



January

Minneapolis, Minnesota U.S.A.

2016

Registering Your UAS's Is Quick And Easy

by Jim Cook

If you live in the United States and own any kind of drone (quadcopter, airplane, helicopter, etc.) that weighs more than .55 pounds (9 ounces) and less than 55 pounds (and that's pretty much every drone that isn't a toy like the Parrot MiniDrone), you have until February 19, 2016 to register it. If you buy a drone after December 21, 2015, you don't get that kind of leniency. You'll have to register before your first outdoor flight.

The FAA has its drone registration website up and running, and you can register there easily and quickly. I am already registered and have my UAS certification number and my Small UAS Certificate of Registration.

Currently the AMA stills disagrees with the required registration and has recommended that AMA members delay registration until the deadline or until AMA has exhausted all of the possibilities to exempt its AMA members from the requirement. However, because the registration is so easy, and in my opinion, so reasonable, I have already registered and do not see any adverse impact that this will have on me as a modeler.

Before I go through the step-by-step process of registration, let me tell you what can happen if you do not register, and also give you some other helpful information about drone registration.

- The deadline to register is February 19, 2016.
- The penalty for failing to register can be \$27,500 in civil penalties, and criminal penalties could have fines up \$250,000 and/or imprisonment for up to three years.
- Registration is for anyone who flies a UAS, regardless whether they are modelers, hobbyists, commercial, etc. If you fly any R/C aircraft within the description, you must register.

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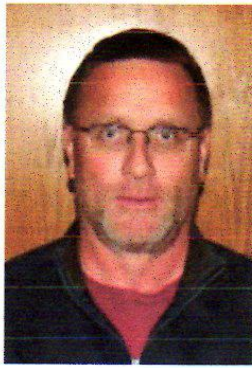
Calendar

Jan. 1	Happy New Year
Jan. 2	All Season Flyer Kickoff, TCRC Model Air Park (10-10-10 Rule)
Jan. 6	TCRC Board Meeting, 7:00 PM Bob Breisemeister's Home
Jan. 12	TCRC Membership Meeting, 7:00 PM CrossPoint Church Bloomington
Jan. 15	Deadline for TCRC Dues Discount
Feb. 10	TCRC Membership Meeting and Auction Prep, 7:00 PM CrossPoint Church Bloomington Pizza & Pop
Feb. 12	Auction Set-Up 5:00 PM CrossPoint Church Bloomington
Feb. 13	TCRC Auction CrossPoint Church Bloomington



A Note from The Head Wing Nut

By Bob Briesemeister



Hello TCRC Members!

Happy New Year!! I hope that you had a nice Christmas and a safe holiday season and that you received that new R/C aircraft that you wished for. We have gained 4 minutes of daylight/day since the winter solstice. The field driveway and parking lot have been plowed so happy flying.

There are a lot of emails from the AMA and members about registering with the FAA. The board will discuss this at the next board meeting. I have been busy with the holidays and work but plan on registering soon.

Save the date of February 13, 2016. This is the day our annual TCRC Auction will be held. We need ALL members to volunteer to make this a successful fundraiser.

We are making some changes to the Auction this year:

1. Credit cards will be accepted at checkout for all items purchased.
2. Silent auction for 30 items with a reserve of \$150.00 or more. Same buy back fees or sale fees will apply.
3. Bargain table for items of \$20.00 or \$30.00, same minimum of \$5.00 selling fee applies.
4. All items will be charged a fee whether sold or not.
5. Check in will start at 7:00 a.m. Viewing will be at 8:15 and auction will start at 9:00. These changes were made to hopefully shorten the timeframe of the auction.

We will have Show & Tell at the January membership meeting so bring those new Christmas gifts to show off.

This month's raffle plane is a Great Planes U-Can-Do SF Sport Plane with a retail price of \$190.00. Chances are only \$5.00 apiece and you can enter as many times as you like. Be the next winner at the TCRC Raffle.

Happy Flying

January 2016 TCRC Dues

With the arrival of the New Year comes the time to renew your TCRC club dues.

The TCRC board of directors elected to keep the dues the same over the 2015 level:

- Regular \$85.00
- Junior \$42.50
- Social Affiliate \$30.00

However, the reduction for paying your dues early has been lowered. If you pay your TCRC dues prior to January 15, the dues will be reduced to \$70, but they must be paid by January 15th.

Dues invoices were handed out at the December 8th meeting if you were present, or mailed on December 9th.

Remember, to be a member of TCRC you must be a member of AMA and supply proof of that membership at the time of your TCRC renewal.

Your TCRC dues can be paid to treasurer Tim Wirtz at a meeting or by mailing them to Tim at:

Tim Wirtz
2422 Downing Avenue
Shakopee, MN 55379

The TCRC board also held the initiation fee for new members or members who had not paid their dues for the previous year. The initiation fee is \$75.

