--Dec. 1985) and have 1000 hours in my Long EZ. If you ever need my expertise with a problem, need air-to-air photography, or anything else, please feel free to call me at (619) 361-1700. Thanks again!

Sincerely,
Ken Koskella
29 Palms, CA

12/10/94

Dear Nat & Shirley,

Enclosed is a check for 2 more years of the most enjoyable reading I can imagine; reading about builders accomplishments, suppliers, builder hints, Vance's ideas and experiments, etc. We as builders are fortunate to have many contributing to the success and safety of such a superior aircraft and wonderful Cozy family as we canard builders and flyers.

I have #218 up on the gear and ready to start the canard. Gettin' cold here in the Ozarks and trying to get the shop insulated and the furnace hooked up so I can progress on. Last November I took a fall and broke my back. couldn't leave this November alone. My wife, Donna, broke her right ankle. Next year is only 11 months long - I'm taking November off all of our calendars.

I wish to comment about Wicks. When I received my axles, a new person had filled the order and pulled a similar but different axle. I noticed the problem when trying to install the wheels and spacers. I called Don at Wicks and let him know of my predicament. Don knew immediately the problem, had me remove the axles, send them back and had a new (and correct) set of axles in the mail to me, along with new bolts, washers and nuts at no charge! Wicks is great and their customer service is remarkable. Already looking forward to Oshkosh and visiting with you both again.

Respectfully,
Kip Davis
Neesho, MO

Dear Nat,

I was the guy who came up to Mesa from Tucson to look at the Mark IV and bought the plans on the spot. When I left, I was ready to start the next day, but life gets in the way of dreams. Since that day, we have moved to Arkansas, where we bought a house with a 3-car garage (thinking ahead) and had our second baby girl.

To make a long story short, I have committed to start my Cozy in April, after getting back from a temporary assignment. I have enjoyed reading about other builders and it has given me a sense of determination and motivation to begin. I hope to see you and other builders in the future. Thanks again,

Rick Shelton
Cabot AR

12/14/94
Dear Nat,

I am sending a check to renew your priceless newsletter, and to brief you on my progress. The first few months of building went great. I finished all of the fuselage parts and started the fitting process. I was very pleased with the quality of my work and the clearly written plans.

Then came Christmas, so I took a break. It is now Christmas again and I have barely touched the plane! Making babies and running your own business can sure put a damper on a builder's solitude. As a result, I am selling my business and not making any more babies (just practicing).

One tip I have to others is not to fold the drawings - roll them up! Ironing paper is not how I wish to spend my time.

Anyway, I plan to hit it hard-core in January and not stop until I'm flying it. My 140 mph Grumman that's really a 3-seater is getting old. See ya at Sun 'n Fun.

Sincerely,
Hugh Farrior
Tampa, FL

12/15/94
Dear Nat,

Happy Holidays from Iowa! We have a foot of snow and it's cold. It's hard to believe a whole year has gone by already, so much has happened. I finished the Velocity conversion in September; remember from a fixed gear to a retract, and then flew it to Indiana on a ferry permit from the FAA. The owner crashed it 4 days later before it was even inspected and, although he wasn't hurt, badly damaged the airplane. No inspection means no insurance! Lucky I already got paid. Anyway, time marches on! It's great to be a member of the family of Cozy builders. God bless you and your family this Holiday Season.

Regards,
Dennis Oelmann

9/14/94
Dear Shirley,

You remember me! I'm the 4'10" blond, 40 something lady that spoke with you in 1993 at Oshkosh, Sun 'n Fun 1994, and Oshkosh '94. We're stuck in Kentucky (career) with a vacation home in "God's Country" Arizona. We are almost finished with chapter 6 and having fun. This is great therapy for career folks; we're trying to make it light!

My husband will send a check to renew the newsletter. The plans are great and your support is greatly appreciated! See you at Sun 'n Fun '95!

Thanks,
Diane Carlton
Louisville, KY

9/23/94
Dear Nat,

Well, I survived my one-year assignment at Osan Air Base in South Korea flying the A-10, and am very happy to be back in the good ole' USA with my family. I am eager to get back to working on my Cozy MK IV. I am now assigned at Randolph AFB in Texas. Enclosed is my new address and a check for the Owners Manual.

