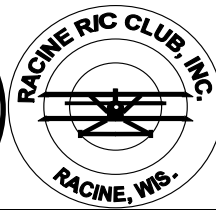




THE FLIGHTLINE



AMA CLUB 668 SINCE 1968
RACINE RADIO CONTROL CLUB INC SINCE 1968

RRCC March Issue
Next Meeting March 21, 2021

WE ARE ON THE WEB
www.racinerclub.com

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Racine R/C Club Meeting Minutes

Sunday: February 21, 2021

Time: 1:00 PM

Location: R/C Flying Field

Open Meeting - Welcome - New Members & Guests – Jim opened the meeting at 1:00PM. 20 members were present.

Minutes - Last Meeting –Reports- There were no changes to the minutes from the last meeting.

President- Jim Litwin informed the membership that based on our by-laws we can have 19 members living outside the Racine/Kenosha area. This is based on a percentage of our total membership.

During discussions with Mark Benish (Mt. Pleasant Foreman of DPW) regarding the plowing of our driveway and parking area, Mark mentioned the village is planning on paving the road leading into the compost this summer. No commitment on when at this time. It sure will be nice not to have to deal with the dust!!

Jim acknowledged the snow removal work done by Darrell Hossalla, Roger Nickolaus (snow blower) and Bill Bylsma (Truck snow plow) which helped make the meeting possible.

Milwaukee RC Association meeting was held via Zoom. Jim does not have Zoom capability so no details on what was discussed. No detail on events for 2021 and there was not an auction this year.

Vice President-Roger Nickolaus had nothing new to report.

Secretary/Treasurer-Bob Johnson

Current membership after dues collected at the meeting.

Open-12
Family-0
Senior-33
Total Membership YTD-47

Wisconsin Non-Stock Corp filing will take place after April 1st.

General Fund-Continues to be healthy. We are well positioned to deal with any expenses (planned or otherwise) for 2021.

News Editor-Dennis Vollrath had nothing new to report and handed out 30 copies of our membership listing.

Field Chairman-Darrell Hossalla informed the membership there will be a wood cutting event this spring (date TBD) and the club needs a new tarp for the wood pile.

Tractor Chairman-Eric Armantrout had nothing new to report.

Web Master-Justin Francisco reported we continue to get 12-24 hits per month on FB and there seems to be a good deal of interest in what we do at the RRCC.

Safety Officer-Dan Pozel, nothing new to report

Compost Director-Jerry Rose reported there are (3) open slots left for compost

duty in November. After these are taken, he will start to double up.

Old Business- None

New Business- Vote was held for 2020 club awards. Below are the winners.

Craftsmanship Award-Lucas Holl
Sportsmanship Award- Jerry Rose
Golden propeller Award-Jim Litwin
Instructor Award-Darrell Hossalla

New Pilots – None

Show & Tell – Jerry Rose showed his new gas motor spark plug/boot removal tool. He is selling these for \$20.00 to club members and \$27.00 to non-club members. This tool makes it much easier to remove the plug connector without damaging it or the cylinder head.

Denny Vollrath has a Spectrum DX7 transmitter selling for \$20.00. (It's sold!) He also brought his new NX10 to show. Very nice radio!!

Raffle Drawing – Bill Bylsma won the raffle and contributed the \$22.00 back to the club. Thank you Bill!!

Close Meeting – Jim closed the meeting with a reminder that the next meeting is Sunday March 19th.

JIM'S CORNER

They say in Wisconsin, "If you don't like the weather, wait 24 hours and it will change!" Well that seems true with our field conditions. We go from record snow depths, where a snow blower was used to clear a path to the flight line, and now the field is all melted clear, and temperatures hitting 60°. Quite a change in a short time.

The pad lock codes were changed on March 1st, and the lock at the first gate was changed to a new one. The new code is located on the bottom of your 2021 membership card.

The club awards trophies will be given out at the upcoming March 21st club

meeting. A big thanks to all who came to the last meeting and voted on these awards.

We say it every year, but here it goes again. Start looking over your planes and flying equipment now to make sure they are ready for the flying season. There is nothing worse than getting to the field thinking your batteries are good, only to find they did not hold a charge. That means both the transmitter and receiver batteries. When did you last change your transmitter battery? Are your servos working ok, or is one chattering or going slow compared to the others.

If you were not at the last meeting you

didn't get to see it, but Jerry Rose has developed a great tool for removing the spark plug cap on your gas engines. It also functions as a plug wrench and can help remove your spark plug from the cap when testing the plug. Quite reasonable price for club members. Check it out.

