



April Minneapolis, Minnesota U.S.A. 2014

# TCRC Model Air Park Close To Spring Flying?

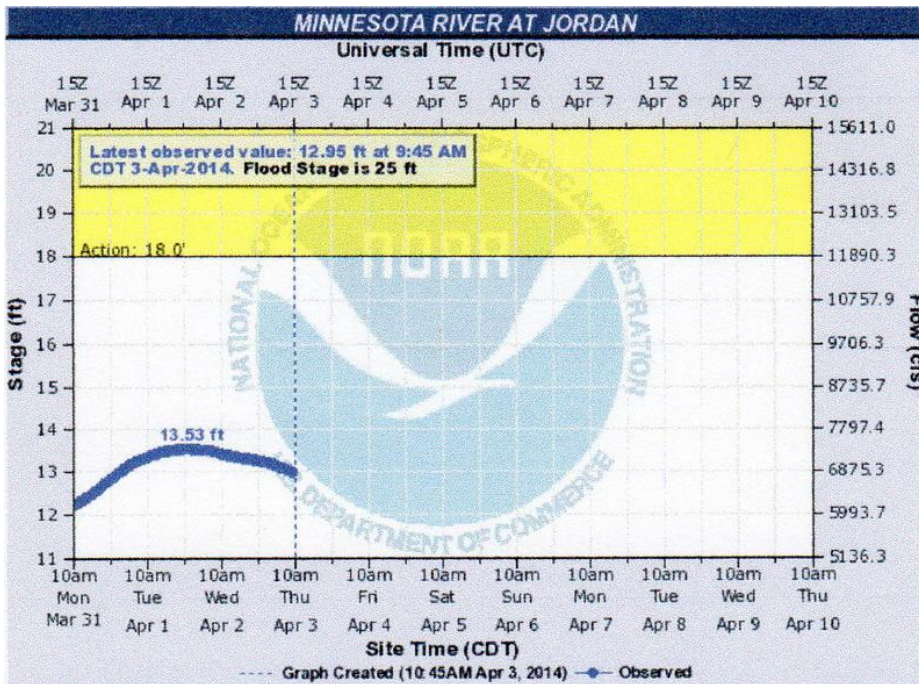
by Jim Cook

It's early April and this is the time everyone in TCRC starts to wonder what the Minnesota River is going to do and what effect that will have on our flying site in Jordan. This has been the 'winter from hell' in respect to both temperature and snowfall. The temperature has been so cold that whenever there was snowfall, it never had a chance to melt -- it just accumulated!

At the March meeting, our member Pedro Restrepo, who works for the National Weather Service gave the club a considerable amount of information on the likelihood of a spring flood in Jordan. The prediction did not look all that good for the club.

Since that time, Minnesota has really had almost perfect conditions for the slow melting of the snowpack -- the principal contributor of floodwater for the river. The Twin Cities enjoyed several days of temperatures in the low to mid-40's, and evenings around the freezing area. This allowed the snow to melt at a rate where it didn't cause a huge increase in river depth. When the snow started to melt, the Minnesota River was around 6 feet in Jordan. That increased to the 13-14 foot depth as the snow to the west of the Cities melted, but for the last two or three weeks, it has fluctuated around 12 to 14 feet, and almost all of the snow cover is now gone. The TCRC flying site starts to flood when the Minnesota River reaches 18 to 19 feet (The area in yellow on the graph to the right.).

Usually the NOAA (National Oceanic and Atmospheric Administration) predicts the river level for the next 7 days on the graph to the left. They have not done that at this time. However, there is a large storm coming into Minnesota on the evening of Thursday, April 3<sup>rd</sup>, and the prediction is that the Cities will get up to 12 inches of snow. The same snow is supposed to affect the area to the west also. This will definitely have an effect on the Minnesota River and we should see a

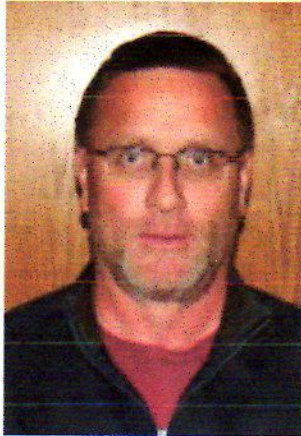


NOAA Minnesota River Situation as of April 3, 2014

Continued On Page 3, Col. 2

# A Note from The Head Wing Nut

By Bob Briesemeister



Hello Members,

READY, SET, FLY! The flying season is upon us! I hope you have spent these long winter months getting ready for the season. If not, get those batteries charged, flight boxes stocked and radios bound to those new airplanes you built or acquired this winter.

