



THE FLIGHTLINE



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

RRCC June Issue
NEXT MEETING June 14th 2020!

WE ARE ON THE WEB
www.racinerclub.com

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Editors Note: Since we've not had meetings for the past two months, there are no minutes to report.
DennyV

JIM'S CORNER

I think it is safe to say that summer is finally here. It's much warmer at the field, and with that, the winds have returned, but at least it's not snow.

If & when you come to the field, you will notice that most everyone is still practicing some degree of “social distancing”. Chairs are spread a little further apart and most people do not stand close to each other.

There will be a June meeting, and it will be held on Sunday, June 14th at 1 PM at the field. This meeting is a week early due to Father's Day falling on our normal 3rd Sunday meeting of the month. We like to give you the opportunity to spend time with family on this holiday.

Over the past few months we have been taking steps to get the field in shape for your flying enjoyment.

The grass at the field is being cut twice a week.
The field has been rolled numerous times
The field has been sprayed with a weed killer to knock down the dandelions
The shelter sides should be down by the time you read this Newsletter

New flashing material has been put up to prevent the birds from building their unsanitary

nests under our shelter roof

It appears that the adjacent compost site construction is completed. Asphalt has been laid, the berm has been seeded, and the site is in full operation.

It goes without saying, the closer proximity of the compost site to our flying field makes daytime flying over our field a little tighter when Village workers are in the compost site working, but it can be done safely with a little effort.

We have picked up a few new members from the Kenosha – Northern Illinois area. Apparently the Lake County RC Club, which is located on Russell Road, just south of the state line is closed for

the year.

They operate on public land, and the Illinois Governor has closed all such sites for the year. Welcome these gentleman, and show them what a great club we have.

As a reminder, at this month's club meeting we will be discussing our July picnic event! Should we have one, etc.?

I'll sign off now, and hopefully this newsletter finds everyone safe and feeling well.

Fly Safe & Have Fun
Jim Litwin
President

Dennys Stuff (Corona Days!)

Well the workbench has been really busy the past several months, what with a bunch of projects on the building block.

First on the line is a "Slick" RC model picked up from a club member that is equipped with a Tacon 160 brushless motor. It's powered by a 12S 4500 MilliAmpere hour battery pack, running 4400 Watts on a 12 pound model. That's 360 Watts per pound of airplane. To say this model is overpowered is a real understatement!

That power system turns an 18X8 standard ignition type propeller at 9700 RPM with a newly charged battery pack. The model came with a ZTW 120 Amp

high voltage ESC, from from MotionRC. I went around and around with it, never got it to work correctly. The throttle setting versus motor power was almost unusable. That ESC might have been set up for a helicopter?

A new Castle Creations 120 Amp HV ESC was just added today, that has real linear power versus transmitter gimbal setting.

Three flights were made with the new CC ESC. The tip speed of that prop is 500 MPH, making this thing really loud while flying. That model flies just about as fast straight up as it does in level flight. The Castle Creations ESC data download shows 11,400 RPM as the maximum speed of the 18X8 prop.

Dennys Stuff

There was a free magnetic propeller balancer sitting on the table at the RC field recently, and your editor picked it up.

This unit consists of a pair of plastic end plates that support a pair of magnets. These magnets are used to support a steel shaft with tapered plastic propeller

