



ACADEMY OF MODEL AERONAUTICS CHARTERED CLUB #1255

# SERVO CHATTER

A PUBLICATION OF:

ANOKA COUNTY RADIO CONTROL CLUB, INC.

**JANUARY 2011**

***THE MEETING WILL BE THURSDAY, JANUARY 20, AT RIVERWIND!!***

## **PRESIDENT'S CHATTER**

During the building season quite a few of us have projects going on and I would like to remind most of you that our club forums have been pretty quiet the past few weeks. Please think about logging in and sharing your project with us. Some pictures would also be great. The freeze fly had a good turn out with decent weather and light winds. A dozen or so brave souls attended the event. The road to our field has been kept up with the help of Chris Elliot. On calmer days consider going to the field and getting in a few flights.

The 2011 flying season will be very busy with all of our upcoming events. If you have any thoughts or ideas on how to make things even better yet for the events please feel free to bring them up at meetings or with an email. The spectator participation has increased dramatically and with that our hobby and club has grown. Please continue letting family and friends, co-workers, etc. know about the events throughout the year!

See you at the meeting

Erik Castrodale



ACRC Forum - <http://anoka-rc.com/forums>

## **VEEP REPORT**

Happy January to all of you at ACRC. I hope all of you are doing well and staying warm. I am looking forward to another great fun and safe flying season. It is my pleasure to serve as your new V.P. and I want to thank our former board members for their service and contributions, especially my friend Dan, who I am replacing as V.P. If you like winter, this is certainly one to remember, and if you don't, try to get through it, maybe hide out inside and get all those flying projects that you got for Christmas ready to go. I haven't had a chance to check out an electric night at the Blaine sports center yet, but that's one outlet to curb those winter blues if you're suffering. Looking forward to seeing you at the January meeting and hope your holiday season was the best.

Jeff Flander



## **NAME THE PLANE**

# MEETING MINUTES

December 16, 2010

Meeting called to order at 7:00 PM.

20 members present.

## Board Reports:

Vice President: Dan Thiede reviewed the evenings raffle prizes, which included a Park Zone Champ RTF.

Safety: Joe Coleman provided the group with winter flying safety tips.

Membership: Stan Zdon reports that over 40 members have renewed for 2011.

Treasurer: Roger Jeffrey reviewed the club's finances. All is in order.

## Old Business:

Tim Karash reminded the group that the Minnesota Association of Aeromodeling Clubs will have their annual swap meet at the B-Dale Club on January 22 from 9:00 AM to 1:00 PM.

Tim Karash also gave us an update on the water project in East Bethel. The town is also considering a shopping area at Hwy 65 and Viking Blvd.

Roger Jeffery updated us on the Super Fund sites that he has been looking into.

## New business:

Phil Vaughn proposed a rule change for Rule 10 that would permit high speed passes over the runway. It was noted that currently full throttle touch and goes are permitted. A motion to make the suggested change was made and seconded. It will be voted on at the January meeting.

There was some discussion as to the feasibility of lengthening the runway. The general consensus was that it is not practical given the current position of the ditch and road.

Catering for the next Fly Out was discussed. For 300 to 400 people the cost would be in the neighborhood of \$600.00 to \$900.00. It was also suggested that the club get the food & supplies at Costco. Also discussed was the need to better organize the next event so that the work is more evenly distributed.

## Raffle:

1st	Mike Harder	Park Zone Champ
2nd	Andy Thunstrom	Calendar
3rd	Phil Vaughn	Fuel dot
4th	Paul Castrodale	X-Acto Set
5th	Andy Thunstrom	Hobby Zone Heli
6th	Mike Harder	Epoxy
7th	Kris Westerbur	Cutting mat

Steve Ulrich

## IT'S NOT TOO EARLY TO START TRAINING

I'm Dale Anderson, this year's training coordinator. I can be reached at 612-481-6405. This number will take text messages but please take it easy with the texting abbreviations.

It may be January, but it's not too early to start doing training homework. Stop by your local hobby stores and see what is available. Most stores have demo computers set up with R/C simulators. Give them a try.

Also, feel free to come and watch the in-door flying at the Blaine Sports Center Saturday evenings and talk to the pilots. There is always a wealth of information to be gained from their experience and see how much fun it can be.

