

FLYPAPER



March 2011

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

The President's Corner

As I write this, we have just had an exceptionally warm Saturday. Hopefully we will be done with the cold weather for the rest of the spring. I think that would make us all feel a lot better.

The turnout for our February meeting was a bit lower than we expected, perhaps due to the very cold weather that night. We had 11 attend the meeting and listen to Kevin with his presentation on the JDT aircraft. We didn't have any new attendees that evening, but that was probably just as well, since we had difficulty getting into the Aero Club. The two members that have keys were not there when we needed to get in. But that was just a little inconvenience.

For those of you that did not make it, Kevin's presentation was fantastic! You will be able to read more about that later in this newsletter.

All were reminded that our meeting in March will be on Saturday the 12th. We will be going to the Summerville Airport (DYB) where we will get to see three or four projects that are either underway or complete. Will also have the Cub Scouts, for another field day. Then we will top that all off with a cookout at Bruce Huffines hanger. If nothing else, that will be a way to usher in springtime.

Make sure that you keep up-to-date on what's going on by going to our website - EAA477.org. In April we will host an SC Breakfast Club in Walterboro on the 17th. And then the third annual Walterboro Wings-n-Wheels event will be held Saturday, April 30th

My Cozy update:

The throttle linkage has been installed and works great! I have all the material cut for the internal fuel tank, which will house the fuel pumps. It just has been too cold to do any fiberglassing, but it looks like that will be changing soon. I also have all material cut and formed for the canopy lifting system. So we are making progress, this still has to be the year!



--Glen Phelps, President

Upcoming Events

March 12 – Saturday 10:30 am
EAA 477 Chapter Meeting and cookout at the Summerville Airport

March 13 – South Florida
Seaplane Splash-In, Sebring FL

March 20th – SCBC at
Greenwood County Airport
([KGRD](#))

April 3rd – SCBC at Barnwell
Regional Airport ([KBNL](#))

February Meeting Report

The meeting started a little late because we didn't have a key to get in the Aero Club. And to make matters worse, it was really cold outside! But once inside we started to enjoy the fellowship and yummy hot pizzas. And that is always a good time.

After our stomachs were satisfied we got on to business. All members were reminded that the next meeting will be Saturday March 12 at the Summerville Airport. We also will be hosting the SC Breakfast Club in April as well as the third annual Walterboro Wings-n-Wheels event. So get ready for warm weather; April will be here soon!



And on to the presentation. Kevin Thorp, our vice president, first gave a slide presentation of the various aircraft of the JDT Minimax series. As always, there is interesting history as to how these manufacturers get where they are. We also learned that the paint scheme used on the company plane was designed by Kevin. His slide show included photos of the the uncovered AeroMax (it looks just like a big model airplane!) and covered & painted. For more photos go to

<https://picasaweb.google.com/minimax.aircraft/FactoryAircraft#>

If you go to the website, jdtmini-max.com you can learn a lot more about their aircraft. If anybody wanted to do some serious inexpensive flying and enjoy building an aircraft, this would be the way to go. Might not be the best thing for a long cross-country flight but it sure would be fun!

Then we followed Kevin to where he had a wing rib jig set up. This is a polycarbonate assembly, well marked so that you can see where each piece needs to go. The plywood gussets are supplied laser cut and marked with assembly notes on each part. The first thing the builder has to do is mark and cut all the small sticks using the supplied marking fixtures (small square Polycarbonate tubes that have the correct length and angles on each end). One makes a small pencil mark on the sticks and then uses a small saw to cut them off. A small belt sander is then used clean up the cuts.



Then the gussets are placed in the gluing fixture which has a mask to ensure the epoxy is only applied only to the required areas. After the epoxy is applied the assembly of the rib can begin.

The laser-marked gussets are placed in the corresponding pocket in the polycarbonate jig. Then the sticks are inserted into place (also marked on the jig) and the 2nd set of gussets are added. The last step is to install the sandwich clamps to provide good glue adhesion. We actually did not glue any of the pieces together because there just was not enough time. But the enthusiasm of all around the table sure showed people like to get their hands on a project.

Now our next step is to keep Kevin building parts so he will have a flying airplane before long.

--Glen Phelps, President

FIRST Robotic Competition

Why am I writing about robots in an aviation newsletter? The FIRST Robotics Competition (FRC) has many similarities to the EAA. It's program that connects high school students with engineers & technicians, working together to design and build a robot, then compete with other teams, regionally and nationally.

