



February 2003

# The Fox Valley Aero Club Flypaper



February 2003

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Club Treasurer  
**BILL SIMMONS**

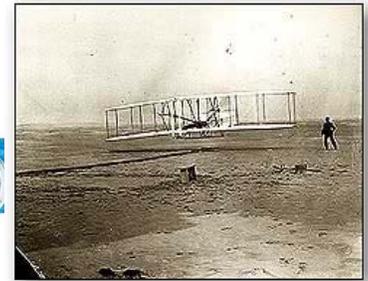


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## Centennial of Flight: We're Part of It!



**This month's club meeting** will be held in the usual spot, the St. Charles Township Building, on Thursday the 13th at 7:30 pm.

**AMA District VI VP Charlie Bauer** will be our guest at this month's club meeting. The AMA is a big part of our modeling lives, and Mr. Bauer will give us a lot of insight into the organization's contribution to the hobby.

By the way, why not bring your latest Winter project, and do a show and tell? Flying has been a little sparse due to the nippy weather, but some of us have been busy building up the hanger for the warm season. Show us what you've got!



The Festival of Giants has always been a big event for our club, and this year will be no exception. In addition to the normal excitement of the event, however, the Festival has been included in the Chicago Centennial of Flight Committee's celebration of the Wright Brothers' first foray into powered flight.

The Committee calls their commemoration "12 Events for 12 Seconds," to symbolize that first 12-second flight. And the Festival will be one of those 12 events, right alongside the Lisle Hot Air Balloon show, Oshkosh, and the Chicago Air and Water Show. That's good company!

All our talented, dedicated organizers who've worked so hard over the years have made the Festival the premier Giant Scale event in the area. We all know that, and clearly the event has garnered attention far beyond our club membership. Soon, you'll see the Festival featured in pictures at <http://www.centennialofflight.org/index.cfm>. Congrats!



### February Highlights

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## Get Well Message

**Highly active club member Paul Douds** is on the road to recovery after a run-in with the medical community. Paul is a tough customer, though, and we're sure he'll be back in the swing of things before you can say "buddy box." See you at the field, Paul!



### TIPS AND TRICKS

*WHEN YOU'RE STARTING THAT COVERING JOB ON YOUR LATEST Balsa MASTERPIECE, MAKE SURE YOU HAVE PLENTY OF NEW, SHARP X-ACTO BLADES ON YOUR BENCH. YOU'D BE AMAZED AT HOW MUCH EASIER THINGS GO WHEN YOU'VE GOT A SHARP BLADE IN YOUR KNIFE. AND MAKE SURE YOU DISPOSE OF THOSE OLD BLADES SAFELY!*

## January '03 Club Meeting Minutes

by Kevin Hersey

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

President Mel Ziska called the meeting to order at 7:30 P.M. at the St. Charles Township facility.

#### Secretary's Report

The December meeting minutes, as published on the club's website, were approved.

#### Treasurer's Report

Incoming Treasurer Bill Simmons received the Treasurer's records from outgoing Treasurer Randy Rhodes. Bill reported on the Club's total assets and will prepare a finance summary in the near future. The Treasurer's report was approved.

#### COMMITTEE REPORTS

**Membership** – Membership Chairman Al Zabel reported that the year-end membership was 192. He further reported that membership renewals for 2003 stand at 37.

Three new members were initiated into the FVAC. Please

welcome the following new members:

Paul Jacobs is a seasoned pilot interested in large scale aircraft. Mike Riley is returning to the FVAC after a short absence. Bill Morrisonbats (sorry if the last name is misspelled) has varied interests including 1/4 scale and slope soaring.

#### FIELD REPORT - Field

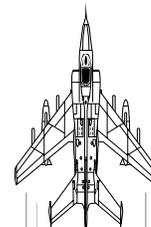
Chairman Lee Patterson reported that activities are underway to arrange for the necessary weed killer, porta potti, mowing etc. The need to apply calcium chloride to control dust will be evaluated later in the year.

