



June

Minneapolis, Minnesota U.S.A.

2016

# TCRC Building Contest Attracts Beautiful Airplanes

by Chris O'Connor

The TCRC building contest was held at our May meeting with 17 airplanes entered. Of those only 3 were foam, the rest were built from kits or plans or ARF's. A good showing of modeler built planes.



**Dan and Steve from Rich Valley R/C were guest judges for TCRC's Building Contest as they give a great looking entrant close scrutiny.**  
(Photo by Jim Cook)

We had a new format this year which seemed to be acceptable to everyone. I know that a few changes will probably have to take place, especially with respect to what qualifies or disqualifies a plane to be entered in a given category. So over the next year Mark, Steve and I will modify some of the procedures for the contest.

Thanks to everyone that entered and thanks to our two judges from Rich Valley RC, Dan and Steve for spending an evening with us.

The People's Choice award was new this year, replacing Best in Show. The winner this year was Delano Stein with his model that represented a 1916 era aircraft, very nice and well deserved.

The winners each received a \$25 gift certificate to Hobby Warehouse. In addition a drawing was held of the remaining entrants and four more \$25 gift certificates were awarded. Those certificates were won by John Dietz, Duane Murphy, Larry Couture and Joe Rogancamp.

I hope everyone will plan on next year entering a plane and if you have any comments please email, call, or talk to me at a meeting. Thanks again to everyone.

For more pictures from TCRC's 2016 Building Contest, see page 3 of this newsletter. J



## A Note from The Head Wing Nut

By Bob Briesemeister



Hello TCRC Members!

The unofficial start of summer has past (Memorial Day) and the start of our events has begun but let's first start with May. The May Float Fly was a bust due to white caps on the lake. We will make up for it with the Fall Float Fly in September.

The first event in June will be Father Hennepin Days in Champlin. This is a great event to showcase TCRC and the hobby that we love. It will be held on the 11<sup>th</sup> with set up on Friday night with some practice flying if you choose to come. The event is on Saturday from 9 to 4. So come and fly or help by being a spotter or teaching someone on the simulators. For more information contact Tim Wirtz, Gerry Dunne or myself.

The next event will be the first meeting at the field this summer. The meeting will be held on Tuesday, June 14<sup>th</sup> at 7:00 pm as usual and TCRC will provide dinner at 5:30, which will include brats, hotdogs, chips, pop and water. Please bring something to share if you would like. Come out early and do some flying and "BS-ing" if you choose. Hopefully the meeting will be short and more flying until sunset. In case of bad weather the meeting will be held at CrossPoint Church at 7:00 pm.

The Electric Fun Fly will be held at the TCRC field on June 18<sup>th</sup>. This is an open event to any current AMA members. Pilots' meeting will be held at 10:00 a.m. For more information call or email Gerry Dunne.

'Help Me Fly' Wednesdays have started. This is not just for novice pilots or beginners. If you need help flying, having trouble setting up your plane, need someone to maiden your new plane, or help trying more advanced maneuvers, come out on Wednesday after 5 p.m. Hopefully someone will be able to give you some assistance. With that said, to make this work I need experienced flyers to come and help. If you are not needed, you can get some flying in. But common sense applies, if the winds are too high, or of course rain, you probably won't need to show up.

That brings us to July and on the 9<sup>th</sup> Kris Hanson will be holding a Competition Fun Fly for the TCRC members. The events will be chosen the morning of the competition so you should be practicing all of your flying skills. For more information contact Kris.

We are still in need of volunteers to do some mowing. Please contact Corey Kaderlik with questions or to sign up. If you are not checked out on the tractor, Corey would be more than happy to give you a crash course.

The raffle will continue at the summer meetings at the field. This month's plane is a Horizon Hobby Ultimate Biplane. It retails at \$240.00 and still only \$5.00 per chance to win.

Don't forget, the June meeting will be at the field, weather permitting. See you there. J

## Aviation Events Coming Up

July 16, 17	Wings Of The North AirExpo
July 21-23	Watts Over Owatonna
July 5	AMA NATS
July 25-29	EAA AirVenture Oshkosh
Aug. 12-14	Northern Alliance Military Fly-In
Aug. 18-20	Warbirds & Classics Over The Midwest Fond du Lac

## Pictures From TCRC's 2016 Building Contest



The Rich Valley R/C judges really gave close scrutiny to Delano Stein's 1916 vintage aircraft. This plane was loved by the members in attendance as it was awarded People's Choice.



