



March 2004

The Fox Valley Aero Flypaper



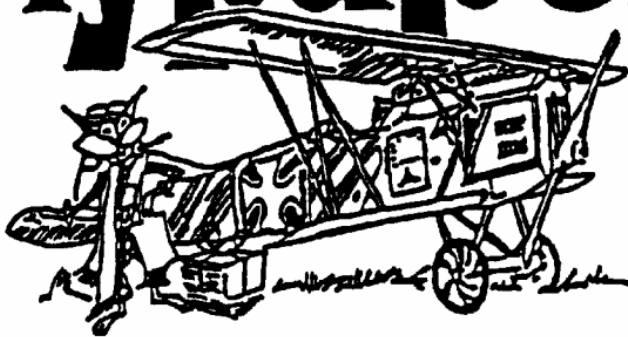
March 2004

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

Not available at time of publish or post.



February 04' Club Meeting Minutes

by Kevin Hersey

Fox Valley Aero Club General Business Meeting Minutes February 12, 2004

President Mel Ziska called the meeting to order at 7:45 P.M. at the St. Charles Township facility

Secretary's Report – Highlights of the January meeting minutes were presented to the membership. The Secretary's report was approved as presented.

Treasurer's Report - Treasurer Bill Simmons reported on the Club's finances. The Treasurer's report was approved as presented.

COMMITTEE REPORTS

FIELD REPORT – Field Chairman Lee Patterson was unavailable to provide a field status.

INSTRUCTION – Instructor Dan Compton reports that the buddy boxes are in good repair and available for another season of training. Mike Wlodek donated an Airtronics transmitter for use as a buddy box.

MEMBERSHIP – Membership Chairman Al Zabel indicated that 165 members have renewed their membership. Approximately 37 have not renewed. Two guests were in attendance at the meeting.

EVENTS AND GENERAL BUSINESS

NEW FIELD – The new field committee provided an update on their progress. Everyone remains positive that the new field location will be secured in the near future. A meeting has been scheduled for next Tuesday with the St. Charles planning commission and the matter will be addressed at the City Council meeting on March 1, 2004.

For a latest status on the new field, field committee members should be contacted.

Swap Shop – Swap shop Chairman Steve Baker indicated that all 65 tables for the swap meet to be held on Valentine's day have been sold. Volunteers are solicited to help set-up in the morning and clean-up in the afternoon. Weather forecasts are positive.

Members are reminded to bring the old/tired R/C paraphernalia to the meet and donate to the Club table.

SHOW AND TELL –

Carl Wegner displayed his ARF Chief Aircraft equipped with an MDS 40. The aircraft weighs in at 3 pounds 11 ounces. This is a neat looking aircraft with large control surfaces and the best part, the cost was \$140 including the engine!

(Continued from page 2)

John Meisch has once again been busy in his workshop. John's latest aircraft is constructed from EPP foam and is a bendable aircraft that can take a licking and keep on ticking! To demonstrate John bent the tail section 180 degrees and threw the aircraft onto the floor. This is about as indestructible as it gets! Weighing in at 15 ounces the plane is equipped with HS55 servos with a Razor 350 motor using a 6.6 to 1 gearbox driving a 12X6 prop. Cost of the plane is approximately \$30.

His second aircraft is an X330, a variant on a plane John presented last month. Due to the use of Depron construction material and additional bracing, the aircraft is much more rigid. The weight of this aircraft is approximately 13 ounces and 15 minute hover times have been achieved.

Bill Simmons presented his latest swap shop purchase, a Wattage Pitts electric biplane. This is a neat little aircraft with full control including ailerons. With the exception of adding some trim details, the aircraft is essentially complete including the motor. Bill is thinking of an upgrade to a brushless motor and lithium polymer batteries.

Shane Waterbly presented his Aero Works 540 Edge. The plane is an ARF which has been equipped with a 120 O.S. Digital servos have been included for control. Flying weight 8 pounds. At 8 pounds and with a 120 upfront this could be considered a performance aircraft!

Mark Knopke presented a project that he has worked on for seven years. A turbine powered helicopter! Power is provided by a P-80 turbine weighing 2 pounds 1 ounce, producing 12 HP at 90,000 RPM. The project got its start when Mark was challenged that he couldn't build a turbine helicopter. To complete the project Mark took up metal machining and ultimately created a real masterpiece! A 90:1 gearbox results in a rotor speed of 1000 RPM. The aircraft weighs 32 pounds fully fueled and provides approximately 10 minutes of flight on 5 pounds of fuel.