The April Fools' Fun Fly is on Saturday April 5<sup>th</sup>. With the storm at the end of the week you might need to bring skies to fly in the morning and maybe wheels in the afternoon. The road into the field is soft but not too bad if you stay on the gravel. As of right now with most of the snow gone it does not look like we will flood. Of course it all depends on how much rain we get and how fast. If you remember we did not flood last year until June when we got a lot of rain, cross your fingers we stay dry.

The board has changed the field clean-up date to May 3<sup>rd</sup> so that it does not interfere with the opening of fishing on May 10<sup>th</sup>. We will be putting a list of work that needs to be done that day. Some of the tasks will be cleaning the shelter, painting the fence and maintenance of equipment to name just a few.

We made an attempt to burn the piles of brush but with all the dirt in the piles it did not go as planned. We will be pulling the piles apart and cutting up some of the wood for campfires and then try to burn the piles again. This work cannot be done in one day so we will have to work on this throughout the summer until complete. Please bring your work gloves, chainsaws, shovels and elbow grease to make this a success.

My plan is to start the Wednesday night Help Your Buddy Fly Program in mid-May. I am looking for people to help out with this event to make it worthwhile. It will be good to have people with knowledge of nitro, gas and electric planes and helicopters. I want members to help with flying and also with setup of flying equipment. The board discussed putting some flyers at the Hobby Shop to get some younger and new flyers into the hobby.

The next plane to be raffled off at our April membership meeting will be a World's Model MFG CAP 232-46N ARF, retail value \$140.00. If you have not been at a meeting raffle chances are \$5.00 each. Come early and pick your favorite number(s). We will also have Show & Tell that night so feel free to bring your prized airplane and take this opportunity to share with all.

Hope to see you at the field or the meeting on April 8<sup>th</sup>. J

## Father Hennepin Days Flying Demonstration

by Gerry Dunne

TCRC will be putting on a flying presentation at Father Hennepin Days in Anoka County on June 7<sup>th</sup>, 2014.

Tim Wirtz and I are putting together the plans for this event. At the membership meeting on April 8<sup>th</sup> we will be asking who of you would be interested in doing a demonstration flight at the event

Also, if you are not planning on flying but would like to help in some way, we certainly do need members to help in all facets of the presentation.

See Tim or myself at the next meeting, or drop me at email at [madmech63@msn.com](mailto:madmech63@msn.com). J





# TCRC On Facebook

# Minnesota River

Continued From Page 1

prediction for the River after that storm. Even with the new snowfall, the next ten days are supposed to be in the 40's and 50's but with evenings back in the 30's. -- the kind of weather that will control the snow melt to some degree.

Our Jordan field may still have flooding, but if it does occur, hopefully it will only be for a short duration.

In regard to the melting that has occurred, the road to our runways has become pretty soft and president Bob has asked members who are planning on flying to consider the road and not drive on it if it is soft, until it dries out.

The club has also chosen a tentative date for the clean-up of the Model Air Park, and that is currently set for May 3rd. This is obviously very dependent on what the River does between now and then, and is subject to change. Check TCRCOnline.com for more timely updates.

The board has also made provision for the possibility that the Jordan field will be flooded for a period of time. The club has signed a contract for the year with the Scott County Fairgrounds so that we can use the area around their parking lot as our alternate site if necessary. However, members can only fly at that site if the TCRC main site is closed.



