

# Flypaper 2021

Official Newsletter of  
The Flying Electrons of Menomonee Falls

Celebrating 60-plus Years of Service to the Community & Counting!



## President's Preflight



### Welcome to Wisconsin Spring!

I joined the club initially in 1978. In the mid 80's I relocated with my job to spend five years in Southern California. Not knowing how long I would be there; I dropped my Electrons membership. My first year in LA was a seasonal shock. I was used to the seasons but in LA there are only simple transitions from cool rainy weather to hot dry weather to mark Spring, Summer, Fall and Winter.

Don't get me wrong, I liked the fact that I could still go to the office without a Winter coat, but I felt that I was locked in a time warp for some reason. No evident seasons! Everything was a subtle transition from warm, dry and sunny ... to overcast, comfortably cool and occasionally wet, back to warm, dry and sunny. Not bad if you don't mind mud slides, fires and earthquakes ... many of which I experienced.

(See SEASONS 2021 on page 6)



### FAA Testing Update

#### The Recreational UAS Safety Test (TRUST) FAQ

On February 22, 2021, the FAA released information regarding the next step of implementation of the Recreational Knowledge and Safety Test. This step includes the application process for organizations interested in serving as test administrators for The Recreational UAS Safety Test (TRUST).

If you go through the narrative, you'll find that what appears ahead as testing is nothing more than a public awareness campaign, designed to make sure that

members are educated on "best practices" while flying.

There is still no timeline on when the test will be implemented or the exact content as of yet. As the mechanics are worked out, we'll be sure to keep you informed. Please see the Q&A that follows:

(See TRUST on page 3)

### Issue Highlights

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**Club Meetings:**  
 Second Sunday of Month  
 7:00pm  
 De Marini's Restaurant  
 N88 W15229 Main Street  
 Menomonee Falls, WI 53051

**Flying Site:**  
 N61 W17000 Kohler Lane  
 Menomonee Falls, WI  
[www.flyingelectrons.com](http://www.flyingelectrons.com)

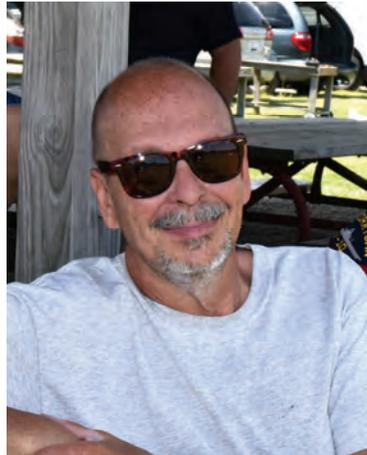
# Remembering Bob Scrip.

All of us were saddened by the news of the loss of Bob Scrip.

Bob passed away Saturday, March 20th of heart failure. He is survived by his wife Stacy, a son, Michael and his daughter Emma.

If you don't know Bob personally, then as an Electrons member, you certainly know his work.

Bob was the key figure that kept our airfield in beautiful pristine condition. Just about everyone that visited the airfield for the first time, commented on how nice and well-kept the field was. The airfield was Bob's domain ... and he maintained high stan-



dards for its condition. He also made sure the field was ready for every sanctioned event, and if a special need arose, he was there to get the job done.

Bob took great care of the club mower, person-

ally keeping it well maintained and running smoothly. I found him to be a quiet but a sociable guy when you approached him.

There are several stories that describe Bob's contribution to the club as a true volunteer member for the Flying Electrons.

(See **Bob Scrip** on page 7)

## Flypaper Contact Information

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*The Flypaper welcomes for consideration articles of interest, recommended video links, letters and questions you may have about the club, meetings, newsletter, and events. Please direct those communications via email to tjacobs421@att.net. We will respond to all inquiries.*

## Next Club Meeting

# TBD

**De Marini's Restaurant**  
 N88 W15229 Main Street  
 Menomonee Falls, WI 53051

**Bring a Friend and/or a Plane to Show & Tell**

**TRUST** *Continued*

**Q: What is "TRUST"?**

A: "TRUST" stands for The Recreational UAS Safety Test

**Q: Why do I need to take TRUST?**

A: The Knowledge and Safety Test is a congressional mandate in the FAA Reauthorization Act of 2018. All UAS users must pass the test to operate a recreational model aircraft (UAS) within the National Airspace System (NAS).

**Q: I have a Part 107 Certificate; do I also need to complete TRUST?**

A: Yes. There are no exemptions from taking the test, including for currently certificated pilots. Anyone flying recreational UAS is required to complete the test.

**Q: Are youth under the age of 18 required to complete TRUST?**

A: Yes. There are no exemptions from taking the test, including for minors. Youth can get assistance from an adult, if needed.

**Q: How often do I need to take the test?**

A: At this time, recreational operators only need to take the test once to comply.

**Q: What will be on TRUST?**

A: The test will have approximately 25 multiple-choice questions about basic safety guidelines and recreational flying knowledge that most AMA members likely already know. Early indications are that this test will be fail-proof and every recreational user will be able to complete and pass the test.

**Q: Does TRUST cost anything?**

A: No. Test administrators are prohibited from charging a fee, either directly or indirectly, to individuals taking the test.

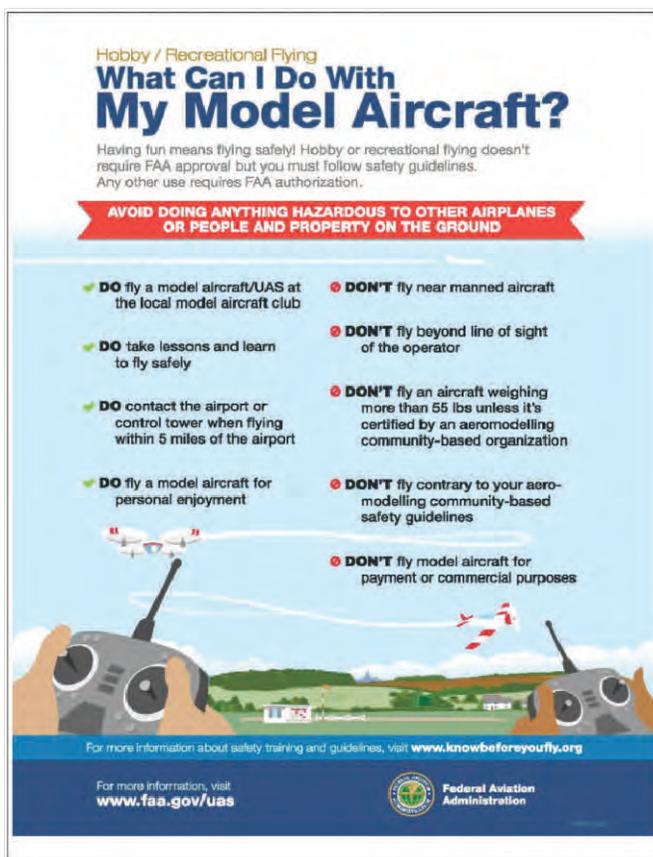
**Q: How will I know that I have passed TRUST and am able to fly my UAS?**

