The Seminole Flyer

www.seminolerc.com

SEMINOLE RADIO CONTROL CLUB TALLAHASSEE, FL

A chartered member of the Academy of Model Aeronautics
AMA Charter #216, 1969-2007

AMA SINCE 1936

"The Seminole Flyer" is a publication of the Seminole Radio Control Club of Tallahassee, Florida

MARCH 2007

INDEX

Letter from the Editor- Stephen Warmath

It's almost here. The annual trek to RC Mecca is happening in Perry, Georgia Friday March 2nd and 3rd. If you have not been to this event, it's worth the 2.5-hour drive just to see how much RC stuff can be crammed into two buildings. On a dryer note, the AMA is keeping a watchful eye on FAA regulator's position on RC aircraft as unmanned vehicles. Read the included **DOT UAV** policy statement and current **FAA Advisory Circular**. Do you have a need for a custom one of a kind part or shape? A one knock off **fiberglass "lost foam" process** may just fit the bill and is explained in this month's musings. In our **Pilot Briefing** this month, the spotlight is on **Shannon Black**- Safety Officer and **Chris Bailey**- Field Marshall. Happy Building and Flying- Steve

Chief Pilot- John Hall

Punxsutawney Phil says that Spring is on it's way and we've had some very nice flying days lately. It's time to finish up the repairs from last season's "hard landings" and get those models ready for the upcoming flying season. If you've never flown off water, consider adding floats to one of your models and participating in the March 31st float fly. If you've only flown large nitro models, consider trying a small electric, or vice versa. With so much variety within our hobby, the opportunity to try something new is ever-present.

Now is a very exciting time to be involved in radio control aircraft. With the new 2.4Ghz radio systems, a frequency conflict and/or the possibility of getting "shot down" is virtually eliminated for their owners. Radio impounding at RC events may eventually be a thing of the past. These systems are already being used by some of the top pilots and can be seen in the hands of more and more fun fly participants. The obvious advantages, rich feature set, and relatively low cost of these radios makes them an excellent choice for both beginners and expert pilots alike.

The park use committee met with the new consulting firm hired to design the park. The firm, PBS&J, has an impressive track record of converting closed landfills into beautiful parks, almost all of which included radio control facilities. The firm's experience with integrating RC activities with other park activities, along with the input from club members on the committee, help to insure that our future location and facilities will be top notch.

Now, back to those repairs. See ya at the field.

John Hall

Chief Copilot- Brad Sharp

Upcoming Club Events

March 1, 2007- Club Meeting at Grace Lutheran Church. 7:30 pm.
March 2-3, 2007- Southeastern Model Show- Perry, Georgia
March 31, 2007- Float Fly- Lake Surovec

Upcoming AMA Regional Events

Florida Jets

FL
2/28/07-3/04/07 - Lakeland, FL (C) Florida Jets. Site: Airport. Frank Tiano CD, 3607 Ventura Dr E Lakeland FL 33811 PH:863-370-1288 email: frank@franktiano.com. Visit www.franktiano.com. 200 Jet pilots, over 400 aircraft. 6 flight lines, 20 vendors, food court, manufactures demos. 9am-5pm. Go to website for more info, hotels, travel. Largest Jet Together in the World! Sponsor: IMPERIAL RC

Tenth Annual Tlush/Kania Commemorative

FL
3/06/07-3/07/07 - Cape Coral, FL (C) Tenth Annual Tlush/Kania Commemorative Contest. Site: Club Field. Lloyd Underwood CD, 5917 Littlestone, Ct #108 N Fort Myers FL 33903 PH:239-656-4009. Tues - O & R 23, C LER Combined Ign-Glow, O & R 60, Elec LMR, ½ A Texaco 5 cc, Elec Wakefield, Graupne 280-300. Wed - Brown Jr - 90 sec, Texaco Combined, Foxacoy 35 sec, A/B Ign LER combined. Sponsor: CAPE CORAL R-SEA HAWKS

Autogyros Over Spring Hill

FL
3/08/07-3/09/07 - Spring Hill, FL (C) Autogyros Over Spring Hill. Site: Club Field. Donald Ogren CD, 6172 Prestwick Ct Spring Hill FL 34606 PH:352-428-9171 email: dogren96@earthlink.net. Call/email for event flyer, which has map to the field, as well as info about RV parking and hookup. Visit www.hcrcc.com. Sponsor: HERNANDO COUNTY RC CLUB

2nd Annual Tampa Bay Heli Classic

FL

3/10/07-3/11/07 - Zephyrhills, FL (A) 2nd Annual Tampa Bay Heli Classic for 431, 432, 433, 434(O). Site: Club Fields. Erich Freymann CD, 2109 Harcourt Place Odessa FL 33556 PH:813-926-8552 email: ejfreymann@verizon.net. AMA/FAI Helicopter Precision Aerobatics Contest. Concessions available. Camping/Trailers OK, no hookups. Awards for 1st place all classes. Visit www.can-amflyers.org. Sponsor: CAN AM FLYERS

SAM 4 Roar RC Contest

FL

3/10/07-3/11/07 - Dade City, FL (C) SAM 4 Roar RC Contest. Site: Withlacoochee River Park. Fred Mulholland CD, 15410 Stonecreek Lane Tampa FL 33613 PH:813-962-7020 email: f.mulholland@att.net. Events: C IGN LER, C Glow LER, O&R SP, ½ A Tex, Elec LMR, Elec Tex, A/B IGN LER, A/B Glow LER, Texaco, Antique Comb, Foxacoy, Brown Jr LER, Nostalgia. Sponsor: FLORIDA FLYERS

