



FLIGHT LINES

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

M & M TOPLESS FUN-FLY COMING MAY 15 FOUR-STAR 40/WARBIRDS RACES MAY 22

PREZ SEZ:

By Bill Lindewirth

During the 15 years that I have been a member of the Spirits, I've had an opportunity to meet an incredible number of people, all with similar interests. Many of these people have become good friends and are still active members. One of the benefits of having friends interested in this hobby is the amount of knowledge that can be shared. Over the years I've learned more from fellow members than I could have from any other source.

Shortly after joining the Spirits, I began looking forward to the tech session that would follow each monthly meeting. Over the years, the business session of the meetings somehow have gotten longer, and the tech sessions shorter, with sometimes none at all. With everyone's help, I'd like to change that and bring the tech sessions back. As I indicated at last month's meeting, I am going to keep the business portion of the meeting as short as possible, so that we can devote the majority of our time towards the enjoyment of the hobby.

If there is an item of interest that you would like to see covered at an up coming meeting, please let us know, and we'll do what we can to have it covered. The subject of the presentation at the May meeting will be: "Getting Started in Electric's". I hope to see you at next month's meeting

MEETING MINUTES: APRIL 14, 2003

By Walt Wilson

Meeting was called to order at 7:00 P.M. by President Bill Lindewirth.

Members signed in: Twenty-four members, a new member applicant and one guest were present.

Curt Milster was introduced as the newly appointed Vice President. He's been flying Control Line planes since he was a kid and started flying R/C in 1971. He's flown R/C helicopters but, at present, likes fixed-wing planes better.

Board of Directors' Meetings; Bill reminded everyone that B.O.D. meetings are not closed. If you wish to attend a B.O.D. meeting, let Bill know at a membership meeting and he will notify you when and where the next one will be held.

Secretary's Report: Minutes were accepted as published in last month's Flight Lines. I want to offer a big "Thank You" to Paul Geders for taking the minutes.

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

Field Report: In the interest of safety, stop all flying and remove your equipment from the pit area when the mowing crew comes to cut the grass. They will usually do the job on Thursday or Friday mornings, as dictated by the weather. A complete field report is on page two.

Swap Meet: Greg Pugh offered thanks to everyone who helped at the Swap Meet. A "Thank-you" letter was sent to the Fort Zumwalt High School Administration and the facility has been reserved for next year. Improvements to speed admission of participants and realize more income from the concession stand are planned for next year. A full report is on page four.

Training and Safety Report: Chief Instructor Bob Gizzie reminded everyone that you should announce your intentions when flying with other people. If you want to enter the runway to take off, and someone else is flying, tell them you're "Taking Off". If they need to land immediately, wait until they've done so before going onto the runway. If you want to land, announce "Landing".

If you have to go onto the runway to retrieve your plane, announce "On The Runway". People who are flying are looking at their own planes, and are not aware of what you may do next. Announcing your intentions is not only a courtesy, but may prevent a serious accident.

If others are on your frequency, communicate with them and coordinate your activities to avoid conflict. Flags identifying your frequency should always be on your transmitter. Read the Spirits' Handbook and be sure you are aware of all the published safety rules. If you've misplaced the handbook given you when you joined the club, it's available on our web site at: <http://spiritsofstl.com>. President Bill Lindewirth, who is also the membership chairman, usually has some with him at the meetings.

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Membership Report: We now have 145 members.

Non-Members Flying at the Field: If someone is flying without a current Spirits' membership card on the frequency board, introduce yourself and find out who they are and what their membership status is. All members have the authority to police the usage of our field. We have all paid our dues and it isn't fair to our members that an outsider be allowed to fly at our field without joining the club.

Activities Report:

Contest and Event Director Don Fitch reminded everyone that a complete list of the year's planned activities is available on the back page of the Flight Lines newsletter.

Warbirds/Four-Star 40 Races April 24: Paul Geders reports that he needs help at the race.

M&M Topless Fun-Fly May 15: A flyer is on page nine.

Learn to Fly Day, June 5: Boy Scouts are to be introduced to the thrills of Radio Control Flying.