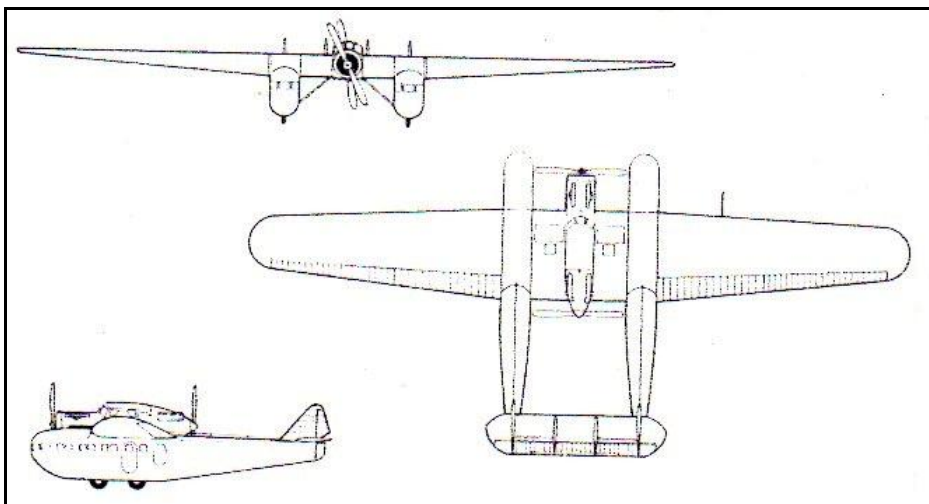
TCRC has a great website at TCRCOnline.com. But did you realize that TCRC has a great Facebook page also?

To find the TCRC site on Facebook, search for Twin Cities Radio Controllers, and the page will appear. The Facebook page is nicely put together with an aerial view of the runways on the homepage.

If you go to the TCRC site and "like" it, that will establish a link connecting your Facebook page with TCRC's. That link will show up in the 'likes' section of your homepage.

Take the time today to visit Twin Cities Radio Controllers Facebook site. You will 'like' it!

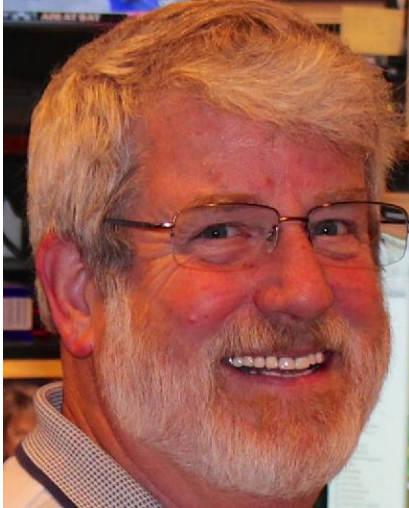
# April Mystery Plane



J

## New Members

Two new members joined TCRC in the month of March.



**Doug LaBore**  
(Photo by Bernie Gaub)

Doug LaBore lives with his wife Linda at 10509 Quebec Road in Bloomington 55438. Their phone number is 952-944-2066 and his email address is [douglabore@comcast.net](mailto:douglabore@comcast.net). Doug has been flying for five years and has several planes including a Quad, a P-51, and RV8. He is also a member of Minnesota Valley RC club.



**Michael Dickson**

Michael Dickson lives with his wife Marsha at 10036 Drew Circle in Bloomington 55431. Their phone number is 952-831-8834 and his email address is [dmichael1\\_mn1@comcast.net](mailto:dmichael1_mn1@comcast.net).

Michael has been flying for 25 years and has gas and electric aircraft.

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

Membership chairman Bernie Gaub reports that the addition of Doug and Michael brings the number of paid members for 2014 in the club to 104. **J**

## Calendar

- Apr. 2** 2nd Qtr. Board of Directors Meeting  
Breisemesiter Home  
7:00 PM
- Apr. 5** April Fool Fun Fly  
TCRC Jordan Field  
10-10-10 Rule
- Apr. 8** Membership Meeting, 7:00 PM  
CrossPoint Church  
Bloomington
- May 3** Model Air Park Clean-Up & Fly In  
Jordan Field  
Dependent on River Condition
- May ???** Help Your Buddy Fly  
Wednesday Nights  
Jordan Field  
Start Date TBD
- May 13** TCRC Building Contest, 8:00 PM  
CrossPoint Church
- May 17** Spring Float Fly  
Bush Lake Park  
Bloomington  
Steve Meyer

## It's Time To Think Pylon Racing

by Gerry Dunne

I know when you look out the window it is hard to believe that spring is really coming, but it is. And when it comes and the field is ready it will be time to start our 2014 Pylon Racing season.

At the April 8<sup>th</sup> meeting I will be explaining the Pylon Racing League that we have, the type of plane you must have to compete, the general rules we follow, and the schedule for 2014.