Take the time to pay your 2016 TCRC dues today and secure your discount. **J**

Registering Your UAS

Continued From Page 1

- You must have proof of registration in your possession anytime you are flying an UAS outdoors.
- Your UAS must have your registration number on the outside of the aircraft or in the battery compartment.
- One registration covers all of your aircraft.

So, to register all of your aircraft:

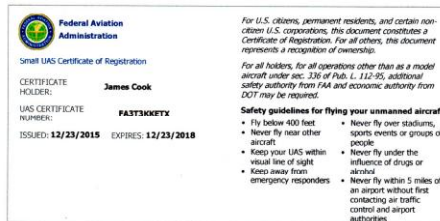
- Go to faa.gov/uas/registration
- When the FAA page comes up, go about 2/3 down the page and click the blue box 'Register Now'
- On the next page click the white box 'Register My Drone'
- You will be asked to create an account using your email address and a password. Follow the requirements for the password choice
- Click the blue box 'Create Account'
- An email will be sent to your email box where you click a link to verify your account and return to registration
- You then enter the data into the electronic form
- You then enter the credit card data for the \$5 fee, which will be credited back. See below for more info on this
- You submit the data and you are immediately assigned and given a 10-digit UAS Certification number and can

print your Certificate of Registration.

Your certification number is a 10-digit number starting with the letters 'FA'. This number should be on all of your aircraft.

Your Certificate of Registration is also sent to your email. This certificate must be in your possession while flying outdoors. The certification is good for 3 years from the date of registration and the expiration date appears on the certificate.

The certificate in the email will print out 6-inches x 3-inches. I printed one, put it on my copier and reduced it to 70%, made two copies, folded and laminated them. One I will carry in my wallet with my AMA card, and the other I will carry in my flight box.



The cost of registration is free for 30 days, from December 21, 2015 to January 21, 2016. After that date, the fee is a non-refundable \$5.

However, during the first 30 days, you do have to pay the \$5 fee and it is then credited back to your credit account a couple of weeks later.

Be aware that there is another site that shows up with an UAS Registration Form. However, this site is a company that will take the time to register for you if you fill

out the form, but they charge \$29.95 to do that for you.

I was amazed at how well the FAA has done at putting their site together and making the registration so quick and easy.

So, you can either wait until the deadline and AMA has exhausted all of its attempts to exempt its members from the registration requirement, or, if you do see any adverse impact on you as a modeler by abiding by the FAA's requirement, then take the time today to file for your UAS registration certification. 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

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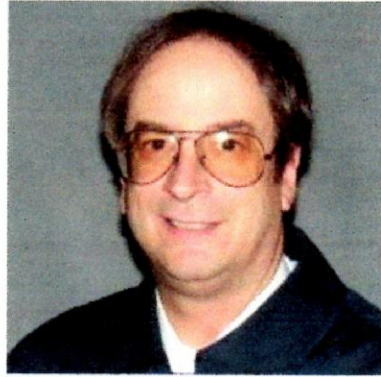
2016 TCRC Annual Calendar

DATE	EVENT	REMARKS
January 2	2016 All Season Flyer Kickoff	TCRC Model Air Park, 10-10-10 Rule
January 6	1 st Qtr BOD Meeting	Auction Planning Session Pres' Home 7 PM
January 12	Membership Meeting	CrossPoint Church, 7 PM
January 15	Deadline for TCRC Dues Discount	
February 10	Membership Meeting (Auction Prep)	Pizza and Pop, 7 PM
February 12	Auction Set-Up	CrossPoint Church, 5 PM
* February 13	TCRC 40 th Annual Auction	CrossPoint Church, 7 AM to 5 PM
February 19	FAA Deadline to Register UAS'	
February 20	All Season Flyer Session	TCRC Model Air Park, 10-10-10 Rule
March 5	End of Winter Fun Fly	TCRC Model Air Park, 10-10-10 Rule
March 8	Membership Meeting	CrossPoint Church, 7 PM
April 2	April Fool Fun Fly	TCRC Model Air Park, 10-10-10 Rule
April 6	2 nd Qtr BOD Meeting	Bob Breisemeister's Home, 7 PM
April 12	Membership Meeting	CrossPoint Church, 7 PM
May 7	TCRC Jordan Clean-Up & Fly-In	TCRC Model Air Park
May 10	Membership Meeting	CrossPoint Church, 7 PM
May 10	TCRC Building Contest	CrossPoint Church, 7 PM
* May 14	Spring Float Fly	Bush Lake Park, 10 AM, Steve Meyer
May 28-31	Hanson Family Fun Fly	Kris Hanson Farm, Mayer, MN
June 11	Father Hennepin Days	Champlin, MN, Tim Wirtz & Gerry Dunne
June 14	Membership Meeting At The Field	5:30 PM Dinner, 7 PM Meeting
June 18	Electric Fly-In & Camp Out	TCRC Model Air Park, Gerry Dunne
July 9	Competition Fun Fly	TCRC Model Air Park, Kris Hanson
July 12	Membership Meeting At The Field	5:30 PM Dinner, 7 PM Meeting
* July 16	Wings Over Jordan	TCRC Model Air Park, Bob Breisemeister
August 3	3 rd Qtr BOD Meeting	Bob Breisemeister's Home, 7 PM
August. 5-7	Wisconsin Fun Fly	Siren & Rice Lake, Bill Sachs & Jim Cook
August 9	Membership Meeting At The Field	5:30 PM Dinner, 7 PM Meeting
* August 20	Model Aviation Day	TCRC Model Air Park, Doug Elyea
September 13	Membership Meeting At The Field	5:30 PM Dinner, 7 PM Meeting
* September 17	Scale Fly	TCRC Model Air Park, Scott Anderson
* September 24	Fall Float Fly	Bush Lake Park, 10 AM, Steve Meyer
October 1	Season Finale	TCRC Model Air Park
October 11	Membership Meeting	CrossPoint Church, 7 PM
November 8	Membership Meeting - Elections	CrossPoint Church, 7 PM
November 8	Ugly Airplane Contest	CrossPoint Church, 7 PM
November 12	TCRC Annual Banquet	David Fong's, Prior Lake, 5 PM
December 3	All Season Flyer Finale	TCRC Model Air Park, 10-10-10 Rule
December 7	Joint Board Meeting	Bob Breisemeister's Home, 7 PM
December 13	Membership Meeting	CrossPoint Church, 7 PM

