



Hangar Talk

The “Lightning” Newsletter

November 2010 - Volume 3, Issue 11



Moonshine Aviation’s Lightning of the Month

Please submit a photo of your Lightning for future “Lightning of the Month” consideration.

The newsletter goal is **to get the word out** on anything having to do with the Arion Lightning aircraft, and **to give a voice to Lightning builders, flyers, and anyone interested in this amazing airplane**. It is not only a way for the factory to provide Lightning news, but it is your newsletter as well. Its success will depend on you getting involved to spread the word and to help others that are considering a Lightning, plus building, flying, and maintenance tips. So think of this newsletter as an “exchange of information publication”. Send your inputs directly to me at: **N1BZRICH@AOL.COM**.

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And now, the rest of the news.

November 2010

This month's issue of the Lightning newsletter, Hangar Talk, covers the 2010 Lightning fly-in and homecoming that the Lightning Shelbyville team held on the weekend of 2 October. If you were there you already know what a great event this was. For those of you that were not able to attend, I think you will find the photo coverage of the event to be both interesting and informative. Check out the photos of the aircraft and people in attendance as well as the night time creeper racing activities. There is also a section about the flights back to their home base by several of the pilots. You should start planning now to attend this event next year. It is the absolute best way to learn about the Lightning aircraft, the Lightning team, and meet many of the Lightning builders, owners and flyers.

The lead article for this issue is the November Lightning of the Month, N787FL, the beautiful demonstrator aircraft built by Moonshine Aviation from DeLand, FL. Max and Olena did an outstanding job on this Lightning and I think you will enjoy Olena's article about the build and some of their build photos that they have shared with the newsletter readers.

N787FL – November Lightning of the Month



A Chain of Unlikely Events

or how I ended up becoming a fiberglass junkie :)

by Olena

On July 28, 2008 my undeniably better half, Max, dragged me out to Oshkosh to introduce me to “the other woman”, in his case, aviation. It took me a while to realize that some of those wholesome masterpieces were not manufactured by factories, but built at home by people who simply loved aviation and were demented enough to build their own flying machines. Little did I know that we too would be joining the crazy crowd. The original idea was to build the Lightning



kit some day, then “someday” turned into “next month” and pretty soon I found myself in Wisconsin loading up the kit into the truck.

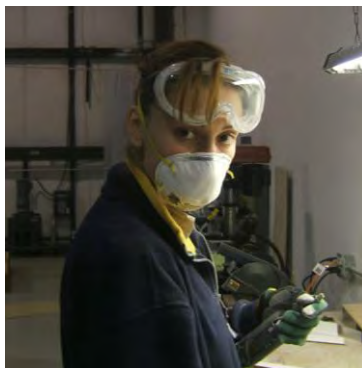
Then all the real fun began. The building part came easy to Max and his dad, after all, they are marine engineers by education, but I had a lot to learn. From the Janitor position I was quickly promoted to a Delivery Girl and got to go to Lowe’s and Home Depot to pick up the needed stuff. In due time I evolved into an Assistant who fetches tools and holds on to the other end of the wrench, but I kept hoping for more.



Wings on for the first time. Olena and Max’s dad celebrate by making airplane noises.

Finally the day came when I was allowed to touch the airplane. One of our fuel tanks was not drained properly after sloshing, and the chemical residue formed a rubber “bubble” in one of the corners. Naturally, the bubble had to be removed, but the guys’ hands wouldn’t fit in into the small hole, and I seized the opportunity. Thankfully my left hand fit through the opening and I cut out the pesky bubble thus gaining recognition as the Senior Assistant.

After a few days of studying the building manual and looking up the Russian translation for every other word like flaps, sockets, rat tails, spar box, rivet, and a screwdriver, I was ready to take on the power tools. Knowing that I am a world-class klutz, Max was not too thrilled about the idea, but two hours of my continuous whining resulted in the full-body and full-face armor and a generous permission to use the Dremel tool for 5 minutes. The moment I hit the power button I was hooked, and the 5 minutes turned into a few months of 14-hour work days... A side note – you definitely want to invest in a Perma-Grit cutting disc – that thing is perpetual. I got mine after going through at least two dozens of regular cut-off discs and having to dodge a few that broke and flew away, and have been happy since.



Olena’s mug shot. “Even a girl can do it!”

Mental note – when you are de-glossing the gelcoat, it helps to have a vacuum going right next to your work area. Otherwise everything in the vicinity of 50 feet will be covered with a thin film of fiberglass particles, and you will be cleaning it up. Another mental note – wear protective gear or shower with a heavy-duty scrubber – that stuff is itchy! Oh, and the manicure quickly becomes obsolete, but on the bright side all of that hard-core scrubbing leaves your skin glowing and gives you a radiant complexion.

The tough part of working with resin in our case was the weather – we had it cold and humid for about a month, and good luck finding a heater in Florida in mid-March – people look at you funny, and then even funnier when you tell them you need a heater to dry out the fiberglass layers on your airplane. Thankfully we did find a small heater and were able to harden resin in proper 48 hours versus five days it took before.



Putting the canopy together. No wonder that Lancair offers a fast built canopy option for the Legacy at the cost of \$4000. One of the days we went home at 4am.

We eventually switched to the West System resin and hardeners – the marine supply stores have the best pricing, and user-friendly (read fool-proof) dispenser system is super convenient. Whenever you are dealing with non-structural pieces, the West System 205 fast hardener is likely the best option, but keep in mind that it will only have about 10 minutes of pot life. A few important things you probably know already, but I figured I'd share anyways: don't mix resins and hardeners from different manufacturers – they are not meant to work together. Also, the deeper the pot, the sooner the mixture starts to “set”, so besides working in smaller quantities, you want a shallow tray for your epoxy. Last, but not least – even if you mixed the proper components, and at the proper ratio, you still want to keep an eye on the temperature of the material and not dispose of unused mix until it cures completely. I've had a pot set on fire, and it was fantastic to watch it burn outside on the concrete pavement...

A few awesome products I've discovered while working on our Lightning:

- AEROSIL R202 – lightweight hydrophobic fumed silica, results in increased viscosity, increased scratch resistance, has a high load of molding compounds, can and should be used in structural areas.
- West System 404 – perfect for small patches where you need maximum bonding strength, a little heavier, works great with any hardener, and gives you extra “stickiness”, so you can add it to other fillers when you need that extra flexibility and strength.
- West System 410 – perfect low-density filler for larger areas, easier to mix in than microballoons, easy to sand. Used it for most pre-paint cosmetic jobs – very economical, very easy to work with and for added “stickiness” at curved areas we mixed it with a dash of 404.

