



# DCRC Club Newsletter

**DCRC Club Meeting**

**July 18, 2008**

**Montgomery County Council building**

**100 Maryland Ave**

**Rockville, MD 7:30 PM**

**Membership Meeting program:**

**TBD**

**Volume 54, Issue 4**

**July, 2008**

**Andy Kanes Newest 50% J-3**



**July Club Meeting**

**Raffle Prize**

**RCS SV 26**



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*Did you know that any airplane brought in to the model shop will receive 3 free raffle tickets. Bring in your models each month for your free tickets, and to share ideas.*

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MY FIRST RC AIRPLANE	PG 7

*Cover: New 1/2 Scale J-3 Clipped wing. The worlds Largest ARF. Powered with ZDZ 210 and JR 8711 Servos. This beast is a real pussy cat to fly.*

*Photo by Allan Hoffman /Mike Dooley*

**AN OPEN LETTER TO ALL CLUB MEMBERS**

BY DON GRAY



The DCRC was formed over fifty years ago, and except for the initial start-up years, it has published a monthly newsletter (NL) until recently. I'm sure the first series of newsletters were only one or two pages in length, but they grew in size as time progressed. When I joined the club in the mid sixties, the NL had grown to sixteen pages. In those days the paper size was only 6 3/4" x 8 1/2", not the current size of 8 1/2" x 11". The 16 pages of the smaller size newsletter would be equal to about 9 or 10 pages of the current size. Also, since in the old days they used typewriters (remember those?), most likely with pica-size type, the word count per page would most likely be higher than it is today.

For those of you who read the board meeting minutes contained in the most recent NL, Andy Kane proposed that the newsletter only be published every other month, primarily because of the lack of material. I don't know about the rest of you, but I look forward to reading my NL every month and would like to continue doing so.

For those club members who don't get out to the field very often or perhaps not at all, and also those who can't make it to the monthly meetings, the newsletter is their only way of staying in touch with what is going on in DCRC. The website provides some information along these lines but nothing beats reading the newsletter every month to keep up with club events and meetings.

Now here is where all of us club members can help keep our newsletter coming each and every month. There are about 200 members give or take a few. If each of us

were to agree to write just one article within a one-year period, Andy would have over 16 articles each month. If only half of us wrote one in a year's time, there would be 8 articles each month (do the math). The point is we need to seriously start to contribute articles for our NL. Before computers, page lay ups were done mostly by hand, photos were from black and white print film, and most of the graphics were hand drawn. That was a lot of work each month for both the author and the editor. But with today's, computers, word processors, digital cameras and scanners, eighty percent of the work is already done. You basically type up your article, add the pictures and any artwork, and email it off to Andy.

There are several types of articles one could write. You could report on an event you attended, tell us about a new product or a model you recently completed, or perhaps you discovered a better way to do something such as applying covering, repairing a model, a new type of building material you found; the list goes on and on.

And you can write about a modeling adventure, which could be fact or fiction or a little of both. The point I'm making is, with the number of modelers we have in this club, Andy should have to be turning away material instead of not having enough to fill the newsletter. At one time, DCRC use to exchange NL's with other clubs. Now with most clubs having their own websites, including the NL that practice has most likely ended. However, if you see an article in another club's NL, and think it would be of general interest to our members, you might want to submit it for publication.

Like DCRC, most clubs do not mind you reprinting an article as long as you credit their NL and author if named. At the June club meeting, several of you indicated

*(Continued on page 4)*



## June Club Meeting Minutes

BY DOUG HARPER

The meeting was called to order at 7:35PM by President Andy Kane. Andy asked for introduction of guests or new members. Gabriel Yesin was introduced as a guest. He is a sophomore in the George Washington University Engineering Department. He is working on a project to develop an inexpensive plane that could be used to find DOD assets, like a downed flyer. He is looking for people who might want to work on this program. Also, John Hill recently moved here from Florida and is in the process of joining DCRC. Richard Clark came with his son Jeffrey who is a member.