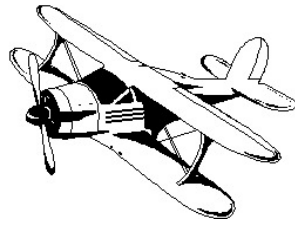
I will also be getting a nose count of the racers that will be participating this year. If you are, or want to be a pylon racer this year and will not be at the April meeting, you can email me at [madmech63@msn.com](mailto:madmech63@msn.com) and let me know of your interest.

Pylon racing is great fun, and you really become a better flyer when you partake of the races. See me at the meeting this month and let me know you are going to be a part of the 2014 Pylon Racing League. **J**

**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.**



# Show & Tell



Only one new airplane at the March meeting but it was really neat.



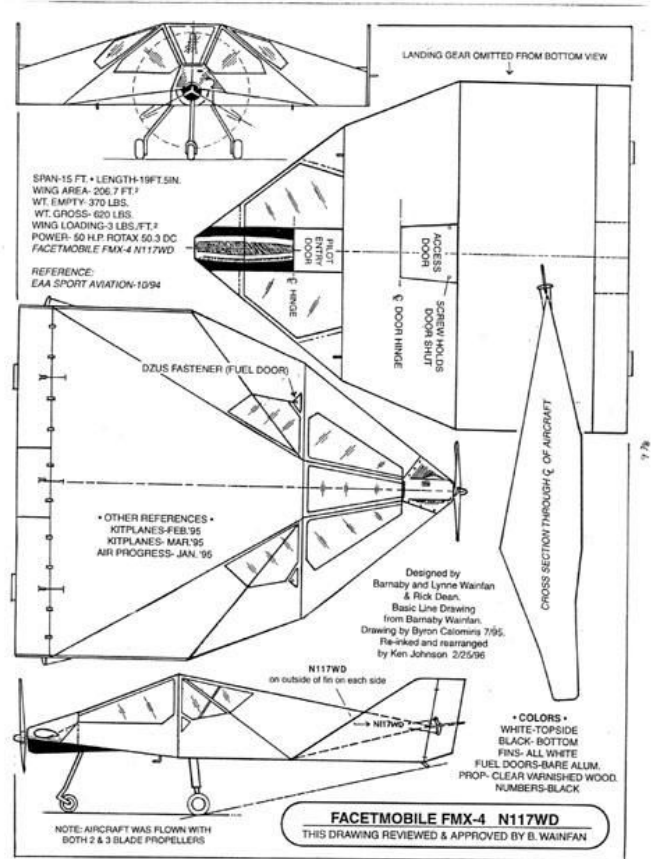
**Joe Neidermayr and his Dornier DO 217K  
(Photo by Jim Cook)**

Joe had a nifty Dornier DO 217K that he designed the plans for and then scratch-built. This German twin-engined World War II bomber was done in gray with German crosses. He put a lot of time in building the molds for the canopies that he vacuum-molded, and his efforts really looked realistic on the plane. The wingspan was 74-inches and it weighed in at 13 pounds. The motors were G32-770 electrics and the batteries were 4-cell 3,700 lipos. Joe designed the retracts that were 'sling and spring' and they operated beautifully. Joe originally had built a 48" version of this plane and that plane inspired this much larger version. He said the maiden flight would be held this spring. **J**



**John Berk getting ready to hand launch his Facetmobile in Arizona.**

The next plane was not at Show & Tell, but would have been if John Berk had been in Minnesota instead of Arizona City, Arizona. John is a member of TCRC and a snowbird in the southwest. He built a home there about 10 years ago and heads for the warmer climate as soon as there is any hint of snow in the Minnesota air. When John is in Minnesota he is a prolific contributor to Show & Tell, usually with a scratch-built foam plane of unique design. He sent me a picture of his latest effort -- a Facetmobile FMX-4 which he constructed from Dollar Store foamboard from plans he obtained. This delta-wing stealth-type plane was electric powered and the picture below left shows John in the midst of a hand launch of the ship. He did not indicate in his email as to how well the plane flew. Also included below is the 3-view drawing that he built the Facetmobile from. **J**



**The 3-view plans for the Facetmobile.**

**Bring Your New Plane To The  
Building Contest May 13th**

# TCRCOnline.com Forum

by Jim Cook

TCRCOnline.com has a powerful tool that members can use to interact with other club members on topics of interest, including selling or buying something.

