



# FLIGHT LINES

The Monthly Newsmagazine of The Spirits of St. Louis R/C Flying Club, Inc.

## happy new year

### PREZ SEZ

By Bill Lindewirth

With the year coming to a close and the holiday season just a few days away, I'd like to wish all of you and your families a "Safe & Happy Holiday".

Start the New Year off right by joining us on New Year's Day for our annual "New Years Day Fly-In" from 10:00 AM - 2:00 PM. Hot chocolate and good friends will be provided!

*Hope to see you there!*

### MEETING MINUTES: December 8, 2004

By Walt Wilson

The meeting was called to order by President Bill Lindewirth at 6:58 P.M. Jim Rawlings called attention to Walt Wilson's article, in Model Aviation, about the Spirits' development of Four-Star 40 racing.

**Members signed in:** 29 existing members, two new members, and two new member applicants, were present.

**Secretary's Report:** Minutes were accepted as published in last month's Flight Lines.

**Treasurer's Report:** The Treasurer's Report was accepted as presented.

**Field Report:** Pat Keebey reported that the tractors have been winterized and the batteries removed for the season. Pat, Bob Gizzie, and Lee Volmert did some repairs and modifications to one of the benches in the pavilion. Also, someone has been doing "doughnuts" on our field, causing ruts in the soft earth. Pat has a full report on page three.

**Safety Report:** Attention was called to Dave Brown's article about propeller accidents in Model Aviation. Be very careful around propellers, they can do serious damage to any body parts that are put in their arc. Also, don't talk to, or otherwise distract anyone working with a running engine.

**Training Report:** Bob Gizzie told about the loss of a beau-

tiful new airplane because of flying with a battery that was not sufficiently charged. See his Training Report article on page six.

### New Members and Applicants:

The following new members were at the meeting for the first time.

Name	Phone Number
Leo Steck	636-828-4343
Earl Acker	636-349-9047
Arie Kaplan	314-229-9394

They were unanimously welcomed by the members present.

**Activities Report:** Contest Directors and Event Directors were needed for several of the planned 2005 events. Don Fitch lined up Directors for all but the July 16 Four-Star 40/Warbirds Race at the meeting.

### 2005 Event Schedule

Date	Description	Director
January 1	New Years Day Fly-In	N/A
March 19	Swap Meet	Greg Pugh
April 16	Show & Tell	Pat Keebey
May 21	Four Star 40 / Warbirds	Paul Geders
June 11	Fun Fly	Bob Gizzie
July 16	Four Star 40 / Warbirds	TBD
August 6	Fun Fly	Bob Fiely
August 27	Four Star 40 / Warbirds	Steve Cross
September 24	Open House	Bill Lindewirth, Dave Rose, Greg Pugh

**Meeting Presentations:** Don Fitch noted that many times presentations were prepared for meetings and time was not available to complete them. A certain amount of year-end business has been conducted at some meetings that took up more time than planned. This is sometimes caused by members prolonging the discussions unnecessarily. Much of the necessary annual club business has been completed, for now, so more time should be available for the good stuff!

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## FLIGHT LINES

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At this meeting, club business was concluded at 7:53, leaving more than an hour for airplane talk!

**New Years Day Fly-In:** As in the past, it will be an informal day of flying, visiting, and snacking. There will be no organized flying events, just come out and fly, watch, or enjoy the comraderie. Hot chocolate will be provided by the club.

### OLD BUSINESS:

**Sale of Tractors and Mowing Equipment:** Sale of the club's mowing equipment had been put on hold until commercial mowing was evaluated. It has been successful and a three year contract has been let for mowing. A motion was made and passed to sell the tractors and other unneeded mowing equipment. Bill Lindewirth researched the value of the tractors and a price range was agreed upon. Our property owner, the mowing contractor, and other people have inquired about buying the tractors. Gene Jones has a friend who collects vintage tractors and is also interested. We have a deep-well water pump that is no longer used. The Lawn Boy riding mower is also available for the best offer. A motion to keep the Kubota for special applications was passed. Bill and Gene will contact the interested parties about possible sales.

