

# Flypaper 2020

Official Newsletter of  
The Flying Electrons of Menomonee Falls



Celebrating 60 Years of Service to the Community & Counting!



## President's Preflight



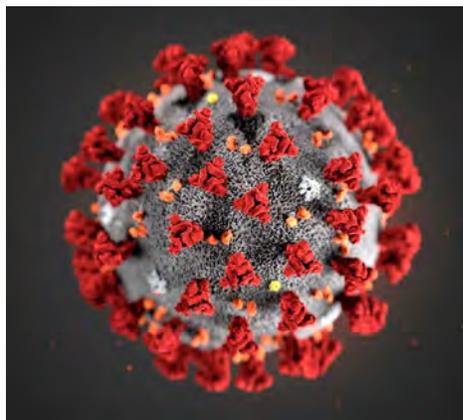
Another month has passed and we're still locked down due to the pandemic.

At the writing of this month's newsletter some local area businesses are beginning to reopen where direct personal contact or group congregation is not needed to conduct business. Hopefully the spread will continue to slow and we'll be able to do some of the things we've been holding back on for the last couple of months.

The airfield is open to flying. Over the last couple of weeks Bob Scrip and his son took it upon themselves to finish the field cleanup process and the field has never looked better.

I recently sent a member wide email out explaining the **COVID-19 Safety Standards** that should be observed while at the field to help limit the spread of the disease. I wanted to restate them here with some rationale so that all of us understand why it's so important.

I know that there are some individuals out there that don't see this pandemic as a real threat to themselves, so they act a little carelessly



when flying at the field. Well, this virus flies at the airfield too! And, you don't want to be in its path when it's flying.

If you're young and healthy you'll probably be just fine if you contract the virus. There are many reports however, of young and healthy individuals being hit hard by the virus and even dying, but the odds are said to be more in your favor if you're young and healthy.

Despite your healthy status, you can contract and spread the virus a week to ten days without even knowing you have it, and that's where it and you really become dangerous to everyone around you.

The COVID-19 Safety Standards we ask our members to follow at the field are there for the protection of everyone, young and old. And, as long as they are taken seriously the field will remain open for flying and fun for the summer season.

Here are the guidelines we're asking our members to follow while flying or visiting at the field.

(See **COVID-19** on page 3)

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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)



Last year we implemented our Incident Reporting System.

As you continue to fly throughout the spring months as weather permits, be sure to indicate any signal interference you may experience so that we can begin tracking events for the 2020 flying season.

To reach the Incident Reporting System, simply click this link, [Incident Reporting System](#)

You can also register an event by going to the [www.FlyingElectrons.com](http://www.FlyingElectrons.com). Select "Contacts" from the left side bar and then "Incident Report" from the dropdown.

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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**

**COVID-19** *Continued from page 1*

**1. Keep a social distance of six feet** from other pilots (a full buddy box or "pit station" distance).

**2. Wear a mask.** Although masks are not mandatory, they are highly recommended out of respect and safety to other pilots at the field. Masks don't protect one from catching the virus, they protect you from passing it. Masks will not be enforced at this time but you should have one on hand just the same.

**3. Only two pilots in the shelter at one time,** while maintaining a social distance. Actually, our shelter is large enough to comfortably house four members at a time while maintaining a safe distance, so we ask that you use good judgment when congregating under the shelter.

**4. Only one pilot in the shed at a time.**

**5. Frequent use of hand sanitizer is requested** (plenty will be made available in a station under the shelter.) I ordered and received 70% Ethanol which is mixed with small amount of Lysol disinfectant. You'll find this hand sanitizer under the shelter along with a spray disinfectant for the charging stations.

**6. Please wipe down the charging stations frequently** (disinfectant will be made available).

**7. No shaking of hands.**

**8. If you feel sick, STAY AWAY FROM THE FIELD!**

The Wisconsin weather is tough to predict. We're fortunate that we've already had some nice days to get in some flying and we have more ahead of us. I was out this last week. It was a little breezy but the sun was out and a light jacket was all that was needed.