We get the kids out of the classroom and into the workshop. They learn about engineering, programming, working with various materials (metals, plastics, etc.), gears, belts, electronics, pneumatics, CAD; all kinds of neat stuff. More importantly, they learn about teamwork, project management and what to do when things go wrong (they frequently do!).



FIRST (For Inspiration & Recognition of Science & Technology) was founded in New Hampshire 20 years ago to help get young people excited about engineering and focus a little less on pop culture. Now there are over 2,000 FRC teams around the world, including 5 in the Charleston area. FIRST also has programs for middle and elementary school age children.

The competition rules change every year. The 2011 FRC game is called "Logomotion". Teams have to pick up inflatable geometric shapes, carry them across the playing field and hang them on racks to construct the FIRST logo. An additional challenge this year is the option to deploy a "Mini-bot" at the end of the match to climb a 9' steel pole. The first one

to the top gets the most points. Matches are short and very exciting. They put 3 teams against 3, randomly selected. Your opponent in one match might be your ally in another.

I volunteer on rookie team number 3489 "Category 5", sponsored by SPAWAR and Bosch. In addition to the robotics competition we're also entered in the website and 3D animation contests.



The Palmetto Regional Competition will be in Charleston this year, on Friday and Saturday, March 25 & 26 at the North Charleston Coliseum. About 45 teams and 800 students will be competing, with the winners going on to the National Event in St. Louis. The events are free to the general public, but I'm not sure about parking. If you come out I guarantee you'll be entertained and impressed with what the kids have accomplished.

For more information about the FIRST Robotics Competition go to:

www.usfirst.org

Animation explaining the "Logomotion" rules:

<http://www.youtube.com/watch?v=DTJOXTIaa9g>

The Palmetto Regional Competition agenda:

http://www.usfirst.org/uploadedfiles/robotics_programs/frc/events/2011/2011_SC_Agenda.pdf

--Kevin Thorp, Vice President

Our Next Meeting of Chapter 477

Saturday, March 12th, 10:30 am, at the Summerville Airport

Come out and join us for a wonderful day of sharing the joys of flight and homebuilding with others. EAA 477 is inviting the Scouts and everyone who enjoys aviation and hot dogs to come out to the Summerville Airport where we will look at what some of the builders in our area have been doing. It promises to be a great time.



Treasurer's Report

Jan. 11 Beginning Balance	\$2152.71
Monthly Receipt	71.00
Monthly Expenses	56.01
Petty Cash	49.68
End of Feb. 11 Bank Balance	\$2222.71

--Tony Cole, Treasurer

Random Glossary

DOWNWIND TURN - Long a point of contest among pilots, there is in reality no such thing as far as the airplane is concerned. Proponents claim that airplanes lose air speed and gets pushed from behind (potentially causing a stall) when turning downwind, while opponents (and the laws of physics) argue that an airplane, like a boat in a river whose speed is only relative to the water and not the shore, is unaffected

within the movement of an air mass and that it gains only ground speed.

DRAG WIRE - A wire designed to resist **DRAG** forces, usually running from a forward inboard point to an outboard aft point.

FLIGHT ENVELOPE - An aircraft's performance limits, specifically the curves of speed plotted against other variables to indicate the limits of speed, altitude, and acceleration that a particular aircraft *cannot safely exceed*.

FLOATPLANE - A water-based aircraft with one or more mounted pontoons, as differentiated from a hulled **SEAPLANE** [Flying Boat], but often used generically.

FLYING WIRES - Interplane bracing wires that help support wing loads when the plane is in flight. Direction of travel is upward and outward from the fuselage to the interplane struts. Also known as **LIFT WIRES**, the opposite of **LANDING WIRES**.

FLUTTER - A self-starting and potentially destructive vibration where aerodynamic forces on an object couple with a structure's natural mode of vibration to produce rapid periodic motion.

Fowler Flap



Figure 1-23

FOWLER FLAP - Trademark name of a flap attached to a wing's trailing edge with a system of tracks and rollers to slide backwards before hinging downwards, thereby increasing both camber and chord, creating a larger wing surface better tuned for lower speeds. Named for its inventor, USAF engineer Harland D Fowler.

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

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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!



"I KNEW WE SHOULDN'T HAVE LET BOB WATCH TOP GUN LAST NIGHT"

**LowCountry
Sport Aviation, Inc.**

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Vice President: Kevin Thorp
Secretary: Roger Medlin
Newsletter Editor, & Webmaster:
Greg Horne
Treasurer: Tony Cole
Young Eagles: Brett Grooms
Web Site: 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

