



January

Minneapolis, Minnesota U.S.A.

2013

TCRC Annual Auction Saturday February 9th

by Corey Kaderlik and Jim Cook

TCRC's 37th Annual Auction will be held on Saturday, February 9th at CrossPoint Church in Bloomington, Minnesota. This is the upper Midwest's largest R/C airplane auction and hobbyists from Minnesota and its surrounding states show up in force to buy and sell some really great R/C airplanes and the supporting accessories.

This is TCRC's biggest manpower (and womanpower) event of the year. The club needs the help of every member and quite a few spouses to make it a success. Help is needed in set-up, bidder registration, seller registration, the impound area, concessions, recordkeeping, flow of items to and from the auction stage, spotters, security and clean-up.

President Corey has moved the February membership meeting to Tuesday, February, February 5th so that meeting can be used as a final planning and preparation session prior to the auction on the next Saturday.

In addition, TCRC has scheduled a set-up work session at CrossPoint Church starting at 5:00 PM on Friday, February 8th. On that Friday we need to bring several large tables from Shepherd of the Hill Church in Edina to CrossPoint Church. We also need to get the floor protection down in the concession area, and the buyer and seller check-in areas laid out in the entry foyer. The rooms used for the impound area need to be set-up as do the tables that will hold the items heading for the auction stage. The sound system and video system also need to be operational and tested. All of the signage needs to be put up. This makes for a busy Friday so it would be great to get a big work crew that night.

For those members who have items to sell at the auction, webmaster Pat Dziuk has set up a pre-registration area on TCRCOnline.com to make it easier to register and to save time on the morning of the auction.

(See article on page 4 of this newsletter for further details.) Remember that the club has a \$20 minimum opening bid, so sellers should bundle smaller items to make sure that every item coming to the auction floor will receive an opening bid.

On auction day, we can always use more spotters, and treasurer Tim Wirtz is in need of help in the cashier/record keeping area. I am sure the ladies in the concession area would love to have more help in their area also.

Because this event attracts so many people, it is very important that TCRC club members park their cars in the Normandale College parking lot that is kitty-corner from CrossPoint church across France Avenue and 98th Street. Members will set up some kind of shuttle service so that TCRC'ers do not have to walk that distance.

Members should take a look at their R/C planes and equipment to determine what they would like to sell, and also start thinking about what they would like to buy. If you are an R/C'er, there will be something there for you.

Be a worker, a buyer and a seller at TCRC's 37th Annual Auction on Saturday, February 9th. **J**

From The Left Seat

By Corey Kaderlik



Hi Everyone!

Welcome to **January 2013!** As we move into the New Year our club has a lot to look forward to: we are continuing to get new members; and we have a great calendar lined up for this year with several flying events scheduled. So keep your eyes on the TCRC website for upcoming events so you don't miss out on the fun.

Our biggest event of the year is next month -- the TCRC Annual Auction. It is scheduled for **Saturday, February 9th** at CrossPoint Church. This is the event where we need all of our members to be there and work to make it flow smoothly. We have moved our February regular meeting up one week to **February 5th** so that we can do some final prep for the auction that is the **next Saturday**. Let's have another great turn out.

See you at the meeting.

TCRC Dues Renewal

At the December TCRC Joint Board meeting, after careful consideration, the TCRC board of directors approved that the 2013 dues would be at the same level as they were in 2012. The 2013 TCRC dues are:

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

Dues payments are due on January 1, 2013. An early renewal rate of \$60 for regular members or \$30 for junior members applies if renewal payments are mailed to the TCRC treasurer and are postmarked by January 14, 2013. The early renewal rate is obviously a great savings!

Payments after January 14th will be at the full 2013 amount.

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 2013 TCRC dues today and secure your discount.

