

The "Lightning" Magazine

Sharing Info between Builders, Flyers, and Future Customers

First Quarter 2015, Volume 8, Issue 1

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Lightning of the Quarter – George Andre's Jet

Letter from the Editor

Attending aviation events to obtain information to include in the Lightning Magazine, "Hangar Talk", is interesting and fun. I get to meet and work with really nice people. This year should be another interesting one for Arion Aircraft, the Lightning, and Lightning owners both current and new owners. The US Sport Aviation Expo in Sebring, FL was a day longer this year although the weather was not optimal; it seemed to be a successful event. I will have more on that later. The picture above is another of a happy Jet pilot getting ready to go flying. If you would like to see your plane added to the list of those highlighted, send me a short write up and a couple of nice pictures. The next major event I will be attending is Sun-N-Fun, see you there.

Blue Skies,

Dennis W. Wilt
dwwilt@aol.com

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Lightning of the Quarter

Article by George Andre

You had earlier wanted to do some newsletter info on owners so here is my input. I first saw a Lightning Jet when my friend Mike Letrello took delivery and gave me my first ride at our airport at Creve Coeur Missouri outside St Louis. I was really impressed with the beauty of the jet and it reminded me of the looks of one of my favorite homebuilt, the Lancair designs. In fact, I can't believe they didn't just make a mold and copy it, curve for curve.

Having had some medical problems off and on, and needing a special issuance every six months from the Feds, the idea of flying under the light sport rules was especially attractive to me. One of the things that surprised me in flying Mike's jet was the difficulty to achieving a predictable and smooth landing touchdown. I couldn't believe I had so much trouble with that.



I would find an amateur built jet for sale that was the 11th kit produced and I snapped it up. It was not really finished to my liking, but as they say, "the price was right". My main complaint was the wiring. If the builder needed to connect a wire from A to B with a distance of 3 feet, and the wire on hand was 12 feet long, he just coiled up the excess and put it in. I have probably removed 5 lbs. of unneeded wire. I also removed an unbelievably complex elevator and aileron trim system and installed simple toggle switches on the panel. Also removed the old design strobes with large heavy power supplies and replaced them with LEDs.

My goal is to keep this as simple and light (that means fast) as possible. I have a 50 plus year career of flying hard IFR without incident and I want to keep my lucky streak going, so this will be a VFR only cross country machine for me.

Getting back to my landing problems, this particular jet already had the MK II tail and it makes a world of difference in handling in the ground effect area. Another big thing for me to learn was to keep it slow and stabilized on final. I tell people that if you have the sight picture perfect, the control response comfortable, the noise level about right, the pitch attitude looking good, you are probably 20 knots too fast. It really takes a much fined tuned and stable final approach with perfect airspeed control to affect good outcomes on touchdowns. Easily learned, but needing frequent monitoring.



My own background includes 24 years as a USAF and Air National Guard fighter pilot, a stint as a Lockheed experimental and production test pilot/Flight test engineer on the F-104 and SR-71 (that explains the skunk on the tail), management pilot at TWA

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until retirement, air show performer and aerobatic competition, and most recently racing at Reno.

I just turned 80 and my wife and I are looking forward to many years of Lightning flying spending as much time ABOVE 120 knots and BELOW 6 gallons per hour as we can.

George Andre

US Light Sport Aviation Expo - 2015



The weather tried really hard to put a damper on the Expo for 2015. It was cold and overcast for the most part, but as you can see, by Friday, the skies were clear and there were plenty of people interested in the Lightning.

Since the weather kept most of the aircraft from getting to KSEF (Sebring Municipal Airport), I was asked to try to bring my jet over on Wednesday. The weather kept me out, but on Thursday morning, I was able to leave my home airport, Sebastian Municipal Airport (X26) and make the half hour flight to Sebring. It is shorter if you can go straight across the state, but unfortunately, the Avon Park Bombing Range (R2901) was hot and I had to take the route around the bottom of the restricted area. Still, all in all, a nice flight. Tuning to Lake Jessup Arrival as I was coming up from the South, I heard nothing on the radio. So, I tuned to the temporary control tower frequency and nothing there as well. So, I called in 10 miles from the South asking if there was any chance for a direct route to the airport instead of making the standard arrival for the show. The tower cleared me to land straight in Runway 01. I let them know I was a show plane and would be taxiing to the demo area and they came back with a "Roger, we will direct you on Ground after landing". The picture below is right after we walked N616DW from the shut down area to the booth at the show and all set up. The ceilings were 1700ft and it had warmed up a bit. Every morning it was fairly chilly and with the humidity and wind, it could be down right cold until the sun was up for a while. That, my friends is Florida in the winter time. It was in the 40's in the morning and warmed up to the 70's by the middle of the day for most of the time at the Expo.

