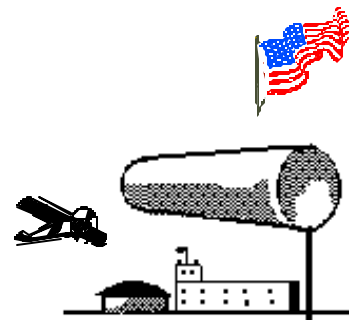


THE WINDSOCK

PUBLICATION OF THE TRI-LAKES R/C FLYING CLUB
EDITOR - DON JOHNSON - 272 SOUTH PORT LN Unit 33, KIMBERLING CITY, MO 65686
(417) 779-5340 e-mail molake@excite.com
CLUB WEB SITE <http://www.bransonrc.org>



VOLUME 12 ISSUE 1

JANUARY 2005

JANUARY MEETING

JANUARY 11 , 7:30 PM

Meet at the Branson Community Center.

Program

Bring your new projects for Show and Tell.

THE PRESIDENT'S CORNER

Greetings to all! I trust that you all had a good holiday season. On Jan 1, the club had our first Fun Fly of the year, and what a great day we had! The weather was fantastic and it was good to see old friends and make some new friends. This was my first Fun Fly, and even though I did not get a chance to fly, with the

help of some of the club members, I did learn a lot. I had what they call "technical difficulties" with my plane. I look forward to seeing you all at our next meeting.

Gary Acton

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

TRI-LAKES FINANCIAL STATEMENT

		DEC	Y T D
BALANCE	12/1/2004	\$ 796.59	\$ 1,645.95
INCOME-DUES	-----	\$ 480.92	\$ 1,660.18
INCOME-SHIRTS&CAPS		\$ 10.00	\$ 122.50
INCOME-FOOD	-----	\$ -	\$ 122.82
INCOME-50/50	-----	\$ -	\$ 67.00
INCOME-MISC	-----	\$ -	\$ 75.00
EXPENSE-FIELD	-----	\$ -	\$ 1,642.93
EXPENSE-NEWSLETTER		\$ -	\$ 67.57
EXPENSE-SHIRTS&CAPS		\$ -	\$ 148.44
EXPENSE-FOOD	-----	\$ 207.11	\$ 343.76
EXPENSE-AMA	-----	\$ -	\$ 130.00
EXPENSE-Web	-----	\$ -	\$ 200.35
EXPENSE-meeting room		\$ 20.00	\$ 100.00
EXPENSE-MISC	-----	\$ 100.00	\$ 100.00
BALANCE	1/1/2005	\$ 960.40	\$ 960.40

MEETING MINUTES

TRI-LAKES R/C FLYING CLUB

December 14, 2004

President Howard Shire opened the meeting at 7:00 p.m. at the Branson Community Center. All officers were present. There were 26 members and the following guests, Lisa Acton, Denise Anderson, Joy Austin, Vicky Dixson, Sharon Freeman, Gina & Josh Gliser, Ardith Halbert, Gloria Haan, Marge Johnson, Susan McCartney, Cathy Metzger, Eva Peterson, Shirley Racette & their son & grand-daughter, Rhonda Robson, Doris Rohde, Marsha Schmidt, Claudia Shire, Cheryl Silva, Margie Steinestel, Janet Woods & Charlotte Zobel. . New members present were Mark McCartney & Evan McCartney. The minutes from the November meeting were approved as published in the December newsletter. Erv Rohde reported that the treasury balance as of December 1st was \$796.59. The 50/50 raffle was not held for this meeting. A drawing for door prizes was held in place of the raffle – the \$25.00 gift certificate to TPA sponsored by Annette's Bookkeeping Services was won by Craig Schmidt. The \$25.00 gift certificate sponsored by Fiberglass Specialties was won by Del Silva.

Committee Reports:

No committee reports.

Announcements and Old Business:

Everyone was reminded to be sure to attend the New Year's Day Fun Fly and that they must make at least one flight in order to earn their certificate. Be sure to let it be known if you fly at another field that day instead of ours for your certificate.