The 8th Annual Harold DeBolt Memorial

FL

3/10/07-3/11/07 - Spring Hill, FL (C) The 8th Annual Harold DeBolt Memorial. Site: Club Field. Greg Dill CD, 20263 Gamble Dr Brooksville FL 34601 PH:352-754-9233 email: gdill@tampabay.rr.com. For aircraft published or kitted prior to 1970. Special Lou Andrews Trainermaster Flying Event. Sponsor: HERNANDO COUNTY RC CLUB

16th Annual Dick Cole Memorial Fly In

FL

3/10/07-3/11/07 - Palmetto, FL (C-Restricted to IMAA) 16th Annual Dick Cole Memorial Fly In. Site: Club field. James Holloman CD, 3312 50th Ave E Bradenton FL 34203 PH:941-727-5670 email: jhollo6540@aol.com. 500' x 75' grass runway, RV parking - no hookups, food & beverages on site. Directions: I-75 to Exit 224, take US 301 North to Erie Road, turn left on Erie road, follow Erie road to 69th street and turn left on 69th for approximately 1 mile to entrance on your right. Sponsor: MANATEE COUNTY RADIO CONTROLLERS

SAM RC Old Timer

FL

3/14/07-3/15/07 - Palmeto, FL (C) SAM RC Old Timer. Site: Club Field. Paul Schmitz CD, 4918 14th St W K-Z Bradenton FL 34207 PH:941-224-5669. Rules will be from SAM Handbook. SAM is a special group within AMA. SAM RC events Wed: C LER Ign, O&R 60 SP, LER, O&R 23 Sp, ½ A Texaco, Fox-a-Coy, NOS, Thurs: Brown Jr, LER, Texaco (comb), Antique (comb), B-C LER (Glo), A-B LER Ign. Sponsor: MCRC

Gathering of Giants

FL

3/16/06-3/18/06 - Cape Coral, FL (C-Restricted to IMAA) Gathering of Giants. Site: Seahawk Park. James McCormack CD, 5362 Coral Ave Cape Coral FL 33904 PH:239-542-8350 email: jimmarbud@aol.com. Sponsor: R/SEA HAWKS

Central Alabama Helicopter Fly In

AL

3/16/07-3/18/07 - Bessemer, AL (C) Central Alabama Helicopter Fly In. Site: Club Field. David Harkey CD, 603 North Lake Circle Birmingham AL 35242 PH:205-991-2049 email: dharkey55@bellsouth.net. Sponsor: BIRHINGHAM HELICOPTER MODELERS

Annual Spring Fly In

FL

3/17/07 - Inglis, FL (C) Annual Spring Fly In. Site: Cross Florida Barge Canal Locks. Kenneth Brown CD, 4107 E Withlacoochee Trl Dunnellon FL 34434 PH:352-637-4891 email: kenbro@xtalwind.net. Flat grass runway, 500' x 150'. Picnic atmosphere, concession stand, RV parking & motels nearby. Strictly flying for fun. Sponsor: NATURE COAST RC'ERS

Spring Air Show Fly In

FL

CANCELLED

3/17/07 - Lake Wales, FL (C) Spring Air Show Fly In. Site: George Breen Field. Philip Coopy CD, 100 Heatherwood Blvd Lake Wales FL 33859 PH:863-638-0994 email: pjcoopys@aol.com. Site located 10 miles east of Lake Wales on SR60. Extending an open invitation to all sport flyers to relax and enjoy a fun Central Florida day. No fees, no competition, no size limitations. Raffle and 50/50. Good food and drinks available on site. Primitive RV camping allowed. Tailgate sales encouraged. Aircraft inspected for safety. Spectators $2 donation per car. Visit www.ridgebarnstormers.com. Sponsor: RIDGE BARNSTORMERS OF LAKE WALES

Third Annual Osceola Flyers Fun Fly
FL
3/17/07 - Kissimmee, FL (C-Restricted to Club Members Only) Third Annual Osceola Flyers Fun Fly. Site: Club Field. Howard Hosenbold CD, 3134 Crested Cir Orlando FL 32837 PH:407-856-2544 email: howardh1951@hotmail.com. Sponsor: OSCEOLA FLYERS

SAM
FL
3/20/07-3/21/07 - Nokomis, FL (C) SAM Site: Land fill. Ed Gandorf CD, 373 Roseling Circle Venice FL 34293 PH:941-493-1614. Tues: C LER Ignition, C GLOW LER, O&R 60 SP, ½ A Texaco, Foxacoy, WED: Brown JR LER, 90 sec, B Ignition, O&R 23, Side Port, Texaco Combined, Antique Combined, Electric LMR, Electric TEX. Sponsor: RC FLIERS OF VENICE

Warbirds Over the Panhandle
FL
3/23/07-3/24/07 - Marianna, FL (C) Warbirds Over the Panhandle. Site: Marianna Model Airpark. Dale Cavin CD, 5098 Old Hickory Cir Marianna FL 32446 PH:850-482-7090 email: dcavin@earthlink.net. Visit www.chipolarcaviators.com. Giant Scale Warbirds Assoc event. Giant Scale Warbirds 1911 to 1950 only. 600x90 grass field. RV parking ok, no hookups. Sponsor: CHIPOLA RC AVIATORS