I have to admit – I love the smell of epoxy in the morning, or any time of the day given the chance... And even better than smell is the texture of resin mixed with filler – that gooey sticky stuff is practically identical to cake frosting, and is just as fun to play... hmm... I mean work with. Even though you have to follow the manual and only cut certain holes, and remove only so much gelcoat, and layer a certain number of fiberglass strips, and you obviously don't want to glue the air vents to the rudder, there is still a very creative touch to it... I experimented with various filler mixtures, and since all of them vary in color, it soon became easy to match the proper color of the mix with the needed density and viscosity, so say a dark chocolate color meant that that mix is super-sandable, while off-white putty screamed for a careful removal of uncured mix ASAP. Some people take on pottery classes, but plane-building did it for me just fine. And the reaction you get when you tell someone you did the fiberglass work on your airplane – priceless!

P.S. Looking back I see just how nuts we were to have built most of our airplane in a month and a half, but it was great! Given, there were a few misunderstandings, and a few “this-is-your-stupid-plane” arguments, and even a few tools thrown in the direction of other people's faces (sorry, Max), but all in all I cannot wait to build another flying baby!

P.P.S. I got my first flying lesson! I heard someone say that I taxied like a drunken sailor, but hey – I didn't end up in the ditch, nor did I hit anything with our beautiful long wings, and that's all that counts. I did do a pretty good job on keeping the plane stable and heading in the right direction, the basic turns were semi-smooth, oh and the barrel roll my instructor showed and I will not tell you about ... was simply breathtaking! ;)

Голубое небо,
Olena

Below are a few more photos that Max sent.



Last, but not least is Max's submission to the "Babe on the wing" photo competition! Oh, that's just some girlfriend of Olena's, excitingly watching Olena do the carbon fiber on the panel. **Max, that's a great photo and idea. Everyone submit your photo entrant (male or female) for the "Babe on the Wing" contest. Of course, centerfold photos, like Mark's, are also welcome.**

2010 Lightning Fly-In and Homecoming

This first photo shows most of the Lightnings in attendance, expertly placed in the Arion hangar. Overall, it was the best Lightning Fly-In that we have had.



In contrast to last year's Lightning Fly-In, the weather this year was fantastic and as a result we had some great flying activities as well as evening hangar fun. Friday night creeper races were just as exciting as they always are and the winners of the various events are listed below. The creeper racing events were all sanctioned by the Creeper Racing Association of Professionals, CRAP. During the evening we had oval track, slalom, and drag race events. The fourth event, team GCA (ground controlled approach), was a demonstration event only in hopes that next year several teams will enter. Below, in addition to the results, are numerous photos showing CRAP contestants, CRAP race officials, and the CRAPpy fans.

Friday night creeper races results-

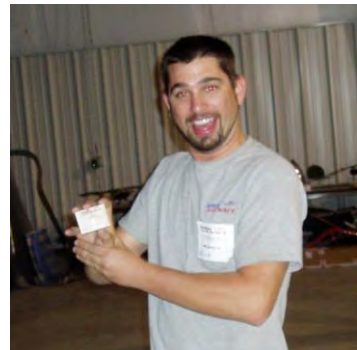
Oval track: 1st place Nick
 2nd place Ryan
 3rd place Moostang Mike
 4th place Mark
 5th place George

Slalom: 1st place Tom
 2nd place Nick
 3rd place Paul
 4th place Earl

Drag Race:

After double elimination runs, Mike and Mark were paired for the winning run.

 1st place Mark
 2nd place Mike



Hey, I won a "one of a kind in the whole wide world" creeper racing trophy.

The photo below shows this year's demonstration team GCA (ground controlled approach) event, where one team member, who is blindfolded, "flies" the creeper around the pattern to a landing while the other team member, stationed in the tower (standing on a chair), gives verbal guidance

to the blind POC (pilot on creeper). Next year this will be a CRAP sanctioned event, so get ready to log some instrument time on your creeper.



Bear, flying his creeper blindfolded, takes GCA directions from Nick. I'm thinking either Bear was not IFR current or maybe his controller had a few too many brewskies.



Friday evening formation fun.

Saturday morning was a fly out to Winchester, Tennessee, for an EAA breakfast. All of the Lightnings in attendance that had open seats took other attendees with them, so overall, we had a good showing at the breakfast. Many of the Lightnings joined up for some formation flying to and from Winchester. That made for some good aerial photography, but no one sent me any photos. The photos below show preparations for Saturday morning's mass launch to Winchester.





Greg and Ryan lead the Saturday morning launch for the Winchester EAA breakfast.

Saturday afternoon's 2010 Lightning Air Race "113" Classic

Saturday afternoon's weather was perfect for the Lightning Air Race Classic 113. For this year's Lightning Fly-In, we planned a 113 kilometer round robin race course. Note: 113 kilometers equals about 61 nautical miles or 70 statute miles. The round robin race course started at the Shelbyville airport (KSYI), then went directly to the Ellington Airport (KLUG) in Lewisburg, then direct to Tullahoma (KTHA), and finally, directly back to Shelbyville to overfly the Lightning hangar for their official time.

Pilots were allowed to select their own altitude based on their aircraft's performance and forecast/actual winds enroute. However, all participants were required to comply with all basic VFR rules. Additionally, they had to cross each airport above the published traffic pattern altitude.

At the conclusion of each contestant's flight, they were asked questions about each airport to insure they actually flew to that airport. Each question could be easily answered by over flying the airport.

The questions for KLUG were:

Where is the segmented circle located?

What are the two closest things to the segmented circle?

The questions for KTHA were:

What is painted on the main ramp to the west of the main terminal?

What is directly west of that painting?

Starting rules were: For a runway 36 departure, the timing crew will start your official time when you cross directly in front of the Lightning hangar over the runway. If runway 18 is in use, your time will start when you release brakes.

Official race times ended when the contestant flew directly over the Lightning hangar on a NW heading above traffic pattern altitude – we suggested 2,500'. Contestants were to call 5 miles SE of SYI at 2,500 feet, then another call when 2 miles out stating they are overflying the airport on a northwesterly heading at 2,500 feet.



Official timing station – computer locked on to WWV for accurate time and starting line sighting device. There was a similar sighting device for the finish line.

Winning aircraft in each race class (light sport or unlimited) was the lowest total time.

There was also an award given for the most accurate flight planning and navigation over the same route. The winner of this award was the pilot that could best estimate the time to fly the route and the total amount of fuel that was used, including the taxi and run up fuel required for the runway in use on race day. The pilot with the most accurate estimates was declared the winner of the first annual Fred Noonan Award.



One of a kind Lightning “GOLDEN BOLT AWARD” trophies for the class winners. No expense was wasted in securing these “only one in the whole wide world” trophies.



Lightning Air Race “113” Classic award winners.
 The top Lightning, Richard “Rick” Edzel Light Sport Class, Carl Beatrice



The first annual Fred Noonan “Excellence in Navigation” award went to World Record Earl. We hope that Fred will be in attendance next year to present the award.