Duane Murphy displays his Commander that he built and modified from a kit. He added the floats and was excited about having the maiden flight at the Spring Float Fly.



No, these two planes did not get their tails caught in the door. They are tailless planes from the 50's designed by Bill Evans. Conrad Naegle and Jim Ronhovde built these Simitars from scratch.



Some of the planes entered in the non-scale category. I think every plane seen in this picture was scratch-built from plans. The orange plane was a Big Guff designed in 1937 by Walt Good.



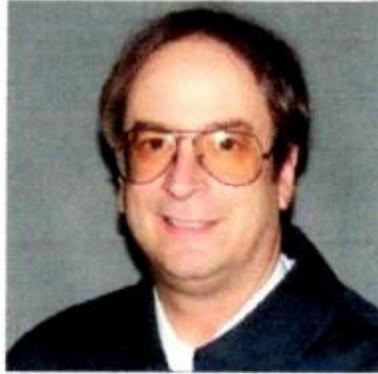
This nice looking warbird won the scale-foam category of the Building Contest. The Me 109 was built by Joe Neidermayr.



More of the entrants in the TCRC Building Contest. Every person in attendance got to judge the airplanes to come up with the People's Choice.

# The Right Seat

by Mark Wolf



## Wind

Wind – it’s a four-letter word. No, not one of THOSE four-letter words but there can be times during takeoff or landing, for example, when it may feel like we’ve been cursed by it. Wind. It comes in many varieties. Strong wind, light wind, steady wind, gusty winds or maybe a relatively calm wind. It may also appear or affect us from any direction. Headwinds, tailwinds, crosswinds, light and variable winds. Wind – it just blows. However, there is one ‘wind’ which is very important. It’s present on every flight and we cannot fly our airplanes without the significant effect that wind has on the wings. The wind flowing over the wing creates a pressure differential. This pressure differential combined with how the wing reacts to it provides lift, and lift enables us to fly. This wind is called – the relative wind.

Here’s the definition: Relative wind is defined as “The direction of the airflow produced by an object moving through the air. The relative wind for an airplane in flight flows parallel with and opposite to direction of flight. Therefore, the actual flightpath of the airplane determines the direction of the relative wind.” (Source: *FAA AC61-238 Pilots’ Handbook of Aeronautical Knowledge*). In other words the airplane proceeds one way and the relative wind flows back over the wing in the other (opposite) way.

Now that we’ve determined the direction of the relative wind, should we be concerned about how fast it’s moving? Yes. Actually it’s how fast we are moving through the air that becomes the speed of the relative wind and it’s measured as airspeed. Our aircraft performance for all phases of flight: takeoff, climb, cruise, various flight maneuvers, configuration changes (i.e. flap extension, landing gear retraction/extension, etc.) Approach and landing are based upon attaining/maintaining certain airspeeds. Maintain an airspeed above normal stall speed and we fly, but note that we’re assuming a steady state wind. Turbulence, gusts or wind shear can lead to stalls even though the airspeed is above normal stall speed. Also remember that the wing stalls when its critical angle of attack is exceeded and this can happen at any airspeed and in any attitude.

Now here’s the question: In which direction do we normally try to take off and land? The quick easy answer is: Into the wind. But which wind are we talking about, or what if it’s calm and there’s no wind at all? While we’re thinking about that and before we make our final answer, here’s a follow-up question: Why? If the relative wind over our wings provides the lift we need to fly (sufficient airspeed above stall) and the “. . . actual flight path of the airplane (in this case takeoff or landing) determines the direction of the relative wind . . .” (by definition mentioned above), then . . . (can you repeat the question) why would taking off or landing into any ‘other’ type of wind be beneficial to us?

That other wind will have an effect on our aircraft performance during all phases of flight and on most days there is some form of wind present. Understanding the relationship between the airplane and the air surrounding it is essential for safe flying operations.

End of Wind: Part One. Next month will continue for Wind: Part Two. The wind and its effects on the airplane.

Until next time . . .