HITEC Futaba. JR
HOBBY WAREHOUSE
7144 Chicago Ave S
Richfield, MN 55423
612-861-5587
MyHobbyWarehouse.com
hobbywarehouse2@aol.com
Specializing in "AIR" RC Hobbies
LOWEST PRICES IN TOWN
Hours: Mon-Fri 10:00-7:00, Sat 10:00-6:00
Closed major holidays
SATO castle GREAT PLANES ANTRONICS Slimline
Thomas Steinmueller

Stop In Today To Find Out 'The TCRC Special Of The Month'

TCRC Calendar For 2013

2013 AMA Dues Statements

DATE	EVENT	REMARKS
January 5	All Season Flyer Kickoff	Jordan Field,10-10-10 Rule
January 8	1 st Quarter Board Meeting	Auction Planning Session 6:00 PM CrossPoint Church
February 2	All Season Flyer	Jordan Field,10-10-10 Rule
February 8	Auction Set-Up	7:00 PM CrossPoint Church
February 9	TCRC Annual Auction	7:00AM CrossPoint Church
March 2	End of Winter Fun Fly	Jordan Field,10-10-10 Rule
April 5,6,7	Toledo R/C Expo	Toledo Ohio
April 6	April Fool Fun Fly	Jordan Field,10-10-10 Rule
April 9	2 nd Qtr Board Meeting	6:00 PM CrossPoint Church
May 11	Jordan Field Clean Up and Fun Fly	Jordan Field
May 18	Spring Float Fly	Bush Lake Park, Bloomington
June 1	Building Contest	Jordan Field
June 15	Electric Fly-In & Camp Out	Jordan Field
July	AMA NATS	Muncie, Indiana
July 20	Big Bird Fly-In	Jordan Field
Jul 29-Aug 4	EAA Oshkosh Fly-In	Oshkosh Wisconsin
August 2,3,4	Wisconsin Fun Fly	Siren & Birchwood Wis
August 9-11	Northern Alliance Fly-In	Owatonna MN
August 13	3 rd Qtr Board Meeting	6:00 PM CrossPoint Church
August 24	Model Aviation Day	Jordan Field
September 14	Fall Float Fly	Busk Lake Park, Bloomington
September 21	Scale Fly-In & Campout	Jordan Field
October 12	Season Finale	Jordan Field
November 12	TCRC Elections	7:00 PM CrossPoint Church
November 16	TCRC Annual Banquet	5:00 PM Location TBD
December 7	All Season Flyer Finale	Jordan Field,10-10-10 Rule
December 10	4 th Qtr Joint Board Meeting	6:00 PM CrossPoint Church

All TCRC members should have received their 2013 dues statements in the mail in September from the Academy of Model Aeronautics.

AMA 2013 dues have not changed from the previous year. They are:

- Adult (19-65) \$58
- Senior (65 and up) \$48
- Under 19 \$1
or \$15 with *MA*
- Additional family \$30

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 \$29.95 per year, but that membership is not valid for membership in TCRC.

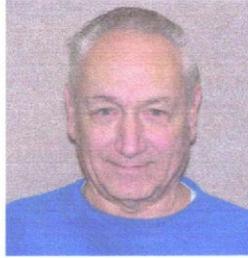
To renew your membership in AMA, the Academy gives you four methods: at the AMA website, www.modelaircraft.org; by fax at (765) 741-0057; by phone at (800) 435-9262; or by returning the renewal form you received in the mail in the supplied envelope.

Deadline for paying your 2013 AMA dues is December 15 to avoid a lapse in membership services. **J**



Safety At The Field

By Larry Couture



Well here it is, the New Year is here and the winter flying season is upon us. I just want all of you to make sure that you dress properly for the cold weather as you can get frostbite in a very short time without proper clothing on.

One of the rules that seems very obvious when one reads it is that all airplanes must have the name and address of its owner on it or in it before flying. If it should fly away and is found or does damage to property it can be returned to the owner, or damages settled without large problems for the hobby.

Some rules are just plain common sense such as flight checking your model before flight so that all controls are working and in the proper direction. I would ask at this time to hold up your hand if this has at any time happened to you! You take off and up is down and right is left or any combination of improper control. I would see a lot of hands in the air and one would be mine. Now sometimes you're lucky and you land without total destruction of the plane, and other times not so lucky, and to think that a pre-flight check takes only a minute or two at best.