To access and use the Forum at the club website, do this:

- When on the TCRCOnline.com homepage click on 'Forum' which is in the dark blue area on the left of the screen about half-way down the page.
- On the Forum homepage you will see several current topics and be able to read all of the comments made about each topic. If you would like to comment on a particular topic, you must be registered.
- To register, send an email to [webmaster@tcrconline.com](mailto:webmaster@tcrconline.com) containing your name, email address and the desired user name.
- Pat Dziuk our Webmaster will send you an email with your initial password which you can change when you first login.
- If you are already registered, click on 'log in' near the upper right corner, and enter your ID and password.
- Once registered and logged in, you should go to your 'Profile' which is located at the top of the Forum page in the center.
- If you would like to know when someone has responded to something you have posted in the Forum, select 'yes' on the comment "Always notify me of replies". In that way, you will receive an email anytime there is a response to your post.
- You can also import a picture or graphic to use when you make a posting. The only constraint is that it must be no bigger than 80 pixels by 80 pixels (6 KB). The program will browse your computer for whatever picture or graphic you would like to have represent you in the Forum.
- If you would like to start a new topic in the Forum, just click on the 'New Topic' button on the left side of the page under the TCRC wings logo.

This is really a great tool to use as a member of TCRC. Take the time today to visit the Forum at TCRCOnline.com and register, and then become a user!

## Auction Workers Win Gift Certificates

The 2014 TCRC Auction was a big success and that success occurred because of all of the hard work the TCRC members, spouses and friends put in at the event.

In an effort to thank those workers, TCRC purchased 20 \$25 gift certificates from Hobby Warehouse and held a drawing at the March meeting from a container holding all of the names of those who worked at the auction in February.

President Bob conducted the drawing and said that the winners did NOT need to be present to win.

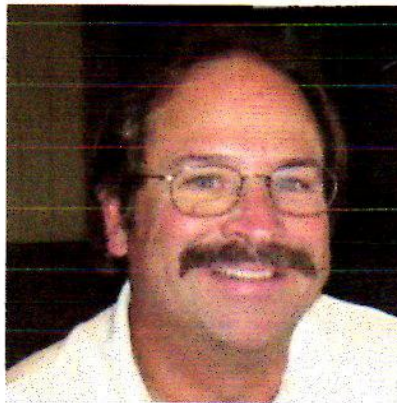
Those whose names were drawn as winners were:

- Larry Couture
- Jim Ronhovde
- Julian Bristow
- Thomas Temple
- Morgan Larson
- Wayne Fisher
- Jim Cook
- Ken Corrin
- Nicholas Sulheim
- Scott Anderson
- Joe Neidermayr
- Mike Burk
- Sheri Timmerman
- Doug Elyea
- Danny Collier
- Loren Temple
- Sherwood Heggen
- Jim Lundquist
- Shawn Dwyer
- Mark O'Connor

Thanks again to all of the people who worked so hard to make the TCRC a success!

# Wingman

by VP Mike Robin



Hello TCRC Members,

The front cover of the April issue of Model Aviation magazine shows a photo of a multi-rotor with a camera and antenna. This is not a model of a full-scale aircraft. This is not a part of our hobby. It is a completely different hobby/business that is destroying everything that Radio Controlled Modeling represents. Unfortunately our AMA is spending time and money promoting this and FPV/sUAS as a large segment of our hobby and it is far from the truth.

What is really happening is the traditional R/C hobby enthusiast and AMA member is being thrown under the bus as the AMA opts instead to promote sUAS/photo/commercial use of this technology, while ignoring the reality of what is happening all around them.

Most R/C Modelers do not have any interest in flying this type of machine at their local AMA field, much less attaching cameras and GPS satellite antennas and using a laptop computer to program flight paths. So what is the reason this is being promoted as a part of our hobby? It is because commercial use is illegal and our hobby use has been declared exempt. This makes it advantageous for the commercial photographers to claim they are “hobbyists”. By providing a sheltered immunity for the commercial operators, the AMA will increase its membership revenue, which has decreased in recent years.

However, the FPV/sUAS operators are not content to use their machines on AMA flying fields. Instead, they are using their multi-rotors in public places like Gooseberry Falls, taking off within several feet of visitors and putting them in danger. They have flown them over hot air balloons and spectators at events, even over the old Cedar Avenue Bridge in Bloomington within one mile of the MSP airport. If that isn't enough, one guy even flew over to the wind turbine power generator near the old Tri-Valley site.