J

### Wind Part 2 Next Month

**TCRC meets every month on the 2<sup>nd</sup> Tuesday at 7:00 PM in Fellowship Hall of CrossPoint Church located on the southeastern corner of the intersection of 98<sup>th</sup> Street and France Avenue in Bloomington. Guests are welcome to attend these meetings.**

# Top Gun: Best of the Best

by Steve Meyer

Top Gun is a world championship event! The Top Gun Invitational is an invitation-only competition for over \$25,000 in cash and prizes and to see who will be “Mr. Top Gun”. There are also lots of awards of excellence given out each year.



Some on the participants and magnificent planes at Top Gun 2016. (Photo by Steve Meyer)

Scale aircraft from each era of aviation from WWI through today’s jet aircraft are flown. Civilian and military are represented. From the model aircraft’s outline, color scheme and attention to details, a static score of 100 points maximum can be generated from the panel of judges. After the static judging the pilots will fly their aircraft four times, for a flight score of 100 points maximum each round. An overall champion and class champions are determined at the conclusion of the event. “Mr. Top Gun” is one of the most coveted awards an RC model aviation pilot may ever earn. (text from *FlyingGiants*)

Chris O’Connor and I flew down to Orlando, Florida on Wednesday night April 27<sup>th</sup> to attend Top Gun 2016. We were met at the airport by Tim Len, a past member (and president) of TCRC, who was competing in the Pro-Am Sportsman class at Top Gun 2016. Tim told us his first round flight that afternoon was not a good one. The BVM F9F Cougar he was competing with failed to lower its landing gear. Tim then needed to land with the landing gear up resulting in damage to the speed brake flaps under the plane and a low landing score from the judges.



Chris O’Connor helps Tim Lin take his BVM F9F Cougar to the flight line. (Photo by Steve Meyer)

The next morning we drove to Top Gun at “Paradise Field” in Lakeland. The day was hot and humid but the wind was down the runway. The classes being flown were Masters, Expert, Team, Pro Prop, Pro Jet, Pro-Am Sportsman, X Class and Unlimited. Tim fixed his gear problem by removing the landing gear doors that had caused his gear not to come down. Each round over the next 3 days Tim’s flying scores improved as he learned how to slow the jet down without speed flaps. He finished in 19<sup>th</sup> place in Pro-Am Sportsman with averaged score of 116.375 (first place was 120.917). Tim sold his Cougar at the event and next year he is competing with a new SkyMaster A-4 Skyhawk.

Continued On Page 6, Column 1

# Top Gun 2016

Continued From Page 5



**Tim and Chris in the pits at Top Gun 2016.  
(Photo by Steve Meyer)**

Top Gun is a must see event for anyone interested in scale aircraft and quality workmanship. Chris and I were blown away by realism displayed by most of the planes that were competing. The pilots of these aircraft were often the builder as well and they were willing to share with us some of their building and flying “tricks”.

Every year we go to Top Gun we see new scale aircraft, get new ideas, and meet old friends. Top Gun is truly the Best of the Best.



**Howard 'Pete' in the air at Top Gun 2016.  
(Photo by Steve Meyer)**

The Howard ‘Pete’, pictured to the left, was a giant-scale plane enlarged from the plans done by TCRC member Dave Andersen.

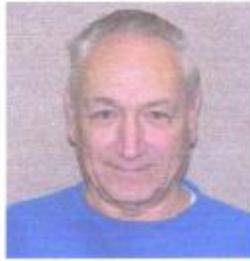
Other pix by Steve Meyer from Top Gun:



The 2017 edition of Top Gun will in late April next year and will be in Florida at Lackland AFB. Mark your calendars and take a trip to Florida next spring to see some fantastic airplanes and some spectacular flying. **J**

## Safety At The Field

By Larry Couture



Well here it is the end of May and the weather is getting better and the amount of flying at the field is increasing with each sunny day (today is not one of them).

In the beginning of the month the field did get some minor flooding but it lasted for a very short time. This was due to the very heavy rains in southwestern Minnesota. That has caused the field clean up to be postponed to a later date to be set by President Bob.

The spring swap meets by the Hobby Warehouse and Big Sky Hobby are over, and some people now have some different equipment to play with, but not as many as I had hoped to have sold from my table.