**Events:** Jim McDaniels talked about the upcoming Heritage Montgomery Tourism Day (we previously called it County Appreciation Day) to be held next weekend, June 28. Jim displayed many signs, posters, brochures, and DVDs that are available from the County. We are prominently displayed in these items. There is also a video that is going to be made into an infomercial that will be shown on the Montgomery County TV channel.

Andy Finizio continued to discuss the upcoming County Day. He expects a large crowd if the weather is decent. Andy is looking for people to fly and for help serving food. Anyone wishing to help should be at the field at 9AM.

**Treasurer's Report:** Scott reported that there were five checks written over \$100.

**Sound and Safety:** Nir reported that there continues to be problems with the 72MHz channels. The cost to test these frequencies is prohibitive so Nir is proposing to work with people who experience a problem to see if they can move to another channel. As the 2.4GHz continues to grow, this problem should diminish.

**Training:** Mike reported that everything is running well.

**Membership:** We currently have 214 members.

**New Business:** Don Gray congratulated Dave McQueeney for his win at Top Gun. Also, he congratulated Andy for his Joe Nall Award. Don wanted to remind everyone that the Rudder-Only Contest is scheduled for July 13. Don also suggested that he would like to see the newsletter return to a monthly status. There was a discussion on this point and many club members indicated that they are willing to contribute to the newsletter. Andy made it clear he would gladly publish monthly if there was material to publish.

Walt Gallagher reported that Google Earth now has icons on the map of our field indicating the name of the field.

**Model Shop:** Tom Pfarr presented his new Aeroworks Extra 330 ARF. He had a 43cc engine he wasn't using that he used to power this plane. He is pleased with this model and feels it flies very well. It weighs 13 pounds and took about 2 weeks to build. Most of the work was done.

Next, Don Gray presented a Carl Goldberg Skylane that is at least 40 years old. It was build for "stand way off" scale and uses a .049 Texaco engine. It uses a single channel radio for rudder-only. It weighs 23 oz and is lightly loaded. He is looking forward to flying this restored model soon.

Ed Leibolt demonstrated an all-foam model he purchased in Pittsburgh called the Formosa II. It uses small servos and is very simple to build. It uses a Rim Fire electric for power. The instructions are practically non-existent but a modeler with experience can figure out how to build it.

Ed also presented an in-the-bones TopFlite DC3 that he has been working on for several years. It currently



is built and sanded and uses two .40 engines. It has flaps and retracts. He is planning to try thin aluminum as a finish but is still working on that. He would like to have it ready for Bealeton.

Jay Stargel presented an Eflite Extra electric he won in a past raffle. He took a whole night to build it and flew it the next night. He had an electric engine and it came out at 29 ounces. It flies well. Jay also presented a Hobby People Wasp which is a very rudimentary stick plane. Jay isn't too impressed with it but it is simple to build. The fuse is made out of a square piece of carbon fiber and everything slides onto the fuse.

Finally, David Harris presented his Hobby People P-38 "foamy" that he bought at Toledo for about \$130 with motors. There is no gluing and everything screws together. You do have to solder the speed controller and battery connections. The model is very impressive looking. The foam is soft and the paint will scratch off easily. He flew it this evening and is pleased with its performance. He built it without gear but the gear is contained in the kit.

Mike Dooley demonstrated several new engines available from RC Showcase. He had a 26cc, a 50cc and a 100cc model for all to see. He invited people to see him at the break for further info.

**Raffle:** David showed a Spektrum 2.4GHz radio and an electric helicopter for tonight's raffle. The helicopter was won by Frank Nehr. The 2.4GHz radio was won by Walt Gallagher, who received much hooting.

**Program:** Our program tonight was presented by Dave Garrison. Dave started by giving a little more detail on the three engines that were brought by Mike Dooley. Dave gave a brief history of his nine year experience selling engines from the Czech Republic. Currently, the weak dollar has hurt the competitiveness of these engines. The Chinese have been watching this market and waiting for the volumes to build. Dave is starting

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*(Continued from page 3)*

to import some of these Chinese engines and has found them to be of high quality and low cost.