Thanks to all members for sharing their projects with the members.

The meeting adjourned at 9:17 P.M.

Kevin Hersey
Secretary



From the Editor...

Please let me know if there is anything you would like to see in future issues. The deadline for newsletter submissions is the 24th of each month. **The newsletter publish deadline will now be the Thursday prior to normal monthly meetings.** Web page submissions can be sent at anytime. Those of you that are serving on committees please send me important dates, times, and flyers a.s.a.p. so they can be posted on the web. I need current activity pictures i.e. meetings, fun-fly's and even normal "day at the field shots." My mailing address : 2016 Grayhawk Dr. Aurora, IL 60504



The best way to contact me is by e-mail: bmosinski@rjkconsulting.com

**TRY SOMETHING NEW:
Experiment: Flying gliders can be exciting, fun**

By MICHAEL HEER

In the past year, we have had a number of new members whose primary interest has been flying electric park flyers or, in some cases, gas airplanes. They have not flown gliders nor have they shown much interest in trying to fly gliders. If it doesn't "float your boat," I certainly wouldn't force you try gliders, but I would urge you to reconsider and give it a try. Since Radio Control (RC) is a hobby, there is really only one reason to fly gliders: it is fun!

Some new pilots say gliders aren't fast enough for their taste, so let's deal with that argument first. Until a few years ago, the RC speed record for all airplanes was held by a glider. A glider might still hold the record, but I am not certain. The reason a glider held the record is it has no propeller or ducted fan to slow it down. It can be soared to altitude, and, if it is built strong enough, it can dive to great speeds and can be flown across a speed trap at speeds in excess of 200 mph. Slope airplanes have been flying at speeds above 100 mph on the front side of the slope for years. This past year, they have been flown behind the slope in Dynamic Soaring at speeds exceeding 200 mph. So if you want speed, gliders are a good way to go.

***"I suggest you give the glider a try.
See if it doesn't capture you the way
it has many other club members."***

Some argue that they like to do loops, rolls, and aerobatics. At the slope, you can do unlimited maneuvers and don't have to land every few minutes to recharge batteries or to refuel. With the right battery pack for your radio, you can fly for hours. You don't need to go to the slope for speed or aerobatics with the new breed of Hot Liner sailplanes. If all you're looking for is speed and aerobatics, I will acknowledge that if you don't try and thermal gliders, you could just as well be flying any electric or gas airplane. It is the soaring aspect that sets gliders apart from other airplanes.

I know pilots who once flew very fast power-scale fighter airplanes and Pylon racers and looked down at soaring and sailplanes ... until they tried them. There is something majestic and extremely fulfilling about flying a glider, keeping it aloft by finding a thermal, and being able to use that thermal to climb your airplane high into the sky. You can stay aloft for five to 15 minutes, and on good lift days, for an hour or more. Fun flying with your glider can be extremely relaxing. On the other hand, if you enter competitions, glider flights can be sheer stress.

Some people love slope airplanes, some enjoy thermal duration, and others are drawn to large full-scale gliders. Whether towed aloft by a powered airplane or pulled up by a winch or hi-start, the grace of a large-scale glider is hard to equal.

To new members, I suggest you consider giving the glider a try. You can probably catch a ride with the club glider or someone else's model when it is up at altitude. Give it a chance and see if it doesn't capture you the way it has many other club members. Don't dismiss soaring as "not your thing" until you've tried it.

from *Thermal Topics*
Modesto R/C Club
Michael Heer, editor
Stockton CA

High Wings Versus Low Wings

by Clay Ramskill

We finally master our high wing trainer—or trash it, whichever comes first. Maybe then we build a shoulder wing plane.

Only after we are somewhat competent at flying do we try flying a low wing plane, and then with white knuckles and shaky knees. WHY? Just what is it about low wingers that make them “tougher” to fly? Are they faster? No! All other things being equal, there’s virtually no difference in drag, or therefore top speed. The illusion comes from designers’ choice—they tend to put faster airfoil sections and lower aspect ratios on low wing planes, making them speedier.

Low wing planes do have several characteristics, compared to high wingers that make them more suitable for higher performance aircraft.

