



ACADEMY OF MODEL AERONAUTICS CHARTERED CLUB #1255

SERVO CHATTER A PUBLICATION OF: ANOKA COUNTY RADIO CONTROL CLUB, INC.

JUNE 2018

THE MEETING WILL BE THURSDAY, JUNE 21, AT THE FIELD !!

FROM THE VEEP June Update

Here we are midway through the year and only a quarter of the year's accomplishments have been achieved.

I wish I could say I could control the lack of work done on our grass runway. Unfortunately the contractor is still trying to get to our field. The work that was to be done in late April or early May was delayed due to that late snow and all of us in the construction area are still playing catch up. I have purchased the grass seed and a small bit of soil has been dropped at the field with 10 more yards coming with the landscape contractor. The later in the year it gets the dryer it gets and grass growing without irrigation becomes more difficult but, not impossible.

I will see you all at the June meeting.

Jeff Slater

MEMBERSHIP NEWS

JUNE 2018

The meeting this month will be the second one at the field for 2018. 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. Because of a recent By-Laws change nominations for the ACRC Board now take place at the May and June meetings with the election at the July meeting. The four members whose terms end this year are Tom LaRose, Brett Ohnsdtad, Bob Proulx and Mark tellevik. At least four nominees are needed to fill the available positions. Tom, Brett and Marc agreed to stay on the board for another term. Nominations to fill the 4th position are still open at the June meeting if you want to be nominated and join in on the FUN! Please consider serving on the board and becoming a FBM.

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:

- 45° 19' 44.4" North Latitude
- 93⁰ 13' 52.2" West Longitude

THE NEXT MEETING WILL BE AT THE FIELD ON JUNE 21 AT 7:00 PM. The summer meetings will be at the field through August. Because of the Pattern Contest on June 16 and 17 the fun-fly will be on Saturday June 23 at 10:00 AM.

Stan Zdon



A Look Back

JUNE 2000

18 Years Ago

Latitude 45 Degrees, 19.89 minutes north Longitude 93 Degrees, 13.58 minutes west That's the precise GPS location of our flying field, thanks to Bud Durant and Mark Felland. This information was forwarded to the AMA to create a nationwide directory of member flying sites.

In not so good news, Mark added, he managed to obliterate his much-loved Four Star Forty at the St Paul field. I think I can hear Taps playing in the background.

The Spring Fly-In was well attended with 29 registered pilots and a rough head count of 60 plus spectators.

Ten pilots participated in the May Fun-Fly

With the Pattern Contest approaching fast, lists of the required Sportsman and Intermediate maneuvers were published. Judging by the descriptions, this year is the beginning of the changeover from "Ballistic" to "In the Box"

JUNE 1990

28 Years Ago

Contests, Contests, Contests is precisely how Jim Peterson's Presidents Corner column started out, and he was right. A Fun-Fly, Pattern, Scale were scheduled plus a helicopter only Fun-Fly was in the works for June.

Dan O'Link gave a lot of valuable information regarding Float Flying. So much info, that it required 2 separate articles to contain it all.

Jeff Slater's Who's Who Column had Curtis Young and Dan O'Link in the spotlight.

Keith Moldenhauer reiterated that preflight checklists can be a lifesaver. A Telemaster belonging to Gene Janssen started its flight ok, but wouldn't respond to aileron input. Fortunately, the flight ending safely and the boys discovered the aileron servo had fallen out of place. That could have ended in so many bad ways.

Tim Karash

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ACRC MINUTES

Board members present:

Virgil Okeson, Marc Tellevik, Stan Zdon, Tim Karash, Bob Proulx, Tom LaRose, Brett Ohnstad

23 members present.

Membership Report: As of today, we have 99 members

Treasurer's Report:

Expenses: \$214.98 Income: \$1582.13

Safety Report:

Brett Ohnstad will need feedback from our membership regarding the changed airplane starting areas. This is to eliminate any confusion and put us all on the same page.

Event Update:

Spring Fly-In Saturday May 19th starting at 9 AM.

The club monthly Fun-Fly will take place first, to start off the festivities.

A Pattern Contest Primer will be held on June 2nd at 10 AM. Brian Dorff will demonstrate the maneuvers and answer questions.

The Pattern Contest will be held on June 16th & 17th

Training Update:

So far the training crew has 4 club members and 5 new members in training.

Old Business:

63 yards of sand from the Beaver Brook gun range was placed on our access road and spread by Tim Hoffman. More will be added in future after this is packed down.

