

Wow! Flying In The Metrodome

by Jim Cook

Friday, December 9th four TCRC pilots arrived at the Metrodome in Minneapolis to do something that a lot of us have dreamed about – to fly an R/C airplane inside the dome.



Jim Cook, Vince Anderson, Conrad Naegele, Jay Bickford and Jim Ronhovde at the Metrodome. (Photo by Jim Cook)

Jim Cook had talked to Dan McArdeell of Marcee (Minnesota Area Radio Control Electric Enthusiasts) to see if a few TCRC members could fly with their group at the Metrodome. Marcee has negotiated 4 or 5 dates per year where their members are given permission to fly electric R/C planes inside the dome.

Jim arrived at the Dome about 9:15 AM to find Jim Ronhovde setting his plane and his electric helicopter up in the pit area. A few Marcee members had just arrived and were getting ready to put the day's first

flights into the air. Both Jim's made the comment that the Dome looked a lot smaller when you look at it from the perspective of flying space. Behind each goal post very large heavy nets were suspended by cables, thus effectively limiting flying space from end zone to end zone.

Marcee has a 20-20-20 rule in effect at the Metrodome. That is, your plane must be electric, weigh 20 ounces or less, fly at a speed of 20 mph or less, and your flight is limited to 20 minutes duration.

Jim R readied his helicopter while Jim C checked his lithium battery on his Scorpio Threedee Stick. After watching a couple of the Marcee guys fly, Jim C put the stick on the field, sighed and then pushed the throttle stick forward. Jim's Stick is powered by a HiMaxx outrunner and the plane leaped into the air. The approaching seats across the field quickly called for a left turn. No sooner did Jim make the turn then the approaching goalpost and net called for another left turn. He throttled the plane back to the point where he felt it was ready to drop out of the air and still the seats, the goalpost, the seats, etc. would jump in front of the plane. A short 6 or 7 minutes of flight and Jim lined up for and made a nice landing around the

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From the President's Hangar

by Bill Jennings

Happy New Year to everyone!

I've discovered recently that winter flying can be just as much fun as the warm-weather variety. With a thermos of coffee, some skis on the plane, and warm clothing it's possible to spend hours at the field!



My Extra 300 S on skis

There are several new events scheduled for this year - details of one appear below. If you've been involved in the RC hobby for a while you already know that kit building is becoming a lost art. Why? Because the 'almost ready to fly' planes (ARF's) provide almost instant gratification for many hobbyists. Some ARF's can be completed in as few as six hours, with others taking a little longer. Even with most of the work completed, my first ARF project required upwards of 20 hours to finish, even with some expert help along the way.

Don't get me wrong - I have nothing against the ARF's. Although, I've had several crashes that were caused by inferior quality hardware that failed during a flight. I've also had some airframe joints pull apart during a less than perfect landing. I later discovered that hot glue was used during the assembly, rather than some of the stronger available adhesives. However, I've run into some difficulty lately in figuring out how to repair my ARF's after a few 'pilot error' mishaps at the field. So, what's the answer? Conversations with a few of the club's kit builders have left me feeling that I've missed out on something by taking the

ARF shortcut. They claim to have as much fun building their plane as flying it! They also seem to be convinced that the extra time and care they put into each kit building project results in a much stronger, better-flying model. However, personally, the idea of starting out with nothing more than some pieces of plywood, laser-cut balsa sheets, and a set of plans, is rather intimidating! So, how does one acquire the know-how to build a kit?

My plan is to bring skilled builders together with club members who would like to learn the basics. A multi-session Kit Building Workshop will begin this month. This event will provide an opportunity for club members to learn how to complete a kit under the watchful eyes and guidance of some experts. Unlike presentations, the workshop setting will provide the opportunity to immediately apply the techniques demonstrated.

TCRC will sponsor an informational gathering at Cross Point Church on Saturday, January 14th, at 9:00 AM. The topic will be "Choosing A Kit and Tools / Organizing Your Workbench". Dave Schwantz, a professional kit builder, will lead this session. Kit information and prices will be available, and the necessary tools will be on display.

Following the gathering, those wishing to continue will have several weeks to purchase a kit and the necessary supplies. The group will meet again on January 28th to begin individual projects. The cost per participant will be a nominal \$2 per session to cover the cost of room rental.