* Denotes events open to other than club members.

The Right Seat

by Mark Wolf



Hi Everyone!

My vice president's article this month is going to be about Flaps.

You're up flying around in the traffic pattern. You're approaching the edge of the field area and it's time to turn around. You bank back towards the runway and start your descent (airspeed starts to increase a little in the dive). Leveling the wings you're lined up with the runway and ready. Adding in a little up elevator, you slowly arrest the descent rate. Landing? Not yet, a little too fast and maybe a little high. You level off, add in some power and you're all set up for a low pass down the flight line. Maybe, a little bank towards the pilot stations and a touch of opposite rudder for a good looking photo pass. Then, at the far end of the field you pull up ;and convert that airspeed into altitude. A zooming climb/chandelle back up and around for another try – who can resist? In addition to a takeoff and landing, that maneuver is probably performed at least once on every one of our flights down at the field.

Back to that approach. Let's use the beginning of that scenario again but this time we plan to land. It can be a challenge sometimes to down from pattern altitude to the runway and be at a proper speed for landing (go down and slow down). Power, pitch and airspeed all managed together. Without power and gliding, our options are somewhat limited. By adjusting our pitch attitude using the elevator and possibly using a slip, we control our airspeed and descent rate accordingly. We've all accomplished approaches and landings this way. Planned or sometimes unplanned – can you say or yell, 'Deadstick!'

With power we can always throttle back to idle and glide down as before. Another method we may use is to reduce some power and attain a slightly nose down pitch attitude. The elevator is used to maintain the descent or approach attitude. By maintaining a constant pitch attitude we're maintaining a constant airspeed (same power setting). But this time we will use power as required to control the descent rate.

If it looks like we're a little high and going to overshoot the runway, reducing some more power while maintaining our current pitch attitude will increase our descent rate. We can lose some altitude without lowering the nose and gaining airspeed. If it looks like we're a little low

and not going to make it to the runway, adding some power while maintaining that pitch attitude will reduce our descent rate. We can hold or gain some altitude without raising the nose and losing airspeed. Initially that what we're doing on a go-around. Power is added and the airplane begins to climb. Pitch attitude is adjusted for climbing and we fly around and try it again.

We would like to land at the slowest speed possible. Can we fly a relatively steeper and slower approach for landing? Yes we can with the addition of wing flaps. Identified as a secondary flight control, the wing flaps are the moveable part of the wing, usually hinged to the inboard trailing edge of each wing. Using a plain flap as an example, when extended or moved downward the wing chord line changes. There is an increase in the camber of the wing and angle of attack. This increases lift and also increases induced drag. The added lift allows for a steeper approach without an increase in airspeed. Extending the flaps allows for a slower speed on approach and landing. Exactly what we're looking for.

The airplane may exhibit a pitch change when the flaps are extended. How much will usually depend on the airspeed when the flaps are extended. Check your models instructions for recommended flap settings and suggested flying tips. Also review your transmitter features and options. An elevator/flap mix may be desirable to smooth some of this out. Now we have a power on approach (as above) with the addition of flaps allowing us to maximize our airplane performance.