OLD BUSINESS:

Prize Distribution at Contests and Events: The proposed budget, distributed at the January meeting, defined the distribution of prizes at races. Distribution of prizes at other events is to be determined by the Contest or Event Director. One member felt that all participants should receive prizes. After some discussion, Gene Jones made a motion that the Contest or Event Director be given the discretion to distribute prizes as he chooses. Jim Rawlings seconded the motion and it passed unanimously.

Entry Fees at Contests and Events: Gene Jones made a motion to have free entry at all 2004 contests and events. Bill Lindewirth pointed out that the proposed budget has no allowance for repairs or future development at the field. Contests have the potential to be self-supporting and entry fees would help to relieve the problem. The motion for free entry failed.

Don Fitch made the motion that a \$10.00 entry fee be charged at Four-Star 40/Warbirds racing events only. Fun-Flies, Fly-In's and the Open House are to have free entry. One \$10.00 fee will cover both Four-Star 40 and Warbirds events, if someone flies in both races on the same day.

The April 24 races will have free entry because they have been advertised locally and nationally as such. Pat Keebey seconded the motion and it passed with only two votes against it.

NEW BUSINESS:

Open House & Show and Tell:

Greg Pugh will be Event Director for the Open House. A committee consisting of Greg, Bill Lindewirth and Dave Rose will organize the event. As in past years, Walt Wilson

will arrange publicity.

The Show and Tell will be rescheduled to next spring.

New Member Applicant and Guest:

<u>Name</u>	<u>Phone Number</u>
Ron Hagner	636-928-0776
Mike Freeman	636-477-0131

Ron was unanimously accepted by the members present. Mike is contemplating joining.

Meeting Activity: Lee Volmert brought a *Hanger 9 Corsair ARF*, Joe Stramaglia discussed problems with his *Magic Extra*, Don Fitch brought his new *Big Foot* (photo was in the March 2004 issue), Russ Watts showed his new Astro Hog, Greg Pugh brought his *Extra 300*, and Dave Rose showed a *Four-Star 40* he is building for Bob Gizzie. See the photos on pages three and four for details.

Tech Q&A: Paul Geders, Gene Jones and Walt Wilson had only five minutes to answer questions about engines. Paul fielded two in that time period.

Meeting was adjourned at 9:55 P.M.

April 24 Races Rained Out

By Paul Geders

I'm sorry to say that the race scheduled for today, Saturday April 24th had to be cancelled due to inclement weather!

What was really special for me was to see all the people who showed up in the rain and were there at about 8:30 to 9:00. Ron Hesskamp, Charlie Brunner, Bob Bennett, Gene Jones, Steve Ramonczuk, Steve Cross, Greg Pugh and his daughters who were volunteering to work, Curt Milster and his boys, more volunteer workers, and about 5 or 6 others.

We even got a new member, his name is John Key who had been flying park flyers and one day came down to the field where Bob Gizzie let him fly one of his planes...instant convert. He thought they were easier to fly than a park flyer...and they are! He is building a .60 size trainer and loves four-stroke engines. Thanks to Bob Gizzie!

So now what are we going to do? I took John Key's application and check over to Bill's house and suggested that we reschedule the race for the 22nd of May. This will give us adequate time to alert everyone! You have been alerted.

May 2003 FIELD REPORT

By Greg Pugh

SAFETY FIRST - from the Field Chairman? --YES! MOWING HAS PRIORITY OVER ALL OTHER ACTIVITIES!! Club members are PROHIBITED from flying or running engines in the pit area during setup, mowing or cleanup. Eric Bledsoe of EB Green Care is now mowing the field and doesn't understand the inherent dangers of mowing the field while flying is in progress. **You Do and You Are Responsible!** You must quickly remove your

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airplanes from the flightline and pit area to help expedite the mowing Job. **No Exceptions!!**

Field Maintenance: I replaced the tattered American Flag with a very nice cloth 3x5 ft flag that George Cooper had procured last year (thanks George). I also replaced the front club sign which had been vandalized by some "idiot with a shotgun" and hung a lower sign with our club's website address.



Lee Volmert shows his Super Tigre .75-powered Hanger 9 F4U Corsair ARF. It came in ten pieces, all of which fit perfectly. It's all wood construction covered with Ultracote. The retractable gear is very troublesome, but Lee's working on it.