Sincerely,
Capt. G. Goodier
Converse, TX

12/2/94
Dear Nat,

I've been building for 13 months now and have completed the wings, canard, and the fuselage is on the gear, and am working on the canopy, which should be complete in about 2 weeks. Everything is coming along pretty good and I'm looking forward to painting the interior. Might be looking for an engine as soon as this time next year. I'm using a Catto 3-blade prop which should be arriving about next week. I'll report on it when I receive it. Keep up the good work!

Thank you,
[Paul Burkhart](#)
Howell, NJ

2/23/95
Dear Nat,

I've made the first step required to building my Cozy Mark IV, i.e. converting my garage into a work area and giving my car the drive way. My wife, who is very supportive, bought me a bandsaw for Christmas and plans to help in the project. Some of the material kits should be arriving any day now. But in the mean time, I'm making templates and fixtures for building the fuselage. I am chomping at the bit waiting for the materials to get started. I'll be visiting my parents in Ft. Myers, FL for Easter, so I plan to leave a week early and attend Sun 'n Fun. I would like to speak with some experienced Cozy builders and learn more about building. Maybe I'll see you there. Thank you.

Sincerely,
Quent Toyloy

1/17/95
Dear Nat,

I ordered your info pack the first part of December, and you provided [Eric Westland](#)'s phone number.

On the day we called Eric, his furnace had broken down and he had no heat. He still took time out from the repairs to show us his Cozy. His fuselage is on the gear, the canard is done, and the wings are covered. We were very impressed with the design and Eric's workmanship. He also loaned us his back newsletters so I could get a feel for the project.

Over the holidays we went to Southern California to visit family also hoping to meet a couple of Cozy builders. We happened on Ken Whitaker, whom you had published in your newsletter as being allergic to epoxy. Ken said it was funny we called when we did because he had been unwilling to part with his plans, hoping to get over his allergy, but had resigned himself to the fact he would not, and was going to ask you if you would advertise his plans for sale. We purchased his plans and the bulkheads he had finished. Ken is now planing to build a metal plane. It's a shame he can't build the Cozy he wants. We visited Gary Buscomb and his lovely wife Alma at Big Bear. They were very gracious. All of the major components are mounted on their plane. We also had a nice session with Chuck Wolcott in Camarillo. His plane had six hours on it, and he is a very happy pilot.

I had a lot of ideas on little changes I could make to personalize the plane and make it uniquely mine. In reading thru the newsletters and talking to builders, they (the little changes) have one by one all been shot down. Everything points to the fact that the Cozy is just right as it is presented in the plans.

I'm fortunate that, like Gary Buscomb, my wife will be working on the plane with me. She works on the Boeing 777. I won't be able to start for a while as I am finishing the restoration of a '63 Lincoln and completing a Ferrari replicar, but the acquisition of the plans was the commitment.

Yours truly,
John Overman
Kent, WA

10/19/94
Dear Nat,

When I left for Oshkosh, I was just finishing Chap. 7. . . . it took me almost a year to complete this chapter, with some time out for obtaining my pilot's license and also making metal parts during the winter. After Oshkosh, I have been able to devote more time during the winter due to fewer travel requirements at work. What a difference! Now I'm rapidly closing in on Chap. 10. For me, this is real progress. I believe that meeting and talking with many of the Cozy folks at the airshow and Cozy dinner really gave me a shot in the arm.

I have located a building partner here in town. Jack is building a Long EZ and is at about the same stage as I am with the Cozy. This makes building much more pleasurable, we can compare notes, trade labor on the larger layups and generally learn together. Jack's experience as an A&P and high time pilot has obvious aircraft building advantages for him, but he is as excited as I am (a relative newcomer to aviation) about our respective projects. Now if we can just get our wives that enthused

Best Regards,
Greg Smith
San Antonio, TX

1/23/95

Dear Nat,

Working on the Cozy Mark IV is a joy. Your expertise shows through in all stages. We are on Chap. 7 and anxiously await each step. Ron and I appreciate your and Herb's advice and assistance. PS: I would like to have you copy Lancair and others charging \$100 for a demo ride to cover insurance and allow builders to experience the aircraft.

Regards,
Dan Moss
Orem, UT

(Editor.- We haven't been charging prospective builders if we think they are serious about building.)

2/9/95

Dear Nat,

This letter is long overdue, but as they say, time flies when you're having fun. I think \$500 for someone to spoon feed you on how to build an airplane is the deal of the century. Without really trying, I have met 4 other builders within about a half hour's drive. Some, of course, through the EAA, others through friends of friends. Without exception they are some of the nicest and most generous people around. Oh, you're building a Cozy, well, you should talk to. . . . and sure enough, come on over, anytime. Nothing is like seeing what you are trying to build 6 months further along. There must be more than a few of you out there toiling silently on your own project. Just don't fall into believing that you are the sole "crazy" out there.