**Insurance Coverage:** Bill Lindewirth will reduce our insurance coverage to cover only the remaining items as equipment is sold.

**Church Men's Club Presentation:** Jim Rawlings thanked all who participated in the presentation to the Church of the Shepherd Methodist Men's Club on November 20.

### NEW BUSINESS:

**Club Lease:** Bill Lindewirth has arranged an appointment with a real estate attorney on December 21 to update our lease to cover 2005 through 2015.

**RCV Engine:** Through AMA, the manufacturers of RCV engines is offering an Engine Evaluation Program to selected clubs. Walt Wilson has made arrangements for the Spirits to get one of them. We expect to receive the engine in February, 2005. After meeting the required displays and being the subject of a presentation at a meeting, the engine will be given to Bob Gizzie to use in the club trainer for next year.

**Meeting Activity:** Lee Volmert, George Cooper, Earl Acker and Walt Wilson brought planes to the meeting. See the photos for details. Bob Fiely lead a discussion of biplane strut configurations and attachment methods.



*Lee Volmert discussed his Top Flite P-40 Warhawk. It's powered by an O.S. .91 Surpass four-stroke and is covered with chrome Monokote. It has operating flaps but Lee didn't want to be bothered with the rotating retracts, so the gear is fixed. He purchased the kit at a hobby shop closeout sale and completed the model using mostly on-hand materials and hardware.*



WALT WILSON PHOTOS

*George Cooper built this E-Dawg from plans included in a copy of Fly R/C magazine. It has an AXI 2808 brushless motor and weighs 36.6 ounces. It's covered with Ultrakote and flew very well the next day after the meeting.*

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Walt Wilson discusses the Megatech Freedom Flyer RTF. The package comes complete with everything needed to fly, except for transmitter batteries. It flies very well, considering it's small size (31 inch span). The kit review will be in an upcoming issue of RC Modeler magazine.



Earl Acker discusses features of his twin-engine conversion of a Sig Four-Star 60 kit. It's powered by two Thunder Tiger .46 Pro's and flies very well. The only problem encountered was getting the engines to run consistently. Walt Wilson designed the conversion and a construction article will probably be in a future issue of RC Modeler magazine.

Meeting was adjourned at 8:55 P.M.



Bob Fiely (left) discusses designs and anchoring methods for biplane struts. Don Fitch assists.

At The Field....



Pat Keebey, Bob Gizzie and Lee Volmert look happy with their work after completing repairs on the benches in the pavilion.

### Field Report

By Pat Keebey

Bill Lindewirth, Lee Volmert, and Pat Keebey prepared the tractors for winter and rearranged the equipment in the barn. The International Harvester Tractors were put in the barn first and the batteries removed. The Kubota is easily accessible

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WALT WILSON AND CAROLYN SCHLUETER PHOTOS

GEORGE COOPER PHOTO

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in the event we would need a tractor at the field. We also did an up-date on the inventory to make sure that the equipment listed on insurance was still usable. We eliminated items from the insurance that had been disposed of, or were not valuable enough to insure.

Bob Gizzie, Lee Volmert and Pat Keebey raised the height of the work table in the pavilion.

I would like to thank Bill Lindewirth, Lee Volmert and Bob Gizzie for the helping hands. Many hands make projects fun and resolve future problems.



*Ralph Amelung and his Seamaster ARF with an OS.46FX.*

GEORGE COOPER PHOTOS



*The Splash is George's electric float plane built from plans.*



*Don Fitch and Bob Gizzie tweak the Clarence Lee pumper-equipped K&B .60 in Don's Big Foot.*