Dave then introduced Bill Wike who he met on RC Universe. Dave was building a twin giant scale airplane and needed a synchronizer for his plane. He got his first prototype from Bill and it worked so well he started producing them. He currently has shipped over 500 units all over the world. This lead to other electronic products thanks to Bill.

Bill has been very active in RC for many years and currently flies many different models including jets, aerobatic, helicopters, scale, etc.. He received an AMA scholarship for college and received both his bachelors and masters from NC State.

As he became more involved in the hobby, he built several glo-powered twins and immediately discovered that engine out was almost an automatic crash. He then decided that he needed an electronic device that would pull the good engine back to idle when the other engine quit. He fabricated a circuit to do this and it worked very successfully. He then moved to the next step of synchronizing the two engines which he tested on several large scale models.

Bill uses a magnetic pickup mounted on the back of each engines spinner. These signals are combined in his circuit which in turn drives the two throttle servos. The TwinSync accomplishes a couple of functions. First, it will get both engines to operate at the same RPM. This is very noticeable when the circuit is turned on or off while the engines are running. Next, if one engine quits, the circuit will throttle back the good engine. After the throttle is returned to idle, control of the good engine is given back to the radio. There is also a response adjustment which allows setting of the circuit response to the engine being used.

Bill has incorporated many advanced functions in his circuit as people

around the world have used it and called him with additional needs.

Bill then went on to develop other products like his engine monitor. This unit can be used to read out many engine parameters after each flight. He also developed a servo matcher which offers a better price point with all the same functions, and more, of anything on the market.

He has developed many other products such as regulators, fail safe switches, and power distribution systems.

Bill talked briefly about future products he plans to work on such as a turbine ECU.

Bill received enthusiastic applause for his very interesting talk.

The meeting was adjourned at 9:40PM.

**2008 DCRC FLIGHT TRAINING SCHEDULE**

July 12 & 26

August 9 & 23

September 13 & 27

October 4 & 18

November 1

**Certification: Often, an instructor can remain after the training session is over to certify a new pilot. Other times for pilot certification can be arranged with any qualified certifier. See the list of certifiers posted at the field.**

*(Continued from page 2)*

that you were interested in maintaining a monthly NL. And a few less indicated that you would be willing to write at least one article per year. I have talked to four or five who have agreed to submit something in the next couple of months; one should be in this issue.

Before I forget, as Andy Finizio indicated at the June meeting, at times there are more helicopter pilots than fixed wing pilots at the field; and this appears to be coming a trend. So I would like to see some articles coming from the other side of the field as well. If anyone thinks he has an idea and wants to bounce it off someone, let me know if I can help. Once you do the first article, the others become easier.

So let's come together and help fill our newsletter with material we all can enjoy.

From one of those members who want to see our newsletter continue on a monthly bases, please make a small commitment to submit at least one article a year. It's sort of like making a small yearly contribution to your favorite public television station so that you can continue to enjoy the good programming they provide. If you enjoy reading our newsletter, make your yearly contribution. Pick a subject and jot down a few notes. It can be fun and rewarding as well. After you do the first one, the others just get easier.

The deadline for submitting NL material to Andy is the last Friday of the preceding month. The next one is July 25<sup>th</sup>. I look forward to seeing a few new authors in the August issue.