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Your Magazine Editor and his Jet

After we put the plane in the booth, we had some good foot traffic. Greg and Crystal Hobbs from Lightning Southwest said that not many people stopped by before the plane arrived, so having it there was a big help. Crystal waxed the plane twice that day and at least once every morning after that and cleaned the plane after every demonstration flight. Carl Beatrice went up with Nick on Thursday afternoon for the demo flight and he had a blast. Pictures below:



Ready for Takeoff



Fly-By



There They Go Again

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Here They Come

Carl had a great time and I was very happy he got a chance to get a flight in with Nick in my plane. Carl is recovering from some health issues and has not been able to fly for a while. He had a big smile when he got back, so it was all good.

Below are some pictures for your enjoyment:



Somebody Taking a Second Look

A Rare Moment, Must have been Lunch Time



From The Florida Aviation Network, two really nice pictures of N616DW

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Wheeler Express



Glasair III



Buz Rich, Donna Wilt, and Randy Burdette

The 2015 Expo turned out to be a success especially after the airplanes finally arrived on Friday. There were a lot of “stealth” airplanes around the show before then. The two non-Lightnings above are just nice airplanes and we all like nice airplanes. They were both in the Aircraft Sale Lot and were for sale. The Wheeler Express is a fairly rare homebuilt and is a really nice, fast airplane that will carry 6 people. The Glasair III is here because it is just really nice and that is not a paint job, it is all vinyl stick on.

The last picture is of all really wonderful people. Buz, most of you know, Donna is my wife and co-pilot / flight instructor, and then Randy is the Executive Director of the Virginia Department of Aviation. Buz is the reason I built a Lightning and has been a friend since about 2002. Donna is, well she is the most important person in my life. Randal has been a friend since I met him when I was working on Aviation Research with NASA Langley Research Center. One very cute note of interest, a family was walking by the booth with a little boy somewhere around 3 or 4 years old. He pointed at my plane sitting on the checkerboard and said, “There’s the race plane Daddy!” Made me smile.

The only downside of the Expo was an accident that occurred on Friday morning. There was a crash of an Aero Adventure Aventura aircraft that took the lives of Dennis Day and Jason Spinks. Prayers are extended to the family, friends, and colleagues of these two aviators.

News from the Factory

The UL390is 160hp Lightning is in full dress and ready for final flight testing. We will have some good solid data in a week or two.



UL390is Powered Lightning – Pretty!



Corner Latches

On some Lightnings the corners of the canopy will suck up in flight. We are playing with a set of corner latches to solve that issue. Easy to fabricate and retro fit to flying aircraft. The latches are located well behind the occupant's shoulders and back, but easy to reach.

Recent Safety Alerts and Service Bulletins:

There are no new Safety Alerts or Service Bulletins to report at this time.

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For Sale at the Factory:



N830LW is for sale

2007 Light Sport Compliant EAB. 63hr TT, 10/13 Last Annual, 8.4" GRT EFIS & EIS, Garmin SL-40 & GTX-327 \$79,900 OBO.



N332AL is SOLD



N337AL is Sold



N339AL is Sold!!

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News from the Dealers

From Lightning Aircraft West:

Sebring Opens

Amid stranded aircraft and cloudy skies Sebring 2015 opened on Wednesday. Crystal said she finally took off her winter coat yesterday. (Editor: Crystal was wearing a Parka, she looked like a Floridian when the temps get below 70.)

Here is part of the official report for the day from the website:

“Day Three of the 2015 U. S. Sport Aviation Expo dawned gray again, but by mid-morning the long-promised sun finally broke through, allowing local pilots and those stranded at faraway airports to make their way to Sebring Regional Airport.”



A couple of shots of the booth by Crystal

Remember AI from the last two Newsletters?

AI's plane has been inspected!! It completed the inspection and passed on November 19, 2014. I assume it has flown, but no first flight pictures were on the blog site.