Several aircraft ran the **2010 Lightning Air Race Classic 113** course as unofficial entrants just to see how their times would compare. Not to be one to brag, but all race results are listed below, starting with the fastest at the top of the list.

1. Buz in Esqual “Lightning Stuff”, N31BZ. Total time was 24:12 = **174 MPH**.
(Note: No, I did not limit my engine to 2850 RPM.)
2. Possum in his RV-6. Total time was 24:50 = **169 MPH**.
3. Rick in his Lightning, N324AL. Total time of 28:12 = **149 MPH**.
4. Buz in the current demo Lightning, N326AL. Total time of 29:32 = **142 MPH**.
(Note: I did not limit the engine to 2850 RPM.)
5. Carl in his Lightning, N767CP. Total time of 33:27 = **126 MPH**.
6. Tom in his R-44 “helio”, N3157Y. Total time of 33:49 = **124 MPH**.
7. Earl in his Lightning, N17EF. Total time of 35:34 = **118 MPH**.
8. Alan in his modified Esqual LS, N99AD. Total time of 44:49 = **94 MPH**.
(Note: Alan says he had GPS problems and missed the KTHA turn point.)

Everyone that ran the course had a fun time, but bragging rights for the year go to Rick Edzel and Carl Beatrice for the two Lightning speed classes and to World Record Earl Ferguson for the navigation and planning award. The keys to getting a fast time in the speed events were accurate point to point navigation and picking the right altitude to fly on each leg so that you could either use the wind to help or to minimize its effect on your overall ground speed.

Knowing the wind was also a big part of Earl’s winning the flight planning and navigation award as he was able to accurately predict his total flight time and fuel burn with an 89% accuracy rate. Second place on accuracy went to Carl with an 84.5% score. Great job, guys! Fred Noonan would be pleased.

We have already had several suggestions for next year's race.

-Allow all airplanes to race at the same time. The thought here is that having just one airplane run through the course at a time is not racing, it's qualifying. Think Reno.

-You get extra points for flying the course in reverse, against oncoming race traffic.

-You also get extra points if you fly in a kilt (skirt). For example, see photo to the right of Aaron at Oshkosh this summer. Cute?



Below are additional photos from the 2010 Lightning Fly-In. My thanks to all that submitted their photos for use in the newsletter.



Bear, Babs, and Pat - relaxing in Tennessee.



Joe shows his engine to George.



Moostang Mike says, "Now Carl, when I start pushing, you pop the clutch and I'm sure the engine will start". The ladies, Claire, Katie, and Dana, thought that was a funny comment.



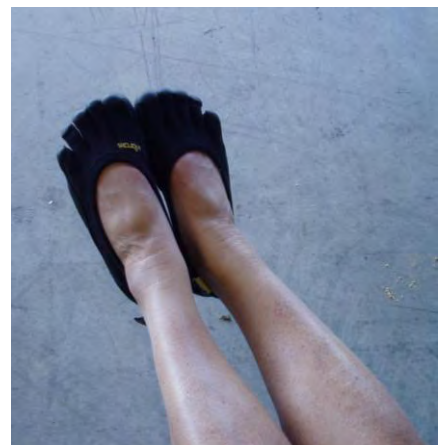
The crowd waiting for the creeper races to start.



Several distinguished attendees discuss Lynn's good looking legs; maybe it was his Lightning.



Nick leads the afternoon discussion on recent Lightning changes.



Joe and "Lady Toes" Cooper with their Lightning. Why is she called "Lady Toes"? Check it out.



Carl and Pat are from Maine, but hangar their Lightning in New Hampshire – which some call New Hamster. Photo on the right shows Carl checking his hamster's cage.



Mark prepares to autograph copies of his world famous centerfold photo.



Tom and Dori Hoffman, the Wisconsin Lightning dealer, arrived in an R-44. They gave numerous rides while over the weekend as well as providing great aerial photo coverage during the event.



Moostang Mike had his "ride" there for all to enjoy. He calls it a creeper based on its top speed. On the right is what it looks like without the body in place.





On the left, Nick and Buz prepare to fly the Jabiru 3300 powered S-19. It was lots of laughs and certainly a big improvement in performance over the Rotax version.

Why are these attendees sleeping? Did they have too much fun the night before at the Tennessee walking horse breeder's cup debutant ball?



Hey Joe, I think there is supposed to be a propeller on here somewhere.

Ben, Pat and Carl tune in the latest episode of Dancing with the Stars on the latest version of the Grand Rapids EFIS.





Jim (I don't need no glide speed) asks, "Hey Mike, why are you growing a beard?"

Mike says, "I'm applying for a part time job as a garden gnome: or maybe that was a WalMart greeter."

Tom (I don't need no thumb) says, "Hey Dori, do you think I could hover taxi the R-44 inside the hangar here?"



Photo left - Saturday morning on the way to Winchester for the EAA breakfast.
Photo right - Lightnings on the ramp at Winchester.



Earl, not setting a world record.

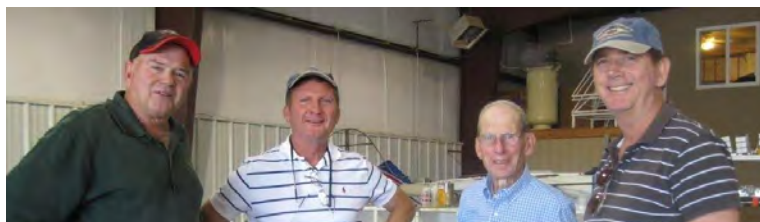
Photo on the right shows the results of attending the Lightning Fly-In and listening to some of the hair raising hangar talk sessions.



These photos show more hangar talk going on at this year's Lightning fly-in. This event is the best way to gather information about building and flying the Lightning as well as meeting the staff and other Lightning pilots and enthusiasts. Start planning now to attend next year's event. You will be glad you did.

Some additional airplane photos from this year's fly-in.





We all had fun at the 2010 Lightning Fly-In. Will you be there in 2011?

Fly-In comments from some attendees.

I just wanted to say how much fun we all had at this year's Lightning fly-in and homecoming. Everyone attending seemed to enjoy the event and the Tennessee Lightning crew were fantastic hosts. We had great weather in Tennessee, a good turnout of airplanes and people, a fun flight of Lightnings and Esquals to the Saturday morning breakfast in Winchester, some great creeper races Friday night, and really interesting round robin cross country races for the Lightnings. As usual, the Saturday evening Bell Buckle dinner was well attended and provided good eats and lots of laughs. It is always great to see all our Lightning friends and of course make many new ones.



I hope everyone's flight home was uneventful. I made it back to Williamsburg in about 3+40, the first three hours VFR on top at 13,500 (with oxygen), but when I had to descend underneath, I again (like the trip out) ended up in the rain with a really bouncy head wind. Sure was good to get on the ground after 30 minutes of bouncing around.