## Schedule of Events

Also on the web  
[www.dc-rc.org](http://www.dc-rc.org)  
 Then click Events

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July 2008						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12 Flight Training
13 Rudder Bug Fly In	14	15	16	17	18 Club Meeting	19
20	21	22	23	24	25	26 Flight Training
27	28 Summer Youth Camp	29 Summer Youth Camp	30 Summer Youth Camp	31 Summer Youth Camp		

## Calendar of Events

July 2008		September 2008	
10-13	Warbirds Over Delaware Site: Lums Pond State Park. Dave Malchione CD, PH:610-357-6649	31-1	Liberty Bell Jet Rally . Lancaster, Harrisburg Area PA Mike Leshner
12	DCRC Flight Training	28-1	DCRC Summer youth camp, Flight training and aviation knowledge. Germantown, MD Ed Leibolt
13	DCRC Rudder Only fly in Don Gray		<u>August 2008</u>
18	DCRC Club Meeting Program by Marvin Napier, Trials and Tribulations of building a Turbine airplane.	9	DCRC Flight Training.
19-20	Mid Georgia Jet Rally Andersonville, GA (C) Site: Hodges Hobbies.	15	DCRC Club Meeting Program by Paul Sforza Electric ducted fan EDF
19-20	IMAC Contest Easton, PA	22-24	Pennsylvania "Tri-County Wingsnappers Giant Scale Fun Fly 2008" Turbine Friendly, Home of the Rally of the Giants 2009. Farview Airfield, Ham burg, PA Rick Boyer (610) 354- 3376 richard.a.boyer@lmco.com www.tcws.org
25-28	"Warbirds Over Pennsylvania - Quakertown PA 18951		
26	DCRC Flight Training.	23	DCRC Flight Training
26	Loudoun County Aeromodelers Assoc 9th Annual Electric Fly In Leesburg, VA (C)	29-1	Dayton Ohio Giant Scaler's fly in The DOGS Show, Wright Patterson AFB, Dayton, OH
26-27	12th Annual CAPI IMAC Prince Georges Radio Control Bowie, MD USA	30-31	IMAC Contest Milford, PA
31-1	Cubs over Loch Haven, PA		
		1	Labor Day
		5-7	Virginia "Bealeton Fly-In" Flying Circus Aerodrome Bealeton, VA Andy Kane (301) 785-3022 andykane01@hotmail.com www.dc-rc.org
		13	DCRC Flight Training
		19	DCRC Club Meeting Nominations for the board of directors, Expiring Terms, Dave McQueeney, Andy Finizio, Scott Davies
		20	Maryland "PGRC 16th Annual Giant-Scale Fly-In" PGRC Club Field Bowie, MD Steven Whitecoff (410) 263- 5836 cross.up@comcast.net
		27	DCRC Flight Training
		28	DCRC Oktoberfest, Food Fun and Flying



## SCHOONER RC Model Biplane

BY GUS CROSETTO

**Tired of the same old ARF's? You don't mind getting your hands dirty (fingers stuck with CA)? Then you may like to try your hand at designing and building your own RC model.**

Inspired by the many builders we have in the DC/RC club, and the abundance of great advise from our members, backed by many years of RC modeling experience, I decided to



try my hand at designing and building my own plane.

The design parameters were simple: "elegant design," "cheap to build," and "fun to fly." (I will elaborate later on my definition of a fun fly). Meet Schooner (pic 1 and pic 2). Pun intended, all painted black with skulls and bones all over it.

Some vital statistics:

Upper / Lower wing span: 30 and 25 inches (no dihedrals and flat bottom,



Clark-Y type airfoils). Upper /Lower wing chords are 9 and 8 inches each.

Length: 28 inches

Flying weight 30 – 32 ounces (wing-load is approximately 9 oz per square foot).

Power System: E-flite's Park 480 (275 W /1020 Kv) motor, a 3S Li-po (11.1V), and 30A ESC. Initial propeller was a 9x6 wood prop.

Design and building components:

The wings, fuselage, stabilizer and control surfaces were designed by drawing them on grid paper (1:1 scale) and maintaining some basic model airplane aerodynamic parameters. For construction materials I used foam boards (20x30 inches each) from Staples, for the entire airplane (including ribs and formers), some balsa sticks for the LE and TE, skewers and coffee stirrers for reinforcement. (Pic 3 and pic 4).

