



November 2003

# The Fox Valley Aero Flypaper



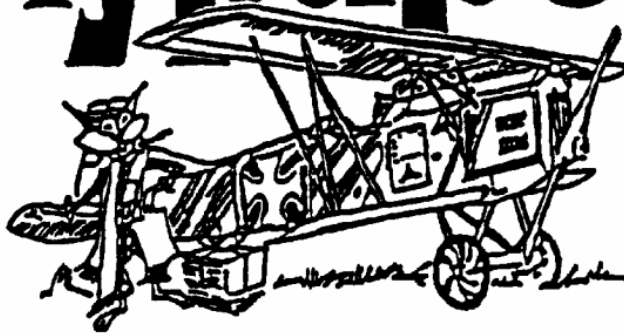
November 2003

Club President  
**Mel Ziska**

Club Secretary  
**Kevin Hersey**  
(630) 513-7987

Club Vice President  
**Greg Bohler**

Club Treasurer  
**Bill Simmons**



AMA Charter 252

Newsletter Editor: **Bob Mosinski**



AMA Charter 252

## *Message from the President*

Are you related to the Wright Brothers? I think you are! Being related covers more than the proverbial family tree. Thoughts, concepts, interests, desires and more can relate us to each other. FVAC members are also related to Edison, Bell, Leonardo, Newton all great inventors and EXPERIMENTORS.

Experimenting with designs, motors, props, glues, coverings and gadgets puts us somewhat in that select group. While we may not discover or develop a Nobel Prize winning item, we do some wonderful things in the hobby. Think of the last time you stood back from a project and said to yourself "that's really great". Did you experiment with materials, ideas and concepts to get that "great" feeling? I think you did.

Sign up now for the FVAC Christmas party. December 12th at the Fisherman's Inn RT 47. Our year end gala event should be better than ever. The Swap Shop is set for February 14th, 2004. We had hoped to get it scheduled for later in the month but activities at Potawatome park bumped us off of our regular date. Steve Baker will take your reservation for a table. Last year Steve sold all the tables we had available and I think some twice! Reserve early.

The new field is progressing. As you know, government bodies move at a somewhat slow pace. The field committee may have a rough draft of an agreement by the next meeting. Everyone seems to be "on board" with the project and even the skeptics have nodded in the affirmative.

We are dealing with the officials on the new field, by putting our best foot forward. Interactions with the public, whether it is visitors to the field or casual acquaintances, must be maintained at a high level keeping in mind the image we want to project. Word choice can influence how FVAC is perceived in the public realm. Our outstanding landing award is a great example of word choices.

*MelZ*

# *October '03 Club Meeting Minutes*

by Kevin Hersey

## **Fox Valley Aero Club General Business Meeting Minutes October 9, 2003**

President Mel Ziska called the meeting to order at 7:35 P.M. at the St. Charles Township facility

### **Secretary's Report**

A motion was made and accepted to approve the September meeting minutes as published on the FVAC website.

### **Treasurer's Report**

Treasurer Bill Simmons presented an accounting of the FVAC assets. The Club assets are not published on the website. For a full Treasurer's report attend a meeting! A motion was made and accepted to approve the Treasurer's report.

## **COMMITTEE REPORTS**

**FIELD REPORT** – Field Chairman Lee Patterson had little to say about the field except to taunt Mike Kostecki about the length of the grass.

**INSTRUCTION** – Instructor Dan Compton reports that training is picking up due the approach of winter. Several new members have soloed. One new member has successfully completed a first landing. The key word here is “successfully”.

**FIELD SAFETY** – President Ziska reminds that if you are not an all season pilot, properly store your plane over the winter months. A little after run oil will help protect the bearings from corrosion. Winter is also a good time to assess your battery packs and keep them charged.

**MEMBERSHIP** – Chairman Al Zabel reports that there are now 197 members. 29 new members joined in 2003.

One new member was initiated during the October. Please welcome Jim Samatas to the FVAC. Jim is a novice pilot with a few landings under his belt!

