



Next Meeting

January 8th

Bridgeton Library

Flight Lines



Good news for future Meetings. The club has acquired at a bargain price, a high quality Electronic Projector. We can present pictures, Power point presentations, articles, what ever we like. This should add some horse power to our presentations and benefit all that attend.

Fun Stuff

We start our new Season with the traditional New Years day Frozen Chozen. Get Airborne by 9:00 am. If the Marines could do it, so can we!

Then soon after we have the indoor electric fly in January 11th at the Hope Lutheran Church, 11aM TO 2:00 PM , 1975 S Old-Highway 94, St Charles, MO. More details are available on our web site, WWW.Spiritsofstl.com.

Gentle reminder to get your membership renewed for 2014. When you renew, you must also provide a copy of your 2014 AMA member card.

We've had some nice flying just after Christmas. Santa was kind to bring some warm weather. On 12/28 we had a great turn out of heli fliers and as usual, they flew impossible maneuvers, it really does make my head spin. Im going to have to do some more simulator time.

Now that we have the projector, please think of slide shows you might have. I know that I have a few that are quite impressive of full scale planes. Lets see what you have to share.



My latest toy, Piper PA 20 by E-Flite with A RIM Fire 15. Was designed for a .10, but I love that extra power. It has working flaps. First flight went fine, no scrapes or bumps. Some rudder coupling with aileron might help the adverse yaw. Im running the ailerons off the same channel, so I cant use differential.

I can t go any further with out saying a big THANK YOU to all that make this wonderful club operate. There are many that “pull on the oars” or should I say spin the props, and they all deserve a lot of credit. I am personally thankful in the very short time of my tenure here for the hard work and sage advice given freely and thoughtfully by all the board members as well as the membership.

A Happy, Healthy and Prosperous New Year to all

Vic Bunze

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Meeting Minutes

By **Greg Bowles, Secretary**

President, Vic Bunze, called the meeting to order at 7:00 pm.

Attendance:

21 members were present.

New Members in Attendance:

There were no new members present.

Secretary's Report:

Greg Bowles, Secretary

Next monthly meeting will be on Wednesday, January 8th in Room #1.

A motion was made to accept the minutes in last month's newsletter, and was accepted by the members.

Treasurer's Report:

Bill Lindewirth, Treasurer

Bill submitted to the members present the finances for 11/01-30/13. A copy was passed to the members for review. Stated were this month's expenses, income, checking account balance and the club's CD's and savings accounts. Total assets were announced, with the club being in the black. The taxes for 2013 were sent ending the fiscal year 2013.

A motion was made to accept the Treasury report as presented and accepted by the members.

Membership Chairman's Report:

Ralph Doyle, Membership Chairman

Ralph reports that there are currently 156 total members, with 33 renewed and 12 new members of 2014. In comparison to last year at this time, we are running a little shy. Membership badges were passed out to those members present.

Event Chairman's Report:

Leo Steck, Event Chairman

A tentative event schedule for 2014 was posted in the newsletter and on the website.

New Years Day Fly-In - January 1st;
First flight at 9:00 am.

Indoor Fly-In - January 11th, 11:00 am
2:00 pm; Jeff Becker/CD; Entrance Fee: \$5.00
per pilot.

Indoor Fly-In - March 15th, 11:00 am
2:00 pm; Jeff Becker/CD; Entrance Fee: \$5.00
per pilot.

Swap Meet - April 26th (Rain date May
3rd), **Babe Raab/CD**; Entrance Fee: \$5.00 per
vehicle.

*Four-Star & Warbird Races - May
17th, CD to be announced.

*Open House - June 21st (Rain date
June 28th).

*Four-Star & Warbird Races - July
2th, **Steve Cross/CD**.

*Membership Appreciation Dinner -
September 10th.

*Four-Star & Warbird Races (Open
depending on participation of earlier
races.

*Heli event dates to be determined.

A motion was made to accept the Event
Chairman's report as presented. Accepted by
the members.

New Business:

Proposed 2014 Budget as presented by **Bill
Lindewirth, Treasurer**

A copy of the Proposed 2014 Budget was
given to each member present.

Hand-out consisted of two tables:

the actual income for 2013, and the final
column listed the proposed 2014 in-
come.

Hand-out consisted of two tables:

Table #1 illustrated the Spirit's income. The first column provided a description of the Club's income, with the second column listed the projected 2013 income, the third a column describing the actual income for 2013, and the final column listed the proposed 2014 income.

