



# Hangar Talk

## The “Lightning” Newsletter

Sharing info between builders, flyers, and future customers.

### Third Quarter 2013 - Volume 6, Issue 3



#### Dennis Wilt’s “Lightning of the “Quarter”

This Newsletter’s Lightning of the Quarter belongs to Dennis and Donna Wilt of Florida. It is an Experimental Amateur Built Lightning and Dennis and Donna constructed it at Ryan Gross’ Green Landings Flight Center in West Virginia using the builder’s assist program. It was completed in early 2012 and after completing the phase one testing, Dennis and Donna flew it to their home in Florida.

Over the years my goal for the Lightning newsletter has been to be a help for the entire Lightning community by providing a source of information for builders, flyers, and potential customers, as well as a way for the factory and the dealers to keep the Lightning community up-to-date on news and potential safety issues. I hope this and any future issues will continue that tradition.

Blue Skies.

Buz Rich

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## Lightning of the Quarter

This Newsletter's Lightning of the Quarter, N616DW, belongs to Dennis and Donna Wilt of Florida. It is an Experimental Amateur Built Lightning and was constructed by them at Ryan Gross' Green Landings Flight Center in West Virginia using the builder's assist program. It was completed in early 2012 and after completing the phase one testing, Dennis and Donna flew it to their home in Florida. Since then they have flown it back to Virginia several times and to both Oshkosh and Sun-N-Fun. Below is a short write by Dennis on his Lightning including some build photos as well as several photos from their trips.



**Dennis fitting a seat rail and Donna installing the elevators in week two of build.**



**First flight made October 21, 2011.**

I have surely enjoyed my Lightning since I flew it home from Green Landings. The really nice side view of the plane by itself (see below) is the morning I began my flight home on a very cold January 2012 morning.



**January 2012 – Ready for the flight to Florida.**

In May of 2012, Donna and I flew the plane to Suffolk for the Virginia Festival of Flight and we had a lot of fun re-connecting with our friends in Virginia. I have also added a picture (see below) from the VA Festival of Flight.



**2012 Virginia Festival of Flight at Suffolk Airport**

I took the plane to Sun-N-Fun last year as well and was called a Lancair by ATC. Donna and I also flew to Oshkosh in 2012. Because of the weather, it took 4 days to get up to Oshkosh and 4 days to get home, but the plane flew great. My jet was on display at the LSA Mall at AirVenture last year. It was an honor to be asked to put my plane on display.



**Oshkosh 2012. N616DW on display in the Light Sport Mall.**

I have a little over 100 hours on the plane at this point and unfortunately, I have not been able to fly since this past January 2013 when I received the Service Bulletin for cracks in the center spar carry through structure. Working full time and going to school getting a Master's degree does not leave a lot of time for working on the airplane. However, I have the new structure in place, the plane is on the gear and the wings are back on. While I have had the plane apart, I decided to replace a fuse panel with a new Composite Designs breaker panel and I am now working on re-wiring the airplane. I had to basically disconnect everything that ran through the center section. It is a lot of wiring even for a small plane.

Donna and I would like to be able to get to the Lightning reunion in October, but we will just have to see how things go this month.

Regards,

Dennis W. Wilt, Aviation Consultant  
Communications, Navigation, and Surveillance Subject Matter Expert  
Program and Project Management  
757-784-8113  
N616DW (Arion Lightning S/N 132)

## Oshkosh 2013

Unfortunately I was unable to attend Oshkosh this year because of a “last minute” major roof leak at my home in Williamsburg, VA. Had I not been home during the storm when the leak occurred my hardwood floors in the master bedroom would have been totally ruined. Several big rain storms during the week of Oshkosh caused me to keep emptying the bucket to keep water off the floor.

I need to offer a big thanks to several people who have shared photos from Oshkosh. Of course both Nick and Mark from Arion have shared their photos, but I also need to say thanks to Dale Fowler, a good flying friend, experimental aircraft owner, fellow Air Force Academy graduate and retired fighter pilot. Without their help, the Oshkosh coverage would not be as complete.

AirVenture 2013 featured a week of nearly perfect weather and that helped the overall attendance. Official figures from EAA indicate that more than 500,000 people flew in or came through the turnstiles. EAA also said that more than 10,000 aircraft for the show. There were 2,341 showplanes – including 867 homebuilt aircraft, 858 vintage airplanes, 343 warbirds, 130 ultralights, 92 seaplanes, 27 aerobatic aircraft and 24 other miscellaneous showplanes.

One of the highlights of this year’s Oshkosh Fly-In was the screening of Disney’s new “Planes” movie which drew a record 15,000 people to the Ford Fly-In Theater. I have recently seen the movie and for airplane lovers, it is a fun movie. Actually I have seen it twice – once with my 3 year old grandson, and once with my 2&1/2 year old granddaughter. They both really enjoyed it.



**Oshkosh 2013 Lightning Booth. Photo by Dale Fowler.**



**More Lightning Booth photos by Dale Fowler.**

Both Nick and Mark told me that they had a good group of people through the Lightning booth every day of the show. I will have various photos made at the Lightning booth below. Also, from what I have read, many of the vendors (over 800) reported strong sales during the show. I certainly hope that some of the attendees will decide that they need a new Lightning – either an SLSA LS-1, or an Experimental Amateur Built version to include the new Lightning XS with the 160 HP Lycoming engine. More on that aircraft below.



**The next generation Lightning with a 160 HP Lycoming. Photo by Dale Fowler.**



**More photos of the new 160 HP Lightning. Note the longer gear legs which allow for a longer prop with good ground clearance. Photos by Dale Fowler.**

## **Below is Mark's Oshkosh write up and photos:**

"Well if we can get out of Tennessee then it should be smooth sailing to Oshkosh" Nick and I were discussing our early morning departure for AirVenture 2013 and it was a sentiment that we would address again later in our trip. After calling Flight Services for a briefing and one last check for TFR's we were finally wheels up at 0843 on Wed July 24th. Our flight would start out in between two layers at 4,500' where it was smooth despite the 12 knot headwind. Around the northern KY border the skies broke and we had CAVU for most of the rest of the way to our fuel stop in Kankakee, IL. After 3.3 hours in the air we touched down in gusty conditions and taxied up to a nice FBO located in the middle of nowhere. We borrowed the courtesy car, had a quick lunch and then refueled for the remaining two hour flight to Oshkosh.