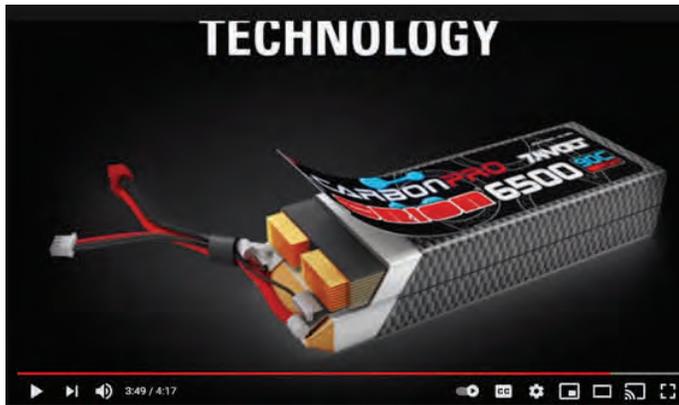
A: Once you complete and pass the test, your test administrator will provide you with a TRUST completion certificate that you can either print or save electronically. This certificate is proof of your compliance

with the Reauthorization Act of 2018 and your passage of the test.

**Q: Will TRUST affect my AMA membership benefits?**

A: Proof of test completion will not be a requirement for AMA membership. However, each member affirms that they will follow AMA's safety code, including applicable laws and regulations, when he or she signs up to be a member.





### LiPo Battery Production

Team Orion take you inside the world of LiPo battery production! Learn how these power sources are manufactured and tested in this video.

[LiPo Battery Production](#)



### Lithium-ion battery, How it works?

Explore the science behind power storage, battery chemistry and what makes all this work together.

[Learn How it Works](#)



### How the \$30 million 'Super Scooper' CL-415EAF plane was built to fight wildfires

This \$30 million Super Scooper is the only plane in the world that was designed specifically to fight wildfires. The CL-415Enhanced Aerial Firefighter performs a dangerous dive down to a body of water, scoops up 1,400 gallons of water in 12 seconds, and drops its load of water on raging forest fires. We went inside this massive aircraft to find out how it works, what it takes to fly it, and why it's considered the most efficient aerial-firefighting aircraft in the world.

[Built to Fight Wildfires](#)



### Proof that Just About Anything Will Fly

Check out these ingenious attempts to get various household objects to fly along with some of the more standard fair.

[Crazy, Crazy Flying Machines](#)

# Pursuing One's RC Hobby After Moving into an Apartment.

*Holger Petersen describes his experience transitioning from home life to apartment life while still loving the hobby of RC.*

If you own a home, there is seldom an issue finding a place to store and work on aircraft. However, it can become a significant challenge when moving into an apartment. You'll often encounter many problems associated with apartment living and your RC hobby.



Sharing your apartment with an understanding and supportive

partner offers the best chance for success. My wife strongly encourages my RC hobby, including putting up with a bunch of resulting inconveniences. Her primary motivation is to keep me occupied with a hobby that I find challenging.

If you're thinking about moving, one of your apartment challenges will be; where to store and where to work on your aircraft. In my case, my wife permits/ tolerates me to keep planes in several locations in our apartment, mostly near and under her piano (see picture), and behind sofas, etc. We have a small stor-



age locker, which holds planes as well.

Finding a suitable area to work on planes can be daunting, however.

I was able to create a small office/hobby area in one end of

our apartment (picture). While I put in some counter surfaces and lighting, it's far from ideal. Consequently, I end up constantly occupying much of our kitchen counter, which has turned out to work out well. So far, I have managed to avoid chipping any of the granite counter surfaces and getting epoxy or CA on them.

My single biggest issue now is how best to maintain my LIPO battery inventory.

Except for three remaining glow planes, I've switched over to electric flying. I have already experienced on two occasions cell packs suddenly swelling up and

bursting while on charge (no fires luckily). During both instances, overheating occurred while charging at the field (I try to minimize all charging at home).

I also keep all LIPO batteries in LIPO Safe bags except when I need them on a given day; otherwise, I keep all batteries at storage level voltages. I get rid of all batteries that are swelling up, plus, I periodically check all cell

**(SEASONS** *Continued from page 1*)

Returning to Wisconsin in 1990, I was once again able to appreciate the seasons. The only way we as humans can appreciate the seasons is to have them offered and then taken away again. We look forward to Spring as warm weather starts to move in and the next thing you know, we have two feet of snow on the ground. The thing is, Mother Nature has a way here in Wisconsin, of showing you what you should be grateful for, and then she takes it away, so you can really appreciate it.

Who knows what global warming is doing to the planet and our local seasonality? Recently we are seeing some pretty good weather. Several members have already been out flying already albeit under conditions that require "snowshoes." I was out for the first time a couple of weeks ago with my Assassin and we were back in the thick of it with rain and possible snow in the two-day forecast.

### **Field Maintenance**

As the field starts to dry out, more pilots will venture out. Our training season will start soon after we make the field ready. Mike Batson, Director, will spearhead the effort and we're looking for a team of volunteers to help. See our Calendar of Events at the end of this newsletter for dates and times.

We're going to ask for your patience early this Spring. The tragic loss of Bob Scrip to the club has left us with a need to

reposition a new team to care for the needs of the field. As we do that, we're having the club mower picked up and serviced to ensure that it is in running order for the season. Bob always saw to the maintenance himself in the past, so the unit has not been in for a comprehensive checkup for many years. It's not clear on how long the mower will be out of service so we are also looking into alternatives to handle our lawn cutting needs for the short term should we need it.

We currently have a list of seven volunteers that have come forward to care for the field on a rotational basis. If you would be interested contact me at [tjacobs421@att.net](mailto:tjacobs421@att.net).

We are planning on holding and orientation meeting at the airfield once the mower is returned to train those that will be using it to handle the work.

We're also going to document the procedure so that those that come later have everything they need to jump in an help.

### **2021 Student Training**

As everyone knows, when we talk of training, we're speaking of anyone that is interested in getting into RC. We're hope that they will join us and continue enjoy our awesome airfield as a member of our club.

Last year, we had a great turnout of students. Several of our IP students took advantage of our

membership plans and will be back this year flying when the field opens. When they do show up, please introduce yourself and offer any assistance you can.