To keep everyone safe at the field the following actions by each one of us will help. In this order:

- Post membership card on board
- Check airplane completely before starting
- Have airplane properly restrained on starting bench
- Start motor and get behind the prop before making any adjustments
- Keep the airplane under physical control until the out taxi way is reached
- Make loud announcement as to takeoff and wait for a reply by others flying,
- Take off
- Have fun, and make loud announcement that you are landing and then land with the rubber side down and on the runway

See how simple it is -- just nothing to it! (This part of course is the hummer).

- Then taxi down the taxi way to the yellow line
- Kill engine and then return to starting bench and look and feel proud

So keep the rubber side down on landings and any landing from which you can fly again is great but not always graceful.

## Father Hennepin Day June 11<sup>th</sup>

TCRC has again been asked to have a booth and put on a flying show at the Father Hennepin Days celebration in Anoka County in Champlin on June 11<sup>th</sup>.

Tim Wirtz is chairing the event for the third year and is planning on having static displays, flight simulators, scale and warbird flying, giant-scale flying, buddy box training, helicopters and FPV with quadcopters.

TCRC will need volunteers for all aspects of this year's show. We will need pilots of the different aircraft to put on flight demonstrations during various times for the two day event. A pilot does not need to commit for the whole day but, obviously, the more time he can be there the better.

Connected to the flying demonstrations, we will need volunteers to act as spotters, to control the flight line, and to provide security.

There will be a large static display of our members' aircraft, so if you have a nice plane or two that would look good in a display, give some thought to having your planes at the event.

We will also need help with simulators, buddy boxes, etc.

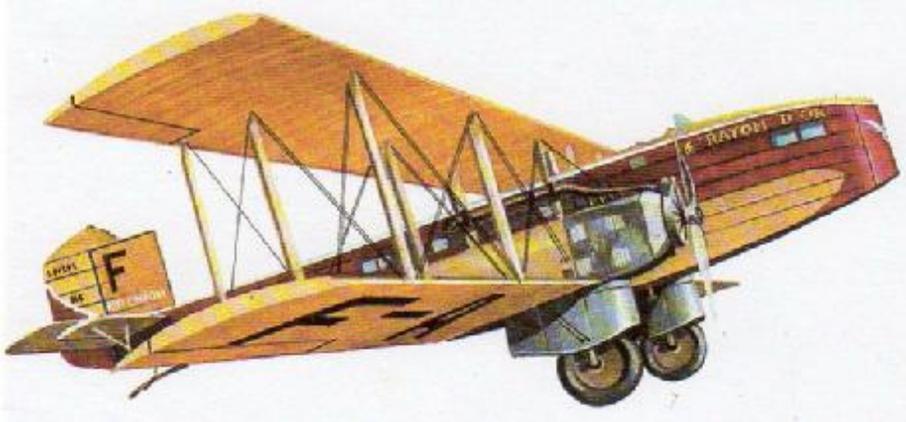
Give some consideration to being a part of Father Hennepin Days this year. Let Tim know where you can help. **J**

**Safety Always Comes First!**

# LIORE et Olivier LeO 213

by Conrad Naegele

The May Mystery Plane was the French Liore et Olivier LeO 213.



*(Editor's Note: If this plane does not exactly resemble the three-view mystery plane in the May newsletter, we were experiencing technical difficulties that have since been resolved. If anyone knows the identity of the May plane, please let the editor or Conrad Naegele know.)*

The late twenties and early thirties saw a tremendous expansion in civil aviation. European companies spared no efforts to capture the largest market share of planes and sought after routes. Three main selling points were safety, speed and comfort.

A French airliner which met or exceeded these requirements was the LeO 213, a twin-engine plane derived from the LeO 20, a heavy bomber. The prototype appeared in 1926 and up to 1931, 13 planes were put into service. One was even converted to a flying restaurant! They were (for the day) luxurious and quiet. They used standard construction but, while rather ugly, were dependable.

Used for the popular Paris to London, and Paris to Marseilles runs, they were all flown by Air France and finally removed from service in 1932, at which time the 'modern' aircraft, the DC1, DC2, the model 247 and many great German planes were coming on line. The LeO 213 was large and ungainly, probably expensive to operate, and all for 12 passengers!

The 213 was powered by two Renault 12-cylinder V, liquid-cooled engines each developing 450 horsepower.