FSS#3
FL
3/24/07-3/25/07 - Charlotte, FL (A) FSS #3 for 444(JSO). Site: Burnt Store Field. John Agnew CD, 5095 Northampton Dr Ft Myers FL 33919 PH:239-936-7148 email: johnagnew2978@earthlink.net. Fly what you have. Map on website at www.soar-fss.org. Sponsor: CAPE CORAL RSEA HAWKS

Kingdom of the Sun Pattern
FL
3/24/07-3/25/07 - Ocala, FL (AA) Kingdom of the Sun Pattern for 401, 402, 403, 404, 406(JSO). Site: Club Field. Ernest Meredith CD, 7943 SW 186th Circle. Dunnellon FL 34432 PH:352-465-1739 email: e1meredith@aol.com. RV's and camping allowed, no hook ups. See website for photos and site map at www.ocalaflyingmodelclub.com. Sponsor: OCALA FLYING MODEL CLUB

Warbird Fun Fly
FL
3/24/07 - St Petersburg, FL (C) Warbird Fun Fly. Site: Club Field. Arthur Lavallee CD, 66146 Tudor Rd Pinellas Park FL 33782 PH:727-544-1939 email: asylval@tampabay.rr.com. Sponsor: SPARKS

IMAA Big Bird Fly In
FL
3/24/07-3/25/07 - Port St Lucie, FL (C-Restricted to IMAA) IMAA Big Bird Fly In. Site: Midway Field. Ken Bridges CD, 9639 Fairwood Court Port St Lucie FL 34986 PH:772-201-5509 email: docbridges2@aol.com. I-95 exit 126 East on Midway to Torino right to Blanton Right to field on North side. Sponsor: SUNDANCERS AERO SQUADRON

Southern 500
FL
3/30/07-4/01/07 - Mulberry, FL (A) Southern 500 for 424, 428(O). Site: Newell Terry Field. Scott Smith CD, 6308 Sherman Terrace Sebring FL 33876 PH:863-670-5141 email: ssmith@hansonwalter.com. SEMPRA rules apply. See www.imperialrcclub.com for additional information. Sponsor: IMPERIAL RC CLUB

King Orange International
FL
3/30/07-4/01/07 - Starke, FL (AA) King Orange International for 322, 323, 324, 325, 326(JSO). Site: Bradford Co Fairgrounds. William Hodges CD, 5060 US Hwy 1 N Bunnell FL 32110 PH:386-445-2238 email: clpahodges@aol.com. Will be flying all PAMPA events plus Basic Stunt, Old Time Stunt, Classic Stunt and Profile Stunt. Sponsor: X47 FLYERS

Big Bird Fly In
FL
3/31/07 - Ocala, FL (C) OTOW Big Bird Fly In. Site: Club Field. Charles Smith CD, 9746 SW 97th LN Ocala FL 34481

PH:352-237-8840 email: csmith2676@clf.rr.com. No landing fee, grass field, food and facilities on site. Sponsor: OTOW RC FLYERS

Warbirds Over Deland
FL
3/31/07 - Deland, FL (C) Warbirds Over Deland. Site: Airport RC Field. William Meyer CD, 745 Bay Drive New Smyrna FL 32168 PH: 386-426-7853 email: momonsb@ucnsb.net. Enjoy warbird action with the Deland RC Clubs 1000ft paves runway. For all military aircraft of WWI, WWII, Korea, Vietnam. Piston and electric power. No heli or turbines. $5 landing fee at registration. Food and refreshments. Visit http://delandrcclub.com/. Sponsor: DELAND RC CLUB

Upcoming IMAA Regional Events

All IMAA Events in our area are listed above.

Chief Treasurer- Sam Varn

Editor's Note: The Treasurer's report is published for Members only. The public version of the Newsletter does not include this information.
Here's the current Treasurer's report:

Cash - **$0.00** Checking - **$0.00** Savings - **$0.00** CD - **$0.00**

Total- $0.00

Chief Scribe- Steve Warmath

The meeting was held at Grace Lutheran Church on February 1st 2007 and called to order at approximately 7:30.

Visitor/ New member Introductions-
New Members Present**- Tim Wheeler** Guests- **Brice Barbato, David Myers**

The Treasurer's Report- Sam read off the current account amounts. He had written checks for AMA sanction fee and magazine ad. He also mentioned that to date our CD had accrued $x.xx in interest.
A motion to accept the treasurer's report was made, seconded and passed.
Sam said that there was an article recently in the AMA magazine about a Club Treasurer that had taken funds from his Club. Sam said if there were any concerns about this happening, he would welcome any oversight such as two signature checks/ withdrawals, etc. and would not be offended

Old Business-

- Status of the frequency pins? John did not know the status of the results of the fuel proofing tests Mike Atkinson was to do. Mike was unable to attend the meeting, so John would check on it.
- Fence Repairs- Chris and John had done the needed repairs.
- Heater- Contrary to previous reports, there is a heater at the field. The new tank works great and is located in the small wood shed. It does get hot, so use starting gloves to handle it.
- Field update- John stated the County had selected an engineering firm to design the park. The company has experience in park planning with RC fields. John stated we would definitely be moved in the future and it should be a good plan. The next meeting is next week. Geoff Lawrence said he saw a park like that with an RC field and it was gorgeous. He said the RC field was already there when the park was built, but it was very nice.
- The next Float Fly is confirmed for March 31, 2007 at lake Surovec. The Fly-In will be May 5th. Brad is working on the flyer. Brad said he was working toward having standardized flyers, brochures, etc, so in the future; these can be modified as required without much effort. There would be some local advertising for the Fly-In. Tim said he could create a Public Service Announcement that could run on TV stations.
- Ken asked if there was any information on AMA insurance coverage for non-flight related injuries. John said he had no definitive answer from AMA. Geoff said things seemed to be working well at the field with the in-close flying. He said the painted lines on the field seemed to help.

