



ACADEMY OF MODEL AERONAUTICS CHARTERED CLUB #1255

# SERVO CHATTER

A PUBLICATION OF:

ANOKA COUNTY RADIO CONTROL CLUB, INC.

AUGUST 2013

***THE MEETING WILL BE THURSDAY, AUGUST 15, AT THE FIELD!!***

## PRESIDENT'S CHATTER

Hopefully everyone is getting a chance to get out and enjoy the nice stretch of weather we have been having. This month we will still be outside for our meeting. The September meeting will be back at Riverwind Community Center in Coon Rapids.

We have been having a pretty good year as far as mishaps, except for a couple that have been brought to my attention. One incident I watched happen. It was caused by an electric plane not being under control by mechanical restraint or the use of arming plug. Food for thought; is it time for arming plugs, mechanical restraints, or a clean run up stand. The electrics are getting very powerful to the point of being as dangerous as an internal combustion powered plane, or more so. If the throttle is in up position upon plug-in the prop can spin right away, resulting in a runaway across the pits. Should there be a rule in place? I talked to some electric guys about this and there is some concern for safety? Would they like a new rule? No. But they figure if it reduces injury at the end of the day and every one goes home with all of their body parts it is good day. Again, food for thought. I'm going to bring it up for discussion at the meeting.

Until then have fun, be safe and enjoy your hobby.

Andy Thunstrom



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

## MEMBERSHIP NEWS

**HOSPITAL REMINDER** - The closest hospital is Fairview in Wyoming, just north of Forest Lake. Go east on Hwy 22 to Hwy 61, which is just a ways beyond Hwy 35, and south on Hwy 61 to the hospital. The hospital is on the right side of 61 as you are going south. **FLY SAFELY!!!!!!!**

If you have to call 911 the GPS coordinates of the field are

Hwy 65 and 197th 45.326927 -93.236293

ACRC shelter 45.328692 -93.230971

**FIELD CLEAN UP REMINDER** - ACRC does not have a garbage service that comes to the field. The barrels at the field are used mainly for events. If you have pop cans or water bottles or other trash please take it home with you.

So far ACRC has 18 new members for 2013. Their names are listed below. Some of them are first year fliers. Please give them all the assistance that you can when you see them at the field.

Kris Aurandt	Annika Patton
Nickolas Aurandt	Caleb Patton
Joe Brennan	Paul Patton
Joshua Colbeck	Ronald Riley
Allen Howe	Kyle Ruesch
Preston Howe	Patrick Springman
Grant Johnson	Chris Swentkofske
Anthony Larson	Greg Thody
John Odmark	Noah Venegas

The 2013 ACRC Contest Season is now history. The only events still to occur, other than Fun-Flies, are the ACRC Scale Fly-In on August 24,

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ACRC Electric Fly on September 7 and the Fall Fly-Out on October 5.

The next meeting will be at the field on August 15 at 7:00 PM. This is the last meeting at the field for 2013. **THE SEPTEMBER MEETING WILL BE AT RIVERWIND.** There will be a fun-fly on Saturday August 17.

Stan Zdon

## SAFETY IS THE NAME OF THE GAME

*by Jim Wallen, AMA Insider Club Editor*

Every AMA club has a safety officer. It is a requirement if the club is to be AMA sanctioned. All too often we quickly identify a safety officer and then go on our merry way, paying little attention to significant safety issues. Let's identify a few of them and see if they might make sense for your club.

AMA issues a safety code to all AMA sanctioned clubs every year and it should be posted at your flying site. This listing of safety requirements has been a valuable asset over the years that has contributed to minimizing accidents and injuries. Take the time to read it to refresh your memory.

Have your safety officer give a brief presentation at one of your club meetings. Perhaps having a guest speaker come to the meeting and give a talk about procedures to follow for such things as lacerations, heart attack, or some other potential problems that could arise.

Keep the address or location of your flying site prominently posted in case of an emergency that requires medical assistance. Minds can get fuzzy when you are in the middle of an emergency! If you have to make that 911 call, you need to know where you are.

We have a lot of hard-earned cash invested in our aircraft. They don't stay in good shape forever. Take the time to periodically check them out for wear and tear. This is especially true for batteries. Electrical failure is the source of numerous unexplained crashes.