For those of you out there that are interested in starting or continuing training this season, please see the training article that appears later in this newsletter. It covers our schedule and what you need to do to get involved and certify as a solo pilot.

### **Builder's Workshops (BWS)**

It's not clear at this time weather the Mequon BWS will move forward or not. Currently there are four enrollments and six are required to execute the class. I've reached out to interested parents and other interested students but have not yet seen a response.

Students that wish to continue training at the field and want to certify as solo pilots will need an aircraft to take the final solo pilot certification test. This BWS is not only an excellent way to obtain an aircraft, but also a way to receive a FREE refurbished 72 MHz radio system to fly it. You can't beat that!

### **UAS Safety Test**

That FAA UAS Safety Test is still on the table. See our reprint article covering all the questions you may have. You will have to take the test if you wish to keep

See **SEASONS**, Page 8

Bob Scrip from Page 1)



Bob and daughter Emma at the Club's Dead Chicken Event

Here is an event that I personally witnessed.

## Mower Problems

On one occasion, the mower was functioning badly. The mower would cut-out unexpectedly, and the field needed mowing desperately. As Bob looked over the mower a crowd of members started to form, everyone that knew something about small engines and made diagnostic contributions and recommendations to get the mower going. Bob stepped back out of the crowd as they hovered over the mower.

Feverishly, the group tried one thing after another. The members rattled and debated as one thing after another was tried. After several attempts the group gave up. "You need to call someone", they said to Bob, as they walked away.

Once Bob was alone with the unit, he started thinking about the fuel line and why the engine wasn't getting the fuel it needed. He checked a fuel line joint that connected the tank to the carburetor and found that it was blocked with debris. He blew out the debris at the joint that was obstructed, the engine started up and ran fine.

Bob called me that night to tell me that the mower was back in business and he detailed the problem. I expressed my gratitude from the club and, from the membership. He also stated that he had completed mowing the field that evening after dark and it's in good working order. I was flabbergasted!

Bob had found the problem, fixed it, and then completed field mowing that same night ... and

in the dark.

## Radio Problems

Then there's this story from Chris Milbauer & Tom Kunath.

Tom Kunath and I met Bob when we were flying in the Golf Dome at Curry Park. Bob was a completely self-taught pilot. He only needed to learn our field rules to pass the pilot test. The following year he easily passed the instructor test.

Bob came into the club with one of the first Spektrum D7 Radio systems. They were new and had some bugs. One of those bugs bit Bob.

There were reports of Spektrum transmitters losing "bind" with receivers while flying. The RC community was slow to embrace this at the time as there were scattered reports from all round the country but nothing definitive. Bob set out to confirm what we now know as "brown outs."

He put a camera inside his plane focused on the receiver to record the lights when it lost bind with the transmitter. He flew high because he wanted a good margin of error. During flight he lost bind, then six seconds later he regained it. He lost bind a second time and regained it. During the third time he lost the plane and it crashed. The video confirmed the "brown outs" so he posted his video and commentary on YouTube. He took a lot of flak about his research from devoted Spektrum users.

Bob sent his radio in for repair,

**BOB SCRIP** *Continued*

and it was returned by Spektrum stating that repair was not needed. He subsequently sold it and purchased a Futaba radio.

Spektrum, after denying problems for 2-years, decided that the 4.8-volt receiver batteries that came with the radio set up could handle the voltage drop when the servos were being activated.

However, when voltage would drop below 3.8 volts, the receiver would lose bind. Then after six seconds of inactivity, it could re-bind. Spektrum then began to employ 6-volt battery packs in their flight packs and recommends now that nothing less than 6-volts should be used.

Thanks Bob!

## The Club Needs Volunteers

Volunteers are important to a club such as ours. We reach out to members asking for you to step up and help; some of you do, but most of you don't. You know who you are. We don't ask for much, just an effort to do something when something is needed.

Bob Scrip stepped up and took care of our airfield for many years.

It's time for members to step up and help take his place by volunteering to handle our airfield needs on an occasional basis.

If you can make yourself available to mow the field on an occasion then please contact me at [tjacobs4@att.net](mailto:tjacobs4@att.net). We're looking for members that want to make a difference.

TJ

**APARTMENT** *Continued*

voltages and their internal resistances. I cannot afford an incident.

Why?

Well ... we live in a 22-story apartment complex.

If an apartment smoke alarm goes off, it automatically summons three City of Milwaukee fire engines. Plus, they evacuate the entire building. This has occurred in the past when people only burned their popcorn (the smoke setting off the alarms.) So, I take care about charging LiPos and I appreciate having a very understanding and supportive wife ...

at least most of the time.

- Holger Petersen

**SEASONS** *Continues*

flying, but it will be a simple multiple-choice quiz where you will be able to review and change answers until you get it right. Wow! How easy is that? It's no "college entrance exam." The purpose of the test will be to make sure that all FAA registered pilots read and understand future FAA regulations. Please don't be offended by this. Look at it as a plan to make our airfield and club more secure for the long term.

See you at the airfield.

TJ



## It's Also Time to Renew Your FAA Registration

The Federal Aviation Administration (FAA) has important registration information for drone recreational flyers whose registration was automatically extended until December 12, 2020.

It's time to renew your FAA registration. The process is simple and easy by clicking the link below and accessing the FAA Drone Zone Dashboard.

### [FAA Registration Renewal](#)

Be prepared to provide your credit card information to handle the required \$5.00 renewal fee.

# What's Happening

As spring flying starts to approach, members are putting last minute touches on aircraft projects. Here are just some of the projects.



John Greve says these photos are of a Great Planes Ultra Sport 1000...long out of production.

I bought the kit quite a few years ago at the January auction when it was still held at the Expo building in Waukesha. Specifications are 80" wingspan, 1000 sq in wing area, power is OS 1.6 cu-in Twin four stroke engine, weight is 12-13 lbs. All built up balsa construction with Monokote cover-



ing.

I am particularly pleased with the way the engine fit. It took quite a bit of extra time, effort and ingenuity to install it so it was accessible as the kit wasn't really designed for a twin engine installation.

My solution was to make the top half of the cowl a removable



hatch thereby making access to the engine for service or removal a breeze. The rear of the hatch has two small dowels that hold it in place and the front of the hatch is held in place by the two small bolts behind the spinner back plate as can be seen in the

photos. The plane has been flown successfully and I must admit that twin four-stroke is one sweet sounding engine.

I also am still building this 20+



year old Adrian Page

Gee Bee Z kit purchased off eBay maybe ten years ago. I seem to still enjoy building long out of production kits. Wingspan is 56", power is going to be a Saito .62 four-stroke, flying weight will be right around 6 pounds. I'm not sure it will be finished by springtime as construction to this point took much longer than I anticipated. It will be finished with Monokote in the typical black/yellow scheme that we are all familiar with.