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Flying In The Metrodome

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20 yard line. He made another more relaxed sigh, grinned, and said that successfully completing that first flight was quite a rush.

Jim R next placed his xx helicopter in the corner of the end zone and lifted off. He didn't have to contend with goalposts and seats, and put 5 or 6 minutes of a wandering hover on the craft before completing his first Dome flight.

Jay Bickford arrived and started putting his Slow Stick together. This is the plane that takes his Canon digital camera aloft for aerial shots. While he was readying the aircraft, Conrad Naegele showed up with his Slow Stick. Vince Anderson came with Conrad to act as pit crew and lend moral support.

The Slow Sticks proved to be the most popular plane at the Dome as 5 or 6 of them were in the pits of the Marcee and TCRC pilots.

Jim, Jim and Jay quickly learned that getting good photographs of planes in flight was pretty difficult. If a picture was taken in 'flash' mode, it would turn out way too dark, so everyone suppressed their flashes on their cameras. Shooting a plane in flight had to be done with a panning motion because the shutter speed was slow because of the low light. Getting a nicely focused shot of a

plane in flight was somewhat elusive.

Jay put his stick up into the air and made several passes over the field taking aerial shots. As soon as he landed, the TCRC'ers gathered around the camera to see how the pictures came out. Some of the results can be seen in this newsletter, and on the website, TCRCOnline.com.

Jim R put his aerobatic 3D plane into the air and made a few laps of the field before trying a few 3D maneuvers. Upon landing, his grin was easy to spot from across the sidelines.

Next up was Conrad with his Slow Stick. He explained that the plane seemed to have a CG problem since his last flight when he flew it into an outhouse! Although the CG seemed to be correct, on takeoff, it definitely appeared to be tail heavy and the plane did not want to cooperate on straight and level flight. After landing, the TCRC group huddled over the plane discussing possible corrective action. On comparison with Jay's Stick, Conrad's plane's wing was farther back. After some wing-placement adjustments the plane again lifted off and experienced a much more successful flight.

The Marcee group had an impound area, and there were 8 or 10 piloting stations along the sidelines. There were several times that 8 to 10 aircraft were aloft at once. There were about 25 to 30 Marcee and TCRC pilots and probably 40 or so electric planes at the event. During the entire morning and afternoon, there were only minor mishaps and I don't

believe any plane landed anywhere except on the field. The TCRC group continued to put lots of flights on during the day.

Dave Andersen of TCRC showed up around 1:00 PM, stating that he took a bus down to the Dome to see his fellow club members fly.

Thanks to Marcee for letting TCRC share their good fortune of flying in the Metrodome. I believe almost all of the TCRC pilots actually paid dues to become members of Marcee for the upcoming 2006 flying season.

I don't know the thoughts of the other pilots, but flying inside of the Dome had always been in the back of my thoughts, and to be given the chance to do so was a dream-come-true. As I left the Metrodome that afternoon, I left with a very satisfied feeling that I had done something that I would remember fondly for a very long time! ☺

President's Hanger

Continued From Page 2

The sessions will be held twice a month through April with additional topics and demonstrations presented by various skilled builders at each session. Don't miss out on this great opportunity to improve your building and repairing skills!

I hope you all received some generous gift certificates for the Local Hobby Store during the holidays... Here's wishing everyone many enjoyable flights during the New Year! ☺

Pictures From The Metrodome



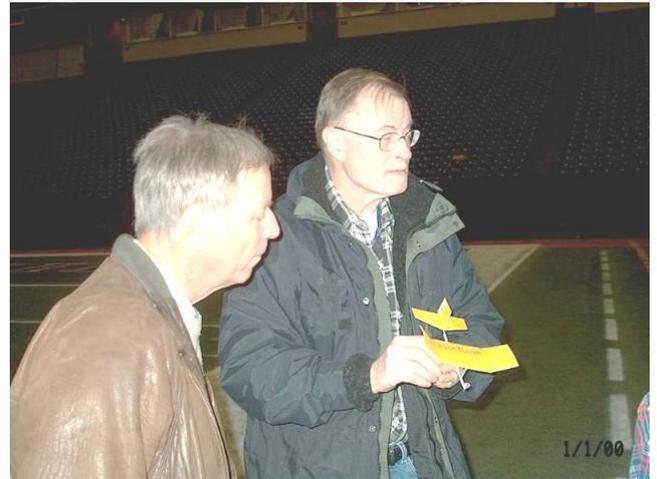
A birdseye view (from Jay Bickford's bird) of the flight line at the Metrodome.