How about everyone sending a short message directly to me about your flights to Tennessee and then on your return flights home. I think it would be interesting reading for the newsletter.
Blue Skies,
Buz

Bev and I had a great time at the fly in, a little rough weather and head wind coming up on Friday. However, Sunday's trip was great. Nice tail wind, stopped once for fuel, smooth flight, back in Punta Gorda about 2:30. Had a problem with auto pilot holding altitude on the way up, Nick gave me the fix for that and it worked like a charm. See everyone next year.
Jim Goad



It was a great event, Got to meet a lot of new folks, including several who were just e-mail addresses. What happened to Tex?

My flight back was legal VFR over a scattered layer. Quartering tailwind about 38 K gave me a 20 to 25 K push. SY1 to Atlanta in 1+10, a PR, but not a world record.



I want 2 sec per year handicap or a 70+ age class for the creeper race next year. Discussion item - why won't Buz enter?

Earl

Buz,

I made it back home in 2 hrs 39 min. Ground speed 175 mph on GPS. Great flight. The trip up took 5 hrs stopping 2 times. I had a great time this weekend. I thank all of the Lightning group.

Thanks,

Allan & Babs



Hi Buz

I just pulled in; VFR all the way - but very low level - 10 + 30 hours to Clearwater --- I did manage to keep it between the white lines. Great to meet a lot of new folks. It was nice to see folks from nearly all over the US....Kansas, Mississippi, Michigan, Wisconsin, Indiana, New Hampshire, Virginia, Florida, Tennessee to name a few...

Although handicapped without my "jet" being there, Thanks to you, Carl and others, I was able to participate in the breakfast Fly-in and the Round robin x-country Race...

I guess now that I beat Earl in the creeper races, I'll have to give him additional seconds next year...especially since I beat him blindfolded...

It was, as you said, another great Lightning get together and my hat off to all the Jabiru and Lightning Staff...for their hospitality and friendship.

Already looking forward to next year's event.

Bear

Hey Buz:

I made it home safely in 4 + 15 and only fell asleep once (I lost the miles from 94 to 45 remaining)

It was a tough flight coming to Shelbyville on Friday against those 40 knot winds. I knew when I saw ground speeds in the double digits that it was going to be a long morning. I vacillated between 4500 and 6500 and finally ended up at 5500 (wrong altitude for the direction) in order to avoid as much of the rough air and get a decent ground speed. I ended up averaging about 120 mph. Fortunately for me the winds were about 30 degrees right of my course.

I agree we had a great time; the Arion folks were all terrific (even you deserve a pat on the back or two). I feel certain we sold at least two more airplanes; however, they will not be starting for about a year.



Lynn

Hi Buz,

We planned to arrive at SYI a day or two before Oct 02. The only window of opportunity came on Sept 29. A good rainstorm had just cleared our area on Sept 29 and another bigger slow moving one due on 9/30. So we departed SFM (Sanford ME) about 08:00 on 9/29. Climbing through a broken cloud layer to VFR on top where we bounced pretty good, along with our usual headwinds. At times, our ground speed was 80kts. However, south of New York the winds lightened ever slowly. Finally about West Virginia the winds cancelled out and then we enjoyed a slight tail wind to SYI arriving under clear skies and temps in the mid 70's (total flight time 8 + 40) with 2 stops.

The weather throughout the entire period of the homecoming was just picture perfect. On Thursday through Saturday more Lightnings arrived (I estimated 12 aircraft +/-). It was great meeting all the Lightning owners along with the potential owners. Buz did a great job as the MC and organizing the activities! A very enjoyable time was had by all. We had a good time during the air race, the creeper race, and most of all exchanging ideas with all the people. Nick gave an informative presentation on Saturday to update us with what's new at Arion. We're all grateful and sincerely thank the talented folks at Arion for the use of their facilities and for the time they gave up to spend with us.

Most all good things come to an end, so on Sunday most everyone flew or drove back home, but not us. There was a persistent stationary front with a low sitting just North of TN, extending East to the coast with low ceilings and rain. So we stayed behind and enjoyed the outstanding weather at SYI (clear and temps mid to upper30's. Our extended stay was enjoyable. We were told we should buy a home in SYI. I thought of pitching a tent in the middle of the airport. At any rate with the expert help of Nick, Mark Mike and Jason we took care of several small discrepancies.

FINALLY on Friday the weather improved along our route of flight, so about 08:00 we departed for home. The first leg to I18 (Jackson County WV), was very pleasant-clear and smooth slight tailwinds.

The second leg to HZL (Hazelton PA) started out smooth but about half way became rougher and rougher as the winds increased from the Northwest. The last leg to SFM was rough all altitudes. We ended up at 7500' with winds over 40 knots.

There was an advisory for surface winds NW gusting to 25kts all the way to SFM about 25 miles out the AWOS read winds 320 @ 8. Great, because the only runway open is 14/32. As we got close in, not so good. A little cold front had just gone through and winds were now were 020 @gusting to 25 knots. So we did not even attempt to land. We diverted to PSM (Portsmouth NH) about 17 miles South (2 mi from our home). Landed, secured the airplane to stay at PSM overnight. One of the line men was kind enough to drive us and our baggage to home sweet home. (7 + 35 hours flying time) Saturday Carl got up early and flew the Lightning back to SFM. So ends another enjoyable visit to SYI.

Carl & Pat Beatrice



News from the Factory

Nick reported that on 11 October, Lightning N932CB, an LS-1, flew for the first time. This Lightning was close to being completed during the recent fly-in. N932CB is kit number 108 and is equipped with an 8.4" Grand Rapids Super Sport with SX vision and a Garmin GDU375. Carl Bastiani from Maryland took delivery of this newest LS-1 on 21 October and will have flown it home by the time this edition of the newsletter is published. Check out the photos below of this beautiful red white and gold Lightning.



Beautiful airplane.

Nick also sent the following update on 21 October.

Buz,

The first customer delivered LS-1, N346BR owned by Ed Ryan. was back home in SYI recently for a few maintenance items. New tires and a painted canopy to keep the sun out were on the list. I think the painted canopy looks good makes it look even faster sitting still. In the attached photo, and check out all the new shiny Jabiru 230s lined up and ready to go.

Nick



The first customer LS-1, Ed Ryan's N346BR, with the new painted canopy top.

On 25 October, Nick sent the answers to questions that Tex recently sent through the Lightning email list. Below are the questions and answers.

1. What is the latest on the use of car gas with ethanol?

Originally the Lightning kits (not LSA's) came with a fuel tank sealant know as KREEM. We had selected this because it was advertised to be compatible with all fuels including those with up to a 10% ethanol blend. There have been 3 tanks out of the about 140 that were sealed with KREEM that later exhibited issues. It was found that 2 of the tanks had been cleaned prior to use with a solvent instead of sloshed with 100LL and drained. We do not have a good idea why the third tank sealant had a problem.