WALT WILSON PHOTO

### Snow Flying

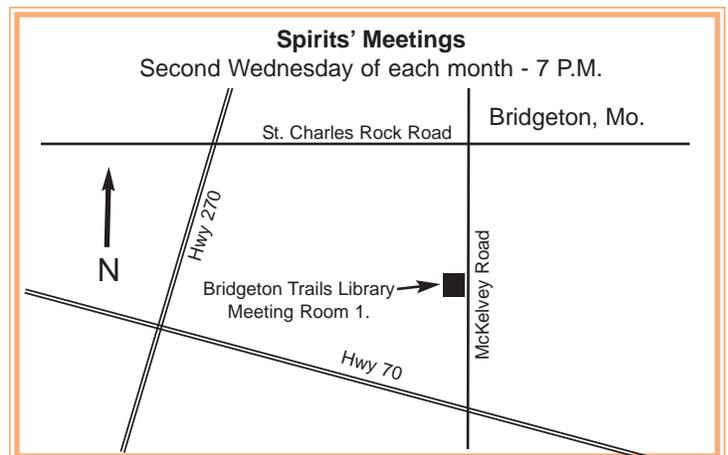
*By George Cooper*

Ralph Amelung and George Cooper were the two brave members at the field on Thanksgiving morning enjoying the beautiful day and getting in an hour of snow flying. They expect to do it again on the next snow day.

### Membership Renewals Due

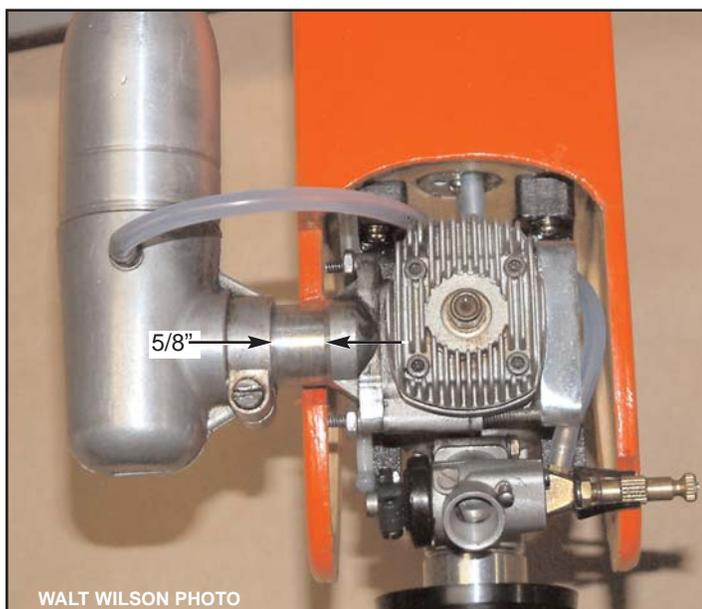
*By Bill Lindewirth*

Just a quick reminder that your 2004 "Spirits" membership expires on December 31. Members who don't renew by March 1 will be considered new and will be required to pay an initiation fee. A membership Application is included in this newsletter. A copy of your 2005 AMA card must accompany your renewal.



**What makes a SIG Four-Star-40 FASTER?**

By Paul F. Geders



*The muffler that comes with the engine should have the inboard edge of the muffler, where it mounts on the exhaust extension tube, 5/8" from the inboard end of the machined tube.*

I decided to document everything I can think of that will make a SIG Four-Star 40 fly as fast as it can. Let's get started right at the nose.

- I use an OS type spinner nut. Some pilots like to use a 2 or 2-1/2" spinner to help with streamlining the front of the airplane. Your choice. I personally think it takes more horsepower to turn the spinner, which translates to loss of RPM, too.
- The muffler that comes with the engine (not the economy muffler) should have the inboard edge of the muffler, where it mounts on the exhaust extension tube, 5/8" from the inboard end of the machined tube. In other words, 5/8" of exposed machined tube. This is the optimum tuned position of the muffler. See the picture.
- I use Cool Power 15% and K&B-1L plugs in all my engines. Castor oil based fuel will slow your engine down over time, and is messier.
- The Super Tiger engine should be broken in with a 9 X 7 Master Airscrew propeller and taken to maximum RPM and then backed off 300 to 400 RPM and let it run the tank dry. You may see an increase in RPM while it is running. Then, VERY IMPORTANT, let the engine cool completely. Restart, and go to maximum RPM again and then back off 200 to 300 and let it run, with a few excursions from factory set idle to full RPM for another full tank. Let it cool completely. Now, refuel, restart and set the engine to maximum RPM and back off the needle three clicks...it should hold