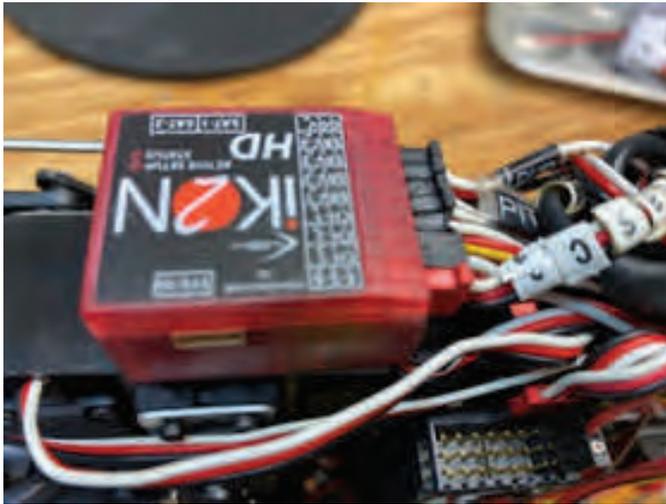
Ed Malec

A Flite Test Bravo, foam board plane. It has a unique tail, a racing quad motor, a 3 blade prop,

(Continued from previous page)

can be built with three interchangeable wings. For Ed, a picture is worth a thousand words.

**This work from Pete Smith**



Inspiration came from Model Aviation magazine several months ago to add a new helicopter to the fleet. An Align 470L will now grace the trunk of my car as it waits for weather, and assistance from the "HeliWizard" to get her flying.

My first project is a reboot of my trusty nitro Synergy N5c "flybarless" helicopter. I never could get the governor to work, so I contacted "HeliWizard" Jason Weber, and he suggested

installing an Ikon2 controller. That is accomplished and all I need is weather where my fingers do not freeze to get it airborne!

It looks easy to assemble you may be thinking. **Wrong!** ... It took four hours just to get the Ikon2 mounted, so the USB connector and wiring did not get sliced in flight.



**Tom Burriss Offers This**

Sky Ranger 40

A kit from Old School Model Works, nearly done. 40" wingspan, weighs about 4 lbs. Cobra 3520/14, 80 amp ESC and a 4S. A solid kit in most ways that went

together well. Covering is a mix of Coverite and paint.

**The Woodpecker**

Power-glider built from plans from the Nov 2017 issue of RCM&E



magazine. 68" wingspan. Supposedly a "stately" flyer. My first plan-built model. Tedious. Monokote finish. The exact motor/



battery/ESC TBD.

**Gerry Weare**

Gery sent in photos of the De Havilland U-6A Beaver that he finished this year. This plane is displayed at the National Museum of the United States Air Force in Dayton, Ohio. I couldn't get further details on this item. Hopefully more later.

# Getting Started in RC



## Building with Balsa.

After test fitting the wing to the fuselage and checking the alignment against the stabilizer and rudder, we're ready to start covering the aircraft. Prior to this step I did some light sanding and filling using a product called Balsa Model Lite.



Balsa Model Lite is a great product and there are others out there that are equally as good. I

prefer the wood toned version of the product especially when using translucent covering material as will be used on the wing surface of this aircraft. I've chosen

translucent red which should be highly visible in the sky when training with students.

I'm not going into the whole covering exercise in this article because this was cover in depth earlier in our April and May 2020 editions of our newsletter. You can find copies of all our newsletters online at [www.FlyingElectrons.com](http://www.FlyingElectrons.com).



I will say this; however, these unique scalloped control sur-

## Cheap Film Covering Tip



If you cover your aircraft with Monokote or another film material, you probably use an iron cover. These provide some protection against the hard surface of the iron. Unfortunately, these fabric covers can cost up to \$6.00 each and wear out very quickly.

As an alternative to the high cost of the covers, you can purchase small muslin bags online and use these instead. Adding a thin piece of cotton inside the bag and then inserting the iron and tying it off to hold it in place does an equally great job of providing protection when applying heat to film and wood surfaces.

No special modifications are needed to the muslin bags; simply insert the iron with a layer of cotton material (optional) under the iron surface, then tie it off around the neck of the iron. One can purchase 100 bags for the cost of three standard hobby iron covers. Just Google 3" x 5" muslin bags.

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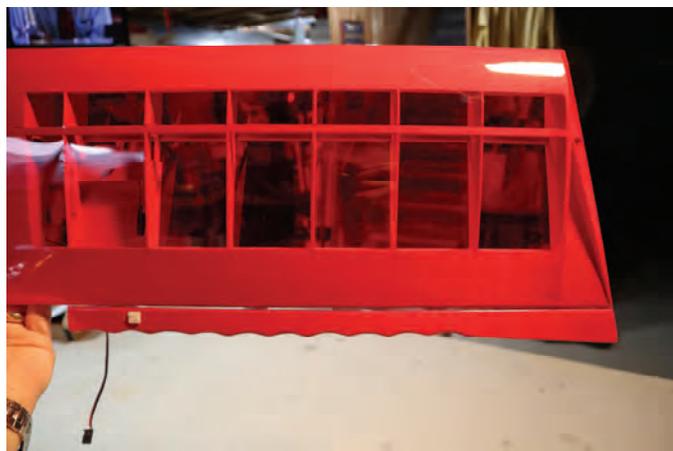
faces were a challenge to cover. Trying to get the material to trace the curved nature of the aileron edge surface was a challenge but with a little extra time, they turned out pretty good.



hole through the back of the stab to secure the tail wheel. I relocated this hole and pushed the tail wheel through the stab.

Using epoxy glue, I attached a small piece of brass tubing to the rear of the rudder and wrapped it with nylon to secure it in place.

I fed the tail wheel assembly through the underside of the stabilizer, through the brass tube and then bent a 45-degree angle, which I will insert into a predrilled hole in the rudder.

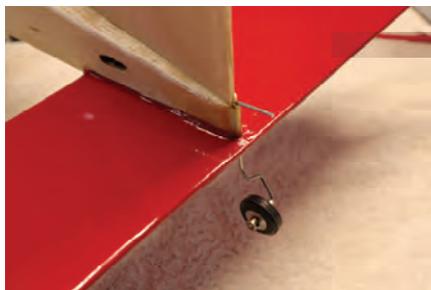


As indicated earlier, I'm covering the wing in red translucent Monokote. It has turned out great! I then attached the ailerons and linkage components to complete this part of the assembly and set the wing aside.