Because of these issues we decided to change to a sealant from a company called KBS Coating Systems. This sealant, instead of acting as just a sealant in the tank, actually bonds to the fiberglass when using the entire system of solvents provided. This allows the use 93 auto fuel and up to a 10% ethanol blend with no problems.

Currently, the only known problem with auto fuel has to do with how long a time you keep it in your tanks. 100LL can stay in your tank for a lot longer than auto fuel can. Auto fuel eventually breaks down and separates into something the engine won't like. The use of auto fuel in the tanks with KREEM should be taken with care. Know what kind of fuel you are putting in your tanks and where it came from. If it is auto fuel with no ethanol, then I wouldn't worry about it, and certainly don't worry about using 100LL.

2. What is the latest on wheel shimmy?

This had been covered many times before in past newsletters. I have flown Lightnings that don't exhibit any at all, some that do it slightly (it is like a little vibration on roll out), and some that occasionally seem to

shake my teeth out. Most of the time it is caused by too much air pressure in the tires or by using cheap tires. I have flown some that have had the tires balanced to compensate for cheap tires that were out of round or had a flat spot. So I guess the long and short answer is to use a better tire like a 6 ply Goodyear or Michelin and keep the tire pressure to 25PSI or so. Also, balancing the wheels and tires has proven to work very well if you find a shop that knows what they are doing. Usually one selling mopeds or scooters can do a good job.

Now for those with newer Lightning kits, say shipped this year, you probably will have the new Aero classic LSA 6 ply tire. These are proving to be good tries with minimal vibration problems if any at all. They are slightly more expensive than the Airtrac but not as much as the Goodyears.

3. What is the factory going to do with updates for those with early model Lightnings?

We have a newsletter called "Hanger Talk". Because each EAB airplane can be built differently, it is hard for us to suggest an update that is required. So when Lightning issues or changes arise, we try to discuss them in the newsletter. If it is a serious problem we also post it on the web site. To date we have not seen any real issues that would be considered a safety of flight problem. Some issues we only hear about once, which could be attributed to that specific aircraft and the way it was built, and thus may not need attention by anyone else. If it comes up again than we look at it closer and do something about it.

The one thing we do try very hard to do is make fixes, changes or updates able to be retrofitted to other Lightnings. This means we try to make it work with parts already being used or we try not to have a major redesign on something if not definitely needed. All updates so far can be incorporated into any previous Lightning out there. The only two changes that would prove costly in time would be a change to the new LSA gear or to the new box frame canopy system that came out about 2 years ago. However, either one could be fitted to existing Lightnings.

4. What's new at the factory and how will it affect the present builders?

We have been concentrating heavily on getting the LS-1 into production and this has taken up much of our time. However this is starting to run on its own now and we can get focused back on the kit.

All of the work towards the LSA has taught us a few things about some of the parts and as a result, some components are being revised to ease assembly on the production line as well as provide better parts to the kit builder as well.

The builder's manual was being updated on a regular basis as we went thru it to improve it for the ELSA Lightning. SLSA production got in the way a bit but did provide us the needed insight to clean up some more things in the manual and provide a better explanation to the homebuilder. Some of these items are better CAD drawings and pictures, or CAD drawings where none were provided before. Others are better suggestions on hardware selection for some components.

5. What mods are cost effective and how is it applied to the overall safety of the Lightning?

A) I am going to start off by saying you should consider getting rid of the original bungee trim system. I know there are Lightning's that still have these systems in place or some variant of it. It may be working now, but at some point the bungee is going to stretch, wear out, or break at a very inconvenient time, and may cause a problem. I do not remember the cost to a builder but the modified trim system was made available at our cost just to promote the change. Call and will get you that price.

B) One other would be the change in design to the rear rudder cables. We have had complaints of bad

geometry here and have seen it ourselves as well. An interim fix was a rod-end in the rudder with a steel tang on either side of the cable and the bearing. This worked well and eliminated the bind in the cable but had more parts and more assembly time. Therefore, we have changed the design of the cable all together. You are now provided a 3/16" rod-end for the rudder, and a rear cable with a custom made fork end with integrated ball end swivel swaged on. The cost is minimal; again call for the current price, but the change is simple and eliminates the geometry issues with the system.

C) Dave from Jabiru Power Solutions up in NY has come up with a nice spring trim assist kit. It is not like the bungee and does not act the same way, it is simply a spring balance for the elevator. This is very nice especially if you have a 4" flap motor which provides 40 degrees of flap. Or, even if you have a new airframe with only 25 degree of flap, this will allow the trim system to fully trim out the forces with flaps down. The trim tab is not large enough to do so by design, allowing the pilot to overcome a trim tab on the fritz. So, adding the spring helps that and keeps the aerodynamic size of the tab smaller. Cost is about \$55 bucks.



D) The pitch system has always had just a bit of slop in it, not enough to cause a problem, but it could be annoying. You can notice it by being able to move the stick in pitch about a 1/2" or so in flight with no pitch change. This can be fixed by changing a few things. First, the mid elevator bell crank was originally welded with a 3/8" steel pivot tube with a wall of 0.058 thickness. With an AN4 bolt you got about 0.07 clearance and this gave a bit of slop. So we changed the design about the end of 2009 and now have a 3/8" steel pivot tube with a 0.065 wall, and now the hole can be reamed to exactly 1/4" and with a good amount of lube used, it provides a no slop pivot point. Also, what helped was using the original top hole in the stick mixer and on the mid elevator bell crank the second hole down from the top. This tightens up the amount of movement you get out of the elevator for stick movement and reduces the mechanical advantage making the elevator more precise but with a slightly heavier feel. The second part of this mod is the elimination of the elevator flying balances (aerodynamic counter balance) all together, but that will take a bit of work to accomplish and simply changing the bell crank and rigging will help a lot.

There are a few other updates I think are of benefit (otherwise we wouldn't have changed the design) however, I think, unless you have some time on your hands and a little extra cash, I wouldn't bother. But, in case you care, and because I am in a discussion type of a mood, I will supply my opinion on one of them - the old style canopy. It was bonded to the frame with a permanently flexible adhesive, and the latches are on the inside only. That canopy should not be left up in much wind and additionally, you won't ever be able to get in it from the outside if you had to with breaking it. The new style has the canopy bonded to a frame and sandwiched between the skins. Also, the new canopy has an internal/external handle for getting in and out from both sides. Your old canopy will work for the handle mod, so no need to buy a new canopy. But if you want to, you can spend about \$700 in new parts for the current style canopy and it will take about 40 hours to build and another 15 or 20 hours for body work and paint.

To close, I think this kind of update will be beneficial to all Lightning builders, pilots and operators. And I would like to continue this type of letter from the factory on a regular basis. So please send me your questions and I will answer them thru the newsletter if appropriate. Next month I will be sending an update on what is new as far as the design as a whole is concerned. Price up dates and kit options, as well as explanations for price increases will be covered. Don't worry, no kit price increase.