the same RPM within those three clicks. Set the idle mixture by bringing the throttle to the idle position and then start leaning out (turning the idle mixture screw clockwise) until the engine quits. Back out the idle mixture screw 1/2 turn, restart, and try some rapid transitions from idle to full power. If the engine hesitates briefly, and quits, it is too lean...back out the screw about a 1/4 turn. Check it again for rapid transition from idle to full power. If the engine hesitates for a longer period, and then goes to full power, it is a little rich and you need to lean it out 1/4 turn, or less. Once you have a rapid throttle response, without any hesitation, you are now ready to put on a 10 X 6 Master Airscrew propeller. Remember, the above will give you a consistent idle so you can land with the engine running, every time.

- The propeller can be "twisted" to increase or decrease pitch to achieve either higher or lower RPMs when you start it. However, as soon as you launch it, and make that first turn, the prop will return to its original "un-twisted" pitch. If we were all taking off the ground simultaneously, this may be a slight advantage to get you into the lead...but it doesn't last...but if you can stay in the lead...! Since we do a "flying start" there is no advantage. If you don't like the RPM your propeller is turning, try another one!
- The engine mounts, by our rules, are allowed to be lowered 1/4" to reduce the chance of the engine cutting out in the turns...I think it is a good thing to do!
- The landing gear can only be chamfered and not have a full radius to be in accordance with the plans. No real advantage anyway.
- I like to seal the canopy by gluing with RC 56 or five minute epoxy. Glue it all the way around, especially on the forward facing part of the windshield, versus screwing on the canopy. I feel it is a cleaner, lower drag installation.
- The fuel tank should be mounted in foam and have the clunk free to fall easily from one corner of the tank to the other without hitting the back of the tank...but as close to hitting as possible. Use a single vent tank and muffler pressure.
- Some pilots don't fill their tanks all the way...to save weight. Lighter is faster when all else is equal. You can experiment with how much to put in if you want. All you have to do is figure out how long you will be in the air during mill time before the start of the race...go ten laps, and then land with the engine still running. Is it worth it...to me no, I just fill up and go for it.
- Once the aircraft are all built from the BIY kit or the ARF version, the next thing to check is to make sure you balance the aircraft correctly. I like mine to hang about an inch low in the tail. Yes, just a hair tail heavy...why? The airplane will turn faster, and tighter.

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· Check to see if you have a heavy wing by setting the airplane on the bench with the lower part of the rudder (in neutral) setting on a surface that allows you to pick up the airplane in a level pitch attitude by the propeller which is held off of compression and allowed to freely pivot. If a wing drops, add appropriate amount of weight to opposite wing so that the wing remains level while doing this. Now you are balanced in both pitch and roll and the airplane will be that much easier to fly.

· The rules state; "Use the size wheels shown on the plans in both diameter and width". I use the lightest weight properly sized wheel and tire available.

· The wing has ailerons that are shown flush with the lower surface of the wing when they are in neutral. If you raise the ailerons on both sides an equal amount (about 1/8") you will go a little faster. It's a sailplane trick! You know...like re-flexed airfoils

· You should set up your controls/transmitter such that a full up elevator position gives you the tightest turn without slowing down, or buffeting.

I believe that covers everything that I can think of! Give it a try, and remember you still have to fly the course...but, with a properly set-up airplane it is so much easier to do.

If you can think of any other "speed tricks" let me know...I will add them to the above list and keep this posted on our web-site.

### Training Report

*By Bob Gizzie*

We have had quite a few inquiries from people interested in our club. I even think that there are a few here tonight and would like to extend my thanks for coming!