Grass runway was rolled and compacted from asphalt to east ditch. Additional fill and seeding will be completed in the next several weeks.

Discussion during previous meetings has led to confusion regarding grass height. It was decided by the members that all mowing to be at one level.

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New Business:

It's that time of year again when Board Member terms are coming to an end: Tom Larose, Brett Ohnstad, Marc Tellevik, and Bob Proulx are up. Unfortunately, Bob Proulx will not be able to serve again. Stan Zdon made a motion, 2nd by Jeff Flander, to accept Tom, Brett, and Marc's nominations. A fourth person will be "Located"

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Show and Tell:

Dave Willemssen brought a scratch built "Flying Bar Stool" that he calls a Pic Stick. Two (one top, one bottom) thrust-vectoring motors are mounted on top of four, 3 ft tall vertical sticks. It flies in a vertical position, tilts to side for directional control. A quad copter style controller is used for stability. LED light strips were added for visual orientation.

Raffle Prizes:

1st Dave Willemssen	No Gravity foamie
2nd Brian Goodspeed	Clamps set
3rd Ed Belmore	Soldering iron
4th Dave Willemssen	Hex wrench set
5th Brian Goodspeed	CA glue

Gift Certificates

King Kong: Brian Williamson Duane Orson Brian Goodspeed

Sky Hobbies: Bruce Martin Lucky LaRose Lucky LaRose

Flightline Gifts:

Dave Willemssen Ed Belmore

Tim Karash

ACRC SAFETY

A few years back I picked up a couple racing quads and a camera and transmitter all with the intent of flying FPV (First Person Video). Although I made a pretty decent ground station I found that I was uncomfortable trying to watch a

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TV screen while flying. I was always looking up from the screen at the airplane and I found that to be distracting. Also, I seemed to have a lot of problems with glare off the monitor making it difficult to see what I was doing. Others seem to find this type of setup satisfactory but it was not right for me.

Then I found that I could get a base pair of Fatshark Teleporter V4 FPV goggles for under \$100 new. Sure they were low resolution (320x280) but they had a head-tracking module built in making them useful to connect to a camera gimbal. Turn your head left and you can look down your wing to line up your airplane onto the runway. Well at least that was the plan. The video screens were small enough that it was like sitting in front of a big screen TV but covering up all but one corner of the viewing area. Not the immersive experience that I had hoped for

Time for a bigger, better pair of googles. That's when I found a set of Fatshark Dominator SE FPV Goggles. These have a higher resolution (640x480) which is still not the highest resolution but the screen was now more like sitting in front of a big screen TV. No head tracking built in but I was able to pop in a diversity receiver for almost crystal clear video reception and now I am set to fly. As a plus, I can always let someone else uses my second pair in order to get a similar flying experience

The only problem is that my eyesight is so bad that I can't focus on anything more than 6 inches in front of my face. Fatshark does provide a set of inserts to help with that issue. They sell a set of plastic lenses in -2, -4, and -6 diopters that cover a wide range of near sighted vision issues and should work for most conditions. This however was not the case for me. A few very short flights with my racing quad showed that I was not able to read any of the information on the periphery of the screen and anything on the screen that was not in perfect contrast seemed to be out of focus for me. This is particularly noticeable when trying to ready information such as indicated battery life or more importantly, the flight mode of the quad. A quad in acro mode is far more difficult to fly over one

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that is in horizonal mode and not being able to see the statues displayed on the screen is imperative. The plastic lenses are OK but not perfect, particularly for someone who needs a -7.25diopter lens.

Two years ago, when I initially bought the goggles, there were no commercially available options available to the visually handicapped such as myself. I can now find two companies online, RHO-Lens out of Germany and CustomFPX out of Hong Kong. The RHO-Lens are the slightly more expensive option but the lenses come in a 3d printed holder that is reported to slide in an out of the goggles easily but hold firm. The only problem that I had with ordering from RHO-Lens is that they do not go past -6.25 diopters. This left me with the only remaining option of going with CustomFPX.

I place my order the first week of April and they arrived about 4 weeks later. The cost was \$45 per pair plus \$15 for shipping. If I were ordering more lenses the shipping would be a flat \$15 for up to 4 pair even of different prescriptions. As an interesting side note; CustomFPX touts itself as a one-man operation so it appears small enough that he is able to control all aspects of the business. Once you place an order you can check the four steps of the completion of your lenses to include: placement of order, manufacturing of lenses, quality control, and shipping.

