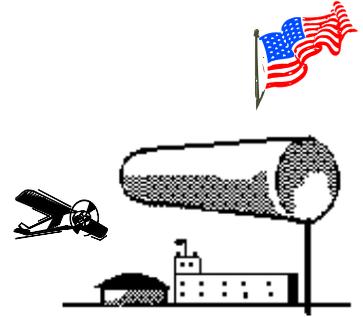


THE WINDSOCK

PUBLICATION OF THE TRI-LAKES R/C FLYING CLUB
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VOLUME 12 ISSUE 4

APRIL 2005

APRIL MEETING

APRIL 12 , 7:30 PM
Meet at the Branson Community Center.

Program
Bring your new projects for Show and Tell.

THE PRESIDENT'S CORNER

As we spring ahead into daylight saving's time, we will have even more time to fly. I want to again thank everyone who showed up for our work day at the field. We had a record setting number of 20 people come out to help—great job!

It was interesting to see and hear about the airplanes that were brought to the March meeting. If you would like to bring your plane or planes to our meeting, you sure are welcome to.

Be sure to mark Saturday April 16th on your calendar for our next Fun Fly. I'd

like to thank Howard in advance for providing some of the food that we will be enjoying.

Looking forward to seeing you at our meeting at the Branson Community Center April 12th at 7:30 p.m.

Gary Acton

TRI-LAKES R/C FLYING CLUB

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TRI-LAKES FINANCIAL STATEMENT 2005

		MAR		Y T D
BALANCE	3/1/2005	\$ 912.72	\$	960.40
INCOME-DUES	-----	\$ 290.00	\$	776.72
INCOME-SHIRTS&CAPS		\$ 10.00	\$	15.00
INCOME-FOOD	-----	\$ -	\$	-
INCOME-50/50	-----	\$ 8.00	\$	21.00
INCOME-MISC	-----	\$ -	\$	-
EXPENSE-FIELD	-----	\$ 213.10	\$	613.10
EXPENSE-NEWSLETTER		\$ -	\$	7.40
EXPENSE-SHIRTS&CAPS		\$ -	\$	-
EXPENSE-FOOD	-----	\$ -	\$	-
EXPENSE-AMA	-----	\$ -	\$	105.00
EXPENSE-Web	-----	\$ -	\$	-
EXPENSE-meeting room		\$ 20.00	\$	60.00
EXPENSE-MISC	-----	\$ -	\$	-
BALANCE	4/1/2005	\$ 987.62	\$	987.62

MEETING MINUTES

TRI-LAKES R/C FLYING CLUB

March 8, 2005

President Gary Acton opened the meeting at 7:30 p.m. at the Branson Community Center. All officers were present. There were 18 members, guests Cletus Cook & Kevin Marsh (who signed up after the meeting), former member Ian Pietz and members wives Shirley Racette, Cheri Silva and Janet Woods present. The minutes from the February meeting were approved as published in the March Newsletter. Erv Rohde reported that the Treasury balance as of March 1st was \$912.72. The 50/50 raffle was won by Don Johnson who received one half of \$16.00.

Announcements and Old Business: Erv Rohde announced that we have 39 paid members as of today. Everyone is reminded to pay up their dues or they will be dropped as of March 1st and they lose their flying privileges. Also that our lease has been renewed for another year. Erv has caps & shirts for sale.

Gary Acton welcomed new member Mark Niebrzydowski and all the guests and wives attending this evening's meeting. He also thanked everyone who came out for the March 5th workday at the field. There were over 20 people and a lot of work was accomplished. The field still needs some additional dirt put down to cover the damage done by the horses last month.

Gary also reported that he contacted the Branson Community Center as Larry Gliser had suggested at last month's meeting. He spoke with Paula Morgan and she is very excited about us putting on some type of show/program, however they are already committed for the first two months that the center is opened. August has been set up as a tentative date for an event there. Their web site is cityofbranson.org if you would like to look up further information on the center. We will have time to make plans to have an interesting and informative event.

Discussion regarding the safety issue of the recommended procedure while starting a plane in the pit area continued from last month's meeting. It was agreed that with the present setup that we have at our field, planes should be restrained (stakes, another person holding or a rope) and pointed away from the field and towards your car (not down line) or if using one of the tables towards the fence, not facing back towards the pits.