AI's Jet Ready for Inspection Ted DeSantis, DAR and AI

Congratulations to AI, he will have many years of great flying ahead. Way to go AI!!

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New Grips for Greg's Lightning

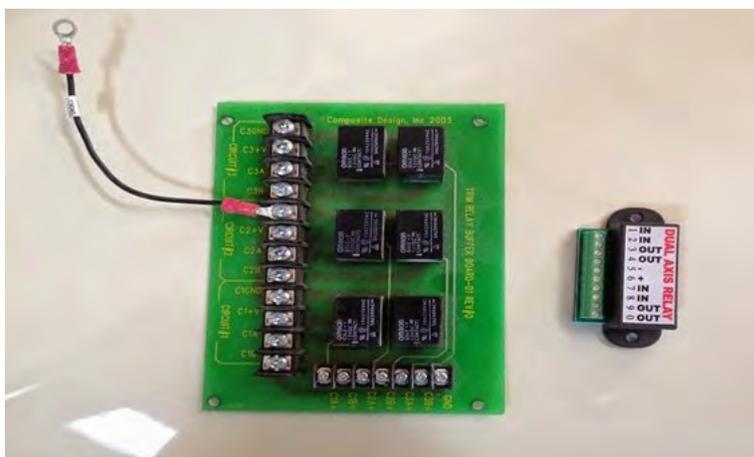
Greg decided to change out his airplane grips. His former ones have the control buttons on top, as seen in this first photo. This new grip is in the second picture. It is a Tosten airplane grip.



Ray Allen Grip



New Tosten Grip



Note the Difference in the Relay Size (New one on Right)

See the grip pictures below. The red button is to talk, the small black below the red one is for auto pilot, the spiral one on the top moves up and down for trim and the silver toggle is for flaps. The side plate allows a platform to be added.



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Perhaps, the style of grip one chooses is a personal preference, but Greg's reason is a good one. He said that it was easy to touch a button he had not intended to while pushing another one with his thumbs. (Editor's Note: Both me and my wife Donna had this same issue and it is why the Ray Allen grips I have only have the PTT switch on the top.) He had also changed trim as he was looking at a map and it brushed across the top of the grip.



Almost Installed, the Relay is Being Wired

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From Moonshine Aviation:



Lightning S-LSA for Sale!

This is a 2012 factory built S-LSA, 60 hours total time, Dynon Skyview 10" EFIS with autopilot, Mode S transponder, Garmin SL40 radio, Garmin Aera 796 with XM weather, Retractable sunshade, MK2 tail, fresh annual, all the good stuff.



The owner, unfortunately, passed away and I'm selling this for the widow. Asking \$85K - hate to see a good airplane sit on the ground.

Contact info - voroninmax@gmail.com and 386-873-9995 - Max Voronin

From Green Landings:



Ryan Gross from Green Landings told me that they are currently converting a Jabiru powered Lightning into an XS. So, very soon, there will be another O-320 powered jet out there. Hopefully we will see some pictures later this year.

Current Lightning Dealers or Representatives



Arion Lightning, LLC, contact Nick Otterback, Shelbyville, TN, 931-680-1781,
www.flylightning.net



Lightning Southwest: Geronimo Experimental Aircraft, Greg Hobbs, 18750
West Avra Valley Rd, Marana, AZ 85635, 520-405-6868
www.lightningaircraftwest.net



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



Upper Midwest: H & S Aviation, Tom Hoffman, 3015 Shady Ln, Neenah, WI
54956-9509, (920)-585-9704



Lightning Florida: Moonshine Aviation, LLC, Max Voronin, 917 Biscayne Bay
Unit #5, Deland FL, 32724, 386-873-9995, 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



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

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Pilot Spotlight (New This Issue!!)

Editor's Note: As I mentioned in the last newsletter, Bear Bryant suggested a new section in the newsletter, the Pilot Spotlight where we highlight a Lightning pilot each issue. This issue, it was decided to highlight Carl Beatrice, an excellent pilot and friend. I hope you enjoy the article and pictures.

Article by Carl Beatrice:



Carl at the Factory Going for a Ride with Nick

I grew up in Watertown MA, (just west of Boston). I now live in Greenland NH just a 1/2 mi from what used to be Pease AFB, in Portsmouth NH.

