

# FLYPAPER



January 2011

The Official Newsletter for EAA Chapter 477, Charleston, South Carolina

## The President's Corner

As I write this we are having a Charleston South Carolina blizzard!! Not hardly the standard for the Midwest, where it is called “flurries”, barely too. It will also get rather cold tonight; not weather conducive to working in your hanger or outside garage. Not to fear, because the days are officially getting longer, even if you can not tell it yet. And that will mean warmer weather is on its way.

We had a great year the last twelve months. For such a small group, we should be very satisfied with the accomplishments. All of that could not have happened without a lot of people pitching in and of course, the others that attended those events and meetings. I am gratefully appreciative of the work that the executive committee members have done because all of this takes time from “other things”. You can read a summary of those activities in the next pages of the newsletter.

We had a great presentation for the Christmas dinner at North Towne, and the food couldn't have been better. For those of you that could not make it, you can get a summary later in this newsletter.

I need to remind all of you that have not yet paid your EAA477 dues that they need to be paid at your earliest convenience. Remember, to be a member in good standing with 477, you must first be a member in good standing with EAA. These dues for 477 are important since it provides funds for much of the activities we do month to month.

## My Cozy update:

OK, it is time for New Year Resolutions! I had way too many distractions last year, most of which were not planned, and I would like to resolve that those will not happen this year. I sure am going to try. However, the top of my resolution list for 2011 is to get the Cozy into the air. That will be a big task, but it is at the top of my list. And no, I didn't get the cobwebs blown off in December. Rats...

*-Glen Phelps, President*

## Upcoming Events

**January 13-** Thursday 6:30 PM  
EAA 477 Chapter Meeting  
CAFB Aero Club

**January 20-23 –** [US Sport Aviation Expo, Sebring Florida](#)

**January 23 -** SCBC at Lake City Airport



## EAA477 Annual Christmas Dinner

On December the 9<sup>th</sup>, members and friends of EAA Chapter 477 enjoyed a great time of food and fellowship at the North Town Restaurant in North Charleston. Retired Navy Flight officer Warring (Butch) Hills, our guest speaker, kept our attention with a great presentation on aircraft carrier operations. This was the second annual Christmas dinner for the Charleston Chapter that was held at the North Town Restaurant. The dinner was proceeded by comments from our Chapter President, Glen Phelps, and a brief prayer offered by Roger Medlin, Air Force Auxiliary Chaplin, one of our new members and Secretary elect.

In Glen's comments, he thanked all who participated and helped out in the events of the last year. A short presentation of those activities was given, with a reminder that EAA477 belongs to us, all equally.

Everyone appeared to really enjoy themselves, as Butch gave an outstanding slide presentation on the success and failures of carrier operations. I must say I was a bit surprised to see as many mishaps as there were. You might say carrier take offs and landing can be dangerous and somewhat unpredictable. Other film clips showed huge waves actually breaking over the flight deck, seventy feet above the water line. The swales and an unstable sea could affect the stability of a ship even as large as an aircraft carrier



Butch, who had many eyewitness experiences, gave vivid detail of the danger pilots and crew face while

launching and landing Navy jets on a tossing unstable carrier deck. I guess that's why they say Navy pilots are the best. Well, Air Force pilots might disagree with that.

The presentation finished with bits of Naval history and background of some of the better known Navy people.



From a new member and a lover of flying and aviation, it was a great time. If you missed it, there will always be next year.

*-Roger Medlin, Secretary*

## Next Meeting

Part II – EAA477 will be meeting at the CAFB Aero Club on Thursday January 13<sup>th</sup> at 6:30 PM. We will be serving Pizza. We expect this to be a great opener for Glen's presentation of composite aircraft construction (foam, fiberglass cloth and epoxy).

This will include more hands on experiences with:

1. The process of "hot wiring", or cutting out airfoil shapes. We will have a couple of volunteers cut a small canard airfoil.
2. Mixing epoxy resin will be demonstrated, including the use of filler (micro balloons) and thickener (flox) with a small section of foam covered. Proper orientation of the two major glass structures will be discussed.
3. A short explanation of finishing will conclude the demonstration.

## 2010 Year in Review

Wow, another year has come and gone. I've been asked to write up a summary of our Chapter's activities in 2010. For a small club we sure do a lot! That's one of the best parts of being a Chapter 477 member. Where else would you get an opportunity to see and do all this neat stuff?

**January** - We welcomed Ed Hensel, Brett Grooms & Greg Horne as new officers. They brought a lot of new energy and new ideas to the Chapter. At our meeting Nick Ugolini gave an interesting presentation on aircraft wiring, and showed some neat electrical gadgets. A couple members went down to the [Sebring LSA Expo](#) (also coming up soon - Jan. 20-23)



**February** - Glen achieved a milestone; he moved his Cozy project from his garage to a hangar at Walterboro Airport (RBW). John Schmidt gave his "Part II" presentation on aircraft upholstery. Earl Fisher set up a tour of the CHS Tower & Radar Room (lucky for us we were able to do that just before the FAA put a stop to these types of visits)



**March** - We toured the Gulfstream factory and the Mighty Eighth A.F. Museum in Savannah. Once again we have Earl to thank for setting this up. At our meeting Jim Wilson gave outstanding presentation on his adventures flying to Alaska & back in his Waco cabin biplane.