Foreseeing many early crashes and abrupt landings (until fully trimmed), part of an elegant design included "snap on" components held by rubber bands (six) and other household materials that could easily adjust to stress or be replaced as necessary. Sub-assemblies were glued together with foam-safe CA and epoxy.

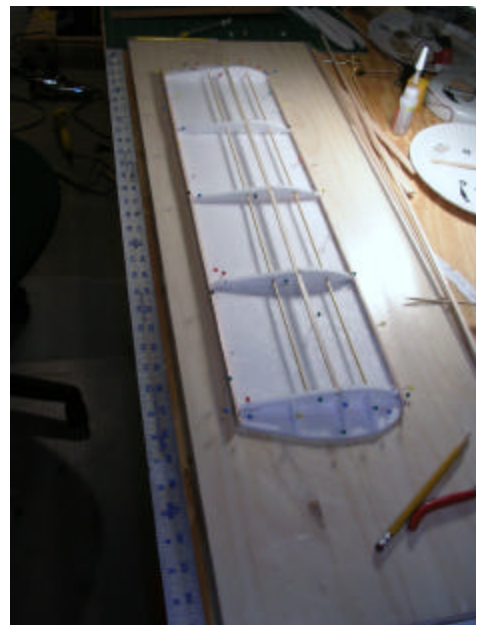
Four ailerons are controlled by two micro servos HitecHS-55 (on the same channel). Vertical and Horizontal tail surfaces are controlled each by a Cirrus micro servo.

Flight characteristics:

The first flight was a successful jump of about 3 minutes (a flight nevertheless, according to Langley), where Schooner fought me tooth and nail (or should I say ailerons and thrust). The four large ailerons, working in tandem had a tremendous effect on the plane's rolling characteristics, while the 6x9 prop gave it inadequate thrust for a biplane. The radio, (a vintage 4 channel FUTABA with no end point adjusters or exponential controls), added to the fun of the maiden flight. If horses could be flown like

an RC model (i.e. Pegasus with servos) Schooner was a mustang or a bronco, not a pony.

After several adjustments, which included a new prop (11x7), a reinforced landing gear, and using a Futaba 2.4 MHz programmable radio, Schooner took flight again. This time the Wright brothers would have been proud of its performance. It is still "fun" to fly, very sensitive to in-flight control-surface adjustments and with power to spare. I



am able to do basic loops and other minor acrobatics (some unintended).

In time, I will master Schooner and probably get bored with its predictability and move the motor to a new experimental model. By the way, Schooner was my first attempt at design and building an RC model but he is not alone, I also completed Skyler, a 3D flyer, Skeeter a sport plane, and Snake-eyes, a small scale -like plane full of surprises. They all fly with varying degrees of proficiency and pose different challenges for the pilot. Come meet them at the DC/RC flying field when you have a chance.

## My First Model Airplane Design Experience

BY BILL GARNER



I joined the ranks of RC airplane modelers in June of 2003. From the beginning I was fascinated by model airplane designs, what distinguished one from another and the why and how of model flight. My first airplanes were ARF trainers, followed by construction of an Eagle 2 kit, then building to plans two airplanes, one called the Indy 400 and the other the Firebolt. Both provided valuable lessons in construction, and in how form affects performance. I was greatly helped by expert advice from several other modelers. In between I owned several Sticks, all now extinct. From the beginning I wanted to be able to design, build and fly models to my own specifications and form. So in late 2006 I decided to design one.

The question was what to design. The design criteria adopted were as follows:

- It had to fit in the trunk of the car with the wing on, have a removable wing, and be able to get to the controls from the top. This determined the wing span, fuselage lengths and wing location on top.

- It had to be able to fly relatively slowly without stalling. This determined the wing area and weight limits.

- It had to be semi-aerobatic. The solution was a symmetrical zero dihedral wing with the horizontal stabilizer located on the thrust axis.

- It had to be simple to construct of wood. The solution was a zero taper wing & a box fuselage similar to a Stick.