I've spent about 65 years of my 81 yrs. in some form of aviation. My best friend, who was 1 ½ years older than me joined the USAF in 1949. So I figured the next best thing for me was to join the Air Force Reserves, which I did in March 1950, at just over 16 years old. (Editor's note: Carl either got written permission from his parents or fibbed about his age to enlist at that age.) I wanted to be a meteorologist so I went to the Hanscom AFB weather station and talked to the warrant officer in charge. He said they had no openings at present but to sign up and become a prop mechanic, as all they do is walk around with a pail of yellow paint. So, I signed on as apprentice propeller mechanic.

The Reserve squadron was then a troop carrier squadron with C-46's and AT-11's (Beech Model 18). I took advantage and went flying every at opportunity I had. I even occasionally got some stick time even though I didn't half know what I was doing.

The Korean War became worse, and then in January 1951 my squadron was activated. I ended up at Kelly AFB San Antonio as a prop mechanic, but later was transferred to Sheppard AFB in Wichita Falls, TX where I became an instructor and taught propellers at what was then the largest A & E school in the world. In June 1952 I was released from active duty. I didn't do much for about a month. Then I visited some of my friends, who worked at Hanscom AFB, which was then expanding under Air Research and Development Center (ARDC). (Editor's Note: I have worked at Hanscom AFB as a Systems Engineer when I worked for The MITRE Corporation.)

The prop shop foreman asked if I wanted a job, which I accepted. I worked on AT6, C45, C46, C47, C54, C97, C119, B25, B26, B29, and B50. I still belonged to the Air Force Reserve which was now flying fighters, using P51's. I loved running them up!

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Then in 1954 the Air Force sanctioned Aero Clubs so that those who didn't fly would now have the opportunity to fly at reasonable prices. I joined the club and learned to fly in a J-3 Piper cub. The cub rented for \$4/hour an instructor was \$3/hour gas was 35 cents/gallon. Hanscom was one of the best military clubs around. We grew to have 4 T-34A's on loan from the Air Force at \$8/hour wet and two Cessna 140's at \$6/hour. The club purchased 4 Cessna 172's for under \$10,000 each renting at \$8.00/hour and a Cessna 182 renting at \$12/hour. A good friend with A&P/IA and I maintained the airplanes after regular job hours and were paid \$3/hour.

I continued to pursue flying and went on to soon earn private, commercial, instrument and then flight instructor, followed by instrument flight instructor. I did a lot of instructing in the club and soon had to give up working on the airplanes, and devoted my time to strictly instructing.

Then in 1965 the airlines were hiring strong, which really got my interest. It was a big decision as I had almost 15 years with the government and for the first year with the airlines you are on probation, so they can fire you for almost no reason at all. Plus the pay was \$500 per month. However I did apply to Northeast Airlines (smallest trunk carrier in the US) and was hired in October 1965 at age 32. I spent the first year as DC6 flight engineer, then a year as co-pilot. I became Captain on the DC-9 then came the merger With Delta Airlines on August 01, 1972. I later checked out the B727 as Captain and then the B75/767 ending my career in June 1993 (mandatory retirement age 60) I retired on the B767ER our last trip being from Moscow to JFK.

I met my wife, Pat in 1966. She then owned a Cessna 206 and was going to make a fortune flying freight etc. She already had a commercial ticket when I met her so I was to get her the instrument rating. We were married in 1969.

In 1999/2000 my wife Pat and I built a Van's RV6A which I dearly love I could not say a bad thing about it if I tried. In 2007 we started looking at LSA, we looked at a lot of different ones and flew a bunch (+/- 28) but none really rang our bell. Then in 2008 at OSH, while walking around, I came upon the Lightning tent. **This airplane rang my bell.** They were not giving demo rides, but Buz was really gracious and explained the airplane and answered questions. I wanted to fly one but at that time I think only 47 were flying and none near us. So in September we flew to BNA drove to SYI and took a demo flight followed by signing on the dotted line. We began work on our Lightning on February 16, 2009 under the Builder Assist program; this is a neat way to go. We first flew it on April 04 2009. We now have just over 340 hours on the airplane, and I must say we are very happy with our choice, particularly with the new larger stabilizer.



Buz Taking up Carl's Jet for a Test Flight, Notice Carl Taking a Picture

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I owned a 1941 Taylorcraft BC65 and enjoyed it on wheels and skis in the winter any lake was a landing strip. Then we bought a 1983 Cessna 172P and owned it for 17 years. We called it our "Sunday driving airplane."