Last but not least I will close with a PERSONAL CONDUCT VOW FOR ALL OF US:

"I will always conduct myself in a responsible manner. Conscious that the maintenance of safety for others and myself rests with my ability to design and construct sound working models and to enthusiastically abide by the AMA and TCRC Safety Code. I will abide by the decisions and follow the instructions of any designated person in charge or control of the session or event."

Now I want to see all members at the upcoming auction on February 9th as it take a lot of help to make it run smooooothly.

Enough said for this time, keep 'em flying and land with the rubber side down. J

TCRC Auction Seller Registration

by Pat Dziuk

Happy New Year TCRC members!

The Twin City Radio Controllers 37th annual auction is just around the corner, on Saturday, February 9th. 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.

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:

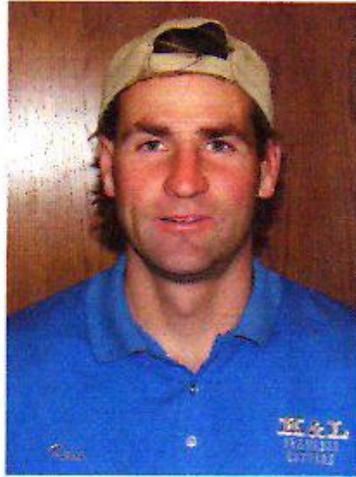
<http://www.tcrconline.com/pages/auction.htm> and <http://www.tcrconline.com>

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

TCRCOnline.com
Where The Action Is!

Veep's Corner

By Kris Hanson



Last month I talked about my past. Now I want to talk about our future and my plan to bring some of the past back.

The most memorable flying time I had was in the 80's through the mid-90's at the fun flies, but back the a fun fly consisted of a competition with games, obstacles and flying challenges against other pilots and yourself. The victor could win trophies, prizes and bragging rights. That is the kind of fun fly I want to bring back!

This summer I would like to have one or two fun fly contests, and could use some feedback from you guys. Give me a call at 612-702-3609 or catch me at a meeting. I would love to hear from you. I do not get text messages.

These events could be glow, gas and electric. Give it a thought and let's have some fun this summer.

Don't forget our Annual Auction is next month – Saturday, February 9th. This is a huge event and TCRC needs every member to be a part of it if it is going to be a success. We have even moved the February meeting up a week so we can do some last minute planning before the big day the next Saturday. Let's see everyone turn out for the meeting and definitely be a part of our great auction! J

TCRC's Annual R/C Auction

Saturday, February 9th

We Need You To Be There!

Don't



Forget!

The TCRC Membership meeting for February has been moved up a week to Tuesday, February 5th.

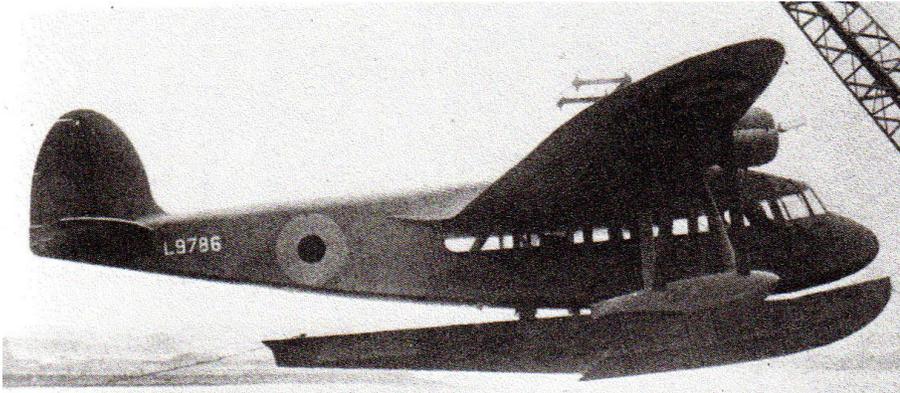
This has been done so that the club can make final plans for the Annual Auction which is the very next Saturday.