Howard Shire announced that we are again having problems with armadillos damaging the field and to be cautious until the holes can be filled.

New Business:

The Top Gun trophies were co-sponsored

this year by the club, PC Works & Annette's Bookkeeping Services and presented by Howard Shire to 3rd Place Erv Rohde, 2nd Place Bud Austin and First Place Mike Anderson.

Since there were no additions to the slate of officers presented last month a motion to accept the following officers was made, seconded and passed unanimously. Officers for 2005 are: President-Gary Acton, Vice President-Bud Austin, Secretary-Annette McEvoy, Treasurer-Erv Rohde.

Discussion was held regarding the dues structure for 2005. A motion was made, seconded and passed unanimously to keep the dues at \$40.00.

Program:

There wasn't any program for this meeting as everyone was busy eating! Over 50 members & guests were in attendance.

Meeting adjourned at 7:14 p.m.



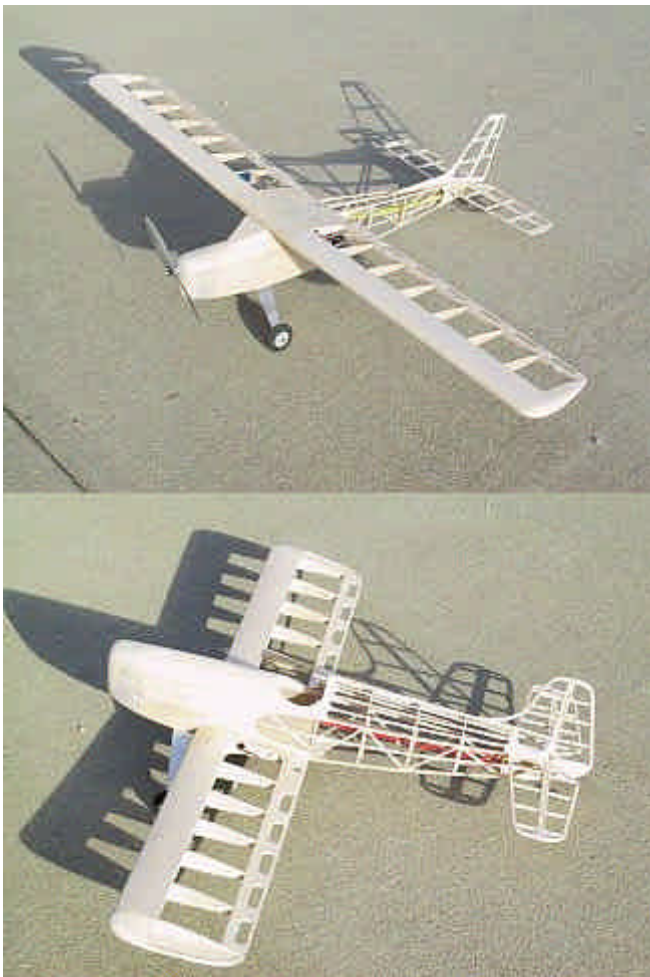
Above are Club members and guests enjoying a great Christmas dinner. BBQ meats were provided by the Rib Crib and the many side dishes and deserts were provided by the members and their wives. Many thanks to Cathy Metzger and Annette McEvoy for the planning that went into the dinner and everyone else that contributed to the feast.

THE EDITOR'S NOTE PAD

Well another year has come and gone. Ended up the year with 50 members, which isn't too bad. Our treasury is in good shape considering we bought a new mower this last year. We have new officers (at least some are new) in place for the coming year and our flying site is in great shape except for a few armadillo holes. And our two lawn mowers are fairly new and in good condition. All seems to be good in our R/C flying world.

Finally got my first article out on electric flight. This month it is pretty much an introduction but with some things that should be remembered if you get into electrics. Next month we will get more in to the meat of electric flight. There are guidelines and rules of thumb that will do a fairly good job of predicting how well your electric airplane will fly. After making a few easy measurements there is a web site you can plug your numbers into and get a printout of the performance you could expect from the plane, motor, battery and prop combination.