New Business-

- John said that Mike Atkinson had suggested using the batteries from the glider winch along with a solar power panel and charger as a source for providing charging stations in the pavilion. He thought the batteries were not being used as most of the glider pilots are no longer flying. John indicated that he would do some research on what to buy and how much money it would cost. Joe Satterwhite said he would help with research as well. John said we could maybe entertain a motion at the next meeting.

Announcements-

- John Paul High School in Southwood has requested the Club put on a demo for them on their track/soccer field. The date is to be April 21st. Volunteers, get with John.
- Shadevulle demo is scheduled for April 24th. It will have (2) 45-minute demos. Volunteers, get with John.
- The Club has four tables reserved for Perry.
- There is a possibility we will be moving the Club meetings back to the Field in April. It will be discussed and decided upon at the next meeting in March.

With no additional business the meeting was adjourned at approximately 8:14 pm.

Pilot Briefing

Shannon Black- Safety Officer

Where are you from? I grew up and went to High School in Spring Hill, Florida. I then moved to Cocoa, Florida, where I attended community college. I then came to Tallahassee to finish my degree at FSU. I have been living here ever since.

What do you do for a living? I work for the Leon County Sheriff's Office, presently in the Criminal Investigations Bureau.

How did you get started in radio control? I have been involved in RC for a bunch of years, but have only recently been flying. While in community college, I started racing cars. I then traded in all of my cars on a used trainer plane and radio system. Like a lot of folks, I tried to learn to fly without assistance, and soon crashed my way out of the hobby. I ran cars for a few more years, and then decided to try flying again. After learning to fly with an instructor, I have done a little better. I definitely like the challenge that flying has to offer.

What do you like best about the hobby? I love the challenge of this hobby. There is always something new to learn and always that next model to look forward to. Now with electric technology advancing the way that it is, the hobby is continuing to evolve as well.

What models do you have or would like to have? What are your favorites and why? My fleet is a little depleted at this time. I have two profile planes, one nitro and one electric, and two helicopters, also one nitro and one electric. I'm trying to work towards a .90-sized helicopter, and I would like to build a large scale P-51. I have always been fascinated by these warbirds and I'd love to have a gas sized scale version.

Other than just enjoying the hobby, are there any skills or maneuvers you are working on or want to master? One of the things that I enjoy so much about RC helicopters is the

seemingly endless amount of maneuvers that can be learned. As a relative novice in RC heli's, I'm still working on some of the basics. I'm also trying to slowly move into some 3D flying and work on my inverted flight.

Is there anyone in particular who has influenced your participation in the hobby? I have found that there are some great resources to be shared within our club. We have members who have been flying longer than I have been alive, we have members who compete in this hobby on the national level, and we have guys that scour the Internet for every tidbit of information that they can find. All of this combines to give us the opportunity to learn together and to progress together. This sharing of information and the warm welcome given by club members helps to keep guys coming back.

Is there anything else you'd like to share? I'm just looking forward to a great year. I hope that everyone stays healthy and lands with the same number of pieces that they take off with.

Pilot Briefing

Chris Bailey- Field Marshall

Where are you from?

I was born and raised in Tallahassee. For short time, I lived in Orlando while I attended the University of Central Florida. In 2003, I moved back to Tallahassee to attend Florida State University for Graduate school, and I've been here ever since.

What do you do for a living?

I currently work for the Florida Office of Insurance Regulation, as the Legislative and Cabinet Affairs Liaison. Anyone who has ever had more than a ten-minute conversation with me, found out quickly that is politics is my life and that flying is my passion.

How did you get started in radio control?

The way I got started in radio control was quite by chance. I guess one could say that I was simply in the right place at the right time. Back when Hobbytown was located adjacent to Walgreens, I was waiting on a prescription and thought I would take a trip next door and browse. Needless to say, I walked out with a $100 Hobbyzone park flyer airplane, and from there the addiction took hold.

Two years later, I have progressed through airplanes to the most exciting of radio control hobbies, to me at least, helicopters.

What do you like best about the hobby?

The adrenaline rush I get when I take the first flight of the day or when I try a maneuver for the first time is what keeps me coming back for more, but the relationships I've built with club members is by far what I enjoy the most about this hobby. I've always enjoyed meeting new

people, and this hobby has allowed me to do not only that, but spread the flying virus to new pilots as well.

What models do you have or would like to have? What are your favorites and why?

My current fleet consists of a Goldberg .40 3D Profile plane, a Thunder Tiger Raptor 50, and a Thunder Tiger Raptor 90. I've had plenty of other models that I have thoroughly enjoyed, and I emphasize thoroughly, because most of them have gone on to the balsa or foam graveyard.

As Gordie Meade once told me, "…once you go helicopters you'll sell everything you own." He could not have been more correct! Once I purchased the Raptor 50, I sold what models I still had in working condition (with the exception of one) to focus on improving my 3D flying capabilities with helicopters.

Other than just enjoying the hobby, are there any skills or maneuvers you are working on or want to master?

With all of the advancements in remote control helicopter technology, the maneuvers are almost limitless (at least within my range of talents). Eventually, I would like to master all of them, but for now, I want to just continue flying without crashing too much.

Is there anyone in particular who has influenced your participation in the hobby?

