



ACADEMY OF MODEL AERONAUTICS CHARTERED CLUB #1255

SERVO CHATTER

A PUBLICATION OF:

ANOKA COUNTY RADIO CONTROL CLUB, INC.

JUNE 2013

THE MEETING WILL BE THURSDAY, JUNE 20, AT THE FIELD!!

PRESIDENT'S CHATTER

It's the middle of June and I have been dodging raindrops and showers. I have stopped at the field from time to time and man it looks good. The boys that fly in the morning (The Everyday Is Saturday Guys) have been doing a fine job on the yard work. Thanks guys!

We have a Warbird Fly-In at the end of the month and hoping to see some more people in attendance. The fun scale attendance was on the thin side, but fun nonetheless. We still have a couple more meetings at the field and I am looking forward to seeing some more people.

Also special thanks to the trainers. I have been helping out on Wednesdays and having a great time. The students are progressing and it puts a smile on my face.

Fun Scale report: The contest had 6 pilots on a fine calm day until the rain came in after lunch. A total of 2 rounds were flown to put the event in the AMA books.

Expert: Matt Campson took first place and Stan Zdon did a super slow take off with his Cub that did not end well. Sorry Grandpa.

(Editor's Note - The Cub is repaired and has 3 flights.)

Advanced: Andy Thunstrom took first place and Marc Davis also had a mishap with his Lear jet. It got away from him, not good. It looked awesome in the air and was fun to watch.

Novice: There were two new contestants with a great effort by both fliers. Victory went to Christian Cone and Chris Elliot took second place. Thanks guys for the participation. I hope you all had fun. The next contest is the Pattern Contest on July 13. Don't be afraid to come out and fly.

That is it for the month, till next time fly safe have fun.

Andy Thunstrom

MEMBERSHIP NEWS

The meeting this month will be the second one at the field for 2013. The road should be in good shape and hopefully it will be a good day for flying. The starting time is 7:00 PM and if you get there early you can get in some flying before the meeting. Remember that you should be using your current membership card to mark your channel and guests should be using their AMA card to verify their AMA membership.

The nearest hospital is in Wyoming, MN and is the easiest to get to. Just take Hwy 22 (Viking Blvd.) east across 35W and turn right on Hwy 61. The hospital is about a block south of Hwy 22. If you have to call 911 for an ambulance they will want to know where the field is located. The road where we turn off of Hwy 65 is 197th and the address of Central Wood Products 19801 NE Hwy 65, East Bethel.

The GPS coordinates of the field are:

45⁰ 19' 44.4" North Latitude
93⁰ 13' 52.2" West Longitude

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On June 29 there will be a Warbird Fly-In. If you have a plane that has military markings bring it out to the field and fly. The ACRC Pattern Contest will be Saturday, July 13. There will be trophies and a good selection of prizes. We will also need some helpers, especially flight judges. Get your airplanes ready and get out and practice. If you want to help at the Pattern contest contact Matt Campson at (612) 987-0191. Registration is at 9:00 AM and flying starts at 10:00 AM.

THE NEXT MEETING WILL BE AT THE FIELD ON JUNE 20 AT 7:00 PM. The summer meetings will be at the field through August. There will be a fun-fly on Saturday June 22 at 10:00 AM.

Stan Zdon

ACRC TRAINING

Training finally officially kicked off Wednesday May 8th. Many of us met at the field even though it was raining so we could at least pre-flight some airplanes. Eight to ten of us were huddled around a picnic table under the shelter looking over airplanes when the rain stopped. OK QUICK, LET'S FLY!!! It actually turned out to be a pretty decent evening for flying; I think everyone got in at least two flights before the sprinkles started again. Since May 8th I think we only scrapped one night and we have been getting quite a bit of flying in. I think it's going pretty well so far and



everybody seems to have a great attitude towards the training, which makes it fun! I'm having great time doing this, its been many years since I've

been part of a training team. With that I need to thank the team!! Bob, John, Matt, and Andy. Thanks guys for all your time, you guys are awesome to fly with and are a HUGE HELP. The pictures are from May 8th between rain showers...