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The Right Seat

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Flaps are primarily used for landing but they can also be used for takeoff at reduced settings. Same results. Increased lift at a slower airspeed. The airplane will reach its flying speed quicker (shorter take-off roll) and become airborne sooner. Flaps. If installed on your airplane, improve both take-offs and landing performance. Flaps. On descent and approach configure the landing (extend those flaps), establish your airspeed. You're lined up with the runway and ready – now bring it on in for a landing. J

TCRC Apparel Available

by Tim Wirtz

Tim Wirtz will be bringing TCRC clothing and apparel that is for sale to the January and February meetings.

There are T-shirts, a few sweatshirts and caps available. Prices are:

- T-Shirts \$10.00
- Caps \$10.00
- Sweatshirts \$17.00
- Sweatshirts (2XL+) \$19.00

It would be nice for all the TCRC members working at the Annual Auction on February 23rd to have TCRC apparel on if at all possible. J

TCRC Auction Seller Online Registration

by Pat Dziuk

Happy New Year prospective sellers at the TCRC Auction.

The Twin City Radio Controllers 40th annual auction is just around the corner, on Saturday, February 13th. This year it will again be held at Cross Point Church, 9801 France Avenue South in Bloomington.

You can register for a seller's number online again this year allowing you to fill out your seller's inventory card and label your items in the comfort of your warm home instead of freezing in the parking lot the morning of the auction. Online registration will be available on December 30th.

To register please send an email to auction@tcrconline.com with your name, address and phone number requesting a seller's number. You can find full details including the seller's inventory card at:

http://www.tcrconline.com/pages/auction_seller_registration.htm

General information can be found at:

<http://www.tcrconline.com/pages/auction.htm> and
<http://www.tcrconline.com>

Hope to see you all at the auction this year, and please feel free to forward this on to your fellow modelers at other clubs. J

2016 AMA Dues Statements

All TCRC members should have received their 2016 dues statements in the mail in September or October from the Academy of Model Aeronautics.

AMA 2016 dues have increased from the previous year. They are now:

- Adult (19-65) \$75
- Senior (65 and up) \$65
- Under 19 Free or \$15 with MA
- Additional family \$38

Your AMA membership gives you \$2.5 million in personal liability coverage, \$25,000 in medical coverage and also a subscription to *Model Aviation* for the year.

To belong to TCRC, you must have a valid membership for the year in AMA.

Please note that AMA also has a Park Pilot membership that has a cost of \$38 per year, but that membership is not valid for membership in TCRC.

To renew your membership in AMA, the Academy gives you four methods: at the AMA website, www.modelaircraft.org; by fax at (765) 741-0057; by phone at (800) 435-9262; or by returning the renewal form you received in the mail in the supplied envelope.

Pay you 2016 AMA dues as soon as possible to avoid a lapse in membership services. J

2016 R/C and Aviation Events of Interest

Date	Event	Remarks
April 1 - 3	Toledo Weak Signals Air Expo	Toledo, Ohio
June 4 - 5	Discover Aviation Days	Anoka County Airport, Blaine, MN
July 16 - 17	Wings Of The North AirExpo 2016	Flying Cloud Airport, Eden Prairie, MN
July 21 - 23	Watts Over Owatonna	SMMAC Field, Owatonna, MN
July 5 – August 4	AMA NATS	AMA National Flying Site, Muncie, IN
July 5 - 8	R/C Scale Aerobatics (IMAC)	AMA National Flying Site, Muncie, IN
July 10 – 15	R/C Aerobatics (Pattern)	AMA National Flying Site, Muncie, IN
July 15 – 22	R/C Pylon Racing	AMA National Flying Site, Muncie, IN
July 16 – 23	Control Line	AMA National Flying Site, Muncie, IN
July 18 – 21	R/C Combat	AMA National Flying Site, Muncie, IN
July 23 - 30	R/C Soaring	AMA National Flying Site, Muncie, IN
July 24 - 26	R/C & CL Scale	AMA National Flying Site, Muncie, IN
July 25 – 29	Free Flight Outdoor	AMA National Flying Site, Muncie, IN
August 1 – 4	R/C Helicopter	AMA National Flying Site, Muncie, IN
TBD	Free Flight Indoor	AMA National Flying Site, Muncie, IN
July 25 -- 31	EAA AirVenture Oshkosh	Oshkosh, Wisconsin
August 12 – 14	Northern Alliance Military Fly-In	SMMAC Field, Owatonna, MN
August 18 – 20	Warbirds & Classics Over the Midwest	Fond du Lac, WI

World War II Flying Aces

(Reprinted from Wikipedia, the free encyclopedia, with summary numbers done by Jim Cook, editor of The Flare Out, newsletter of Twin City Radio Controllers, Minneapolis, Minnesota.)

Wikipedia has published a list of World War II flying aces on the internet.

