Issue 708 July 2020 Club Charter 667

Flypaper 2020

Official Newsletter of
The Flying Electrons of Menomonee Falls

Celebrating 60 Years of Service to the Community & Counting!

President's Preflight

Survey Results Are In.

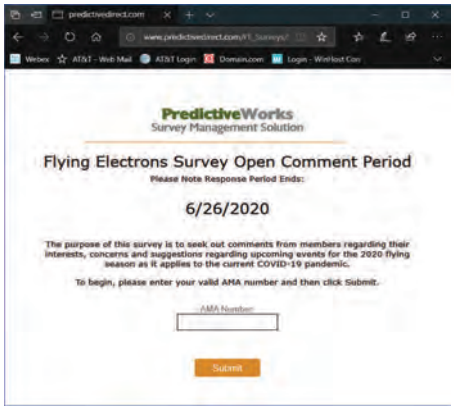
Thanks to everyone that took the time to complete our Event Survey. It was helpful is letting us know where you stand on this year's events and the risk imposed by the Covid-19 pandemic.

By now, you're aware that we scheduled and held a scaled down "Electric Event" at the airfield on June 28th. Details on the event are covered later in this newsletter.

With early survey results in by June 14th, we could see that the majority of responders were open to, or would consider attending events this season, but very cautious about conditions going forward. So, Steve Huelsbeck as CD, made the decision to hold the Electric Event as scheduled.

We planned to generate a scaled back and cautious event just to see if it could be handled and executed properly.

I promised to share the survey findings with you and rather than summarize and calculate percentages



PredictiveWorks
Survey Management Solution

Flying Electrons Survey Open Comment Period

Please Note Response Period Ends:

6/26/2020

The purpose of this survey is to seek out comments from members regarding their interests, concerns and suggestions regarding upcoming events for the 2020 flying season as it applies to the current COVID-19 pandemic.

To begin, please enter your valid AMA number and then click Submit.

AMA Number:

Submit

Click this Link to View the Actual Survey Report

of who said what, I decided share complete the survey report with you.

The most important take-away is that responders indicated that they were open to events this season either directly or cautiously with 24 Yes responses and 18 Maybes, and only 6 No's.

To review the report yourself, simply click on the link above.

There was lesser interest in holding a single all-inclusive event toward the end of the season. Maybe I did not make it clear enough on how it would be orchestrated, but the verdict is now in.

With the Electric Event now over we can see that small events can be handled at the field where the crowds remain manageable.

Events that are still a possibility this year are the Pattern Contest, Swap Meet, Builder's Challenge and FrankenPlane Events which

(See EVENTS on page 15)

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

Incident Reporting System

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.** 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

The Flying Electrons of Menomonee Falls
Celebrating Over 60 Years of Model Aviation & Service to the Community!

The Flying Electrons Reach 60-Years of Service and Counting!

Continued ...

Having gotten through the first ten years of evolution, the Flying Electron's history begins to expand with ventures like seeking out new flying locations and the introduction of rules which govern safety and protect the hobby.

1970 to 1976

Our club history picks up in this series with the year 1970.

After having established Aero Park as a flying site back in the early 60's, a review of records show frequent votes to seek out alternative airfield locations. I've counted three separate occasions where members voted to create a committee to seek out alternative locations to fly, although there is no clear indication of why members seemed unsatisfied with the location at Aero park.

Perhaps it was being under the pressure of Aero Park administration or the difficulty in coexisting with full size aircraft and the rules that govern all that, but over time there were several unsuccessful attempts to negotiate a relocation.

The first was in 1970. In September of that year there was an official vote to find a new site, a committee was formed and then the motion was rescinded the following month.

In 1971 the club initiated its first frequency control system using

HISTORY *Continued next page)*

Regarding the Facts Presented in this History

The dates and events listed in this and future articles are drawn from documents and a handwritten histories that were compiled by several past officers.

Several years ago a published historical document was created and covered events that occurred from years 1968 through 1979. There was very little information prior to that time period until I uncovered some hand--written pages in an old file box that shed light on the club's earlier days.

From these documents I tried to construct a connected history which takes the club back to 1958.

Some of the names may be misspelled due to handwriting legibility. These documents were created well before the days of computers and spell check. There are conflicts in some cases regarding accounts but I tried to adopt those most credible for this history.

Later accounts were extracted from club newsletters, event brochures and other documents that were uncovered in the files.

This history is broken down in several parts but will be eventually compiled into a single document and placed on our website once completed.

I hope you find it fun and interesting.