The plan was for us to fly to and land at Brennand Airport, a small airport directly in between Oshkosh and Appleton's Class D airspaces. The only problem was they were just finishing up a runway improvement project. Ten south of the airport we called the Unicom frequency to find out that the airport was still closed. After talking with persons on the ground at Brennand and discussing options we were finally told that the paint was dry on the runway and to come on in and land. Brennand is a small airport. It has a new owner who has started to put a lot of money into the airport and the first order of business was to widen the runway from 20' to 30'. The length is still the same at 2450'. Brennand is a great example of a small active airport that supports all sorts of aviation from homebuilts to helicopters and was the birthplace of both Jabiru USA and Arion Aircraft. After touchdown we met with Tom Hoffmann, Arion's Wisconsin dealer and put the airplanes inside hangars for the evening. Later in the evening Mike "Moostang" Jones made it to Oshkosh after 13.5 hours on the road pulling our "ground support" trailer and met us at the local Tilted Kilt for dinner and drinks.

Part of ASTM certification for Light Sport Aircraft requires us to periodically inspect our suppliers of "safety critical" components hence the reason all of us arrived in Oshkosh several days earlier than necessary for the show. Thursday morning Mike, Nick and I drove over to Custom Fiberglass to perform an audit and to take delivery of our newly designed cowl for the O-320 powered Lightning. We spent about an hour fitting the new cowl and making notes on places to improve it. It was a first run of the cowl and the purpose was to see where it can be improved. Also, while there, we brainstormed a major change that will be introduced in the very near future. While Mike and Nick finished the audit and the cowl after lunch, I headed over to Specialty Welding to conduct an audit with them. Rita and I discussed many issues and were able to nail down upcoming changes to the design.

Friday morning we started setting up our booth display with our usual tent, flags and so forth. We unloaded the new O-320 powered Lightning off the trailer (that's the last time we're going to trailer a Lightning to a show!) and just put everything in place. The plan was for me to fly the LS-1 Demo into the show on Saturday or Sunday which would complete our setup. Friday evening Nick was able to head down to Madison to meet up with Dana and family while Mike and I continued to turn Camp Arion (in Camp Scholler) into home for the next 10 days. Just a little about the weather. This was the best weather in the past eight years that I've been coming to Oshkosh. Actually I think we were ill prepared for the weather. Mike and I both ended up going to the local Wal-Mart to purchase extra sweatshirts and borrowed extra blankets for the wonderfully cool evenings. With morning in the very low 50's the extra blankets and sweatshirts came in very handy! As a matter of fact Saturday set a new record of the lowest high with a balmy 61 degrees! In July!

Late Saturday afternoon Al Skruby and I hopped into N337AL, our LS-1 Demo plane, and flew the arrival procedure into Oshkosh. Of the seven times I've flown into Oshkosh this was one of the better ones, at least until we were safely on the ground. We landed on 27 and for some reason they had us exiting to

the right side of the runway instead of the normal left side. We then were instructed to taxi the remaining way down to the end of 27 in the grass, cross the departure end of 27, and then taxi all the way back in the grass. It probably took 10-15 minutes to accomplish this and in my opinion was completely unnecessary.

Those who may doubt the stoutness of the landing gear or the effectiveness of the cylinder head cooling of the Lightning need not worry. The CHT's stayed well within the green and the landing gear and wheel pants made the trip through the rough grass with no problems. Finally, with three planes in front of us before we reached concrete we were told to stop and shut down for the Mooney arrival so they could taxi by us en masse. Oh well, that's Oshkosh! At least when we arrived at Phillip's Plaza there was a tug available to pull the LS-1 to our booth where we tied it down for the night.



**A tow to the booth.**

Monday dawned bright a clear and we had good traffic in the booth for an opening day. As a matter of fact we had pretty good foot traffic for most of the week. There was interest in the Lycoming O-320 powered Lightning and a lot of people are anxiously awaiting the performance numbers. We talked to many interested customers and collected quite a few contact cards for follow up meetings.



**O-320 Lightning on display at Oshkosh 2013.**

There was no Light Sport Mall this year at Oshkosh (a result of booth price increases and the new "college/university row" where the mall used to be) so we had plenty of dealer representation in the booth.



**Lots of traffic through the Lightning booth all week.**

I spend a lot of time at both Sun n Fun and Oshkosh walking around talking with our vendors and looking for new options for our customers and trying to stay current on new trends in avionics. I was a little disappointed that I did find any new "ground breaking" equipment. I thought there may have been a couple of new players in the ADS-B market but I really didn't find any. One thing that Tom Hoffmann pointed out to me as we walked around the display hangars was the lack of people around the XM Weather booth. Years ago (before ADS-B receivers hit the market) the crowd at the XM Weather booth was five or six deep, now it's just a handful of people. Oh how times change, especially in the fast moving market of avionics.



**Mark checking out "vendors" and their ADS-Bs, or maybe Cs.**

On Friday we had our annual Oshkosh gathering of Lightning owners, builders and enthusiasts. We had a good representation of owners from Australia to New York and everyone had a great time. I ended up having to do all the talking because Nick had lost his voice earlier in the week and could barely talk above a whisper. It must have been all the people he was talking to about the new Lightning O-320!



**Nick answered lots of questions about the new O-320 powered Lightning.**

The overall "vibe" of Oshkosh, sorry - AirVenture, was much, much better this year. The weather was absolutely beautiful and the attitude of EAA was just different, in a better sense of the word. Even though the whole FAA/controller issue was still going on everyone on the grounds seemed to be so much more upbeat. They instituted quite a few changes this year from a vast array of food choices, to concerts every night on the main stage to an extra night air show. Sure, the military aircraft were missed but that wasn't EAA's fault. I think the change in leadership over the last year has been a breath of fresh air and I hope they continue with the positive changes.

Sunday was the usual slow day so we started tearing down the booth around 3 o'clock. When they allowed trucks on the grounds at five, we loaded up everything and Mike was able to hit the road by 6:30 that evening. He and a former Jabiru employee, Bruce, split the driving duties for the overnight drive home. Nick and I spent one more night in our rented camper in Camp Scholler where there was the same "well if we can get out of here by 0600 in the morning we should beat the rain and incoming front" conversation.