This plane had a wingspan of 77-feet, a weight of 12,566 pounds, and a range of 350 miles. It carried a crew of 3 and 12 passengers. J

## Don't



## Forget!

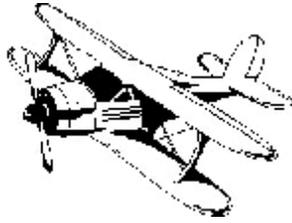
The TCRC Membership meeting on June 14<sup>th</sup> will be held at the TCRC Model Air Park in Jordan, weather permitting.

The grill will be on and dinner will be served at 5:30 PM. The meeting will start at 7:00 PM. Bring a plane and get some flying in before enjoying a dinner on the club and then attending the membership meeting.

The meetings for July 11<sup>th</sup> and August 9<sup>th</sup> are also scheduled for the Jordan field.

In case of bad weather the meeting will be at its normal time of 7:00 PM at CrossPoint church in Bloomington. J

## Show & Tell



Only one plane at Show & Tell for the May meeting, since all the other new planes were entered in the Building Contest being held that same evening.

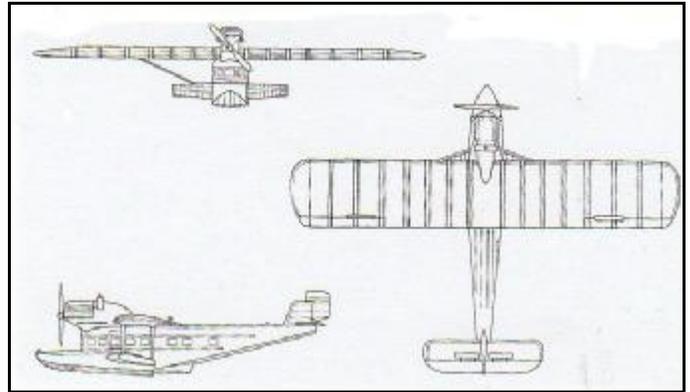


Bob Swenson had his newest Dormoy construction project at the meeting. The scratch-built plane was still in its bones, but definitely was taking shape nicely. The Dormoy was called the bathtub airplane for obvious reasons. (The pilot appears to be flying while sitting in a bathtub.) Bob has built three Dormoys while a member of TCRC. His Dormoy #2 was given to long-time club member Doc Azeiman, who would fly it at the club float flies held at Bush Lake. The plane was a great water plane and either Bob or the editor will come up with a picture of that plane and put it in the next newsletter.



The picture of the completed Dormoy is not one of Bob's, but rather a full-size Dormoy. Bob said he started this project because he had a set of wheels he did not know what to do with, until he realized they would look nice on a new Dormoy. It will be exciting to see when the plane is finished and Bob makes the maiden flight on it. J

## June Mystery Plane



## Volunteers To Mow Still Needed For Jordan Field

TCRC still needs volunteers on the mowing crew for the Jordan flying site.

Field maintenance manager Corey Kaderlik would like to see several more club members become trained in driving and operating the two tractors so that the grass cutting work load is shared by more people.

Corey says the crew mows one-half of the open area at a time rotating every other week.

If you are interested in joining the mowing team, either email Corey at [kaderlik@frontiernet.net](mailto:kaderlik@frontiernet.net) or call him at 507-364-7244. J

**Become A Member Of  
TCRC's Elite Mowing Crew**

# Putting Your FAA Number On Your Airplane

by Jim Cook

The FAA now requires that all people piloting a UAS (Unmanned Aircraft System) must be registered and have an FAA registration number. Furthermore, that number must be somewhere on each of your model aircraft.

Although the regulation allows the registration number to be inside the battery compartment, I felt that I should have my number visible on the outside of the aircraft.

While discussing methods of doing this neatly while at the Wednesday Bald Eagles breakfast, it was mentioned that there were several inexpensive label makers in the marketplace that would work nicely for the registration number.



I stopped at Office Max on the way home and looked at the various electronic label makers. I

chose a Brother P-Touch PT-90 labeler that cost \$30.

There was a more expensive unit available that normally sold for \$60, but had a \$30 rebate, effectively making it the same cost as the Brother P-Touch I purchased. However, the pressure sensitive labeling material for the one on rebate was almost twice as much as the one I purchased. I figured this was similar to computer printers, where the cost of the printer was nothing in comparison to what would be spent on ink.

My unit came with a 13-foot roll of tape that would have black ink on a white background. I purchased a 26-foot roll of black on clear for an additional \$10.