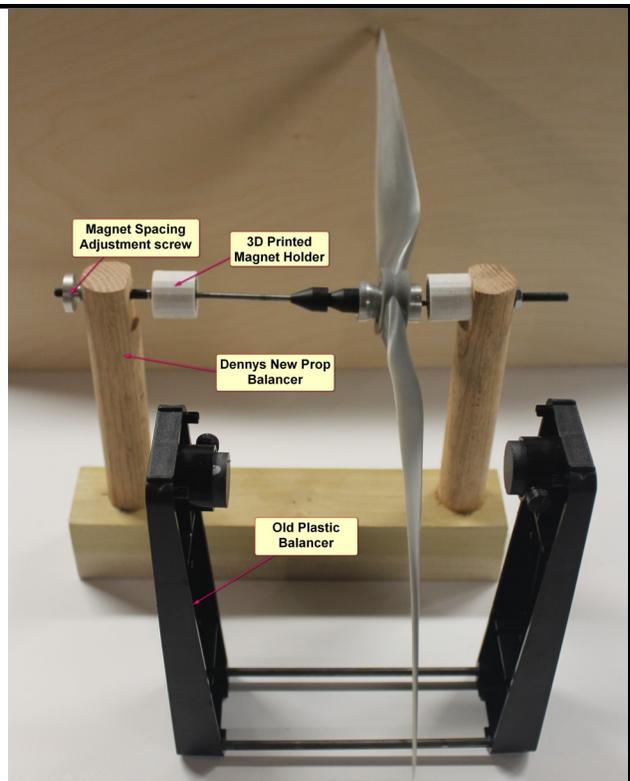
mounts. It worked kind of OK, but the flimsy plastic mounts for the two magnets flexed all over the place while using the balancer with the steel shaft between the two magnets. The spacing between magnets shifted each time the prop was removed from between the two magnets.

Your editor cut a new tapered prop

mount out of aluminum on his lathe, and built up a new stand with a 2X2 piece of Oak along with two pieces of one inch diameter dowel. My 3D printer was used to build up a holder for the two high powered magnets picked up from work 11 years ago.

This unit has solid rigidity, and has a screw adjustment for the magnet spacing. If the shaft is spun without a prop installed, that shaft will coast for 20 seconds. It is virtually friction free.

A 3/16 inch wide piece of 3/4 inch wide plastic electrical tape on the tip of a well balanced 22 inch diameter propeller quickly drops that tip completely to the bottom of the balancer. That's far better than the original plastic balancer device.



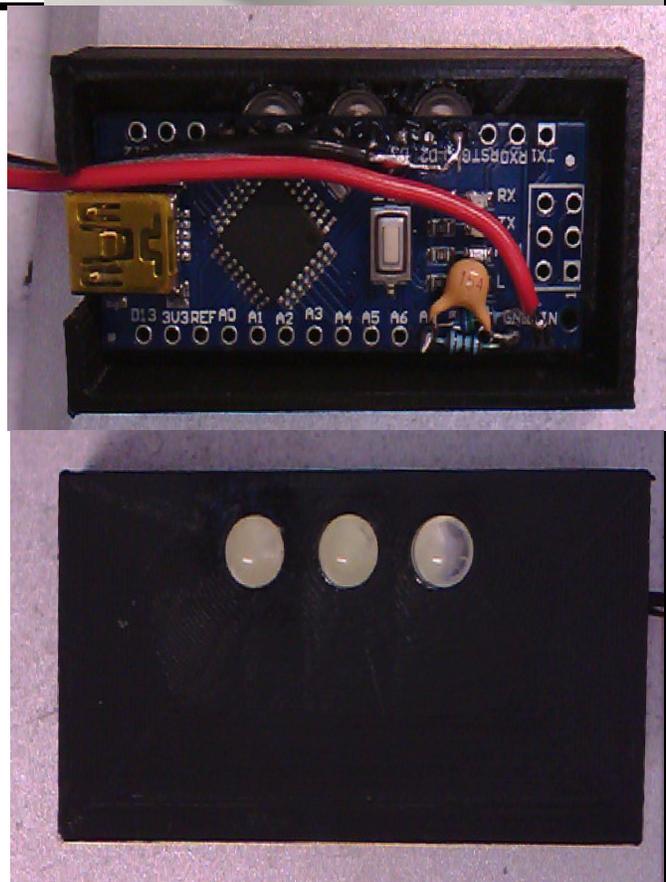
Denny's Projects

Many of the RRCC club members have purchased one of his "VoltSagger" projects that counts the number of flights of the model, along with monitoring the receiver voltage.