Fighter aces in World War II had tremendously varying kill scores, affected as they were by many factors: the pilot's skill level, the performance of the airplane he flew and those he flew against, how long he served, his opportunity to meet the enemy in the air (Allied to Axis disproportion), and the standards his air service brought to the awarding of victory credits.

Towards the end of the war, the Axis Powers had largely exhausted their supply of skilled pilots and the replacements did not have as much opportunity to gain enough experience to be successful.

Additionally, national policies differed; German and Japanese pilots tended to return to the cockpit over and over again until they were killed, while very successful Allied pilots were routinely rotated back to training bases to educate cadet flyers. It is not clear what impact each individual nation's rules for score crediting have on the counts listed, although the impact is likely to be significant. Germans credited a shared victory to only one pilot,

while the French credited full victory to all participants. British, Finnish and US air forces credited fractional shares of aerial victories, resulting in fractions, such as 1 1/2, which might be for example 10 aircraft and three shares with the second pilot. Some U.S. commands also credited aircraft destroyed on the ground. The Soviets counted only solo kills, while group kills were counted separately, as did the Japanese. Probable kills are usually left out of the list. This list is obviously still incomplete, for instance, of 123 known Italian flying aces only less than 20 have been included in this list, whereas of the 31 South African Air Force flying aces, only one has been mentioned.

Here are the very interesting facts from Wikipedia's list:

To qualify as an 'Ace' a pilot had to have tallied 5 kills.

The two top aces of all nations in World War II were both German Luftwaffe pilots, with Erich 'Bubi' Hartmann notching 352 kills and Gerhard Barkhorn notching 301 kills.

There were 15 pilots that had 200 or more kills. They were all German Luftwaffe pilots.

The top 152 aces of World War II were all German Luftwaffe pilots, tallying an incredible 15,076 kills, or an average of 129/pilot!

Of the 152 top German aces, only 44 of them have the symbol that indicates the pilot was known to be either killed in action, missing in action, died of wounds, or killed in a flying accident during World War II.

The pilot who is credited for the highest number of kills and being non-German is Ilmari Juutilainen of the Finnish Air Force. He is credited with 94 kills. He claims 126 kills.

Of the next 100 aces, 94 of them were German. Two were Finnish Air Force, three were Imperial Japanese Navy, and one was from the Soviet Union.

The top Japanese ace is credited as Tetsuzo Iwamoto with 80 victories. He claims 200.

The top Allied ace was the Soviet Union pilot Ivan Kozhedub with 65 victories.

Kurt Welter of the Luftwaffe had 63 victories, but more than 20 were in the Me-262, so he was probably the best ever jet ace.

Constantin Cantacuzino of the Royal Rumanian Air Force had 56 kills and was the highest credited Rumanian ace.

Mato Dukovac of the Croatian Air Force had 44 victories for Croatia.

Richard Bong was the top US Army Air Forces ace with 40 kills.

Marmaduke Pattle was credited with 40 kills as the top ace in the Royal Air Force.

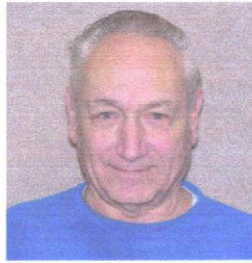
David McCampbell was the highest credited US Navy ace with 34 kills.

Pierre Clostermann flying for the Free French Air Force and the Royal Air Force logged 33 kills.

Continued On Page 9, Col. 3

Safety At The Field

By Larry Couture



Well here it is the end of December, and Christmas is over. I have not been to the field this month so I hope everything has been OK.

I have heard from and read some articles on safety problems with electric airplanes now. How could that ever happen? It seems that the prop can start all by itself at times, which has caused some very nasty cuts on hands and arms, and it has not always happened in the shop or on the bench. I have mentioned on a few occasions that when working on the bench or checking out things on the model TAKE THE PROP OFF. It takes such a short time to do this but just remember cuts can take stitches and a long time to heal.

The New Year is now upon us and it's time to plan all the things you forgot to do this year into next year. Winter is the time for building, fixing or just plain dreaming, so you just better get with it and very soon, or spring will sprang and leave you all behind.

The next big thing our club has planned is the Annual Auction on February 13th. If you have never been there you're in for a big treat as it's really, really great. The auction takes all day and it requires a lot of manpower to keep it running smoothly all day long, so we need all the help we can find. Please donate some of your time. Set up is on Friday night, February 12th, and the auction action is all day Saturday, February 13th, so come on out and have some fun, meet all kinds of crazy people just like yourself, and just maybe you'll have some more stuff to play with at a very good price.

As of today it looks like the skis will need to be on the airplane as the ground seems to be very white, and my memory says it's SNOW at last! I just finished plowing a few tons of it and I'm now writing my required column for the monthly squeak.