The instructions were easy and I quickly made my FAA labels.



Attaching the labels to the various airplanes was also easy.



The label maker can do up to two lines, has some graphics and font variations, and I will utilize it in my house and especially in my shop.

The FAA doesn't require the registration to be machine printed, but I felt that I should do it neatly and uniformly on all of my airplanes. **J**

## THE TCRC FLARE OUT Monthly Newsletter



### \*\*TWIN CITY RADIO CONTROLLERS INC.\*\*

**Purpose:** To preserve, encourage, and further develop the hobby of building and flying radio controlled model airplanes.

#### 2016 Officers

<b>President</b>	<b>Bob Breisemeister</b> 612-964-8877
<b>Vice President</b>	<b>Mark Wolf</b> 612-207-3128
<b>Secretary</b>	<b>Jim Ronhovde</b> 952-854-9062
<b>Treasurer</b>	<b>Tim Wirtz</b> 952-941-5357

#### TCRC Flare Out

<b>Editor</b>	<b>James R. Cook</b> 952-445-5257
<b>Publishers:</b>	<b>Pat Dziuk</b> 952-445-3089 & <b>Mike Timmerman</b> 952-496-1631

**Website:** <http://www.tcrconline.com>

**Andersen Designs**  
Andersen La-7  
Built by Jeff Quesenberry

**FREE! Scale Plan Downloads**

ARADO 96B, Focke Wulf TA-152H  
Grumman Lynx, Howard Pete  
Kawasaki Ki-45, Lavochkin La-7  
Mitsubishi - "Babs"

**MNBigBirds.com**

**Add'l Extras:**  
- In Flight Videos  
- Construction Articles  
- Scale Documentation  
- Paint Masks & more...

Composite Parts Available thru...  
**MICKO**  
Aircraft & Accessories

## May Raffle Winner



Jim Lundquist won the May raffle at the TCRC monthly meeting on May 10th. Jim was all smiles as he took home yet another win in the monthly raffle. This time the plane was a Sig Something Extra ARF with a retail value of \$200.

At the June 14th meeting the raffle prize will be a Horizon Hobby Ultimate Bipe with a retail value of \$240. Chances are only \$5/each and you may enter as many times as you wish. Come to the monthly club meeting on June 14th at TCRC Model Air Park in Jordan and be the next winner of the TCRC raffle. J

## Tim Lin's BVM F9F Taking Off

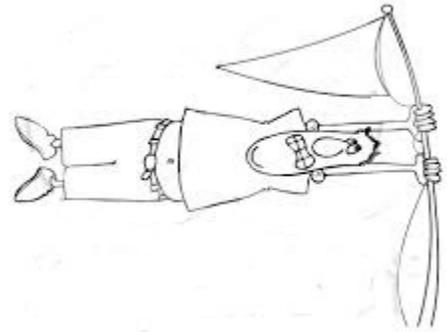


Former TCRC member Tim Lin's F9F Cougar taking off on one of its four required flights at Top Gun 2016. (Photo by Steve Meyer)

## Spring Float Fly Cancelled

by Steve Meyer

The Spring Float Fly scheduled for Saturday, May 14th was cancelled due to high winds.



However, we have the Fall Float Fly scheduled for Saturday, September 24<sup>th</sup> at Bush Lake Park in Bloomington, so keep your floats ready. The weather will be much better then. J

## TCRC Auction Date Changed

The TCRC Board has decided to change the date for the Annual Auction held in February to the first Saturday in that month.

The 2017 TCRC Auction will be held on Saturday, February 4<sup>th</sup>.

President Bob explained that making this change will eliminate the potential overlapping of the auction with Valentine's Day weekend in future years. J

## Calendar

June 4,5	Discover Aviation Days, Anoka County Airport
June 11	Father Hennepin Days TCRC Air Demo and Static Display Champlin Tim Wirtz 952-941-5357
June 14	TCRC Meeting At The Field Dinner at 5:30 Meeting at 7:00
June 18	TCRC Electric Fly-In Jordan Field Gerry Dunne 952-888-7238

## Membership Chair Needed

TCRC needs a volunteer to become the club membership chairman.

The chair would be responsible for collecting the new member form when a new pilot joins the club, verify AMA membership, issue membership badges, update the club roster, among other duties. The process to do this is very well organized and easily done.

