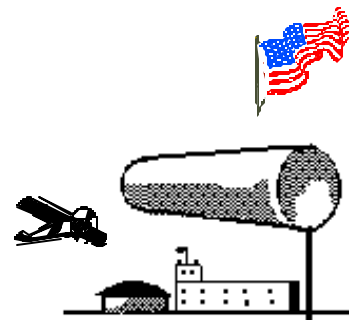


THE WINDSOCK

PUBLICATION OF THE TRI-LAKES R/C FLYING CLUB
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VOLUME 12 ISSUE 2

FEBRUARY 2005

FEBRUARY MEETING

FEBRUARY 8 , 7:30 PM

Meet at the Branson Community Center.

Program

Bring your new projects for Show and Tell.

THE PRESIDENT'S CORNER

HELLO TO ALL CLUB MEMBERS.

I AM FINDING OUT THE OLDER I GET THE LESS I LIKE WINTER, HURRY UP SPRING. AT OUR LAST MEETING IT WAS A LITTLE DOWN AS FAR AS ATTENDANCE, BUT ALL THAT CAME RECEIVED A FREE CALENDER FROM YOURS TRULY. WE ALSO WANT TO WELCOME DAVE MEDLEY AS A NEW MEMBER TO

TRI-LAKES R/C FLYING CLUB

PRESIDENT
GARY ACTON 334-3917

VICE-PRESIDENT
BUD AUSTIN 861-4466

SECRETARY
ANNETTE McEVOY
417 883-9630

TREASURER
ERV ROHDE 538-2439

SAFETY OFFICER
JOHN WOODS 338-8419

FIELD MARSHALL
DICK HANN 563-0018

INSTRUCTORS
RAY DIXSON 870 426-4310
ROSCOE FUDGE 336-5841
JOE MAJOR 337-5808
ERV ROHDE 538-2439
JOHN WOODS 338-8419

OUR CLUB, THAT BRINGS US TO 29 MEMBERS RIGHT NOW. AT OUR MEETING WE HAD 18 FUN FLY CERIFICATES TO BE GIVEN OUT, I AM STILL WAITING FOR MY FIRST ONE HA HA.

THE PROGRAM IS ALWAYS NEAT TO SEE IN JANUARY BECAUSE OF MEMBERS THAT RECEIVED NEW PLANES FOR CHRISTMAS. WE HAD 6 PLANES AND ONE HELICOPTER THAT NIGHT. I AM ALWAYS AMAZED OF THE TIME PEOPLE PUT IN ON MAKING THESE PLANES. ANNETTE AND JACK BROUGHT TWO IN THAT TOOK A GREAT AMOUNT OF TIME TO BUILD.

TILL THEN SEE YOU AT THE FEILD OR AT OUR NEXT MEETING.
GARY ACTON

TRI-LAKES FINANCIAL STATEMENT 2005

	JAN	Y T D
BALANCE 1/1/2005	\$ 960.40	\$ 960.40
INCOME-DUES -----	\$ 356.72	\$ 356.72
INCOME-SHIRTS&CAPS	\$ 5.00	\$ 5.00
INCOME-FOOD -----	\$ -	\$ -
INCOME-50/50 -----	\$ 6.50	\$ 6.50
INCOME-MISC -----	\$ -	\$ -
EXPENSE-FIELD -----	\$ -	\$ -
EXPENSE-NEWSLETTER	\$ 7.40	\$ 7.40
EXPENSE-SHIRTS&CAPS	\$ -	\$ -
EXPENSE-FOOD -----	\$ -	\$ -
EXPENSE-AMA -----	\$ 15.00	\$ 15.00
EXPENSE-Web -----	\$ -	\$ -
EXPENSE-meeting room	\$ 20.00	\$ 20.00
EXPENSE-MISC -----	\$ -	\$ -
BALANCE 2/1/2005	\$ 1,286.22	\$ 1,286.22

MEETING MINUTES

TRI-LAKES R/C FLYING CLUB January 11, 2005

President Gary Acton opened the meeting at 7:33 p.m. at the Branson Community Center. All officers were present. There were 15 members, new member Dave Medley and guest Claudia Shire present. The minutes from the December meeting were approved as published in the January Newsletter. Erv Rohde reported that the treasury balance as of January 1st was \$960.40. The 50/50 raffle was won by Joe Major who received one half of \$13.00.

Announcements and Old Business: Erv Rohde announced that we have 29 paid members as of today. Everyone is reminded to pay up their dues or they will be dropped as of March 1st.