Joe Stramaglia discusses his Hobby People "Magic Extra". It was very poorly built, with hot glue even getting into some of the pre-installed blind nuts. The new O.S. .46 AX runs fantastically and it flies well.



Russ Watts shows his new Sig Astro Hog with Saito .72 power.



Dave Rose discusses the Four-Star 40 he's building for Bob Gizzie.

Field Trash: There is no trash pickup at the field, so everyone is responsible for cleaning up after themselves. Remember when you leave the field to double check and pick up any of your trash, rags, wreckage, and any miscellaneous items that may have blown around. Your cooperation is greatly appreciated. When everyone picks up - it keeps the field looking sharp!

Greg Pugh, Field Chairman

SWAP MEET REPORT

By: Greg Pugh, Swap Meet Coordinator for Spirits

The Boeing and Spirits' Swap Meet was a great success! I was more than a little worried about the change in facilities and overall preparation. Boeing and Spirits had several pre-coordination meetings which really helped hammer out many of the issues and the Swap Meet went off with very few unforeseen surprises. My personal thanks to everyone who contributed in making this a great event! The two clubs really pulled together from Friday Night Gym preparation to Saturday's static display, concession works and cleanup. THANKS AGAIN TO EVERYONE WHO HELPED!!

Boeing and Spirits have also sent a "Thank You" note to Fort Zumwalt South High School for their excellent and professional support of the event. Overall profits, lessons learned and next year's plan were presented at the club meeting.

VINYL DECALS by "Vinyl Expressions"

By: Greg Pugh

At the club meeting, I presented a "Spirits Logo" vinyl decal installed on my newest favorite model, a Goldberg Extra 300. I've been working custom decals with an internet business. For background, Bob Gizzie showed up at the field one day with a really spiffy vinyl decal on the back of his



Greg Pugh discusses his Saito 1.20 powered Goldberg Extra 300 and the self-Adhesive Spirits' logo (inset) he bought over the internet.

MOWING SAFETY

The field will be closed when mowing is in progress! Please clear the pit area and do not fly until the mowing is completed.

TRASH DISPOSAL

There are no trash receptacles at the field. If you brought it, take it home with you. Do not leave your trash at the field!

truck window - it was the cartoon guy you typically see making a rude gesture on a Ford or Chevy truck, however in this case he was flying his R/C airplane. I thought this was really cool, and like any R/C enthusiast where money is no object when it comes to your airplanes, I decided to inquire. Bob referred me to an e-Bay trader that specialized in vinyl decals for cars, trucks, etc. I found the site online, purchased a few of these decals as a test run and anxiously awaited. The company quickly produced and mailed the items, and I was shortly thereafter in R/C heaven installing these decals on the back of my truck camper window. Though difficult to install the first time, after a trial run, you're an expert. I would mention the installation directions are

well written and I strongly recommend going with the "Dry Install", not the "Wet". To continue, I was so impressed with these vinyl decals, I emailed the company and asked about "special orders", mentioning an R/C club logo. A gentlemen I contacted at the company requested an image file which I quickly emailed and he responded the next morning with pricing. I ordered several of these logos, one which was presented at the club meeting, a 3" yellow Spirits Logo on the tail of my Extra 300.

If you are interested in these logos, visit the following website: <http://www.vinylexpressions.net>. If you are interested in the Spirits Logo, you can special-order these with the following reference: "Greg Pugh R/C Spirit of St. Louis Decal". I believe pricing is reasonable. As installed on my truck, it was ~\$6.00 (5" character and airplane) and the special Spirits Logo installed on my airplane was ~\$4.00 (for two 3" decals). Be aware you need to specify "exterior surface" for decals on the outside surface such as an airplane. If you have questions, I found the company's website is very friendly and they are very responsive to email Q & A's. Enjoy!