We need your ideas and your presence at this meeting! J

Short 'Scion'

by Conrad Naegele

The December Mystery Plane was the Short 'Scion'.



Although the Scion Senior was not strictly speaking a flying boat, actually starting out as a float plane, it warrants mention by reason that its tests were concerned solely with flying boat hulls. The hulls were intended for large boats and were tested in 1/3 and 1/2 scale, attached to the fuselage by two swinging arms that allowed considerable movement.

The Scion dual float plane had been built and in service since 1936, a 10-passenger commercial transport, about 1/2 the size of the Sunderland flying boat. When the need for more efficient boats arose at the onset of WWII, the Short brothers chose the Scion. They devised a 'quick disconnect' system that enabled them to test a large range of central floats. With an onboard dynamometer, all aspects of the float could be tested, stability, water handling, directional stability, etc. One interesting phase was an air lubrications system. The hull was perforated with thousands of holes; the float was pressurized via four high-capacity air bottles, to result in an air layer, a 'ground effect' of sorts. However, after extensive testing, no real benefit resulted.

The hull tests were during 1942 and 1943. Appears nothing resulted from all of this effort, the Scion was refitted with floats and returned to passenger service!

The Scion has a wingspan of 55 feet, a gross weight of 6,000 pounds and a cruising speed of 115 mph. It was powered by four Pobjoy 7-cylinder radials that developed 88 horsepower. J

Something Missing?

Something is missing from this newsletter! What is it you ask?

.... Pictures!

The *Flare Out* always has lots of pictures in it! Lots of neat pictures of all kinds of airplane stuff. But not this month!

With the holidays we didn't have a lot of flying events occurring. However a few of the guys went to the Metrodome and put some flights on and probably saw some pretty neat aircraft. And those 'boys of winter' – the All Season Flyer guys - they had their ASF Finale in December.

With the internet it is soooo easy to send me a picture of something you saw at an event, or something your neighbor is doing. Take the picture and attach it to an email and send it to jimcook888@q.com. Write a sentence or two about the picture and you will be amazed at the nice article that will show up in the newsletter the very same month!

We all have digital cameras and almost all of us have computers. Start sending me some of those neat pictures! J



A Rarely Known Christmas Story

Contributed by Mike Burk



When four of Santa's elves got sick, the trainee elves did not produce toys as fast as the regular ones, and Santa began to feel the Pre-Christmas pressure.

Then Mrs. Claus told Santa her Mother was coming to visit, which stressed Santa even more.

When he went to harness the reindeer, he found that three of them were about to give birth and two others had jumped the fence and were out, Heaven knows where. Then when he began to load the sleigh, one of the floorboards cracked, the toy bag fell to the ground and all the toys were scattered.

Frustrated, Santa went in the house for a cup of apple cider and a shot of rum. When he went to the cupboard, he discovered the elves had drunk all the cider and hidden the liquor. In his frustration, he accidentally dropped the cider jug, and it broke

into hundreds of little glass pieces all over the kitchen floor. He went to get the broom and found the mice had eaten all the straw off the end of the broom.

Just then the doorbell rang, and an irritated Santa marched to the door, yanked it open, and there stood a little angel with a great big Christmas tree. The angel said very cheerfully, "Merry Christmas, Santa. Isn't this a lovely day? I have a beautiful tree for you. Where would you like me to stick it?"

And thus began the tradition of the little angel on top of the Christmas tree. Not a lot of people know this. 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.