2013 SOLOS

So far only Chris Swentkofske has soloed but several fliers are getting really close!!

TRAINING TIPS

I'm calling it Training Tips now because someone else is also using "Tips and Tricks" as seen in last months newsletter!!

This month is geared more towards the new pilots in training. One of the biggest challenges for new pilots is the ability to trim their own airplane in flight. The most common changes are in pitch, either a power change was made or simply fuel burn is moving the CG aft. Often during a flight I hear "it seems like it wants to keep climbing." At that time I momentarily take my eyes off the airplane to add a few clicks of down elevator trim

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and then ask, "is that better." This is a skill that can only be obtained by practice and is extremely important to be efficient with. All trim adjustments should only be made by feel, not looking down at your transmitter to see if you're adjusting the right one. If you have a simulator, mess up your trims, take off, re-trim the airplane, land AND repeat! When you think you have it all figured out, have your wife mess it all up and try it again!! P.S., this is also a good way to create the illusion that you are including her in YOUR VERY EXPENSIVE, TIME AWAY FROM HER, HOBBY!!!

See ya all at the field!!

Scott Oleson

MEETING MINUTES

May 16, 2013

Vice President: Showed off Raffle prizes, don't forget to send Mark Tellevik photos for Facebook

Training: We currently have 16 trainees and training is proceeding well on Wednesday nights. Currently there are 4 instructors. The new club trainer is going well and using 2 four channel DX radios for buddy box flights. Tony Larson donated 2.5 Super Cubs as foam trainers to the club.

Members: 95 members so far.

Safety: Be careful when you are starting your planes and carrying them to the flight line. If you're here at the field watching them, give them a hand. Also, don't run up your engine when someone is in front of or to the side of your plane. Stan went over field safety and flying areas at the meeting.

Events: The Spring Fly in is in the books, about 5 flyers but lots of fun with lots of people just showing to to watch and visit. June 1 was the Fun Scale and the Pattern is on July 13. Both these events are low stress judged events. Stan sent out the pattern maneuvers with the newsletter a few months ago. The Warbird fly-in is on the June 29, this is usually a well-attended event and lots of fun to watch.

New business:

The landowner needs to get into the sod farm and needs to cut through the north end of the field to load sod. The trucks will cross the northwest end of the taxiway but should be well clear of the runway. If you're out flying when they are cutting sod, keep an eye out for sod trucks at the north end of the field.

Stan talked about putting a new grass field over the runway. Estimates are about \$2500.00 to put new dirt and sod. No action was taken at this time.

Show and Tell



Stan Zdon showed his finished Balsa USA Sopwith Pup that is covered with Solartex. Stan stated that it looks nice thing about the Solartex is that it can be cleaned up with some acetone. It's powered with a Saito 150. Wing area: 1900 sq.in., 13 pounds with about a 14 oz./sq.ft. wing loading.



Roy Carrigan brought his Easy Tiger P51B. He likes this model, as there are not too many B-models out there. He filled in the panel lines and covered the plane in flight metal. He modified the

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Robart tail wheel so that it will retract forward. He also modified the radiator door and reworked the landing gear bays to look more scale and to use Robart retracts.

Raffle:

| Prize | Name |
|--------------------|------------------|
| Servo extensions | Marc Tellevik |
| Fuel | Virgil Okeson |
| Cordless drill | Jeff Flander |
| Starter w/ battery | David Willemssen |
| CA glue | Roy Carrigan |
| Remote glow | Daren Bitzer |
| Twist | Scott Oleson |