**TRAINING** – Dan, Top Gun Compton was unable to attend the meeting.

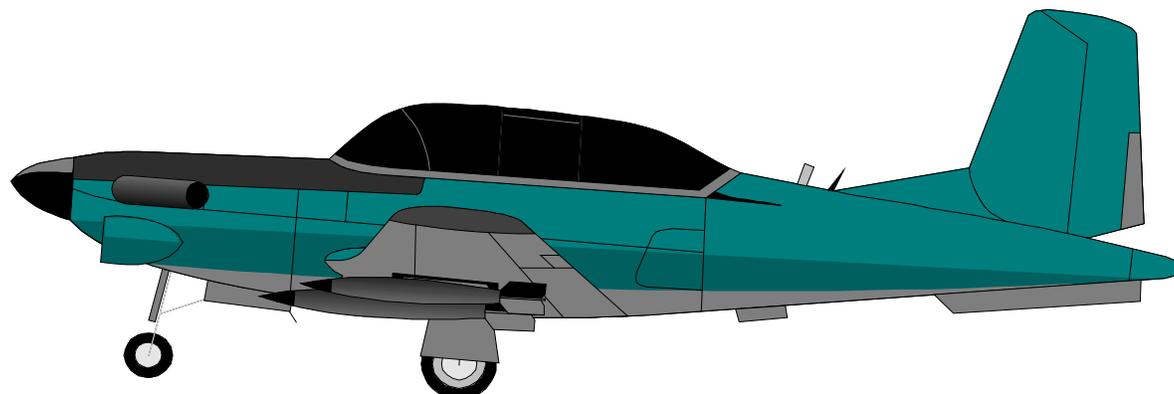
#### FIRST IN FLIGHT –

Traditionally on the first of the New Year at precisely 10:00 A.M. a contest is held to determine the first to aviate in the New Year. In a close contest, Mark Nyman won the honors. Also, as traditional and dictated by weather conditions the first outstanding landing of the year is also held.

*(Continued on page 3)*



***“Three new members were initiated into the FVAC...”***



*January 2003 Meeting Minutes, continued*

(Continued from page 2)

Temperatures on New Year were not bad but the strong wind out of the north proved a challenge. Mel Ziska was acknowledged for his outstanding landing at the event. Mel went into the corn field attempting a landing approach. In his defense, Mel argued that the plane was not damaged.

### EVENTS AND GENERAL BUSINESS

**Christmas Party** – President Ziska recognized the following individuals for the efforts:

Randy Rhodes  
Mike KostECKi  
Julie Rhodes  
Gary Ernst  
Paul Douds  
Lee Patterson

The General Membership recognized their efforts with a round of applause.

When the membership was polled concerning a “Ladies” raffle for 2003, the response was about as enthusiastic as the group can get! Julie does a great job organizing the raffle!

Paul Douds reported that there were 103 members and guests in attendance. Cost of the meal was approximately \$2.00 more than the members were charged. The additional cost was underwritten by the Club treasury.

The reservation for the 2003 Christmas Party at Fisherman’s Inn has already been made.

**Swap Shop** - Chairman Steve Baker reported that the 2003 event will be held on FEBRUARY 22, 2003 from 9:00 A.M. to 2:00 P.M. at the

Pottawanamee (hopefully this is spelled close to correct, I’m tired of looking it up) Park facility. Volunteers are needed to help set up the facility at 07:00. Throughout the day help will be needed to assist with admissions, the Club Table and Coffee sales. At approximately 1:30 P.M. help will be required to dismantle the operation. Steve indicates that interest in this year’s event is high.

Did I mention the Club table? The Club table is always a big deal. It’s a big deal because we make big money! So if you have old equipment, old junk, new equipment or new junk that you’re not going to use, please donate it to the Club table.

**Fuel Sale** – Hobby Town is now working out the details on a new fuel sale concept. In previous years fuel was bought in bulk and distributed. This was cumbersome, required a fuel sale chairman to keep track of the order and left someone with a rather large quantity of ignitable liquid to store. Here’s the new deal, show your member card and fuel can be purchased at a discount year round! This is a great deal for members and helps increase traffic at Hobby Town. Sounds like a win-win situation.

**New Field** – President Ziska and Bob Walker talked briefly about the new field location. There are many different public entities involved in the property and ownership/control of the property is still in question.

**New Business** – President Ziska reminds that dues for 2004 membership are due. The dues are due.

**Flypaper** – The general consensus



is that a hard copy of the Flypaper would help a number of Club members and serve as a meeting/event reminder. With a few volunteers, you should be receiving a hard copy of the newsletter in the near future.

**Future Events** – There are numerous events scheduled for 2003. Briefly they are as follows:

2 – Pylon Races  
Festival  
Kids Fly Day  
Helicopter Meet  
Biplane  
Cub Fly  
Fun Flys – Monthly

**Show and Tell** – Bob Walker introduced a fellow FVAC member, Hal Parenti. Hal is a world recognized R/C modeler. Hal was accompanied to the meeting by his son Gary and a fabulous B-25.