Now I would like to tell a story about batteries. A brand new student showed up at the field on Sunday with a Great Planes Edge 540 ARF. He announced that he had not flown before and had just purchased this plane, all put together and ready to go, from another person. He wanted to have it checked out and fly on a buddy box with some one to see if he could fly it. Ok, so there were two instructor pilots there and one asked: "Have you got the batteries charged?" "Yes, I charged them all last night." Good to go, right? They finished looking over the plane, did a range check and every thing looked good. The plane was assembled by someone who looked like they knew what they were doing. They took off. The Instructor got the plane trimmed out and really liked the way it flew. Not bad for a high performance plane and he was amazed that maybe it could be used for training! So he had it "two mistakes high" and got ready to turn it over on the buddy box to the owner/student. Just before he did, the instructor lost control. He announced he has no con-

trol to everyone and to watch out. The plane was in a three to five degree banking, descending right turn. Man what a helpless feeling trying to regain control. Boom! Splatter after about 8-10 descending turns. The biggest piece was about the size of a battery pack, and was about eight to ten feet away from the rest of wreckage. After picking up the pieces and taking them back to the pits to see if they can figure out what went wrong, they got a good battery and plugged it into what was left of the radio system. Every thing worked. Then they checked the voltage of the battery that was in the plane with an expanded scale voltmeter tester and guess what voltage showed --just under three volts, or about 2.5 volts! This was depressing for everyone. We hope this story can help to prevent this from happening again some time.

I'm not a battery expert, but believe that you have to condition new batteries before using them and, yes, you have to charge before flight! I think it's a good idea to check them before you fly with expanded scale voltmeter! I'm pretty sure that you should not leave your wall charger plugged into the batteries all the time when not flying. We can talk and discuss care and feeding of batteries with any of the club instructors and experts when you have questions!

Get those planes and batteries ready and let's go fly. Be ready also to fly on New Year's Day

*Have a Merry Christmas and a Safe New Year! Bob Gizzie*

### Spirits' Mowing Equipment for Sale:

**1953 Farmall "C"**, 35 HP, S/N #6385, with 5-year-old Woods 59" Belly Mower S/N 614277. The engine has less than 60 hours running time on it since the pistons and sleeves, clutch and brakes were replaced. Has a hydraulic system. This tractor has standard ignition. All in good working order. It's been well-maintained with 99% of the work done by Brinker Tractor. Includes all Maintenance and Parts Manuals.

**1954 Farmall "Super C"**, 35 HP, S/N #25193, with 5-year-old Woods 59" Belly Mower S/N 618348. This tractor has magneto ignition, and brakes were replaced. Has a hydraulic system. All in good working order. It's been well maintained with 99% of the work done by Brinker Tractor. Includes all Maintenance and Parts Manuals.

**1990, 8 HP Lawn Boy**, 30" Single Blade, Riding Mower, Model #52144A, S/N 150022.

**Pull-behind Brush Hog** mower, works with either Farmall. It has not been used since the transfer gearbox was replaced by Brinker Tractor. Mechanically sound...needs paint from long term storage outside of barn.

**Call Bill Lindewirth at: 314-839-0282**

## FLIGHT LINES

### Remembering 2004....



*We had great weather for the New Year's Day Fly-In. The turnout was big and everyone, who wanted to, had a chance to fly!*



*No Boy Scouts appeared, but the Learn to Fly Day was a success with many club members and walk-in flyers getting into the air.*



*Partly thanks to the move to a new location, we had the biggest Swap Meet ever!*



*There were three Four-Star 40/Warbirds races throughout the year. All were well-attended.*



*The M&M Fun Fly was well-attended and everyone had fun! Here are most (not all) of the participants!*



*The Fourth Annual Open House was the biggest and best yet. Most types of powered aircraft were flown and displayed.*

## FLIGHT LINES

**FLIGHT LINES** is the Spirits of St. Louis R/C Flying Club newsletter and is published on a monthly basis. Club members may submit personal classified ads for inclusion in the newsletter free of charge. Businesses wishing to advertise in the newsletter should contact the editor or an officer of the club for details.