TJ

HISTORY *Continued*

the familiar frequency-marked clothes pins attached to a pole. This was also the first year that Field Rules were posted at the field. In March of that year, temporary use of the RC field was authorized to the "Marks Club," though there is no documentation on who the "Marks Club" was at that time.

That year, members got wind of a piece of property that was for sale in the Waukesha area. This property was later to become the home of Pebble Creek Flyers Club. In August, the club voted to require wooden props on all aircraft carrying engines over .46 cubic inch in size. Lastly, in October of that year once again a committee was formed to seek out a new flying site. This time, the Waukesha County Park System was being considered.

In 1972 there was hope that the Waukesha County Parks would grant use of an area in Mukwonago. Meetings were held, letters were written but in the end, the Park Commission said, "no."

1972 Today

1972 was the first year the club designed and produced its embroidered patches along with plastic name tags and decals originally designed by Bill Schmitt. The patch design has evolved over the years and names tags and decals have been eliminated.

In 1972 the club budgeted for and purchased the first club-owned glider wench.

The club continued to hold well-attended glider contest events over the years.

You might remember Paul Harvey, the famous radio personality? He always ended his show by saying, "Well, that's the news ... I'm Paul Harvey, pause, pause, pause, pause, pause ... Good Day!"

An interesting club fact was that Paul Harvey was known to be an RC enthusiast and in 1972 was given an Electrons honorary club membership on June 11th. There's no record of how or why this honor was given to him at that time, but the honorarium was bestowed according to the written account.

Just as Al Secklin's Hobby Shop was important in the club's early years, Dennis Dempsey's new hobby shop located at 126th and Hampton in Butler became a frequent and unofficial club member gathering location. Unfortunately, the shop only stayed in business for a couple of years.

In 1973 the club voted to set up an annual award ceremony that would provide recognition in the following categories;

- Distinctive Service to the Club
- Most Improved Senior Flyer
- Most Improved Junior Flyer
- Craftsman of the Year
- Flyer of the Year
- Crash f the Year

I want to note that "Most Im-

HISTORY *Continued next page*

HISTORY *Continued*

proved Junior of the Year" in 1973 was awarded to Marv Ingerson Jr. I'm sure that he still proudly displays this award in a shoebox under his bed. These awards were to be an annual honorary event, however it appears that 1973 was the first and last year for these recognitions.

1973 claims to be the first year

that a helicopter was brought to the club and demonstrated. Credit for this is given to Dario Brisighella hoping to bring heli's to the field. Nothing came of that until years later. The club added "Model of the Month" contest to its monthly recognition program, honoring craftsmen and their building skills.

Of course, the year wouldn't be complete without another motion by the membership to seek out an alternative flying field location, so another committee was created to pursue new locations. This time there was talk of purchasing land to the east of Aero Park, although there are no details available on this strategy.

In 1974, the Surgeon General was making waives with tobacco companies and some members were starting to get the message that smoking causes cancer.

So, it was proposed that the club ban smoking during the business portions of monthly meetings. Unfortunately the motion failed, which didn't say a lot for the club's willingness to make changes for the greater good.

In 1974 a JC Penny's Riding mower was purchased and a new shed was budgeted for to protect it from the winter months and house other club related items.

The "Pre Nats Warm-up" event continued to be held at the field despite the "fuel shortage" as a backlash from the OPEC Oil Embargo in 1973. The contest drew more than 40 contestants from at least four surrounding states for this two day event. In addition, the Electron's Glider contest also drew over 40 participants held at Warnimont Park site in Cudahy on the lake front. The club event included a pro-am fun fly, pattern contest, and a quarter midget race which included other aircraft beside quarter midgets.

With all the events and good will, the club attracted more than 30 new members in 1974.

In 1975, and for the first time, the club roster reached the 100 member mark. This recognized the Electrons as one of only a dozen clubs in the nation out of 1600 clubs with 100 or more members. Toward the end of 1975, the club actually reached a membership total of 118.

Al Secklin (hobby shop owner) was awarded a lifetime membership for his continued support of the club over his many years. This was the second only lifetime award after that which was given to Paul Harvey back in 1972.

Ron Kopps effort to engage Schlitz Brewery made it possible for the club to hold a sponsored event for its "Suds City Soar-in."