Table #2 illustrated the proposed expenses. The first column provided a description of the Club's expenses, with the second column listed the projected 2013 expenses, the third a column describing the actual expenses for 2013, and the final column listed the proposed 2014 expenses.

Note from the Treasurer:

Proposed expenses for 2014 may vary from their actual cost. The Field Lease is the only constant, and is set to expire in June 2015.

Extra money was allocated to the Flight Instructor Program (Gary Pyles – Director) for new radios and equipment.

Contract for the Spirit's website is due June/ July. Extra money was also set aside for renewal of a five-year contract.

For 2013, the Club's balance was in the **positive. (Great Job Bill !)**

A motion was made to accept the proposed 2014 Budget as presented. A vote was taken and accepted by the members.

Field Chairman's Report:

Jeff Becker, Field Chairman

Jeff states he has tried to repair the cracks on the runway, but is unable to seal the cracks until the weather warms.

Fence post on the flight line has been repaired.

Jeff Bohrer commented, that rolling the field around the runway has saved a few planes for him, and he hopes we will continue this practice for 2014.

A motion was made to accept the Field Chairman's report. A vote was taken and accepted by the members.

Safety Chairman's Report:

Brendon Weidinger, Safety Chairman

Brendon states no reports of safety issues at the field last month.

Bill Lindewirth brought to the members attention; beware when using the Dremel thin fiber (stone) cut-off wheels. They may disintegrate. So either double them up or use the fatter ones and always wear safety glasses.

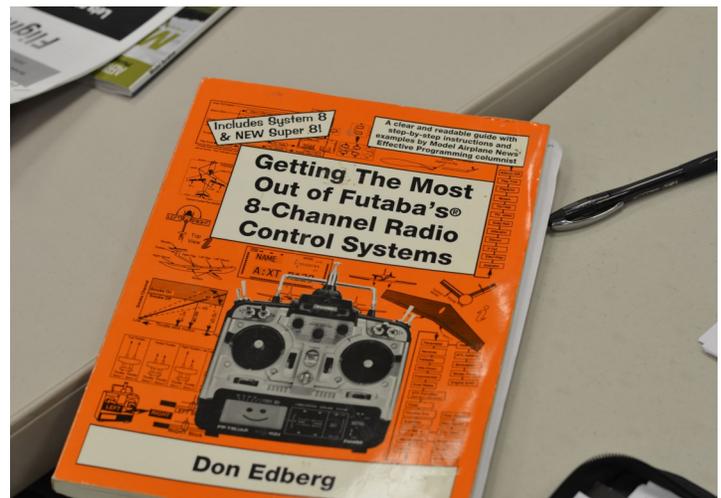
A member asked the question "How do you get CA off your fingers?" A number of suggestions were mentioned:

Nitro Methane.

Acetone (Finger nail polish remover).

Sand it off.

Liquid/invisible Glove.



Bill Lindewirth found this manual to be very informative when it comes to programming Futaba Transmitters. Don Edberg is a World Class Soaring Pilot and the Soaring guys use more mixing than any other class of pilot, so you can bet he has a lot of useful help for you Futaba fellows. Contact Bill if you want to know where he got it.



Tech Pres



- **Bill Lindewirth** and his R/C Combat Gremlin from RAcores ([www Racores.com](http://www.Racores.com)). This foam-core flying-wing was purchased as a full kit for \$35. [Supplied by Leo Steck.] Since the plane is going to be used for combat, Bill used an old OS .40FP engine and surplus parts. His total cost after purchasing paint and packing tape (covering), was a total of \$41. Cheap! Bill has also done some modification to the original Gremlin by adding wing tips and a skid for safer landings.

The plane uses elevons as flight controls, and Bill states he has had an issue with the plane rolling to the right. Presently he is trying to work out the problem with his transmitter set-up.

Bill also showed us his eight-channel 72 MHz Futaba transmitter, given to him by Russ Watts after it was dropped. After cannibalizing some other radios to make it work, he now uses it to control some of his other planes. The interesting point of this transmitter, is that Bill increased the memory by building his own memory pack, increasing the memory for eight additional planes (instructions per Don Edburg; parts from Digikey). Futaba cost \$60; Bill's cost \$3! Amazing!

Jeff Bohrer, who builds high performance jets, had a two-part presentation. Part one was a presentation of his new ChangeSun 90mm ducted fan, with motor. It has 12 replaceable blades, operates on a 6-cell battery, and comes balanced and run-test from supplier for only \$70. He has tested it on his home-built dyno and states it produces 6 lbs. of thrust, with 28,000 rpm.