### Newsletter Editor:

Walt Wilson  
3000 Persimmon Dr.  
St. Charles, MO 63301-0131  
Phone: (636) 946-6167  
**e-mail: rallyo@charter.net**

**Newsletter submissions** must be in by the Monday following the club meeting in order to make publishing deadlines. The preferred format for article submission is via e-mail. I have Macintosh and PC computers and use QuarkXpress and Microsoft Word, so send the copy as the e-mail message (not an enclosure) to avoid cross-platform or incompatible software problems if you don't have the same equipment and software. Typed or clearly written copy on paper, or a Word or Word for Windows file on a 3.5 inch 1.44MB floppy disk are acceptable if you don't have access to the internet. Photos are welcome and may be in the form of glossy prints, or if scanned or digital, in jpeg, gif or tif format. Photo credits will be given.

**General Membership** meetings are the second Wednesday of each month at the Bridgeton Trails County Library Branch, 3455 McKelvey Rd. (1/4 mi. south of St. Charles Rock Road) at 7:00 P.M.

**Membership information** can be obtained from:

Bill Lindewirth  
1046 Pinecone Trail Drive  
Florissant, MO 63031  
Phone number (314) 839-0282  
**e-mail: MrBillSTL@aol.com**

**Flying Field:** Our field is located on Amrein Road, off Greens Bottom Road in St. Charles County. It's open for flying daily from 9:00 A.M. to dusk. Flight Training may be arranged by appointment. Call Bob Gizzie at **636-441-7924** or see our web site at **http://www.spirit-sofstl.com** for a list of instructors and times when they may be available.

## SPIRITS OFFICERS FOR 2005

President:	Bill Lindewirth	314-839-0282
Vice President:	Curt Milster	636-387-9100
Secretary:	Walt Wilson	636-946-6167
Treasurer:	Les Richman	314-434-8080
Membership	Bill Lindewirth	314-839-0282
Newsletter Editor	Walt Wilson	636-946-6167
Webmaster	Paul Geders	314-838-1350
Safety Officer	Vic Bunze	636-541-2094
Field Marshal	Pat keebey	636-279-1289
Past President	Steve Cross	636-458-3287
Appointed member	Dave Rose	636-244-6563

### Katy Trail Update

*By Bill Lindewirth*

The Missouri Department of Natural Resources / Division of State Parks has finally installed the requested signs at the parking lot across from the Katy Trail on Greens bottom Road.

Two signs have been erected that say: "Remote Controlled Aircraft and Vehicles Prohibited".

Hopefully this will help to eliminate the potential danger of someone flying radio controlled aircraft at this location. My sincere thanks go to Mr. Greg Combs for his help with resolving this matter.

### The Last Word

*By Walt Wilson*

As I write this, it's in the low 20-degree range outside with a 20-mph wind. Hardly the kind of weather most of us would pick to go flying. Since it'll probably be some weeks or months before we fly again, it's time to assure our equipment is properly prepared for storage and to do the little repairs that will make it ready when we do go out again. Did you run out the last of the fuel in your engine and oil it at the end of your last flying session? If not, it would be a good idea to pull the backplate off and make sure there's no fuel in it. Then oil it thoroughly. Are your fuel tanks as empty as you can get them? Do you have any breaks in your airplane structures or coverings? Now's the time to fix all the little things that need repair. Does your flying box, starter, or other support equipment need repair or replacement? Drop a hint with your spouse that you could use something new in that area for Christmas. Complete that new airplane you haven't had time to work on. The new flying season will be here before you know it! Be ready!

*Gotta go build!*

FLIGHT LINES



SPIRITS OF ST. LOUIS R/C FLYING CLUB, INC.  
**MEMBERSHIP APPLICATION**  
 FOR YEAR \_\_\_\_\_



(PLEASE FILL IN YEAR ABOVE)

**PLEASE PRINT CLEARLY!**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: \_\_\_\_\_

AMA No. \_\_\_\_\_

Your e-mail address: \_\_\_\_\_

Additional Family Members:

Name: AMA #	Name: AMA #	Name: AMA #
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NOTE: ANY MEMBER WHO ALLOWS THEIR MEMBERSHIP TO LAPSE BEYOND MARCH 1 OF ANY YEAR SHALL BE CONSIDERED A NEW MEMBER WHEN RENEWING THEIR MEMBERSHIP. SOURCE: ARTICLE 7 SECTION 1, AND 4, CLUB BYLAWS. DUES ARE PAYABLE NO LATER THAN THE JANUARY CLUB MEETING.