We woke Monday morning around five and finished packing our bags. We drove into the show grounds where we packed up N337AL and Nick prepped her for the flight home. Luckily the tower was open and Nick was able to get off the ground around 6:05. I had to drive Aaron Hoffmann's truck back to Brennand Airport to get in my plane and start my journey home. I knew the weather was coming but I refused to rush and make a mistake during loading and preflight. I was able to get off Brennand about 6:50, about 15 minutes or so before the rain hit Brennand. I had quickly installed a Radenna SkyRadar in my plane before the trip to Oshkosh and it came in very handy for



my flight home. I could clearly see on radar where the rain was, the intensity and that I could make it to my fuel stop in DeKalb, IL. I did fly through some very light rain but it really wasn't anything significant. I did see plenty of rain and low visibility off my right wing but I was going to out run it. The flight to DeKalb was uneventful and after a quick, self-serve fill up I was on my way home to Shelbyville. The next small worry was a storm front that moving east from Memphis but unless I had to stop for some unplanned reason it wasn't going to be a factor.

My overall feeling was that this was a good Oshkosh. While we didn't take any orders at the show there was definitely solid interest in the LS-1 and the new changes (including engine options) in store for the standard Lightning kit. If we can get another few months of growth in the economy and people feeling a little better about their financial futures I think the market is going to open up again. Let's all hope this is the case. In the meantime please fly your planes! You, our owners, are our best representatives! You're the ones that go to your local fly-ins, breakfasts and lunches. You have the ability to reach so many more potential Lightning owners than we do at the factory and to share how you much fun you have flying your "jets".



**Jack Gonzenbach with customers.**



**Greg Hobbs helping customer with the pedals.**



**Tom "Half Thumb" Hoffmann and "Moostang" Mike Jones**



**Greg and Crystal Hobbs and customer John Drane (he built his Lightning with them).**



**Crystal Hobbs with customer. Caelie and Ed Skalniak of greater Chicago area. They built their Lightning in Shelbyville.**



**Bill Browns from greater Chicago area with Jack Gonzenbach. Bill built with Tom Hoffmann in Wisconsin. Marty Warner and his wife Tiki(?). Built with Ryan in WV.**



**Nick with potential customers. Tex Mantel with "Moostang" Mike. In the background is Dave Jalanti and his girlfriend Garnett.**



**Left - Greg with Donna and Dennis Wilt. Right - Aaron Hoffmann (Tom's son) and his new 4 month old baby boy Theodore at Theo's first Oshkosh. Aaron, are you and Theodore wearing your kilts?**



**Crystal with Peter Mitchell, Lightning owner from Australia. Mike with potential customers.**

## **MIDWEST LSA Expo**

5-7 Sept 2013

**Mark Stauffer**

Operations Manager, Arion Aircraft, LLC

This marked the fifth year for the Mid West LSA Expo in Mt. Vernon, IL and the fifth time Arion Aircraft attended. The first three years suffered from bad weather but last year and this year were much, much better. This year we had sun filled days, light winds, 90 degree temps and decent crowds.

I left Shelbyville about 6:25 am on Thursday, September 5th for the two hour flight to Mt. Vernon. The show opened at nine and I had plenty of time to get the plane in the booth and cleaned up before the

show officially opened. I taxied up just as Tom and Dori Hoffmann (Wisconsin dealers) and Jack Gonzenbach (Mid West dealer) walked through the main gate. They had all arrived the night before and they helped get the plane cleaned up and ready for display. Jack flew his beautiful EAB Lightning and it was in the booth along with our LS-1 demo, N337AL.



**Lightning Booth at Mid-West LSA Expo in Mt. Vernon, IL**



**Tom "The Thumb" Hoffmann, Wisconsin Lightning dealer. GRT display poster.**

There was a good crowd early on but it waned toward the end of the day. But, overall there was good interest in the Lightning. Also on the field was N46HM which is for sale through Eric Evans Aviation. Eric's demo pilot was kept busy with several demo flights in the airplane for those interested in a used LS-1.



We met with several people who we made contact with at Oshkosh. We'd invited them to Mt. Vernon where we would have more time to chat and give a demo ride. On Friday evening I took Dan Johnson up for a media flight so he could put it on his web site ByDanJohnson.com. After installing cameras on the wing, tail, seat back, front canopy and hooking up audio we went up for a 45 minute flight where we

showed off the Lightning. Dan had a great time flying the plane and we look forward to seeing his "review" in the near future on his web site.

Saturday had a strong crowd all day and we stayed pretty busy in the booth. I gave a couple more demo flights and Jack stayed busy talking with customers. Mike LeTrello from St. Louis flew over as did Ed and Caelie Skalniak from the greater Chicago area. It was great to see an LS-1 owner (Mike) and EAB owner (Ed and Caelie) and I'm glad they could make it over. At one point we had five Lightnings on the field, probably more than any other make or model! Around mid-afternoon the crowds started thinning out and vendors started packing up to head home. I topped off N337AL and was in the air by 4:30. I decided to fly high (7,500') where it was cool and smooth with a decent 15 knot tailwind! I touched down just after 6 pm and home by 6:30. It was an enjoyable flight home.

This show has struggled in the past but it's starting to show little signs of life. The hospitality is first rate with ice cold water for the vendors, a cookout, shuttle service to the hotels and much more. The airport has great facilities to host the show as well. Now if they can do something to guarantee great weather it will be a good show to attend in the future.

Mark

## News from the Factory

### Fantastic News for Arion Aircraft – “They aced the test!”

Buz,

As many know we were visited in April of 2012 for an FAA audit of our SLSA program. We have detailed that successful audit before, however part of the audit was that we would have a follow up visit by the FAA at some point down the road to make sure that all items were still correct.

The FAA arrived again on Thursday, 12 September, although not with nearly the man power as last time. We covered what was necessary in the morning and then set out to fly the production acceptance program in the afternoon. Keep in mind that program is designed around a 5 hour flight test program over a week or so. For their benefit, it was accomplished in one afternoon so they could see the entire operational acceptance program. While I was in the air Mark stayed below to help the FAA review documentation.

This morning (Friday, 13 Sept.) at about 9am we wrapped up all that was required and were issued an AWC for the next LS1 on the line. With the closing comments that we were doing everything we need to be doing and what a nice operation we have.

Nick

**Super Job, guys. I had absolutely no doubts. Buz**



**Nick receives latest Airworthiness Certificate from FAA Rep.**

## **AOPA Aviation Summit in Ft. Worth**

Arion Aircraft will have an airplane at the AOPA Aviation Summit in Ft. Worth, TX. AOPA recently announced that this will be the last Aviation Summit and afterwards they will concentrate more on town hall meetings and regional fly ins. Mark Stauffer and Greg Hobbs, the Arizona area dealer will be on hand to answer all your Lightning related questions. Unfortunately demo rides are not possible during the Aviation Summit but arrangements can be made to fly with Greg in Marana, AZ or at the factory in Shelbyville, TN.