RADIO CONTROLLED MODEL
GLIDER CONTEST
JOINTLY SPONSORED BY
MILWAUKEE FLYING ELECTRONS INC.
RADIO CONTROL MODEL AVIATION
Old Milwaukee
The MILWAUKEE FLYING ELECTRONS*, and for the first time in RC Soaring history, OLD MILWAUKEE BEER bring you the...
"SUDS CITY SOAR-IN"
(AMA Sanction #542 and #543)
AUGUST 2 & 3, 1975 at AERO PARK AIRPORT just outside MILWAUKEE
(SEE MAP ON REVERSE SIDE)
Each Day Registration - 8:00 a.m., Briefing-8:30 a.m., Flying Starts- 9:00 a.m.!
TASKS: 2 each day. (Open Winch-same winches used at 1975 Soaring "Nats")
CLASSES: Standard and Unlimited CONTESTANT REQUIREMENTS: AMA & FCC licenses
AWARDS: To 5th Place - Each Task and Each Class! 1 - GRAND CHAMPION 1 - BEST JUNIOR Each Day! Mechanikee Door Prizes All Day
ENTRY FEES: $5.00 For Contestant One Day; $9.00 for Two Days -Single Events; $9.00 for Two Classes One Day; $17.00 for Two Classes-Two Days.
CONTEST CHAIRMAN Ron. Kopp (414) 321-3465 8015 W. Waterford Avenue Milwaukee, Wisconsin 53220
CONTEST DIRECTOR Giulio Fomary
SATURDAY NIGHT HOSPITALITY SUITE: Howard Johnson's Motel, Hwy.100 & North
FIELD SERVICES: Refreshments and Food; Portable Toilets.
* CLUB No.667 of the ACADEMY OF MODEL AERONAUTICS WASHINGTON, DC 20005

The contest received national publicity in model airplane magazines of the time as well as Milwaukee Journal coverage. The club's Pattern Contest was also successfully CD'd by Jim Zahorik that year.

HISTORY *Continued next page*

HISTORY *Continued from page 5*

Other major innovations of this year include the advent of color ink jet printers. Now the newsletter could be printed in color, although that was limited to the heading and logo. All newsletter were still mailed to members.

The "Model of the Month" was eliminated due to a lack of entries near the end of 1975. The club, as a replacement decided to add "Show & Tell" to their monthly meetings instead which still persists today.

Lastly, 1975 the club saw the first member to be expelled from the club. There are no embarrassing details on the expulsion but apparently one can push the club only so far before it acts.

In the next edition of our series we'll time travel into 1976 and beyond.

If any member has photos from this article's time period that would help to give this a more complete account, I'd love to include them. You can reach me at tjacobs421@att.net and we can arrange a way to get them transferred.

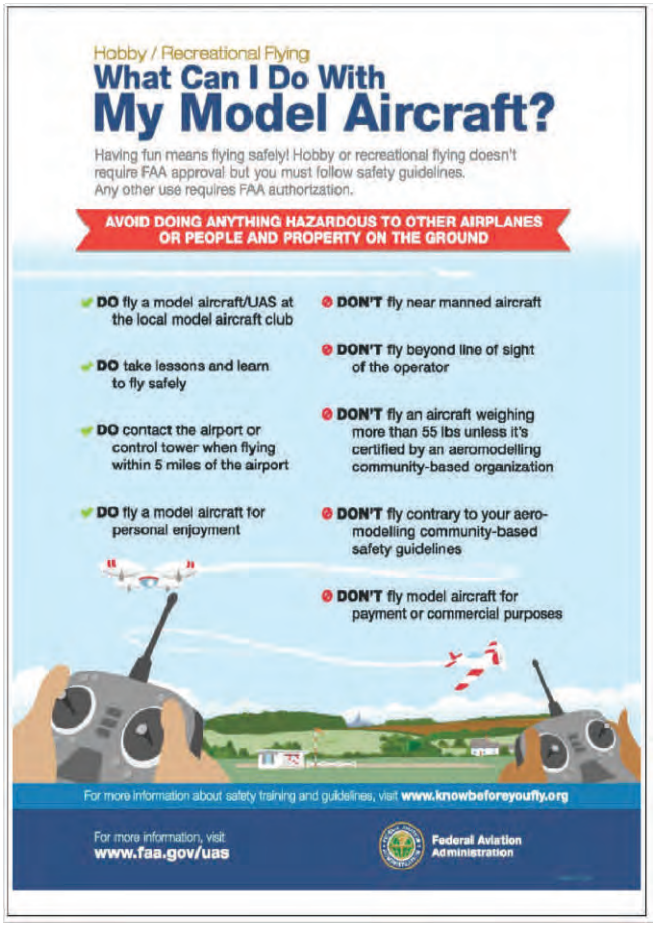
Be Prepared for Emergencies!

Emergencies at the field can require a quick response. Be informed so you can give authorities the information they need to respond.