**WEBSITE** – [www.foxvalleyaero.com](http://www.foxvalleyaero.com) is gradually being rejuvenated.

## **EVENTS AND GENERAL BUSINESS**

**FUN FLY** – The last Fun Fly of the season is being held this Saturday. Alan Galle indicated that the event may involve carrier landings. Fun Fly events are typically not announced to prevent pilots from bringing specialized aircraft to the event. A plane that is suitable for a “climb and glide” event may not be the best for aerobatics!

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Points earned in the Fun Fly event may be used to bid on great R/C auction items during the November meeting. Points are awarded for placing in the events; first through third in four competition categories. Points are also awarded for competing. Remember, if you are not able to attend the meeting, have a buddy bid for you! Pilots are asked not to combine their points with other pilots.

**NEW FIELD** – Paul Douds reports that the new field committee is meeting with all the local governmental bodies. The committee will be meeting with the St. Charles planning commission and may be required to participate in a City council meeting. Everything is positive.

**FESTIVAL** – Dates for the 2004 Festival are being reserved.

**CHRISTMAS PARTY** – The Christmas party has been scheduled for December 12, 2003 at Fisherman's Inn, Route 47 Elburn. The Christmas party is held in lieu of the December general business meeting. Please note that the party is NOT on Thursday but on Friday. This is a family affair and family members are welcome.

There will be a buffet style meal with plenty to eat. The pickled herring and cheese cake are personal favorites! Further details will be provided in the as the date approaches.

**SWAP SHOP** – Swap shop Chairman Steve Baker reports that the date for the Swap Shop is being changed by the Park District. Steve will have clarification on the actual date by the next meeting. As a reminder to new members this is one of the FVAC's most successful events. Last year 60 swap shop tables were sold and the Club table, stocked with donated R/C paraphernalia, netted Big Bucks Buddy (BBB)!

**ELECTION COMMITTEE** – A nominating committee will be established to identify a slate of new officers for 2004. Of particular importance is a volunteer for the much coveted Secretarial position. This is obviously the best position in the organization. You don't have to do much and you have literary license to make wise cracks about Club activities! Please note that the list of Secretarial candidates will be limited to five (5).

**OUTSTANDING LANDING** - After much prompting the Outstanding Landing award went to Julian Pugh. Seems that Julian was putting on an air show with his 4 Star 60. Gravity and altitude (or lack thereof) conspired with a spin to put the plane into the bean field. Julian expected the worst but the plane was not damaged! The plane is now appropriately named the Bean Queen!

**SHOW AND TELL** – John Meisch presented his Steven's Arrow Groove electric plane. Weighing in at 22 ounces the hackler 4:1 geared motor is driven by a 2100 milliamp polycell. John provides a second 340 milliamp cell for the radio equipment. The aircraft is covered in Nelson's lite film. John is the resident expert on electric aircraft and his efforts keep improving all the time!

John Turner brought his Sig Rascal electric ARF to the meeting. The plane is equipped with HiTech micro servos. John reports that the kit was complete with the motor and speed controller. This is a great looking high quality ARF! John travels a lot in his business and the size of the Rascal makes it a perfect traveling companion!

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(Continued from page 3)

Cliff Fullhart made a rare appearance at the meeting and shared his unassembled Great Planes Folker Tri-plane with the group. Once again an excellent ARF kit.

Thanks to all the Club members that shared their planes and experience with the group.

Bob's Breezy – A former local resident is flying cross country in his ultra light type aircraft to raise money for cancer research. The Board agreed to support Bob's effort with a donation. Donations were also solicited at the General Business meeting. An accounting of the money raised will be presented at the next meeting

The meeting adjourned at 8:32 P.M.

**Kevin Hersey**




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## How to adjust a two-needle carburetor

By PAUL GEDERS

Typically, carburetors come from the factory close to being pre-set. If you have torn down your carburetor for a thorough cleaning and examination or you just want it to run right, here's a good starting point.

With the throttle barrel in the full open position, close the high-speed needle until it stops. Then, back it out three turns. Now, with the throttle barrel almost closed, do the same thing with the idle mixture screw. This is your baseline.