Here is the latest and greatest device, on a personal challenge on how simple (ie cheap) it could be made without designing a circuit board for it. This project was covered in the last newsletter.

The project shows the number of flights by flashing the 3 LED's in succession. It also shows how low that voltage dropped should that voltage ever drop below 5.8 Volts DC. The microcontroller measures the receiver voltage 5000 times per second.

I'm building these at cost and will sell them for \$10 each, only for the active flying members of our club.



Dennys Stuff Field Distances

We've had questions on just how far away our models are flying at our field over the past years. And, we **DO NOT** want to have our models anywhere near the railroad tracks located 1400 feet East of the pit area of our field.

Many of our models are flying 60 miles per hour, or more. That 60 miles per hour is around 90 feet per second, or a foot ball field length in three seconds.

If you fly in one direction for 15 seconds, your model has traveled at least 1300 feet or a quarter mile in that period of time.

FYI, doing 15 seconds in the East direction with a 30 cc gasser class of model

airplane will place your model directly over the railroad tracks. And, some of our models are flying faster than 60 Miles Per Hour.

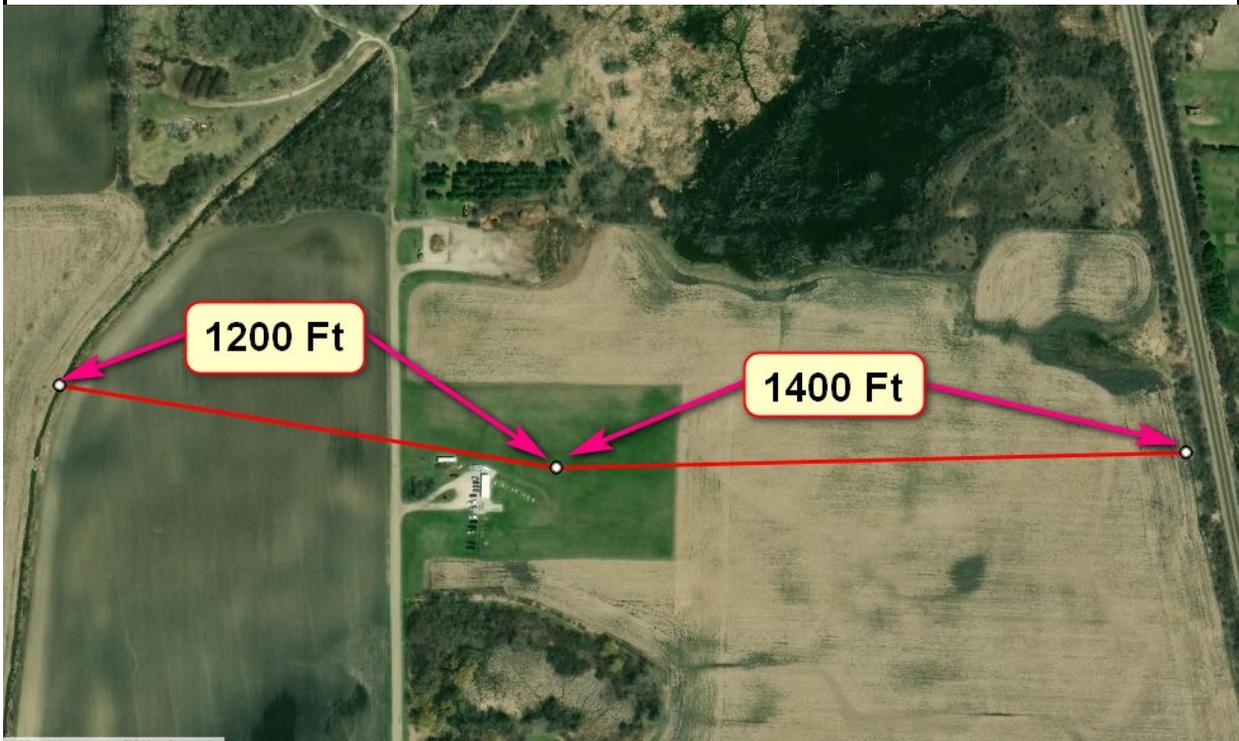
Below is a topographical layout of our club field with the distances shown between our field and the river West of the field, and the railroad tracks East of the field.