Tamarack Field
N61 W17000 Kohler Lane

FIRST AID BOX
(Located on the North Side of the Building)

Contact Police or Fire by Dialing 911



The 2020 Electric Event

During our survey, many stated that they either would or might come to an event if it were held this year.

We're pleased to say that our recent Electric Event had a pretty good attendance with over 35 members and friends attending, of which 22 were registered pilots.

Registration fees were waived for the event but not published as such, so the attendance was truly supported based on its own merits without an incentive.

Steve Huelsbeck pretty much single handedly put the event together and although there were no orchestrated contests or competitions this year, the event was enjoyed by all.

The weather couldn't have been better. Winds came pretty much out of the east at about 5 to 7 mph which is just what we needed.

Steve put together a great raffle of prizes which virtually paid for itself due mainly to a donation made by Tom "Terminator" John-

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It appears that events can be held at the field and members are taking the social distancing seriously.

Plenty of hand sanitizer was available for all that wanted it and members were encouraged to bring their own food and drinks for the day.

son, consisting of a brand new Rebel delta wing, complete with hardware.

Prize winners were as follows:

Flight Box ……. Jim Hendricks
Power Supply ….. Ken Pressman
Anemometer ….. Ryan Ocampo
Watt Meter …… Scott Buchholtz
Tachometer/Level … Tom Jacobs
Rebel Delta Wing .. Ken Pressman

YouTube

This month we're concentrating on the A-10 Warthog with some exceptional scale detail video. But first, checkout the Model Rocket Challenge!

Model Rocket Battle from Dude Perfect

Clearly these guys exceed the 400 foot rule with some awesome model rockets, some of which run over 10 feet tall. All have mounted camera to capture the entire ride.

Part One

https://www.youtube.com/watch?v=WpqUOW19aJQ

Part Two

https://www.youtube.com/watch?v=uPCi5Rs7EuA

$25.000 RC A-10 "WARTHOG" by MIBO Jets

Most incredible detailing an RC model ever. Take the tour of this beauty.

https://www.youtube.com/watch?v=D_GarTmt43I

A-10 Warthog Catches Fire Just After Take-off

Emergency landing and fire extinguishers in hand the plane is brought to a stop.

https://www.youtube.com/watch?v=nMxzL7E3Z7s

Super Scale RC Turbine Model Jet Warthog A-10 Thunderbolt

https://www.youtube.com/watch?v=_Ih-3BwqPpY

Inside an RC Jet Workshop

Mibo Jets were kind enough to let us snoop around their workshop and take some videos. At the time of the video they were busy building their flagship model, the A-10 "Warthog" in 1/4 scale, dubbed "Grande".

https://www.youtube.com/watch?v=-hYLFjXbpQs

Getting Started in RC

Part V: Batteries and How to Care For Them

This article will cover the basics for aero modelers new to the hobby. We will not cover, the more sophisticated electronic systems which support receiver redundancy and distribution of power using "power boxes" with this article. These requirements are generally needed for the large, extreme sized aircraft that can cost a considerable amount of money.

In this article we'll talk about battery types, use, charging and safety for those types of batteries that those new to the hobby may need to use and handle.

Whether you fly electrics or nitro aircraft, you still need battery power to handle the electronics. In either case, you'll use a transmitter that needs battery power, so let's look at that first.

Transmitters

If your transmitter is a rechargeable unit, the manufacturer will provide a battery pack with your unit. These packs will generally be NiCad or Nickel Metal Hydride battery packs. Transmitters of different brands and types can require different voltages to power the system. Generally rechargeable transmitters will run on 9.6 volts, however some new systems are running on 4.8 volt rechargeable packs.

The good news is that the manufacturer will provide the right power pack and a charger that will handle the charging requirements necessary.

Additionally, there will be a means to know how much charge your transmitter has left during a day's flying, whether it's a dial meter, or a digital voltage reading on an output screen. If you have a meter, then you'll want to stop flying when the needle moves into the red zone. With the digital output voltage readout, you must follow the manufacturer's guidelines to stop flying when the voltage output reaches a certain level.

Some newer transmitter systems now rely on 1.5 volt dry cells (AA batteries) for power. I really like these systems because one doesn't have to remember to charge the transmitter every night to keep it at full charge. I just carry four extra AA batteries in my flight box, and when the voltage gets low, I simply change them out. I find that flying weekly, I only go through a couple of sets of batteries each season.

(Continued next page)

One caution I want to communicate is that dry cells can leach, so you'll want to remove them from your transmitter when you plan not to use it for an extended period of time.