One more thing is the N number for the FAA UAS registration is a little disappointing since when you get one as there is no N number in it. (It's actually an FA number.)

So just remember keep the skis down and all landings from which you can fly again are great but not always graceful, have fun and keep flying. J

World War II Flying Aces

Continued From Page 8

Jan Reznak was the highest Slovak Republic ace with 32 victories.

George Beurling was the top Canadian ace with 31-1/2 kills.

Dezso Szentgyorgyi was the top Hungarian ace with 30 kills.

Clive Caldwell was the top Australian ace with 28-1/2 victories. He was also the top P-40 ace.

Gregory 'Pappy' Boyington was the top US Marine ace with 28 victories.

The top female ace was Lydia Litvyak of the Soviet Union and she was credited with 12 kills.

The only other female ace of World War II was Yekatrina Budanova, also of the Soviet Union, with 11 kills.

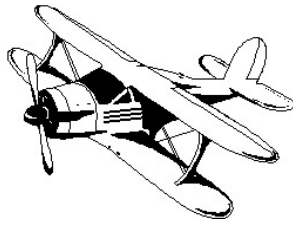
There were pages and pages and pages of listed aces, far too many to even try to count.

For more information just Google 'WWII aviation aces'. The data is very interesting. J



Safety Always Comes First!

Show & Tell



One plane showed up and Show & Tell at the December 8th meeting.



Prolific builder Joe Niedermayr had a very nifty looking Lear Jet at the meeting. This plane was scratch-built by Joe and had a wingspan of 57-inches and weighed in at 7-1/2 pounds. It was done in traditional Lear Jet white and had twin ducted fans by Mercury that developed 1,100 grams of thrust. The fuselage was painted but the wings were from film. He had retractors that were really neat. After they retracted, the gear doors closed. This was the second Lear that Joe had done, and he made changes to improve its flight characteristics. The wings were extended beyond actual scale design, to give it better wing loading. He also added flaps to this version and strobe lights. As of yet the Lear Jet had not had its maiden flight. J

Looking For P-40 Warhawks

by David Cutaia

I am a collector of R/C P-40 Warhawk airplanes. I currently have three P-40 Warhawks, but would like to add additional planes to my collection.

Do any of you fellow TCRC members have a P-40 Warhawk R/C airplane available for sale? I would be interested in discussing the purchase with you. I can be contacted at dcutaia@charter.net. J

FAA Discusses UAS Registration

by Jim Cook

Kevin Moore of the Federal Aviation Administration attended the TCRC membership meeting on December 8th, and presented a program on the recent legislation concerning all UAS aircraft, which encompasses all of the aircraft that we in the hobby fly.

Kevin said that currently Amazon sells 17,000 drones per month. DJI, the maker of high-end drones, has already sold 750,000 of the units. Walmart has stated that drones will be the number one item they sell for Christmas this year. This huge proliferation of aircraft being flown by new and untrained people is causing and will continue to cause huge safety and security issues in the United States. This is the reason for the required registering of all UAS aircraft greater than .55 pounds in weight.

Kevin was very complimentary of TCRC and the modeling community, and stated that the problems that are occurring and will continue to occur will not be caused by hobbyists who are aware of the requirements and issues of model flight. He said unfortunately the entire modeling community is a very small part of the number of flyers now in existence.

He said registration of individuals above the age of 13 flying outdoors will be required, but one registration would cover all of the aircraft owned by the registrant. The registration number would be required to be on the aircraft in the air, and the pilot would be required to carry his registration card.

Since Kevin's presentation, the FAA website for registration has gone online, and several TCRC members have already registered and received their 'FA' numbers. Deadline for registration is February 19th.

TCRC thanks Kevin for taking time out of his busy day to present the FAA's viewpoint on UAS registration, and explaining the rationale for why registration must be done.

(See the article on Page 1 of this month's newsletter for more up-to-date information on UAS registration.) J

TCRC Membership Report

by Tim Wirtz
TCRC Treasurer

Good Morning all!

I hope everyone had a safe and warm holiday. As I write this, it appears we may actually get some measurable snow. So far, we have 42 renewing members and I'm sure there are more renewals in my mailbox as we speak. If you haven't renewed already, please take some time to do so by **January 15th** so that you can renew at the Early Renewal Rate of \$70.00. If you choose to wait until after **January 15th**, the renewal fee will be the regular price of \$85.00.

In the letter I sent with the renewal form, there was also a listing of the field rules and a place on the renewal form to sign a statement confirming you have read and will abide by the TCRC field rules. Please remember to read and sign it. Also, if any of your information has changed (name, address, phone number, picture on card (yes or no), etc.) you can note the new information on the renewal form.