Pilot error is always a major concern. Maybe conducting classes for pilots to fine-tune their skills would help out. Many clubs provide training for the new fliers but pay little attention to pilots who have successfully soloed. There is always room for improvement.

Courtesy and common sense often fix a potential safety issue before it becomes a problem.

Our hobby often puts us in potentially hazardous environments. We need to think of safety issues that are not directly related to flying. Do you have an area at your flying site that is a great hangout for snakes? Stay away if at all possible.

Extreme sunlight can be damaging to your eyes. Take a look at getting some proper eye protection. Some tints of color actually let you see your aircraft more clearly. Polarized lenses are a great form of protection. Our hobby is notorious for putting us in jeopardy from sunlight. Always slather on sunscreen before going to the field. It is a good idea to reapply during the day. Skin cancer is a terrible thing!

Take the time to think about safety. Safety doesn't happen all by itself. It takes your thoughts and actions to make it happen. Modeling and flying is one of the best sources of fun and enjoyment that I can think of. Creating safe environment will help keep it that way.



## NAME THE PLANE

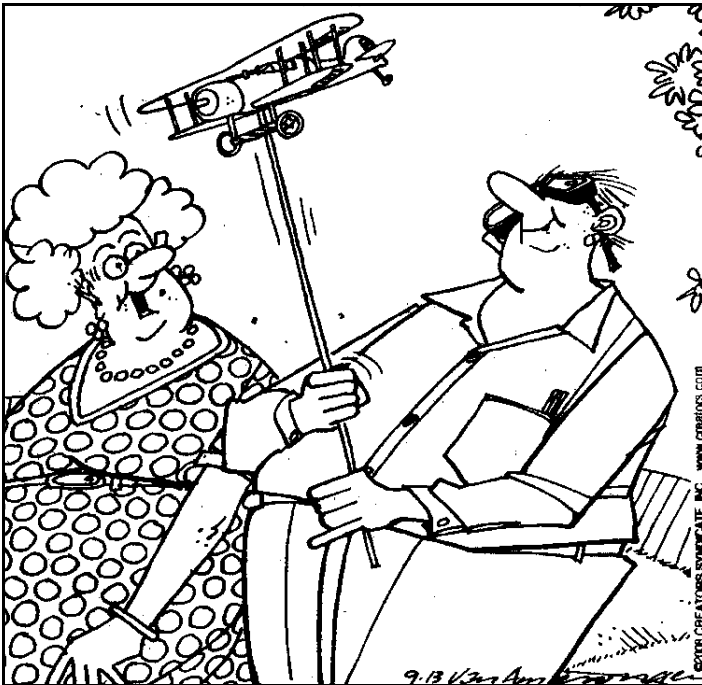


## Anoka County R/C Instructor List

Please note that it is up to the new pilot to contact an instructor for flight lessons. It is good practice to get a hold of an instructor prior to a training session.

Scott Oleson	(763) 742-0642
Lead Instructor	
Matt Campson	(612) 987-0191
Dale Anderson	(612) 481-6405
Bob Moser	(612) 325-7942
John Sager	(612) 386-9319

## Ballard Street by Jerry Von Amerongen



You're doing some fancy flying today, Dan

## REAGAN QUOTES

"Here's my strategy on the Cold War: We win, they lose."

"The most terrifying words in the English language are: I'm from the government and I'm here to help."

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

## ON THE SAFE SIDE

by Jim Tiller, *On the Safe Side* Author

### DISPOSING OF BATTERIES

You can't be in this hobby without using batteries. With the proliferation of electric flying, even more batteries entered our lives. These batteries eventually go bad, so we are faced with how to dispose of them. For many years it was the trash can. Now, with all the exotic combinations, it is more of a hassle. "Green" environmental laws and regulations are also a consideration. In some states, it is illegal to dispose of any kind of battery, even alkaline cells, in the trash.