New Business: Field Marshal Dick Haan said that he would like to get a list of members so that he can contact them regarding mowing and field maintenance. Annette McEvoy said that she would provide it to him and to anyone else interested in a roster. You may obtain one at the field or she will email one to anyone interested.

April 16th is the first Fun Fly for the year. FFD Mike Anderson did not have the events scheduled as yet but

the BBQ will begin at noon and events will begin at 1:00. Howard Shire will take care of getting the supplies for the BBQ.

John Woods brought up the issue of purchasing a roller for the field as it was so useful for repairing the field last work day. Everyone was asked to keep a lookout for one that may be picked up for future use.

John also passed around pictures of pilot stations that he took at another club's field. These are portable and can be moved for mowing, changes in condition, etc.

Program: John Woods brought pictures of some of his projects of the cars & trucks that he flew for Chrysler and the flying saucers that he built for Jim Stafford, for new members to view. He also brought a (almost 10 feet long) Viking ship that he is revamping for the Stafford Theater that includes oars that actually row. He's going to be adding a mylar bag filled with helium so that the ship can fly during intermissions. John buys his mylar from John Perry in Calif.

Don Johnson brought his completed Pussy Cat and Tiger Kitten that were just bare bones at last month's meeting. The Pussy Cat is 80% of the original size and weighs 25 oz. He hasn't flown it yet but says it's way overpowered with a 140% thrust to weight ratio using a AXI 2808/24 with 9 cells. The Tiger Kitten is also a Bob Benjamin design and has as much thrust as weight. You really have to check out the pictures of the passengers!!

Mike Anderson brought his Don Johnson built Eflite Tenzor 4D Biplane. This is the design that won ETOC. Cost \$54.00, weighs 10.6 oz with an AXI 2212/34 motor and 3 cell Apagee battery, and has huge 50 deg. control surface travel, 60% expo on almost all of the surfaces. He hasn't flown it but feels the side force generators really should make it fly great. You can get more info from the Eflite web site. Go to the ETOC film clips.

Howard Shire had his new nice looking Fun Fly Magic ARF that he's using with a 46. He also brought a bare bones Sky Baby biplane. Says the instructions are not the least bit helpful and would appreciate any input to help him finish it.

Joe Major had an Ultra Fly Cessna 180 with a 43" wing span. Comes with 2 sets of wings and has working flaps. Has a Himax 2025/42 with gear box. Weighs 26 oz and has a 25 amp speed control. The plane cost \$79.00 and Joe says the stock hinges are horrible-he's using silicon hinges which are very strong.

Jack & Annette McEvoy brought a sample of the type of doll that you can purchase from toy stores carrying Mattel, to use as a pilot (doesn't come with the Tri-Lakes t-shirt). They also had the Frank Tiano dummy radial engine finished for their Stinson Reliant which took 27 hours to complete and even has spark plugs and wires.

Meeting adjourned at 8:47 p.m.

THE EDITOR'S NOTE PAD

It's that time of year again, if you haven't paid your 2005 Club dues you are no longer a member of the Club. Sad but true! If you forgot and want to fly at the Club field you need to get your payment to Erv Rohde or other Club officer before you do so. Don't forget you also need to be current in your AMA dues before you can fly at the field. We have 44 Club members as of the March 19th and we only had 41 last year at the end of March so the Club seems to be in pretty good shape for members at this time.

We have four women in our membership now but only one has done any flying. Hope the other three decide to start flying and maybe even show up some of us long time members— which probably wouldn't be too difficult.

Don't forget our Fun Fly on April 16th. Hope we have a good turnout of brave pilots especially novice pilots that can get some help from the older members.

Have gotten some good comments on the DOING ELECTRICS column which I appreciate very much. It has been fun and made me study and dig a little to try to come up with information that is useful and understandable. May or maybe June will probably be the last in the series and will exhaust my knowledge of electrics. If anyone has questions about the material presented or would like to know something about electric flight that wasn't covered just let me know and I will try to get an answer for you.

Time to land for this month



SAFETY 1st

For those who were unable to attend March's Club meeting and as a reminder to those who did attend, our Club decided to position the Starting Stations so that the airplane's propeller points toward the flying field during starting and running. If you have your plane positioned behind your vehicle when starting, then position the plane's propeller toward your vehicle.