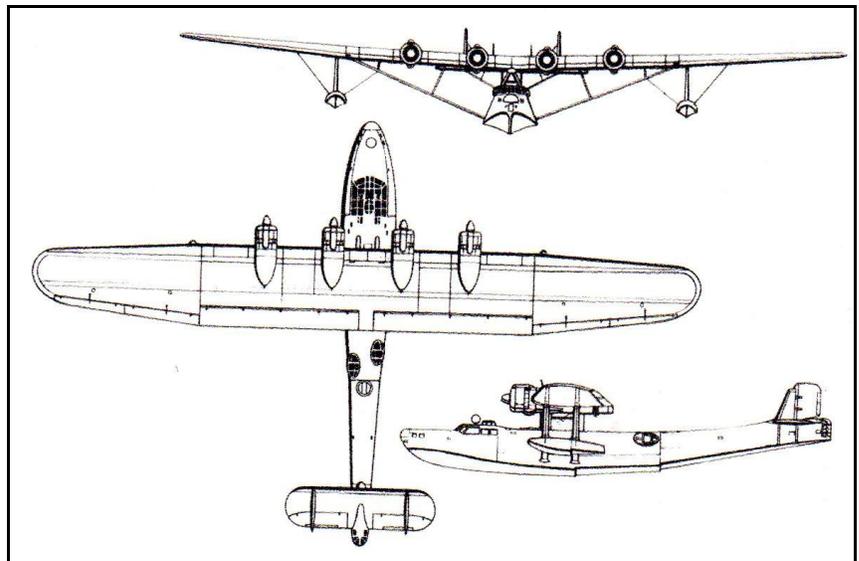
All Season Flyers 2013

With the New Year comes your opportunity to begin your path to becoming an All Season Flyer.

To become an All Season Flyer, an R/C pilot must put at least one flight in outside in every month of a calendar year. That's not just 12 months in a row, but 12 months in a row starting with January. This was originally started by the AMA and there are ASF flyers all over the United States. But without a doubt, the prestigious All Season Flyers accomplish their feat in the state of Minnesota. The weather in December, January and February is just a wee bit colder than it is in Arkansas.

TCRC sponsors special days in the winter months to help you become an ASF. Start your journey today. J

January Mystery Plane



The Quadcopter Trend

by Leo Davids, WFRC Secretary

The quadcopter and it's the tricopter and the hexcopter have been part of the RC repertoire for a few years now. But over the last year, the trend has gone miniature with the advent of very compact and inexpensive stabilizing on-board controllers which are the heart of the multicopter.

The mechanics of the multicopter are much simpler than their hovering counterpart, the helicopter, even though both depend on vertical thrust from rotor blades to defy gravity and maneuver in space. There are no servos or control surfaces to manipulate to make the multicopter fly in any direction. Until the price of the key components of the controller board were commoditized, an inexpensive RTF version was not to be seen.

But over the last year there has been a flood of mini-sized quadcopters hitting the RC market (from the Chinese, of course). One of the first to be marketed here in the US, by none other than Horizon Hobby, was actually a bit over a \$100, known as the Blade MQX. It was an extension of their AS3X flight stabilization to improve handling of the micro line of airplanes. By adding a 3-axis gyro to their all-in-one control board.

When stabilization boards first became available, they typically cost hundreds of dollars. And they still needed to be coupled up with motor controllers and receivers to provide the functioning core of multi-rotor flying. As Horizon Hobby got sales started on their mQX quadcopter, the Chinese sent a wave of similar but lower priced quadcopters into the RC market. Wltoys launched a series of ready-to-fly models starting with a V919, then V929 and currently the V949 model. These sell in the range of \$40 to \$60 from mostly Chinese based sellers. Wltoys was joined by Nine Eagles and Hubsen with similar models and prices. And this fall Tower Hobbies got their own versions of the Nine Eagles called the Helimax 1SQ and a version of the Hubsen x4 called the Traxxas QR-1.

For the most part each of these use an all-in-one controller board with a 3-axis MEMS gyro at its heart. The gyro is a micro-electromechanical device that is being produced for a couple of dollars each.

When the gyro output is combined with other chips on a circuit board to receive radio signals, run control program code on a microprocessor and output power to the DC rotor motors, a complete multi-motor control system is contained in a three centimeter square card.

The basic control program uses feedback from the gyro to hold the quadcopter's roll, pitch and yaw stable until a signal is received to move it on one or more of its axes. Many of these quadcopters have a channel from their transmitter to allow you to increase or decrease the gyro's feedback causing the quadcopter to fly more stably or be more responsive to the elevator, aileron and rudder input commands.