Let's make the season as safe as possible for all members by following these guidelines so everyone can enjoy what they can of the season.



## 2020 AMA Sanctioned Events

The AMA has been very flexible regarding the rescheduling of sanctioned events. The board met on Sunday, April 26th by web conference to establish our budget for year 2020.

During that meeting we also discussed the status of our events for the season. Our 60th Anniversary & Club Fun Fly that was scheduled for June 18th has

been postponed for the time being.

As the situation unfolds over the summer, we may reschedule it for a later date if it makes practical sense.

Regarding our other scheduled events; with the exception of the Charity Event, most of our other events can be ramped up within a week and made ready. This means that we will likely make last minute decisions on a go or no-go on the events.

Please watch your emails for status of club events. Because the Charity Event requires more planning, we will be deciding on whether or not to hold that event by July 15th.

Whether we hold any of our

scheduled events this year will depend greatly on how controlled this pandemic is at the time and whether we can come up with an event structure that makes it safe for members and the public to attend.

Our calendar at the back of this newsletter contains all of our current event dates.

Please watch your email for updates as we get closer to those times.

## Restoring a High Performance Airframe-Part III



vacuumed the dust from the surface. I also checked the overall wood surface to ensure that there is no previous film residue left behind. I used acetone on a soft rag to wipe away any residue that remains.

I studied the complex "wing tip" shape and initially tried to cover it

as a part of the overall wing surface. This idea failed badly for a couple of reasons.

1. I didn't leave enough material off the wing tip to do a good job of stretching against the shape under the heat of the gun. In my case, I left only a couple of inches when I needed more like 6 to 8 inches to get a good grip.
2. I didn't have plan to hold the wing structure solidly in place while I stretched the material under heat so I struggled.

As a fall back position, I decided to cover the wing tips separately (see right sidebar.)

It wasn't my preferred strategy but I learned from my mistake and I'll be better prepared next time.

### Laying Down the Full Wing Pattern

After completing half the wing tip, I laid down the film sheet over the structure and then, I laid

### Learn From My Mistakes



Wing tips are difficult to manage with Monokote and other films due to the compound shape.

I initially tried to pull the covering over the wing tip with heat and found that I had not left enough material at the end of the wing to get a good grip or stretch it properly under the heat of the gun.

So, at the tip, be sure to leave enough material over the wing tip to allow you to get a good grip and leverage to pull the materials around the compound shape of the wing tip under heat from your heat gun.

My mistake in this regard forced me to cover the wing tips separately, which worked out OK but there is now a seam at the tip where otherwise there would have been none.

The other tip when covering a wing tip is to "go slow." With enough material, a good grip and gradual heat, you can make Monokote do amazing things.

There are some builders that are so skilled at this, that you can't find a seam anywhere on their aircraft.

### Re-covering the Wing

After combining the sectional film Monokote for our upper and lower wing patterns, it's time to start re-covering the wing.

I'm starting with the wing bottom



surface first, because I want to layer the top film to fold over the bottom layer edge. This design is split at the leading and trailing edges of the wing so it will be important that I create a clean and straight line which separates the upper and lower portions of the wing.

So, let's get started.

### The Bottom Wing

I finished prepping and sanding the wing and then I thoroughly



down my tracing pattern on top for positioning purposes. I find that aligning the bottom wing root and wing tip points with the tracing pattern are a good way to lock in the positioning.

Once the tracing pattern is



aligned with the film and wing panel, I gently remove the tracing



pattern and tack down the film at the mid portion of the wing root. I do the same at the midpoint of the wing tip to lock down the films location. Next, I tack down the bottom and top wing root points followed by the wing tip bottom and top points.

Next, I tack down perimeter ar-



reas of the film around the wing at points, gently stretching the film to a smooth surface as much as possible. Since the wingtip is already covered now in this case, I can tack and stretch to the tip without trying to shape the wingtip.

### Perimeter Tacking

I continue to stretch and tack the perimeter of the wing. Because the wing has the ailerons already attached, the film sheet needs to be parsed to handle that. If this was a

new assembly, then ailerons could be covered separately.