## **Name for the O-320 powered kit – The Lightning XS**

At a Lightning dealer meeting just before the start of Oshkosh, it was decided, using a group effort, to name the next generation Lightning, the Lightning XS. It sounds like “Excess” which when you look it up says, “The state of exceeding what is normal or sufficient” or “A behavior or an action that exceeds proper or lawful bounds”. That certainly fits, because the Lightning XS will certainly fly faster and climb quicker than it needs to. Yea, right on!

Arion Lightning will now have three models, the original Lightning Experimental Amateur Built (with 120 HP Jabiru engine), the production “store bought” SLSA LS-1 (also with the 120 HP Jabiru), and now the Lightning XS (as an EAB kit). The XS will incorporate all the new mods to include the shorter wings with winglets and the new fuel tanks. Future model upgrades will be the XS-2, XS-3 etc. The XS will be a firewall aft kit with three different FWF options based on engine choice, which will include the O-320 Lycoming, or the 130 HP or 160 HP UL Power engines. The kit will be priced firewall aft and then a separate FWF package price depending on the engine of choice. The dealers are excited to get started marketing the new Lightning XS.

This Lightning XS kit aircraft will come with the new tall steel gear for any of the 3 engines we will offer. We will continue to support the old short aluminum EAB gear legs but will not offer them in a new kit. The new steel gear has redesigned axles with roller taper bearings and are a flat plate bolt on type, not a tube into a socket. The front nose leg socket on all aircraft is redesigned to have the forks in trail for better ground handling. All new Lightnings will come with the MK2 tail of course, which now sports a fully molded trim tab cut out and trim tab, so no more fabrication of the cut out and tab are required. The new stab will also have a trim motor inspection panel. Also, the new upswept short wing tips will be standard as well.

## **Other O-320 Project Updates and Photos**



**O-320 baffling being designed by Nick.**



**Fitting the new O-320 cowl at Rick Disher's Custom Fiberglass plant in Wisconsin.**



**New cowling in place. Looks like it's ready for Mach 2 just sitting in the paint booth.**

**Rick Disher, owner of Custom Fiberglass in Wisconsin, provided a prime paint job for the Oshkosh show.**

### **New Center Stick Option:**

New center stick option soon to be released. A bell crank is added in the wing root to shorten pushrod length. Gerd, from Germany, will be the first to use this option.



## **New aluminum tank option:**



**Car gas any one? New aluminum fuel tank option. Look for a price soon.**

## **Engine Choices for the Lightning:**

As we have reported in previous issues, due to customer requests, Arion has decided to offer several engine options for the experimental Lightning kit other than the 120 HP Jabiru 3300 that the Lightning was designed around. Besides the Jabiru, customers can now install a Lycoming O-320 (150 or 160 HP) or one of the new UL Power engines of either 130 or 160 HP. In the future you may see Arion installing one of the new light weight O-233 Lycomings.



**Left photo, Doug and Ronda Guy install their UL Power 390iS. They will be the first Lightning in the US to fly with this engine. On the right is their engine in the foreground with a Superior O-320 in the background. Both are 160 HP.**

## **MK 2 Tail Mod Price Increase**

Starting Oct 1<sup>st</sup>, 2013 the price for the MKII Horizontal Stabilizers will increase from \$625.00 to \$786.00 each for a new total price of \$1,572.00.

For the past year Arion Aircraft has sold the new MKII stabilizers at a deep discount to encourage current owners to convert to the new tail. There has been plenty of press about the MKII stabilizers covering the reason for the change, flying characteristics, and modifying your current Lightning. Articles in the Lightning Newsletter (Issue 6-1) and industry magazines such as Kitplanes have detailed the new stabilizer. Arion Aircraft believes all owners know about the new stabilizers and they have had plenty of opportunity to make the change if they wished. So, starting on Oct 1<sup>st</sup> the MKII stabilizers will sell at their regular retail price of \$1,572.00.

If an owner was on the fence about making the change they still have until September 30<sup>th</sup> to place an order at the old discount price. Delivery time is 4-6 weeks. The stabilizers will drop ship directly from Custom Fiberglass.



**New tail stabilizer in place.**

For those interested in having the conversion done for you at Arion Aircraft the normal cost is around \$4,000.00 - \$4,500.00 including paint. Turnaround time is usually about two weeks from start to finish. Also, our dealers offer the conversion as well so check with your local dealer for an estimate.

If you have any questions please contact Nick or Mark at Arion Aircraft.

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## Next Production SLSA Lightning LS-1

The next Lightning LS-1 coming off the production line should be ready for delivery right around the time of the Lightning homecoming, the first weekend in October. The owner, and newest member of the Lightning family, is **Rodney Friend** of Indiana. Welcome Rodney. I know you will enjoy your new “jet”.

## Lightning Sales Update:

Mark Stauffer, Production Manager tells me that overall Lightning sales remain sluggish compared to past years, again linked to the overall US economy. Interest in the SLSA LS-1 and EAB Lightnings (both the original 120 HP Lightning and the new O-320 powered Lightning XS) remain high as indicated by the many people visiting the Lightning booth at Oshkosh and the many phone call received on a weekly basis. The Lightning Facebook page is: [www.facebook.com/flylightning](http://www.facebook.com/flylightning).

## Arion has a Slightly Used LS-1 For Sale:

Are you looking for a slightly used LS-1 Lightning? N332AL has only 80 hours total time, no damage history, all ADs and SBs complied with, Grand Rapids EFIS 8.5” screen with Trutrack AP and internal GPS. Equipped with 22 gallon tanks which equates to over 3 hours flying time (with plenty of reserve) at cruise speed. Aircraft is located at the Shelbyville factory at an asking price of \$110K.



**Slightly used SL-1 for sale at factory, 80 hours TT, asking price \$110K.**



**Grand Rapids EFIS 8.5” screen with Trutrack AP and internal GPS**

# Special Sale: THE CLAW AIRCRAFT TIE-DOWN SYSTEM

## C-100 Aircraft Anchoring System

Developed by avid pilots, the C100 Aircraft Anchoring System provides superior protection for aircraft from damaging winds. The C100 System exclusively utilizes the Claw®, a patented lightweight, high-strength earth anchoring system. The C100 Kit includes one carry bag that stores three Claw® anchors, nine spikes, one hammer and 30-ft of rope. Its total weight is just 8 lbs. Each one of the three Claw® anchors can withstand 1,200 lbs. of force, yet, it requires little effort to install or remove, making it far superior to any other aircraft anchor system. In addition, its simple, low profile design, helps reduce tripping hazards and will not puncture tires. The Claw is ideal to provide temporary or long-term security for your aircraft.



