

Jordan Field Sporting A New Fence

by Tim Wirtz

Well, for the first time in my membership history, we weren't cleaning up mud on our annual Spring Clean Up Day. Instead, we focused on putting in a new fence at the pilot stations, putting up No Trespassing signs, and replacing the patio pavers that were removed when we redid the shelter posts last year.



Once they got into rhythm, the fencing crew was pretty efficient.
(Photo by Tim Wirtz)

Bob Breisemeister, Tim Wirtz, Cullen Dwyer, Brian Johnson, Jim Ronhovde and Ken Weddell all showed up about 8:30 and brought down all the supplies and the generator. Tim had picked up what he thought were all the fence supplies during the week. Turned out he needed to make

one run to Menards to get a few odds and ends – it would help if he could actually count . . . By 9:00, the chain link fencing was coming down, thanks to some pre-work by Steve Meyer and Mark Wolf, who loosened a lot of the bolts holding the on the chain link the previous day. The old chain link was rolled up and set off to the side, followed by the rotted out top rails. Then Bob and Brian used the bobcat to pull up the old posts.

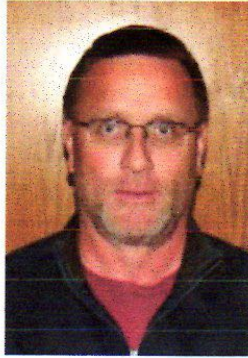
About this time, more members showed up and were tasked with smoothing out and repositioning the patio pavers under the shelter. Butch Neutgens and Dave Andersen took six fence posts and No Trespassing signs that Cullen made and put them out on the perimeters of the property. We put up these signs as a safety and liability measure as the land to the west of the property is now owned by the DNR and we could see hunters using it.

John Dietz and Jim Ronhovde worked to flatten and cold patch the path to the shelter where it goes over the culvert. Others, like Thad and Mike Robin, worked to flatten the ground around the shelter posts and replaced the patio pavers. Cold patch was also used where the shelter posts met the walking path to make it smooth.

Continued On Page 3, Col. 1

A Note from The Head Wing Nut

By Bob Briesemeister



Hello Members,

Happy May Day!!!! It's 87 degrees on May 1st which made it a warm clean-up day.

The day went well with 21 members showing up to improve the appearance of the flying field. The old rusted out pilot fence was removed and replaced with a shiny new one to improve both the safety for the pilots and the view from the shelter. The runways were swept, and the patio blocks that had been removed last fall when the posts were repaired, were replaced in the shelter. Also, there was some cold patch asphalt applied around the posts and the path over the culvert. There are still things that need to be repaired but it was a good start. Thanks again to everyone that helped out.

With the weather getting nice we will be able to start holding the meetings outside at the field starting with the May 11th membership meeting. If the weather permits the meeting will be at 7pm with the grill firing up around 5 or soon after. So come out early and fly or get a flight in afterwards. As always if there is a change in venue, I will send out an email the day of the meeting.

Brush or blow the dust off your float plane, or you still have time to build or purchase one. The TCRC Spring Float Fly is just around the corner. The date is Saturday May 15th at Bush Lake Park in Bloomington. The beach is accessible off of East Bush Lake Road. Flying will start at 10am or as soon as the rescue boat arrives. Even if you don't feel like flying stop by and see some old friends and watch the flying.

New this year is the TCRC Spring Swap Meet on Saturday May 22nd at the Scott County Fairgrounds. The scheduled start time is 8am but we all know how most swap meets go. The runway will be open for flying for your existing collection of planes or your new purchases. The fall swap meets have been a success and growing over the past 4 years. I hope to see you there.

There are some opportunities to help out at the Swap Meet. TCRC will be having a couple of tables selling of an airplane estate from Rochester which the club will receive half of the proceeds. So, I will need a few members to man the booth. Also, TCRC is charging a table fee or sellers

fee of \$5.00 to off-set the cost of site rental. I will need someone to collect the fee from the vendors. Please contact me if you are able to help out. My phone number is 612-964-8877.

It is also time to start thinking about volunteering your time to mow the flying field. This is a task that needs to be accomplished every week so that it doesn't become a problem and get out of control. We will be putting together a schedule soon and publishing it, so please consider doing your part and signing up for a slot or two.