To start, I isolate the main wing area from its aileron with the iron tacking the areas separately. If there is need for adjustment, then one can use some heat to easily remove a tacked area for repositioning. Once tacked, I run the iron carefully over the length and lock down the film at the edges of the wing/aileron connection.

Next, I locate the center line of the aileron area and mark it. I then tape a straight edge in place to ensure that I'm slicing this area correctly and I make the cut right down the middle. The result; a clean cut that can be easily folded down and sealed into place at the hinge area.

### Preparation for Final Shrinking

The one thing we need to do is make sure that all perimeters are secure before using the heat gun.

In doing so, we should trim all perimeter areas that will not be part of the final product. For this purpose, this means that you will need to heat seal and trim away material that will not be required to accommodate the next step.

### Shrinking the Overall Wing Panel Film

With perimeter sealing accomplished, we can start using the heat gun to shrink up the loose areas. "GO SLOW!" This is the most important advice I can give you. GO SLOW! Monokote and all films have a tremendous capacity to shrink. Learn how to apply heat over time, rather than applying heavy heat at the outset.

### Final Trimming



The top and bottom of this wing pattern is divided at the leading and trailing edge. Creating the cut-off at the trailing edge is easy; you just trim the material right down one side of the trailing edge. But how do you get a nice, straight, sharp line where the design pattern changes at the leading edge?

Use masking tape as a rule guide.

This is a trick I learned after several experiments in trying to come up with a way to create a

reliable straight edge down the center of the leading edge.

Once your film is laid down and the edges are sealed, you can



apply a straight length of masking tape right down the center of the leading edge, creating a nice straight edge.

You'd be surprised to know that this minimal layer of thickness provides an adequate guide for trimming a straight line down the

center of the leading edge.

I recommend using a single-edge razor blade versus an X-Acto knife to make the cut as X-Acto knives can more easily run up upon the masking tape when making your cut.

When making your trim cut, go slow. Be sure to cut deep enough to penetrate the layer you're trying to trim.

Cut and peel away the trim remnants and heat seal the cut line

*(Continued next page)*

### Flight Simulator Library

Spending time at the transmitter practicing maneuvers is essential to improving your flight performance. Whether you conduct these exercises at the field or at your computer, you'll get results.



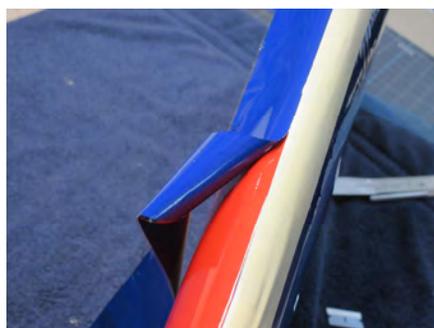
Sure, being in the air with a real aircraft has its challenges but it also has its risks. One still needs the ongoing practice to develop the motor skills necessary to become a good pilot and nothing is safer or more forgiving than a flight simulator.

Holger Petersen has generously offered to donate a Real Flight Simulator to the club for loan to members. Ed Malec has been loaning out two copies that he has, so now we are up to three available flight simulator software packages.

If you would like to check one out for 30-days send an email to me at [tjacobs421@att.net](mailto:tjacobs421@att.net) and I'll make arrangements. We would like to hold the length of time to 30-days for checkouts to ensure that the packages are available to others that may also want to use them.

to seal and mend the cut with your heating iron.

Your last step is to go over all



seams with Monokote Solvent. This helps seal the seams so they



will not pull apart or lift after your application.

Below is my finished aircraft assembled. It looks as good as new (with some flaws) but you can't beat it for \$75.00 and a few dollars spent on covering.

You'll note that the cowling is not attached pending my engine run-in and setup for throttle

adjustment but everything looks good for me getting this baby out soon on a calm day for it's maiden flight.

I will be flying a Futaba T10J Radio system with 6 servos. It's powered with a DLE 55 which should give all the power it needs as it was initially rated for 50CC.