Hal explained the six different levels of scale competition as follows:

Fun Scale – Resembles a full size aircraft.  
Sport Scale – Documentation available, static judging and flying points.  
Expert – Most hotly contested category. Any kind plane construction is allowed including ARFs.

## January Club Meeting Minutes (continued)

Designer – Design structure and complexity is a factor. FAI – World Competition. Plane size is restricted by limiting weight to less than 26 pounds. Maneuvers are restricted to full scale performance characteristics. Team Scale – Teams compete.

Hal recently competed in FAI and finished 20<sup>th</sup> of

approximately 60 participants. Judging is similar to figure skating, with judges from around the world. The intricacies involved with international judging can only be imagined.

Hal's B-25 has been prepared to compete in Designer Scale. The

plane was originally designed by Hal and served as the prototype for Wing Manufacturing's B-25. Construction consists of sheeted foam core wing panels and a planked fuselage. The paint scheme matches the aircraft being modeled. Paint is latex house paint! There are 33,000 hand applied rivets on the model. The plane is powered by 2 counter rotating

Enya 53s. Hal demonstrated the function of the Robart landing gear and the gear doors.

Hal also brought with him a smaller electric plane that he designed for indoor flight. The plane features a box spar that is not only strong by resists twisting.

Paul Douds displayed his Sig Rascal 110. The 110 stands for wing span. Paul indicated that it required about 25 hours to construct and is powered by a Saito 1.5. This is a great looking ARF aircraft retailing for approximately \$399. Paul reports that the plane flies great.

The meeting adjourned at 8:45 P.M.

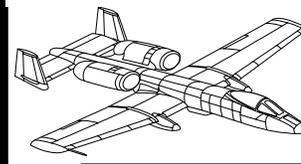
*Kevin Hersen*



## Are You Still Starting Your Engine by Yourself?

**H**ave you ever started an engine set accidentally at full bore? Ever knocked over the transmitter after starting, causing the throttle stick to go high? Ever lost your grip on an oily fuselage and had your plane leap forward at you?

If you've been modeling very long, you've probably had one or all of these experiences. Even a .15 size motor can be a dangerous weapon when the unexpected happens. To avoid accidents, either get a good airplane restraint (Midwest makes a great one for about \$18.00), or ALWAYS have a friend hold your plane securely when you're starting it or running up the engine. *Fly safely!*



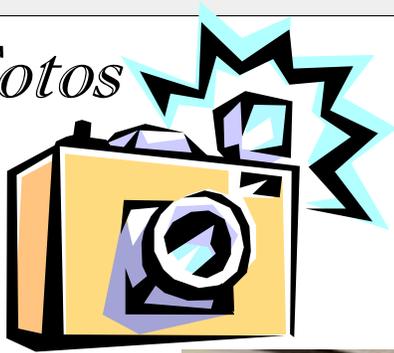
*"Hal also brought with him a smaller electric plane that he designed for indoor flight..."*



The *Flypaper* is always looking for articles, tips, news items, for-sale notices, and other contributions from FVAC members!

Send to: Jack Henderson, 26 W 586 Embden Lane, Wheaton, IL 60187 jackhenderson@covad.net

# Fox Fotos



Here are some highlight photos from last month's meeting. Photographer: Paul Douds



## Quit Stalling!

*Learning to avoid the often-misunderstood stall-and-crash syndrome*

**T**he first time I stalled my plane on final approach, it was a complete surprise to me. I had flown the airplane for months, and was very comfortable with it. There was a strong crosswind, but everyone was landing normally, right down the runway, and I didn't want to



be any different. The downwind leg was fine, but as I turned onto the base leg at the far end of the runway, I over-rolled a little bit, so I pulled some extra elevator, trying to get the nose up. Well, the nose came up all right, right into a snap-roll. I

knew I hadn't done that, and I was sure somebody had switched on their transmitter on my frequency. It felt like I had no control, and then the airplane started to respond, sluggishly. I barely managed to recover upright, and pulled back on the elevator again to try to save the day. Wham! Another snap-roll, this one ending in a pile of balsa and Monokote right on the centerline of the runway.