Time to land for this month. Happy New year!



The happy guys above are the 2004 Top Gun Award winners. First place Mike Anderson on the right, second place Bud Austin in the center and third place Erv Rohde on the left. Nice flying guys!

Below is a shot of the 2004 Club officers at their last meeting. Annette McEvoiy and Erv Rohde will return in 2005 while Howard Shire and Gary Metzger will be replaced by Gary Acton and Bud Austin. The young man is drawing a name for a gift certificate donated by either Fiberglass Specialties or Annette's Bookkeeping Services just prior to the Club's Christmas dinner



Left are a couple of progress shots of Don Johnson's 80% Pussycat (top) and 80% TigerKitten (bottom). Both will have an AXI 2808 out-runner motor using a 9 or 10 cell NiMH battery or a 3 cell Li-Ply. At less than 2 pounds and 160 watts of power they should be quite agile. The cowls were made by shaping a foam plug, sticking several layers of fiberglass cloth to the plug with 3M Super 77, saturating the cloth with odorless CA and then digging out the foam. Works well! Will cover them both with Nelson light weight film.

NEW YEAR'S DAY 2005 FUN FLY

Well it arrived. The first day of the year when Club members bundle up in their warmest clothes and trudge through the wind and snow to be the first in the Club to fly during the new year. If you can brave the weather and get one flight in on the first day of the year you earn a certificate and bragging rights for the rest of the year. Well this year it was different. Not only were Club members and guests wondering around without coats, several of them were in short sleeve shirts.

Around noon there was a great lunch. The Metzgers provided a couple of big pots of great chili and their son brought a big tray of smoked beef brisket that was delicious. The Shires brought coffee and other drinks and several others brought goodies. More than enough for everyone.

Even with the very breezy conditions Members flew before and after the lunch. Counting noses, 19 members put in a flight and earned their New Year's Day certificate. As warm as the weather was it will probably be a little embarrassing handing out certificates claiming bravery and fortitude for flying in such abysmal weather. Another six members were present but didn't fly for one reason or another. That's half the Club's membership at a single event—not bad at all. There were several regular sized planes like, four Star-40s and 60s. Avistars, etc., that flew and handled the wind quite well. There were also several members that flew small foamies, weighing 12 to 16 ounces, that flew and also handled the wind in good fashion. The only problem seemed to be getting blown over when trying to land. There were even some new members that had some buddy-box flight training during the day.

All in all a good start for the new year. Many thanks to all those that contributed to the great lunch and helped make the day a success. Welcome to 2005!



Above is a view of part of the crowd milling around, chatting, eating or getting planes ready to fly. In the foreground is Mike Anderson getting his flight in with a plane he put together all by himself! Beside him is Don Livermore telling him how it should be done.



Above Jack McEvoy and Ray Dixson help prepare Mark and Evan McCartney's Avistar for flight. Below Ray Dixson has Evan McCartney on the buddy-box while Evan's dad and brother watch and wait their turn.



DOING ELECTRICS

By Don Johnson

After about 11 years of flying electric R/C planes and seeing more and more people getting into electrics, I decided it might be good to develop a few columns on flying electric. Sort of a common sense, non technical explanation of what makes electrics tick and how to get into electrics without being disappointed or getting discouraged.

Why are electrics becoming increasingly popular? A couple of good reasons are that electrics are clean and quiet, but I think the real reasons are the rapid increase in battery capacities and the miniaturization of electronic equipment. These improvements certainly were not driven by the model industry but by a need for larger battery capacities and smaller electronics for lap top computer, PDA's, cell phones and other consumer electronics. The model industry was quick to embrace the higher capacity batteries and with microelectronic technology to develop smaller receivers, speed controls and servos. And the icing on the cake was the development of lighter, more efficient and affordable electric motors. This has spawned an unbelievable variety of indoor, back yard and park flyer aircraft. In addition to the great variety of aircraft now available to us, these small planes with quiet electric motors allow us to fly at more parks, school yards, gyms and lakes than if glo engines of any size were used.