I hope you found something useful to take away from this experience of mine.

Come to the field and watch me fly this "Bad Boy" as soon as the weather gets better.

I hope to see you there!

TJ

**Sidebar Tip:**



Recently I was working on repairing my Christian Eagle Biplane. The Christian Eagle has a very complicated, multi-colored wing pattern laid down on a white surface.

I decided to try the Windex method of applying film on film and it worked flawlessly. The technique works like this:

Cut your trim pattern and set it aside. Apply your based color Monokote to the framework, shrink it up tight and when you're done, spray the surface with Windex.

Lay out the trim pattern on the wet sprayed surface and position in place. Wipe out the underlying moisture with a soft cloth until all bubbles and moisture are out.

Allow the layered trim to dry for at least eight hours, then brush "Trim Solvent" over the edges of the layered film applied to the base Monokote layer.

You'll be amazed that the trim pattern will adhere faithfully and remain secure. I could hardly believe it myself.



This month we have several YouTube contributions from our YouTube source ... Ed Malec.

Some of these are really great to watch. Just click on the link to gain access.



### Laser Tag with RC Aircraft

Our friends at Flite Test are always up to something. They have now successfully developed a laser tag system to put on our RC Airplanes. Today was the first test in direct sunlight, and we were very happy with the results! More development of this system to come!

<https://www.youtube.com/watch?v=rSLFi5rwgMA>



### Giant Scale Warbirds

Some of the largest military scale RC aircraft anywhere are represented here flying in formation. Quite a sight!

<https://www.youtube.com/watch?v=fJ8i4kqLkjq>



### Soaring

If you're looking to take a break from all the pandemic news of today, click on the link below and sit back and relax.

<https://www.youtube.com/watch?v=gchmz0FiIdo>



### Weston Park 2019 - Europe's Largest Air Show

Features highlights and clips of incredible flying, pyrotechnics and aerobatics. Dozens of aircraft fly at the same time competing for attention. A scale B2 Bomber makes an appearance.

<https://www.youtube.com/watch?v=NS-JiXZcTWQ>



**AZ Aerosport's Bill Hempel 60% Clipped Wing Cubs ZDZ 420cc Weston Park 2019.** What more can you say.

<https://www.youtube.com/watch?v=ZfUuydtxFhY>

# Getting Started in RC



## Part III: How to Power Your Aircraft

Last month we talked about the type of aircraft you should choose starting out in RC. This month we are diving into power sources. But first, it's important that we spend just a little more time on the choice between RTF's and ARF's as a platform for RC.

The reason we need to do this is because if you choose to purchase an RTF aircraft starting out, your decision on a power source will be "electric" and it will what ever is made available on the RTF aircraft that you purchase. For trainers, there is no way around that for RTF's. The package components are specific to the aircraft.

If however, you choose to purchase an ARF aircraft, you have more work to do to setup your aircraft for flight but you also

have many more options from which to choose in how you want it set up. ARF's allow you to choose what type of power source you want to employ. They also allow you to choose how much power you wish to install in your aircraft. As a rule, you should always install a little more power than you need for an aircraft. This provides you with the ability to access that power when you really need it to get out of trouble while in the air. With an RTF trainer, you get what you get in the package ... no options.

I personally like the ARF type of platform because it gives me the choice of either electric or nitro as a power source. Which one I choose depends on the aircraft but I like both for a variety of reasons that we'll look into later.

## Deciding on a Platform

First you must decide whether you want to purchase an RTF or ARF platform aircraft. If you choose RTF then the rest of this article will be educational and worth reading. Starting with RTF aircraft is a good choice for many new students because it gets you into the hobby quickly without much effort.



Most trainer RTF's provide a complete package to include radio transmitter and receiver, so their purchase price will be a little higher to start. If you choose that route, be sure that you select an aircraft and transmitter combination that can take advantage of "buddy box" technology. Many RTF packages do that very well. Our last issue of FlyPaper mentioned three you could consider. Those RTF's that include either a Futaba or Spektrum radio system are good choices.