One of the other pilots walked up to me and asked me what happened. I told him I had no idea, but I thought it was a radio problem. He kind of chuckled, put his hand on my shoulder, and said, "That was no radio problem. You had a 15 mile-an-hour tailwind, you slowed it down too much, and you stalled, buddy boy." That was a first for me, and in addition to that sick feeling you get when you just crashed the only airplane you have in flying condition, I felt like I'd just learned something the hard way that I should have known before.

Many of the planes sport pilots fly have so much power and so much built-in lift and/or stability that we can usually ignore many of the precautions taken by full-scale pilots. It's harder to accidentally stall our planes; you have to be pretty careless, or you have to encounter a set of unusual flight conditions, as I did in the preceding story. The main lesson I learned that day was that "up" elevator doesn't always make the plane go up; sometimes, it makes it go down, and quick.

That was 17 years ago, and I

hadn't really thought about the event much until I started flying my new plane recently. It has a double-tapered wing, and is built for wild, hot-dogging aerobatics. The second day I had it out, I was still trying to get the feel of it, and I had the control throws set *way* too high. I got some altitude, and decided to see how well the plane snap-rolled. The answer was very well! "Gee, if it snaps like that, I bet it'll do a flat spin," I thought. I got up high, and put the plane into a spin, then slowly started to feed in opposite aileron, trying to go flat. Looking pretty good. I was still tweaking the controls when I noticed I was down to about 100 feet. Time to recover. I neutralized the controls, and after a couple of extra spins, the plane straightened out. Great! Now a little up elevator and some throttle, and we're outta here, right? Wrong! As soon as I touched the elevator (too much throw, remember?), & bang! Snap roll! Heading down over the corn field, I tried again. Zap! Another snap! That 17-year-old lesson finally surfaced, and as the ground whooshed upward, I hit the throttle, got my airspeed back, and then gently pulled back on the stick to level flight. Yeesh! My old pal, the stall, had reared its head again. I thought it might be a good

*(Continued on page 7)*

***"That was no radio problem. You had a 15 mph tailwind, you slowed it down too much, and you stalled, buddy boy."***



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*Quit Stalling! continued*

idea to print an article on avoiding the dreaded stall.

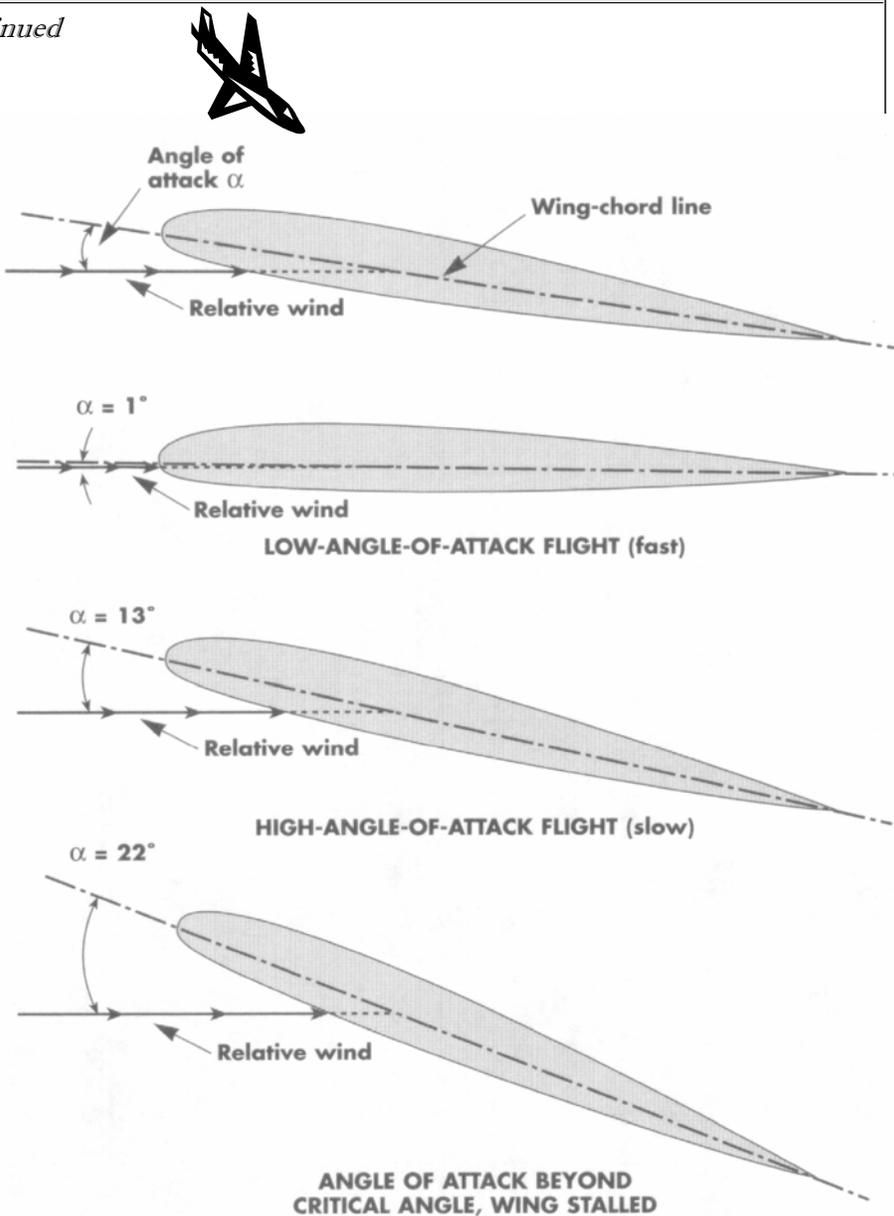
*By the way, the following text is from a great article in a great book, The R/C Pilot's Handbook, published by AirAge Publishing. I highly recommend it!*