I slide one lens into the googles and tested it out. Night and day difference. The image was sharp and clear from edge to edge. No blurring or color distortion from the plastic lenses. I am very impressed with the product so far. But will it improve my flying ability? I hope so because I will no longer be able to blame the goggles on my poor performance. I will let you know in an upcoming article.

Brett Ohnstad

SOLDERING CLINIC

Many modelers have so much trouble with soldering, they cease to rely on this very useful, strong, and economical method of making good connections and bonding steel wires together. As an Electronics

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Engineer for 24 years, I have consistently relied upon soldered joints in critical areas such as complex aileron/flap linkages, servo extension leads, and music wire undercarriage assemblies. I can honestly say that no solder joint has ever let me down. The following guidelines will help you achieve good, reliable solder joints, and will hopefully encourage you to be more adventurous with your model's on-board control systems.

RULE 1 Use a small soldering iron for small jobs (small wires and connectors) and a large iron for large jobs (U/C wire, tinplate, music wire, etc.). In a pinch, you can wrap a piece of thick copper wire tightly around the tip of your 'blunderbuss', extending the copper wire tip about 1/2 inch beyond the tip of the oversize soldering iron or gun, thereby creating a 'small' iron. Be sure to run solder around the contact region between the big tip and the coil of wire, to make a good thermal contact.

RULE 2 A good solder-joint is usually made from the standard 60/40 blend of lead and tin. If this alloy is allowed to oxidize by being overheated, or heated for too long, the binding-properties of the solder degrade seriously. DON'T USE solder that has been sitting molten on the iron-tip for more than five seconds. Wipe it all off. Discarded solder blobs are useless. Don't save them. Always use fresh solder.

RULE 3 Keep a piece of dampened (not soaked) sponge nearby to clean oxidized solder off the iron tip. This must be "natural" sponge, not one made from foam or plastic (which melts). You'll find the green "Scotchbrite" kitchen pads (one side bristly, other side sponge) ideal. Clean off your soldering iron tip on this just before you make any solder-joint. The tip of your iron should look bright and shiny just before you apply it. Oxidized solder looks dull and grainy. Get rid of it! I find that I discard 70% of my solder by cleaning it off and replenishing it with fresh. But it's well worth it.

RULE 4 Always use resin-cored solder. You should never need liquid or paste acid-flux if you prepare your work correctly. The resin core melts when you apply solder to the job and acts as a cleaning and flow-agent so the solder will bind properly.

RULE 5 Use only enough solder to bind the two objects together. Extra solder does nothing to increase strength, but only adds weight.

RULE 6 ALWAYS ALWAYS ALWAYS 'tin' both parts before joining together. 'Tinning' means heating the areas to be joined, applying solder to the junction

of the hot tip and the part, and ensuring that the part is evenly coated with a good, shiny film of solder.

JOINING ELECTRICAL WIRES

1. Strip off 3/32" to 1/8" of insulation.

2. Tin the wire so it looks uniform and shiny.

3: If the solder "drags" and looks dull and grainy, apply the iron again, apply more solder, and clean off the excess.

4. Slide a piece of heat shrink tubing (available from Radio Shack, Ace R/C, and elsewhere) approximately double the wire diameter and about 3/8" long over one of the wires.

5. Lay the two tinned ends side-by-side. HEAT BRIEFLY with the iron, so they flow together.

6. Slide the heat shrink tubing over the joint and heat with your heat-gun or the barrel of your soldering iron. Once it cools, pull on the wires to make sure the joint holds.

JOINING STEEL WIRE

1. Prepare the joining surfaces by thoroughly sanding them with sandpaper. This provides a good surface for the solder to stick. Treating each piece separately, heat

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the contact-area with the iron and apply solder. Rub the tip all over the contact area, while applying fresh solder and flicking off oxidized solder, until the contact-area is shiny and well-tinned. While the steel wire is still hot and the surface solder is still molten, quickly wipe off the solder with a dry cloth. You'll notice a different color between the rest of the steel wire and the tinned surface indicating that solder has penetrated the wire surface and has prepared the contact area for binding.

2. Place the two tinned areas together and wrap with fine copper wire. Strands taken from multi-strand heavy electrical cable is ideal, but have the strands ready for use before you start. After wrapping tightly, twist the ends of the binding-wire together (so they don't unwrap). Heat the whole joint with the iron and apply fresh solder. Because you pre-tinned the steel wires, you'll find the solder will readily flow into the joint and adhere properly to the surfaces. Any time you see convex blobs of solder you can bet the joint has not soldered properly. Apply more heat, flick off the old solder, and apply fresh.

> Vincent P. Lipton R/C Report July 1993



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