It's also not too early to call and check in with me and start working a training plan and get on the training schedule. I'm looking forward to a great flying season.

Dale Anderson



## MEMBERSHIP NEWS

### SEASONS GREETINGS AND HAPPY NEW YEAR!!

The Freeze-Fly is over and but I did not make it. The temperatures was too much for my aging body. I stayed home and worked on a plane instead.

This is the last month that you can rejoin for the regular \$50.00 dues. Membership applications were included with the November and December newsletters that were mailed out. Members that read the newsletter online can download a membership application from the website. After January 31 a \$5.00 late fee will be added to your dues. This will also be the last newsletter that you will receive via snail mail because it is part of last year's membership. If you don't want to miss any of the newsletters, be sure you renew on or before January 31. If you don't have your AMA by the end of January you can send me your application and dues and I will mail you your ACRC membership card when you verify your AMA.

At the last membership meeting a motion was made and seconded to amend Rule 10 to allow high-speed passes over the runway. A vote on this motion will be taken at the January meeting. The current version of Rule 10 and the proposed new version are printed below. If you have any feelings about this motion, either positive or negative, come to the next meeting and voice your opinion.

#### The Current Rule

10. High speed passes and aerobatics must be done over the grass area east of the asphalt runway and not over the asphalt runway. When student pilots are receiving instruction all high-speed passes and aerobatics maneuvers shall be done in the in the vicinity of the ditch east of the runway or to the east of that ditch.



#### The Proposed Rule

10. Aerobatics must be done over the grass area east of the asphalt runway and not over the asphalt runway. High-speed passes may be performed over the asphalt runway or over the grass area east of the asphalt runway. When student pilots are receiving instruction all high-speed passes and aerobatics maneuvers shall be done in the in the vicinity of the ditch east of the runway or to the east of that ditch.

Anoka County R/C, St. Paul R/C and the other clubs in the area are working on their 2011 calendars. ACRC will be having a Fly-In in May, a Pattern Contest and Warbird Fly-In in June, a Fun Scale contest in July, a Scale Fly-In in August, an Electric Fly in September and an end-of-season Fly-Out in October. A complete listing of 2011 events and their dates will be published in future newsletters.

#### SWAP MEET AND AUCTION:

MAAC SWAP MEET – The MAAC swap meet will be January 22 at the B-Dale Club located at 2100 North Dale Street. This is 1/2 mile south of Hwy 36 on Dale. Buying or Selling, admission is **FREE**.

The TCRC auction will be on Saturday, February 12, at Cross Point Church on 98th and Bloomington. Registration starts at 8:00AM and the auction starts at 10:00AM. Go to the TCRC website for more information:

[http://www.tcrconline.com/pages/auction\\_seller\\_registration.htm](http://www.tcrconline.com/pages/auction_seller_registration.htm)

Sky Hobbies and Hobby Warehouse will be at both events to take your hard earned money.

The next meeting will be at Riverwind on January 20 at 7:00 PM.

Stan Zdon

## REAGAN QUOTE

“Some people spend an entire lifetime wondering if they made a difference in the world. But the U.S. ARMED FORCES don't have that problem.”

## TECH HELPLINE

Dear Tech Support:

Last year I upgraded from Boyfriend 5.0 to Husband 1.0 and noticed a distinct slow down in overall system performance, particularly in the flower and jewelry applications, which operated flawlessly under Boyfriend 5.0. In addition, Husband 1.0 uninstalled many other valuable programs, such as Romance 9.5 and Personal Attention 6.5 and then installed undesirable programs such as Fun Fly 5.0, Scale 3.0, and Pattern 4.1. Conversation 8.0 no longer runs, and Housecleaning 2.6 simply crashes the system. I've tried running Nagging 5.3 to fix these problems, but to no avail! What can I do?