Met with Mt. Pleasant DPW Foreman, Mark Benish, and they are quite happy with us. No issues. They are looking for

some people to work the Saturday hours at the compost site. The hours are 8 AM – 4 PM. He mentioned \$14 - \$15 per hour. If you are interested, or know someone who might be, contact him.

As mentioned above, our next meeting is Sunday, March 21st at 1 PM at the field. Hope to see you then.

Fly Safe & Have Fun

Jim Litwin
President

Denny's Stuff

Good news, I've got a few things to cover this month. Bad news, I'm going to include a bit of electronic mathematics!

Starting off, Someone at the field on Sunday, 03/14/2021 was asking something about metric screws. Here, Amazon is your friend where you can buy just about anything. I picked up a metric screw assortment from Amazon several years ago. It has saved a trip to Ace Hardware many times over the years.

Search Amazon for "Metric Screw Assortment". You will find there are many dozens of different assortments of both metric and SAE screw kits available. The metric kit I have is this 420 piece one, for about \$20.00. You will be glad you ordered one of their kits.

HVAZ1

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Servo Wire Extensions:

A couple of days ago, Jim L showed me a bunch of switch harnesses he built up using the Max Products 12 inch #20 gauge wire servo wire extensions, along with that high grade 4 pole, double throw locking type of toggle switch available from www.digikey.com. **FYI, that locking type switch is about as reliable as it gets for performance in our RC models.)**

Jim had purchased one of my SwitchIR meters, and used it to check the quality of his workmanship after the switches were wired up. My SwitchIR meter showed very 4 times normal high resistance readings on those Max Products servo wire extensions.

Bad news, I've run across this same exact problem with the Max Products #20 gauge servo extensions a number of times in the past couple of years. It is caused by the use of the wrong die in the crimping tool used to crimp the wires onto the male pins, female housing end of the servo extensions.

Jim reported that he disassembled his servo extensions, re-crimped the pins, and reassembled. And, the servo wire extensions now test out OK.

The wire crimping process involves the crimping tool wrapping the servo pin wire

area around the bare servo wires, such that the wire location of the pin is compressed into and displaces the copper lead strands. This is a gas tight connection.

If the crimping tool die is oversized, the crimp job results in a pressure connection, not the mandatory “gas tight” connection between the servo pin and the servo wires. That pressure connection can and will develop higher resistance after a few years, and could result in the loss of a model airplane.

So, how much servo wire resistance is bad? And, just what is that servo resistance?

One of the first things you learn in electronics is the three items used to measure electrical current. First, you have “Voltage”, next is “Current” and last is “Resistance”.

Voltage is measured with the “Volts” unit. Typically, our A123 receiver batteries run at 6.6 Volts DC.

Next, we have “Current” measured in Amperes, or Milli Amperes. As an example, 3.578 Amperes is 3578 Milli Amperes.

Last, we have “Resistance” measured in “Ohms” The Ohms unit provides the “Resistance” to current flowing through a wire, light bulb, electric motor, you name it.

Measuring DC current is a simple process, and can be easily done with a digital multimeter, AC and DC clamp on ammeter and the like. Measuring AC current is much more involved, since one has to deal with the AC current measured, the power factor of the load, resistive and reactive resistance, and a whole

lot more.

We don’t need to involve us with AC power. (Other than NOT buying one of those \$50.00 things you can buy in the internet that claim to reduce your whole house electric bill by 90%, by just plugging in their gadget into one outlet. These rip off things have only a single 50 cent capacitor inside that will have zero effect on your electric bill)

Back to the matter at hand. Jim’s ServoIR meter measured the Max Products #20 gauge wire resistance values that were some 4 times higher than the normal 40—50 MilliOhms. He was measuring around 150—200 Milli Ohms resistance. Per my direction, Jim re-crimped the terminals, and the resistance dropped to a normal value of around 40 or 50 MilliOhms.

What does this mean? Well, on a giant scale model, your servos can easily pull peak currents of five to ten Amps when under load during a flight. I’ve measured peak currents of 14 Amps on one of my giant scale models equipped with seven Hitec 645MG servos.

Now, for the electronics math portion. Jim had readings of near 200 MilliOhms on one of his servo wires. The voltage drop across that servo wire is $E=IR$.

E is Voltage, I is Amps, and R is resistance in Ohms. So we have:

$$E=IR$$

$$E=7 \text{ Amps} \times 0.2 \text{ Ohms (200 MilliOhms)}$$

E is 1.4 Volts on each wire, or a 2.8 Volt drop on the two red and black wires of your servo plug. That is almost a 50% voltage drop on your receiver and its servos, enough to affect reliability of your radio system.

I have not built any of my SwitchIR meters lately, but could restart that project if enough RRCC members are interested in buying one of them. Price is around \$30.00 or so. (The typical digital multimeter does not have the capability of measuring those very low resistance values.)