*Avoid the Stall/Crash Quandary  
By Dan Parsons*

**WING AERODYNAMICS**  
First, I'll review how a wing supports a plane in flight aerodynamics. As the wing is propelled through the air, it develops lift. The amount of lift developed by a particular wing airfoil under a given set of atmospheric conditions is determined by the angle at which the wing meets the oncoming "relative" wind and by the wing's speed through the air.

This angle is known as the angle of attack (AOA), and it's measured from the wing's chord line to the line of the relative wind (see graphic). Here, "relative wind" means the air moving past the wing,

*(Continued on page 8)*



## Quit Stalling, continued

(Continued from page 7)

and it has nothing to do with the wind that blows at us as we stand on the ground. This relative wind is produced solely by the wing's being moved through the air. Thus, the relative wind always comes at the plane from the direction in which the plane is traveling. For example: if the plane is going straight up, the relative wind is coming straight "down" at the plane; if the plane is going straight down, the relative wind is coming straight "up" at the plane, and so on. This is an important concept that all

R/C pilots should clearly understand.

The lift developed by a particular wing is determined by many factors, including:  
-its airfoil;  
-its angle of attack (AOA);  
-its speed through the air. Thus, the lift that supports an airborne plane is generated by the combination of a higher

AOA and a lower speed, or a lower AOA and a higher speed. Low-speed flight is always at a high AOA, and high-speed flight is always at a low AOA.

As mentioned previously, the larger a wing's AOA, the greater the lift - up to critical angle. Increase the AOA beyond this critical angle, and total wing lift suddenly decreases very rapidly. And you know what happens next; the plane starts to fall out of the sky. This sudden loss of lift caused by the wing's having too large an AOA is called the wing's "stalling point." I want to emphasize that with most of the airfoils that we R/C 'ers use, this sudden loss of lift is just that - sudden and complete. In other words, one moment, your plane is flying through the air with maximum lift from its wing and, suddenly, with too large an AOA, the wing stalls and lift disappears. The plane immediately heads for the ground - usually with its nose pointing almost straight down and often in a spin. In its stalled condition, the wing has all the lift of a round rock!



**Remember:** a wing always stalls because its AOA has been increased past the critical or stalling AOA (typically 16 to 18 degrees).

It's even more important to understand and remember that the pilot *always* controls the AOA. How so? Because he operates the AOA controller, otherwise known as the elevator. When he puts in up-elevator, the tail drops, thus raising the nose, increasing the wing's AOA and decreasing the plane's air speed.

*So what should a pilot do to avoid stalling his plane?*

It's very simple: if he does not increase the wing's AOA with the elevator beyond the critical stalling angle, his plane will never stall. Caution: too much engine power with incorrect trims or incidence could stall the plane, too.

I said the answer was simple, but always following this "law" under all flying conditions is neither simple nor easy. It's difficult, and it can only be accomplished by knowing thoroughly what a stall is, what causes it and how it can be prevented - combined with plenty of flight experience.