We all know that all of these examples are not allowed by the FAA or AMA, yet it is happening, not just in our state but all over the U.S. These so-called modelers are flying over firemen and rescue workers, around National monuments and inner cities. Why? Because the multi-rotor provides an easy means to capture photos and videos that are not obtainable from the ground. The photos have a lucrative market with

real estate and commercial broadcast companies, event promoters, and travel agencies.

Why am I waving a red flag to all TCRC members? It's simple; the public does not like drones and that is what the April cover represents to the general public. It is a spy drone not a radio controlled airplane or helicopter like the majority of AMA members fly. Now many states and cities along with ours are passing laws banning the use of them to take photos and videos of innocent unsuspecting citizens and violating their privacy rights.

The sad part for all of us is that we are now sucked into this mess, although we fly model aircraft at AMA fields and follow the rules. We are declared guilty by public perception and association. I have personally spoken with our local FAA representative and he is deeply concerned with all of the illegal activity in our area, citing real concerns from crop dusting and mosquito control pilots that worry about getting hit by one of these drones.

I have had several conversations with Rich Hanson at AMA and our District 7 Representative, Tim Jesky, explaining how our area has been losing flying fields and letting them know how hard it is to find a place for AMA clubs to fly in the Twin Cities. With all of the negative publicity that drones have been creating and the public's perception of this type of activity, we may never have another place to fly locally.

Sure TCRC has a field which we own, so we are in a good position right now. But what if the State of Minnesota takes our private prop-

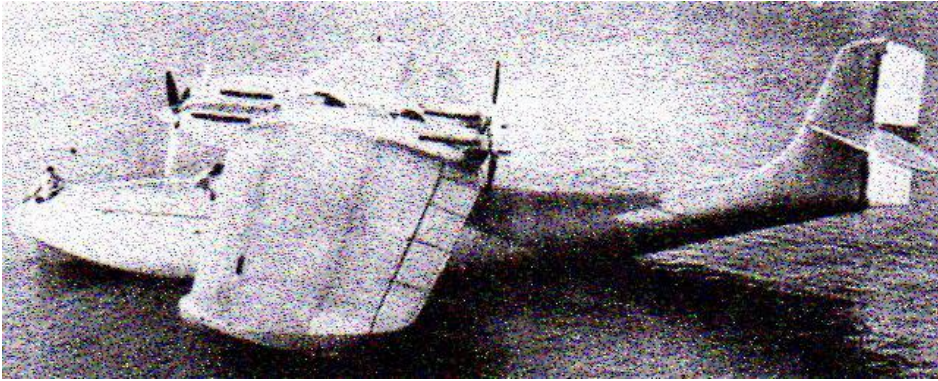
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## Sud-est LeO H470

by Conrad Naegele

The March Mystery Plane was the French Sud-est LeO H470.



One of the fastest flying boats of the 30's resulted from a request for a flying boat for use over the South Atlantic, issued by the French Air Arm. Specifications demanded a cruise speed of 155 mph at 75% power, at 13,000 feet, and 1,850 mile range, and with a 30 mph headwind!! Prototype was ordered on August 10, 1935. The first flight was July 25, 1937. This plane was all metal, with four Hispano-Suiza 880 horsepower engines.

The initial testing went well, with all specs met and improved. Range exceeded 2,485 miles, 186 mph. Five machines were ordered. Prototype #2 sprang a leak on takeoff, and on landing, hull split, and sank. Remaining boats were redesigned, and went into service, and armaments were installed. All five boats, including the repaired one, were sent to Dakar, Africa.

In service until 1943, spare parts ran out and the last plane was scrapped. A successful plane, very competent, and considered easy flying. With no real bad habits, it was always considered one of the most graceful in appearance, and compares favorably with the four-engine Dornier DO-26, and the four-engine Kawanishi H6K1.

The Dornier H470 had a wingspan of 103 feet, a max speed of 219 mph, and a full military load range of 2,188 miles. Its armament was mixed with four 7.5 mm machine guns and four 330 pound bombs. J

**TCRCOnline.com**

**Take A Look At The Forum**

## Wingman

Continued From Page 7

erty away though eminent domain and we have to search for another field? Then we are in the same position as other clubs in our area. How will we be perceived at the Bush Lake Float Fly if one of these drones is flying above? Also our State and local government can ban our hobby; of course, the FAA can make very strict rules as to who can fly anything in the National airspace.