**Covering the Fuselage**

On the fuselage I'm going to use a solid red Monokote material, and I start with the tail section. I covered the bottom of the stabilizer first, followed by the left and right side of the top. Prior to this, I had drilled a small

I next wrap some red Monokote around the



tail wheel assembly and continue covering the rudder fin. Next, I'll cover the bottom of the fuse. First, I cover the landing gear area, then the front, followed by

the length. I then trim the excess and make sure that the edges are sealed down firmly, then I open the exhaust vent to allow air flow out through the aircraft.

I next trim a length of Monokote to cover one side, creating a notched area where the stab is located. I tack down the edges and then proceed to seal off the perimeter and trim off the excess before shrinking it all down. I pay

(Continued from previous page)

careful attention to the wing bed where I heat and stretch the material up over the curved surface edge. I roll the edge over slightly and seal the material down. I'll cover this wing bed area further later with a strip of Monokote and the seal it down with some



trim solvent. I repeat the same process for the other side of the fuselage.

**Covering the Fuselage Top Section.**

I'm going to handle this phase in sections starting at the front. Here I'll cover the battery com-



partment hatch and then the two cross members individually. I start with the two cross members and

then test fit the hatch to be sure that I don't have to trim it down due to the added material thickness.

Once I'm sure that it will fit well with the added covering, I take care of the hatch wrapping the Monokote around the edges. Next, I add a couple of strips to cover what's left of the wing bed.

After cutting a piece for the rear top section, I cut a slit at the rudder location so that fin slides in place with minimal overlap. I

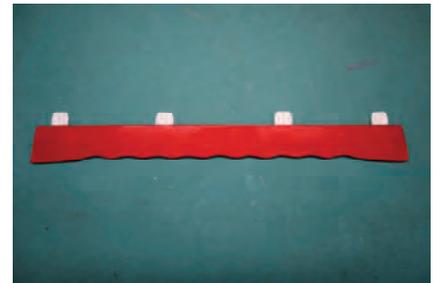


tack the edges and seal the Monokote up against the rudder fin. I fold the Monokote over the rear edge of the wing bed to create a nice finish, trim the excess and then shrink it all up.

To finish the aircraft off, I'm going to add some trim in orange and white and orange to spice up its appearance. I'll add some side striping and some checkerboard patterns to the wing and tail section so it's easy to identify the aircraft's attitude in the air.

**Hinging Control Surfaces**

I'm using "Tyvek" material hinges for all control surfaces and the process for handling each surface is the same. First, locate the previously cut slots where your hinge material was installed prior



to covering and, using an Xacto knife reopen those areas. To complete the stabilizer, insert Tyvek hinges in each slot of the elevator and align it with the stabilizer, sliding the control surface side to side to insert it into position.



Insert a "T-pin" at the joint of each hinge as shown to maintain an even separation and press the control surface against the stab. Using thin CA glue, wick the glue into the area of the joint allowing it to seep into the wood. Once dry, remove the T-pins and test the connection. Use this process for attachment of all control surfaces.

**Motor & Equipment Installation**

After opening the slots for the push rods, I insert the pushrod outer housing and epoxy it in place as shown. An easy way to neatly open slots and holes beneath an applied film covering is

(Continued from previous page)

by using a rounded tip soldering iron.

### Clearing Film-Covered Openings

The rounded tip iron allows you to easily poke through the film cov-



ering, outline the opening and, at the same time, seal the edges of the film against the wood surface. If you take time to do a nice job cutting the opening at the outset, the finished product will look great!



Earlier I inserted a couple of rails that would hold the servos. I happen to have a plastic tray that came with the servos when I purchased the radio, so I'm this item mount them in the tray first, then in the fuselage. I install the servo tray and servos and anchor them in place with wood screws.

Next, I adjust the length of the outer pushrods and use a scrap piece of balsa to secure them in

place inside the fuse with a little epoxy glue.

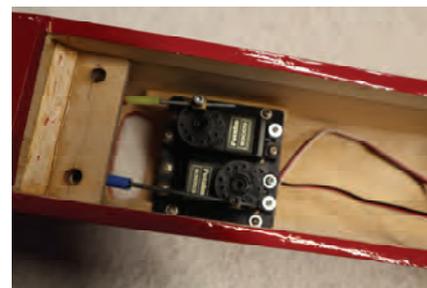


Once the epoxy is cured, I attach clevises to one end of the rod and feed the rods into the outer sleeves through the fuselage. With control rods in position, I locate the control horns for both the rudder and elevator. I attach them with the screws supplied and connect the clevises.

To mark the location of a control horn, I attach it to a clevis, hold in position on the control surface and use a T-pin to poke an indentation where the screw holes should go. Using a small drill bit, I complete the hole and attach each control horn.

### Interior Fuselage Linkage Connections

I prefer using Dubro style "EZ Connectors" for the inside servo connections because they offer a lot of adjustability and you don't have to do a lot of soldering or



wire bending to set up the linkage.

The motor I've chosen for this plane is a 1250KV, (3536D) out-runner with a maximum output of 500 watts from Flash Hobby for about \$19.00. This same motor is also sold through Hobby King under the Turnigy brand name for slightly more money. I don't expect the aircraft to weight



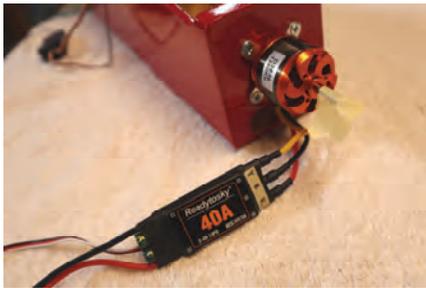
more than 3.5 lbs. so it should be easily able to handle it.

I'm using a 2200 mah 3-4S Lipo pack and 40 Amp ESC to power this motor so airflow will be important.

Wiring up the system is relatively easy. I slide the ESC into the front compartment and fish the motor wires out the lower firewall. To make sure that I connect them properly, I'll need to temporarily hook up my receiver and battery pack to make sure the motor runs in the correct direction.

For test purposes, I'll attach a

(Continued from previous page)



piece of masking tape to motor shaft to safely determine the rotational direction once I power the motor up. After testing the motors directional rotation and adjust wire connections if necessary, I can tuck the ESC wires back into the front-end cavity and finalize the rest of the servo connections for the elevator and rudder controls.

Once I determined the proper rotation, I marked the ESC wire connections with a piece of tape so I can connect them back again correctly after installation.

The aircraft is now complete and ready for its "flight check" and maiden flight.



Shown here is the almost finished product. I have yet to add some decorative trim to spice it up a little but I think it came out rather well. I think it will make a great trainer.



I hope you enjoyed this small introduction to building an RC aircraft. If you're interested in trying it for yourself, let me know and I will recommend a good start up project.