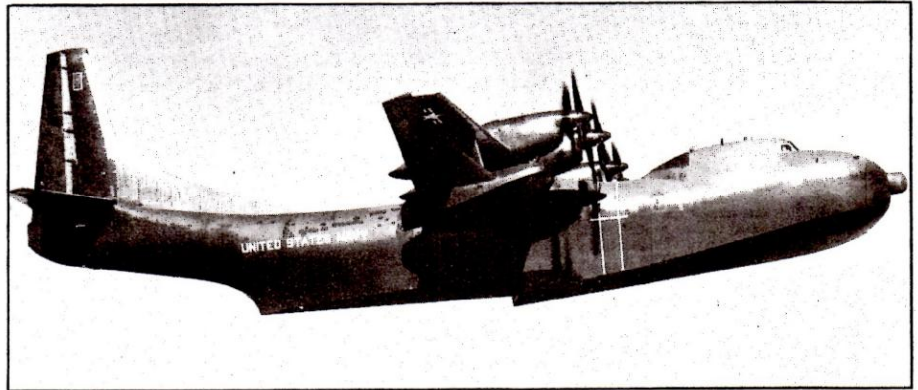
One final reminder: your renewal is not complete until I have validated that your AMA membership is current for 2016. I will not be able to issue you a member's card until that validation has occurred.

I will be handing out membership cards at the January meeting to all who have renewed by then. If you

Convair R3Y 'Tradewind'

by Conrad Naegele

The December Mystery Plane was the Convair R3Y 'Tradewind'.



In 1945 Convair received a request from the US Navy for a large flying boat, using a laminar-flow wing and turbo prop technology. The response was the Model R34, a large high wing flying boat with Allison T-40 turbo prop engines with 6-bladed contra-rotating propellers. It had a single step hull and high lift wings with fixed floats.

The first aircraft flew on April 18, 1950. The Navy approved and two prototypes were developed. One was lost in 1953 and first production plane flew on February 25, 1954, capable of carrying 102 passengers or 24 tons of cargo. A total of 13 aircraft were built. It carried various munitions and five pairs of 20 mm cannons. Front loading was developed. In practice, however, it was found that the plane was impossible to hold steady on beaching for loading or unloading.

The aircraft were converted to tankers for inflight refueling, one plane managed to refuel four F9F Cougars at one time! However, failure was built into these airplanes due to catastrophic crashes due to engine failure. After 5 such inflight failures due to poor turbo prop and complex propeller design, the program was terminated. All P5Y and R3Y planes were grounded in 1958 and all were subsequently broken up. A total of 13 were produced.

The Convair R3Y had a wingspan of 145 feet 9 inches, a gross weight of 145,000 pounds, and a speed of 403 mph. It was powered with four Allison T-40A turbo prop engines that each developed 5,100 horsepower. **J**

have renewed by then and are not present at the meeting, I will mail it to you. I will mail membership cards to anyone who renews after the January meeting.

Renew your TCRC membership today and take advantage of the Early Renewal Rate! **J**



AMA Club #383

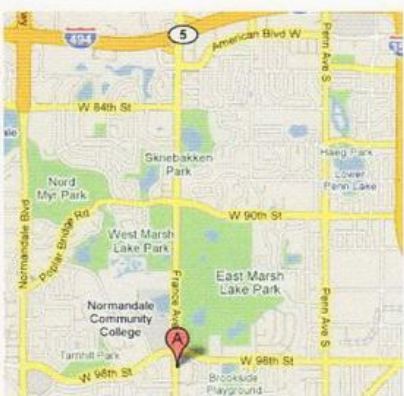
Cross Point Church
9801 France Avenue South
Bloomington, Minnesota



TCRC 40th ANNUAL AUCTION

Twin City Radio Controllers - Minneapolis, MN

Saturday, February 13, 2016



Concessions & Door Prizes!

- Hot Coffee & Donuts
- Soda/Pop
- Hot Dogs & Chips

What's for Sale?

- R/C Airplanes, Kits, Engines & Radio Systems
- R/C Aircraft related stuff & support equipment
- NO Cars/Boats
- NO Unrelated Stuff

When:

Registration Begins @ 7:30 am
Auction Begins @ 9:00am

Details:

- \$5.00 Admission: includes Bidder's Card
- \$20.00 Minimum Opening Bid. Nothing will be sold for less than \$20
- Commission of \$5 or 10% whichever is greater.
- SELLER MUST attach a brief description to EACH item being sold
- Pre-Registration Available for Sellers
- BUYBACKS @ 10% up to a maximum fee of \$20

Questions?

- E-mail: Auction@TCRCOnline.com
- Call Jim 952-445-5257 or Scott 952-934-1471
- MORE info at <http://www.tcrconline.com/pages/auction.htm>

TCRC Auction February 13th

TCRC will be hosting its Annual Auction on Saturday, February 13th at CrossPoint Church at the intersection of 98th Street and France Avenue in Bloomington.