If you are interested in becoming more involved in the operation of TCRC, and becoming the membership chairman, let a board member know, J

## Field Gate Access Code Changed

The access code for the gate at the Jordan field has been changed.

After a TCRC member has renewed his membership for 2016, he will receive a letter informing him of the new code. J



## 'Help Me Fly' On Wednesday Evenings

The TCRC board has designated Wednesday evenings in the summer as 'Help Me Fly' nights at the Jordan Model Air Park.

After 5:00 PM on Wednesday evenings, experienced pilots should be on hand at the Jordan field to help those members who are learning to fly, or possibly want to improve their flying skills, or to practice a new air maneuver. They should also be able to help set-up a plane, or give a pilot advice on programming the mixing of channels, etc.

So, let's see lots of new and old members at the field on Wednesday evenings for 'Help Me Fly' night. J

## Electric Fun Fly To Be June 18<sup>th</sup>

June is really a busy month with lots of TCRC projects scheduled. This includes the Electric Fun Fly to be held on Saturday, June 18<sup>th</sup> at the Jordan Model Air Park.

Gerry Dunne is chairing the Electric Fun Fly again this year, and since he is the club's number one electric advocate, that is very apropos.

This is an open event and any pilot with a valid AMA membership card is permitted to fly at the event.

Start time is scheduled for 10:00 AM, and Gerry will hold a short pilots' meeting at that time before the serious flying begins.

This will be a low-key event. The main goal is to get lots of pilots with electric aircraft together to do a day of very enjoyable flying and camaraderie.

In past years this has also been a campout at the field, but that is not being officially scheduled this year. However, if you would like to camp that evening I do not think anyone would object.

For more information, give Gerry a call at 952-888-7238 or email him at [madmech63@msn.com](mailto:madmech63@msn.com).

Get your electric aircraft ready and come to the Jordan Field on Saturday, June 18<sup>th</sup> for the Electric Fun Fly. J

  
**Visit Your**  
**Local**  
**Hobby Shop**  


  
**7144 Chicago Ave S**  
**Richfield, MN 55423**  
**612-861-5587**  
**MyHobbyWarehouse.com**  
**hobbywarehouse2@aol.com**  
**Hours Mon-Fri 10:00-7:00**  
**Sat 10:00-6:00**  
**Closed major holidays**  
**Thomas Steinmueller**  
**Stop In Today To Find Out 'The TCRC Special Of The Month'**

**LITTLE CANADA** (651) 490-1675  **RICHFIELD** (612) 866-9575  
**HUB HOBBY and...** Fun for the Family Games Toys Stuff  
**HOURS:** MON-FRI: 10:00-9:00 SAT: 9:30-5:30 SUN: 11:00-5:00  
**Arts & Crafts** **Rockets** **Science** **Radio Control**  
**Games** **Slot Cars** **Puzzles** **Kites**  
**Plastic Models** **Trains** **Toys** **& Much More**  
**LITTLE CANADA** 82 Minnesota Ave. Little Canada, MN 55117 (Hwy 36 & Rice St.)  
**RICHFIELD** 6410 Penn Ave. S. Richfield, MN 55423 (2 Blks S of Lunds)  
 Visit Us Online At [HUBHOBBY.com](http://HUBHOBBY.com)  
 Find us on Facebook

**HOBBY**  
  
**HOBBY ZONE**  
 Check us out! 763-551-1159 info@hobbyzone.com  
**3700 Annapolis Lane N, Suite #175**  
**Plymouth, MN 55447**  
 Monday - Friday 10AM - 5:30PM  
 Saturday 10AM - 4PM  
 Sunday Closed  
 Most in-store prices are 5% - 10% OFF online prices. Plus, every month we select two popular items at 15% OFF!  
[www.hobbyzone.com](http://www.hobbyzone.com)  
**ZONE**

  
**BIG SKY HOBBY™**  
 Great products, expert advice.  
**Open Monday thru Saturday, 10 am - 6 pm**  
**Have Special Orders or Questions?**  
**Contact: [Jeremy@BigSkyHobby.com](mailto:Jeremy@BigSkyHobby.com)**

**Big Sky Hobby**  
**3402 Federal Drive**  
**Eagan, MN 55122**  
**(651) 905-8909**