I can go for a while with this question because everyone in the club has been positive influence for me in one-way or another. To highlight a few, Gordie Meade has been an enormous influence, in that he is the master of all things that fly and is able to answer just about any question I can conjure up. Jay Leudecke is truly a genius when it comes to anything that moves on a helicopter, so he has been an influence in many ways by being a mentor and sharing his knowledge with me. John Hall has been an influence from the beginning of my experience with radio control by explaining how to perform some of his outrageous maneuvers, and for pushing me to actually try them.

I want to take this opportunity and thank each of you for all of your assistance, because you have all been major influences to me these past two years.

Is there anything else you'd like to share?

I'm looking forward to another great year of flying and meeting new people. Oh, and PLEASE SUPPORT YOUR LOCAL HOBBY SHOP. Now let's go fly!

Fiberglass Parts "Lost Foam" Technique Author unknown

Everyone has its own preferred way of building; some like to carve balsa, some like to bend sticks, some like to get deep in epoxy and polyester or foam and paper. There are certainly a lot of different ways. The Lost Foam technique is just one of them. I will present a bit of a description for this method. Maybe some day you will be tempted to try it.

A related molding technique, called the Lost Wax Molding, has been in use for several centuries. In the case of the Lost Wax, the wax is often used to build the second part of the mold but during the process the wax is being replaced by metal in fusion. The wax in the mold melts or evaporates upon contact of the hot liquid metal leaving space for the metal to fill the mold. When the metal turn to solid, the mold is open and the metal piece retrieved.

In the Lost Foam technique, the foam is the mold and you dissolve the foam (or just part of the foam to keep more rigidity) when the piece is done to leave you with the resulting part. In

short, you carve the shape you want in foam, cover the foam shape with layers of fiberglass and epoxy, and then get rid of the foam. It is used mostly for fuselages and nacelles, but there is nothing preventing you from doing a hollow composite wing this way.

Here are some advantages and disadvantages to consider:

Advantages

- Easy to reproduce complex curves.
- Fast
- Sturdy and easy to repair.
- Easy to paint on
- No grain filling, no heat or solvent problems
- Economical
- Provides lots of internal room for components.

Disadvantages

- Flimsy on flat areas
- It's a one shot deal - the plug you create is destroyed with your attempt
- Messier than traditional balsa construction.
- No wood carving for the wood fanatics.
- Can get heavy easily.
- Compared to conventional fiberglass methods, the lost foam technique requires more work to complete the finish.

Some may use polyester resins instead of epoxy, but because of the smell and appetite for foam, I never used that. So I will only describe and talk about epoxy instead.

You will probably need only 1 layer over all with another layer of lighter glass in high stress areas, if you use a heavy fiberglass cloth. You may also want to add carbon fiber and/or kevlar in high stress areas.

Wear protective gloves when handling epoxy. Work in a well-ventilated area.

I use this technique when building scale curved fuselages. I decided to explore with the Lost Foam technique after reading about it being used by several UK modelers on PSS planes. I prefer to use this technique instead of wasting a lot of good balsa wood on a design showing plenty of compound curves.

The Hurricane in the pictures is my second attempt at such a technique and gave decent results. Much lighter than my first attempt. But still lots of space for improvement. The Hurricane is 1/15 standoff scale and powered by an AP29 on 8 cells. The dark area on the bare fuselage is where the microballoons stayed in a thicker layer.

The finished fuselage for my Hurricane, created using the technique described in this article.

The finished Hurricane.

The technique is fairly simple and fast. I'll give a short description with additional tips and improvements.

Mold-making and Fiberglass Lay-up

1) Take a big chunk of dense foam - pink, gray or blue extruded foam are much easier to carve and sand - to match the fuselage. I take junk pieces of foam and glue the pieces to cover the fuselage outline. Then cut the side outline using a band saw, a scroll saw, a carpet knife or a kitchen knife with small teeth. Complete the shaping and rounding by rough cutting with the knife then sand to final shape - I use a dry wall sanding pad, this is a mesh of abrasive material with plenty of holes where the foam crumbs can lodge themselves instead of rolling and making dents in your foam. All this can be done in half an hour or an hour.

2) Once satisfied with the accuracy and level of details, wrap the plug with one layer of packing tape to prevent the epoxy from getting into the foam. Apply some wax to help remove the tape later on - I will use Johnson floor wax next time.

3) If you want, you can mount it on a fixture with a nail at each end to hold the foam core off the working table. You want to be able to rotate the core like a chicken on a rotisserie so that you can work on all sides of it.

4) Apply one layer of thick fiberglass cloth - 2oz or 3oz - using 3M#77 spray to stick before the epoxy is applied. Apply the cloth in 2" or 3" overlapping strips to ease the placement. Make the strips as wide as will conform to the shape of the core. In some areas, they may be quite narrow, and others quite wide.

5) Mix your epoxy per the manufacturer's recommendations. Then brush epoxy into the glass, thoroughly saturating it.

6) Use toilet paper or paper towels to absorb as much of the epoxy as possible. Lay the paper on a portion of the fuse. Press the paper onto the glass so that it absorbs epoxy. Pull off the paper, being careful not to pull up glass cloth with it. Continue this process until the paper can absorb no more epoxy.

7) Apply the number of layers needed to obtain the rigidity you want. I used a couple of layers of medium grade cloth with additional layers in the nose and tail.

8) Let the epoxy harden for at least 24 hours if no more glass is to be applied. If more glass is needed, apply it before 24 hours. You may want to rough up the surface with sandpaper first.