Some carburetors have a throttle stop screw. Usually we set these so the air hole in the carburetor barrel completely closes off against the stop screw. This is so we can shut the engine off at full low throttle trim. When adjusting some idle mixture screws, the carburetor barrel wants to rotate and get pushed inward, making it a little difficult to get a good setting. All you have to do is lock the throttle arm so it cannot rotate or go in while you are adjusting the idle mixture screw.

Here are 10 easy steps for setting up almost any two-needle carburetor:

1. Start the engine and go to full power.
2. Set the high-speed needle to maximum power and back off about ¼ to ½ turn.
3. Go back to as low an idle as you can achieve.
4. Turn the idle mixture screw until the engine stops. While the engine is off, back the idle screw out ½ to ¾ turn.
5. Restart the engine at idle.
6. The engine should be idling pretty well.
7. Reset the high-speed needle to maximum rpm and back off 200-300 rpm.
8. Return to idle and let the engine idle for about 15 seconds.
9. Quickly move the throttle to full power and listen to the transition from idle to full power. If it instantly goes to full power, you are finished.
10. If it hesitates or sags a little, it is still too lean. Back out just ¼ turn. Repeat step 9.

When you are finished, at about ½ trim setting, you should be getting a good fast idle at high throttle trim. You should be able to shut the engine off at full low idle trim. That's all there is to it!

from *Flight Lines*  
Spirits of St. Louis R/C Flying Club  
Walt Wilson, editor  
St. Charles MO

# Christmas Party

Your personal invitation to "The Greatest Time on Earth"

**Fox Valley Aero Club's Annual Dinner  
Friday December 12, 2003**

*Fisherman's Inn*

RT 47 and Main St. – 2 miles South of Elburn  
Cocktails at 6:00 p.m. Dinner at 7:00 p.m.

Buffet Dinner \$20 per person

Door prize drawing-----Surprise gifts for pilots!  
Big buy-in raffle with great items  
Special drawing for the Ladies...



Send your check to:  
Bill Simmons  
2225 Big Woods Drive  
Batavia, Illinois 60510

# “Give me air!, or Not?”

## THE ENGINE - Air Leaks

*-by Clay Ramskill*

Why do old engines run poorly? Why do otherwise good engines sometimes become hard to adjust and difficult to keep running? Why do some engines continually lean out badly when the planes nose is pointed upward?

There are a zillion answers to the above questions - but a good answer for any of them could be an air leak. After all, an engine is nothing more than an air pump; anything that destroys the efficiency of the pumping action will show up as poor performance, one way or another.

First, some basics - we must understand that unlike a four stroke engine, our two strokes USE THE CRANKCASE as a pump. Naturally, we have to have a good, airtight seal in the combustion chamber for good compression. But in a two-stroke engine, we also must have an airtight seal in the crankcase, also. As the piston moves up to compress the mixture in the combustion chamber, the crankshaft valve under the carb opens, and fresh mixture is then sucked into the crankcase. And as the piston moves down on the power stroke, at the same time the intake valve closes, and the mixture in the crankcase IS COMPRESSED. Only when the piston gets down far enough to open the transfer ports is that crankcase pressure released, squirting the fresh mixture into the cylinder under pressure.

So, not only must we have good seals in the top part of the cylinder - around the head gasket, the glow plug, and, of course, the piston itself - but we must also have good sealing in the lower part of the crankcase. This involves the seal on the back plate, on the front bearing housing if the engine has a removable one, and at the front bearing area of the crankshaft. Note that all these are relatively fixable except the last - in nearly all cases, its not the bearing that seals the crankshaft, but the fit between the crank and the housing itself that provides the seal. When an engine is "too worn out" to adjust and run properly, this area may be the culprit. But the major source of air leaks, and the first area to start looking for them, is the carburetor.

First, the carb must be sealed in its connection to the crankcase - usually an "O" ring. The barrel inside the carb must make a good fit inside the carb, or it will leak, on the low-needle side. The needles themselves must be sealed. The fuel intake fitting must be sealed, as must be the one or two screws that hold in the barrel and provide a low speed throttle stop adjustment.