This Nitro Field Box holds everything you would need for a day of flying at the field

If you are thinking about choosing an ARF, then you need to decide on a power source and radio system. We'll talk more about radio systems next month. This month we'll focus on power sources.

### Power and the Aircraft

Most aircraft are specified by required engine size. Bigger aircraft naturally require larger power sources. Nitro engines have been around for many



years and the preferred power source of most modelers over time. Only with the recent advancements in battery storage

has elect power taken off and received wide-spread approval.

So, when choosing an aircraft as an ARF or even a kit, one of the specifications provided by the manufacturer is engine size required to fly the aircraft.

Most manufactures will specify a power range,

i.e. "suitable for .40 to .60 size engines." The decimal number refers to the cubic inch displacement or volume of the cylinder of the glow or gas engine recommended.



The larger the cylinder the more power the engine provides. When one talks about larger engines, especially those which run on gasoline instead of nitro



This a publication that young students might want to consider when getting into RC.

Written by Air Age Store tech editor, Gerry Yarrish, this popular book has been helping thousands of RC pilots earn their wings for more than a decade. Now updated with the latest radio technology, the low-down on electric and glow power systems, and setup tips for ARFs, this new version will continue to educate the next generation of fliers.

Gerry brings a lifetime of knowledge and experience in the hobby to this comprehensive beginner's guide and showcases the latest airplanes and equipment. From setting up your RC workshop and building your first serious model airplane, to taking off and landing, this book includes all the tips and tricks you'll need to know to get in the air. Get ready to have some fun!

Click the link below to learn more.

[Getting Started in RC Planes](#)

methane, they size them in CC's or cubic centimeters.

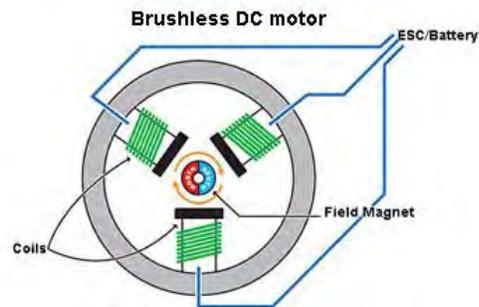
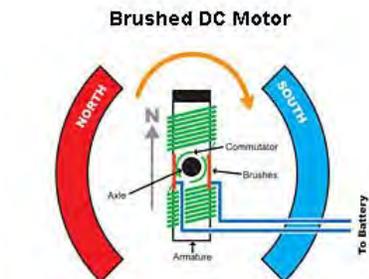
Because nitro engines were here before electrics, some electrics are gauged to compare with nitro's as power equivalents. Some electric motors will provide a conversion number that reflects what power they produce compared to a nitro engine. If this is not available, then you'll need to calculate it on your own. This is where our STEM training for students comes in, and we'll look at that in a later issue.

### Electric or Nitro?

The term "Nitro" has been used for years to describe model engines that run on a combination of Castor Oil, methane and Nitro Methane. When I was young, my dad and I used to mix our own fuel for these engines. I don't think that mixing your own fuel is even possible anymore because one can't buy the chemicals without ending up on a terrorist watch list. Times have changes.

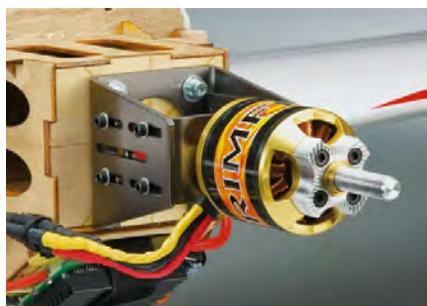
Anyway, the term "Nitro" comes from the nitro methane chemical mix that the fuel is made up of. Now days, castor oil has been replaced with a synthetic blend. There are different blends of fuel made available that usually specify 5%, 10%, 15%, or more, nitro in the mix. When flying a glow engine the Nitro percentage has to do with how fast it will burn in the engine. The "glow plug" in your engine should be selected to match your Nitro rating to run most efficiently.