Signed, Desperate

Dear Desperate:

First keep this in mind; Boyfriend 5.0 is an Entertainment Package, while Husband 1.0 is an Operating System. Please enter the command: "http: I Thought You Loved Me.html" (without the quotes) and try to download Tears 6.2 and don't forget to install the Guilt 3.0 update. If that application works as designed, Husband 1.0 should then automatically run the applications Jewelry 2.0 and Flowers 3.5. But remember, overuse of the above application can cause Husband 1.0 to default to Grumpy Silence 2.5, Happy Hour 7.0 or Beer 6.1. Beer 6.1 is a very bad program that will download the Snoring Loudly Beta. Whatever you do, DO NOT install Mother-in-law 1.0 (it runs a virus in the background that will eventually seize control of all your system resources). Also, do not attempt to reinstall the Boyfriend 5.0 program. These are unsupported applications and will crash Husband 1.0. In summary, Husband 1.0 is a great program, but it does have limited memory and cannot learn new applications quickly. You might consider buying additional software to improve memory and performance. We recommend Food 3.0 and Hot Lingerie 7.7.

Good Luck, Tech Support

## ACRC EVENTS

The winter building season is rapidly ticking away; I can't believe that the first event is only a few months away. There was a great turnout for the 2011 Freeze Fly even though the event was postponed by week due to high winds. Big thanks to Chris Elliot for talking to Central Wood Products and getting them to use their front-end loader to dig out the access road after the blizzard. Chris has also personally kept the road plowed so that we could hold the freeze fly. There was a great turnout for the freeze fly, with about 5 fliers who braved the cold and 10 spectators to provide encouragement. Amy Thiede kept everyone warm with lots of hot chili, thanks Amy!

There are four events in the coming month that I have been made aware of in our region and have included some information below. Please send me any event related material that you would like put into the club newsletter.

### **MARCEE's Electric RC / Glider Swap Meet**

1:00 PM to 3:00 PM

Immanuel Lutheran Church

104 Snelling Ave South

Saint Paul, MN 55104

(1 mile south of I-94 on Snelling)

No admission or table fees!

??? Contact Steve Mundt at 651-646-2195

[www.marcee.org](http://www.marcee.org)

SATURDAY, FEBRUARY 19, 2011

**DULUTH/SUPERIOR R/C CLUB'S**

**ANNUAL AUCTION**

The Auction will be held at the Pilgrim Lutheran Church located at 820 Belknap, (Hwy. 2) in Superior WI (next to Burger King) All R/C clubs are invited to bring their items for inclusion at the Auction.

The doors will open at 8:00 AM for setup, Buyer and Seller registration and preview of items for sale. Buyers need to obtain a Bid Number and Sellers should have all of their items registered prior to the Auction start at 10:30 AM.

<http://www.flydsrc.com>

Marc Davis



## FIELD SAFETY

*From the St. Paul R/C Pulse*

Happy New Year Everyone! The goal for this year is zero injuries! No way you say, I think it's possible. I've been in construction for over 30 years now and when I started there were lots of injuries. Over the years, the industry as a whole, along with the Occupational Safety and Health Administration (OSHA), has reduced construction accident significantly.

So how can we reduce the number of accident at the flying field? By raising awareness and understanding that safety is everyone's responsibility. We can all make a difference if we all get involved. Let's start by reviewing the club rules, if you don't have a copy please contact any board member or me. These will also be posted at the field.

So let's get started. Each month I will bring up one safety item and I'm asking everyone to help me with raising the awareness. This month's item is from the Club Rules, Arriving at the Field, Item g. **“Range check your radio before every flight, or at bare minimum when you first arrive at the field. Definitely do it after each hard landing”**.

Let's work together and help remind our fellow pilots to perform a range check (planes and helicopters).

Kim Slogar

## Update on FAA

*by Dave Mathewson, AMA President*

By now, nearly everyone should be somewhat familiar with the FAA's intent to create regulation for the operation of small unmanned aircraft systems (sUAS) in the national airspace. There's been a lot of speculation about what will be contained in the sUAS proposed rule that is scheduled to be released as a notice of proposed rulemaking (NPRM) sometime in June 2011.

The NPRM will contain proposed regulations that will likely have some impact on model aviation. The FAA is prohibited by law from disclosing the exact language in the NPRM until it's released in the Federal Register. However, we have been able to determine, in a generic sense, what some of the proposed language might be. The NPRM will likely address things such as how high, how fast, and where a model aircraft may fly. We know that the FAA has drawn a hard line between recreational use and commercial use.