The Last Word

By Walt Wilson

This issue marks the beginning of my seventh year of editing and publishing Flight Lines for you. Actually, it's the beginning of the twelfth year of Spirits' newsletters, since I published them from 1975 through 1979, too. They weren't called "Flight Lines" then, just "Newsletter". That's about 130 months of newsletters! I think that's longer than anyone has done any specific, productive job for the Spirits. If I'm wrong, I'm sure someone will correct me. I want to thank everyone who has contributed articles, photos, drawings, or any other material or information to be included in our newsletters. I want to especially thank my wife, Suzi, who has done a final edit and quality check of every issue. And she's not even a member! That's all the room we have this month!

Gotta go build

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

**Rescheduled from April 24
due to in climate weather!**



Presents



**Four-Star 40*
and**

**Silver Class WARBIRDS*
Races**



Saturday, May 22, 2004

At Spirits Field
on Amrein Road, ½ mile south of Greens Bottom Road
St. Charles County

Paul Geders, Contest Director

ENTRY FEE: **FREE!!!**



Registration starts at 9:00 a.m.

Racing starts at ~ 10:00 a.m.

*Class rules are available on the Spirits' Web Site at:

www.spiritsofstl.com

under the Contest & Events link on the first page!

For more information call: Paul Geders at 314-838-1350

or e-mail him at: pgeders@charter.net

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Wanted:

I am looking for a O.S. 120FS engine for display. I was chosen in 1991 from the disabled R/C flyers in the U.S. to go to Italy and my plane was just accepted for the AMA Museum. It can be in non- working order with a bent crank, bad bearings, etc. It just has to fill a cowl and hold a prop and spinner.

Thanks to any attention you may give to this request.

Please call Stan at: 314-962-4704 or

e-mail at: rcking1@mindspring.com

For Sale: Saito .65 Golden Knight, \$125.00. Call Russ Watts at 314-522-0778.

For Sale

Field box / starter batteries, slightly used, Yuasa Brand - 12 Volt, 7.0 amp. All Fully Charged and Ready to Go Super Price - \$5 each. Call Steve Cross at: 636-458-3287 or e-mail at: svcross@charter.net



Mike Roederer with his four-year-old "Shrike", powered by an O.S. .15. It's a real fun airplane!



This "Starfire" is powered by an OS-91 DF (Ducted Fan) engine, turning a "Dynamax" Fan, and uses a "JMP" tuned pipe. It develops six horsepower at 24,000 rpm which equates to approximately 12 lbs. of thrust, which is more than enough to propel this 12.5 lb. aircraft.

On board the "Starfire" are two, 12 ounce saddled tanks, that feed one, two ounce hopper tank. The OS-91 DF consumes approximately two ounces of fuel per minute at wide open throttle. The "Starfire" has a cruising speed of 180 mph, and is capable of obtaining speeds in excess of 200 mph in a dive.

Special fuel is required for flying during these extreme conditions. "Wildcat" with a 5% nitro content and 23% oil content is the fuel of choice.

A "Futaba" 7 Channel PCM radio is used for guidance, along with 11 servos and a 1200 milliamp battery pack. High torque, ball bearing, metal gear servos are used on all controlling surfaces. Less expensive servos are used for throttle, retract and brakes. Ground stability is provided by "Robart Duro-Struts" on the nose wheel and "BVM Smooth-Stop" pneumatic brakes on the mains.

The "Starfire" was originally designed by Mr. Tom Cook of "Jet Model Products" (JMP) and is currently available through "Yellow Aircraft".

Bill Lindewirth will be presenting an introduction to jets (JETS 101) at the "Tech Session" immediately following the business portion of the July membership meeting. For more pictures (in color) visit our website at; www.spiritsofstl.com and click on "Photo Gallery".



Randy Buxton and his O.S. .61FX powered Hobbico Hobbistar 60. It's a great trainer!

EMERGENCY SAFETY ALERT

Lithium Battery Fires

Lithium batteries are becoming very popular for powering the control and power systems in our models. This is true because of their very high energy density (amp-hrs/wt. ratio) compared to NiCads or other batteries. With high energy comes increased risk in their use. The, principal, risk is FIRE which can result from improper charging, crash damage, or shorting the batteries. All vendors of these batteries warn their customers of this danger and recommend extreme caution in their use. In spite of this many fires have occurred as a result of the use of Lithium Polymer batteries, resulting in loss of models, automobiles, and other property. Homes and garages and workshops have also burned. A lithium battery fire is very hot (several thousand degrees) and is an excellent initiator for ancillary (resulting) fires. Fire occurs due to contact between Lithium and oxygen in the air. It does not need any other source of ignition, or fuel to start, and burns almost explosively.