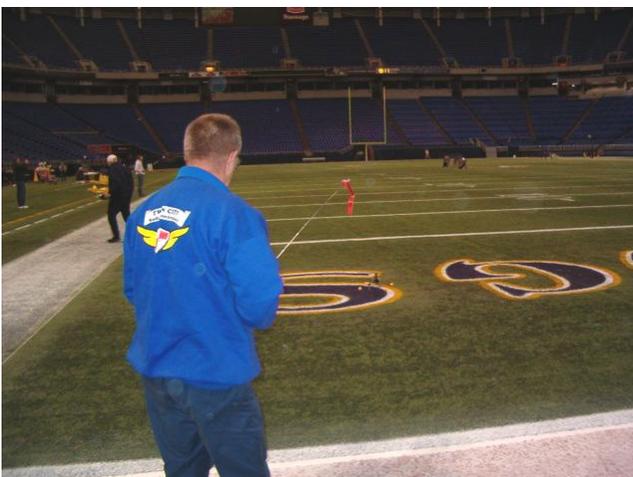
Jim R and Conrad getting ready for a takeoff from the sidelines.



Jim C's ThreeD Stick up in the rafters of the Metrodome.



Dave Andersen check's out what must have been the smallest plane in the Dome.



Jim R with his helicopter in the endzone.



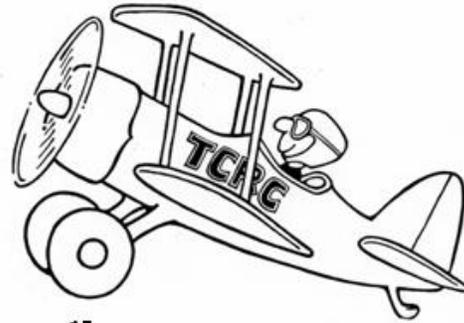
Jay doing a 'photo op' in the Dome.

Building Workshops

by Bill Jennings

Are you interested in learning how to build a model from a kit? The informational meeting and sign-up session for this winter's Kit Building Workshop will be held at CrossPoint Church on Saturday, January 14th from 9:00 AM to Noon. You'll learn about the kits that are available and their cost. You'll also learn about the tools and supplies required to complete a kit. Since building space will be limited, teams of two are encouraged to work together on a kit.

The first workshop session will begin two weeks later on January 28th. Each session will begin with a presentation by a skilled builder on one aspect of kit building. The sessions will be held through the month of April from 9:00 AM to Noon on Saturday mornings at Cross Point Church. Don't miss this chance to learn how the experts achieve their impressive results! ☺



TCRC 30th ANNUAL AUCTION

TWIN CITY RADIO CONTROLLERS - MINNEAPOLIS AMA CLUB #383

SATURDAY - February 11, 2006



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:

St. Peter's Catholic Church
6720 Nicollet Avenue
Richfield, Minnesota

When:

REGISTRATION Begins at 8 AM
AUCTION Begins at 10 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

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Questions?

Call Jim 952-445-5257 or Scott 952-934-1471

Email auktion@tcrconline.com

More info at www.tcrconline.com

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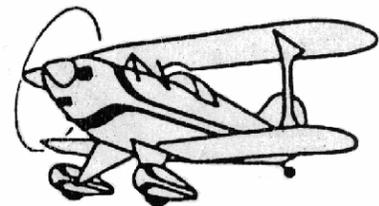
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From The Co-Pilot's Seat

By Chris O'Connor

Happy New Year to everyone! Hope you got that kit you were looking for. If not, why not try a kit instead of an ARF. We have the kit building clinics starting this month. It's fun to do an ARF, but can even be more rewarding to do a kit or build from plans. In conjunction with the clinics we are having a workshop tour each month. The first one is Saturday January 14 from 2-4 pm at my house. My address is 2525 Woodhaven Drive, Long Lake. Directions to the house are at the end of this article. The shop tours may give you some ideas for your shop or even some ideas to change my shop. The tour follows the first clinic we are having. Everyone is welcome. We are planning on having three more shop tours, so I need some volunteers to open their shops up for a tour. Let me know when you would like to do yours and contact me at 952-473-5210 or at the upcoming meeting.