1. “Nicer” (and quicker) roll response. This comes from the relative placement of the Center of Gravity, being closer to the natural roll center of the wing. The CG will be at or only slightly above the roll center of a low wing, but well below that of a high wing. Assuming at least a little dihedral, the roll center of the wing will be slightly above the center of the wing. See figure 1.

In a roll, the wing (providing the “power”) wants to roll about its own roll center. The rest of the plane (the “resistance”) wants to roll about the CG. The wider the distance between roll center and CG, the funnier-looking is the roll (i.e., “non-axial”).

2. The low wing lends itself to a less stable stabilizer position, leading to more pitch maneuverability. With a high wing, it’s simple, and natural, to have the stabilizer well below the wing. When the nose is pulled up, the stab drops down well below the wing’s downwash, and becomes increasingly resistant to further AOA increases. This is great for stability, and makes stalls less likely. See figure 2.

The opposite is true for the low winger—or a pull-up, the higher stab drops into the wing’s downwash, making further AOA increases easier, and the plane more maneuverable.

3. The low wing reacts more neutrally to power changes. Our old high wing trainer, with the thrust line very low, will respond by pitching nose up when power is added, nose down if power is reduced. This contributes to stability, with the nose going the way we want it to on a trainer. On the other hand, the low winger will be more neutrally stable, without much pitch reaction to power changes. The low winger will also be more wind “resistant” on the ground, a function of wing height above the wheels. The high winger will naturally be more “tipsy,” reacting to wind while taxiing and during takeoff and landing.

We must all understand that we’re only talking of tendencies here. There are many other variables that have an impact on the characteristics involved—the designer can juggle these around to get the desired handling. But wing placement is definitely one of the biggies when it comes to establishing how a plane is going to handle.

from *Clay's Newsletter Editor Helper*
courtesy of Clay Ramskill, Arlington TX
Seven Towers RC Club

THE WATERFALL

With Wes Batson

What it is:

The waterfall is a maneuver where the plane pivots 360 degrees in the pitch axes with very little forward motion and altitude gain or loss.

Plane set-up:

The primary control surface is the elevator followed by the rudder and finally the ailerons. The control rates should be set for maximum deflection, not that you will need that much, but it's a good place to start. Later, if you find that your consistently not using max to do the maneuver, you can dial some out. Remember the plane will be VERY sensitive in these rates. There's two ways to manage this. One, is to have dual rates, the other is to have a lot of expo dialed in to make the plane less sensitive around the neutral point of your radio.

How to do it:

The waterfall is a fairly easy 3-D maneuver to learn. There's two ways to enter. One, from a harrier, the other is from just above a stall. Let's start from just above a stall. From a safe altitude, slow the aircraft until you feel that it's at it's slowest CONTROLLABLE speed. When the plane is directly in front of you, push full down elevator and apply enough power to rotate the plane 360 degrees back to the upright position. How much power? That will depend on the type plane and engine. Start by using full power, after a while you will be able to tell how much it actually takes to get the plane to rotate. Entering from a harrier will basically be the same. It's actually a little easier because the plane is in a nose high attitude and will have more momentum as the nose comes down on the rotation.



Trickiest part:

The hardest part is keeping the plane from falling off of one side or the other.

The rudder is the most effective control having the most air moving by it because of engine thrust. The first few that you do, the plane will probable fall one side or the other. Use rudder opposite to the fall to keep it upright. Ailerons help some, but remember, this is a 3-D maneuver and the plane's not flying. There's very little air moving over the wings so the ailerons are not very effective. The other tricky part is stopping the plane as it comes over the top. You can either fly out by releasing the elevator and keeping the power in, or go right into another by not releasing the elevator. With practice, you can get the plane to make consistent small tight circles in a very small space.

Recovery:

This is a pretty safe maneuver if you keep enough altitude. The thing to remember is, THE PLANE'S NOT FLYING! If you over rotate the nose pasted level and want to recover, first get the plane flying by releasing the elevator and keeping the power in. If you fall off to one side, again, RELEASE THE ELEVATOR, use ailerons to get the plane upright, and use enough power to get the plane flying

Thanks, Wes

Reprinted from Blaine Austin's "Tech Tips"
[www. blaineaustin.com](http://www.blaineaustin.com)

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

The Fox Valley Aero Club *Flypaper*



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Flypaper