Since there are current R/C aircraft that range from a single channel plane with about a five inch wingspan, weighing 5 grams (1/6 ounce) to a man carrying powered glider, the intent of these articles will be to give you information to enable you to make good decisions and choices regardless of what size and type of electric airplane you chose to fly.

Let's assume you are a gas (or glo) pilot and want to get into electrics—what's the difference between gas engines and electric motors? First off the gas engine has a fairly narrow power range, and this is at a relatively high RPM. If you choose a bigger or smaller than optimum prop the motor will not put out the maximum power, probably will not run well and may not run at all. You are pretty well stuck with the prop the engine was designed for as gearing a gas airplane engine is usually not an option. Also if some resistance is given to the prop at full throttle, such as running into the ground, the safety fence, a tree or even your hand, it will quickly stop, usually with no damage to the engine.

Every electric motor will turn when an electrical voltage is applied and it wants to turn at a given speed for a specific voltage. Increase the voltage and the motor wants to turn faster. This happens regardless of whether it's a tiny motor or huge motor, or whether it is a brushed or brushless motor. Therefore motor speed (RPM) is determined by the battery voltage. If you add a load to the motor, like a

propeller, it will still try to turn at the same speed, and will do this by pulling energy (Amps) from the battery. Put a bigger prop on and the motor will pull more amps. Stop the motor from turning, like by hitting the ground, a tree or putting your hand in the prop and it will continue to try to turn by pulling all the Amps it can get from the battery. This will in all likelihood exceed the current carrying capacity of the motor system and will cause one of several things to happen. If lucky, the speed control may detect an overload condition and shut down the motor. If you have a brushed motor with a fuse, it might blow saving the rest of the system. Replace the fuse and you're back in business. Or you may blow a motor winding or some electronic part in the speed control—either one of which will be expensive.

It is also possible to cause damage by adding too much voltage even though the current is within acceptable limits. Since motor speed is proportional to voltage, a battery with too many cells can over speed and destroy the motor or even blow the speed control.

Now the main difference between gas engines and electric motors is they can be geared down. This is a big advantage. Assume you have a motor that has optimum power (volts times amps) at 30,000 RPM. This RPM is not very useful. By gearing it 2 to 1, the prop will turn at about 15,000 RPM, which now is a useful range. By gearing 3 to 1 you get into the 10K RPM range which means you can use an even larger prop and get more thrust from the same motor output.

This month has been very general. The main points to remember are:

- 1 Motor RPM is determined by voltage. Add voltage and RPM will increase given the same load (prop).**
- 2 With the same voltage, motor current will go up as the motor load is increased. Increase the prop size or pitch and motor current will go up.**
- 3 Voltage and current must be kept within the limits and specifications of the motor, speed control, battery, wiring, connectors, switches and fuses.**
- 4 Electric motors can be geared to bring prop speed into a useful RPM range while allowing the motor to operate at its optimum power level.**
- 5 Through gear reduction, bigger props can be used giving better prop efficiency and more thrust for a given power output.**

Next month we will get into more specifics on power—how much you need, how to compute or measure power. How much thrust do you need and how to measure it. Also some places to go to get answers.



As seen on New Year's Day, above is Henry Racette's good looking Four-Star 40. Not sure what the four stroke is but looks to be about the biggest you can hang on the front. Also check out the pilot—a two-D Henry! Nice job Henry. To the right is Mike Anderson's first airplane he built himself. It's an Edge 540 and powered with a HIMAX 2812 out-runner motor and 3 cell Li-Poly battery. It can fly very slow and also has plenty of power for vertical hovering flight. Was also able to move in for a great close-up without damage to the plane or photographer. Probably should be getting hazardous pay for this job. You could use a pilot figure Mike.



Words of wisdom from Club Safety Officer Roscoe Fudge

May the new year bring you many good landings.

Roscoe

TRI-LAKES R/C FLYING CLUB

Don Johnson - Editor
272 South Port Ln. Unit 33
Kimberling City, MO 65686