If you choose to train during the upcoming flying season, you'll have an opportunity to fly this great new aircraft. I also have several other aircraft you'll be exposed to as we train. Some are electrics but others are nitro aircraft of varying sizes and types.

I encourage you however to read our article on training in this issue of Flypaper. We have two goals with student training:

- Give students the opportunity



to experience and decide if RC is right for them,

- Provide students with the training, resources and information on how to become a productive member of the RC community

Our training program officially begins June 1st, however you can get in early, weather permitting, with our trainers by letting me know that you're interested in learning to fly. You can contact me at [tjacobs421@att.net](mailto:tjacobs421@att.net), or text me at **262.527.2481**.

You may also schedule summer training sessions by clicking here [I Want to Learn to Fly](#). This will link you to our training signup page at our site. Just fill in the details and we'll get back to you pretty quick.

Lastly, you can just come out to our airfield and let us know you're interested. We can most often get you started same day.

We hope to see you this season.

TJ

# 2021 Student Training

As flight training begins for the 2021 flying season, we're instituting some additional guidelines associated our efforts to get you qualified as a solo pilot. and become a valued member of the club.



As Spring approaches, so too does "Student Training Season."

There are many questions about flight training, and I hope to answer most all of them here in this article using a Q&A format.

We had many trainee's last season. Several graduated to "Solo Pilot" status and are now club members with full club benefits. Welcome you all you new members.

If you are interested in learning about RC, would like to learn how to fly, or are looking to continue your training during the 2021 season, then you'll likely

find the information you need right here.

For young students, there are many reasons to consider RC as a hobby. To name a few; it's fun, allows creativity, employs science, technology and math; and it's a great alternative to secluded video gaming. As summer approaches in Wisconsin, we have the "Great Outdoors" to explore. Why not explore it while doing something that is exciting and fun!

Now, I'm the first to admit that RC Modeling is not right for every-

one. Some folks just don't get the reason for all the excitement. That's what makes us all different. In a way, we're all excited by flight. Some of us want to directly control every aspect of flight, while others are content to watch a golf ball go wherever based solely on the "smack" of a club. I tried both and I still find RC less expensive, less frustrating, and more satisfying. But that's me.

If you're interested in trying your hand at RC flying, then Tamarac airfield is the place to be. Learn here about how you can find out and get started doing something that fun and productive by signing up for training season.

When does training start and end?

Official Spring training starts June 1st and ends October 1st. This doesn't mean that we can't begin training early or train late in the season. Training depends greatly on the weather and field conditions. You'll find Instructors out at the field in April and May, but you'll need to schedule with them to start training as a rule.

## How do I sign up?

It's simple. Go to our website and select Join > Scheduled Training. Or click on this link <https://www.flyingelectrons.com/scheduledtraining>

All you need to do is complete and submit the form and you will

be contacted. Training is FREE of charge and open to everyone of all ages.

### **How long does training last?**

If you decide to start training individuals are required to enroll in our Introductory Pilot (IP) Program. This program is sponsored by the Academy of Model Aeronautics and provides 60-days of liability insurance for students enrolled in the program.

What if I don't want to enroll in the IP program?

Then you're uninsured and cannot fly at Tamarac Airfield.

All pilots, students and Instructors must be members of the AMA to fly at Tamarac Airfield as directed by the FAA, our parent organization the Academy of Model Aeronautics, and our contract obligations set forth by the Village of Menomonee Falls.

### **How often will I train?**

You'll train under a mutually agreeable schedule between you and your Instructor. Before leaving your session confirm with your Instructor the day and time for your next lesson. It's always good to re-confirm your appointment the day of training in case of high winds or rain.

### **How is training handled?**

Training is handled by certified IP Instructors using our "buddy-box" system. This system allows the Instructor the ability to retake control of the aircraft if the student have a problem. Training session will run approximately

one hour (4 to 6 flights) allowing other fliers at the airfield opportunities to fly too.

### **Do I need my own aircraft to train?**

Not at the outset. The club has stable trainer aircraft available for flight training. You will need an aircraft to fly solo at the airfield eventually so you should talk to instructors about what type of aircraft is best for you. Club trainers are limited and often owned by the Instructor, so you will likely be required to fly your own aircraft during solo pilot certification. Instructors can provide advice on aircraft and equipment that would be right for you.

### **What is the goal of the training program?**

The initial goal of the program is to determine if you want to pursue RC modeling as a hobby. Other goals are to ensure that your flight training is successful, assess and guide you in becoming a better flier and provide you with information about the hobby, flight and safety rules.

### **What type of aircraft will I train with?**

Either the club or your Instructor will provide a trainer aircraft. Most of these aircraft are high-wing, stable aircraft that are forgiving of mistakes. The club may also bring out other aircraft using different power sources so that you can experience between electric and gas-powered aircraft as you learn.

The club does not train using jets or delta wing aircraft. The aircraft

chosen for certification purposes must include landing gear for the purposes of learning how to taxi, take-off and landing requirements.

### **What is the IP Program all about?**

The IP Program is a program that is run in cooperation with the Academy of Model Aeronautics and provides students with 60-days of liability insurance while flying at Tamarac airfield. Students may enroll in this FREE program one time only and following the 60-day period, students must obtain their own personal membership with the AMA to continue to train at the field.

### **How do I become a Certified Pilot?**

There are two categories of competence that must be met to become a certified pilot: safety and field rule knowledge, and Flight competency.

### **Safety and Field Rule Knowledge**

Instructors will provide students with a copy of the field rules and safety procedures and go through them with each student. As students train, the Instructor will quiz the student on what they have learned on these topics.

### **Flight Competency**

There are twelve (12) maneuvers that a student must complete successfully ending with a successful landing and return to the pit area. The student must complete all maneuvers during a single flight as called out by his in-

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structor while observing all field and safety rules during flight. Two qualified instructors must be present during the certification process and both must sign-off on the certification form and submit it to the club secretary for filing.

### **What if I trained last year but wasn't yet able to certify?**

If you were an IP student under the 2020 flying season, you will need to join the AMA to receive insurance coverage and continue training in 2021. Membership for individuals 18 and older costs approximately \$75 per year. Students under the age of 18 may join the AMA for \$15 per year.

### **What should I expect after becoming certified?**

Once you are certified if you've not already joined the club you can do so and fly at the airfield anytime you wish. Students under the age of 18 may join the club FREE of charge under our STEM Student Membership Academy (see information at the end of this newsletter.) They must however join the AMA and register their aircraft with the FAA. Instructors can advise students on how to register and join.