Gary thanked Howard Shire for his 3 years of service as President, Gary Metzger for his year as Vice President and Erv Rohde and Annette McEvoy for their continued service as Treasurer and Secretary. He also thanked Homer Zobel for all his years as Field Marshal and Roscoe Fudge for being Safety Officer and Fun Fly Director. He asked that everyone take to heart what is involved in making our club really work, that being everyone taking their turn to step up and help out by holding office or whatever needs to be done and asked that you start thinking now about what each of you can contribute.

The cost to the club for the Christmas party was \$207.11 for the meat from the Rib Crib. Thanks again to Cathy Metzger & Annette McEvoy for organizing both the Christmas dinner and the New Years day Chili feast and Gary & Cathy for providing the Chili and everyone else for their contributions to this fun event.

The field really needs to be worked on as the grub problem has gotten bad. Looks like we will need a work day to tighten up the fencing and help get the field back in shape. Our new Field Marshal, Dick Haan will be contacted to see what can be done. In the mean time, everyone is cautioned about the condition of the field and asked to help pick up loose rocks & fill holes as you come across them.

New Business: Certificates for the New Years Day fun fly were handed out by Bud Austin.

Gary Acton announced that John Woods now holds the Safety Officer position and Dick Haan

has taken on the Field Marshal job for 2005.

A motion was made, seconded and passed unanimously to again have 3 Intro Pilots for 2005. They are Ray Dixson, Joe Major and John Woods.

Discussion regarding instructors was held, at the present time we have five and Bud Austin has volunteered to become the sixth after a review from the current instructors.

Gary Acton asked that everyone think about promoting the club through exposure to the community such as a Mall Show, etc. and to bring your ideas to February's meeting.

Program: Joe Major brought his Byron "Pipe Dream" with a 35 Quadra that he purchased from a friend who bought it new over 20 years ago. Flew it today in heavy wind and says the 13-14 pound plane handled real good with it's 855 square inches of wing. Joe also brought his new electric heli with contra rotating props, 2 cell li-poly batteries, has a gyro, 4 channel receiver, 3 sets of blades and 2 coreless motors for \$310. Runs 10-15 minutes and gave quite a demo including hands off hovering! **** Tom Mckenzie brought his new Goldberg Falcon with a 46 engine. **** Don Johnson had his 80% Pussycat – he's using an AXI 2808/24 motor with 9 cells, weight will be about 29 oz. when covered with Nelson film. Don also brought his bare bones 80% Tiger Kitten, weight should be around 30 oz.. It will have an AXI 2808/20 motor on 9 cells. He used magnets from an electric tooth brush to hold down the cover. Both cowls were made by spraying 1.5 oz. glass cloth with Super 77, laminating 3 or 4 layers over blue foam plugs and soaking with odorless C.A. Looks great!! **** Jack and Annette McEvoy brought their Sig Kadet Senior which they converted into a tail dragger, installed an OS 70 Surpass II, PCM receiver, Hitec BB servos and an instrument panel. After adding 3 ½ oz to balance, the plane weighs in at 7 lbs. 11 oz. They also had their scale Giant Decathlon featuring a complete interior with J-tech instruments, 32 Fuji, PCM receiver with dual 800 MAH JR battery system, JR wiring (mostly 22 gauge), covered with 21st Century. They have a full documentation book to go with it. **** Bud Austin is looking for a 1/6 scale pilot!! He also has several used items for sale: A Hobbico starter; a K&B 20; a JR radio and a quick charger. Please contact him at 417-561-4466.

Meeting adjourned at 8:33 p.m.

THE EDITOR'S NOTE PAD

Well it's that time of year again. We've had our New Year's Day Fun Fly, which was a great success and the Officers for 2005 have held their first meeting of the year and now it is time for everyone to pay their 2005 Club dues. As of the January meeting there were 29 members current in their Club dues. So we have about 20 members that haven't renewed their membership for 2005—hopefully most if not all will do so. Of course you can pay your 2005 dues anytime during the year but after March 1st the Secretary has to send AMA paperwork that says you are no longer a member of the Club. Then if you pay your dues after the cut off date she then has to send in more paper work saying you are now reinstated as a Club member. Also, if your dues are not renewed by March 1st you can no longer fly at the Club field and become ineligible for a discount at TPA Hobby Center. So while you are thinking about it you may want to send Erv Rohde a check, his address is in the column to the right.

Our next Fun Fly will probably be April 16th. Might want to keep this date in mind and have a suitable airplane or two ready to compete. Hopefully we can field about a dozen participants to make it interesting. Just remember a Fun Fly is supposed to be fun! It is also good training and makes you fly with a pre-determined goal. And if you are a beginner you can always get some help from one of the instructors! You don't have to win to have fun, but admittedly it is a little more fun if you win an event once in a while. Come join in!