We have attended OSH for at least 20yrs and enjoy it the best. I guess our second choice is Fantasy of Flight which unfortunately is closed. (Editor's Note: Fantasy of Flight is open for special events only, but plans to open a new destination attraction.) We have also gone to Sun n Fun a few times and also the LSA Expo in Sebring Florida.



Carl and Pat (from the Hangar Talk Issue 6-4)

From the Editor: Carl wrote this article while being network limited and I think he wrote it on his phone. Carl is like that, you ask for something and if he can, you've got it. Carl and Pat just fit together. It is wonderful to see people that enjoy themselves and their passions so much. I am blessed to be able to call them both friends.

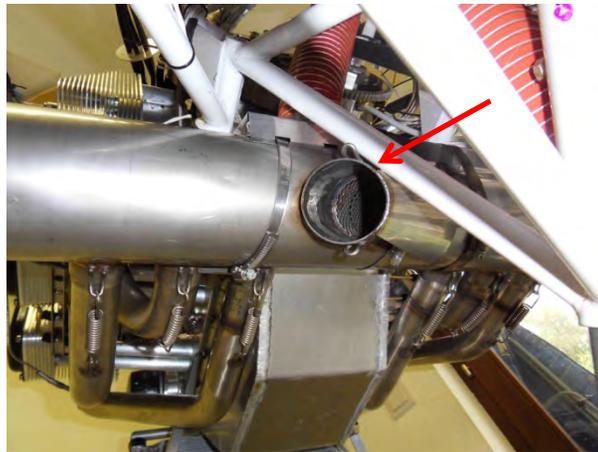
News from Builders and Flyers

Muffler Dilemma from Gerd Nowak:

Article by Gerd Nowak

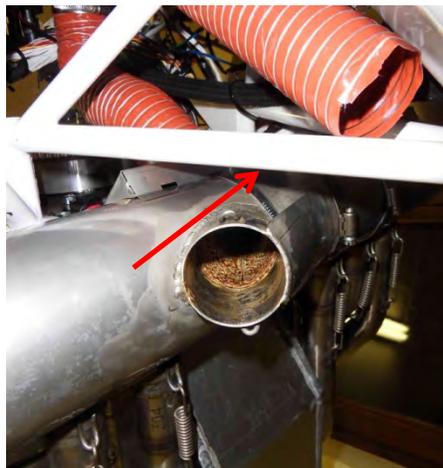
Group,

If you plan to build a Lightning with a UL power 6cyl engine and an exhaust muffler (yes, some of us live in noise sensitive regions of the world and have to have them!) you should be aware that the standard muffler's exhaust tube and its heat shield does not quite clear the newly designed engine mount that is now sold as the standard mount for ULPower engines. The muffler fits fine - although you should mount it on the 6 exhaust tubes and also put the heater on first because there won't be enough room once you have the engine fixed - but as stated above, the heat shield contacts a mount tube - see pic!



Arrow Shows Interference of Muffler

My solution: I got a modified muffler from ULPower with the exhaust tube welded on a bit to left and forward, now all is good. See next pic.



Arrow Shows Where Interference used to be

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Maybe in the future a Lightning modified muffler will be available, or maybe they can weld one for you as they did for me, for a little extra fee. Another solution: ULPower offers a muffler without the final exhaust tube, so you can look for somebody who welds it on at the right spot.

In all other regards the new 10" engine mount is a success, it clears all engine parts and I was able to accommodate all on the firewall and between the firewall and engine with no major hassle - except after I had closed all the holes in the firewall and fixed all the wires and tubes and cables my hands looked as if I had strangled three cats!

Gerd, - Kit 162, D-EGFL

If It Ain't Broke, Upgrade It!

Article by Paul "Bear" Bryant

What's that you say? Normally, if it's not broke you don't go and try to "fix" it. But in my case, I'm always looking for an easier process or method of doing things. This past spring when I was in Shelbyville having my tail mod completed, I happened to see different static/pitot fittings on Mark's airplane from what was on my Lightning. I was curious as to what they were and where he purchased them. The fittings and tubing were from Stein Air and are a quick-disconnect type of fitting. These are very well made and make the removal of pitot/static lines very easy.

At one time, I had to return my autopilot to TruTrack for service and remembered how cumbersome and awkward it was to remove the static and pitot tubes from the nylon plastic fittings which were used at the original build. These fittings use a ribbed protrusion to prevent the tubing from slipping off. Once the tubing is fitted onto these types of fittings, they are very hard to remove.