Nick Otterback
Arion Aircraft, LLC

The last news from the factory; Arion Aircraft will be adding a sales representative in the gulf coast area. Jim Henderson, from Gulf Shores AL, will be starting his Lightning build later this year and will be serving Southern AL, Southern GA, Southern MS, and Southern LA. Jim will be our new southeast Sales Manager for kits and LSA's; welcome aboard Jim.

Current Lightning Dealers



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



Lightning Southwest, Greg Hobbs, Marana, AZ, 520-405-6868,



Green Landings Flight Center, Ryan Gross, WV, 304-754-6010, www.greenlandings.com



Lightning North Central, Tom Hoffman, Neenah, WI, 920-836-2318



Lightning Northeast - Jabiru Power Solutions, LLC, Dave Jalanti, NY, dave@jabirups.com



Lightning Australia, Dennis Borchardt, Kingston SE, South Australia, 08-8767-2145



Lightning Brazil – Cimaer Ltd, Claudio Nunes, Brazil 24 900-000, 21-2637-3605, 21-9451-9700



Russia and CIS – AVIA-NIANIA, Moscow, Russia, + 7495518-62-75, avianiania@mail.ru



Lightning Florida, Max Voronin, DeLand Airport, FL, 386-873-9995, www.moonshineaviation.com

News from the Dealers

From Lightning Florida

Congratulations to Max and Olena for having their demo aircraft, N787FL, being selected at the November Lightning of the month.

Check out Max and Olena's new web site.

http://moonshineaviation.com/Florida_Sunday_Fliers.html

News from Builders and Flyers

Buz,

Knowing a little bit about your background from reading the Lightning Newsletters, which by the way I enjoy and appreciate immensely, I thought you might like the attached picture.

Best regards,
Steve Sundquist
Kit #48



Wow, Steve, great photo. Looks to me like the Corvette is winning - just slightly ahead of that Navy guy.

How's your project coming along?

Buz

Hi Buz,

Here are a few pictures of N226WB first flown on Aug. 26th. This Lightning was built with the help of Mark, Mike and Nick in Shelbyville using the builder assist program. I would recommend this program to anyone who has three or four weeks to spend in Shelbyville. The advantages of having their level of knowledge and all necessary equipment and tools saved countless hours of work and confidence the construction was being done correctly. I would also like to thank Steve at B&B Interior for the excellent and prompt work on my interior. Still have to finish fitting the intersections for the leg fairings, can't seem to stop flying it long enough to finish fitting them.



N226WB, Bill Beasley's new EAB Lightning.

Thanks again to all the guys in Shelbyville for all the effort you put into making sure your customers have all the help and assistance they need during and after the build program.

Thanks, Bill Beasley - bez@lakegranbury.com

More photos of Bill's Lightning, N226WB.



Guess what? I like Bill's Lightning, and his car.

Here is the latest from Philip Beeson and the Florida Flyers.

Sunday 10/10/10 offered up a beautiful day for taking to the skies. The Florida Flyers don't miss many opportunities to get our jets in the air and this Sunday was no exception.

Lynn flew to KGIF where we departed at 7:45 a.m. for our destination of River Ranch (2RR) for our typical Sunday morning breakfast. The flight there was absolutely breathtaking with patches of low lying fog over many wooded areas and lakes. Since the Restricted Areas were cold we proceeded through them for a direct route. Since the weather was cool and the air was smooth we flew at 1,500' to take the best advantage of our scenic flight. It seems here lately I have been a bad reporter with enjoying the sights and forgetting to photograph them to share. I will work on this bad habit and try to remember, take pictures, take pictures, take pictures. Lynn and I flew the pattern at 2RR and as I am about 40 feet or so above the runway I notice a couple of deer run across the runway, yikes! As I got closer the deer stop running and stand still on the sides of the runway as they watch us land. What a magnificent thing to see on our Sunday morning flight. As Lynn is following me in for his landing he comes across the radio with "Thanks for clearing the way for me". I am there for you Lynn, but why do I always have to be the guinea pig?

Max and Olena showed up about 9:15 and we parked the 3 Jets in close formation taking up only 2 spots. The three looked awesome sitting on the ramp and drew the usual attention of lookie loos.

When you fly to River Ranch you rent a golf cart for \$5.00 and can tour the grounds and make your way to a couple different restaurant options. River Ranch is a beautiful facility that offers horseback riding, fishing, hunting camps trap and skeet shooting, camping, etc... After having breakfast outside on the deck by the water we tooted around in the golf cart and did a little sightseeing. We even stopped at the trap range and watched a few bustin' the clays. We made our way back to the FBO and met up with a couple of pilots flying a Jabiru 3300 powered Sonex. It's always nice running into other pilots who just love this little power plant. We hung out on the field for a bit talking planes before we headed out and had a wonderful time. It was great having Max and Olena join us again and I look forward to others joining us in the future. I received an e-mail from Ray Gage saying that his plane was in annual and could not make this trip but was looking forward to future ones. We will look forward to you joining us Ray.

Well the time had come for us to head back home and Max headed out first. Lynn and I departed and made our way towards our home bases. As usual, as the day wears on the air becomes more turbulent so I decided to climb to smooth and cooler air. We leveled our climb at 4,500' and enjoyed an OAT of 64 Degrees. That made for a nice flight, just not very long. Lynn made his way to 52FL and I made a landing at KGIF with very minimal wind. It was a great ending to a wonderful day. Thank you to Lynn, Max and Olena for an outstanding day of fun and flight, next time I will bring a shotgun and we can bust a few clays at the range.

I wanted to let everyone know that next Sunday I will not be available for our usual flight; I will be spending the day in the Bahamas. The owner of Tailwheels, Etc, the flight school that was crazy enough to teach me how to fly, and I are going to the Bahamas for the day so I can practice everything I need to know and do with respect to e-APIS, Customs, etc.. This will give me an opportunity to practice the procedures with an expert before I take our group over. John has agreed to let me handle everything so the training and practice will benefit us all.

I also wanted to let everyone know of a neat little item my wife found for me in a local fabric store. This is a great item for people who fly solo a lot that organizes your stuff for easy access in the front seat. It is very inexpensive and seems to work great. I keep an A/FD, clipboard, sunglasses, pens, cell phone, car keys, misc items and a bottle of water all neatly organized in the pockets. It is designed for the seat backs of automobiles but I find it works great in the Lightning as well.



Have a wonderful week and I will submit pictures of my Bahamas trip when I return.

Sincerely,
Philip Beeson
N897PR

NOTE: Next month's newsletter will include coverage and photos of Philip's trip to the Bahamas.

Reader Feedback or Q & A

These first messages came from George Barrett from NC, who many of you will remember from this year's Lightning Fly-In.