### **What should I be doing between lessons?**

Flying is a learned motor skill. If you expect to learn how to fly in a few short weeks, then you'll want to take advantage of a home flight simulator. The club offers assistance in setting up a

free flight simulator for practice between lessons, but students will need a transmitter controller to interface with the system. The club has a few of these available for check out from its library. Units can be checked out for a period of 30-days and require a \$20 deposit which is refunded on return.

### **Where can I go to learn more?**

Most of what you need to know is covered in this article. If you have further questions, you may email Ed Malec at [mechanical.eddie@gmail.com](mailto:mechanical.eddie@gmail.com), or Tom Jacobs at [tjacobs421@att.com](mailto:tjacobs421@att.com). Better yet just stop out at the field with your questions and we'll be happy to take care of your needs.

### **Builder's Workshops**

The club is sponsoring a Builder's Workshop this year and enrollments are still open. This workshop is an opportunity to construct an aircraft on your own over a 6-week period, and then learn to fly it at the airfield. It's an easy, low-cost way to get into the hobby. All students that complete the workshop and attend their first flying lesson receive a FREE, fully refurbished 72 MHz radio system for their aircraft on training day.

For more information on our Builder's Workshops, see the flyer at the end of this newsletter.



### **Man Rescues Windsock!**

With our last Winter, our airfield windsock suffered some damage. It was reported to be hanging only by a couple of zip ties and flapping madly in the wind. Super Dave Wandrey decided to do something about it but he needed to get up on the shelter roof to take care of the problem.

I was given the full account of his efforts and I won't go into detail here, aside from saying that reaching the rooftop without a ladder involved several shelter tables and a Cirque du Soleil performance. The end result was a secure windsock for the new flying season.

Mike Batson can now check another item off his "Field Clean-up Day" list.

### **Thanks for the effort Dave!**

# Thank you for the *Donations!*

I can't say enough about the donations we're receiving this month. Several were made toward our student training efforts with nitro aircraft donations. Others are from previous donors like Scott Chartier, that located some smaller fun items that could be used as raffle items during meetings and events. I thank him for thinking about our club.

Benefactors that are making a difference with contribution to our training efforts are detailed below here on this page.



### Darren Stawski

I want to take this opportunity to thank Darren Stawski for his donation to our Student Training Program. Darren donated an excellent Hobbico Nexstar. The aircraft sports a 60" wingspan and a .46 OS engine. The engine will probably have to be upgraded to a .60 size to perform well. The controller is a 72 MHz system which is out-of-date, but the aircraft itself will serve well when we install a 2.4 GHz receiver and fuel it up so we can start training new students.

### Doug Colton

Doug Colton was sitting around thinking about finishing off two

trainers before he injured his arm during a slip navigating some Winter ice. Even before then, he contacted me to donate two partially completed aircraft. It appears that these aircraft

could be finished with some considerable work and materials, so I'm going to try to tackle that and make them available to students.



### Don Rancic

Don donated this Cessna to the club. It's in pretty good shape needing only a prop and battery pack, but should fly just fine. I've



asked Ed Malec to add it to his trainer collection in that he doesn't really have a trainer with wheels on it.



### Jeff Surges

We've been in desperate need of a new Nesco cooker for the concession stand and Jeff Surges came through with this nice looking unit.

It is the same large size as our other one that still maybe has another year of life on it.

Thanks Jeff!

### A Special Thanks goes out once again to Scott Chartier.

Scott recently cleared out some items from storage geared to young people that can be added to our raffle collection. Items include a camera drone, two small helicopters and various other cool toys.

Thanks again Scott!

# Build & Fly Your Own RC Model Aircraft!

**A Complete 7-Session Builder's Workshop for Everyone  
11 Years of Age & Older!**



*This program was developed in cooperation of the Mequon/Thiensville Recreation Department.*

Introducing

## **RC Builder's Workshop**

Sponsored by

**The Flying Electrons of Menomonee Falls**

*Saturdays, 10:00 AM to 12:00 Noon*

*May 1st thru June 19th*

*No class on June 12th (Spring Break)*

**To Register Click Here!**

**Enter Course Number: 212045**

**Registrations close April 24th 2021.**

**Seats Are Limited.**

Everything needed to become an accomplished RC pilot is included!

These are two-hour introductory classes held on Saturday mornings where students learn how to build and fly their own RC model aircraft.

Using household tools and materials, students learn the basic principles of flight, construction techniques, safe use of tools, damage repair techniques, electronics installation, power sources, and more.

Program includes all materials necessary to build one flying RC aircraft per student. No prior experience is necessary.

On completion, each graduating student receives a complete Transmitter/Receiver system and flight lessons from a Certified Flight Instructor.



All components provided.



Easy-to-use tools and materials.



Step-by-step construction.



Decorate and start flying.



**Special Workshop Offer:** All students that complete the course will receive a FREE, refurbished 72 megahertz Radio Transmitter and Receiver System that will control their finished aircraft. Aircraft project must be fully completed in class to qualify for this offer. Transmitters and Receivers are distributed and installed during the final class.

The Builder's Workshop is a collaborative effort between the Flying Electrons of Menomonee Falls and the Mequon/Thiensville Recreation Department. All registrations and information concerning fees are handled online through the Recreation Department website at [www.MTSD.wi.us](http://www.MTSD.wi.us)

# STEM Student Membership Academy

Education in Aviation through Aero Modeling.

Sponsored by

**The Flying Electrons of Menomonee Falls**

## Here's What The STEM Student Membership Academy Offers!

1. A state-of-the-art airfield for training and personal flying
2. Ongoing access to top notch flight instructors, builders, technical advisors
3. Access to get great RC deals and discount savings
4. Earn your solo pilot's license while learning at your own pace
5. Mini-workshops covering all types of aircraft and power sources
6. Immediate access to advice and tips on how to get the most out of your aircraft
7. Learn airfield protocols and proper safety precautions
8. Meet top pilots and learn aerobatic techniques
9. Participate in all club events and activities
10. Monthly club newsletter
11. Full access to Tamarac Airfield for personal flying
12. Attend monthly club meetings to learn about various model aviation issues

*Graduating students are eligible to renew their membership each year FREE of charge up until they reach the age of 18. (\$15.00 Annual AMA membership is also required for insurance purposes.)*

For more information feel free to contact Tom Jacobs at [tjacobs421@att.net](mailto:tjacobs421@att.net).

The Flying Electrons "**STEM Student Membership Academy**" is a member scholarship program that provides interested young people the opportunity to learn how science, technology, engineering, and math support the various principals of flight through model aviation.

Available to young people ages 8 to 18, students qualify and apply for the Membership Academy by completing the Flying Electron's **Introductory Pilot (IP) Program**. This program, supported by the Academy of Model Aeronautics (AMA), is designed to introduce individuals to model aviation by providing a FREE structured 60-day flight training program.

