

# Flypaper 2020

Official Newsletter of  
The Flying Electrons of Menomonee Falls



Celebrating 60 Years of Service to the Community & Counting!



## President's Preflight



As you know, this year is our 60th anniversary as an aeromodelling club. In lieu of our originally planned event, I've been re-researching the club's history each month and including a section in each edition of Flypaper.

It's been really interesting how the club has evolved and dealt with issues over the years. My source for this information at the outset were handwritten notes and the history document generated by past members of the club from 1960 through 1976.

From there, I've relied on club newsletters for information about the events that have helped shape the club we have today.

The December edition of Flypaper will be the last installment. It's taken some considerable effort reading through ten years of newsletters each month and extracting the details.

Surprisingly, the club has reported itself well with only a few missing

(See **RESEARCH** on page 10



### November is Club Officer Election Time.

Every year at this time, the club holds elections of officers to the board.

This year, due to the pandemic, we weren't able to hold club meetings where nominations could be made so we sought out your nominations through email request and this newsletter.



Tom Beyer, our current

treasurer, has decided to step down. Tom wanted to step down a

year ago but we encouraged him to stay on, which he was nice enough to do and we are truly grateful.

I want to thank Tom for his service over the last two years. He was not only treasurer but he also assisted many times in the

(See **ELECTIONS** on page 15)

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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**



## 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!

## 2000 to 2009

### Do you remember the Y2K fiasco?

In year 2000, Paul Daniel takes the reigns as club president and everybody was living in fear that the country was about to shut down as the world went from 1999 to year 2000. Billions of dollars

were spent to update 2-digit years in company databases to 4-digits, due to the unforeseen possible problems that may occur when our computers can tell the difference between 1900 and 2000.



Well guess what? Everyone's back to using 2-digit dates again, figuring that they'll just let the people in 2099 worry about it. It's guaranteed jobs for the IT industry.

In 2000, the club was awarding a special patch to members that could show that they flew at least once every month of the year, regardless of weather.

The new concession stand/field house begins construction in March, name that plane is introduced into the monthly newsletters, and combat continues to become increasingly more popular, so the club decides to host "Mayhem Over Menomonee Falls," the

### Regarding the Facts Presented in this History

The dates and events listed in this and future articles are drawn from documents, newsletters 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 reconstruct 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 next page!*

**HISTORY** *Continued*

club's first AMA sanctioned combat event.

**2001**

Meeting minutes are still not published in the monthly newsletter. Activities of the club are generally extracted from Jim Wahner's monthly article, "Who's Doing What?" Jim was often at the field so most information covers who was flying what while he was at the field.

Combat still looms large at the club and members are building planes out of Coroplast in mass quantities.

Other materials include PVC rain gutter material and EPP foam. Later in the year a new trend begins to gain popularity; 1/12th scale Warbird Combat, creating a new level of competition. A special club static display event is scheduled to judge best of show for these 1/12th scale beauties. Twelve aircraft were entered this first year.

Safety becomes a big issue this year in that some club members are stretching the rules resulting in too many close calls.

The "hot potato" method of training is abandoned in favor of mandatory "buddy-box" training. In addition, tougher measures

are set when passing members from student to pilot. One measure includes that a student must make at least 8 "unassisted" flights with an instructor before taking their pilot certification test. (This is probably a good test to re-introduce now with new students.)

The club purchases a new mower this year and Tim Roliff creates a new Electronics website using Microsoft Front Page as a development tool. Park flyers start to become popular as a sideline to member's larger nitro planes.

On September 11th, two passenger planes hit the World Trade Center and

nearly take out the pentagon. The country and world is awestruck, dismayed and looking for ways to assist and serve by doing anything they can to support those that have fallen victim to this devastating attack on our country. The club announces "The Flying Electronics' Fund Drive." Donations are requested of members which will be disbursed to support New York City relief efforts. By December, \$800 is collected from members and donated to New York Firefighter through the Menomonee Falls Fire Department. As the holiday

**Combat Team Building**

**Mark McCool** was an avid 1/12th scale modeler, combat flyer and member of a number of clubs. I joined him and several other modelers in building 1/12th scale models back around the year 2002.

Mark charged each of us a fixed amount to participate and was in charge of ordering all the materials. I decided to purchase three aircraft.

Mark ordered the components and wood. Several of us got together over six Sunday evenings and built about 20 scale aircraft over the duration.