We have a few things coming up in June including the Building Contest at the June membership meeting and the Electric Fun Fly. ☺



The TCRC Membership meeting on May 11th will be held at the Jordan Model Air Park

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 membership meetings for June 8th, July 13th, August 10th and September 14th are also scheduled for the Jordan field, weather and water permitting.

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

Jordan Field Gets A New Fence

Continued From Page 1

Ken brought water and pop to keep everyone hydrated and food for lunch. Dan Oberg was an excellent chef and there were even some cookies made by members' wives that were extremely tasty and a welcome addition to lunch.

New Members

TCRC gained two new members in March and their info was shared in the April newsletter. The new members were Brad Honey and Anil Poulouse.

Brad Honey was at the virtual TCRC April Zoom meeting and thus his picture was available.

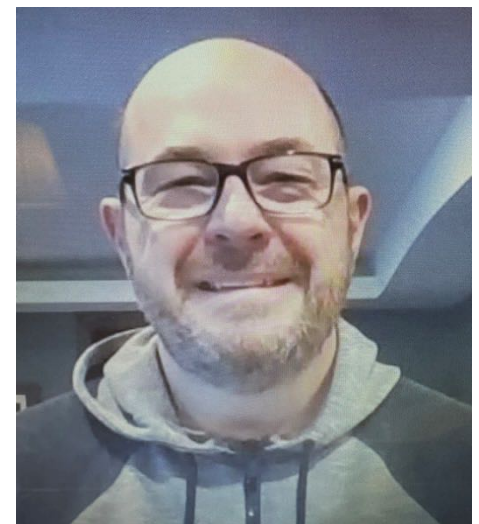


**The shelter crew did a great job with the pavers and walkway.
(Photo by Tim Wirtz)**

Steve Meyer and Mark Wolf swept the pits and the runways, and Al Boucher followed with the blower. The wind was from a favorable direction so the guys rebuilding the fence stayed out of the dust for the most part.

Back to the fence – the line for the new fence was run and then the fence posts were pushed/pounded in with the bobcat bucket. It took a couple of posts before a system was worked out but, once that was figured out, the posts went in fairly quickly. While some people helped ensure the posts went in straight and plumb, others started putting the fittings on the posts that had been completed. About this time, it was noticed that the fencing material was the wrong height (48 inches instead of 42 inches) and that we were 3 end post kits short and one top rail short (the Tim can't count thing . . .). So, while the crew kept working, Tim went back to Menards to get the needed materials and came back just in time for

Continued On Page 4, Column 1



In April TCRC gained another new member in Alex Bujold. He lives at 1902 Fulton Road in Carver, 55315. His phone number is 952-855-3208 and his email address is pilotbuje@gmail.com. Alex has been flying for eight years and has a Timber and Cirrus among many other planes.

When you see Brad, Anil Alex at a meeting or the field, be sure and introduce yourself and welcome them to TCRC.

With addition of Brad, Anil and Alex, the TCRC membership is now at 94 members. 😊

Jordan Field Clean Up

Continued From Page 3

lunch. By this time all the posts had been placed and all the top rails, save the one he went to get, had been run. After lunch a crew began putting up the new chain link. This process took 6 people and I think only Bob had actually done a fence before. A couple people would place one end of the fence after getting it to the right length and then others would use a stretcher to pull it tight while still others put in the bolts on the end that was being stretched. As this crew worked its way from one side of the field to the other, another crew came along behind and tied the fence to the top rails and the middle posts with fence ties.

By 3:45pm, the work was complete, the garbage cleaned up and the gear put away. There is still some clean up left to do – mainly disposing of the old fence, which we'll do in the next few weeks.

It was a very productive day, and many thanks need to be given to those who came out to help. Below is a list of who was there. If I've forgotten anyone, I'm sincerely apologetic. These events don't do themselves and the work you all did was truly appreciated.

Bob Briesemeister, Tim Wirtz, Cullen Dwyer, Jim Ronhovde, Ken Weddell, Brian Johnson, Dave Andersen, Butch Neutgens, Morgan Larson, Dan Olberg, John Dietz, Thaddeus Gorycki, Mike Robbins, Brad Honey, Tom Hall, Stan Erickson, Larry Couture, Delano Stein, Al Boucher, Steve Meyer, and Mark Wolf. Great job guys! ☺

Removing The Old Fence To Prepare For The New



The new poles are positioned to replace the old ones as the old fencing is removed. (Photo by Tim Wirtz)

Pulling The New Fence Tight



The Bobcat was great to have! (Photo by Tim Wirtz)

Pictures From TCRC's Field Clean Up



Sweeping the runways at TCRC's field clean up on Saturday, May 1st is a lot easier when you use a power sweeper.