The fuselage sides on N248CZ are mated to the bulkheads and the center keel is under construction. Here are some bulkhead weights:

FW upper:	3 lb 5.1 oz.
FW lower:	3 lb 13.0 oz.
FW sides:	4.8 oz. ea.
Inst panel:	4 lb 13 oz.
F22:	2 lb 9.5 oz.
F28:	10.8 oz.
Seatback:	5 lb 12 oz.
Fwd ldg gear blkhd:	1 lb 10.7 oz.
Aft ldg gear blkhd:	3 lb 3.3 oz.
Fwd upper portion:	15.4 oz.

Best regards,
[Thomas Kennedy](#)
Aliso Viejo, CA

2/16/95

Dear Nat & Shirley,

Hi. Hope you are both well and had a pleasant break over the New Year. My Cozy is coming along

well. Canard is complete and soon to start the wings. This is such a satisfying project - my thanks to you for designing it!!!

As I mentioned in my last note, I recently hooked into Internet and as a result have been "corresponding" and sharing tips with a bunch of homebuilders around the world (including Cozy builders). Recently someone mentioned that you were considering hooking in as well. I hope you do. It is a great way to share ideas and stay in touch with others (especially given the time difference between Australia and just about anywhere else!). Hope you are still considering a visit down here. Shereen is a travel agent and can get you brochures so that you can get a good idea of what to see. Hope to see you again soon.

Warmest regards,

[Allan Aaron](#)

Vaucluse NSW

12/17/94

Dear Nat,

I wanted to thank you so much for your hospitality, first at Oshkosh where you shared your campsite and then in Mesa where you shared your hangar.

The most important was sharing your knowlege where I learned so much about my own plane. You wanted a brief description of our flight from Maryland to Mesa to visit my sister-in-law and return, exactly 2000 miles. We planned to fly two 3.5 hr. legs per day. We spent the first night at Sparta-Hamilton, just SE of St. Louis. The airport treated us royally, making reservations for us at the local motel, hangaring our airplane free, and letting us use a courtesy car for the night. The next morning they even carried a bucket of soapy water out to the plane so I could wash the bugs off. The motel was old but cheap (\$26), clean, and everything worked, which is more than I can say for the \$80 room we had at the Grand Canyon. From a safety point of view, the trip was uneventful; the only problem was our loran "C" went out (no real problem as I have a Garmin moving map and a VOR). We had headwinds on the way out, so my little 0-235 could only give me 156 mph. Those reclining seats, a wing leveler, and CD made for a very relaxed flight.

After our visit, we proceeded to the Grand Canyon. We overflowed Sonoma and wished that we had stopped to visit this apparently beautiful town. We were disappointed with the facilities at the Grand Canyon. The air traffic was surprisingly heavy. The Park Service is attempting to limit the number of people who use the Canyon. Flying over the Canyon is limited to two narrow channels that are also used by 5 or more sight-seeing flying services. The panorama of the Canyon was magnificent. We left the Canyon and flew down the Painted Desert, but the colors were not that impressive. We stopped in Pueblo, CO to see my sister and then returned home, stopping again in Sparta. We had a tailwind the whole way home and averaged 195 niph. Pretty nice speed and when leaned out the fuel burn was only 5.2 gph. Our next to last landing was at Shenandoah Valley in VA, which had a 20 kt crosswind. This made the pucker meter get right up there, but it was unnecessary as the plane handled perfectly. We later landed back at our home base of Easton, and the crosswind was 23 kts. Again the landing was made very easy just by keeping the windward wing a little low. My wife Janie joins me in saying "hello" to your charming and talented wife.

[Ken Brimmer](#)

Bowie, MD

1/28/95

Dear Nat, I am finishing the canard and will send weight data when it is completed and ready for painting. My progress is slow but steady. I am working hard to keep the excess resin off the plane!

I read with great sadness of the loss of Chuck Larson. Our local papers indicated a powerline collision, but did not give details. I spoke with him just last month and he was to be featured in a magazine for the electrical retractable nose gear and his ability to fly his wife and her wheelchair (Sandy has M.S.). He had only great things to say about his Cozy Mark IV. Hope to see you again this year at Sun 'n Fun. Thanks for your on going newsletter support.

