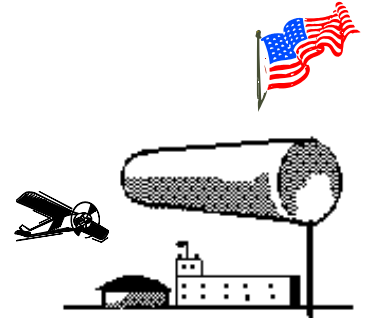


# THE WINDSOCK

PUBLICATION OF THE TRI-LAKES R/C FLYING CLUB  
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VOLUME 12 ISSUE 6

JUNE 2005

## JUNE MEETING

JUNE 14 , 7:00 PM

Meet at **ROCKY TOP FIELD**. In case of sever weather meet at the Branson Community Center.

## Program

Bring your new projects for Show and Tell. Fly before the meeting.

## THE PRESIDENT'S CORNER

Hello flyers!

What a great evening we had at the field for our meeting, even though the attendance was down a bit. After the meeting, Howard asked if I wanted to fly his plane, since I did not bring mine. About five minutes later, John was helping me fly Howard's plane. All I can say is thank goodness for the buddy box! John said I did okay for my first time in the air.

The Branson Rec Center will not be ready for us to promote our club. I was told to try next spring. See you at the field. Have a great day!

Gary

## 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 HAAN 563-0018

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

P.S. If anyone has a plane that is being stored in a dark, lonely spot, you could bring it over to my office, at Blue Haven Resort, where we could hang it up so it could be seen and admired by many.

## TRI-LAKES FINANCIAL STATEMENT 2005

		MAY		Y T D
BALANCE	5/1/2005	\$ 842.62	\$	960.40
INCOME-DUES	-----	\$ 80.00	\$	901.72
INCOME-SHIRTS&CAPS		\$ -	\$	35.00
INCOME-FOOD	-----	\$ 4.00	\$	72.00
INCOME-50/50	-----	\$ 4.50	\$	35.00
INCOME-MISC	-----	\$ 60.00	\$	60.00
EXPENSE-FIELD	-----	\$ 109.69	\$	901.11
EXPENSE-NEWSLETTER		\$ -	\$	14.90
EXPENSE-SHIRTS&CAPS		\$ -	\$	-
EXPENSE-FOOD	-----	\$ -	\$	50.14
EXPENSE-AMA	-----	\$ -	\$	130.00
EXPENSE-Web	-----	\$ -	\$	-
EXPENSE-meeting room		\$ -	\$	80.00
EXPENSE-MISC	-----	\$ -	\$	6.54
BALANCE	6/1/2005	\$ 881.43	\$	881.43

# MEETING MINUTES

## TRI-LAKES R/C FLYING CLUB

### May 10, 2005

President Gary Acton opened the meeting at 7:02 p.m. at Rocky Top Field. All officers were present. There were 12 members present plus guests David Brown Jr and David Brown Sr of D&D Hobbies and members wives Gloria Haan and Cheri Silva. The minutes from the April meeting were approved as published in the May newsletter after correcting the number of pilot stations to be built from 3 to 4. Erv Rohde reported that the treasury balance as of May 1<sup>st</sup> was \$842.62. The 50/50 raffle was won by Reeder Jones who received one half of \$9.00.

**Committee Reports:** Safety Officer John Woods announced that Mark Niebrzdoski is currently working on the pilot stations. He will check to see what the status is. Also that the April fun fly went well. He reminded everyone to be sure to secure your plane when using the starting stations – be sure to chock your wheels!

**Announcements and Old Business:** Considerable discussion regarding the gate not being locked and the lock being hard to open/lock ended with a motion by Bud Austin, 2<sup>nd</sup> by Jack McEvoy to change the combination on both the entry gate and shed and to replace lock if necessary to have it work properly. Passed unanimously. This will be effective May 17<sup>th</sup>, all members with email addresses will be notified via email and Annette McEvoy will notify the members without email by phone.

Everyone was reminded that no non-member or guest is allowed to be left at the field. If you are the last member present, you must be sure that anyone remaining leaves when you do and lock the gate!

Gary Action announced that the new recreation center won't be able to have a time slot for us to put on a presentation until next spring.

Dick Haan and his helpers were thanked for the good work that they have been doing on the field. Howard Shire suggested that Sid Beckham be contacted to have the surrounding areas brush hogged soon. Hopefully we can enlarge it somewhat to help accommodate more parking as the fun flies are attracting more people.

Erv Rohde read a letter from the ROC Team thanking us for the \$25.00 donation to them for their World Championship expenses.

A notice was read regarding Springfield RC upcoming sale/fun fly May 14<sup>th</sup>.

A new hobby shop, D&D Hobbies has opened in Kimberling City and will give members a 10% discount.

**New Business:** John Woods asked if AMA had been notified of the latitude and longitude of the Club field as announced in Model Aviation Mag. and Annette McEvoy advised that they had been advised a couple of years ago.