This will be the 40th year for the auction, and the club is expecting that the 2016 version will be a huge event again for the upper Midwest. Hobbyists come to the auction from the 5 states surrounding Minnesota.

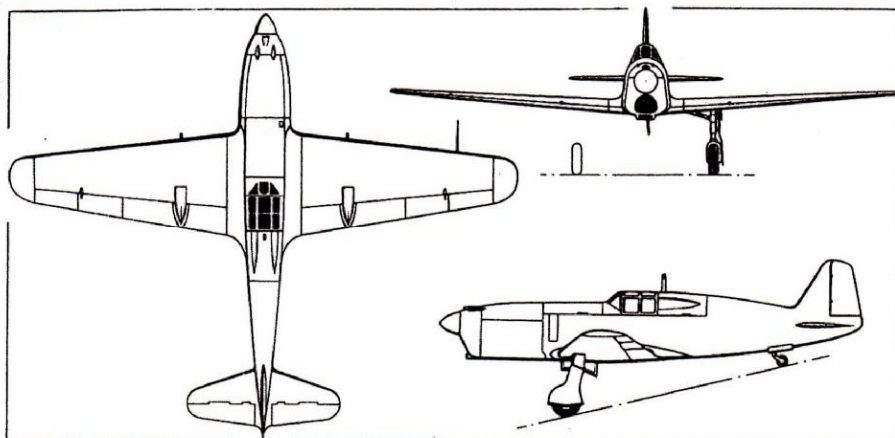
TCRC has implemented several changes in the auction this year in an attempt to shorten the length of time that is required to sell the 400 plus items that will go on the auction block. In past years once the doors open at 7:00 AM, the action is continuous until 5:00 PM that evening. The changes to be instituted include:

Starting the auction at 9:00 AM, which is one-half hour earlier than previous years. Sale item check-in, and pre-viewing will also be moved up to allow this earlier auction start time.

Set-up a silent auction for 30 items that will have a reserve of \$150. It is hoped that these high quality items will get the bids they deserve without taking up actual bidding time.

Having a 'bargain table' area where smaller items having a value of \$20 to \$30 will be sold again without taking up actual bidding time.

January Mystery Plane



December Raffle Winner



Darryl Volk was all smiles as he posed with the new Parkzone T-28 Trojan ARF he had just won at the TCRC monthly raffle on December 8th.

At the January 12th meeting there will be a Great Planes U-Can-Do SF Sport plane up for grabs, with a retail value of \$190. Chances are only \$5/each and you may enter as many times as you wish. Come to the monthly club meeting on January 12th at CrossPoint Church in Bloomington and be the next winner of the TCRC raffle. J

The Sight Of Sound



A Super Hornet fighter created the vapor cone as it approached the sound barrier at 760 mph. (Photo from Darek Slusta Solent News)

TCRC Auction

Continued From Page 12

To help speed up seller check-in, TCRC webmaster Pat Dziuk has again set up online registration at TCRCOnline.com. See page 6 of this newsletter for more detailed information on online registration.


Another new change at this year's auction is that the club will be accepting credit cards for payment of winning bids.

Every TCRC member is needed to work at the auction to make it a success. Contact president Bob or any board member and let him know that you will be available for working the event. You can specify what area you would like to work at, be it bidder check-in, seller check-in, impound, concessions, spotters, etc.

The February meeting has been moved up to the Tuesday, before the auction, which is February 10th. At that meeting, the final preparations for the auction will be determined. The club will be treating all members in attendance at that meeting with pizza and pop.

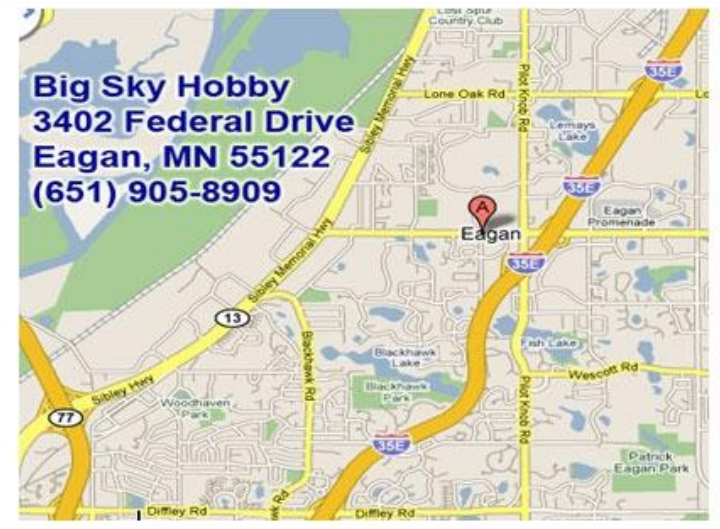
Let's see everyone at the TCRC Auction on February 13th, 2016. J

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.



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