Finishing

1) After the epoxy has hardened, sand off the high spots and rough up the surface all over.

2) Mix up a blend of epoxy and microballoons that is just liquid enough to be brushed on, but no so fluid as to be runny. You want plenty of microballoons so that it will be easy to sand. Other fillers that will stick to epoxy can be used. Just be sure they are light in weight.

3) Brush the filler all over the fuse. Let it harden until it can be sanded. Don't let it harden any longer than necessary, because it just makes it more difficult to sand.

4) Using sandpaper of decreasing roughness, sand all the mixture off, except what is left in the hollows. One application may be enough to get a smooth surface, but you may have to touch up a few areas.

Foam removal

1) It is better to get rid the foam after all the sanding was done as the foam provides a solid base to apply pressure. Now get the solvent out - I use acetone. Use a large bucket to receive the soon to be dripping solvent (or your neighbor's lawn if you hate him) in an area with excellent aeration. Open up an area of the fuselage where you will pour the solvent - I use the wing opening in the fuselage. Pour a bit of solvent at a time and let it dissolve the foam. You will be left with a bit of thick paste at the end; don't worry.

2) Next, remove the packing tape; if you waxed it, pulling a corner from inside the wing bay will have most of the tape extracted and leave a nice clean interior, bringing with it the foam paste that was left.

Painting:

1) Spray with gray, white or light gray (depending on the finish color you want) Krylon primer or something similar. Wet sand almost all of it off. Repeat this until you are happy with the surface smoothness.

2) If you make a sport model you can spray with one or two coats of Krylon fast dry enamel. Silver Krylon makes for a very nice aluminum.

Tips

- Remember that there is wax inside and that you will need to sand the places you want to glue formers or reinforcements.
- To be more accurate; make cardboard templates.
- For boxy type fuselage a stick method would be faster and more rigid.
- Apply your reinforcement (carbon fibers, kevlar cloth, etc) in the first layers, as you don't want to have to sand those if they protrude.
- I make my firewalls out of discarded PCB from work (RRR; Reduce, Reuse, Recycle) that I have predrilled and glued to the plug's tape using 3M77 contact cement; the firewall is an integral part of the completed fuselage.
- I used 2" thick pink foam that was a bit narrower that the scale fuselage and didn't bother to do the wing fairing on this first attempt at a scale airplane. Therefore there is a fairly large flat area on the sides and these are not very stiff. Next time, I will use balsa planking (1/32 or maybe 1/16) then add fiberglass to provide more rigidity to the side.
- You may find that the sanding has weakened a couple of spots on your final fuselage. You can reinforce those up from the inside by applying patches of cloth soaked with epoxy.
- If you make it flexible enough is will absorb energy much more and there will be less destruction. A thicker fuselage will propagate the energy of a crash to the components instead of absorbing it. On the other hand, a soft fuselage may bend or distort when moving control surfaces at high speed.
- Fiberglass is weaker on sharp corners. Round the foam plug a bit and add more microballoons/epoxy paste to be able to carve/sand the sharp corner in the end.

Sleeve Material

One of my friends, Waid Reynolds, while attending the June Slope Jamboree at Richland, camped at the Columbia River Park right next to a real nice guy named Jerold Converse. It turned out that Jerry is an RC glider pilot living in Grand Coulee. He likes to scratch build gliders, including using the lost foam technique to make his own fuselages. In searching for better ways to build fuselages, he found that using sleeves of modern woven materials over the foam fuse cores saved time and produced a stronger and prettier end product compared to using strips of material to do the lay-up. He knew that other scratch builders would like to do the same. But, sleeve material was expensive and difficult to acquire from normal modeling sources. He searched out manufacturers who would sell sleeve stock in relatively small quantities at reasonable prices. To make this material available to the rest of us Jerry has started his own Web based business.

His Web based business; R/C COMPOSITES in Grand Coulee, Washington sells Biaxial Woven Sleeves made from Fiberglass, Kevlar, Carbon fiber and Kevlar/Carbon fiber blend. The material will expand 25 to 30% and contract 65 to 70%. It comes in various sizes and weights (1/4" to 11" dia. and 5.9 oz./sq.yd. to 30.7 oz./sq.yd.).

Check out his home page at http://homepage.usr.com/c/composites.

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
14 CFR Part 91

Unmanned Aircraft Operations in the National Airspace System

AGENCY: Federal Aviation Administration (FAA), DOT. ACTION: Notice of policy; opportunity for feedback.

SUMMARY: This document clarifies the FAA's current policy concerning operations of unmanned aircraft in the National Airspace System.
FOR FURTHER INFORMATION CONTACT: Kenneth D. Davis, Manager, Unmanned Aircraft Program Office, Aircraft Certification Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, (202) 385-4636, e-mail: kenneth.d.davis@faa.gov.

Background

Simply stated, an unmanned aircraft is a device that is used, or is intended to be used, for flight in the air with no onboard pilot. These devices may be as simple as a remotely controlled model aircraft used for recreational purposes or as complex as surveillance aircraft flying over hostile areas in warfare. They may be controlled either manually or through an autopilot using a data link to connect the pilot to their aircraft. They may perform a variety of public services: Surveillance, collection of air samples to determine levels of pollution, or rescue and recovery missions in crisis situations. They range in size from wingspans of six inches to 246 feet; and can weigh from approximately four ounces to over 25,600 pounds. The one thing they have in common is that their numbers and uses are growing dramatically. In the United States alone, approximately 50 companies, universities, and government organizations are developing and producing some 155 unmanned aircraft designs. Regulatory standards need to be developed to enable current technology for unmanned aircraft to comply with Title 14 Code of Federal Regulations (CFR).