Not everything could be done with a power tool at the field clean up. A lot of elbow grease was expended by everyone.



President Bob shows his expertise with his Bobcat as he pounds fence posts into the grounds.



Jim Ronhovde and John Dietz install pavers around one of the posts replaced in 2020.



Brian Johnson makes sure the posts are in line.



Cullen Dwyer assists in proper post placement.

AWN

(Assistant Wing Nut)

by Chris O'Connor



The building contest will take place at the June meeting at the field, or at Crosspoint Church. I hope to see a better turnout than in the past. This year everyone will vote on the models. Each person's criteria for what they think is the best will be up to that person. We will have one category, best finish, or best build, or just your favorite plane. There will be a gift certificate for the winner. Just trying to make it very simple this year!

Continuing on from the last few articles on your new plane, is the checkout, then preflight of your model. This of course applies to your existing models also. Each year sometime should be taken to go over and inspect each model. Usually removing the cowling if appropriate and inspect the engine compartment making sure everything is tight, no binding of pushrods and the fuel line is in good shape. Make sure to look at the spark plug or glow plug and replace if necessary. Next would be the condition of the fuel tank. Make sure as you move through the plane from spinner to tail, there are no broken parts or glue joints. Check all servos and connections, grommets, servo plugs, servo wire, then pushrods to the tail surfaces. Make sure there is no slop on either end of the pushrod. Check all hinges to make sure they are solid and not broken, replace if necessary. Check wheels, landing gear, any related parts to the undercarriage. Make sure the propeller and spinner are in good shape. Make sure that the receiver and any satellite Rx if appropriate are in good condition. Don't forget the battery and switch.

One thing to remember is make sure that your fuel is fresh and if using gasoline, make sure that is fresh, no ethanol and has oil mixed in. Car gas starts to go bad after a month, for sure over the summer. That's one reason I prefer to use avgas. It will last at least a year.

Once out at the field make sure all surfaces work, come back to center and most important that the surfaces travel in the correct direction.

A little time spent on the plane at the start of the flying season before that first flight is well worth it!

Happy flying.



TCRC Spring Float Fly Saturday May 15

by Steve Meyer

Time to get your feet wet!

TCRC's annual Spring Float Fly will again be held at Bush Lake Park in Bloomington on Saturday, May 15.

Start time is 10:00 AM. Chair for the event is Steve Meyer, and the event is open to any pilot with a valid 2021 AMA membership card.

We will try to maintain social distancing in the pits and on the beach. If it is too windy or raining, we will cancel the event.

Get the floats onto a plane and be at Bush Lake beach in Bloomington on May 15. ☺

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

☺

Sizing Electric Components For An R/C Airplane

Eagle Eye
Duluth/Superior R/C Club

One of the areas I struggled with as I was moving into electric airplanes was to understand how motors, electronic speed controllers and batteries work together, and to size them properly to make sure there were no issues.

After getting a few different answers from a few different folks, I did some research to find out how to figure them correctly. I then created a document that would make it fairly simple to understand so I can revert back to it as needed.

I decided to post my document because it may help others that are interested in electric planes and are not sure how to start.

RC Airplane

Sizing Electric Motor, ESC, Battery

#1: Match motor with airplane specifications

- Use motor size as stated in the airplane instructions, if available, or
- Start with physical size then closest Kv size if indicated
- If switching from gas or nitro, choose closest motor size to output of engine being replaced
- Write down maximum Watts required for motor
- Calculate motor Amp requirement with formula below
 - Motor Watts / Total Battery Watts = Amps
 - Battery Watts: 1s = 3.7, 2s = 7.4, 3s = 11.1, 4s = 14.8, 6s = 22.2 and 8s = 29.6
 - Install batteries in parallel to get 6s and 8s
 - Ex: if motor requires 575 maximum watts and you plan to use a 3s battery, formula is
 - $575 / 11.1 = 50.802$ Amps

#2: Calculate Electronic Speed Controller Requirement

- Must choose an ESC with higher Amp rating than motor's maximum requirement
 - A motor cannot draw higher Amps than the motor's indicated maximum
 - Battery size does not matter
 - A battery with a higher "mAh" number simply stores more energy
- Using example above: Amp rating must be higher than 50.802
 - A 60 Amp ESC would be a logical choice