Erv Rohde read the worlds shortest fairy tale: A guy asked a girl to marry him – she said no. He lived happily ever after.

Gary Acton asked to purchase the old boat. Motion by Dick Haan, 2<sup>nd</sup> by Gary Metzger, passed unanimously to sell it for \$60.00.

Everyone was reminded about the upcoming June 18<sup>th</sup> Fun Fly.

**Program:** Bud Austin handed out the April Fun Fly certificates to members in attendance.

John Woods showed a device that he made to set the degree of deflection for any control surface. He had patterns and supplies to hand out to anyone interested.

Bud Austin brought a Dualist that he built years ago from plans.

Roscoe Fudge had a Zenoah 26; Tensor 40; a couple of starters and other misc. equipment for sale.

Bud Austin had a trainer; radio; starter and a .20 engine for sale

Meeting adjourned at 7:45 p.m.

## THE EDITOR'S NOTE PAD

Seems like I have been out of touch with the Club for the last Month. Missed the May meeting because we had gone out to Reno and then on into Oregon. The Oregon coast is quite picturesque and there are a couple of neat air museums that are worth stopping at for a quick tour. The first was along the northern coast at Tillamook. It is housed in a WW II blimp hanger that was built to house 9 blimps used to patrol the Pacific coast looking for submarines. This is one big wooden building. There were two blimp hangers but one burned down. The exhibits are mostly flyable? WW II aircraft. A large tent was set up inside the hanger to protect the exhibits from droppings from the owls that roost up in the rafters. Can't disturb the owls, you know! The two pictures below are from the Tillamook Museum.



The next stop was the Evergreen Aviation Museum in McMinnville, close to Portland. This is the current home of the Spruce Goose and the museum looks like it was built around it. The Spruce Goose is one BIG model airplane! This is a classy museum and is even making a replica of a 1909? Belorit. To the right are a couple of pictures of the museum and the Goose. The SR-71 Blackbird is a large airplane but is dwarfed by the Goose. Even a B-17 looked



small under its' tail. If you find yourself on the upper Oregon coast try to visit one or both these museums.

On the first weekend of June the Halberts and Johnsons took their annual trip to Little Rock to take in the S.M.A.L.L. Fun Fly. Even though it has lost some attendance the last two years it is still an interesting event. Unfortunately they are being evicted from their flying field in July so not sure if or where S.M.A.L.L. will be held next year. When we first attended in 1998, over 80% of the planes were glo powered. Now over 80% are electric. One of the interesting models is the flying fish skeleton pictured below. It probably had a 30 to 36 inch wing-span and flew quite well. Have several more pictures, both indoor and out, I wanted to show but don't have room. Maybe get them in next month.

Time to land for this month.



## **SAFETY FIRST**

The Safety Stands that many Club members are using should be set up with a slight angle so that your airplane will naturally rest against the uprights. This along with the use of some kind of wheel chocks, as mentioned at our last meeting, will help keep the plane from unexpectedly moving forward after starting. Also, always have any bystanders stand behind the plane and away from the propeller's arc – propellers will hurt and they do come off.

John Woods  
Safety Officer

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## **NEW MEMBER**

The Club's membership has now grown to 48 for 2005.

Dr. Gerald (Jerry) Kenning has become a Club member. He and his wife Margaret live in Springfield.

Welcome to the Club Jerry, glad to have you join us.

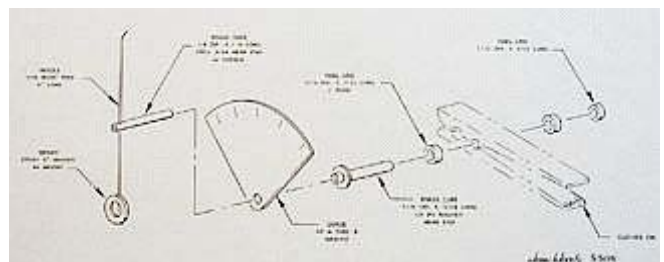
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Field Marshall, Dick Haan, seems to be having a lot of fun keeping the flying field in great shape. He has also asked for and received a lot of help. His number one helper is his wife, Gloria, who usually goes to the field with him and runs one of the mowers. Dick would also like to thank the following members that have come out to help him on the field maintenance (through May 18th). Howard Shire, Bud Austin, Dave Carnahan, Larry Gliser, Jim Halbert and Reeder Jones. Many thanks to everyone who helps keep the field in great shape.

## **Control Surface Deflection Meter**

John Woods demonstrated his Deflection Meter that is used to measure movements of any control surface. Using this gauge will show any irregularities between ailerons as well as helping to dial in any needed or unwanted differential. The meter is simple to use, just level your plane and attach the meter to the surface you want to measure the degrees of travel. Adjust the travel up and down for the desired settings using your computer transmitter and record the surface movements for reference. Fly the plane then change throws to obtain the desired handling. Adjustments can be done at the field. John is supplying (Free) the degree gauge, clothespin and a detail drawing (shown below) showing how to build your own with a couple pieces of brass tubing and a few other items you have around the shop. He did see a picture of a commercial meter being used by some pattern flyers, then figured out how to make his own. Very inventive John!