These batteries must be used in a manner that precludes ancillary fire. The following is recommended:

Store, and charge, in a fireproof container; never in your model.

Charge in a protected area devoid of combustibles. Always stand watch over the charging process. Never leave the charging process unattended.

In the event of damage from crashes, etc, carefully remove to a safe place for at least a half hour to observe. Physically damaged cells could erupt into flame, and, after sufficient time to ensure safety, should be discarded in accordance with the instructions which came with the batteries. Never attempt to charge a cell with physical damage, regardless of how slight.

Always use chargers designed for the specific purpose, preferably having a fixed setting for your particular pack. Many fires occur in using selectable/adjustable chargers improperly set. Never attempt to charge Lithium cells with a charger which is not, specifically, designed for charging Lithium cells. Never use chargers designed for Nickel Cadmium batteries.

Use charging systems that monitor and control the charge state of each cell in the pack. Unbalanced cells can lead to disaster if it permits overcharge of a single cell in the pack. If the batteries show any sign of swelling, discontinue charging, and remove them to a safe place outside as they could erupt into flames.

Most important: NEVER PLUG IN A BATTERY AND LEAVE IT TO CHARGE UNATTENDED OVERNIGHT. Serious fires have resulted from this practice.

Do not attempt to make your own battery packs from individual cells.

These batteries CANNOT be handled and charged casually such as has been the practice for years with other types of batteries. The consequence of this practice can be very serious resulting in major property damage and/ or personal harm

Safety Committee
Academy of Model Aeronautics
5161 E Memorial Drive
Muncie, IN 47302

GLOW PLUGS

The glow plug is used to provide ignition for the fuel/air mixture in a similar manner to a spark plug in a petrol engine. A spark plug could also be used in our model engines running with our special fuels but would then require added equipment and complexity with the possibility of interference with the radio receiver. However, glow plugs can not be used with an engine running on petrol (likewise without added equipment).

So how does it work? To start the motor we must first heat up the element (the small coil of wire inside the plug) by connecting it to a battery. Most plugs are designed to use 2 volts but some can only handle 1.5 volts. Make sure which one you have! A 2 volt plug will not get hot enough on 1.5 volts for easy starting while a 1.5 volt plug will burn out on 2 volts (the coil melts).

Once the motor is running the battery can be disconnected. However, the plug will continue to glow with an orange heat to provide ignition. How does it do this without a battery?

It all hinges on the fuel we use (or part of the fuel) and what the element is made from. The working part of the fuel is methanol which is a type of alcohol, but not the drinking kind, it is quite poisonous. The element is made from several metals alloyed to make it strong enough to handle the heat and vibration. The metal we are interested in is the platinum. When platinum comes in contact with alcohol there is a catalytic reaction between the two which heats the platinum while causing the alcohol to ignite. So one helps the other.

But the element is glowing all the time the motor is running so how does the fuel know when to start burning (in other words, what determines the ignition point)?

Well this goes back to the catalytic reaction again. This reaction depends on two things, one is the temperature of the element (the hotter it is the easier it will react) and the pressure of the fuel/air mixture inside the cylinder (the higher the pressure the easier it will react).

Glow plug temperature is controlled by using different HEAT RANGE plugs. Just like motor car spark plugs, glow plugs come in different heat ranges from hot to cold with maybe half a dozen steps in between. If in doubt, use the plug specified by the engine manufacturer. Using a hotter plug than normal will advance the ignition point and a colder plug will retard the ignition. The only way to determine exactly the right heat range plug is by using an accurate tachometer. The plug that gives the highest rpm (for the same fuel and propeller) is the correct plug.

But what about the pressure of the fuel/air mixture? This is determined by the compression ratio of the engine and normally is fixed by the manufacturer with possibly some small change allowed for by fitting or removing shims under the cylinder head. Not something to play with unless you know what you are doing. For ultimate power a competition modeller will juggle combinations of plug, compressions and type of fuel (mainly nitro methane content) but this is way beyond the needs of the sporting flyer.