Original Tubing behind the Panel

So, I recently decided to purchase some of these quick-disconnect fittings for my Lightning and off I went to replace all the pitot/static lines and fittings. However, I did retain the portion of the original lines which came in from the pitot/static tube located on the right wing and the portion which ran through the wing and into the spar box. There just wasn't a need for any quick-disconnect fitting in that location. So, as you can see in the picture, my first new quick disconnect fitting actually began in the spar box. By the way, the new tubing is smaller in diameter than the original tubing, but where I placed the first quick-disconnect fitting there was already a splice in the line to make removal of

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the wing easier. That splice already had a smaller, “step down” piece of tubing in between the original line, so placing the new fitting there was easy.



Where the Old Tubing and New Tubing Meet

The new tubing is also color coded to help with separating the pitot from the static line. The big decision (challenge) and to keep the process simple was to determine how to remove the old lines as they go through the spar box up behind the center console and back underneath and behind the panel to the appropriate gauges. Behind the console, the original tubing goes through a harness which also houses all the electrical and fuel lines. At first, I was going to leave them alone and just thread the new lines through the harness as well, but in the end I slowly pulled the old tubing through the harness. I just didn't want to leave something there that's non-functional and it's a lot cleaner that way too.

As a result, I threaded the new lines through the spar box up through the center console, but kept the lines on the outside of the harness and just tie wrapped them to the harness instead. This made the install go a lot faster and if I needed to get to these lines later, I would not have to disturb the harness again. Once the new lines were threaded through the console and up behind the panel, it was just a simple matter of removing each gauge from the panel, removing the old lines and plastic fittings and replace using the new fittings and lines. A unique feature of the fittings allow for a small swivel motion to allow easy adjustment and positioning of the lines. The fittings also have small holes to accept tie wraps or other material to keep them in place. After all the new fittings were tightened to the back of the gauges, I just slid the new color-coded lines into the quick disconnect fitting and it was done. I then bolted back each gauge into the panel. When completed with all of the connectors, I did a check of the lines and saw that I did have good readings. Then went to fly.



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New Tubing behind the Panel

Ahh, “if it ain’t broke don’t fix it...”. On the first flight after the install, my indicated airspeeds were approximately 20-30 mph slower than I was actually flying. This was not good. So I went back and checked all the connections and found I had not completely seated the tubing in one of the fittings. A second test flight and all was normal. The new quick-disconnect pitot/static system is great. The fittings are a very high quality product and provide an easy method to disconnect the tubing from the gauges and flight displays if the need ever arises.

For my Lightning, I spent approximately \$50.00 and it took about 6 hours to complete.



Parts Purchased for the Modification

Garmin G3X Install:

Article by Curt Stein:

I just attended the US Sport Aviation Expo on January 15, 2015. Got to finally meet Nick from Arion, Dennis Wilt, and Bear. Dennis asked me to tell a little bit about myself, my plane, and the new Garmin system. Let me start by stating that I did not build my plane. I was fortunate enough to find a good used one for sale by the original builder, Greg Crouchley. Greg did an excellent job of building the plane. (Editor’s Note: This plane is the first Lightning that I flew. I flew it at the Virginia Festival of Flight in 2010.)



N126NM at Green Landings

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Before my purchase, I visited the Arion booth at the Sport Aviation Expo in Sebring, FL. several years ago. At that time, I was sitting in several of the planes just to see if I'd fit. I'm 6'2", but long in the torso. I sat in the Lightning, but didn't fit. I was disappointed at that time. I didn't buy a plane that year, but kept my eyes on the Lightning.

The following year, I decided to visit Ryan Gross at Green Landings, in Hedgesville, WV to take another look. I had the same initial results. Ryan thought about it for a minute, took the seats out, and sure enough, I fit. I asked him if he knew of any Lightning's for sale and he mentioned that Greg had one he might sell. We went to the hangar and pulled it out. I liked what I saw and we took it for a "demo" ride. After that ride, I had to make the deal. I talked to Ryan and he suggested installing the newer tail modification before I took it home, as well as lowering the seats and reclining the seatback. In a matter of months, it was all done.