With advancements in battery technology, electric power



sources have become very popular. Electric motors have been around for 30-years but the use of them in model aircraft have been more experimental until the last 20-years or so.

We now have brushed and brushless motors. We also have light-weight lithium polymer (LiPo) batteries and small circuit boards called ESC's (Electronic Speed Controllers) that allow us to control the power of a LiPo battery to the motor in a graduated way, through a receiver and directed



by signals from a transmitter. How cool is that! In fact, electric motors have advanced so much that they can now power extreme aircraft of extraordinary size.

### Which should I choose?

Each type of power source has its pros and cons. How you feel

about each of them can lead you in one direction or another.

Once you've decided, there are accessories that you must own to support your choice. When all are purchased, the cost for choosing one over the other is about the same, so you won't be able to decide solely on cost.

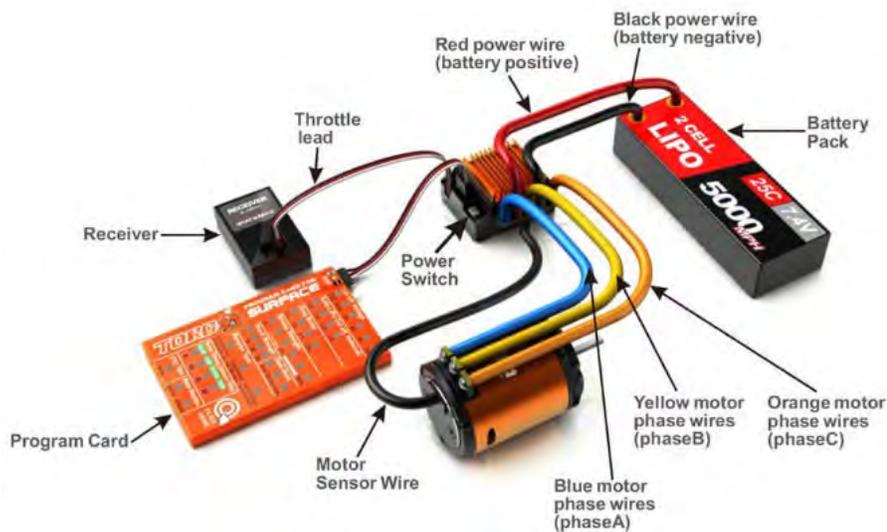
Let's look at some of the accessories you'll need once you decide on a power source.

### Electric Power

Here you'll need the motor, an ESC (Electronic Speed Controller), battery pack, charger and fire proof container to store your LiPo batteries. You'll likely want to own several battery packs and a charger that will charge several batteries at a time. This way, you can be flying your aircraft while your other batteries are charging.

When purchasing batteries and your ESC, you'll want to make sure that your batteries, ESC and charger have compatible connectors so they can plug into each other. There are XT-60 and T-Type connectors most commonly found in the market place for small to mid size power sources. Be sure that you choose connectors that are compatible.

*(Continued next page)*



Generally you'll want to invest a charger that will accommodate a variety of battery sizes and most importantly runs on both AC and DC current. This way you can take advantage of the club's solar powered charging stations located at the field of which we have four.

These stations can handle a variety of field charging needs but do require a charger that will run on 12 or 24 volt DC current.

With enough extra batteries, an electric pilot can fly all day using the Electronics solar charging stations.

### Nitro Power

When choosing a "nitro" or glow fuel engine as your power source, you'll also need the engine, fuel and glow starter as a minimum requirement. Most ARF's will already provide a fuel tank and acceptable glow engine mount for your aircraft.

These engines are often called "Glow Engines" because they

ignite the fuel using what is called a "glow plug." This is similar to a spark plug used in gasoline engines but the difference is



that gasoline engines require that a spark be generated to ignite the fuel, whereby with a glow engine, the plug just continues to "glow" red hot once the fuel is initially ignited. This con-

stant "glow" keeps the engine running as long as it's receiving fuel.