Charging Your Transmitter Battery Pack

If you're using rechargeable packs then you need to know how long you should charge the pack to get a full charge. Most individuals put their transmitter on charge the night before flying and that 8 to 12 hours is plenty to fully charge their system. But for those that have high milliamp battery packs in their transmitters, it can take longer. So here's how to figure out what you need to

do based on the battery pack you have.

First, check out your charger supplied by the manufacturer. The charger will be a block that plugs into the wall outlet and one wire will attach to your transmitter and the other should attach to your receiver battery pack. We'll cover receiver packs later.

The block will have specifications listed on it. The important information are the "outputs." The output for your transmitter (TX) will probably be anything from 40 to 70mAh, which is secret code for milliamp hours. You need to know this number so you can figure out how long to charge your battery pack.

The "mAh" tells you how many milliamps of energy will be pushed into your battery pack each hour, when it's under charge. So, the question is, "how many hours do I need to charge my transmitter battery pack to know that it is fully charged?" The answer to this math problem needs one more piece of information; we need to know how many milliamps your transmitter pack requires?

To understand this, you need to open your transmitter and read what milliamp rating your transmitter pack supports. Transmitter packs can support anything from 600mAh to 2200mAh, or even more. So what does this mean? It means that the larger the mAh pack you have, the longer it will take to fill it with power.

For example, if you have a 50mAh charger, and you have a 1000mAh battery pack, it will take 20 hours to totally fill that battery pack with power if the pack starts out empty. To do the math all you need to understand is that if a charger puts out 50mAh per hour, and you need to fill 1000mA then (1000mA / 50mA = 20 hours.) The math is relatively simple. This math works for other battery packs as well. When charging a battery you have an amount of power that you're trying to pour into a battery. How long the charge will take depends on how much you pour into the battery each hour to charge it.

Aircraft Batteries

If you a beginner and your flying a nitro aircraft, you'll need to charge your receiver battery as well. Not many new entries to the hobby are starting out with nitro but we need to go over it anyway because it has its own issues.

Nitro Flyers & Battery Packs

As a nitro flyer, you'll have a receiver and servos that need to be powered. This is handled by the receiver pack. Receiver packs follow the same rules as do Transmitter batteries. Your charging block will also have a receiver battery pack charging wire. Its output milliamp rating will likely be the same as the transmitter and, the math in charging the receiver pack will be the same as well.

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For example; you have a 2000mA rated aircraft battery and a 50mA charger, it will require 40 hours of charge time to bring an "empty pack" up to full charge. An empty pack is considered to be a pack that has fallen below its voltage rating. If a pack is rated at 4.8 volts, and the current voltage rating is 4.6 volts, then the pack needs to be fully charged. If the pack's voltage is above the specified range, then less charge time is required to top off the pack.

When charging, battery packs will absorb a charge that is higher than the specified rating. A fresh 4.8 volt pack might reach 6 volts, while a 6 volt pack might reach 7.2 volts. It's this overage

that supports reliable flight times with your aircraft. Once voltages drop below the specified rating, your aircraft is at risk.

Electric Aircraft Flyers

Information for this portion of this article was in part provided by the following website.

https://rogershobbycenter.com/lipoguide

The site primarily focuses on RC car and truck hobbyists however, the principles apply to model aircraft as well. We want to recognize their knowledge and expertise and recommend that you visit their site for more detailed information.

All Electric Aircraft

Electric flyers have it made; all power comes from once source ... their LiPo battery pack. Although pilots will still maintain their transmitters by changing out batteries or following the standard charging procedures using their charging block, the focus with electronic aircraft is the LiPo battery pack.

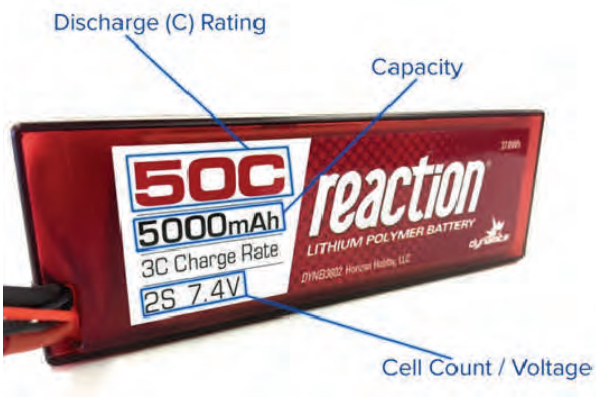
The reason we now have electronic aircraft is because of LiPo battery power and the innovations that have been made in electric motors over the years. In the beginning, electric flyers only had what were called cobalt motors. These ran on a large number of NiCad batteries and provided a great deal of power for a short time. Today we have Lithium Polymer batteries that are light weight and hold a great deal of energy which can be dangerous if not handled properly.