The Federal Aviation Administration's current policy is based on whether the unmanned aircraft is used as a public aircraft, civil aircraft or as a model aircraft.

Unmanned Aircraft Systems Operating as Public Aircraft. The most common public use of unmanned aircraft today in the United States is by the Department of Defense. U.S. operations in Iraq, Afghanistan and elsewhere have fueled a huge increase in unmanned aircraft demand. In Iraq alone, more than 700 unmanned aircraft are in use for surveillance and weapons delivery.

Other agencies have also found public uses for unmanned aircraft. For example, the Customs and Border Protection uses them to patrol along the US/Mexican border. In the future, unmanned aircraft could be used to provide first responder reports of damage due to weather or other catastrophic causes.

In response to this growing demand for public use unmanned aircraft operations, the FAA developed guidance in a Memorandum titled "Unmanned Aircraft Systems Operations in the U.S. National Airspace System—Interim Operational Approval Guidance" (UAS Policy 05-01). In this document, the FAA set out guidance for public use of unmanned aircraft by defining a process for evaluating applications for Certificate(s) of Waiver or Authorization (COA's) for unmanned aircraft to operate in the National Airspace System. The concern was not only that unmanned aircraft operations might interfere with commercial and general aviation aircraft operations, but that they could also pose a safety problem for other airborne vehicles, and persons or property on the ground. The FAA guidance supports unmanned aircraft flight activity that can be conducted at an acceptable level of safety. In order to ensure this level of safety, the operator is required to establish the Unmanned Aircraft System's (UAS) airworthiness either from FAA certification, a DOD airworthiness statement, or by other approved means. Applicants also have to demonstrate that a collision with another aircraft or other airspace user is extremely improbable as well as complying with appropriate cloud and terrain clearances as required. Key to the concept are the roles of pilot-in-command (PIC) and observer. The PIC concept is essential to the safe operation of manned aircraft. The FAA's UAS guidance applies this PIC concept to unmanned aircraft and includes minimum qualifications and currency requirements. The PIC is simply the person in control of, and responsible for, the UAS. The role of the observer is to observe the activity of the unmanned aircraft and surrounding airspace, either through line-of-sight on the ground or in the air by means of a chase aircraft. In general, this means the pilot or observer must be, in most cases, within 1 mile laterally and 3,000 feet vertically of the unmanned aircraft. Direct communication between the PIC and the observer must be maintained at all times. Unmanned aircraft flight above 18,000 feet must be conducted under Instrument Flight Rules, on an

IFR flight plan, must obtain ATC clearance, be equipped with at least a Mode C transponder (preferably Mode S), operating navigation lights and / or collision avoidance lights and maintain communication between the PIC and Air Traffic Control (ATC). Unmanned aircraft flights below 18,000 feet have similar requirements, except that if operators choose to operate on other than an IFR flight plan, they may be required to pre-coordinate with ATC.

The FAA has issued more than 50 COA's over the past 2 years and anticipates issuing a record number of COA's this year.

For more information, Memorandum on UAS Policy (05-01) and other policy guidance is available at the FAA Web site: http://www.faa.gov/uas

.

Unmanned Aircraft Systems Operating as Civil Aircraft Just as unmanned aircraft have a variety of uses in the public sector, their application in commercial or civil use is equally diverse. This is a quickly growing and important industry. Under FAA policy, operators who wish to fly an unmanned aircraft for civil use must obtain an FAA airworthiness certificate the same as any other type aircraft. The FAA is currently only issuing special airworthiness certificates in the experimental category. Experimental certificates are issued with accompanying operational limitations (14 CFR 91.319) that are appropriate to the applicant's operation. The FAA has issued five experimental certificates for unmanned aircraft systems for the purposes of research and development, marketing surveys, or crew training. UAS issued experimental certificates may not be used for compensation or hire.

The applicable regulations for an experimental certificate are found in 14 CFR 21.191, 21.193, and 21.195. In general, the applicant must state the intended use for the UAS and provide sufficient information to satisfy the FAA that the aircraft can be operated safely. The time or number of flights must be specified along with a description of the areas over which the aircraft would operate. The application must also include drawings or detailed photographs of the aircraft. An on-site review of the system and demonstration of the area of operation may be required. Additional information on how to apply for an experimental airworthiness certificate is available from Richard Posey, AIR-200, (202) 267-9538; e-mail: richard.posey@faa.gov.

Recreational/Sport Use of Model Airplanes.

In 1981, in recognition of the safety issues raised by the operation of model aircraft, the FAA published Advisory Circular (AC) 91-57, Model Aircraft Operating Standards for the purpose of providing guidance to persons interested in flying model aircraft as a hobby or for recreational use. This guidance encourages good judgment on the part of operators so that persons on the ground or other aircraft in flight will not be endangered. The AC contains among other things, guidance for site selection. Users are advised to avoid noise sensitive areas such as parks, schools, hospitals, and churches. Hobbyists are advised not to fly in the vicinity of spectators until they are confident that the model aircraft has been flight tested and proven airworthy. Model aircraft should be flown below 400 feet above the surface to avoid other aircraft in flight. The FAA expects that hobbyists will operate these recreational model aircraft within visual line-of-sight. While the AC 91-57 was developed for model aircraft, some operators have used the AC as the basis for commercial flight operations.