I'm sure there is a more complicated and technical explanation for the difference but what I describe here is the main difference.

To start a glow engine, voltage is applied to the glow plug using the "glow starter," fuel is drawn into the carburetor by flipping the propeller until combustion occurs.

A needle valve on the engine allows the user to adjust the fuel mixture until the engine runs smoothly. Sometimes an engine will need to be "primed" by adding a couple of drops of fuel into the carburetor to boost the starting process.

Glow engines can be started by hand as described above, but you may want to invest a "Torque Starter" and Flight Box for convenience and easier starting.

The Torque Starter is a heavy duty hand-held starter with a rubber cup attached to the front. The cup fits up snug against the engine's nose cone and rapidly spins the nose cone and prop until the engine starts.

This is a faster and safer way to get your glow engine started because these engines can "kick-back" when too much fuel is applied and smack your fingers.

Ouch!

## Electric vs. Nitro

Below I've listed some pros and cons associated with these two power sources.

### Electric Pros

1. Easy to start
2. Very quiet in flight
3. Very clean operation
4. Can be run indoors (not flown)
5. Batteries offer larger number of flights

### Electric Cons

1. Hard to hear in flight
2. Limited flight time
3. Batteries must be charged before each flight
4. LiPo batteries require special care
5. Flights are shorter than glow engine

### Glow Engine Pros

1. Realistic aircraft sound
2. Easy to hear in flight
3. Smoke capability
4. No waiting for charge between flights
5. Longer flight times based on tank size

### Glow Engine Cons

1. Very noisy
2. Require an initial learning curve to become familiar
3. Can't be run indoors
4. Leaves exhaust residue on aircraft
5. Fuel is expensive
6. More stuff to bring along to the airfield

## Still Tough to Decide?

If you still can't decide, I've put together a case scenario with estimated costs that may help you make a more informed decision. The costs and components were selected from online RC stores but please keep in mind that your local hobby shop also carries these items at a competitive price or, they can get them for you.

The chart reflects costs associated with both electric and glow engine power source choices. The costs below do not include a radio system which could run between \$150 to \$250 including servos and receiver battery pack, so you would need to add those costs unless you are part of the Flying Electrons Builder's Workshop Program.

These are just estimates but should be pretty close to what you expect at this time.

There are a lot of choices out there and no one ever said that you can't choose both. I personally have a collection of nitro aircraft and a couple of lesser electrics that I fly all the time. I also have a few large scale gasoline models.

It's actually great to have both so that you can enjoy what both have to offer

## Next Month

We'll discuss Radio Systems and what you need to think about when choosing a good radio that will support your needs now, and in the future.

Components	Electric	Glow Engine
Avistar Aircraft	\$ 150.00	\$ 150.00
Engine or Motor	\$ 100.00	\$ 160.00
4 Batteries/5 Gallons Fuel	\$ 160.00	\$ 150.00
Electronic Speed Controller (ESC)	\$ 25.00	
Charger	\$ 110.00	
Glow Starter		\$ 25.00
Torque Starter		\$ 32.00
Flight Box		\$ 25.00
LiPo Storage Box	\$ 25.00	
<b>Total Cost</b>	<b>\$ 570.00</b>	<b>\$ 542.00</b>

Also, costs above outline what's needed to enjoy a full summer of flying.

For example, one can enjoy approximately 250 twelve minute glow engine flights for the summer, or 500 six minute flights using electric.

- Costs listed are entered where they are relevant for the power source.
- Costs were obtained from reliable online store providers. Your local hobby shop may provide better deals.
- Torque starter and Flight Box are not absolutely necessary but a great convenience.

# APPLICATION FOR MEMBERSHIP

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

## MEMBERSHIP FEES AND TERMS

Check this box if you have updated your address, email, phone...etc.

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: \_\_\_\_/\_\_\_\_/\_\_\_\_

Select the Membership Category (Enter Cost at Right)	Unit Cost	Extension
New Member Initiation Fee	\$50.00	\$
Regular Family Membership	\$75.00	\$
Menomonee Falls Resident	\$55.00	\$
Junior (18 Years or Younger by July 1st)	\$55.00	\$
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 this is your first membership renewal	<b>-\$20.00</b>	-
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.