Leaks around the carb are doubly bad in that they're hard to find. Only suction is involved in the carb area - pressure is also involved in the crankcase seal areas, and thus, if there's a leak, you will normally see it in the form of fuel or oil coming out. But around the carb, only suction is involved, and air leaking in will not show!

There are other air leak possibilities besides the engine. The fuel feed line is an obvious one, both inside and outside of the fuel tank. And don't forget the pressure line, and its fitting on the exhaust. ....Ed note: there are some techniques for troubleshooting these, and other engine problems. We'll go into them later.

# “Measure Twice, Cut Once”

## PLANNING FOR (& DURING) BUILDING

*-by Clay Ramskill*

PHOOEY! BLAST! GOSH—DARN IT!!! Rats! I've done it again! Today, I just "framed up" the fuselage for a new plane—and once again, I did not drill a hole in the #2 frame for the throttle nyrod. Oh, I'll get a hole in that 1/8" ply frame—I've had to develop techniques for this. But the hole won't be as accurately placed and will have a "buggered up" look—all because I didn't drill the hole BEFORE gluing in the frame. A hole for the throttle cable is only one of a number of items that are so much easier to take care of when the pieces involved are spread out flat on your workbench, unassembled. Like appropriate holes for routing your receiver antenna. Mounting arrangements for the servos. Extra supports for nyrods. Cut-outs for the radio switch. And in that #2 frame again, the holes for the wing dowels.

This list can be quite extensive—and unfortunately, most come in areas where a designer's plans don't give any help. This is not really the designer's fault—he leaves radio, battery, and pushrod installations up to you. YOU fit in the cables, pushrods, and antenna installations of your choice, in the style and type that you feel most comfortable with.

For instance, back to that throttle cable/nyrod. It's all going to depend on your engine and how you intend to mount it. A 4-stroke may require a different set-up than a 2-stroke engine. An engine mounted horizontally will require a different cable routing than an engine mounted vertically. The cable or nyrod may have to go around a fuel tank; it may not. Because of the considerable differences in types and mounting styles for engines, and the numerous ways of mounting and connecting servos to their respective control surfaces, it is improbable that a designer can cover all the possibilities. Very often, then, engine mounting and control layout is left to the builder. So you, the builder, will have to do some design work.

You decide how the engine is to be mounted. Then determine where the throttle arm will be, and then route the cable or nyrod, avoiding the fuel tank. Quite often, this will involve a hole in a frame or bulkhead. Servo placement is dependent on their linkages to the corresponding controls, weight/C.G. considerations, and space available in the fuselage. Knowing where you want them allows you to locate mounting hardware and install appropriate reinforcement, beams, or whatever. This is all more easily done BEFORE the fuselage is half completed!

The same applies to control rods or nyrods—if you determine where servo horns and control horns are going to be, then you can draw in, right on the plans, the routing for the appropriate linkages. Then it's relatively easy to allow for supports, clearances, exit points and so on. Again, it may be easier and more accurate to provide for these items before fuselage assembly.

Oh, yes—your antenna! Whether you like it outside or inside the fuselage, figure it out early. An inside antenna definitely requires some planning. Determine where you want it to go, steering clear of servos and wiring as much as possible. Find a good exit point so it won't get wrapped around a tail wheel. Draw that in on your plans. Make appropriate holes while it's easy, BEFORE you glue the whole shebang together! You may find it easier to drill the firewall for the engine mount, fuel tubing (and that throttle cable) before assembly. This is especially true in designs where the fuselage sides extend well forward of the firewall.

There are even some cases where prior planning is advisable before constructing the wing - the most obvious being a case where you add outboard ailerons run by a single servo. It's much better to have pushrod holes predrilled and bell crank mount supports already installed at the proper angle before assembly.

Sure, I know - we all want to have something that LOOKS like a plane as soon as possible. It's hard to do the boring work first; planning, marking and drilling little holes before you even get on with assembly. But you may find doing just that is the best method overall.

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In This Issue... The Latest Club News, and More!

# The Fox Valley Aero Club *Flypaper*

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