Policy Statement

The current FAA policy for UAS operations is that no person may operate a UAS in the National Airspace System without specific authority. For UAS operating as public aircraft the authority is the COA, for UAS operating as civil aircraft the authority is special airworthiness certificates, and for model aircraft the authority is AC 91-57.

The FAA recognizes that people and companies other than modelers might be flying UAS with the mistaken understanding that they are legally operating under the authority of AC 91-57. AC 91-57 only applies to modelers, and thus specifically excludes its use by persons or companies for business purposes.

The FAA has undertaken a safety review that will examine the feasibility of creating a different category of unmanned "vehicles" that may be defined by the operator's visual line of sight and are also small and slow enough to adequately mitigate hazards to other aircraft and persons on the ground. The end product of this analysis may be a new flight authorization instrument similar to AC 91-57, but focused on operations, which do not qualify as sport and recreation, but also may not require a certificate of airworthiness. They will, however, require compliance with applicable FAA regulations and guidance developed for this category.

Feedback regarding current FAA policy for Unmanned Aircraft Systems can be submitted at http://www.faa.gov/uas. (Scroll down to the bottom of the page and find Contact UAPO. Click into this link.)

Issued in Washington, DC, on February 6, 2007.
Nicholas Sabatini,
Associate Administrator for Aviation Safety.

ADVISORY CIRCULAR

AC 91-57
DATE June 9, 1981
DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.
Subject: **MODEL AIRCRAFT OPERATING STANDARDS**

1. PURPOSE. This advisory circular outlines, and encourages voluntary compliance with, safety standards for model aircraft operators.

2. BACKGROUND. Modelers, generally, are concerned about safety and do exercise good judgment when flying model aircraft. However, model aircraft can at times pose a hazard to full-scale aircraft in flight and to persons and property on the surface. Compliance with the following standards will help reduce the potential for that hazard and create a good neighbor environment with affected communities and airspace users.

3 0 OPERATING STANDARDS.
a. Select an operating site that is of sufficient distance from populated areas. The selected site should be away from noise sensitive areas **such as parks**, schools, hospitals, churches, etc.
b. Do not operate model aircraft in the presence of spectators until the aircraft is successfully flight tested and proven airworthy.
c. Do not fly model aircraft higher than 400 feet above the surface. When flying aircraft within 3 miles of an airport, notify the airport operator, or when an air traffic facility is located at the airport, notify the control tower, or flight service station.
d. Give right of way to, and avoid flying in the proximity of, full-scale aircraft. Use observers to help if possible.

Classified Advertisements/ For Sale

FOR SALE-

Alpha Jet ducted fan profile jet from Hobby Lobby ($57 new)
Do you have a NEED FOR SPEED!!! Well, if you do, this aerobatic jet is the ticket. Add a dual conversion crystal on your frequency and this model is ready to fly!

Here is a video of an Alpha Jet in flight:
http://www.aff-cnc.de/aff/vid/aff_alpha_jet.avi

This model has been flown probably 10 times max, NEVER been crashed or even required repair since new.
Whole package cost over $534 new! You can have it for less than half the new price!
I will personally demo fly this model at the field for you before you buy it. It's a great model; I just don't fly it much any more due to my helicopter addiction. :-) Asking just $250 FIRM.
The price is firm because this is a great deal at less than half the new price and the quality is high. AND, you get to see it fly before you buy so this is not some Perry-table-gee-I-wonder-if-it-will-fly-gamble-buy! :-)
John Hall
john_hall@mindspring.com
(850) 893-6457

Seminole Radio Control Club
Tallahassee, FL

AMA Charter #216, 1969-2007

SRCC Officers
President – John Hall
Vice President – Brad Sharp
Secretary/ Newsletter Editor – Stephen Warmath
Treasurer - Sam Varn
Field Marshall – Chris Bailey
Field Safety Officer- Shannon Black

Field Hours
12 Noon till Dark- These hours apply to **all** aircraft, gas **and** electric.

Training Notes
To schedule a training time contact Mike Atkinson.

Flight Instructors

Mike Atkinson- Primary/ Advanced Fight Instructor (Coordinator)	926-4692
Geoff Lawrence- Primary/ Advanced Fight Instructor	942-9807
Mike Kinsey- Primary/ Advanced Fight Instructor	566-0144
John Hall- Primary/ Advanced Helicopter Flight Instructor	893-6457
Jay Leudecke- Primary/ Advanced Helicopter Flight Instructor	508-7135
Jeff Owens- Ground School/ Airworthiness Instructor (Fixed Wing)	894-2504
Steve Warmath- Ground School/ Airworthiness Instructor (Fixed Wing)	509-0672
Frank Bastos- Hobby Town Flight Demonstrator	671-2030
Don Coon- Leon High Aerospace Club Instructor	488-1971 x 1950

Club Meeting Location and Time

The regular club meetings are held on the first Thursday of each month at 7:30 PM at the Grace Lutheran Church on Miccosukee Rd. Head out Miccosukee Rd., cross Capital Circle NE, and the entrance will be the first one on your right. Once you park, follow the sidewalk around the left side of the building and go down the hill. We meet in a room on the first level.

Newsletter Submissions- Submissions are requested to be in M.S. Word format. Photos should be in .jpg or .tif format. Vector art accepted in Corel, Illustrator and AUTOCAD format. We will, however, accept anything to make it easier for those who wish to contribute. Submissions are due no later than the 23rd of the month. Send your submissions to ssw@nettally.com or by phone, Steve Warmath at 509-0672.