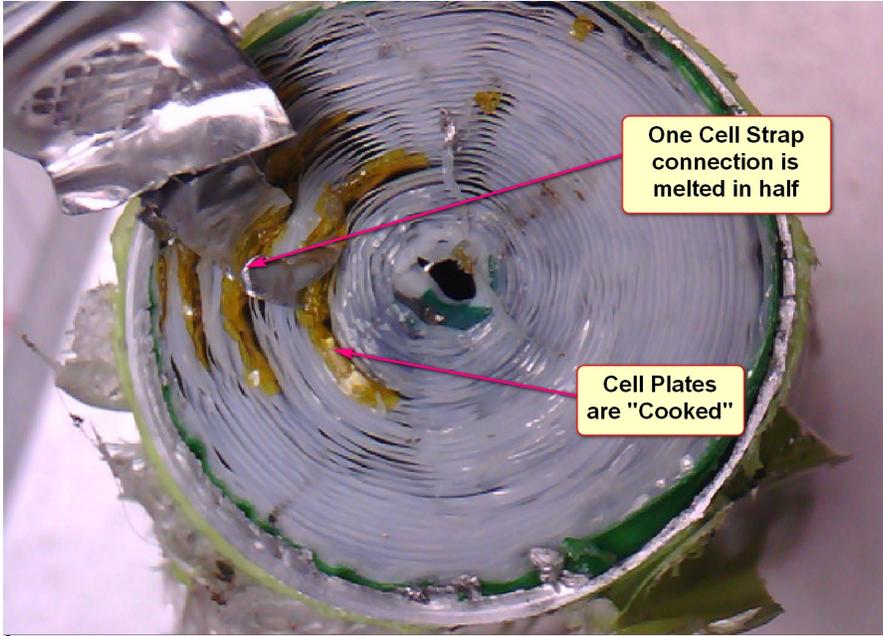
I've checked that map program against the measured size of our field. It's accurate to a few feet.

Word to the wise!

The map distance program

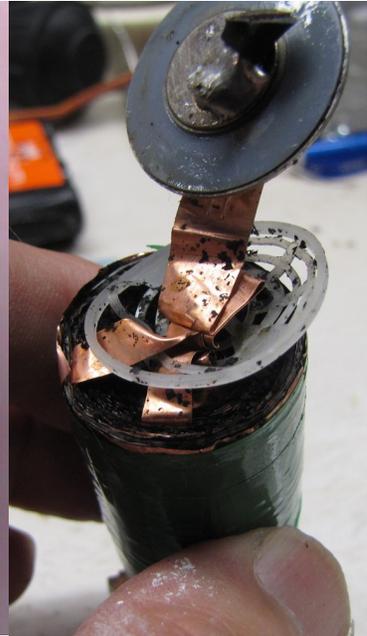
<https://www.calcmaps.com/map-distance/>





One Cell Strap connection is melted in half

Cell Plates are "Cooked"



Bill recently asked me to check out his receiver batteries for milliampere capacity. Two were LiFe's, one was an A123 pack that I built up, the last one was a purchased two cell A123 receiver battery pack from an unknown supplier. The LiFe's and the A123 pack I built up were all OK.

The purchased A123 battery pack had an open cell. I put both of these cells in my lathe, and cut off the aluminum ends of the two cells.

The cause of the open cell failure was obvious. Who ever built up this battery pack dead shorted it while soldering up the lead wires. The attached photos of the internal cell plates shows what happened on the second cell. Several areas of the battery internal plates are obviously "Cooked". I didn't take photos of the first cell that was in worse shape.

No, Bill didn't do it, since the battery was wired with #22 wire. That #22 wire would have melted before any internal damage would have occurred.