# DOING ELECTRICS

By Don Johnson

For the last article in this series we will cover some odds and ends about electrics starting with batteries.

The capacity of batteries used in R/C models is given in milliampere-hours or mAH. We are all familiar with this nomenclature but it might make more sense to rate the batteries in Ampere-hours or AH, which is the same way the capacity of your auto battery is rated. Since one AH = 1000 mAH a 500 mAH capacity battery = 0.5 AH, a 1000 mAH battery = 1.0 AH, a 1500 mAH battery = 1.5 AH and so on. Using AH instead of mAH has its advantages-read on.

Many times I have been asked how long a flight to expect from a certain motor, battery and prop combination. Actually making a good estimate is quite easy. By definition one ampere-hour is equal to a battery delivering one ampere for one hour. It is also equal to one ampere for 60 minutes or 60 ampere-minutes. Now if you have a 1.5 AH capacity battery it could also be said that it has 90 ampere-minutes of capacity (1.5 X 60). Now assume you have a small electric motor that from test or manufacturer's data you know it will pull about 15 amps at full throttle. So if you have a 1.5 AH battery (which is also equal to 90 ampere-minutes) in the plane the full throttle flying time will be about 90 divided by 15 or 6 minutes. Actually it would be a little less than that due to internal resistance losses and power needed for the receiver and servos, but on the other hand you probably would not use full throttle during the whole flight. With good throttle management you could get much more than 6 minutes of flight. So to estimate your flight time multiply the AH battery capacity times 60 and divide by the motor amps.

What size batteries should you use? This is a somewhat complex question. Batteries are heavy so you don't want to burden your plane with more battery capacity than you need, but all batteries have a voltage drop when put under load. If the battery is not big enough it will have a significant drop in voltage. For example if you have a 10 cell battery and at full throttle the voltage drops more than 20 % (from about 12 volts to under 10 volts) you should consider a larger capacity battery. Remember power is volts times amps. So it doesn't

help to have high amps if it makes the voltage sag. Also if high amps drags down the voltage it will also, in effect, reduce the battery's capacity such as only getting 1000 mAH out of a 1500 mAH battery.

What does C (capacity) ratings mean? If you have a 1.5 AH (1500 mAH) battery the C rating is 1.5 amps, for a 700 mAH (0.7AH) battery it would be 0.7 amps. Charging NiCad and NiMH transmitter and receiver batteries is usually done at 0.1 C and this is built into the little charging transformers that come with the radio set. These batteries (usually 700 mAH cells) can be left on 0.1 C charge (0.07 amps) for more than the recommended 14 to 16 hours without much or any damage. Charging at a higher rate than 1/10 C is not recommended unless the charger can detect when the battery is fully charged and then ends the charging cycle. For motor batteries the charging rate for regular NiCads is 2C and for fast charge it is 3C to 4C. For a 1500 mAH battery 2C is 3 Amps, 3C is 4.5 amps and 4C is 6 Amps. For NiMH batteries the maximum charge rate is usually 1.2C, or for the 1500 mAH battery 1.8 amps. For Li-Poly (lithium polymer) batteries the maximum charge rate is 1.0 C. Note Li-Poly batteries must only be charged with a good quality charger made specifically for Li-Poly cells. From the above you have probably guessed that NiCads take the least amount of time to recharge with Li-Polys taking the longest to recharge.

Discharge rates for NiCads and NiMH batteries didn't seem to be much of a problem as long as high current didn't make the voltage sag too much or the cells didn't get too hot to hold in your hand. With Li-Poly it's different. The manufacturers specify the maximum C rate that their cells can be discharged at. This is a safety issue so don't exceed these C ratings. The cells may be rated as low as 1C up to 20C. If you have a 1500 mAH Li-Poly battery with 10C rating, do not exceed 15 amps or you will probably damage the cells or worse. But note that staying within the 10C rating will prevent damage to the battery but 15 amps may still cause a significant voltage drop.

This is the sixth and concluding article in DOING ELECTRICS. It has been fun and hopefully informative to many readers. Electric flight has arrived and performance levels are continuing to increase. If you haven't already joined the quiet flyers give it a try, you may really like it.

# FUN FLY

**When? JUNE 18th**

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

**Where? Rocky Top Field**

**There will be three events.**

**One event will be a CARRIER TRAP LANDING, another event will be timed INSIDE LOOPS, TOUCH, OUTSIDE LOOPS, LAND. The third event will be CLIMB, GLIDE AND SPOT LANDING.**

**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.**

**TRI-LAKES R/C FLYING CLUB**  
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