For what it's worth, I've sold several dozen of these SwitchIR meters to other RC fliers through out the USA, along with programming info to people outside of the USA. Unfortunately, they have found that high resistance servo extensions, along with high resistance in receiver switches is rather common.

Last, I've indicated in a previous newsletter, that I have picked up a pair of Spektrum AR8020T receivers along with a Spektrum nX10 transmitter for my RC models.

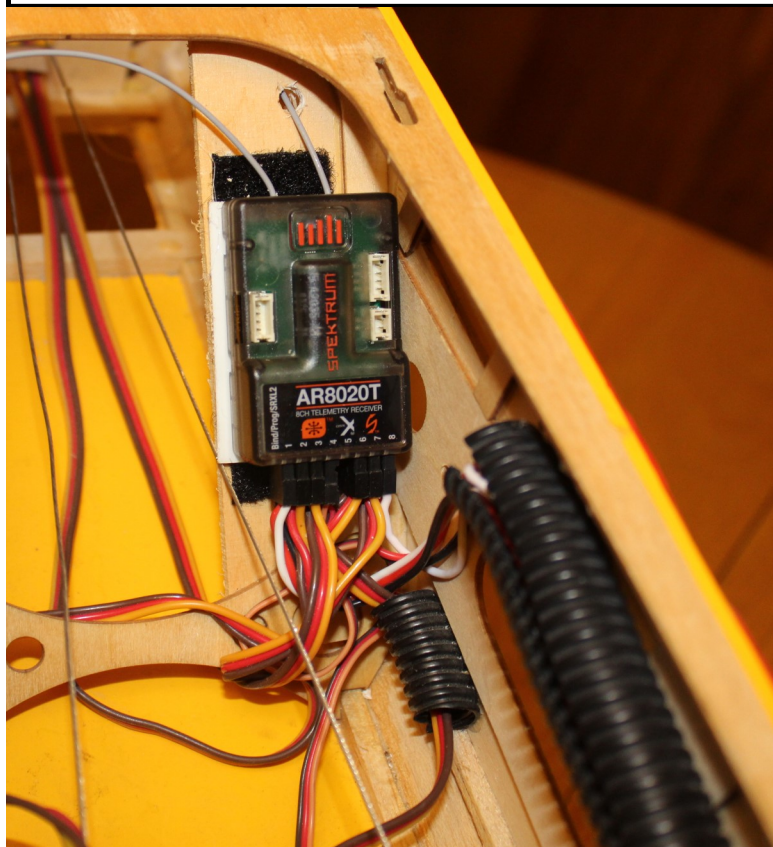
The AR8020T receiver comes standard

with an internal barometric altimeter function that along with my new Spektrum nX10 transmitter allows the Spektrum nX10 transmitter to voice altitude every 5 seconds, or what ever repeating time you desire. A couple of quick flights on my old Kantana RC model showed that the model had climbed to 375 feet. And, it wasn't very high.

There is a built in time delay of several seconds between when the receiver returns altitude to when the transmitter vocalizes how high the model is.

It looks like the AR8010T is obsolete, and has been replaced by the AR8020T receiver, selling at the same price as the AR8010T.

Bad news, my DX9 transmitter does not work with the altimeter function of the AR8020T receiver. Dang.



Here is a photo of the AR8020T receiver as it is installed in DennyV's Kantana model.

Note the black split tubing available from Ace Hardware that allows simple cabling of the various model wires in your model.

This split tubing is easily secured with some hot melt glue.



Note the very nice balancing setup for balancing this model. It looks to have been built up using standard 1/4 inch aircraft plywood, and a couple of narrow strips of bass wood or something similar. Nice set up.



Jonathan's new model. After a lot of cranking, the brand new engine failed to start. Probably a good thing, the North cross wind was some 20 MPH .