Safe flying,
Stephen Blank
Port St. Lucie, FL

6/2/94

Dear Nat,

I have been reviewing the plans for the Mark IV over the last month and I'm really anxious to get started. It took me several evenings to update the plans based on the newsletters, but I am confident that I have all the corrections made.

Thanks for the list of other Cozy builders in Tennessee. To my surprise, I visited Island Home airport here in Knoxville and saw a Cozy N372 in a hangar. I haven't spoken to the builder yet but I understand he recently completed the first flight. I was told it was an exciting flight, the canopy opened during takeoff, but I don't think any damage was done. I'll let the owner share the real story with you. It is really great to be able to see the final product so close to home.

I'll keep you informed about my progress. Keep those newsletters coming, they really do help.

[Marty Kansky](#)

Knoxville, TN

12/20/94

Dear Nat & Shirley,

What a delight to have you attend our wedding. Since the Cozy has been an integral part of our courtship (and proposal!), it was wonderful to have you come to Sedona and share in our special day. And thank you for the great wedding gift. It was the ONLY aviation-related gift we received and therefore was one of my favorites! We will put the Cozy decal and transponder kit to good use.

Cozy Mark IV #104 is coming along. It's on the gear and we have temporarily mounted the main spar and attached the wings. We are currently fitting the AeroCad fuselage top to the tub. It is very exciting and somewhat amazing to finally see an airplane emerging from the buckets of resin and rolls of fiberglass cloth. I spend a good deal of time in the ["rec.aviation.homebuilt"](#) forum on the Internet. I get into it through America On Line. There are always lots of questions on the Cozy posted from around

the world and I enjoy communicating with other Cozy enthusiasts.

I didn't like many of the wingtip lights I saw on Cozys, and EZs at Oshkosh. They seemed like after-thoughts and many of them were ill-fitting. So I used pour foam to slightly extend the wing leading edges and plumbed the sides to be exactly parallel to the line of flight allowing a flush fit. I sent pictures to the Central States Newsletter, which they published (I'd recommend the CSA newsletter to Cozy builders - great stuff).

We are having a great time building and meeting lots of wonderful people in the Cozy family. Thanks so much for making this possible.

Sincerely,
[Sid & Mari Lloyd](#)

1/20/95

Dear Nat & Shirley,

I'm surprised to find it has been almost a year since I ordered my plans. Things have slowed this winter but I have this big green thing in the basement that just keeps growing. I have progressed into Chap. 10 and am still having a great time.

I must compliment you on your plans. I am always surprised when I put parts together to find they fit perfectly. I purchased the power panel and electric brake actuator from [Wayne Lanza](#). First class workmanship and prompt delivery. I have also purchased some items from Feather Lite, and again, first class workmanship. I am holding off on the purchase of an engine, hoping Superior will get their kit together before I need it. I'm no letter writer, so I'll call it an evening.

Regards,
Jon C. Staben
Freeport, IL

12/15/94

Dear Nat and Shirley,

My Mark IV has about 70 hours so far and is performing great. Cruise speed of 180 knots at 8,500 to 12,500' altitude is normal. Everywhere we go, a crowd seems to gather. I've enclosed two newspapers, one from Clanton, AL (my parents' hometown, the photographer from the paper saw us land and came running to the airport. The Miami Herald also had a feature article on experimental aircraft. Hope you enjoy!

Dave & Vicky Higgins
Pembroke Pines FL

1/4/95

Dear Nat and Shirley,

It was a pleasure meeting you both at the San Diego EAA open house and seeing the Mark IV in person.

Photographs do not do it justice. Enclosed are some photos of Mark IV #200. The basic fuselage is complete, the centersection spar is finished, the canard and elevators are soon to be primed, and the main gear is waiting for warmer weather to make the attach tabs.

This year I'm shooting for the wings, winglets and nose section. I am planning on using AeroCad's fast-build wing kit and installing Bill Ortel's electric nose lift. I've met Bill and seen the actuator installed on a Cozy. I feel the weight trade-off is worth the benefit of the lift.

It certainly is nice to build at a pace my budget and time allow. I would not be able to do this without the benefits of a plans-built plane.

If you have no objections, I would like to start a local (Southern California) Cozy Builders' Group where we can get together to share building tips, talent, labor and companionship. If you wouldn't mind mentioning this in the newsletter, I will serve as a contact person to get something going. Thanks. I plan to attend Oshkosh this year for the Cozy dinner. Hope to see you there.

Sincerely,

[Paul Stowitts](#)

San Dimas, CA

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