Speaking of the meetings, I plan on having a program at each meeting, trying to cover all aspects of R/C aircraft. Last meeting we had building from a set of plans. I put on that program, so if you missed it or have questions fell free to call me. Our meeting in January features Dave Schwantz from Tri-Valley RC Club and his expertise covers jets, turbine engines, ducted fans, and electric jets. Dave is a wealth of knowledge on jets and can answer

all your questions. **PLAN ON BEING AT THE NEXT MEETING, JANUARY 10th.**

Other upcoming meetings will feature Wayne Seiwert from Aerotech Models here in town; electricians; helicopters; pattern; giant scale; etc. Anyone who would like to do a program please contact me, your help would be very much appreciated. Remember winter is a good time to build!!!!!!!

Also at each meeting we will also continue to discuss pattern flying and specific maneuvers. All this will lead up to a pattern fun fly contest in August. Flying maneuvers are fun and does improve your skills by putting the plane in odd attitudes and having you control your plane instead of you reacting to what the plane is doing.

Directions to my house for the shop tour: Take 494 West to Hwy 394/12. Go west on 394 about 8 miles to the town of Long Lake. (West of Wayzata and also West of Ridgedale Center). Go through Long Lake to Willow Drive. At the stoplight are an SA, and MacDonald's. Turn left on to Willow Drive you will be going south. Go about a half mile and just past the fire station on your left, turn right onto Woodhaven Drive which is a gravel road. Go down to almost the end, and we are the 3rd house on the left, tan color, white trim, 3-car garage. 2525 Woodhaven Drive.

See you at the next meeting!

Chris ☺

Calendar

- Jan. 7** All Season Flyer
11:00 AM Jordan
CD: Jim Cook
- Jan. 10** TCRC Membership Meeting, 7:00 PM
Fellowship Hall
CrossPoint Church
Bloomington
- Jan. 14** Kit Building Workshop, 9:00 AM
CrossPoint Church
'Choosing A Kit And Tools'
- Jan. 14** Shop Tour, 2:00 PM
Chris O'Connor's House, Long Lake
- Jan. 24** 1st Qtr. Board Meeting
Auction Planning
John Dietz's House
- Jan. 28** Kit Building Workshop, 9:00 AM
CrossPoint Church
'Organizing Your Workbench'
- Feb. 4** All Season Flyer
CD: Rick Smith
- Feb. 7** TCRC Membership Meeting (Moved from February 14)
- Feb. 11** TCRC Auction
St. Peter's Church
Richfield, MN
- Feb. 18** Kit Building Workshop, 9:00 AM
CrossPoint Church
- Feb. 18** Shop Tour
- Feb. 21** Auction Review
Board Meeting
- Feb. 25** Kit Building Workshop, 9:00 AM
CrossPoint Church
- March 4** Winter Fun Fly
CD: Bill Jennings