The Seat Back Moved for a big guy The New Wiring and Panel Going In

I'm a low time pilot with no previous experience in anything like the Lightning. My experience was with training in a Cessna 172 and Piper Archer. I have a dozen or so hours in a Diamond DA 40, a couple in a Cirrus SR20 and 2 hours in an Evektor Sportstar. I did have 18 hours in a Schweizer helicopter, but personal issues turned me away from finishing that rating. Before I took the Lightning home, I asked Ryan for some instruction and he had me flying around the patch and up to Hagerstown, MD for some take-off and landing practice. From there it was going home. My insurance company wanted me to fly with an instructor for a few more hours as part of the underwriting.

A few months gone by, and a few hours of flying, have reinforced my decision in my purchase. There were several occasions where I would have glitches with the existing MGL Voyager EFIS and radio. Finally, in August, I took the plane for its annual condition inspection. My neighbor has his A&P and looked over my shoulder as we did the inspection. Everything seemed to go well, no problems with the plane.

As I taxied out to the runway, I made the call to the tower. He gave me the clearance to take off. As I read it back, "bam", the radio stack went dead. I taxied up the runway to the first pull-off and headed back to the hangar for some troubleshooting. It turns out the radios were overloading the circuit breaker inside the panel. We reset the breaker, shed some load and I was ready for take-off again. This time, I completed the read back and headed down the runway.

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I got up to altitude and turned towards home. As I was flying along, I looked down and the EFIS went blank, then restarted, went blank, restarted, and then finally blank. Fortunately, I had visual reference to where I needed to go and made it back to the airport. Once I landed, I knew that I had to make a change.

I read several reports on both the Dynon Skyview and Garmin systems. No one could really say anything negative about either. For personal preference, I chose Garmin. Now it was time to call around to different dealers, shopping price and questioning their service. I bought the system from Stein Air. Stein and his group have made the purchase easy and thorough. While Garmin restricts pricing, Stein has helped in other areas to offset some of that expense. As part of the package, he included a wiring diagram for the entire system. He supplied the panel, completely cut out for all of the components, including brackets for the radio and audio racks. Just add nut plates and install the items. Stein also provided phone assistance during the install and helped get answers from Garmin when they were needed.

My Garmin system is the new G3X Touch with dual 10" displays, GTX-23ES transponder, GTR-20 Remote Comm radio, GEA-24 engine module, GAD 29 interface, GMU-22 magnetometer, Dual GSU-25 AHRS units, GMC-305 autopilot controller, GDL-39R ADS-B, GMA-240 audio panel, GNS-430W GPS, and two GEA-28 servos. The autopilot can be operated by the controller or by either touch screen. There's also an AP disconnect button and TO/GA button.

My neighbor and his friend helped me with installation and wiring the new system. This has been a real education. I learned more about the systems than I probably wanted to know, but now I can more easily troubleshoot if anything goes wrong (hopefully nothing). The time to rip out and reinstall the entire system, working on it sporadically, was just over 3 months. Finding space to fit everything was a challenge.



Instrument Panel Before



Instrument Panel After

My neighbor (the A&P) called the FAA to ask them about the plane and any required paperwork for the installation. When I heard this, I gasped and held my breath. Sure enough, I had to pay a visit to my local office and meet the inspector. We all dread this meeting, the thinking and not knowing what to expect. When I met the inspector, he was friendly, actually smiled. After we talked briefly about what work we had done, he explained to me what I had to do and why.

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As it turns out, I'm required to make a log book entry to include all the changes we made to the plane. Create a new weight and balance, and insert it in the manual. Make a logbook entry to place the plane back into "phase 1" flight testing for 5 hours and restricting my flying to a 25 mile radius. Once the 5 hours is finished, make another entry removing it from phase 1 back into regular use. He did require me to email him scans of the log entries as they occurred.

Since the installation, I've begun flying the plane again. I have to report that the Garmin system works as advertised. The displays are easily readable in sunny conditions. The radios now are so much clearer than the original MGL radio. The functionality is more intuitive than that of the MGL. The initial setup was fairly painless. The auto pilot works out of the box, minor changes to the gain setting to correct oscillating were needed. The auto pilot also uses auto trim on the elevator, no more out of trim issues when you disconnect. The 430W will drive the auto pilot and fly the coupled approaches down to minimums as well as holding patterns. With the GDL-39R and transponder, you get traffic and weather, and meet the 2020 mandate for ADS-B compliance. Last, if you have an iPad you can use the Garmin app to create flight plans and upload them via Bluetooth to the system or use it as an additional display.