#3: Calculate Minimum Battery Requirement

- Must use a battery with the same "S" (cell) count as used in the motor calculation
- Battery must have higher maximum Amp draw than motor
- Use the following formula to calculate a battery's maximum designed Amp draw
 - $\text{mAh} * C / 1000 = \text{Maximum Continuous Amp Draw}$
 - "mAh" = milliamp hours
 - "C" = capacity of energy that can be safely discharged – considered "C Rating"
 - Both of these values are found on the battery
 - Ex #1: a battery indicating 1300 mAh – 35C would calculate as follows
 - $1300 * 35 / 1000 = 45.5$ Amps
 - This battery would not work in the above example
 - Ex #2: a battery indicating 2200 mAh – 25C would calculate as follows
 - $2200 * 25 / 1000 = 55$ Amps
 - This battery would work in the above example
- The use of a battery with lower Amps than the motor will heat up and may catch fire
- Use a battery that is higher than the minimum power requirements needed
 - Keep in mind physical battery size and weight for the plane

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.

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Editor James R. Cook 952-200-2030
Publishers: Pat Dziuk 952-445-3089
& Mike Timmerman 952-496-1631

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

Lock The Gate!

It is very important that the gate to the field be kept locked at all times when there is no member present.

It is every member's job to lock the gate when her/she is the last one at the field. It doesn't matter the time of day or how nice the weather is. This simple rule is to keep the gate locked to prevent theft, vandalism and the unauthorized use of our land from occurring. ☺

Arsenal VB-10

by Conrad Naegele

The April Mystery Plane was the French Arsenal VB-10.



Arsenal was A French Aircraft Company of some importance, although not as well known. They produced primarily fighters, in the late 30's.

Of interest is the VB-10, designed by M. Bodie. The plane was ordered into production off of the drawing board, in 1940. It was an all-metal, single-seat fighter, powered by engines mounted fore and aft of the cockpit, driving contra-rotating propellers.

The first prototype had 2 860-horsepower 12-cylinder liquid-cooled engines. It was first flown July 1945. A second was flown in September 1946. Armament was rather heavy with 4-20mm cannon and 6-50 caliber Browning machine guns! The first production plane flew in November 1947 with a 1,150-horsepower engine. The contract was cancelled after four planes were built.

All flight tests had been very successful, but eight years had elapsed, and no wars were going on. The two-tandem engine idea was not new. Two similar planes come to mind -- the Dornier DO 335, and the Kawasaki KI 64. Great planes but neither were used operationally.

The Arsenal VB-10 had a wingspan of 50 feet nine inches, a weight of 13,735 pounds, and a speed of 323 mph. The final plane was powered with two Hispano-Suiza 12-cylinder inline liquid-cooled engines developing 1,150 horsepower. ☺

MNBigBirds.com

Hawker Hurricane MkII
Kawasaki Ki-45 "Nick"
Focke Wulf TA-152H
Lavochkin La-7
Grumman Lynx
ARADO 96B
Howard Pete
Mitsubishi Ki-15 "Babs"
Thomas Morse Scout S4C

Free! Scale Plan Downloads

Howard Pete
1/3 Scale Placer

New!

Composite Parts Available Thru MICKO

Andersen Designs

Add'l Extras

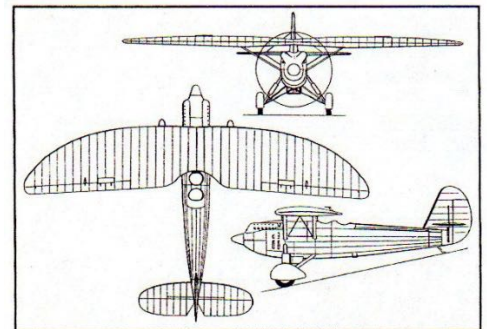
- In Flight Videos
- Construction Articles
- Scale Documentation
- Paint Masks & More!