What can we do as an AMA Club? At this point I recommend that TCRC considers a ban against all FPV/sAUS equipment that carries cameras, GPS, and satellite antennas at our field. This will send a strong message to the AMA that we are a Radio Control Modeling Club not a commercial business or commercial photography club. Also, that TCRC is concerned that our hobby is in danger of being banned due to all of the dangerous activity by non-club members in our area. If we do this, we can separate our hobby from the recklessness of the Drone operators and can't be accused of spying on our neighbors.

I have studied the increase in FPV/sUAS illegal activity for several years and I believe the situation is now out of control. My message to the FPV/sUAS operators: leave my hobby alone, and if you want to take photos and videos, you have thousands of places to enjoy your hobby. If you want to use this technology for commercial use, knock yourself out! Just don't hijack my hobby and cause me to lose a flying site and my right to fly my radio controlled model.

My next program topic: How Drones are Ruining Our Hobby! J



## Why Is My Charger So Slow?

by Greg Gimlick

The industry offers plenty of chargers, but not all of them do the same thing the same way.

Questions about chargers and charging make up the majority of the email I get, so I knew it was time to answer the most frequently asked questions for you right here. The biggies are:

1. Why does charging at the normal 1C rate take longer than one hour?
2. Why doesn't my 3C rate charger get my packs charged in 20 minutes?
3. What is parallel charging?
4. Why isn't my high rate charger charging at its full capacity, even though I set the values correctly?
5. I have two chargers of the same brand, but one takes longer to charge than the other. Why?

For those of you who may not know, "C" represents the capacity of a battery. If you have a 3000 maH Lipo pack and it's rated at 20C, it means it can be discharged at 20 times the capacity of the pack: 60 amps (3000 maH = 3 amps, so  $20 \times 3 = 60$  amps).

Since Lipo packs have gone beyond the standard 1C rating, many now come with charge ratings. Look for both charge and discharge ratings before you purchase or use a pack.

The first two questions share the same answer. Theoretically, a 1C rate should take one hour and a 3C rate should do it in one-third of the time, or 20 minutes. The problem comes when theory runs into reality, and when this happens, performance is all up to the programmer/designer of the charger.

Most Lipo chargers are of the CC-CV (Constant Current-Constant Voltage) type. When charging, they limit the current to some preset until the battery voltage reaches a present voltage. Then the current is reduced to keep the voltage from going over that preset.

The charge is considered complete when the current has been reduced to a threshold. In the case of

a 3S pack the voltage will most likely be close to 12.6 volts. The current is limited by what you tell the charger to do. The charge termination current threshold is the unknown, and is set by the engineer who designed the charger. The variables are the actual current, the actual constant voltage setting, and the threshold current.

It is fairly easy to measure these values with an accurate DVM. With a depleted pack, measure the charge current. The current is where the charger will spend roughly 80 percent of the charge cycle if the pack was completely discharged. At approximately 80-90 percent state of charge, the pack voltage will reach 4.2 volts per cell and the current will taper off to prevent an over-voltage condition that will damage the pack. You can measure this point by watching the pack voltage with a DVM, and when the voltage stops rising during the charge is what the charger thinks is that preset voltage.

Threshold current is the most difficult to measure because you would have to be looking at the meter just before it signals charge complete. An instrument that logs would be beneficial for this.

All other things being equal, the constant-current charge value will control how long it takes to get to approximately 80-90 percent state of charge value. If you have a 2Ah cell and you can charge it at 2 amps, you will reach that 80-90 percent charge value in 48 minutes. If your cells can accept a 2C rate, it will take 24 minutes. A 3C rate would take 16 minutes.

The last 20 percent of the charge will take the same amount of time on any constant-voltage charger because the current is reduced according to what will prevent the battery from self-destructing. It doesn't matter what you set the current limit to once the voltage reaches 4.2 volts per cell.