### Features of C-100 Aircraft Anchoring System:

- Easy installation and removal - no more struggling with screw-in anchors
- Ideal for all aircraft
- Holds 1,200 lbs. per Claw® - more than any other system
- Light-weight aircraft aluminum with hardened corrosion resistant spikes
- Tremendous holding strength
- Low profile will not puncture tires
- Reduces tripping hazards
- Lifetime warranty

### Kit includes:

1 Carry bag that stores 3 anchors; 9 spikes; hammer; 30-ft rope. Total weight 8 lbs.

These Claw tie-down kits will be available from Arion at the Homecoming & Fly-In. Regular price from Claw is normally \$99.95, but the special price for Lightning customers will be \$79.95. Pick it up while you are at the Homecoming & Fly-In (October 4-6 2013) and save shipping cost.

Just let Mark Stauffer know before the show starts if you would like a Claw kit. Contact Mark at: [Mark@flylightning.net](mailto:Mark@flylightning.net)

## Recent Safety Alerts and Service Bulletins

No new ones at this time.

## Current Lightning Dealers or Representatives



Arion Lightning, LLC, contact Nick Otterback, Shelbyville, TN, 931-680-1781, [www.flylightning.net](http://www.flylightning.net)



Lightning Southwest, Greg Hobbs, 18750 West Avra Valley Rd, Marana, AZ 85635, 520-405-6868 [www.lightningaircraftwest.net](http://www.lightningaircraftwest.net)



Mid-Atlantic Region, Green Landings Flight Center, Ryan Gross, 309 Takeoff Dr, Hedgesville WV 25427, 304-754-6010, [www.greenlandings.com](http://www.greenlandings.com)



Lightning North Central, Tom Hoffman, 3015 Shady Ln, Neenah, WI 54956-9509, (920)-585-9704



Lightning New York - Jabiru Power Solutions, LLC, Dave Jalanti, 136 Millbrook Rd, Hudson NY, 12534, Kline Kill Airport, Ghent NY - Identifier NY1, (518) 929-4307, [dave@jabirups.com](mailto:dave@jabirups.com)



Lightning Florida, Moonshine Aviation, LLC, Max Voronin, 917 Biscayne Bay Unit #5, Deland FL, 32724, 386-873-9995, [www.moonshineaviation.com](http://www.moonshineaviation.com)



Midwest, Heart of America Aviation LLC, Jack Gonzenbach, 12906 W 122nd St, Overland Park KS, 66213, (913) 890-3052, [jgonzenbach@flyhoaa.com](mailto:jgonzenbach@flyhoaa.com)



Western Light Sport, Sullivan Equipment and Leasing, Jay Sullivan, Hanger#23, Redlands Municipal Airport (KREI), Redlands CA, Cell 909-362-7294, Office 909-307-5757, [FlyLightningLS1@gmail.com](mailto:FlyLightningLS1@gmail.com)



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Russia and CIS, AVIA-NIANIA Ltd, Moscow, Russia, Phone: + 7495518-62-75, Mobile Phone: + 7925518-62-75, [avianiania@mail.ru](mailto:avianiania@mail.ru) or [avianiania@aol.com](mailto:avianiania@aol.com)



South Africa-Flylightning SA, Deon Lombard, Petit Airport, Pretoria, Phone 0834196613 or 0723122717, [deonandpamela@yahoo.com](mailto:deonandpamela@yahoo.com)

## News from the Dealers

**The first dealer input comes from the Midwest Lightning dealer, Heart of America Aviation in Overland Park, Kansas. Jack Gonzenbach reports on a recent airport open house he attended.**

Buz,

I've attached a photo from a local event I attended last weekend. It is called the Airport Fun Day and was held at Johnson County Executive Airport (KOJC) in Overland Park, KS. Not really an airshow as such, it is more an event to get the public out to learn about general aviation and hopefully re-awaken some long dormant dreams of learning to fly. It was sponsored by Air Associates, one of the two local FBO's and a Cessna dealer and KC Copters who is probably the largest local helicopter operation in the area. KC Copters is run by Johnny Rowland who used to be the local flying traffic reporter for many years and before that, a local DJ.

The show was interesting as they made it as easy to attend as possible, free parking, free attendance, free use of the provided kid's entertainment activities and a hot dog lunch with chips and drink for a buck! Not only was there no cost for me to attend and show the Lightning, they were genuinely happy to have me there showing an example of another facet of general aviation. As it turned out, I was the only LSA dealer there. Air Associates didn't even show either of the two SkyCatchers that they operate.



**Heart of America's Demo Lightning LS-1 on display at KOJC.**

They got a good turn out and I had my Lightning demo right on the flight line with the Cessna Mustang, Corvalis TT x and KC Copters' display birds and simulator trailer. I got a lot of interest in the Lightning, as usual. Everything from "What a pretty airplane" (non-aviation attendee) to "What is it, a Lancair? ... Lightning? Never heard of it." . I had a number of local pilots, both active and inactive express interest as well, most with an eye to needing access to an LSA for medical reasons.

All in all, it was a good show and I've already had a couple of folks call back with more questions and interest in a demo ride. I definitely plan on attending again next year and I'll be looking for more shows of this type to attend in other areas of my territory. It's painfully obvious that one of my biggest challenges is to raise the profile of Arion Aircraft and the Lightning in this part of the country.

Hope all is well with you and your family.  
Best Regards,  
Jack Gonzenbach  
12906 W 122nd St  
Overland Park, KS 66213  
(913) 890-3052 [jgonzenbach@flyhoaa.com](mailto:jgonzenbach@flyhoaa.com)



**Jay Sullivan of Western Light Sport, Sullivan Equipment and Leasing, has his LS-1 Lightning demo aircraft for sale.**

I must sell my factory built Lightning LS-1, S-LSA, (105 hours TTAE, NDH, always hangared), to make room for 2014 model. No reasonable offer will be refused. This plane will be sold to the first reasonable offer. This is a FULLY LOADED aircraft, synthetic vision, 2 axis auto-pilot with vertical command and much, much more. If you have ever wanted a Lightning, then this is the opportunity that will not happen again anytime soon. Contact\_Jay Sullivan, Hanger#23, Redlands Municipal Airport (KREI), Redlands CA, Cell 909-362-7294, Office 909-307-5757, FlyLightningLS1@gmail.com



**N142AL**



**Note the TAS above  
(130 knots) at 10,000 ft.**

**Contact Jay at Cell 909-362-7294, Office 909-307-5757, or FlyLightningLS1@gmail.com**

## News from Builders and Flyers

### From Benardo in Texas:

[n45bm@yahoo.com](mailto:n45bm@yahoo.com)

Hi Buz,

The panel is next, it is cut out and I and I think I've got all the stuff to put in it, so that's where I'm heading next. No more fancy mods or re-dos for me, just plain ol' work. Otherwise I'll be old by the time I finish this thing. Come to think of it, I already am. Just gotta keep plodding on as if though I knew what I was doing.