Here are two brands of plug with their various heat ranges.

<p>OS PLUGS The complete line up of O.S. plugs are as follows: OSMG6300- #0 Economy standard plug similar to the #8. OSMG6304- #1 Hot plug for low nitro (0-5%). OSMG6308- #3 Medium plug for medium nitro (5-25%). OSMG6312- #5 Cold plug for high nitro (25% +). OSMG6316- #7 2 stroke engines requiring an idle bar. OSMG2691- #8 "The" standard. For use in all 2 strokes, any nitro. OSMG6320- #9 For general use in 2 stroke engines. OSMG2692- #F For O.S and other four strokes. OSMG2688- #RE For the O.S. Wankel rotary engine.</p>	<p>ROSSI PLUGS 10001 R1 EXTRA HOT FROM 0,8 TO 2CC 10002 R2 HOT FROM 2 TO 3,5CC 10003 R3 MED FROM 3,5 TO 6CC 10004 R4 COLD FROM 6 TO 10CC 10005 R5 EXTRA COLD FOR NITRO FUEL AND RC 10006 R6 COLD FOR NITRO FROM 10 - 13CC 10007 R7 COLD FOR NITRO FROM 13 - 15CC 10008 R8 SUPER COLD FOR NITRO FROM 15-30CC 10010 RC HOT FOR RC FROM 2,5 TO 6CC 10020 RC COLD FOR RC FROM 6 TO 15CC 10011 G1 HOT FOR R15 SPEED 10022 G2 MED FOR R15 SPEED 10033 G3 COLD FOR NITRO FROM 18% TO 30% FOR R15 SPEED 10044 G4 EXTRA COLD FOR NITRO FUEL FROM 30% TO 15% FOR R15 SPEED 10055 G5 EXTRA COLD FOR NITRO FUEL FROM 50% TO 70% FOR R15 SPEED.</p>
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**The SPIRITS OF ST. LOUIS R/C FLYING CLUB, INC.
PRESENTS**

M & M TOPLESS FLY-IN

May 15, 2004



**Registration: 9:00 A.M.
Flying Begins: 10:00 A.M.
Entry is Free!
Great Prizes**



Events:

1. Take off, fly at least two laps, do what ever you want in-between....for as long as you want. You can even have someone take-off and land your plane for you. If you want to fly alone, or when others are up...it's your choice. One M & M for completing the flight. One bonus M & M for landing with the engine running.
2. Take off, fly at least one lap while "TOPLESS". Do at least one roll (right or left). You may also have a buddy help you anytime you wish. One M & M for completing the flight, one bonus M & M for landing with the engine running.
3. Pick out an M & M. Register it with the ED. Put it into your mouth, take off, fly a lap, and then land. You can have a buddy help you any time you wish (except with the M & M). Go back and show the ED that you have NOT EATEN the M & M (yet). Bonus M & M for landing with the engine running.
4. When all pilots have completed their events, the ED will draw a number for each color M & M. The person with the most points wins! The most points gets first choice of prizes etc.
5. In the case of a tie, the person who can chew and swallow 10 M & M's while "TOPLESS" wins the tie.

Questions? Call Event Director Les Richman at: 314-434-8080 or
e-mail at: Citabria77@aol.com

FLIGHT LINES

Area 2004 Activities Schedule

Date	Contest or Event	Contest or Event Director	Notes
May 8	SLRCFA Four-Star 40	Charlie Brunner	Eureka. Mo.
May 15	M&M Fun-Fly	Les Richman	
May 22	Four-Star 40/Warbirds	Paul Geders	AMA Sanctioned Races
May 29	Wright Flyers Float-Fly	Don Vetrone	Practice Day May 15
June 5	Learn to Fly Day	Bob Gizzie	Boy Scout Introduction to Flying
June 26	Four-Star 40/Warbirds	Vic Bunze	AMA Sanctioned Races
July 17	Fun-Fly	Bob Fiely	
September 11	Four-Star 40/Warbirds	Paul Geders	AMA Sanctioned Races
September 25	Open House	Greg Pugh	



FLIGHT LINES

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

www.spiritsofstl.com

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