The easiest and most environmentally friendly way to dispose of all your batteries is to put them in a plastic bag, and when you've collected enough, take them to a battery recycler. Many hardware stores or homes centers have boxes or bins that will take batteries. There are also battery retailers such as Batteries Plus or Interstate Batteries that will take them. There is even a website that will send you a box to put your batteries and other hard-to-dispose-of items such as fluorescent bulbs. When it's full, you just drop it in the nearest FedEx box. ([www.lamprecycling.com/](http://www.lamprecycling.com/))

LiPo cells are the ones that are the biggest concern for most fliers. There is plenty of Internet information about the care and feeding of LiPo batteries. You simply *cannot* charge LiPo batteries without a proper peak charger and a fireproof container. If they overcharge, they build up gases. If those gases produce enough pressure, the cells will rupture energetically (notice I did not write explode), releasing those gases that then combust mixing with air. Most have read and heard the horror stories associated with LiPo batteries.

But this essay is on disposing them. If you simply must dispose of them yourself, here are some simple instructions, but you can search the internet for a more complete set.

Before you dispose of a LiPo battery, you should discharge it. Don't try to discharge a damaged

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pack. If it is damaged, skip down to soaking the cells in salt water. Many LiPo chargers also discharge the same packs. If so, just discharge the battery to the lowest point allowed on your charger (less than 1 volt per cell). Follow the same safety instructions while discharging as you do for charging.

If your charger won't do it, a 12-volt light bulb wired between the poles will do the job for smaller packs of three cells or less. Let the pack discharge an hour or so after the light bulb goes out.

Soak the cells in salt water ( $\frac{1}{2}$  cup of salt per gallon) for a few days. Soaked and discharged LiPos are safe to put in the trash or the recycling bag depending on local regulations.

The biggest environmental concern is the Nickel Cadmium (Ni-Cd) and Nickel Metal Hydrides (NiMH) batteries. First of all, the metallic residue can be recycled and reused. Second, they are toxic waste if they find their way into the landfill and/or our water supply.

## Tips & Tricks

### AIRPLANE CLEANER

To clean your airplane after a day at the field use my formula, which is as follows:

- 5 cups of water (40 oz.)
- 1 cup of denatured alcohol (8 oz.)
- $\frac{1}{2}$  cup of ammonia (4 oz.)
- 1 oz. of dish detergent

—by Tom Voorhis, West Jersey Radio Control Club, Gibbsboro, New Jersey



## NAME THE PLANE

It's not a B-29

## How to Fix Warps, Dents, Twists, Or Un-Crunch Foam Airplanes and Parts

by Ed Anderson ([aeajr@optonline.net](mailto:aeajr@optonline.net))

I never crash, but maybe you do. Crashing can crunch the foam of a Radian or other foam airplanes to the point that the parts don't fit or you introduce a twist or warp as you try to put it back together. The repair can also introduce a twist or warp in the fuselage.

I am going to outline a method of getting the foam back to straight or un-crunching parts. This can also be used to take twists or warps out of new parts and it will take dents out of your foam wings or even bagged wings, like DLG glider wings.

Let's suppose your Radian, Easy Glider, Easy Star, etc., has a tendency to turn in the air requiring you to trim in a lot of rudder to get it to fly straight. How can you fix it? Well first you have to find the cause. Turn your foamy over and sight down the fuselage seam. It should be straight from nose to tail. Or, tape a piece of string to the tail end of the fuselage, again inverted and then gently stretch the string to the nose. It should track down the center of the fuselage. If it does not, you have a warp. We are going to fix it.

This can happen at the factory, from a fuselage not sitting right in the box, or from a crash where one side of the fuselage compressed from an impact. This can also happen if you leave a foam airplane in a hot car for a long time. Believe me, what you will learn here will come in handy for the rest of your foam-flying life.

Heat does wonderful things to foam. It can stretch it, expand it, and help straighten it. You can put twists in or take them out. You can use this when making some foam replacement parts too.

Since we are fixing the fuselage, take the wings off; you won't need them. Take the horizontal stabilizer off if it comes off. Tape the rudder so it is straight.