Hi Buz,

First I want to thank you for writing the Lightning newsletter. That is the reason I ended up in Shelbyville on the Oct. 2010 Fly-in. Being able to read about the people building and flying the Lightning gave me a sense of knowledge and a connection with them. And after meeting everyone that weekend- (even though I am not a builder yet) I felt connected and very much a part of the family.

When I arrived you were the first one I was introduced to. You immediately made me feel comfortable and introduced me to the others there. That set the stage for a great weekend. Nick was a great host for the weekend. The time between planned activities allowed time to talk with everyone about our favorite subject, "aviation".

Buz watching you and Nick fly formation was a real treat. Of course having the controls handed to me on the trip over to the pancake breakfast Saturday morning along with the demo flight I had with Nick wasn't second rated at all.

In closing I just want to say that getting involved with a company to buy and build something (especially an airplane) there has to be comfort level not just with the product, but also with the people that run the business. Arion Lightning has exceeded my expectations. Know that I have the Lightning in my crosshairs for the near future.

To everyone I met at the fly-in, I enjoyed our time spent together and look forward to being part of the Lightning family.

Keep the dirty side down.

If anyone is passing through NC please don't hesitate to call and come by.

George Barrett cell 919-280-1939
Hillsborough NC
Home airport KBUY

Morning Buz,

You are right about the fly-in being the best way to get acquainted with AC owners and the people at the company. It really was a great mix of people. I enjoyed learning about folks and their background.

I think I told you I have a son in Richmond VA that is interested in flying. At some point I may email you to see if you are around and he and I could come by and let see what I want to build. I know your AC

isn't a Lightning be it is pretty close.

Thanks again for your part in making that weekend in Shelbyville a memorable one.

George

Below is an interchange of emails with Larry Romig from Florida. Larry has some good feedback on the newsletter and ideas for future improvements for it and the Lightning web site.

Hi Buz,

First of all thanks for three years of dedicated service in presenting a wonderful news letter. Having been a "lurker" since the beginning and having seen from the editor's side what you do (my father was editor of our local Hudson Essex Terraplane chapter news letter) I would love to see you nominated for the Golden Quill.

Also having seen the dilemma regarding new editors before, perhaps you might suggest a team or pair approach having alternating months to prepare each issue by alternating authors. Since most folks won't be as adept and knowledgeable as yourself, the additional prep time may come in handy to a novice. On the other hand I'd be happy to step up were I provided a Lightning for my personal education and recreation. Just a thought...

One small gripe you may have some influence over as I pull this month's newsletter from the Arion Aircraft LLC website. When the new newsletter is published to the website it should be at the TOP of the list and not the bottom. I want to see the *new* letter first; I expect to hunt for the back issues but shouldn't have to scroll to the bottom to find the latest and greatest. In the past I also pulled from Jim's website and had the same gripe. Small bit but I think worth fixing (though I know it's not your responsibility you probably have some pull with those who can accomplish the fix).

Its my fondest hope that the time you've spent writing can be converted to time spent flying, I love and appreciate all you do for the Lightning community.

Still dreaming,
Larry Romig

Hi Larry,

I certainly appreciate your kind words regarding the Lightning newsletter. You and I must think alike as I had also thought of a possible team approach to writing the newsletter. My idea was to have the six Lightning dealers be responsible for two issues a year. I have passed on that idea to Nick, Mark, and Pete as something to fall back on if nobody steps up to take the lead on the newsletter. The only potential problem with having the dealers be responsible for two issues each year is that the readers who have inputs and articles might not know who to deal with to submit their articles at the appropriate time.

I will also pass on your idea about having the latest issue at the top of the list. Makes sense to me. And thanks for expressing your thoughts on the newsletter,

**Blue Skies,
Buz**

Thanks Buz,

Maybe the factory website can have a customer repository that folks can deposit contributions to and the "Editor of Rotation" can access from there. I'll still miss your insight and knowledge but expect you'll be a guest contributor from time to time.

Perhaps there could be an "Ask Buz" column that would require less of your efforts than an entire newsletter.

Still warm wishes from sunny St. Petersburg, land of Paul Bryant.
Larry

Hi again Larry,

Actually, one person at the fly-in did show an interest in taking over the newsletter, so I am hoping that they, after we had a long one on one talk, will agree to do so. And yes, I will continue to contribute to the newsletter and help out as much as possible.

So you are from St. Petersburg. Many years ago, I flew the F-4 out of MacDill. Great area. And speaking of Paul "Bear" Bryant, he flew with me to the EAA breakfast at Winchester, TN, last Saturday morning. He thinks he is having some engine issues, so drove to the Lightning Fly-In. It was a great weekend.

**Blue Skies,
Buz**

Buz,

The area is great and I've done much of my aviation work out of Albert Whitted SPG and its one of those nice scenic waterside airports that was nearly lost to politics a few years back.

WRT to Paul though I've not had the pleasure yet of meeting him please forward my email to him. I'd be happy to help as an A&P and former tech support guru for an avionics company.

Happy to help the community when I can until I can focus on getting my own "Jet".

BTW thanks for rattling the windows when I was a kid- it all goes into what made me love this stuff. Hell I remember them "bombing" our school yard for fire ants with a B-17 about '69 or so.

Still waiting to float my Marauder from your old MacDill flight path, one a day in Tampa Bay they used to say!

Larry Romig

Upcoming Events

Jabiru Engine Seminar, Shelbyville, TN, 19 - 21 November 2010

US Sport Aviation Expo, Sebring, Florida, 20 - 23 January, 2011

Sun-N-Fun, Lakeland, Florida, 29 March - 3 April, 2011

AirVenture, Oshkosh, Wisconsin, 25 - 31 July, 2011

Annual Lightning Homecoming and Fly-In, Shelbyville, ?? September 2011

Technical Tips

This tech tip is from Tex Mantell. As all of Tex's tips seem to be, it is simple and should be effective. Hopefully we will soon hear from him as to how this tech tip actually worked during real life flight testing. I know I am going to try it the next time I have my top cowl off and have access to my air box. Here is Tex's latest tip.

In looking at the suggestion of adding a spacer to increase the area behind the air filter, I have noticed a small possibility of increasing air in this area. Most of us are using the K&N filter and it has pleat's which give it more filtering mass. The air enters the side of the compartment and flows across filter and then through it. If one places the filter so the pleats are running vertical there is restriction as the flow crosses each pleat. If the pleats are horizontal there is less blocking of the flow. This is a minor effect but every little bit helps. I hope I have described this so it can be understood.

Tex



K&N filter with the spacer that Corky used as an attempt to provide more airflow through the air box. Note the filter pleats running left and right (horizontal) in this photo.

Thanks, Tex,

I'll put it in the next newsletter. Have you actually tried this yet? And if so, did you notice any difference. For the life of me, at the moment I can't seem to remember which way it fits in my air box, but I think I remember that it will only fit one way. Does yours fit either way? Probably so or you would not have made this observation.