Was out at the field several days ago and it was fairly windy. With the wind blowing to the east, one of the trees on the east side of the runway raced out and grabbed my plane. No big deal but it was 40+ feet up and it had a Li-Poly battery in it, which I couldn't turn off. As you know Li-poly batteries can't go below 3 volts per cell or they become damaged, so you can't leave them up a tree until the batteries run down. Not to worry, I called Sir Howard of Shirewood Forrest and he came out with his long bow and shot it out of the tree. In the process Sir Howard, while aiming at the target, slipped off a log and fell on his Royal rear end. Kind of an un-Nobel scene. But soon after we were able to dislodge the plane from the aggressive tree with very minimal damage and no damage to the batteries. Many thanks to Sir Howard for his archery skill, hope the Royal rear end did not sustain any damage.

Time to land for this month, See you at the Field.

2005 DUES ARE DUE

If you haven't paid your 2005 dues yet you can pay them at the February 8th meeting or send a check or money order payable to TRI-LAKES R/C FLYING CLUB, to:

ERV ROHDE
928 Jackson Hollow Rd.
Galena, MO 65656

The dues schedule is as follows:

1. **FULL MEMBERSHIP** - \$40 per year.
2. **ADDITIONAL FAMILY MEMBERS** - \$5 each per yr.
3. **ASSOCIATE MEMBERSHIP** (non-voting) - \$10 / yr.*
4. **STUDENTS** - Free Club membership but must be a current AMA member.

*A person can join as an Associate Member if he/she lives outside Taney County or counties adjacent or touching Taney County. A non local person can also join as a Full Voting Member if desired.

To maintain 2005 flying privileges your 2005 Club dues must be paid and your current (2005) AMA membership card must be shown to Erv Rohde.

CURRENT 2005 CLUB MEMBERS

The following Club members are current in their 2005 dues.

Gary Acton, Bud Austin, Sid Beckham, Rich Berthold, Del D'Alessandro, Paul Denny, Ray Dixson, Vicky Dixon, Roscoe Fudge, Cody Garber, Larry Gliser, Dick Haan, Don Johnson, Don Livermore, Joe Major, Evan McCartney, Mark McCartney, Annette McEvoy, Jack McEvoy, Tom Mckenzie, Dave Medley, Dick Peterson, Henry Racette, Erv Rohde, Craig Schmidt, Howard Shire, Del Silva, Roy Steinestel and John Woods.

If you are not on the above list but feel you are current in your 2005 Club dues contact Erv Rohde.



Above is an action shot of our 2005 Club Officers hard at work. From left to right, Bud Austin-Vice-President, Annette McEvoy-Secretary, Gary Acton-President and Erv Rohde Treasurer.



Above is Jack and Annette McEvoy's Sig Kadet Senior built as a tail dragger and powered with an OS 70 Surpass II. It weighs in at 7# 11 Oz. In front of the Kadet's wheels is Joe Major's Sky Robo Helicopter. The giant Super Decathlon to the upper right is also out of the McEvoy's hanger. It is powered with a Fuji 32 and covered with 21st Century fabric. The binder under the wing is a scale documentation and construction pictures. Note the full interior for the Decathlon in the photo directly to the right—looks like it is ready for someone to climb in and start it up. Hey guys, are you really going to put this thing up in the air?



Above is Tom Mckenzie's Goldberg Falcon powered with a .46 2-stroke engine. To the right is a 20+ year old model that Joe Major bought from a friend. It is a Byron "Pipe Dream" powered with a Quadra 35, also over 20 years old. Weighing in at 13 or 14 pounds with a long tapered wing, Joe says it flies very well even in very gusty weather. Note in the bottom right photo the 1/4" plate aluminum wing supports that also clamp onto a motor tube that allows the CG to be adjusted by moving the motor forward or back.



DOING ELECTRICS

BY DON JOHNSON

A little over a year ago one of our members bought an electric combo from "the" major hobby distributor. It consisted of a nice foam Cessna 180, a canned 550 motor, a 7" prop, two 6 cell Nicad packs with Tanya connectors and a timer charger. He asked if I would help him get the electric parts together. After looking at what they had sent him I told him it might fly from a hand launch and stagger around the sky but it wouldn't take off a grass field. He told the distributor what I said and they replied that they never guaranteed it would take off the ground. This is a true story! What was wrong? First off the charger was run by a timer that was instantly obsolete when Peak Detector chargers came out way over 5 years ago. The batteries were made of 6 cells which would not have given enough voltage to power the plane even if a larger prop was used. He returned the batteries and charger and got a peak detector charger and I made up two 8 cell packs with Deans Ultra connectors for him. When he flew it he was quite pleased with the planes performance. Had he tried to fly it without the above changes he would have been another one that felt electrics just didn't have enough power to fly well.