Marc Davis

EVENT CALENDAR

| | |
|------------|-----------------------------------|
| June 15 | SPRC Scale Fly -10am-5pm |
| June 15 | TCRC Electric Fly & Campout |
| June 15 | Sodbusters Float Fly |
| June 22 | ACRC Fun Fly - 10am start |
| June 22 | Grassfield Heli Fly 9am-2pm |
| June 28-30 | MARCEE 3M E-fly |
| June 29 | ACRC Warbird Fly-10am |
| July 13 | ACRC Pattern Contest |
| July 13 | SPRC Frankfurter Fly |
| July 20 | ACRC Fun Fly - 10am start |
| July 20 | Sodbusters Float Fly |
| July 20 | TCRC Big Bird Invitational Fly-In |
| July 24 | ACRC Float Fly |
| July 27 | SPRC Heli Fly 10am-5pm(?) |



NORTH AMERICAN O-47

ACRC SAFETY

Check, Check! One Two Three

What is made of paper, goes around an airplane, and can help with keeping the airplane in the air? If you said a “A checklist” then you are right. On a recent evening I watched several of the club’s instructors giving tutelage to the newest members of the club. Prior to going out to the flight line, the instructors went over a quick, but thorough, preflight with each student getting them in the habit of inspecting their aircraft prior to flight. And why wouldn’t they, both instructors fly full-scale models (i.e. real planes)

Prior to flight, pilots of manned aircraft take a checklist around their airplane to inspect for any obvious signs damage or distress that could cause their flight to go awry. They look for damage to a wing, loose or binding cables, properly working electronics, or anything that could lead to a failure of the mechanical parts or systems once the airplane is underway, prior to the airplane being put up in the air. Typically this checklist is a unique set of directions that are kept with the airplane in order that the pilot can use to complete a safety inspection of the airplane prior to flight. This list is also laid out in a logical order grouping areas together so that the pilot can check one whole area at a time before moving on to the next area. A checklist such as this helps a pilot to complete a check on every important area on the airplane making sure that no area is missed.

When it comes to taking out anything from our Park flyers to the big gassers, there are several different checks to perform prior to hitting the flight line, some of which will be the same for every plane you fly. As such I would recommend an overall flight checklist that you perform on each plane. A sampling below might get you started on creating your own list:

- **Radio**
 - On and charged
 - Bound to the correct plane
 - Range check (min. once per day)
 - 72 MHz : Frequency clear / antenna extended

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- **Balance**
 - While battery is in place
 - With fuel tank empty
- **Flying surfaces** (wing, elevator, rudder)
 - Free from damage
 - Attached securely (rubber bands or screws)
 - Aligned properly
- **Control surfaces,**
 - Hinged surfaces move freely - no loose play
 - Control surfaces move in correct direction
 - Correct rate and correct deflection
 - Control surfaces trim at neutral
 - No binding of linkages
 - No servo movement under deflection
- **Landing gear,**
 - Secure and properly aligned
 - Wheels turn freely
 - Steering works properly
- **Receiver**
 - Mounted securely
 - Servo leads all attached
 - Screw, nuts, bolts are all secure
- **Motor**
 - Mounted securely
 - Prop connected tightly
 - No binding or rubbing of moving surfaces
 - Linkage moving securely
 - Fuel lines/battery cables not loose or damaged
- **Power systems**
 - Properly fueled (New, clean fuel only)
 - Battery charged and checked for damage
 - Fuel tank and/or battery securely attached
- **Power up**
 - Free from excessive vibration
 - Nothing becoming loose
 - Airplane retains power in nose up position

Different airplanes may need additional checks that can be added to a plane specific list that might include retracts, smoke systems, FPV cameras, and so on. To make the check useful it needs to be easy to use but comprehensive enough to cover every area on the airplane that could malfunction. Having a set of checks to complete that are common to every one of your airplanes will make going through an initial check of the airplane second nature, quick to perform, and reliable.