Blue Skies,
Buz

Yes the filter on mine is square and will go in either way. I have no way to quantify the difference but when you see it you will see what I am talking about. With the spacer as someone suggested it might not be as noticeable. But when you add the spacer you lose area on the other side of the filter. So what the total or actual effect is time will tell.

Tex

Hi Tex,

Oh yes, I do know what you are talking about. Since the air comes into the side of the air box, and thinking about the way you install the filter so the pleats run horizontal instead of vertical, it just seems like it would make an easier path for the air to flow through the air box to the carb. So if it fits that way, I say do it. My only concern, knowing that swirling or turbulent air might be a reason that some folks are reporting uneven fuel/air distribution to one side or the other on the engine cylinders, and thus higher EGTs on one side, I'm wondering if the pleats might have an effect on the swirling air just like the tabs that some have inserted in the air box outlet to help smooth out the air to the carb. Bottom line, like you said, is to try it. So how about you doing some back to back flights in as equal flight conditions as possible and take a look at the various EGTs. I'd really like to hear the results.

Blue Skies,
Buz

Flight Safety Tips

Some more thoughts and discussion on making good landings.

Some recent happenings and incidents in the experimental and in the Lightning world have prompted me to once again write about making good landings. As always, I invite your comments or suggestions on this topic. We can always learn from the experiences (good or bad) of others. But seriously folks, it isn't that hard; however, if some out there keep messing it up, the insurance people will eventually start charging all Lightning pilots a premium for insurance. So here are some additional thoughts and a discussion on making good landings in your Lightning.

My concept of a good landing is one where the aircraft touches down smoothly on the center line at just above stall speed with the stick nearly full aft. And since we are talking about flying the Lightning (a nose wheel aircraft), the pilot then holds the nose wheel off as long as possible and then smoothly lets it down as the elevator loses effectiveness.

You have probably heard that a good landing starts with a good approach. Certainly I have mentioned that several times in past newsletters. But a good approach alone will not insure a good landing. And a bad approach will tend to make it almost impossible to make a good landing. So we need to start with the approach. I have talked at length in past newsletters about not flying big patterns, so let's just talk about the final approach in this issue. A good final approach to me means being on the desired speed and on the desired glide path with a constant rate of descent. I should probably add that you should also have the aircraft properly trimmed for that speed (it just makes things easier) and your flight path should have you aimed at a point that will allow you to flare and touch down at your desired touchdown spot. Having the airplane set up in this manner at least gives you a shot at a good landing.

If you make your approaches this way every time, the airplane will feel the same during the flare every time and this will give you a chance to learn how to make that perfect landing. If you are off speed, off the desired glide path, or out of trim, the airplane will behave differently during the

flare on every landing so you never see the same results from your control inputs and thus you have a harder time of seeing exactly what your control inputs are doing.

Now let me stress this next point as I have several times before in past newsletter issues. **Proper airspeed control is vital to a smooth touchdown.** Hard landings can result from too little airspeed, while bounced landings and pilot-induced oscillations are symptoms of too fast a landing speed. Avoid the temptation to force the airplane onto the runway if you are too fast. Either wait for the airplane to slow to the correct speed if the runway is long enough or, better still, go around and set it up correctly the next time. Being on the correct speed on short final is your best predictor of a smooth, safe touchdown. So, if not on the proper airspeed when crossing the runway threshold, go around and try again.

It is natural for student pilots to make hard landings as they are learning, but it is the instructor's responsibility to anticipate the hard landings and coach the student on the proper correction as long as the touchdown can be salvaged. The instructor should intercede vocally and tell the student what to do to correct the problem, and to take over the controls if the student is not able to correct the condition in time.

Each type of airplane you fly will have different landing characteristics just like they have different flight characteristics. So by making a stabilized approach, you get a chance to learn how to adjust the flare and the power reduction required to accommodate those different characteristics. So practice stabilized approaches and your landings will improve.

Here is my bottom line on this, if **the landing just doesn't look right, go around** and set it up again. Remember, the only time you shouldn't consider a go around is when you are engine out. Is that clear enough?



Lightning Skunk Works

Not being content with only building internal combustion powered aircraft, I have been secretly working on a real jet – a light sport version that is designed to look like the Air Force's latest and greatest operational fighter – the F-22 Raptor. At a reported cost of about \$150 million for each F-22, this one can be built for quite a bit less using parts that are readily available in the aviation hardware section at Lowes or Home Depot. One other way to keep the total build cost down on this smaller F-22 was to make it an open cockpit design, so that alone saved a few bucks. Photos of this latest jet are below.



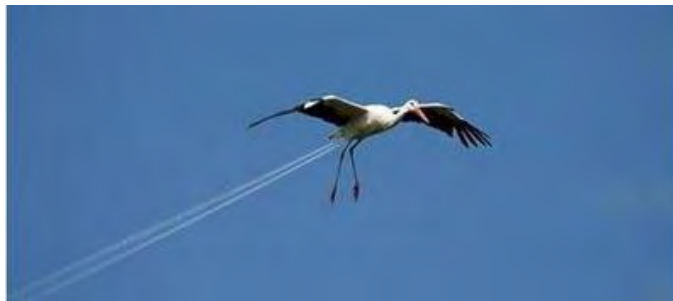
Don't worry, parents, the seat will not actually eject your child prodigy.

Other Items

Here is something just for World Record Earl. What is the difference between the Navy and the Boy Scouts?

Answer: The Boy Scouts have adult leadership! Sorry, Earl, I just couldn't resist. :-)

Fast Bird?



No, it isn't photo shopped; it is just a photographer's lucky timing.

Final Thoughts

Here are several things to think about in November.

-First, Joe Mathias will be celebrating the 71st anniversary of his very first flight lesson on 6 November. I think that is absolutely outstanding. Congratulations, Joe.

-Second, Daylight Savings Time ends at 2 AM on Sunday, 7 November. Set your clocks back an hour unless you live in Arizona, Hawaii, American Samoa, Guam, Puerto Rico, the Virgin Islands, or the Commonwealth of Northern Mariana Islands. Also, the Navajo Nation does participate in the Daylight Saving Time policy, even in Arizona, because of its large size in three states.

-Third, Veterans Day is 11 November. Our Veterans and their dedication to keeping us free are one reason we can enjoy the freedom of flight. Even though Veteran's Day, Veterans' Day, and Veterans Day are all grammatically acceptable, the United States government has declared that the attributive (no apostrophe) rather than the possessive case is the official spelling.

-And finally, Thanksgiving Day is 25 November. Celebrate this traditional day of thanks with your family and friends.

Blue Skies,

Buz Rich

N1BZRICH@AOL.COM (Contact me directly for newsletter inputs – I need your help to keep this newsletter both interesting and informative.)