Make checks payable to The Flying Electrons, Inc.  
 Mail to: The Flying Electrons  
 Chris Milbauer  
 4952 N 106<sup>th</sup> Street, Milwaukee, WI 53225  
 414-750-2740  
 chrismilb@att.net

Academy of Model Aeronautics, 1-800-I FLY AMA, www.modelaircraft.org

The Flying Electrons Inc., www.flyingelectrons.com

## 2020 Flying Electrons Events Calendar

Below is a tentative calendar of events for the upcoming 2020 flying season. The Caronavirus epidemic has placed all meetings and events temporarily on hold.

Date	Time	Event	Club/Location
Wednesday, January 1st	8AM to 11AM	News Year Day Chili Dump	Flying Electrons Airfield
Sunday, January 12th	7:00PM	Member Meeting	Cancelled. Go Packers!
Sunday, February 9th	7:00PM	Member Meeting	De Marini's Restaurant
Saturday, March 7th	9:00AM to 12 Noon	RC Association Meeting	Wauwatosa Library
Sunday, March 8th	7:00PM	Member Meeting	De Marini's Restaurant
Saturday, April 4th	10:00AM	Builder's Workshop Starts	Menomonee Falls Rec Center
Sunday, April 5th	7:00PM	Member Meeting	De Marini's Restaurant
Saturday, May 2nd or 9th	8:00AM	Field Clean up	Flying Electrons Airfield (Weather permitting)
Sunday, May 3rd	7:00PM	Member Meeting	De Marini's Restaurant
Saturday, June 13th	10:00AM to 2:00PM	60th Anniversary Celebration & Club Fun Fly	Flying Electrons Airfield
Sunday, June 14th	7:00PM	Member Meeting	De Marini's Restaurant
Sunday, June 28th	10:00AM to 2:00PM	Electric Only Event	Flying Electrons Airfield
Sunday, July 12th	10:00AM to 2:00PM	Scale Event	Flying Electrons Airfield
Sunday, July 12th	7:00PM	Member Meeting	De Marini's Restaurant
Saturday July 18th	9:00AM to 2:00PM	Education Event	Flying Electrons Airfield
Sunday, July 19th	9:00 to 2:00PM	Education Event (Rain Date)	Flying Electrons Airfield
Sunday, August 9th	7:00PM	Member Meeting	De Marini's Restaurant
Thursday, August 13th-16th	8:00AM to 4:00PM	Warbirds & Classics Over America	Wellnitz Field In Fond Du Lac
Thursday, August 27th	10:00AM to 2:00PM	Dead Chicken Event	Flying Electrons Airfield
Saturday, August 29th	10:00AM to 2:00PM	Airfest 2020 (Rain Date 8/30)	Flying Electrons Airfield
Saturday, August 30th	10:00AM to 2:00PM	Airfest 2020 Rain Date	Flying Electrons Airfield
Sunday, September 12th	8:00AM to 2:00PM	Swap Meet	Flying Electrons Airfield
Sunday, September 13th	8:00AM to 2:00PM	Swap Meet (Rain Date)	Flying Electrons Airfield
Sunday, September 13th	7:00PM	Member Meeting	De Marini's Restaurant
Saturday, September 19th - 20th	8:00AM to 4:00PM	Pattern Contest	Flying Electrons Airfield
Sunday, September 27th	10:00AM to 2:00PM	FrankenPlane/Builder's Challenge	Flying Electrons Airfield
Sunday, October 11th	7:00PM	Member Meeting	De Marini's Restaurant
Sunday, November 8th	7:00PM	Member Meeting (Elections)	De Marini's Restaurant
Sunday, December 13th	5:00PM to 12:00PM	Christmas Party & Dinner	TBD
Friday, January 1st	8:00AM to 11:00AM	New Years Day Chili Dump	Flying Electrons Airfield