Other than knowing safe flying practices, understanding what causes the stall and how it can be prevented are probably the most important lessons about flying that the R/C pilot has to learn. Combined with knowing how to handle the unintentional stall, this knowledge will eliminate many crashes. This is particularly pertinent for modelers who fly scale models, which generally have heavier wing loadings. Over the years, I've seen many beautiful planes crash and often be destroyed because the pilot did not understand the stall.

*Why do so many R/C pilots unintentionally stall their planes and crash?*

Because they believe the elevator is what makes a plane go

up! It's easy to understand why: first, the name itself: elevator. Second, up-elevator does cause the typical model to go up for a while until the critical AOA is reached and the wing stalls: and third, many of the "flying movies" we've all seen always show the pilot pulling up to go up.

Thus, when combined with the "feeling" that the elevator is always the "go-up" and "hold-up" control, there's enough misleading information out there to get many pilots into deep trouble.

Here I want to clarify a very important point. I've been using the term, "unintentional stall." These stalls don't usually occur during normal, full-powered flight, but during bad takeoffs, tight aerobatic maneuvers, the low-altitude terror of sagging engine power or no power, and finally, during landing approaches. And it's during just such flight situations that many planes fall victim to the stall/crash quandary because the pilot tries to "hold" the plane in the air with full up-elevator and holds it all the way to the crash point.

The pilot must have it ingrained in his mind - and, eventually, in his reflexes - that the elevator is not the "always-go-up" control; it's the AOA controller. I can't overemphasize this: the elevator is the AOA controller. And that's all it is!

*If the elevator doesn't make a plane go up (except temporarily, as the plane bleeds off speed), what does?*

The engine's power does! This brings up another very important point. At lull throttle, most R/C models have much more power than is required to maintain minimum-speed level flight. During level flight, this "excess" power is converted into higher speed (low AOA). Thus, when the pilot wants his plane to go up, all he has to do is hold some up-elevator to increase the AOA and thus lift, and the plane goes up and its speed goes down. If the angle of climb isn't too steep, the plane could continue to climb out

(Continued on page 9)

***"It's even more important to understand and remember that the pilot always controls the angle of attack."***

## Quit Stalling, continued

(Continued from page 8)

of sight. The "excess" power has been used to lift the plane to a higher altitude. It's easy to understand why many pilots fall into the trap of thinking the elevator is what always makes their planes go up.

Now, let's assume a pilot flies his plane at reduced power that will just maintain level flight by greatly increasing the AOA to just below the stalling AOA. The pilot tries to go up by putting in some up-elevator, but there's no available excess power to climb,

so the plane doesn't go up. If the pilot continues to hold this up-elevator, he will increase the AOA beyond the critical AOA, the wing will stall, and the plane, instead of going up, will go down very rapidly. And if he doesn't get off that elevator, his plane will head straight down often with the plane rotating either to the right or to the left. This rotation is called "autorotation" and is caused by a rather complicated series of events. It's more commonly called a spin.

### THE SPIN

The spin is but an extension of the stall. When a wing is completely stalled and kept stalled, the plane will often fall off into a spin, rotating rapidly, its nose pointing almost straight down. As long as the wing remains stalled (for example, as a result of the pilot holding full up-elevator and full aileron and rudder), the plane will remain in a spin all the way to the ground. (Caution! Introduction of opposite aileron in a spin can result in a possibly dangerous flat spin.)

*I want to stress these very important facts:* When a plane is heading toward the ground, almost straight down in a sudden, unintentional spin, it is psychologically and reflex-wise very difficult for the unskilled pilot to get off what he thinks is the "up" control—the elevator. Yet this is the first action that he has



to take if his plane is to be saved. This is a perfect example of why a pilot has to understand the elevator/AOA/stall connection if he's to fly without falling victim to the stall/crash quandary. He must not only understand this, but he must also develop his reflexes by practicing until he does the right things to recover during the emergency of an unintentional stall-spin.

### RECOVERING FROM A SPIN

This is usually very simple; just release all the controls, thus lowering the AOA; this un-stalls the wing, and the spinning stops. Then *ease* the plane out of its dive after it has regained sufficient flying speed. Be careful not to add up-elevator too soon or too hard, or you might stall the wing again and pop right back into a spin.

Some planes will not recover from a spin just by having their controls neutralized; then things get more complicated. Usually, neutralizing the controls and then giving opposite rudder to the rotation of the spin will bring the plane out of the spin. If this doesn't do it, adding some down-elevator and changing the engine power might work. Once in a while, nothing works, and the plane will spin all the way to the ground.