TCRC Calendar For 2006

DATE	EVENT	REMARKS
January 7	All Season Flyer Kickoff	Champion: Jim Cook
January 14	Kit Building Workshop	Shop Tour: Chris O'Connor
January 15	TCRC Dues Deadline	
January 24	1 st Quarter Board Meeting Auction	Planning Session John Dietz's House
January 28	Kit Building Workshop	CrossPoint Church
February 4	All Season Flyer	Champion: Rick Smith
February 11	TCRC Annual Auction	St. Peter's Church
February 18	Shop Tour	
February 21	Board Meeting	Auction Review Meeting John Dietz's House
February 25	Kit Building Workshop	CrossPoint Church
March 4	Winter Fun Fly	Champion: Bill Jennings
March 11	Kit Building Workshop	CrossPoint Church
March 11	Shop Tour	
March 25	Kit Building Workshop	CrossPoint Church
April 1	April Fool's Flyer	Champion: John Dietz
April 15	Kit Building Workshop	& Shop Tour
April 25	2 nd Qtr Board Meeting	John Dietz's House
April 29	Kit Building Workshop	CrossPoint Church
May 6	Jordan Field Clean-Up	& Fly-In
May 13	Spring Float Fly	11:00 AM, Bush Lake Champion: Jim Cook
May 20	Building Contest & Fun Fly	Champion: Jay Bickford
June 3	Model Aviation Day	Champion: Scott Anderson
June 10, 11	Combat Event	Champion: Scott Anderson
June 17	Electric Fly-In & Camp Out	Champion: Gerry Dunne
July 15	Field Trip to SMMAC	Owatonna, Bill Jennings
July 18	3 rd Qtr Board Meeting	John Dietz's House
July 25-27	Oshkosh Air Show & Fly In	Champion: Chris O'Connor
August 4-6	Park Rapids Fun Fly	Champion: Jim Ronhovde & Marilyn Krekelberg
August 12	Pattern Fun Fly	Champion: Chris O'Connor
August 19	Giant Scale Fly-In	Champion: Chris O'Connor
August 26	Fun Fly & Swap Meet	Champion: John Dietz
September 11	Fall Float Fly	11:00 AM, Bush Lake Champion: Jim Cook
September 16,17	Wings of the North Expo	Champion: Scott Anderson
October 14	Season Finale	Champion: Mike Timmerman
November 14	TCRC Elections	CrossPoint Church
November 19	TCRC Annual Banquet	Location TBD
November 28	Joint Board Meeting	John Dietz's House

Dues Deadline

by Pat Dziuk

The TCRC board approved a dues increase for 2006. TCRC annual dues will be \$75 for regular members, \$37.50 for junior members and \$30 for social members. An early renewal rate of \$60 for regular members or \$30 for junior applies if renewal payments are mailed to the TCRC treasurer and are post-marked by January 15, 2006.

The club initiation fee (a once per lifetime fee) has been reduced to \$25 for regular members and \$12.50 for junior members. New members joining after October 1st will pay the full dues rate which will cover the remainder of the current year and the entire next year plus the one time initiation fee.

This dues increase was deemed necessary due to important maintenance projects that are required to keep our flying field and facilities in good shape.

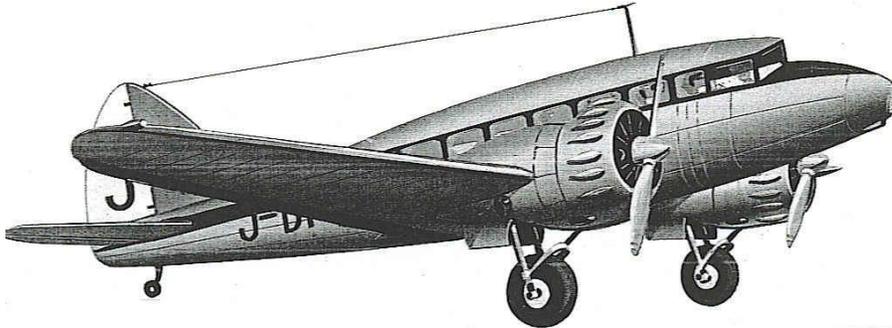
A dues notification was mailed to each member in December. Please take the time to review your personal information and send in the renewal form and check to John Dietz, TCRC Treasurer. After January 15th, the dues will increase from \$60 to \$75. Get your dues sent in to John Dietz today. ☺

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.

Nakajima AT-2

by Conrad Naegele

The December Mystery Plane was the Japanese Nakajima AT-2.



Japan's rapid transformation into an aeronautical power of some consequence during the late 20's and early 30's was an interesting phenomenon. Driven by the wish to achieve military dominance and by her expansionist policies, Japan progressed through simply building planes of foreign designs under license, to designing original aircraft.

While this was very apparent in the military aircraft, it also affected commercial aircraft designs and some of the best pre-war planes were early versions of what were to become some of the most famous and widely used Japanese bombers of WWII. In defense of this practice, almost all of the other combatants were guilty of this as well, although most were indigenous to that country. In many cases Japan was not just copying but was using these designs for completely different purposes.