Thanks to all our members for keeping our flying field a SAFE place.

John Woods
Safety Officer

CURRENT 2005 CLUB MEMBERS

The following Club members are current in their 2005 dues.

Gary Acton, Denise Anderson, Erin Anderson, Mike Anderson, Bud Austin, Sid Beckham, Rich Berthold, Dave Carnahan, Cletus Cook, Del D'Alessandro, Paul Denny, Ray Dixson, Vicky Dixson, Phil Equi, Roscoe Fudge, Cody Garber, Larry Gliser, Bill Griffin, Dick Haan, Jim Halbert, Don Johnson, Reeder Jones, Don Livermore, Joe Major, Kevin Marsh, Evan McCartney, Mark McCartney, Annette McEvoy, Jack McEvoy, Tom Mckenzie, Dave Medley, Mark Niebrzydowski, Dick Peterson, Henry Racette, Erv Rohde, Craig Schmidt, Howard Shire, Del Silva, Robert Smith, Dale Strahan, Henry Stratmann, Roy Steinestel, John Woods and Homer Zobel.

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



Left is Joe Major's foam Cessna 180 and above are Don Johnson's 80% Pussycat and TigerKitten. All three planes have small brushless motors.

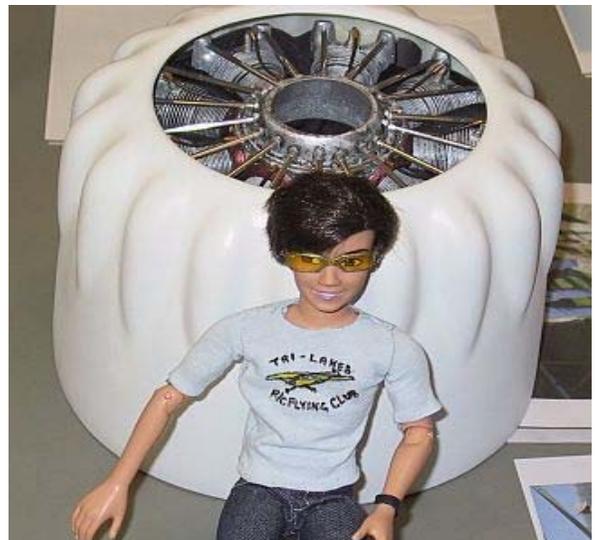


Above and right is part of the crew that showed up at the Club Work Day on Saturday, March 5th. Some of the things done were fill holes in the field, roll the field, reinforce and re-panel the shelter and fix the frequency board. Had about 20 members show up and even had coffee and cake courtesy of the Shires. Great show people! Below is Mike Anderson and his new Tensor 4D. Should be a great Fun Fly airplane if the wind isn't blowing to bad.



Below is John Woods with a funny looking airplane. Actually it is a Viking ship that was flown at Jim Stafford's show for several years. John has the job of refurbishing it. He is replacing the old tissue covering with plastic film and will make a new helium cloud that floats above the ship as the articulated oars row it above the crowd in Stafford's Theater. Pretty impressive at about 10 feet long.

Above is Howard Shire's new Magic Fun Fly ARF with a .46 on the front. Maybe it will get him in the winners circle at the next Fun Fly. Behind the magic is his bare bones Fly Baby, a scale model of the world's smallest man carrying airplane. Below is the McEvoy's scale radial motor for their Stinson Voyager. Great job guys with all the added details. Also notice the articulated Mattel doll, about 1/5 scale, with a Club t-shirt no less.



DOING ELECTRICS

By Don Johnson

In the last three columns we have gotten a feeling of what makes electrics tick. In review we know that voltage determines motor speed, want more RPMs add voltage (cells). Also that increasing the load on a motor by increasing prop diameter and/or pitch or increasing the motor speed with the same prop makes the motor current (amps) go up. We also know that Power (Watts) is Volts times Amps and that we need a certain minimum power to make the airplane perform satisfactorily. For a trainer type airplane this would be about 50 or more Watts for each Pound of flying weight—a 2 pound airplane should have at least 100 Watts or more of input power. We also know that with an Astro Super Whattmeter or Micro Meter we can easily measure Amps, Volts and Watts as we juggle props, batteries and motor configurations to find the best performance level. This works great if we have the parts available to try. But what if you wanted to start from scratch—what do you do?