The question is: does a R/C pilot need to perform the same safety check? Since there are no souls to be lost aboard a R/C airplane, a thorough safety check is probably not as important. That doesn't mean that it doesn't hurt in the wallet when a expensive model goes full speed nose first into the dirt because 30¢ servo screw was loose. It also doesn't mean that I am pulling apart my indoor foamy to make sure that all the linkages are secure and the proper lights are blinking. There has to be some balance between carefree flying and performing an exhaustive 50-point checklist. Speaking of balance, I might check the CG real quick on that micro-flyer along with making sure that the battery is strapped in tightly and all the control surfaces are moving properly before I hand launch in the living room. Those three quick checks still make it a safety check.

Over all, take some time to make your own safety checklist and use it, it may save your plane from an early dirt nap. By the way, I would have also accepted "preflight inspection safety check list" as an answer to the opening question.



Picture: New pilots perform preflight checks as Highwing trainers dominate the setup stations during the club's training day.

Brett Ohnstad

ON THE SAFE SIDE

“Beware the Hun in the Sun”

by Jim Tiller (*jtiller@hotmail.com*)

The phrase “Beware the Hun in the Sun” dates back to World War I. Allied pilots used this idiom to remember to watch for enemy airplanes using the glaring sun to mask their diving attacks. It remains a standard combat tactic to this day.

What does this have to do with safety? How often have you heard the dreaded, “I haven’t got it,” while standing in the pits or on the flightline. Although these are often mechanical or radio issues, sometimes they are not. We have all experienced the temporary loss of orientation in flight and with those new to the RC skies, it is more common than we’d like to think. Loss of control is one of the most common reasons cited in severe crashes. Therefore it becomes a high-priority safety concern.

Although we usually don’t have to worry about gun toting RC airplanes diving on us spitting bullets, the glaring sun can be a problem to even the most experienced RC pilots when our airplane flies across the orb of the sun. For those few seconds and the time it takes for your eyes to recover, you have lost control of your aircraft.

What can we do to minimize the problem? First, given that we aviate mostly for recreation, we can choose when and where we fly. We can choose to postpone flight until the sun is in a more favourable position or find a spot of sky that does not bring our line of sight across the sun.

But at a contest or a fun-fly sometimes we don’t have a choice. Anything else we can do? On bright, sunny days, wear good-quality polarized sunglasses (they should also be ANSI-rated safety lenses as well - see a previous safety column). Remember that even the best sunglasses will not protect your eyes from damage when looking directly at the sun, but they will help with the glare and minimize the time your airplane disappears in the sky. Combine glasses with a hat or cap with a bill. This gives you a built-in sun visor.

But gizmos only go so far. What do you do when your airplane disappears in the sun? The simple answer is don’t panic, it will reappear again on the other side. Keep the sticks where they were and let the airplane do the flying. Try not to do anything frantic until you have reacquired the plane on the other side. This may sound like simple advice, but it is easy - especially for new pilots - to get disoriented.

One of the most common problems is to mistake the orientation of the airplane as it reappears as a shadow. Once again, let it fly for a moment as you re-establish your visual cues as to attitude and direction. If that fails, give a small stick movement to the left. If it turns left, it is going away from you, if it turns right, it is coming toward you. These small test movements will soon get you back to normal. This advice is also good for newbies when your airplane gets out there so far you can’t see it clearly anymore.

Another problem encountered when you go through the sun is white spots that appear in your eyes from the sensory overload. These spots can be bad enough that you can’t see your airplane. In this case, remember the spots most often occur in the center of your vision, so re-establish contact using your peripheral vision.

In this or any serious loss-of-control situation, immediately call out for help. As I began this discourse, the words “I haven’t got it” will certainly get the attention of those around you. Briefly explain your situation and have them help you return the plane to level flight. Even if you are an experienced pilot, hand over the transmitter if need be. Don’t be embarrassed or prideful. Safety should be your first concern. And it could also save one of your expensive airplanes.