Now there are a number of differences in the various mini quadcopters available. The first difference has to do with transmitter they can be controlled with. The Wltoys and the Traxxas come with their own transmitters and will not work with any other transmitter. Whereas, the Helimax 1SQ and the Blade mQX can go either way. If you have an AnyLink compatible transmitter, you can fly the Helimax 1SQ from various Futaba, Hitec, JR or Spektrum transmitters. And any transmitter with a DSM2 Spektrum signal that binds to an Horizon BNF aircraft will work with their Blade mQX quadcopter, too.

A second difference is final drive for the rotor blades. DC brushed motors are used whether they do direct or gear reduced drives. The gear reduction drive (on Wltoys and Blade mQX) provides a bit more thrust and efficiency but weighs a little more with the extra parts and larger props. The direct drive models (Helimax 1SQ, Traxxas QR-1) are very light and fly with less battery power. For similar flight times, the gear reduced style run 1-cell 500mah batteries where the direct drives use 1-cell LiPo batteries in the 250-300mah range.

The Traxxas QR-1 (or Hubsen x4) may be unique in one aspect of its stabilization. In addition to a MEMS gyro, it has an accelerometer for feedback. This adds the ability of hovering without as much side-to-side drift and altitude variation which isn't sensed by a gyro alone. As long as the aircraft is not rotating or tipping, the gyro does not put correction into the rotor motors. They confusingly tout this as 6-axis stabilization.

Continued on Page 9, Column 1

The Quadcopter Trend

Continued From Page 8

As with a typical hovering aircraft, these quadcopters can all fly in any direction using the rudder, elevator and aileron stick on a transmitter. To accomplish true forward flight requires being able to coordinate the rudder with elevator and aileron to make turns. Altitude control is mostly a function of the throttle stick to climb and descend.

The only aerobatic (more like a trick) move in the quadcopter's repertoire is a maneuver called a flip or tumble. To accomplish this requires very high control rates on either the elevator or aileron and very low stabilization settings on the gyro. From hover, the aircraft can be made to do a full 360-degree flip. If the quadcopter has its own transmitter, there is a sequence of stick and/or button actions that sets it up to do a flip. If you are using your own transmitter, you have to set up the dual rate and aux channel gyro switches appropriately to allow a flip to be accomplished with abrupt elevator or aileron stick action.

As to what to buy, the decision is tough. The Wltoys current model, the V949 is a good buy at about \$55 and includes the transmitter and a battery. It also has LED marker lights that aid keeping track of orientation. It is available on-line mostly from Chinese vendors. There are essential spare parts to be had also on-line.

The Horizon Blade mQX, Helimax 1SQ and Traxxas QR-1 are available at hobby shops as well as on-line. The Blade mQX is about \$120 without a transmitter or \$150 with a minimal DMS2 transmitter. As is usual for Horizon, they have great customer support and full line of spare parts. Most all of the Spektrum radios of 5-channels or more will work with the Blade mQX.

The Hobbico product under their Helimax brand is \$80 without a transmitter and \$100 with transmitter. It will also work with Tower's Tactic brand transmitters or the AnyLink module fitted to various Futaba, Hitec, JR or Spektrum radios. The 1SQ includes a battery, charger and 4 spare props. Each and every part that makes up the copter is available as spares from Tower.

The Hobbico product under the Traxxas brand is \$61 without a transmitter and \$85 with the transmitter. There is no mention of what to use for a transmitter in lieu of the one that comes with the RTF version. It also includes two batteries and a charger. They offer no spare parts for the quadcopter but a novel trade-in plan where for half the list price of a new one they will replace the damaged one. However, even with the street price at \$61 without the transmitter, the list is \$100, so you are actually paying \$50 for a replacement.

Selecting one of these based on flying characteristics would favor the bigger Wltoys V949 for visibility and orientation with its LED lighting. It does great flips with the transmitter provided and adjustment for docile or aggressive flying.