Part two, was Jeff's presentation of his new Aero L-39 Albatross (CMP) kit from Nitromodel for \$150. It comes with a fiberglass fuselage, full flaps, full electric retracts (10lb/Hobbyking) and clean fiberglass internal ducting. He is planning to install the 90mm ChangeSun ducted fan which will give him a 1:1 thrust/weight ratio. Looking forward to its maiden flight.



Photos by Vic Bunze



Steve Ramoncuk brought in his new Messerschmitt Me 262 from Nitroplanes for \$196. It has two 70mm ducted fans, two 60 amp ESCs, built-in BECs, electric retracts, and a 4 cell battery. The kit was easy to build and provides a good representation of the original aircraft. Steve has checked the BLOGs and discovered modifications to beef-up the control surface hinges, control horns, and control rods. These are still being corrected, and an issue with it being tail-heavy still needs to be resolved. Steve gave a short history of the aircraft. Can't wait to see this fly!

Late breaking news! Steve discovered that there was no airflow over the ESCs and they were over heating. One has failed. He is moving them into a high air flow area.

Our final presentation was by **Brendon Weidinger** with his new Multi-Plex Fun Cub from Horizon Hobby. The aircraft comes with tundra tires and flaps for slow flying. Flight times with a 3S battery are around 10 minutes. Brendon didn't like the civilian paint job so tried his hand at painting (his first). Using Krylon Polycrylic spray paint, he changed the paint scheme to a WWII military green with D-Day black & white identification strips. It turned out really good. Brendon says the aircraft has plenty of power, does loops, rolls and he has even got to hang on the prop. Landings are a little bouncy on the runway with the tundra tires; lands better on grass. Looks really nice Brendon!



Leo Steck showed his custom design stand for the Combat Gremlin. Parts cost about \$10

Photos by Vic Bunze

Four Star 40 Wing Bay Cut off

By Ralph Doyle

Since the new 54-inch wingspan 4-star is going to be available this year, and the 4-star rules have been modified to accept this model plane for competition, I wanted to see how difficult it would be to modify the current 60-inch 4-star wing. As you can see by the photograph 1 it was a simple step to cut out the last bay on both wing tips with a band saw or even a hacksaw. Then you need to remove the end plate (photo 2) from the piece you just cut off because you will need to glue that piece back onto the new wing tip. More than likely the last aileron hinge was removed when the panel was cut off so a replacement hinge was added (photo 3) by simply slotting the aileron and trailing edge stringer then sliding in a new hinge and super gluing it in place. After the hinge is installed you then reattach the end plate to the wing (photo 4), recover the tip, and you are ready to go racing.

Photo 1



Photo 2



Photo 3

Photo 4



Photos by Ralph Doyle

World Record Electric Duration

18 hrs, 6 min, 13 sec

Wingspan 4.82 meters

Weight 8.69 lbs

Power 5 series 9 Parallel 18650 mAh

Power on 98% of time was a requirement. They used on board telemetry to monitor batteries and LEDs for night orientation. The Battery was 55% of the total weight. (45 cells)

The battery pack capacity is 18.65 Amps for one hour or one Amp for 18Hrs . So right there we see that this powered glider on average got along on less than one AMP! Remarkable

Lets look at the energy requirement to stay aloft.

The most important performance parameter is the normal gliding sink rate of the glider. I will just have to estimate that, and see how the energy requirements come out. Suppose this glider has a sink rate of .5 meter per sec. The power required to compensate for that amount of weight sinking 0.5 meter each second comes out to 19.35 Watts.

The 5 cells in series need only draw about one Amp to provide 19.35 Watts. Terrific! What about motor efficiency, wire losses, prop efficiency? Looks like the Pack will need to put out more than one AMP to handle all that. But...thats ok

This bird is clearly capable of a better sink rate than .5 meters per second. If its average sink rate is as good as .35 meters per second , that should take care of the inefficiencies in the motor, gear box, wires , prop , esc, etc.

The flight profile was a 7 PM take off when the Pack was fresh, by morning they could get help from rising air and fly with a very low sink rate or even a neutral sink rate. That's my story and Im sticking to it.

Vic Bunze

Gorgeous December Day to Fly



Dave Brown has a way to make it fit in the truck better



Bruce Omans getting ready for more knife edge spins



Has Steve Oconnor grown another ear?



Dale the Tic Tock King Buchanan



This Goblin 770 is gobbling up the air



Santa forgot one of his Elves

Photos by Vic Bunze