Date	Time	Name(1)	Name(2)	Substitute	Date	Time	Name(1)	Name(2)	Substitute
04/07/21	12-2	Darrel Hossalla			08/11/21	12-2	William Bylsma		
04/07/21	2-4	Darrel Hossalla			08/11/21	2-4	Charlie Reich		
04/07/21	4-6	Terry Peterson			08/11/21	4-6	Gary Bokowy		
04/14/21	12-2	Roger Nickolaus			08/18/21	12-2	Bill Flannery		
04/14/21	2-4	Roger Nickolaus			08/18/21	2-4	Charlie Reich		
04/14/21	4-6	Terry Peterson			08/18/21	4-6	Gary Bokowy		
04/21/21	12-2	Terry Peterson			08/25/21	12-2	Jerry Rose		
04/21/21	2-4	Darrel Hossalla			08/25/21	2-4	Ray Fisher		
04/21/21	4-6	Jason Fisher		Stephen Knackert	08/25/21	4-6	Ray Fisher		
04/28/21	12-2	Roger Nickolaus	Arland Matson		09/01/21	12-2	Carl Bergqueist		
04/28/21	2-4	Rich Smentek			09/01/21	2-4	Dennis Vollrath		
04/28/21	4-6	Jason Fisher		Charles Roberts	09/01/21	4-6	Dan Pozel		
05/05/21	12-2	Jason Fisher	Arland Matson	Stephen Knackert	09/08/21	12-2	Wayne Greisen		
05/05/21	2-4	Dennis Vollrath			09/08/21	2-4	Wayne Greisen		
05/05/21	4-6	Dan Pozel			09/08/21	4-6	Donald Parkinson		
05/12/21	12-2	Charles Roberts	Arland Matson		09/15/21	12-2	Richard Stapleton		
05/12/21	2-4	Carl Bergquist			09/15/21	2-4	Richard Stapleton		
05/12/21	4-6	Raymond Redlin			09/15/21	4-6	Richard Stapleton		
05/19/21	12-2	Jerry Rose			09/22/21	12-2	Donald Parkinson		
05/19/21	2-4	Dennis Vollrath			09/22/21	2-4	Bill Flannery		
05/19/21	4-6	Eric Armantrout	Ron Dixon		09/22/21	4-6	Bill Flannery		
05/26/21	12-2	Matthew Holl			09/29/21	12-2	Douglas Karge		
05/26/21	2-4	Matthew Holl			09/29/21	2-4	Douglas Karge		
05/26/21	4-6	Matthew Holl			09/29/21	4-6	Douglas Karge		
06/02/21	12-2	Charles Roberts			10/06/21	12-2	Buzz Paricka		
06/02/21	2-4	Rich Smentek			10/06/21	2-4	William (Oz) Miller		Ron Dixon
06/02/21	4-6	Dan Pozel			10/06/21	4-6	Donald Parkinson		
06/09/21	12-2	Jerry Rose			10/13/21	12-2	Trygve Smalley		
06/09/21	2-4	Ray Fisher			10/13/21	2-4	William (Oz) Miller		Ron Dixon
06/09/21	4-6	Ray Fisher			10/13/21	4-6	Stephen Knackert		
06/16/21	12-2	Charles Roberts			10/20/21	12-2	Trygve Smalley		
06/16/21	2-4	Rich Smentek			10/20/21	2-4	William (Oz) Miller		Ron Dixon
06/16/21	4-6	Justin Francisco			10/20/21	4-6	Stephen Knackert		
06/23/21	12-2	Raymond Redlin			10/27/21	12-2	Buzz Paricka		
06/23/21	2-4	Raymond Redlin			10/27/21	2-4	Buzz Paricka		
06/23/21	4-6	Justin Francisco			10/27/21	4-6	Trygve Smalley		
06/30/21	12-2	Jim Litwin			11/03/21	12-2	Stephen Knackert	James Martinich	
06/30/21	2-4	Jim Litwin			11/03/21	2-4	James Martinich		
06/30/21	4-6	Jim Litwin			11/03/21	4-6	James Martinich		
07/07/21	12-2	Bob Johnson			11/10/21	12-2	Paul Willems		
07/07/21	2-4	Bob Johnson			11/10/21	2-4	Terry peterson		
07/07/21	4-6	Eric Armantrout	Ron Dixon		11/10/21	4-6	Jim Strelitzer		
07/14/21	12-2	Bob Johnson			11/17/21	12-2	Paul Willems		
07/14/21	2-4	Carl Bergqueist			11/17/21	2-4	Terry peterson		
07/14/21	4-6	Justin Francisco	Helmut Schmidtke	Roman Kirykowicz	11/17/21	4-6	Jim Strelitzer		
07/21/21	12-2	Wayne Greisen			11/24/21	12-2	Paul Willems		
07/21/21	2-4	William Bylsma			11/24/21	2-4	Terry peterson		
07/21/21	4-6	Eric Armantrout	Ron Dixon		11/24/21	4-6	Larry Petricek		
07/28/21	12-2	William Wampler			12/01/21	12-2	Steven Navone		
07/28/21	2-4	William Wampler	Helmut Schmidtke	Roman Kirykowicz	12/01/21	2-4	Steven Navone		
07/28/21	4-6	William Wampler			12/01/21	4-6	Steven Navone		
08/04/21	12-2	William Bylsma							
08/04/21	2-4	Charlie Reich							
08/04/21	4-6	Gary Bokowy	Helmut Schmidtke	Roman Kirykowicz					