The AMA is continuing to work with the FAA's Unmanned Aircraft Program Office (UAPO) and is in contact with the UAPO on a weekly, if not daily, basis. Face-to-face meetings between AMA representatives and the UAPO staff take place in Washington on a regular basis.

AMA's internal workgroup, consisting of members with a diverse and knowledgeable model aviation background, meets weekly by conference call and continues to develop standards that will eventually be submitted to the FAA for adoption that will allow modelers who follow these standards additional latitude from the rule.

We're fighting a tough battle between keeping our members informed and not painting an overly tenuous picture of the future of model aviation. Not knowing exactly what will be in the proposed rule makes this a difficult challenge. And we're still working through some issues today that may be satisfactorily resolved before the NPRM is released.

The February 2011 issue of Model Aviation magazine will contain an interview with FAA Associate Administrator for Aviation Safety, Peggy Gilligan, detailing why the FAA feels its needs to create new rules for model aviation and the direction the process is taking. Representatives from the UAPO will attend the AMA Expo in January and participate in a roundtable discussion, open to the membership that will provide additional insight into the regulatory process. The roundtable will be taped and posted on the AMA Web site.

*Continued on Next Page*

Now is the time for modelers to become more familiar with this regulatory process, and to prepare for action in case the need arises in the coming months. Within the next few weeks a section will be added to the AMA Web site for Academy members and all who are concerned about the future of aeromodeling. It can be found at [www.modelaircraft.org/news/ama-faa.aspx](http://www.modelaircraft.org/news/ama-faa.aspx). The site will feature background information about this topic, the latest developments, and how to communicate with your federal representatives.

As club officers and Leader Members you can help now by making your club members and modeling friends aware of the regulatory effort and the possible need for us all to get involved in the not too distant future.

Model aviation has an impeccable safety record spanning more than seven decades. Overly onerous regulation not only is unnecessary, it has the potential to harm the recreational activity that we all enjoy.

## The Importance of Setting Headings

*by Mike Lynch*

*From the newsletter of the Circle City Flyers of Corona, California*

One of the first goals of flying RC is to be able to make smooth, level turns. As early as your first practice flight, your instructor will tell you to bank with ailerons, maintain the turn with the elevator, and straighten with the opposite aileron. The goal is to maintain a smooth turn with no gain or loss of altitude. The time it takes to master this first step varies from one beginner to another. And the good feeling you get from mastering this step is but one of many you will enjoy as your flying improves.

With this step mastered, you will be able to “keep the airplane in the air.” However, you may not be able to enter and exit the turns you make as predictably as you would like. You may find that

the airplane is flying you, wandering all over the flying field. The second step to flying is to master entering and exiting turns precisely—and the importance of this step cannot be over assessed. As you begin learning how to land, it is mandatory that you are able to exit your last turn (during final approach) in a manner that has you perfectly aligned with the runway. You can master this very important talent only by knowing how to set headings.

Practice with figure eights. Once you are relatively comfortable making smooth, level turns it is time to begin practicing more precise turns. Figure eights are excellent for this purpose because they force you to make left and right turns equally to avoid the “I can only turn left” syndrome. To begin, we recommend making left turns on your right side and right turns on your left side. This way the airplane will always be turned away from you. (Many beginners feel uncomfortable when the model is coming directly at them, even in a turn.)

At first, you may find this quite difficult. The goal is to exit each turn with the airplane heading directly toward a corner of the field (with the center of the figure eight directly in the middle of the field). You will find that you must begin exiting the turn slightly before your desired heading is reached, which can be tricky. Your first few attempts will probably not be perfect and will force you to make minor corrections; you must be quite gentle with the controls to avoid over correcting. Once you have mastered, reverse the direction of the figure eight and start again (right turns on your right side, left turns on your left side).

Always remember the importance of setting headings. As you practice landings (and even after you have performed your first solo), whenever you are having problems setting up your headings, go back and practice figure eights.



## Heat Treating Music Wire

by Roy Vaillancourt

The music wire used by modelers to make landing gear and cabin struts is medium carbon steel heat-treated to spring temper or about 45 on the Rockwell C scale of hardness (RC45). On this scale, RC20 is soft, RC45 is tough, and RC60 is hard. Tough wire can be bent and cut using the proper tools and techniques, but sometimes it's just too difficult to work with.