Transmitter charging was covered in this earlier article, so we'll focus here on the power needs for your aircraft, which means your battery selection that will power your aircraft.

Why are LiPo packs so popular.?

Several reasons. They are much lighter in weight, have much higher capacities and have much higher discharge rates; meaning they pack more energy punch. LiPos do have a downside though; they have limited life cycle (100 to 150 charge cycles), they can be susceptible to fires and require special care for charging, discharging and disposal.

Electric aircraft require enough power to handle the receiver signals, reliably activate all servos, and also power the aircraft



motor through the air. All this is the responsibility of your LiPo battery pack.

LiPo packs come in all shapes and sizes. Here are some of the specifications.

The picture page 12 identifies the key specs for a LiPo battery. The "2S" refers to the fact that this pack is a 2-cell pack wired in series. Each cell is 3.7 volts, therefore, a 2S pack wired in series becomes 7.4-volts. A 3-cell pack would produce at 11.1 volts and so forth.

The voltage refers to the "nominal" voltage rating, which is the voltage when the battery is at rest. "At rest" can be referred to as the proper voltage for storage over long periods of time. When a battery is charged, its actual voltage will peak at around 4.2 volts per cell when fresh. When flying, it's important to time your flights short enough as to not drop a battery pack's cell voltage below the 3.7 volt level. This will ensure that you get maximum life out of your LiPo pack.

Let's look at some of the math in determining how voltage affects performance. The voltage is going to determine how fast your aircraft is going to travel because voltage is directly related to RPM of the propeller that moves the aircraft forward.

Brushless motors are the popular motor of today and they are rated by kV, which means "RPM per volt." So, if you have a motor that is rated at 1000kV, the propeller will spin at 7,400rpm if your battery pack carries a 7.4 volt rating. If you were to use an 11.1 volt pack the RPM of the prop would rise to 11,100. A prop that spins at 11,100rpm will travel forward faster than one the turns at 7,400 RPM. It just makes sense.

Keep in mind that the motor must be rated to handle the heat of the increased rpm otherwise, it will burn up.

The Electronic Speed Controller

So how does a single battery pack provide power to both the motor, receiver and servos which control the aircraft? Through the Electronic Speed Controller or ESC. The device is the switching device that channels the appropriate amount of power to both the motor and receiver separately so that you can control airspeed and control surfaces.

The ESC plugs into the motor and, with a separate connection into the throttle receiver connection. All other control surface connections are wired up as usual. The ESC's job is to read the signal from the receiver and translate the signal into power from the battery pack to the motor.

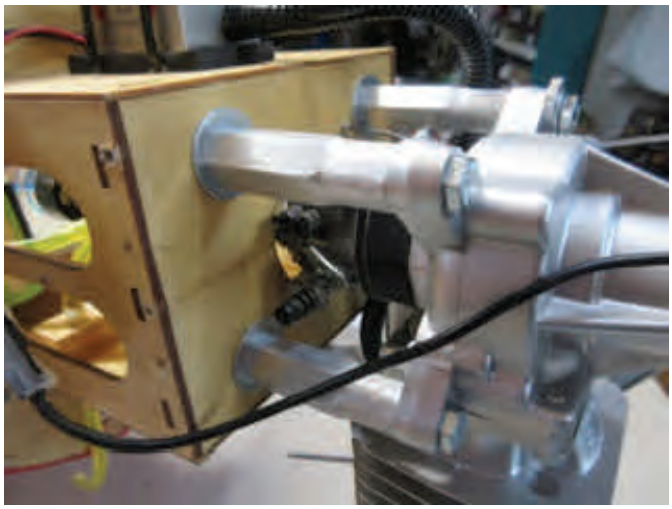
The amperage rating on the ESC should be one rated high enough to handle the flow of current from the battery pack to the motor without overheating. This why ESC's are rated by amperage level. A motor that will draw 40 amps from a battery pack under a burst of power must have an ESC that can handle 40 amps. You can oversize an ESC for your motor and power supply but the ESC will be heavier than necessary, therefore modelers try to do the best job of matching their ESC to their motor and power system.

So there you have it. All you need is a motor, battery pack and ESC to power an electronic aircraft.

Next month we'll cover how to choose the right motor, ESC and pack based on the size and type of aircraft you may have or be interested in purchasing.

More to come.