To become a new member or renew your membership, please do the following:

1. Fill in the above information, even if this is a renewal.
2. Photocopy this application with valid AMA license of each flying member in the spaces below.
3. Make out a check payable to SPIRITS OF ST. LOUIS R/C FLYING CLUB, INC. **(NO CASH PLEASE)**
4. Send completed application and check to the membership chairperson: →→→→→

Membership Chairperson  
 Bill Lindewirth  
 1046 Pinecone Trail Dr.  
 Florissant, MO 63031  
 Phone No. 314-839-0282

If you apply at a club meeting, be sure to have all three of the above items. Meetings are held on the second Wednesday of each month, 7:00 p.m., at the Bridgeton Trails County Library Branch, 3455 McKelvey Rd.

**Note: New Members shall be introduced in person OR, by their sponsor, to the club before joining. This allows new members to join the club, even though their schedule doesn't allow them to attend club meetings.** New members who join in August or September will pay \$10.00 each for August and/or September, and will also pay next year's dues and initiation fee at the same time. New members who join on/after October 1st pay only the annual membership amount and the initiation fee, but get the next year and the end of the current year included.

Junior members pay no initiation fee and \$2.50 each for August and/or September!

MEMBERSHIP AGREEMENT:

I agree to abide by the SAFETY RULES and CONSTITUTION & BY-LAWS of the SPIRITS OF ST. LOUIS R/C FLYING CLUB, INC.

\_\_\_\_\_  
 Signature Date: \_\_\_\_\_

\_\_\_\_\_  
 Family Member Signature Date: \_\_\_\_\_

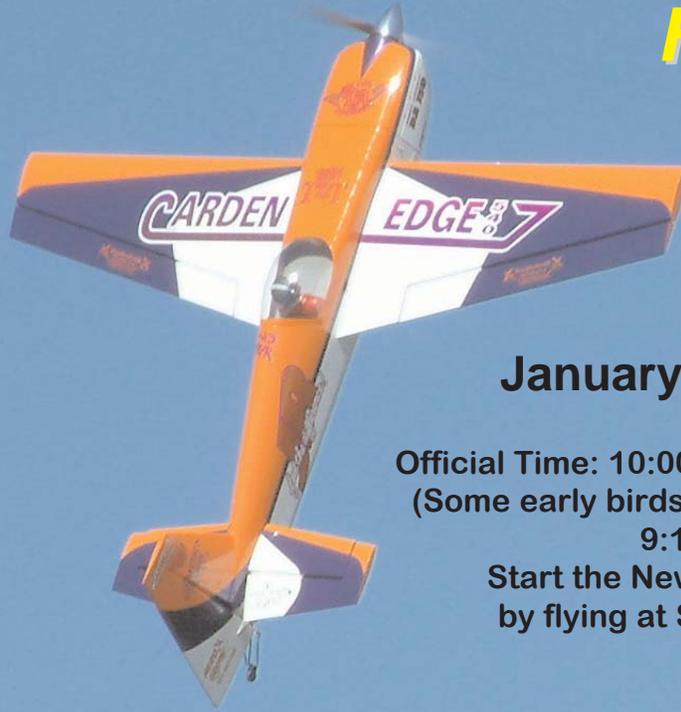
Membership rejected if not signed and dated, or AM A card NOT VALID FOR YEAR APPLIED FOR!

**Spirits Web-site Address is: <http://spiritsofstl.com>**

Place AMA card here when photocopying

Place AMA card here when photocopying

# Spirits' Annual New Years Day Fly-In



**January 1, 2005**

**Official Time: 10:00 A.M. to 2:00 P.M.  
(Some early birds will start around  
9:15)**

**Start the New Year right,  
by flying at Spirits Field**

WALT WILSON PHOTO



## **FLIGHT LINES**

Walt Wilson  
3000 Persimmon Drive  
St. Charles, MO 63301-0131

[www.spiritsofstl.com](http://www.spiritsofstl.com)

**Meeting is on  
Wednesday,  
January 12  
at 7:00 P.M.**