If you are a Spektrum owner and Horizon micro fan, the Blade mQX will be appealing. It is a little smaller physically than the Wltoys V949 but bigger than either offering from Hobbico/Tower. It is able to fly in two different configurations, the so called "X" or the Cross. The "X" is more stable and the Cross is more aerobatic. You can also adjust control rates if you fly with a Spektrum transmitter that has those adjustments.

The Traxxas QR-1 is possibly the better confined space flier of the bunch. With the so called 6-axis stabilization, it will more easily stay put hovering and under slow motion not overshoot into obstacles. It also has some LED's to enhance visibility and orientation. It also has the next best RTF package price after the Wltoys V949.

The Helimax 1SQ is a good fit if you are already into Flyzone micros and have an AnyLink setup for your favorite transmitter. The manual calls for using a helicopter mode on your transmitter but it really works fine with a 5-channel aero-mode setup. The 5th channel (a.k.a., landing gear) can be used to set the amount of stabilization you desire from the gyro. This quadcopter may be the hardest to see for its small size and lack of marker lights. You have to really depend on recognizing the orange props that are the front of the craft.

*(Reprinted from **The Wright Flyer**, newsletter of the Wright Flyers R/C Club, Monticello, Minnesota, Jean Davids, Editor.)*

J

Calendar

- Jan. 5 All Season Flyer
Kick Off
Jordan Field
10-10-10 Rule

- Jan. 8 1st Qtr Board Meeting
Auction Planning
Session, 6:00 PM
CrossPoint Church

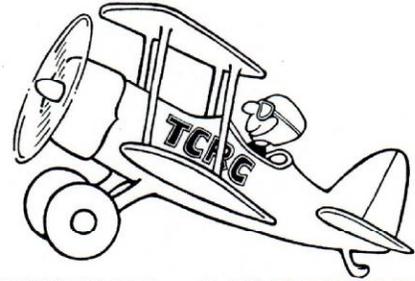
- Jan. 8 Membership
Meeting, 7:00 PM
CrossPoint Church
Bloomington

- Feb. 2 All Season Flyer
Jordan Field
10-10-10 Rule

- Feb. 5 Membership
Meeting, 7:00 PM
CrossPoint Church
Bloomington

- Feb. 9 TCRC Auction
7:00 AM to 5:00 PM
CrossPoint Church
Bloomington

Cross Point Church
9801 France Ave S
Bloomington, MN

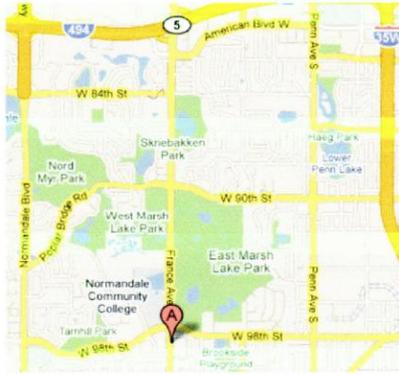


TCRC 37th ANNUAL AUCTION

TWIN CITY RADIO CONTROLLERS – MINNEAPOLIS AMA CLUB #383

SATURDAY - February 9, 2013

More Info online at www.tcrconline.com



Raffle & Concessions!

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

Questions?
Call Jim 952-445-5257 or Scott 952-934-1471
Email auktion@tcrconline.com
More info at www.tcrconline.com

What's for Sale?

- R/C Airplanes
- R/C Airplane Kits
- R/C Airplane Engines
- R/C Airplane Radio Systems
- R/C Aircraft Related Accessories and R/C Aircraft Support Equipment
- No Cars, No Boats, No unrelated Stuff

Where:

Cross Point Church
9801 France Avenue
Bloomington, Minnesota

When:

REGISTRATION Begins at	7:30 AM
AUCTION Begins at	9:30 AM

Details:

- \$3.00 Admission: *Includes Bidders Card*
- \$ 20.00 MINIMUM OPENING BID (to speed the auction! 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 AT 10% UP TO A MAXIMUM FEE OF \$20



Open Monday thru Saturday, 10 am - 6 pm
Have Special Orders or Questions?
Contact: Jeremy@BigSkyHobby.com