On another note, my wife and I just closed on a 1 acre airport lot with a 40' x 60' hangar just south of Seguin Texas. No house there yet, but plan on having one built there within the next 6-9 months, we hope. Then we'll move there and sell our house here in Houston. We're working on the house plans as we speak. If you have Google maps loaded on your PC, it's on Elm Creek Airpark (0TX6), about 4-5 miles south of Seguin. Check it out. Address is 326 Tailwind Dr. Oh, I also bought the neat little car (mule) in the hangar. You'll have a place to fly in and come visit after we build the house. We'd love to have you. Pictures attached – see below.

Bernard-ohhh



Bernardo's fun ride and Rose Parakeet in his new hangar in Texas.

### From Gerd in Germany:

Hi Buz,

[NowackLinden@gmx.de](mailto:NowackLinden@gmx.de)

The News: my new Lightning Kit (No.162) is at my home since last week and I have started to build. Should be much faster to build this time! Experience helps a lot, and I will be able to use a few things from the old one.

Today I read the new Newsletter and found something about me and my Kit. There is something I must correct: I did not do the Build Assist program in SYI. Mainly because I am not allowed to, the 51% have

to happen in Germany, that's the rule. I spent a few days in SYI, mainly to sort a few things out and discuss details that are better done person to person. Ronnie and I built a nice sturdy wooden crate and loaded the kit parts that were there into it. We only drilled a few holes with the drill jigs that the guys have (and I don't), that's all. The work still has to be done here.

I attach a nice pic of me and Ron in front of the crate. BTW it arrived here without a scratch!  
Hope to see you again soon!  
Gerd



**Left - Gerd and Ronnie with the crate they built to ship Gerd's Lightning to Germany.  
Right - Gerd with the shipping crate at his home; ready to start building.**

**Gerd's next email explains his plan for his second Lightning build and the reasons he is modifying his "jet" to have a center stick.**

To the Lightning list,

As you might have read in the latest Newsletter I have started to build my second Lightning, kit no.162. The crate with all the parts - well, almost all the parts - arrived in Frankfurt Rhein Main Airport and I trailered it home. Since then I have unwrapped my shiny new toy and started to work. The first major thing I did was the stick / control mixer / front spar box assembly. You could read in the Newsletter about my plan to have a single stick, and maybe you wondered why? Well, I guess it is the habit that was formed by many years of flying with side sticks in the Airbuses I used to fly. I just feel better and more comfortable. And it leaves more space for my (and Uli's) legs. If you are curious how it looks, see the picture below. You can see that the Control Mixer is bolted on at the usual points and carries only one bolt for the center stick. You'll notice the two aluminum angels bolted to two steel plates that are welded to the spar box front. These carry Nylon bushings supplied by A/C Spruce which are supposed to take up the bending forces that might result from high control input forces. You might say that the control forces of the Lightning's elevator are way too light for any mixer tube to bend, which is true. But I will have to perform control load tests later for the famous German Second Evaluation, and the forces called for then are beyond everything you would normally apply to your Lightning stick. Nick mentioned the "Walking Bar" that divides the Aileron push pull tubes. Same reason here. My examiner found the aileron controls of my late D-ELIY on the "elastic" side, and Nick also voiced the concern that a single tube from the center stick to the aileron bell crank would be too long. You will get the chance to see pictures of said walking bar in a future Newsletter.

By the way, I did not do the Build Assist in SYI, as the Newsletter stated. I have to do the 51% here in Germany (yes, same Rule in G.). I would have liked to save some time to get my new Lightning out faster, but it's just not possible. I spent a few days in Shelbyville to clear some design specifics with Nick and Mark and, most of all, to build a nice, sturdy crate with Ronnie. I had planned to take the Crate along to Atlanta Airport in a U-Haul truck but, since some parts were on backorder, I couldn't. Of course I used the time in SYI to learn a few new tricks, and I drilled a few holes with their drill jigs. They really have drill jigs for everything!

That's it for now. I plan to do another write up for Buz, who seems to be stuck with the noble task of News Letter editing. Then I can show some more pictures and tell more funny stories about Experimental Aircraft building in Germany. In case you're interested.

Gerd



**Gerd's center stick  
for his Lightning.**

## **Upcoming Events**

**6th Annual Lightning Homecoming and Fly-In, Shelbyville, 4-6 October 2013.**

**Arrive on Friday the 4<sup>th</sup>, the big day will be Saturday the 5<sup>th</sup>, depart on Sunday the 6<sup>th</sup>. It is always a fun flying event for current and future Lightning customers and a great way get all the latest info on current and future Lightning plans.**

**The 2014 Light Sport Aviation Expo in Sebring, FL, is scheduled for Jan. 16-19.**

**Sun-N-Fun 2014 will be April 1-6.**

**Virginia East Coast Regional Festival of Flight, Suffolk, VA, 31 May – 1 June 2014.**

**Oshkosh 2014 will be July 28 - August 3.**

## **Flight Safety**

As a long time EAA Flight Advisor and, for a while in my past profession in the USAF, as a fighter squadron Flight Safety officer, I have always been convinced that the best safety device you can have in the cockpit is a well-trained and well educated pilot. Having read about numerous FAA general aviation accidents and actually having been the board president of an Air Force major accident investigation, I have decided that what gets pilots hurt in aircraft accidents (or what damages aircraft) is usually more related to the pilot's own decision making more that their ability to actually control the airplane. The numerous decisions that pilots make on every flight can get you in trouble if you make the wrong

decision or don't take some potential problem seriously. It can be as simple as not having enough fuel onboard or pressing on when the weather is bad.

A safe pilot is a pilot who is in control of every aspect of a flight. Practice your ability to effectively analyze situations related to flight operations, and develop your sound decision-making skills. Take control aggressively to avoid potentially hazardous situations. You can also learn from the mistakes of others and never let it happen to you.

Perhaps it is time we ask ourselves, "have I been making good decisions, or have I just been lucky?"