One way to soften steel music wire is to heat it, which makes it easy to bend and form. But after heating and forming, the subsequent cooling -- often at an uncontrolled rate - can make the finished wire too hard or too soft since its hardness is determined by the rate at which it cools. For some parts, the final hardness isn't critical. But a landing gear formed from wire softened too much won't spring back to its original position; and a gear made from wire cooled to a harder than normal state will snap on its first use. To restore the wire to its original specific spring temper, it must be heat-treated a second time and cooled at a controlled rate. To form wire easily, first anneal it; next, form or bend it to the desired shape; and then heat-treat the part back to spring condition - that is, temper it. First the wire should be annealed at the location to be bent. To anneal it, heat the wire with a torch until it becomes a bright cherry red - about 1400 degrees Fahrenheit. Let it cool completely to the touch. Don't quench it or blow on it. Just let it cool naturally away from any drafts. The wire should now be in the RC25 soft range, and it will bend easily. After forming once again heat the wire with a torch until it becomes bright cherry red, but this time quench it - that is, cool it rapidly by immersing it in room temperature water. Plunge the steel into the water with a twisting, swirling motion to keep water vapor from insulating the wire against the cooling action of the water. At this point the wire should be very hard, probably above RC60. To test the hardness, try to make a mark on the worked area with a file. The file should slide off without cutting into the steel at all. If it cuts the wire, try the heat and quench cycle again. If the file still cuts the wire, it isn't high carbon steel. Get another piece of wire and start over - you won't be able to add the necessary carbon to low-carbon steel. When the file

test signals success, the wire is ready for the final step, but not for use, because it's very hard and quite brittle, and will probably snap off. The final step is to temper the wire back to the desired hardness. Tempering is a form of annealing but is controlled so that the steel achieves a specific hardness. Start by sanding the wire with steel wool or emery cloth. Then heat it gradually with the torch. Watch for the following colors as a guide: straw color (350 degrees), followed by dark blue (600 degrees), and then medium blue (750 degrees). At this point, remove the wire from the heat and allow it to cool slowly. Don't quench it or blow on it; just let it cool naturally in still air. Once the steel returns to room temperature, it should be at the target RC45 hardness, which has a good spring temper. Try the file test again. You should be able to make a mark now, but only with some effort. If it passes this test, the wire is properly tempered. Besides parts for model planes, tempered music wire can also be used to make special purpose tools. Instead of tempering to 750 degrees (medium blue), stop at the straw color stage. The wire will be at about RC60, which is still very hard, but not brittle. Wire at this temper can be used to drill wood and plastics, and most aluminum and copper.

**1. Rockwell hardness testing**, named after Stanley Rockwell who made his first testing machine in 1921, is a general method for measuring the bulk hardness of metallic and polymer materials. Although hardness testing does not measure performance properties, hardness correlates with strength, wear resistance, and other properties.

Rockwell hardness testing is an indentation testing method. An indenter is impressed into the test sample at a prescribed load to measure the material's resistance to deformation. A Rockwell hardness number is calculated from the depth of permanent deformation of the sample after application and removal of the test load. Various indenter shapes and sizes combined with a range of test loads form a matrix of Rockwell hardness scales that are applicable to a wide variety of materials. The Rockwell B and C scales are used for metallic substances.

**2. Anneal:** To heat and then cool (as steel or glass) usually for softening and making less brittle.

**3. Quench:** To cool (as heated metal) suddenly by immersion (as in oil or water).

# SERVO CHATTER

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## MAAC SWAP MEET

The MAAC swap meet will be January 22 at the B-Dale Club located at 2100 North Dale Street. This is 1/2 mile south of Hwy 36 on Dale. Buying or Selling, admission is **FREE**. Concessions will be available and there will be a raffle.

### ACRC BOARD MEMBERS

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### **ACRC SPONSORS**

King Kong Hobbies  
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Aerospace welding  
Cambridge State Bank  
T & G Hardwood

*Deadline for the  
next newsletter is:  
February 1, 2011*

### **CALENDAR OF UPCOMING EVENTS**

Thursday – January 20

- ACRC Club Meeting

Saturday – January 22

- MAAC Swap Meet

Saturday – February 12

- TCRC Auction

Thursday – February 17

- ACRC Club Meeting