**April** - A few of us attended Sun n Fun in Lakeland, FL. Photos can be found [here](#). At our meeting Brett Grooms gave a very enlightening safety presentation on off-airport emergency landings, including ditching.

**May** - Along with the Lowcountry Airport Commission we hosted the 2nd annual [Walterboro Wings-n-Wheels](#) event. This was a major success with good attendance from "plane guys," "car guys" and local residents. Profits went to the MUSC



Children's Hospital Fund and the Veterans Victory House.

**June** - Ed Hensel gave an very exciting presentation on his adventures (and misadventures) buying a LongEZ & fly it home from Washington state.

**July** - Nick Ugoline gave a technical presentation on aircraft diesel engines, including a parking lot demo of his Mercedes sedan, converted to run on vegetable oil. Some members (including myself) were able to attend AirVenture in Oshkosh WI.

**August** - Chapter 477 hosted the SC Breakfast Club at the Moncks Corner Airport. We also paid a visit to new friends at the Twin Lakes Airpark near Trenton, SC. There we saw a Rans S-19 project, a Velocity,

Pulsar, Vans RV-8, and Stewart V8 Mustang.

**September** - We were invited to Jim Wilson's beautiful private airstrip "Crosswinds" in Cross, SC. Jim has a Waco cabin biplane, a Piper J3, and a Fairchild biplane. Later we had a cookout then Jim took a few members up to "buzz the pea-patch".

**October** - We helped the CAFB Aero Club with their open house/cookout, and arranged to have [Mint Air](#) bring down a Flight Design CTLS from Greenville. A few members were able to fly the CTLS.



**November** - We held officer elections and Glen Phelps gave "Part I" of a technical presentation on composite construction (see "Part II" this month). Some of us also participated in the Walterboro Airport Poker run (RBW-MKS-LRO-JZI-RBW), with proceeds divided up between the winners and the MUSC Children's hospital fund.

**December** - we attended our annual Christmas dinner at the North Towne restaurant. Waring "Butch" Hills gave a fascinating presentation on modern supercarrier operation. We all enjoyed his talk, and would love to have him back again, perhaps to talk about carrier operations in WWII.

Yes, we did a lot and learned a lot in 2010. We also hope to have many interesting activities and presentations in 2011. If you have any ideas, suggestions, know interesting speakers or have special aviation-related contacts please let me or any other officer know. Thanks!

--Kevin Thorp, Vice-President

## Just a Safety Note

I get a number of aviation publications each month. Sometimes I am frustrated by the time I spend reading them, but there are always a collective number of good articles.

This past month there was an article in one of those publications that really caught my eye. It is a publication that I am not too fond of because a few years ago there was a horribly inaccurate article that was published in it. But this article was really thought provoking. A number of aviation incidents, some involving fatalities, were presented.

The common thread in all of these accidents, was fatigue or lack of adequate sleep. (*As I said in the February issue of the Flypaper, there is no such thing as an accident, only an incident that can be avoided.*) This is something that is intuitively known. The problem is that it is clear that many have trouble applying this to themselves.

I am sure that if we are all honest, we will remember times when we had trouble driving because we were tired, or simply exhausted. Could have been because of lack of sleep, *or as a result of strenuous activity.* The writer of the article quotes studies where "as little as two hours of sleep loss or being awake for 16 hours" can be shown to be equivalent to a blood alcohol level of 0.05. Or simply impaired judgment and motor skills.

It is also easier for a person to be distracted when they are not fully rested. Personally and unfortunately, I seem to operate in this mode way too much. Just before putting the finishing touch on this short article, I experienced this very thing. I was hooking a trailer to my car and talking to one of our members on my cell phone. Got *almost* everything done right, *but did not latch the hitch.* It disconnected from the ball when I drove the lawn tractor *off* the trailer!

Add fatigue to the flying regime, and we are just asking for trouble. The writer of the article I mention noted that safety statistics indicate that while only 10% of GA flights are conducted at night, they count

for about 50% of the GA accidents. While night flying has increased risks, one must wonder how many of these accidents are a result of fatigue.

The NTSB board did not agree that fatigue was a contributing factor in the Colgan accident in Buffalo, New York, but you have to really wonder. It is well known that both of these pilots couldn't have had sufficient rest before that fateful flight that took so many lives.

Personally, it is on my radar and I am going to resolve to do something about it.

*--Glen Phelps, President*



## Treasurer's Report

|                                 |           |
|---------------------------------|-----------|
| November 2010 Beginning Balance | \$1621.92 |
| Monthly Receipts                | \$705.00  |
| Monthly Expenses                | \$558.77  |
| Petty Cash                      | \$30.00   |
| End of Nov. 2010 Bank Balance   | \$1738.15 |

*--Rich Hassell, Treasurer*

## Random Glossary of Terms

**ALCLAD** - Trademark of Alcoa used as a generic term to describe corrosion resistant Aluminum sheet formed from high-purity aluminum surface layers metallurgically bonded to high strength Aluminum Alloy core material. These sheets commonly used by the aircraft industry.