Calendar

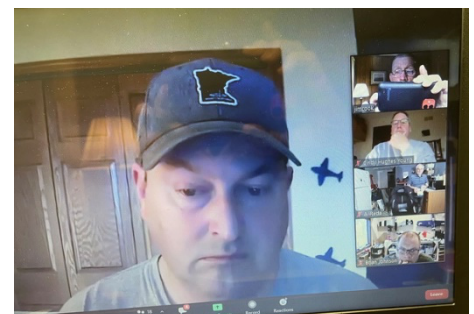
- May 1 TCRC Jordan Field Clean-Up & Fly-In
- May 8 Auction Duluth/Superior R/c Club Barnum, MN
- May 11 TCRC Membership 'Meeting at the Field' Jordan Field 5:30 PM Dinner 7:00 PM Meeting
- May 15 Spring Float Fly Bush Lake Park Bloomington 10:00 AM Steve Meyer
- May 22 TCRC Swap Meet & Fun Fly Scott County Fairgrounds, 8:00 AM
- June 8 TCRC Membership 'Meeting at the Field' Jordan Field 5:30 PM Dinner 7:00 PM Meeting
- June 8 TCRC Building Contest Jordan Field



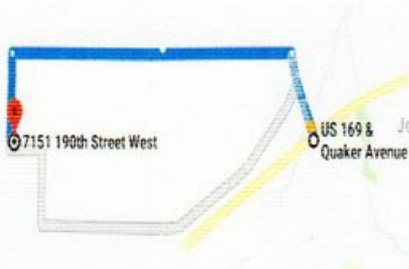
May Mystery Plane



Attending TCRC Via Zoom:



7151 190th St. W.
Jordan, MN 55352



Contact Bob Briesemeister
(612) 964-8877

Flying:

Large grass field
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72 MHz allowed after 12:00

Swap Meet:

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COVID Rules:

Vendors must have hand sanitizer at tables
Gloves for handling cash strongly recommended
Social Distancing rules apply



A lot of members attend TCRC meetings via Zoom.

FAA Seeks Trust Administrators For Recreational Safety Test

by Tyler Dobbs, Government Affairs Director

(Reprinted from Model Aviation, Volume 47, Number 5 May 2021)

The FAA recently released information regarding the next step of implementation of the Recreational Knowledge and Safety Test. This step includes the application process for organizations interested in serving as test administrators for The Recreational UAS Safety Test (TRUST).

On October 5, 2018, the FAA Reauthorization Act of 2018 was signed into law. It included a requirement for all recreational UAS users to pass a knowledge and safety test in order to operate a recreational model aircraft within the National Airspace System (NAS).

While working with the FAA, AMA has advocated for our members since the testing mandate, ensuring that the test meets the intent of Congress without placing an undue burden on our hobby. In the spring of 2019, AMA met with UAS stakeholders and the FAA, hosting a roundtable discussion to lay out the guidelines and administration of the knowledge and safety test, as well as develop the questions included on the test.

In September 2019, AMA sent a request for information to officially declare our interest in becoming a test administrator. AMA is advocating that the test be available both online and in a written format at fixed locations, such as an AMA site, to ensure that all members are easily able to take the test.

AMA expects that the test will more closely resemble a guided checklist of things to know before you fly, rather than a typical test that most are familiar with. Early indications show that the test will have approximately 25 multiple-choice questions about basic safety guidelines and recreational flying knowledge that most members will already know. If a member misses a question, he or she will be able to go back and reselect an answer until the response is correct. This way, the test is fail-proof and guarantees that every recreational user will be able to complete and pass the test. The is designed to bring safety awareness to the airspace and not to exclude recreational users from operating in the NAS.

It is important to understand that there is no new requirement for users at this time. However, the announcement of the application process for test administrators shows that the FAA is making progress and recreational users should expect to see the test sometime in 2021.

Following are FAQs regarding the test:

Q: *What is "TRUST"?*

A: "TRUST" stands for the Recreational UAS Safety Test.

Q: *Why do I need to take TRUST?*

A: The Knowledge and Safety Test is a congressional mandate in the FAA Reauthorization Act of 2018. All UAS users must pass the test in order to operate a UAS within the NAS.

Q: *I have a Part 107 Certificate; do I also need to complete TRUST?*

A: Yes. There are no exemptions from taking the test, including for currently certificated pilots. Anyone who flies recreational UAS is required to complete the test.

Q: *Are youth under the age of 18 required to complete TRUST?*

A: Yes. There are no exemptions from taking the test, including for minors. Youth can get assistance from an adult, if needed.

Q: *How often do I need to take the test?*

A: At this time, recreational operators only need to take the test once to comply.

Q: *What will be on TRUST?*

A: The test will have approximately 25 multiple-choice questions about basic safety guidelines and recreational flying knowledge that most AMA members likely already know. Early indications are that this test will be failproof, and every recreational user will be able to complete and pass the test.