Low Cost Gasoline Engine Stand-Offs



If you fly large scale aircraft powered by gas engines with rear mounted carburetors, then you're often confronted with the need to acquire the correct size stand-offs to support your engine at the proper distance from the firewall and yet place the prop hub at the proper position for the cowling.

There are a number of stand-offs in the market today but they are all manufactured in set sizes meaning that you have to purchase a set shorter than necessary and add spacers of some type or rebuild the motor box which is even more problematic.

What if you could create your own stand-offs to the exact size you need and do it for a fraction of the cost?

Most stand-offs that place the engine forward to clear the rear mounted carburetor will cost anywhere from $24.00 to $30.00 per set. The DIY option I share with you here will run you about $6.00 per set.

I've tested these stand-offs on engines as large as 71CC size and they hold up very well. I'm currently using this solution on my new 55cc YAK. All it takes is a little planning and a couple of "turnbuckles" of the right length.

What Are Turnbuckles?

Turnbuckles are used to adjust tension between two heavy wires. Generally used to provide tension in creating tension across fence spanners, turnbuckles are

made of lightweight aluminum and threaded at each end (one end right-hand thread, or end left -hand thread) so that as one turns the center section, the wires connected at both ends are pull together tighter and tighter to bring the fence structure to a high tension and make it extremely stable.

Using turnbuckles as an engine stand-off solution requires a little advanced planning. It requires that you pass a bolt through the engine back plate, through the turnbuckle, through the firewall, and then anchor it on the backside of the firewall with either a nut and lock washer or anchored blind nut already installed in the firewall.

Here are the steps.

First, determine the exact length of the stand-off required and then purchase a turnbuckle with a housing that is a least twice that length. There are many sizes out there and most will handle your needs without a problem.

The exact length is the length required to position the engine forward of the fire wall so it clears your cowl and positions your propeller at the correct distance forward.

Turnbuckles will cost about $1.50 to $2.00 each. Remove the eyelets or hooks attached to each end and discard them unless you have a use for them, then mark where the turnbuckle needs to be cut to create two standoffs.

With a band saw, or hacksaw, cut out a center section of the housing which will leave two stand-offs at the exact length required. Do the same for the second turnbuckle housing so that you have four complete stand-offs. If you're using a hacksaw be sure to cut at 90 degrees so you're creating a flat flush surface to the firewall.

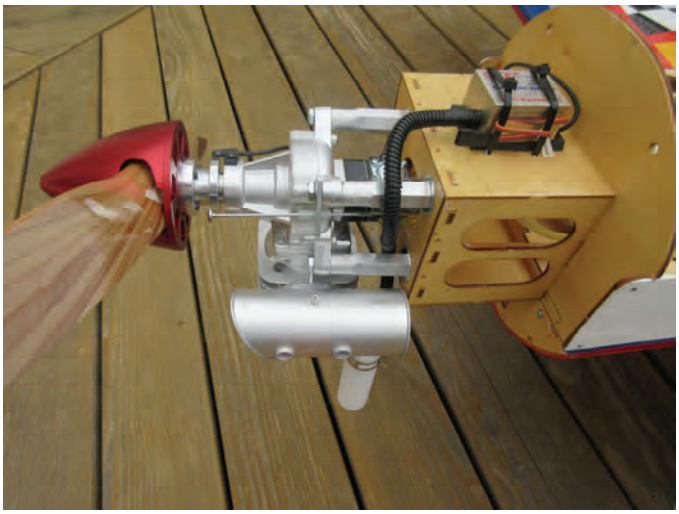
If you have easy access to the rear of the firewall then you can use a nut and lock washer to

secure the engine and stand-offs to the firewall.

If however, access is problematic, then you can use blind nuts to provide a secure anchor.

Drill the firewall using a template for your engine allowing 2 degrees of right thrust, then mount 5/16 blind nuts to the inside back of the firewall.

Secure the blind nuts in place of the rear side of the firewall with epoxy, staying clear of the threads.



Although the turnbuckles are threaded, they are not used primarily because they are standard at on end and then reversed at the other.

To mount the engine, pass an appropriate length bolt through the engine mount hole, through the turnbuckle housing, through the firewall and into the blind nut. The turnbuckle housing should be positioned with the fatter end against the firewall for added stability. You can also add a flat washer to expand the stand-off footing as shown in the photo on page 14.

Insert the other three engine bolts and turnbuckle housings. Tighten the engine bolts diagonally a little at a time to avoid stressing the firewall.

Your done!

(***EVENTS*** *Continued from page 1)*

are closed club events of limited participation.