On September 2, 1936 the AN-2 flew for the first time. Yes, it did show traces of contemporary foreign designs, and indeed was planned in 1935, just after Japan obtained construction rights to the Douglas DC-2! However it was not a clone, but smaller in all dimensions and had an entirely different goal. After some early problems, construction began. All told, 32 were slated for commercial transport, but over 300 were strictly military. These saw extensive use through WWII, but as liaison, or personal transport. These small airplanes were a complete success. A small DC-2 perhaps, but they were completely domestic.

The Nakajima AT-2 was powered with two Nakajima Kotobuki 9-cylinder, air-cooled, radial engines that each developed 710 horsepower. It had a wingspan of 65 feet, a cruising speed of 193 mph and a range of 746 miles. ☺

Safety Officer

The AMA requires each charter club to have a designated Safety Officer/Safety Coordinator. The Board is pleased to announce the appointment of Larry Couture as TCRC's Safety Officer for 2006. Larry's responsibilities will include increasing member awareness of TCRC's Field Rules and the AMA Safety Code. Please give Larry your cooperation in his efforts to promote safety awareness for the benefit of all our members.

It is hoped that during the course of the year we will have several safety columns in this newsletter dealing with the TCRC Field Rules and with other areas of safety that need reviewing. ☺

February Meeting Date Changed

In the month of February the regular membership meeting will be held on the **1st Tuesday of the month, February 7th**, not its normal 2nd Tuesday of the month.

This change has been made to avoid the meeting falling on St. Valentine's day, February 14th.

Please mark your calendars so that you do not miss the membership meeting. ☺

TCRCOnline.com

Are You Using This Great Tool?

Notes From A Warmer Place

TCRC has several members that are 'snowbirds' – members that head for warmer climates somewhere around November 1st and seldom return until the last vestiges of snow have long disappeared from the Minnesota landscape.

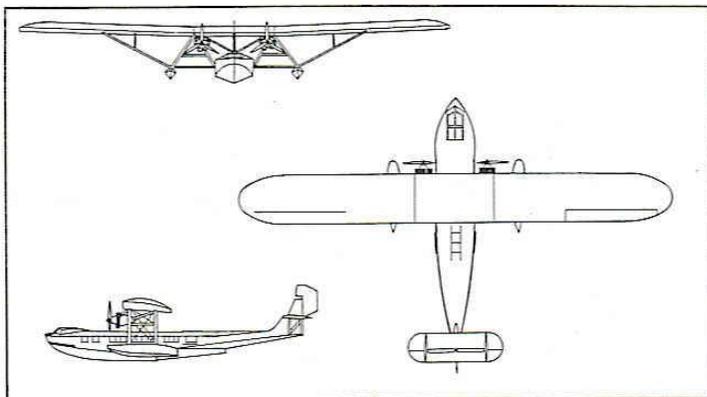


One such snowbird is long-time member Larry Edelman. Larry spends his springs and summers with his wife Lynn in Long Lake, Minnesota, but come the fall and they head for their winter home in Naples, Florida.

Above, Larry is shown with his newest aircraft, a WWI Fokker, at the Naples flying club that he belongs to. Larry didn't indicate how well the plane flies, but if it flies as well as it looks, it is surely a joy in the air.

Thanks for the nice picture, Larry. See you in April or May. ☺

January Mystery Plane



Dues Payable Now

Every AMA member should have received his membership renewal notice in the mail in October.

2006 AMA dues are:

- Regular \$58
- Senior \$48
- Junior \$1

To qualify as a senior member, you must be over age 65 on July 1, 2006.

AMA lists December 15th as the deadline to renew your membership without the risk of interruption of your *Model Aviation* subscription. However, this year AMA also states that any member that renews his/her membership by March 31, 2006 will be automatically entered in a sweepstakes for a \$5,000 ARF airplane.

Remember, every TCRC member is required to be a member of AMA at the time that he/she renews his/her club membership.

There are four ways to renew your AMA membership – online at www.modelaircraft.org; by telephone at 1-800-435-9292; by fax at 1-765-741-0057; or by mail using the envelope enclosed with the renewal notice.

Take the time to renew your AMA membership today. ☺

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Shakopee, Minnesota 55379

Is This A Great Hobby Or What?



Jim Ronhovde pilots his 3D electric into the wild blue yonder of the Metrodome on Friday, December 9th. The group of TCRC'ers that made this trip that day and put an airplane into the air all came back with quite a sense of accomplishment. ☺

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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