Try to figure out where the warp is centered. I am going to guess it will start behind the wings, somewhere along the boom. Flex the fuselage to see if you can get it to look straight. You may have to use something to apply pressure in the center of

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the curve on the opposite side to get it straight. If you can flex it to straight, you can fix it. Basically you are going to apply heat to the inside of the curve as you flex the boom away from the curve and a bit past straight. As you apply heat, the gas that is trapped in the foam beads will expand. As the beads expand, they extend that side of the fuselage making the heated side longer and helping you take that warp out. If this was caused by a crash this will un-crunch the crunched beads.

This goes under various names, but you might hear it called the Elapor soup method as it really became popular with the Multiplex Elapor foam models. But it works well with most bead-type foams. Easy Star pilots would crunch the nose of the airplane in a crash. They would plunge the nose, Elapor foam, into boiling water and the foam would expand, thus the soup reference.

### Heat Methods

**Hot running tap water:** You hold the part to be expanded under the hot water while you shape it. In this case you flex the fuselage just a little past straight while it is under the running hot water. The foam beads will expand, extending that side of the fuselage. After a minute or two, take the fuse out from under the water, still holding it and let it cool. Then sight and see if it took. Go back under the water if needed. As tap water is only 100-140° sometimes this is not hot enough to do the job. So we need more heat.

**Place the part into boiling water:** This works well for small pieces like a rudder, a wing tip, or a crunched nose. You can also pour boiling water over the area.

**Steam from boiling water sometimes works.** Use a big pot and make lots of steam. This works well for large areas such as wings.

My favorite is using a heat gun/hair dryer to heat a wet cloth or paper towels. Don't let the towels dry out completely. You heat the wet cloth till it steams and starts to dry out. You have the part stretched while you do it, just as above.

By the way, this works well for bagged composite wings, like DLG glider wings. It can take a dent out by heating the foam under the skin. I use paper towels and my covering iron. They magically

disappear. This works well for dents in your Raidan, Easy Glider, etc. Here you want to be more focused, so a covering iron or a hot clothes iron is best. Just use the tip to focus the heated area over the dent.

In each case, the purpose of the water is to keep the foam from getting too hot and melting. We want to get it up to about the temperature of boiling water, though sometimes hot tap water, 120°-140°, can do it too.

Using these methods I have taken Radians and Easy Gliders that have been broken into numerous smashed and crushed pieces, reshaped the foam, and glued it back together with great success. Recently I shredded my Radian while Slope Soaring. A high-speed crash through bare tree branches did a nice job on the fuselage. The wings got a few dents, but the fuselage was in five pieces. It flies today!

Regardless of the method, you want to spread the expanding heat over a somewhat broad area, not a pinpoint. Again, in the case of dents in a wing you want to be more targeted. That is why I use my covering iron rather than a heat gun.

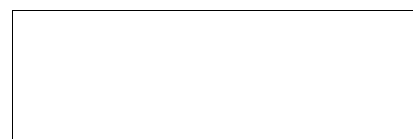
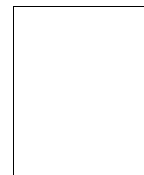
In the case of the fuselage we are using as our example, you want to expand the most in the center of the warp curve, but you want to extend that somewhat forward and back of the center or you will have to overheat one area too much and perhaps not have enough expansion ability to make it work.

Try it! If you have some scrap Styrofoam or other beaded foam you can try this out for practice. Take a foam drinking cup and cut out the bottom. Now do a top-to-bottom slice. Use the method above and see if you can take the curve out of the foam and make it flat. You may not get it totally flat but you will see the impact. Note that the cup material is thin so don't heat it too much at once or you will expand all of the beads instead of just the ones on the inside of the curve. The heated beads will get bigger.

When working on a fuselage, wings, or other parts, be sure you don't introduce a twist as you do this or you will have another problem. But no worries, that can be fixed too. *Clear skies and safe flying*

# SERVO CHATTER

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

## SERVO CHATTER

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*Stan Zdon*

### ACRC SPONSORS

King Kong Hobbies  
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Cambridge State Bank  
T & G Hardwood

*Deadline for the  
next newsletter is:  
September 1, 2013*

## CALENDAR OF UPCOMING EVENTS

Thursday – August 15

- ACRC Meeting

Saturday – August 17

- ACRC Fun Fly

Saturday – August 24

- ACRC Scale Fly In

Saturday – September 7

- ACRC Electric Fly