- The engine selected was an O.S. 25 FX. To meet the other goals with this engine the weight had to be less than four pounds. Managing weight required careful selection of materials, open frame wing & tail construction, and the use of mini servos for the relatively low torque requirements. A tail-wheel design was adopted to remove the weight of a nose wheel.

I had been studying typical construction methods & aerodynamic

principles for some time. Of special help was Andy Lennon's book, "The Basics of Model Aircraft Design", and many conversations with Ron Bozzonetti about the practical side of design. Using these references and some others, I wrote an Excel spread sheet to make estimates of performance when various parameters were changed. The wing ribs were designed using the Profili program, which prints out the exact rib shape on plain paper with spar locations. The principal design specs were as follows:

Wing Span:	49 inches
Wing Chord:	11 inches
Wing Area:	539 square inches
Weight: (measured)	3lbs, 13 ounces dry
Wing Loading:	16 ounces per square foot
Estimated Stall Speed:	18 mph
Overall Length:	42 inches
Engine:	O.S. 25 FX
Servos:	5; throttle (micro), elevator, rudder, two ailerons (all minis)
Battery:	4.8 V, 600 mAh NiCd.
Receiver:	Spectrum AR 7000

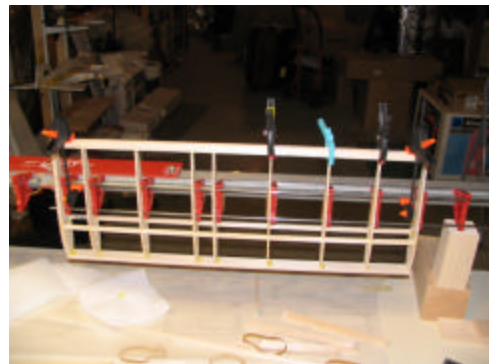
Construction began with the wing. Using the Profili templates all ribs were rough-cut at one time then smoothed using plywood templates that became the root ribs. The wing was constructed on an Adjusto-Jig, which made the alignment and construction relatively easy. When completed one of the root ribs was not quite aligned properly so the wing would have had a slight dihedral & twist. Terry Lamb suggested gluing balsa ribs on the root rib faces and sanding to shape. That worked.

The fuselage is basically a rectangular box made of balsa with light ply doublers & plywood formers. The top, sides and bottom are tapered but flat. The fuselage assembly was straight forward, except for mounting the tail assembly. It was necessary to modify the design to provide additional support for the horizontal and vertical stabilizers. The elevator & rudder servos were mounted externally near the tail, making for short push rods and simplifying construction and alignment. They also counter balanced the natural nose

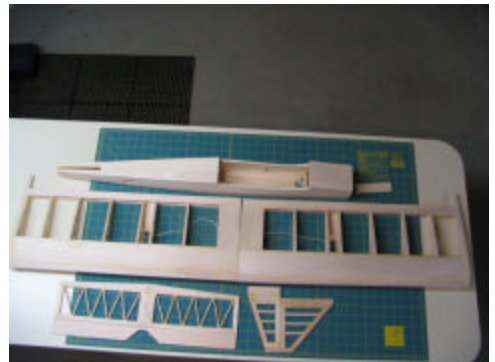
heaviness of the design.

The tail assembly was constructed of balsa framing, using the design of other airplanes as a guide. The plane was covered with Monokote, using a yellow base with red & blue stripes. A special thanks to Al Rettig who taught me how to cover using Monokote on another plane.

Construction began between Christmas & New Years of 2006 and was completed in early February, 2007. The plane flies very well and now has well over one hundred flights. It did suffer one crash that was easily repaired. By the way, it has never been named. Any suggestions?



Wing in the Adjusto-Jig



Parts Ready for Final Assembly

Ready to fly.



District of Columbia  
Radio Control Club

First Class Mail

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July 2008



Doug Harper and his newest jet  
project now complete.

Reaction 54  
Jet CAT P-120