IMHO, there is no excuse for any battery mfg supplier to sell a battery pack that their assembly line had dead shorted.

The above photos also show how these A123 cells are made. They start off with the two plates of the cell, separated by the normal mesh between the two plates.

Those plates are wound up like a roll of

black electrical tape.

I've cut off the top and bottoms of several A123 receiver packs over the past 10 years.

And, all of them are constructed with the plates wound up as shown in the photos. Those plates are very tightly wound up in the manufacturing process.

They are then pressed into the aluminum housing of the battery pack. I've tried, it is not possible to push the plates out of the aluminum jacket, they are very tightly pressed into place.

Since these cells are very solidly built up,

vibration from the engines can't shake up the internals of the pack, causing internal connections to break off. (Hopefully)

Also note, the multiple connections between the positive and negative connections to the wound up plates of the cells. That allows a lower internal resistance of the cells when they are used for high currents.

As a refresher, these 2500 mah A123 cells are rated for a maximum of 40 Amps per cell.

Well, that's about it for this month

DennyV RRCC Editor

Reserved space
for the model
photos of our
RRCC
members!

Milwaukee Association of R/C Clubs 2020 Event Schedule (Reflecting known cancellations at this time)

(Copied from Marks newsletter, thanks Charlie!)

Sat Apr 11	Model Engine Collector's Assn)	Collector and Hobby Swap Meet
Sun Jun 7	Circle Masters Flying Club	Control Line Open Fun Fly
Sat Jun 13	Flying Electrons	Club-Only Fun Fly
Sat Jun 13	Fond du Lac Aeromodelers Assn	Open Fun Fly
Sun Jun 28	Flying Electrons	Electric Only Event
Sat Jul 11	Astrowings of Wisconsin	Charity Fun Fly
Sun Jul 12	Flying Electrons	Scale Event
Sat Jul 25	Lakeland RC Club	Fly-In
Sun July 26	Flying Electrons	60th Anniversary Celebration
Sun Aug 2	Circle Masters Flying Club	Annual Control Line Contest
Sat Aug 8	Milwaukee Area Radio Kontrol Society	Float Fun Fly DNR Bong
Sat Aug 8	Rubicon Area Flyers	Fun Fly Thu
Aug 13 - 15	Fond du Lac Aeromodelers Assn.	Warbirds and Classics
Sun Aug 16	Fond du Lac Aeromodelers Assn	Wellnitz Memorial Open Fun Fly
Sat Aug 22	S.E. Wisconsin Area Rotary Modelers	Friend Fly
Sun Aug 23	Racine RC Club	Open House
Sat Aug 29-30	Circle Masters Flying Club	Demo Flying, Sussex Farm Show
Sat Aug 29	Flying Electrons	Air fest, Fly-In Benefit Troop #110
Sat Sept 12	Flying Electrons	Fly-In and Swap Meet
Sun Sept 13	RC Club at Watertown Airport	Open house, breakfast, flying
Sat Sep 19-20	Flying Electrons	Pattern Contest
Sat Sep 26	RAMS and	Joint Club-Only Picnic
Sat Sep 26-27	All clubs are invited to participate	Maker Faire
Sat Oct 10	Model Engine Collectors' Assn)	Collector and Hobby Swap Meet