The big variable once you reach the constant-voltage portion of the charge is the low-current, end-of-charge point. A charger with a lower cutoff threshold will take longer to decide the pack is charged. It will put a little more charge in the pack than one with a higher threshold, and this could be minutes to hours of difference. Say you set the threshold to zero amps; you will never get an end-of-charge indication. The closer you get to fully

**Continued On Page 10, Column 1**

## Why Is My Charger So Slow?

Continued From Page 9

charged, the lower the current, and with an infinite amount of time you will get there, barely. It's up to the charger's designer to determine how good is good enough.

You can charge really fast if you only charge to 80 or 90 percent, but most pilots won't give up 20 percent of their flight time. Once a charger nears the end of the charge, it slows things down. Even if it isn't balance charging, the charger tapers off at the cycle's end.

Parallel charging is a method of charging multiple Lipo packs on one charger at the same time. The cell count must be the same, but capacity can differ. My TME Xtreme will charge and balance up to four packs, and my Triton 2 EQ will do up to six if I use the Progressive RC board.

The answer to the fourth question is often just asking too much of the charger or power supply. Some chargers automatically adjust the charge rate if they sense that the power supply is lagging. If your high-rate charger is set for 3C and charging at a lower rate, it's most likely simply adapting.

Question 5? One unit might be earlier-version firmware than the other. Many are upgradable online, so check to see if you can update the earlier version of firmware.

It's always helpful to separate charging, engineering and marketing voodoo.

*(Originally published in **Park Pilot**, Fall 2011 issue, and then reprinted in **Plane Talk News**, newsletter of the Des Moines Modelaires, Ankeny, Iowa, Duane Vierling, Editor.)* J

**'Like' TCRC On Facebook!**

## March Raffle Winner



March was the third month that TCRC has been holding a raffle for an airplane at the regular membership meeting.

Sherwood Heggen was the lucky winner in March and claimed a very nice Parkzone T-28 Trojan.

Chances for the raffle prize are \$5 each and there has been a great participation by the members. Be sure and be at the April meeting to try your luck in winning another great airplane at the raffle. J

## Help Your Buddy Fly Night


The TCRC board and members have been discussing establishing a beginners' night at the flying field in 2014.

At the March membership meeting it was confirmed that as soon as the weather is good and the Jordan field is in adequate flying condition, Wednesday evenings will become 'Help Your Buddy Fly' night. It is planned that every Wednesday there will be members who can act as instructors at the Jordan Model Air Park, and have buddybox systems to train newcomers in the hobby.

Wednesday nights at the Jordan field will not be exclusively for beginners, but the more seasoned flyers will be aware of the training and be courteous to those receiving and giving instruction.

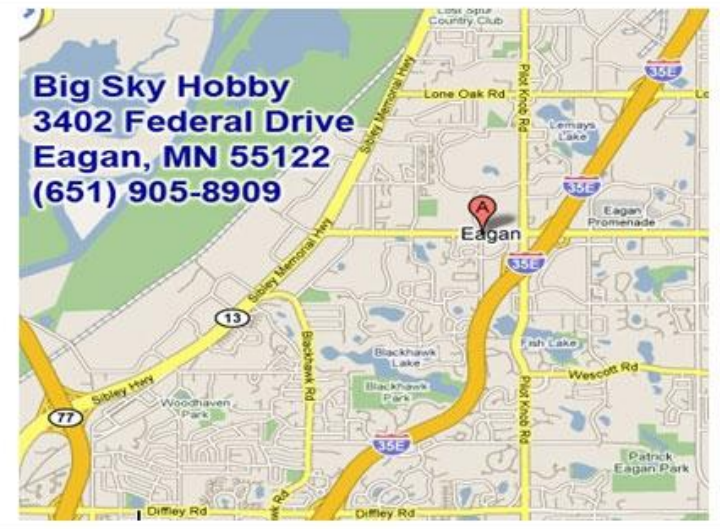
If you are a beginner to the hobby, or even a veteran flyer but want to learn a new aspect of the hobby, come on down to the Jordan field and be a part of the 'Help Your Buddy Fly' program. J





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Shakopee, Minnesota 55379

## The Programs Are Great At The Membership Meetings!



The vice president of the club is responsible for having an informational program at the monthly membership meetings. VP Mike Robin has been doing a great job at this. His program for the March meeting was 'Electric and Gas Nitro 101' -- discussing the pros and cons of the various engines that can be used in our hobby. Terry Spoeltzer gave Mike and assist. Come to the April meeting for the next great program.

### 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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