How did I know plane wouldn't fly well? There is a **Rule of Thumb** that says **you need about 50 watts of input power per pound of flying weight** to successfully fly an electric airplane. If for example a plane, ready to fly, weighs three pounds, the battery needs to deliver about 150 watts of power to the motor if the plane is going to fly successfully. If I remember correctly the original setup would have given less than 40 watts input per pound.

What's a **watt**? Well a watt is power. Big Deal! OK this is as technical as we want to get. **POWER (WATTS) EQUALS VOLTAGE (VOLTS) TIMES CURRENT (AMPS)**. For example if the battery provides 10 volts and the load (prop) causes a current of 15 amps, the power is $10 \times 15 = 150$ watts. By Rule of Thumb we should be able to successfully fly a three pound airplane with this setup.

Does this Rule of Thumb work for all types of models? The simple answer is no. It should work well with a trainer style airplane and even give you some mild aerobatics. To have crisp flights with loops and rolls from level flight you should be in the 60 to 80 watts per pound range. For pattern flight or pylon racing shoot for 80 to 100 watts per pound or more. And finally for 3D flight you will probably need over 100 watts per pound to hover, however thrust is more important than watts (see the second Rule of Thumb). Remember the above values are for input power so motor efficiency will be a factor in the planes perform-

ance. These power levels will work with brushed ferrite motors that have an efficiency of around 50 to 65 %. Brushed cobalt motors have efficiencies of around 60 to 75% and brushless motor efficiency runs around 70 to 85%. So by using cobalt or brushless motors you could drop the input power to 40 or even 35 watts per pound for satisfactory flight or use the same input power and gain 10 to 20 % improvement in airplane performance.

The second **Rule of Thumb** is that **you need to develop prop thrust of at least 25 to 50 % of the airplane's weight**. For example if your plane weighs 2 pounds, you will need .5 to 1 pound (8 to 16 ounces) of prop thrust. This will work fine for most planes other than the 3-D planes. Some will argue that measuring static thrust (measured while the motor is held stationary) isn't accurate since the motor will develop more thrust as it moves through the air. This is probably true but for practical purposes an airplane with a 25% static power to weight ratio will fly quite satisfactorily and with a 50 % static power to weight ratio it will fly in a very spirited fashion. 3-D flight is a different story since part of the flight envelope is to be able to hover. To hover the static thrust must be equal to the weight of the model to hold it stationary in the air. But to get into and out of hover maneuvers you need more than 100% power to weight, 150 to 200% would be ideal. For example if the plane weighs 16 ounces the thrust should be about 24 to 32 ounces for great 3-D maneuvers.

What we have covered in the last two months is the basics for determining what will make an electric airplane fly well. Next month we will get into how to use this information to set up your plane for the best results. But in review remember these points.

You need at least 50 Watts of input power for each pound of airplane.

You need thrust equal to 25 to 50 % of the planes weight. 3-D needs about 150%

Watts = Volts X Amps

Increasing voltage (add cells) increases motor speed.

Increase Amps by increasing motor speed with the same prop or put on a larger prop (diameter or pitch).

A larger prop will develop more thrust than a smaller prop for the same input power.

Geared motors allow much larger props (more thrust) to be used with the same input power (watts).

Always stay within the voltage and current (Amp) limits of your speed control, motor and batteries.

NEW MEMBERS

We have gained five new members since last reported.

Roy Steinestel of Kimberling City joined the Club in October. Evan McCartney and Mark McCartney of Nixa joined the Club in December and Cody Garber of Bois D'Arc joined January first. Evan and Cody are both students. Last but not least, Dave Medley of Kimberling City joined at the January meeting.

Welcome to the Club guys, we are pleased to have you join us.



SAFETY FIRST

First, I know many of our members join me in thanking Roscoe for serving as our Club's Safety Officer in 2004.

As your new Safety Officer please let me know of any areas that you feel need attending to. Of course safety needs to be our number one priority and every member's responsibility. New members have so much to learn and may not be aware of an unsafe situation so please help them with any safety issue.

Thanks to all our members for showing their respect for safety while at the field and being conscientious in striving for a safe flying environment.

John Woods
Safety Officer



Here's Joe Major with his Hirobo Sky Robo counter rotating helicopter. This is an RTF with gyro control and a 13.5" rotor diameter. It has two coreless motors and is very stable, allowing hands off flying. The stability comes with a price since it will not do the aerobatics that single rotor copters will do. Joe is the first to fly inside our meeting room with an RC aircraft. That a way to go Joe!

TRI-LAKES R/C FLYING CLUB

Don Johnson - Editor
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Kimberling City, MO 65686