Described in NACA-TN-259, of August 1927, as "a new corrosion resistant aluminum product which is markedly superior to the present strong alloys. Its use

should result in greatly increased life of a structural part. Alclad is a heat-treated aluminum, copper, manganese, magnesium alloy that has the corrosion resistance of pure metal at the surface and the strength of the strong alloy underneath. Of particular importance is the thorough character of the union between the alloy and the pure aluminum. Preliminary results of salt spray tests (24 weeks of exposure) show changes in tensile strength and elongation of Alclad 17ST, when any occurred, to be so small as to be well within the limits of experimental error."

**CARSON'S SPEED** - The term Carson's speed refers to the paper "Fuel Efficiency of Small Aircraft" (AIAA-80-1847, 1980) by Professor Bud Carson of the U.S. Naval Academy, which, using prior work by Gabrielli and von Karman, defines this speed as the maximum speed per unit of fuel burned. Carson's speed can be calculated as 1.316 times the speed for maximum lift to drag ratio, which, in turn, is 1.316 times the speed for minimum power and minimum sink rate. Carson's speed is also defined as the tangent point on a line that is tangent to the drag polar and passes through the origin. Reference: [http://members.EAA.org/home/flight\\_reports/wittman\\_tailwind.html](http://members.EAA.org/home/flight_reports/wittman_tailwind.html)

**NITRIDING** - Gas nitriding is a case-hardening process whereby nitrogen is introduced into the surface of a solid ferrous alloy by holding the metal at a suitable temperature and in contact with a nitrogenous gas, usually ammonia. Nitrogen released by the decomposition of ammonia reacts with the metal to make iron nitride, a hardening substance. Process methods for nitriding include: gas (box furnace or fluidized bed), liquid (salt bath), and plasma (ion) nitriding.

**SAILPLANE** - An unpowered, soaring aircraft capable of maintaining level flight for long periods of time after release from tow and of gaining altitude using wind currents, as opposed to a GLIDER.

*-- <http://www.eaa.org/experimenter/glossary.asp>*

Low Country Sport Aviation, Inc.  
EAA Chapter 477  
P.O. Box 62582  
North Charleston, SC 29419  
[EAA477.org](http://EAA477.org)



## Membership Application

*You must be a current EAA Member to join Chapter 477*

Name \_\_\_\_\_ EAA # \_\_\_\_\_ Exp.Date \_\_\_/\_\_\_/\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone; Cell \_\_\_\_\_ Home \_\_\_\_\_ E-mail \_\_\_\_\_

Send you meeting notices, newsletters, etc. via your e-mail? Yes [ ] No [ ]

Today's Date \_\_\_\_\_ Adult Membership [ ] Student Membership [ ]

Annual dues: Adults \$25.00 (if paid by Dec. 31 only \$20.00). Students \$12.

New members after Dec 31 pay dues pro-rated at \$2.00/month adults, \$1.00/month students.

Make checks payable to "EAA Carolina Lowcountry Ch. 477"

EAA 477 membership dues paid; Cash [ ] Check [ ] Amount \$ \_\_\_\_\_ Date Paid \_\_\_\_\_

Pilot Ratings (if applicable ) \_\_\_\_\_ Types \_\_\_\_\_

Total Hrs. PIC \_\_\_\_\_ Experimental \_\_\_\_\_ Last Flight Review \_\_\_/\_\_\_/\_\_\_ Hrs. since last \_\_\_\_\_

Aircraft you have owned or own now \_\_\_\_\_

\_\_\_\_\_

Aircraft you have built or building now \_\_\_\_\_

Aircraft you would seriously consider building/restoring \_\_\_\_\_

\_\_\_\_\_

Skills you would be willing to share/help other members in their homebuilt project \_\_\_\_\_

\_\_\_\_\_

Other skills/talents that can help our chapter \_\_\_\_\_

\_\_\_\_\_

Comments/suggestions, including membership in other EAA Chapters \_\_\_\_\_

\_\_\_\_\_

*Thanks, and welcome to Chapter 477!*

**Code of Federal Regulations, Part 91, Sec. 91.111 - Operating near other aircraft.**

- (a) No person may operate an aircraft so close to another aircraft as to create a collision hazard.
- (b) No person may operate an aircraft in formation flight except by arrangement with the pilot in command of each aircraft in the formation.
- (c) No person may operate an aircraft, carrying passengers for hire, in formation flight.



**LowCountry  
Sport Aviation, Inc.**

P.O. Box 62582  
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Newsletter Editor, & Webmaster:  
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Treasurer: Tony Cole  
Young Eagles: Brett Grooms  
Web Site: [eaa477.org](http://eaa477.org)

***You're Welcome to Join or Visit EAA477!***

*If you're not already a member of EAA Chapter 477 we'd love to have you join us!*

*Fill out the application included in this newsletter, or just drop in on one of our meetings & see what we're all about.*

*For more info go to [eaa477.org](http://eaa477.org)*