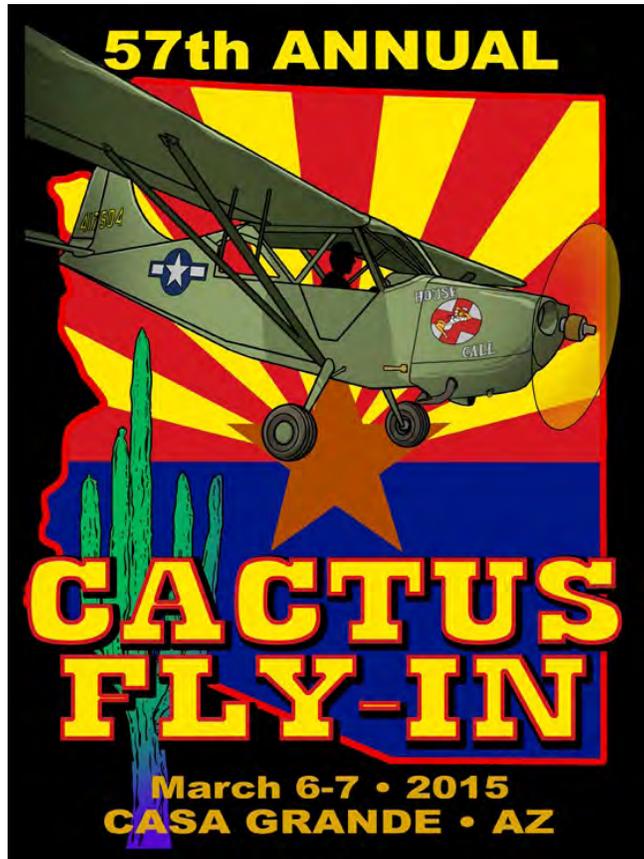
I want to thank Nick from Arion. He made himself available several times by phone to assist with my questions and give me guidance. Ryan, from Green Landings, for his earlier efforts and help were appreciated too. Customer service and support by these individuals is, as the ad says, Priceless.

If I sound like an advertisement, I'm sorry. The avionics system now matches the plane for a complete package. Speed, economy, good looks, performance, ease of maintenance, low operating cost, and reliable navigation/communication, what else is there?

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Upcoming Events

Casa Grande – Fly-In: March 6 – 7, 2015



For all of you South Western folks, this should be a fun event. Information can be found here [Cactus Fly-In](#).

Sun-N-Fun Fly-In: April 21 – 26, 2015



Sun-N-Fun is always a great event. Information can be found here [Sun-N-Fun 2015](#).

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Virginia Festival of Flight: May 30 – 31, 2015

The 17th
Virginia Regional
Festival of FLIGHT

Suffolk Executive Airport
Suffolk, Virginia

May 30 and 31, 2015

Saturday 8AM - 5PM Sunday 8AM - 4PM

2 Days of Airplanes & Family Fun
from Ultralights to Multiengine!



I have been to this fly-in several times. And, for the first time in several years, there will be an airshow. It should be a lot of fun. Information can be found here [Virginia Festival of Flight](#).

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Final Thoughts



The adventure continues. The plane is now in Shelbyville to install the MK II tail on my jet. Nick flew it up on Sunday after the US Sport Aviation Expo, many thanks to Nick for his friendship and help with the plane. So, by the time this is published I will be either on my way to Shelbyville, via commercial airlines or getting ready to go. The picture above is Nick and Carl landing after doing the Expo Fly By Demonstration. Carl has continued to thank me for letting him go up with Nick, but thanks are not necessary. The majority of people in aviation are wonderful folks and once you meet them, they become friends immediately. And as Paul Poberezny always said, it's about the people. Carl and Pat are wonderful people and have become friends in just a couple of visits with them. It was my pleasure to let Carl go for a short ride. The smile when he taxied back in was all the thanks needed. If you noticed, the "Newsletter" changed to "Magazine". For any publication to include as much as this one does, it is no longer a Newsletter. A Newsletter is usually no more than 5 pages. This magazine has always been quite large and includes many sections that really allow us to call the publication a true magazine. Expect the next issue, 8-2 of the Hangar Talk Magazine to be published in late April or early May after Sun-N-Fun in Lakeland, FL (KLAL).

Blue Skies,

Dennis W. Wilt