I've been talking about spins that develop out of an unintentional stall. Most reasonably proficient R/C fliers will do spins on purpose because they're fun and rather spectacular. To expedite spin entry, full rudder is always applied at the same time.

*To repeat, for emphasis, why does a wing stall?*

Because the pilot, using the AOA controller—the elevator—increased the AOA beyond the stalling AOA, and his plane fell out of the air.

Again, this shows that it isn't up-elevator that makes a plane climb; it is the *power of the*

*engine.* Take away that power and all the up-elevator in the world won't make that plane go up or even stay airborne: in fact, it will do the opposite: if the pilot insists on holding up-elevator, the plane will go down rapidly and crash.

And the sad truth is that many pilots of R/C models (and of full-scale planes, too) have never gotten these all-important fundamentals clear in their minds. The many models that are stalled and crashed attest to this. Every crash caused by a stall is caused by improper control of the AOA, i.e., by the pilot's grossly misusing the elevator.

Flying an R/C plane is more difficult than flying a full-scale plane for several reasons, two of them major:

- the absence of an air-speed indicator;
- because you aren't sitting in it, you don't have the "feel" for the plane that can warn you that you are close to stalling the wing.

### FINAL THOUGHTS

In conclusion, it is *always* the pilot who stalls the plane—unintentionally or otherwise. The elevator is not the "go-up" or "hold-up" device; it's the AOA controller. Holding up-elevator too long or applying it too rapidly increases the wing's AOA past the critical point and the wing stalls. The only way to un-stall the wing is to release the up-elevator to lower the AOA. The pilot must give that poor wing a chance to fly!

For approximately a third of the time that it takes to build even a modest R/C model, the builder/pilot could study, learn and practice these important fundamentals and save himself much disappointment, frustration and money.

### ABOUT THE AUTHOR

#### Dan Parsons

*Dan has been involved in R/C since 1952. His primary interest is designing, building and flying "different" WW II fighter-type scale models.*



***“Again, we reiterate that all of these controls are interactive. When you change the wing incidence, it will influence the way the elevator is***

# FVAC MEMBERSHIP FORM

Initiation Fee: \$100.00 (For new memberships only.)

- Dues for Senior Members (18 years and over) ..... \$75.00 per Member
- Dues for Junior Members (17 years and under) ..... \$25.00 per Member

PLEASE PRINT

<b>Your Full Name:</b>	<b>AMA Number:</b>	<b>Age:</b> <small>(Junior Members only)</small>	<b>Dues Amount:</b>
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____

**Your Complete Mailing Address:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please list the R/C channel(s) you use:**

\_\_\_\_\_

**Your Phone Number:**

\_\_\_\_\_

**What is Your Occupation?**  
(Please provide details)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Your E-mail Address:**

\_\_\_\_\_

**Total Payment Enclosed:**

\$ \_\_\_\_\_



***Complete and mail this form to:***

**Alfred Zabel**  
**FVAC Membership Chairman**  
**1231 Averill Drive**  
**Batavia, IL 60510**



***Make checks payable to:***  
**"Fox Valley Aero Club"**

Signature

Date

Fox Valley Aero Club  
Presents the Annual

# Radio Control Swap Shop



Planes, boats, Cars  
Equipment & Supplies

Pottawatomie Park  
Community Center  
St. Charles, Illinois

Saturday, February 22, 2003  
9:00 am - 2:00 pm

Admission \$4.00, Children under 12 free

Table Rental \$12.50 ea. prepaid, \$15.00 at the door  
Table setup 8:00 - 9:00 am

For table reservations and information contact  
Steve Baker 815.246.4227 or Mike Kostecki 630.761.4973  
e-mail: IMAA16955@aol.com



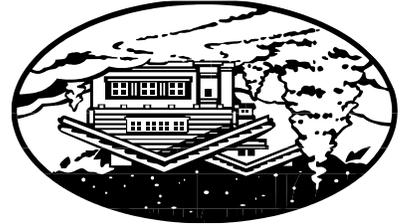
In This Issue...

The Latest Club News, and More!

# The Fox Valley Aero Club *Flypaper*

Rush to:

Jack Henderson  
26 W 586 Embden Ln  
Wheaton, IL 60187



Club Meeting This Thursday!

See you there!

## Meetings Are FUNDamental !



**There's always something to learn or someone to meet at our club meetings! Come on out!**