COMPOST ROSTER 2020

Date	Time	Worker	Date	Time	Worker	Date	Time	Worker
04/08/20	12-2		06/24/20	12-2	Carl Bergquist	09/09/20	4-6	Eric Armantrout
04/08/20	2-4		06/24/20	2-4	Ray Fisher	09/16/20	12-2	Craig Manka
04/08/20	4-6		06/24/20	4-6	Ray Fisher	09/16/20	2-4	Craig Manka
04/15/20	12-2		07/01/20	12-2	William Wampler	09/16/20	4-6	Eric Armantrout
04/15/20	2-4		07/01/20	2-4	William Wampler	09/23/20	12-2	Stephen Knackert
04/15/20	4-6		07/01/20	4-6	Matthew Holl	09/23/20	2-4	Rich Smentek
04/22/20	12-2		07/08/20	12-2	William (Oz) Miller	09/23/20	4-6	
04/22/20	2-4		07/08/20	2-4	Tim Hady	09/30/20	12-2	Bill Flannery
04/22/20	4-6		07/08/20	4-6	Trygve Smalley	09/30/20	2-4	Bill Flannery
04/29/20	12-2	Stephen Knackert	07/15/20	12-2	Matthew Holl	09/30/20	4-6	Bill Flannery
04/29/20	2-4	Rich Smentek	07/15/20	2-4	Justin Francisco	10/07/20	12-2	Ronald Schroeder
04/29/20	4-6	Raymond Redlin Sr	07/15/20	4-6	Justin Francisco	10/07/20	2-4	
05/06/20	12-2	Jim Hiett	07/22/20	12-2	Roger E Olsen	10/07/20	4-6	
05/06/20	2-4	Jim Hiett	07/22/20	2-4	Roger E Olsen	10/14/20	12-2	Larry Petricek
05/06/20	4-6	Dan Pozel	07/22/20	4-6	Raymond Redlin Sr	10/14/20	2-4	Larry Petricek
05/13/20	12-2	Edward Witt	07/29/20	12-2	Dennis Vollrath	10/14/20	4-6	Larry Petricek
05/13/20	2-4	Edward Witt	07/29/20	2-4	Dennis Vollrath	10/21/20	12-2	Roger Nickolaus
05/13/20	4-6	Edward Witt	07/29/20	4-6	Trygve Smalley	10/21/20	2-4	Roger Nickolaus
05/20/20	12-2	Tim Hady	08/05/20	12-2	William (Oz) Miller	10/21/20	4-6	
05/20/20	2-4	Rich Smentek	08/05/20	2-4	Charlie Reich	10/28/20	12-2	
05/20/20	4-6	Dan Pozel	08/05/20	4-6	Daniel Fucile	10/28/20	2-4	
05/27/20	12-2	Jim Litwin	08/12/20	12-2	Gary Bokowy	10/28/20	4-6	
05/27/20	2-4	Jim Litwin	08/12/20	2-4	Charlie Reich	11/04/20	12-2	
05/27/20	4-6	Jim Litwin	08/12/20	4-6	Daniel Fucile	11/04/20	2-4	
06/03/20	12-2	Carl Bergquist	08/19/20	12-2	Gary Bokowy	11/04/20	4-6	
06/03/20	2-4	Ray Fisher	08/19/20	2-4	Charlie Reich	11/11/20	12-2	
06/03/20	4-6	Trygve Smalley	08/19/20	4-6	Daniel Fucile	11/11/20	2-4	
06/10/20	12-2	Buzz Paricka	08/26/20	12-2	Wayne Greisen	11/11/20	4-6	
06/10/20	12-2	Helmut Schmidtke	08/26/20	2-4	Wayne Greisen	11/25/20	12-2	James Strelitzer
06/10/20	2-4	Buzz Paricka	08/26/20	4-6	Wayne Greisen	11/25/20	2-4	James Strelitzer
06/10/20	2-4	Helmut Schmidtke	09/02/20	12-2	Ronald Schroeder	11/25/20	4-6	James Strelitzer
06/10/20	4-6	Roman Kirykowicz	09/02/20	2-4	Ronald Schroeder	12/02/20	12-2	Steven Navone
06/17/20	12-2	Jerry Rose	09/02/20	4-6	Raymond Redlin Sr	12/02/20	2-4	Steven Navone
06/17/20	2-4	Jerry Rose	09/09/20	12-2	Darrel (Hoss) Hossalla	12/02/20	4-6	Steven Navone
06/17/20	4-6	Roman Kirykowicz	09/09/20	2-4	Darrel (Hoss) Hossalla			