During training, students learn the principles that support flight, how control systems operate aircraft, power sources and how to properly set up aircraft for successful flight.

Each student trains at their own pace and under a schedule that is mutually convenient. Instructors are also available to assist the student in acquiring his or her own RC aircraft and equipment to be used during student solo pilot certification. Several options are available.

Students that graduate from the IP Program to "pilot status" are immediately invited to apply for a full and FREE club membership with all benefits.

# NEW MEMBER APPLICATION

You must include a photocopy of your AMA card to receive your membership card!

- Check this box if you have updated your address, email, phone...etc.
- Check this box if this is a "STEM Student Membership Academy" Application

AMA NUMBER: \_\_\_\_\_ FAA NUMBER: \_\_\_\_\_  
*(Please include copies of both cards)*

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

EMAIL: \_\_\_\_\_

PRIMARY PHONE: \_\_\_\_\_ DOB: \_\_\_\_/\_\_\_\_/\_\_\_\_ (month and year only)

RADIO CHANNELS CURRENTLY USING: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 2.4 GHz: \_\_\_\_\_

SPONSOR (Required for new membership): \_\_\_\_\_

By signing this application I agree to abide by the Field Rules.

Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Make checks payable to The Flying Electrons, Inc.  
 Mail to: The Flying Electrons  
 Chris Milbauer  
 4952 N 106th Street, Milwaukee, WI 53225  
 414-750-2740  
 chrismilb@att.net  
 Academy of Model Aeronautics, 1-800-1 FLY AMA, www.modelaircraft.org

The Flying Electrons Inc., www.flyingelectrons.com

## MEMBERSHIP FEES AND TERMS

Select the Membership Category (Enter Cost at Right)	Unit Cost	Extension
New Member Initiation Fee	\$50.00	\$
Non-Resident - Individual or Family Membership	\$75.00	\$
Menomonee Falls Resident - Individual or Family Membership	\$55.00	\$
Junior (18 Years or Younger by July 1st)	\$55.00	\$
Single Senior (65 or Older by July 1st)	\$55.00	\$
<b>Additional Costs</b>		
Add if renewing after January Club Meeting	\$5.00	\$
Add if renewing after February Club Meeting	\$10.00	\$
<b>Deduct</b> if you paid initiation fee previous year	<b>-\$20.00</b>	-
STEM Student Membership Academy (IP Qualified)	N/C	
Calculate Total Membership Cost Here		\$

Incomplete forms will be returned to the applicant. Failure to provide proof of AMA membership will result in suspended flying privileges until proof such as a photocopy of AMA card or faxed confirmation from the AMA is provided to the club secretary. Applications for AMA membership are available from the club secretary or from most area hobby stores. Acceptance into membership of the Flying Electrons Inc. is contingent upon Club sponsorship, Board approval, and completion of all requirements of The Flying Electrons Inc. bylaws and based on the information provided herein.

All fees are payable in advance.

## 2021 Flying Electrons & Local Area Events Calendar

Date	Time	Event	Location/Club
Saturdays, May 1st thru June 5th	10AM to 12:00PM	Builders Workshop	Mequon Recreation Center
Saturday, May 8th to 15th	8AM to Noon	Field Clean up	Flying Electron's Airfield
Sunday, June 6th		Control Line Open Fun Fly	Circle Master's Flying Club
Saturday, June 12th		Open Fun Fly	Fon du Lac Aeromodeler's Assoc.
Saturday, June 19th	9AM to 2PM	BWS Flight Training, IP sign-ups, Education Event	Flying Electron's Airfield
Saturday, June 26th	9AM to 2PM	Club Fun Fly, 60th Anniversary Celebration, First Club Meeting	Flying Electron's Airfield
Sunday, June 27th	9AM to 2PM	(Above rain date)	Flying Electron's Airfield
Saturday, June 26th		Fun Fly	Sky Ranch Flyers
Saturday, July 10th		Charity Fun Fly	Astrowings of Wisconsin
Sunday, July 11th	8AM to 2PM	Scale Event	Flying Electrons Airfield
Sunday, July 11th	TBD	Club Meeting	Flying Electron's Airfield
Sunday, July 18th	8AM to 2PM	Electric Event	Flying Electron's Airfield
Saturday, July 24th		Fly-in	Lakeland RC Club
Monday, July 26th thru August 1st		EAA Kid Venture	Oshkosh
Monday, Aug 2nd thru Aug 6th	9AM to Noon	5-Day Builders Workshop	University School of Milwaukee
Saturday, Aug 7th		Float Fly	DNR Bong Recreation Area
Sunday, Aug 8th		Annual Radio Control Contest	Circle Masters Club
Sunday, Aug 8th	TBD	Club Meeting	Flying Electron's Airfield
Thursday, Aug 19th to 22nd	8AM Daily	Warbirds & Classics	Fond du Lac Aeromodeler's
Saturday, Aug 21st		Friend Fly (Rain Date Aug 22nd)	SWARM
Sunday, Aug 22nd		Wellnitz Memorial Open Fun Fly	Fond du Lac Aeromodeler's
Sunday, Aug 22nd		Open House	Racine RC Club
Wednesday, Aug 25th	9AM	Jim Wahner Dead Chicken	Flying Electron's Airfield
Saturday, Aug 28th	8AM to 2PM	Airfest 2019	Flying Electron's Airfield
Saturday, Aug 29th	8AM to 2PM	Airfest 2019 (rain date)	Flying Electron's Airfield
Saturday, Aug 28th thru 29th		Demo Flying	Circle Master's Flying Club
Saturday, Sept 11th	8AM	Swap Meet	Flying Electron's Airfield
Sunday, Sept 12th	8AM	Swap Meet (Rain Date)	Flying Electron's Airfield
Sunday, Sept 12th	TBD	Club Meeting	Flying Electron's Airfield
Sunday, Sept 12th		Open House - Pancake Breakfast	Watertown Aeromodelers
Saturday, Sept 18th - 19th	8AM	Pattern Contest	Flying Electron's Airfield
Saturday, Sept 25th thru 26th		Maker's Fair	Wisconsin State Fair Grounds
Sunday, Sept 26th	9AM to 2PM	Franken-Plane and Build & Fly	Flying Electron's Airfield
Saturday, Oct 9th		Collecto & Hobby Swap Meet	Model Engine Collectors Assoc.
Sunday, Oct 10th	TBD	Club Meeting	TBD
Sunday, Nov 14th	TBD	Club Meeting (Elections)	TBD
Sunday, Dec 5th	5PM	Club Holiday Dinner	TBD