Q: *Does TRUST cost anything?*

A: No. Test administrators are prohibited from charging a fee, either directly or indirectly, to individuals taking the test.

Continued On Page 11, Col. 1

FAA Seeks Trust Administrators For Recreational Safety Test

Continued From Page 10

Q: *How will I know that I have passed TRUST and am able to fly my UAS?*

A: After you complete and pass the test, your test administrator will provide you with a TRUST completion certificate that you can either print or save electronically. This certificate is proof of your compliance with the Reauthorization Act of 2018 and your passage of the test.

Q: *Will TRUST affect my AMA membership benefits?*

A: Proof of test completion will not be a requirement for AMA membership. However, each member affirms that he or she will follow AMA's safety code, including applicable laws and regulations, when he or she signs up to be a member.

Q: *When will recreational users be required to take the test?*

A: The FAA has not yet released dates regarding when the test will be available to users, but members should expect the testing requirement to be in place sometime in the second half of 2021. →



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Donate your unwanted RC items and support the club

We have store on eBay, Facebook and Craigslist. We get the best return on eBay but large items or complete airplanes sell better on Facebook Marketplace or Craigslist.

Things you can donate:
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Contact Brian Johnson at 763-744-6379 with any questions on how to donate.

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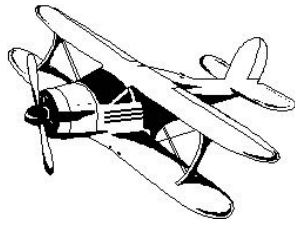
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2021

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Show & Tell



The April program was about float planes and some members brought their float planes for that meeting to help illustrate float flying concepts.



**Steve Meyer and his Fly Baby on floats.
(Photo by Steve Meyer)**

A member can have his new or rebuilt airplane appear in the Show & Tell column just by sending a picture of the plane and a data sheet about the plane. (Data sheets can be obtained on the club website, TCRConline.com).

Send your pictures and info by texting to Jim Cook at 952-200-2030 or emailing them to him at jimcook888@q.com. Data arriving before the last day of the month should make the newsletter.

Now, you don't have to attend a meeting to show the membership what you have been building.

Steve Meyer shows his Fly Baby on floats, and explained how the floats were positioned with respect to the CG of the plane. It will be in the air at the Spring Float Fly on May 15th at Bush Lake Park in Bloomington.



John Dietz and his Combat Plane at the April meeting. (Photo by Steve Meyer)

John Dietz had a neat looking combat plane at the meeting. This plane was designed by the LaCrosse Wisconsin R/C club. John became aware of it through the St. Paul R/C club. It is meant to be set up with an 1,800 mah battery for the electric motor and use a 30 amp ESC. It weighs in at one pound and flies at a speed around 30 mph. John has the plans if others are interested, and he is hoping that we may do some combat with it this summer at TCRC.



**Chris O'Connor and his high-wing plane on floats.
(Photo by Steve Meyer)**

Chris O'Connor had his nifty looking high wing plane on floats at the meeting and explained how the plane handled on takeoff and landing from the water. 😊

Twin City Radio Controllers



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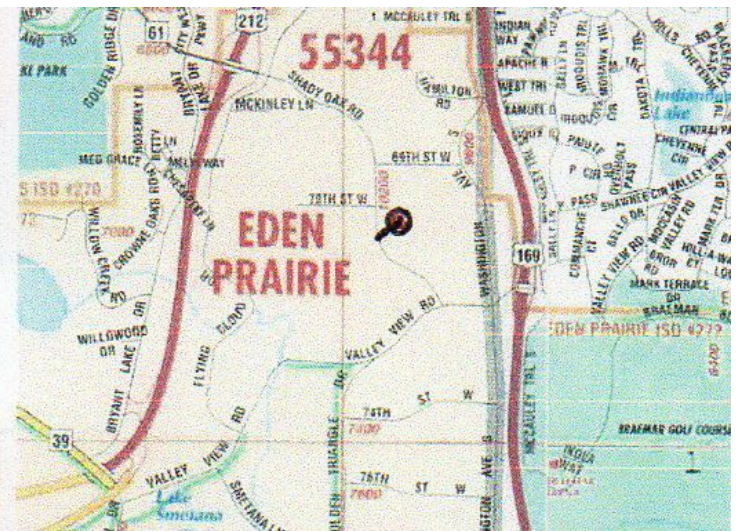
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