Summer Events

With summer coming, many of you are planning your summer flying schedule. I encourage all of you to try to get to at least one out-of-town event. First, you get to make some new friends or acquaint yourself with some old ones. You also get to see lots of beautiful airplanes. I always come away with some new ideas stolen from

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someone or something at an event. I enjoy seeing how other people mount or rig their systems. I am always impressed by the creativity I see in our hobby.

But perhaps the best part is to expand your horizons. I have been part of the same club for about 15 years. There is a comfort that comes with that history. But it also makes you complacent. I know our safety rules and our flying styles and don't even think much about it anymore. If you go to another club's event, it forces you outside those familiar surroundings and makes you a better, safer flier.

When you do go to an outside event, the safety rules are a two-way street. It is up to you as a participant to know the safety rules of the club field and abide by them. It is also incumbent on the hosting club to make sure that all the attendees all have the field rules and any particular event safety rules or any other issues of concerns.

At any event, remember the best rule is the Golden Rule. It never fails.

Happy summer flying.

Some Rules of the Air

1. Take-offs are optional; landings are mandatory.
2. When in doubt, stay at altitude. No one has ever collided with the sky.
3. The propeller is just a big fan in front of the plane to keep the pilot cool. When it stops you can see the pilot start sweating.
4. The only time you have too much fuel is when you are on fire.
5. Stay out of clouds. The silver lining everyone keeps talking about might just be another airplane traveling in the opposite direction.
6. You start out with a bag full of luck and an empty bag of experience. The trick is to fill the bag of experience before emptying the bag of luck.
7. There are three simple rules for making a smooth landing. Unfortunately, no one knows what they are.

2 BLADES vs. 3 BLADES

I am periodically asked to recommend a 3-blade prop for an airplane that currently has a 2-blade prop or vice versa. Like most questions like this, there are no "perfect" cookbook methods. However there is a cookbook method that works pretty well.

If you have a 2-blade prop which works well and want to try a 3-blade prop which is a pretty good match, try this: If the diameter of the prop is D and the pitch is P , multiply $D \times D \times P$ and you get what's called the load factor of a 2-blade prop. For example, the load factor (LF) of a 10x6 2-blade prop is $10 \times 10 \times 6 = 600$. Multiply the LF by .6666667. For the example, you get a "modified" LF of 400. Now pick the diameter of a 3-blade prop you might like to try. Let's try a 9" prop. Divide the "modified" LF by the diameter you want to try squared: $400 \text{ divided by } 9 \times 9 = 4.93$. 4.93 is the pitch of a 3-blade 9" prop that you should try, but you won't find a prop with that pitch, so try a 9" 3-blade prop with 5" pitch.

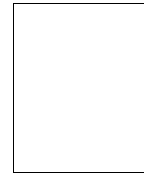
Now let's go the other way. Suppose you have a 3-blade prop which works well and want to try a 2-blade prop which is a pretty good match, try this: If the diameter of the 3-blade prop is D and the pitch is P , multiply $D \times D \times P$. Then multiply that by 1.5 and you get the LF for a suitable 2-blade prop. Let's try another example. You have a 9x6 3-blade prop. Multiply $9 \times 9 \times 6 = 486$. Then, multiplying by 1.5 gives 729, the load factor for a suitable 2-blade prop to try. Let's get wild and see what pitch is required for a 14" 2-blade prop to be a match. $729 \text{ divided by } 14 \times 14 = 3.72$. This means that the closest match of a 14" 2-blade prop is to a 9x6 3-blade prop is one with a 4" pitch.

Ron Van Putte

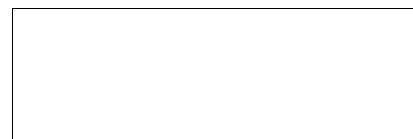


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*Deadline for the
next newsletter is:
July 1, 2013*

CALENDAR OF UPCOMING EVENTS

Thursday – June 20

- ACRC Meeting

Saturday – June 22

- ACRC Fun Fly

Saturday – June 29

- ACRC Warbird Fly-In

Saturday – July 13

- ACRC Pattern Contest