And remember, In any emergency situation the most important initial actions are:

- Maintain aircraft control
- Analyze the situation and take appropriate action
- Land as soon as practicable.

## Technical Tips

From Benardo in Texas:

[n45bm@yahoo.com](mailto:n45bm@yahoo.com)

I've been a mostly lurking member of the Jabiru engines yahoo group for a long time. Though I assume that most Jabiru engine owners are satisfied with their engines, there appears to be a fair number of them that appear to have cooling problems. It's long been my belief that those problems are derived primarily from poor or leaky baffling, or not so good baffling installations in their aircraft.

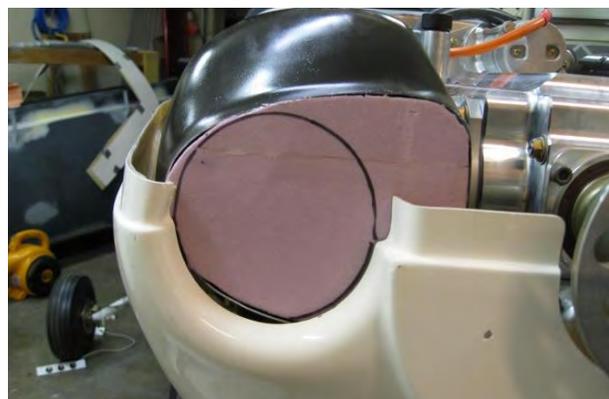
Though I have not yet flown my Lightning, I am making a very conscious effort to make the best leak-proof air cooling system, per my capabilities. Along those lines, it's evident to me that the fiberglass cooling ducts as supplied to Lightning kit builders could certainly use improvements. Specifically, the front of the ducts is in the most need of improvements. Jabiru also sells aircraft kits, and the front of the ducts are sized to fit the Jabiru cowling air inlets, not the Lightnings.

So, I've revised and improved (I think) my cooling ducts as shown in the attached pictures for those that may be interested (or not), and here they are for your review and consideration.

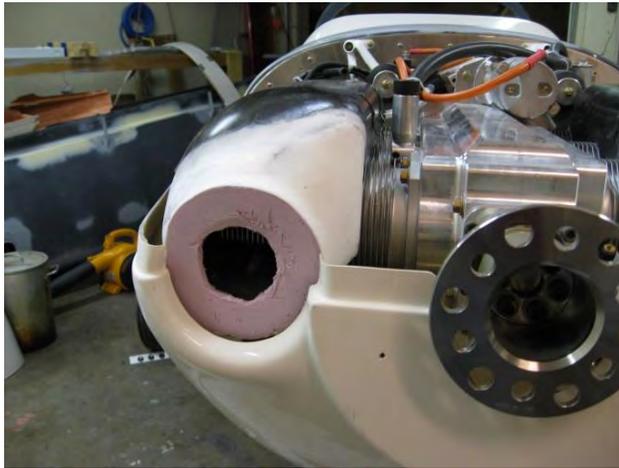
My project seems to be progressing well (90% done, 90% to go), and I'll be happy to report my findings shortly after I begin my flight testing. Stay tuned.

Bernardo

P.S. The rubber strips at the front of the cooling scoops will be attached to the inside of the ducts, per accepted practice, not on the outside.



**Original shape of Jabiru supplied intake ducts.**



**Bernardo modifying the ducts to hopefully improve airflow to the engine.**



**Bernardo's newly modified intake ducts.**



**All painted and installed. Looks great.**

**From Gerd in Germany:**

[NowackLinden@gmx.de](mailto:NowackLinden@gmx.de)

Concerning the propeller: I plan to use a UL Power 390iS engine that will be de-rated to 2800 RPM for noise reasons and to make prop selection easier. I think (like Nick does) that an adjustable propeller is a must when we all don't know the optimum prop pitch for the speeds we expect. The new Sensenich prop that will drive the O-320 powered Lightning (Original Code Name – Strike, but now called the

Lightning XS) would certainly also be an option for the UL Power 390. Also, I found out that Airmaster can supply a variety of prop blades with their ground adjustable hub, so that is an option. But since I am a fan of in-flight adjustable props I looked around further and found something very interesting in Italy: GT Propeller. They make 2 blade CS hubs and have a new scimitar shaped blade that is made for 160 HP engines and fast planes like the F.8L Falco, so that one is my favorite. GT has a hub extension that also carries the slip rings for the electric blade drive, which length can be determined by the customer. Nick told me that the normal cowling fits without modification, when their UL Power 390 gets a 4inch prop extension. Since they use a 7" mount and my mount has 10", even a rather short hub extension of 2 or 3 " should be enough in my case. So apparently I won't have to make drop shaped cheeks on the cowling!

Finally: I wouldn't advise anyone to use a Woodcomp or any other Rotax prop on a UL Power engine. The torque pulses with only two peaks per round are much higher than with the geared Rotax, those props are designed for a much smoother torque curve

Gerd

**Here is another note from Gerd on how he made and set up the throttle on his first Lightning. He will make his new Lightning set up very similar to this. See photos below.**

Guys, here's how I made the throttle quadrant and how I plan to do it with the next one. The basic part is from A/C Spruce; I turned it upside down, cut away some casing and removed the 2nd lever. The whole thing got powder coated. The knobs were made by a friend out of Oak on a lathe. I have built a back plate with rivnuts that will be floxed and bolted to the fuse side. The whole thing is as far aft as it is because I wanted the knee room.

I had it installed in D-ELIY because somehow I like to fly right handed with the stick in the middle, even after flying with a left sides tick for 17years. Funny, but somehow the smart hand kept pushing the silly hand out of the way all the time;-)

It all handled just fine!

Gerd



**Throttle set up on Gerd's first Lightning.**

## **From Bill in Texas:**

**bill@gdsx.com**

I recently had a 2 hour night flight in my Lightning, and decided about an hour and a half in that I was going to do something about those LEDs before my next night flight.

My trim indicator and my intercom are both mounted directly in front of me, and they are bright. BRIGHT!! So I have turned them around and now use them as landing lights...okay, they're not that bright, but they are bright enough that I kept holding my hand in front of them to let my eyes adjust and actually enjoy the moonlit landscape below me.

The other distraction was the reflection of the EFIS on the canopy, but I'll deal with that separately later. So on to the LEDs.

A bit of research showed me that the PS Engineering 1000 intercom had no provision for a dimmable LED. No problem that a bit of black fingernail polish can't fix. Not elegant, but done.