Assume you've had your eye on an Avistar ARF but want to go electric. Is it doable? Certainly! First the advertised flying weight is five pounds so subtracting the motor, fuel tank, motor mount, throttle servo, etc. you have a bare airplane that probably weighs about 3 to 3.5 pounds. Making a wild but somewhat educated guess we should be able to come up with a satisfactory motor, battery, speed control package that weighs about 2.5 pounds. This would give the Avistar a flight weight of about 6 pounds or less so we would need at least 300 Watts from this combination. Doable? You betcha. So how do you decide exactly what equipment will work?

Here's the cool part, there are three computer programs that I know of that can help you. The first and simplest one is at www.flyDMA.com then click P-CALC. From the pull downs choose a battery (say a Sanyo RC3000 NiMH), motor (try an AXI 4120/14) and prop type (Master Airscrew). Then choose the number of cells (maybe 12), the gear ratio (1 for an outrunner type) and the prop diameter and pitch (maybe 11x7), then hit enter. The program calculates that the motor and battery pack + 10% (Speed control, wiring, Switch, etc.) weighs 39.9 oz. (40 oz = 2.5 pounds). At full throttle the motor will pull 25.2 Amps at 13.6 volts giving 342 Watts input power or **57** watts per pound. It also tells us that that the RPM will be about 8100, Prop pitch speed is 54 mph, the static thrust is 60.5 oz (**63%** thrust to weight at 6 pounds). And it should fly 6.5 minutes at full throttle. Not bad for a first guess. OK. So I had to choose a second motor to hit the numbers. Pull up the web site and plug in the numbers then try some alternatives and see what happens. Remember to hit ENTER to update the calculations.

There are two more programs and they are more complex but will give you even more information and may have an even bigger data base. The first one is ElectriCalc which you can get info on at www.skelectronics.com/ecalc/index.html. There is no demo available and it costs about \$40 from dealers, like Hobby Lobby or Northeast Sailplane and others that they list on their web site. I have used this program for several years and just upgraded it to the most recent version for free. In this program they have you select an airplane in addition to motor, battery and prop. If your airplane is not in the data base, you can easily add it and get the drag coefficient by clicking C DRAG in the tool bar, then clicking five characteristics of your airplane. This info allows them to show the wing loading, max speed, max climb out angle, climb rate and stall speed. There is also a little slider bar that will tell you how much flying time you will get at full throttle on down to 0 throttle. The data bases on batteries, motors props and airplanes is being added to all the time and you can download the new data into your program for free. Or you can add a battery or motor to your data base if you have the manufacturer's specs. You can also print out the results for up to 5 different combinations side by side or 5 different airplanes side by side. If that's not enough it has program routines that help you select the different components. For more detailed info go to the web page and click electricalc and then "check out the help file on line". Then click the items you want more info on.

The third program is MotoCalc which you can find at www.motocalc.com. You can download a 30 day trial of this program and if you like it you can download the program for about \$35 or get a CD for about \$7 more. I am not very familiar with this program but it looks to be very similar to ElectriCalc in the information it gives you. Will probably try the trial when I get the chance and then compare the results of one against the other, which I suspect will be very close. If you don't find the motor or battery that you want to use in MotoCalc check if ElectriCalc has the motor or battery constants that you need then add them to the MotoCalc data base. Do just the opposite if you are using ElectriCalc.

Using ElectriCalc, I have found their results to be very close to results I get when I run motor and battery tests on the bench. However, use common sense when evaluating your results and stay within the voltage and current limits of the motor, speed control and battery. All electronic equipment has smoke inside and if you let it out it will cost you money!

Next month we'll cover an easy way to measure thrust and maybe some common sense things to consider when selecting motor, batteries or props.

FUN FLY

When? APRIL 16th

BBQ starts at noon—pilot's meeting at 1 PM

Where? Rocky Top Field

There will be three events.

**One event will be CARRIER SPOT LANDING,
another event will be an EGG DROP event
and the third event will remain a mystery
until the day of the Fun Fly.**

Pilots can use any fixed wing aircraft they want in any event.

**Novice pilots (meaning new or inexperienced) are encouraged to enter and
can have an instructor stand by or be on a Buddy Box in case of trouble.**

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