We've decided not to hold our Scale Event this year because it's success and prize award structure are intertwined with concession stand sales proceeds. The Scale Event generates revenues that are used to award cash prizes during the event. Supporting the Concession is an ongoing process that simply doesn't pay for itself under a single event's use.

The Charity Event for this year will also NOT be held due in part to the directive from the scout's head office eliminating all scout participation in events for the balance of the year.

The Charity Event also depends greatly upon food service sales, which the scouts manage and public attendance, which could lead to issues with social distancing that we can't control.

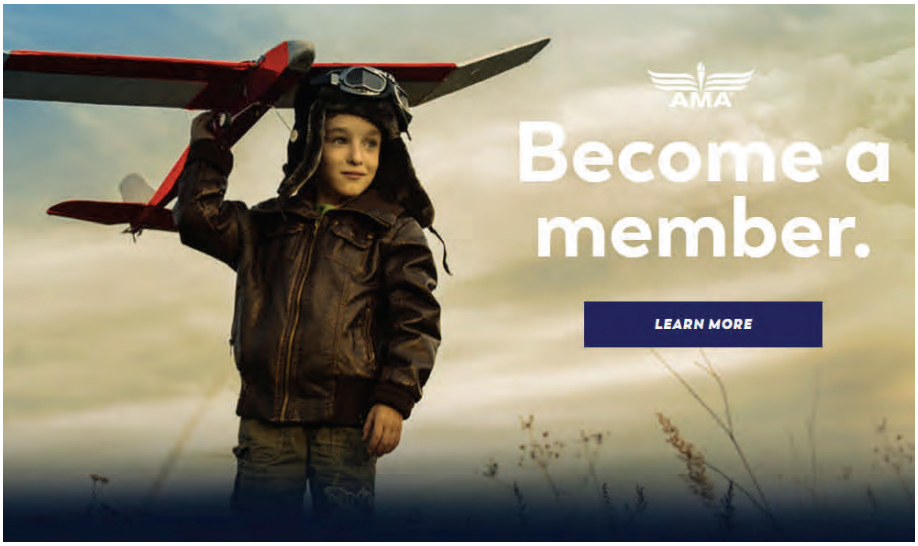
Joe Burzinski still plans to host the Pattern Event for 2020 at this time. If this changes we'll let members know.

A possible event that we may consider hosting later this year is our annual Swap Meet due to it's more casual nature and our ability to better manage traffic patterns. More on that later.

Our Builder's Challenge and FrankenPlane Events are generally small in nature and closed to club membership as well, therefore it's likely that we will continue with those get-togethers as well in 2020.

We're seeing some great flying days out at the field. Pilots are using social distancing and there's plenty of hand sanitizer at the field.

Pack a mask and come join us.



AMA Changes Available Youth Programs as of July 1st, 2020

Effective July 1st, 2020 the AMA has reorganized their youth programs to create a new level of membership for youth under the age of 19 called "Young Aviator."

This new class of membership is now the only FREE class of young membership.

Previously, youths under the age of 19 could join the AMA FREE, receive insurance coverage and participate in AMA sanctioned events held by chartered clubs such as our own.

This has now changed!

Now, the AMA has created what they call a "Youth Aviator" membership class. This new membership class is FREE to students under the age of 19 that want to be involved with aviation but not ready to join an aero modeling club.

These new "Young Aviator" members receive access to digital content and are added to the AMA email list for news, sales and marketing information, and that's about it..

So what's happened to the previous "Youth Membership

The new "Youth Membership" classification which previously included insurance and the ability to participate in AMA sanctioned events at no charge will now cost $15.00 annually.

This membership class will provide full liability insurance benefits, the ability to participate in sanctioned events and, also provide access to the AMA's digital magazine, which was previously a $15.00 option cost.

Clearly, the AMA is looking to find ways of gathering new revenues from the student population.

For those young people that have joined the AMA prior to July 1st, 2020, you are grandfathered in until your 18th birthday. Congratulations!

The bottom line is that after July 1st, 2020, young students that want to join the club will have to pay an annual AMA fee of $15.00 annually, which in the past was the cost for the AMA digital subscription offered as an option.

I make this information available so that anyone that has the opportunity to talk to youngsters and parents about joining the club should know that the AMA membership is no longer FREE.

We'll get new AMA applications to the field as soon as they are available.

Federal Aviation Administration

It's 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.

APPLICATION FOR MEMBERSHIP

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-I 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	$
Additional Costs		
Add if renewing after January Club Meeting	$5.00	$
Add if renewing after February Club Meeting	$10.00	$
Deduct if you paid initiation fee previous year	-$20.00	-
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.

Member Application Form 6/29/2020 TJ

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