As to the Ray Allen indicator, I took a look at the docs here:  
<http://www.rayallencompany.com/RACmedia/instructionsPOSRP3.pdf>

Evidently there is a wire that dims the indicator when it's connected to 12v+. Sweet! Had the panel out at that point anyway, and immediately saw that the white wire had been snipped flush with the back of the indicator. So I removed the indicator, took the back off of it and got access to that wire and spliced in a new one and reassembled. Sure enough +12v applied to that wire made the indicator very dim. Great!

Now just pick a place, pick a switch, drill a hole, wire it up...I decided to sleep on it.

Good thing. That night it occurred to me that I could just connect it to the load side of my NAV light switch. NAV lights on, indicator is dim, and if I get annoyed by it being bright, that means it's probably become night time while I've been flying and is a reminder to turn on the NAV lights. Yay! (Can I mention I would have been really pissed at myself if this had occurred to me AFTER I installed a switch?)

So, if you're still in the build phase and using the Ray Allen indicator I highly recommend you wire in the white wire to your NAV light switch.

Bill Strahan

## **The next tech tip is from Craig Sumner:**

**craigsumner@comcast.net**

Good evening Buz!

I always appreciate the time and effort you continue to spend sharing your knowledge and experience with others on our airplanes. You have a great gift and just not enough hours in the day to do what you do!! All that said, my son and I are trying to get back in the flying business. Over a cold beer I could share the distractions we have experienced but that is all behind us now. I wanted to pass along my experience on changing a flat tire on the Esqual/Lightning with a missing bolt and a loose bolt that join

the wheel rim halves. Please see Mark's response and just ask that you consider putting a blurb in the Newsletter that will draw attention for others to check at least once a year.

Hope this finds you in good health and enjoying life! I am now fully retired and hope to be making holes in the sky again soon.

Best Regards,  
Craig

### **Mark's Response ([mark@flylightning.net](mailto:mark@flylightning.net))**

**Hi Craig,**

**Sorry I missed your call. It's been a very hectic day. If those are MATCO wheels the torque value is 80 inch pounds for the tie bolts (bolts that hold the wheel halves together) I was quite surprised when George Happ from MATCO told me about the importance of that torque value. It has to do with the stress on each bolt as they rotate under load. That may have caused the failure. We've seen it before. We shouldn't have patched that tire at all; I don't know where it would have come from. Again, sorry I didn't call you back. I need to put your name with that number, all I know is it's an Alabama area code and don't always put two and two together. I hope you and your family are well. Weather and time permitting I'm going to try to come to Moontown for breakfast this weekend.**

**Mark**

### **Craig's response back to Mark.**

**Mark,**

**With the help of an experienced pilot, we fixed the flat this morning without any problems. I just wanted to share that I have one bolt missing from the rims. This probably caused the flat because it looked like the inner tube was pinched. Of the three bolts, one was missing and one was loose. I also noticed a tire patch inside of the tire. Do they use patches to balance the tire? Oh well, sure was great having someone to help me that had the knowledge and tools to do the job right.**

**Hope you are doing well and enjoying life!!**

**Best Regards,  
Craig**

### **Bill Strahan adds his recent experience on the Matco wheels and brakes using Torx Plus screws.**

**[bill@gdsx.com](mailto:bill@gdsx.com)**

**I HATED the old cap head screws with the 1/8" hex drive. I stripped them when torquing them, I stripped them trying to get them out, and basically I just felt every time I used them I anticipated problems. Speaking with George a couple weeks back he said they were getting Torx Plus screws to replace them. I ordered them in anticipation of the next time I needed to do any work on the wheels. What a change. See them at this web site:**

**<http://www.matcomfg.com/TORXPLUSBUTTONHEADCAPSCREW-idv-3819-35.html>**

You can order the drivers here:  
<http://www.matcomfg.com/DRIVET25IPTORXPLUSINSERT-idv-3820-35.html>

I threw an extra set of screws and the drive in my travel tool kit. These engage VERY securely, and I torqued each one to 80 inch/lbs. no problem. Yay! If you haven't upgraded yet, order them now so they're on hand and you don't have to mess with the hex drive screws ever again. That stuff was starting to give me gray hair.  
Bill Strahan

**Mark Stauffer**  
**mark@flylightning.net**

Yes, MATCO has changed the screws that hold the rotors to the wheel, and as Bill points out, the new Torx drive screws are worlds better than the old button head screws. The new screws still use the Nord-loc washers.

All new Lightning kits are shipping with the new screws. If you want to replace yours contact either Arion or MATCO directly.

Thanks for passing the word Bill.  
Mark Stauffer  
Operations Manager  
Arion Aircraft, LLC



Socket Head Cap Screw



Torx Plus Button Head Cap Screw



Torx Plus Insert Drive

## Lightning Skunk Works



On the drawing board. Code name "CL" - Classified Lightning.



Crew: 2, Max Speed: Mach 1.1, Cruise: .99 (Note - Does not meet Light Sport Regs.)

## Final Thoughts – Newsletter’s Future

When I started the Lightning Newsletter back in February 2008, I never expected to write 36 straight monthly issues and then now an additional year of four quarterly issues. But I feel the newsletter is so important in keeping the entire Lightning community informed, that I have freely given of my time and energy to try to insure the Newsletter goals have continued to be met.

Those goals have always been, and continue to be, provide a source of information for builders, flyers, and potential customers, a way for builders and flyers to exchange info on the Lightning, as well as a way for the factory and the dealers to keep the Lightning community up-to-date on news and any potential safety issues.

Over the years, even though I have dedicated many hours to the newsletter issues, I have enjoyed the project because it gave me a chance to meet so many Lightning owners, builders, and flyers, and it helped me to continue my close association with the factory. It has been an honor and lots of fun. Besides, I have been able to log lots of Lightning time in every different Lightning model.

For the future I am hoping that someone in the Lightning community will decide that the newsletter is important enough to take on that mission. You might be a current Lightning owner, builder, or maybe even someone that hopes to be a future Lightning flyer. The Lightning community needs you to volunteer. The newsletter is important to the entire Lightning community, both current and future, plus, you will get to meet some fantastic people. What a great deal! Give it some thought and let us know if you have any questions. Please contact me at [N1BZRICH@AOL.COM](mailto:N1BZRICH@AOL.COM), or the factory guys at [info@flylightning.net](mailto:info@flylightning.net). Let us hear from you!

Blue Skies,

*Buz Rich*

[N1BZRICH@AOL.COM](mailto:N1BZRICH@AOL.COM)