In assembly line fashion, each participant had a distinct responsibility. Some cut wood on the band saw (me), others wired cut wing cores (Mark built his own foam cutter,) others sheeted wings and constructed fuselages.

In the end, everyone walked away with one or more (I got three) raw constructed P51-B Mustangs that were ready for covering, decoration and combat.

It was a great experience in teamwork and basement manufacturing.

TJ



**HISTORY** *Continued next page*

**HISTORY** *Continued*

season approaches, it's not a jubilant one under the cloud of this tragedy.

**2002**

Combat is still strong in year 2002 and the club holds its second 1/12th scale static Warbird display contest. Mark McCool is the predominant 1/12th scale pilot and builder (see sidebar previous page.)

The club spends money to invest in three buddy boxes this year to support training efforts and Instructors.

**2003**

Tim Roliff is elected president of the club. In March 2003, U.S. forces invaded Iraq vowing to destroy Iraqi weapons of mass destruction (WMD) and end the dictatorial rule of Saddam Hussein. When WMD intelligence proved to be illusory and a violent insurgency arose, the war began to lose public support.

Several club members enter the national AMA championships in Muncie, Indiana and Bob Schultheis returns with the first place trophy. Later during the year, the club makes it a policy to hold an annual internal audit of its books.

The club also decides this year to incorporate "pit tables" behind the flight line. Many of the old

timers were feeling badly having to kneel to start their aircraft and then struggle to rise to their feet. The "pit table" made the experience much more tolerable for those that needed them. These tables are still in use today.

A group of flyers within the club known as the "Sunshine Club,"



mainly because they only fly when is nice and warm, came to the field with a 1/4 scale Sopwith Pup. The aircraft was constructed by three members known as the "three amigos" (Frank Zagar, Bob Schultheis and Elton Rheume.) Apparently this aircraft was built by assigning each of the three members a separate section of the aircraft to build and then the main parts were brought together at the field. It turns out that the plane flew flawlessly.

In the month of September, the club approached the Village hoping to gain a long term arrangement for the club's flying field by offering the Village \$10,000 for the property and existing improvements. This one-time payment would eliminate

the annual \$500 assessment from the Village and ensure the club's longtime access to the airfield. That same month, the club holds its first Swap and Fly at the field this year.

**2004**

This year marks the first Scale Event to be held by the Electron's and the club's 7th Tamarac Challenge Pattern Event.

After several months of delays, the board met again with the Village Manager to discuss a long term solution to field access.

The Village expressed its complete satisfaction with everything that club had been trying to do over the years to make positive use of the property, and assured the club that access will remain available for the foreseeable future. It was also agreed that it would be in everyone's best in-



terest to leave the agreement stand as is.

In 2004 club submits a grant request to the AMA for funds to

**HISTORY** *Continued next page*

**HISTORY** *Continued*

assist in leveling the airfield and the grant is approved.

3D flying starts to become very popular at the field and the flyers are starting to interrupt the flow of traffic with their 3D maneuvers. In addition, despite the newer narrow band receivers, club members begin to start experiencing radio hits at the field. The club asks for members to start keeping track of the hits so they can make a decision whether certain frequencies should be flagged.

A member is accused of flying too close to Menomonee Falls workers at the field. This apparently led to a conflict between



the worker and the member where the issue was raised with the Village and policies regarding flight over Falls employees needed to be reinforced. The member was disciplined.

This year the "Screaming Chicken Squadron" goes into full operation building ten .25 size Fokker D7's. These classic warbirds carry a 43" wingspan and are all built from scratch. They have broken down responsibilities by section with some building fuselages, lower and upper wings, wire bending, tail structures and so forth. By employing an assembly line approach the planes should

complete sooner. Each aircraft is expected to be decorated differently making a great show of force when in the air.

**2005**

2005 was a fairly uneventful year. The Chicken Squadron did complete their Fokker D7's and displayed five of them at the May club meeting. Each were meticu-



lously crafted and each decorated differently. The photos shown here do not do these aircraft justice.

**2006**

John Kreitzer is elected president this year and to try to stimulate increased attendance at the monthly meetings, those that attend will receive a free raffle ticket. At the Christmas party, a winner will be drawn from a special raffle category of prizes. The previous year's member count reaches 195 of which 158 were dues paying members (due to the Family Membership Plan.)

John, as president, tries to bring a little wit and humor to the club with his personal communication style in his Presidents Preflight articles.

In 2006, the club embarks on its first support of "High Interest Day" at Orchard Lane School in New Berlin. This is an organized effort by schools to introduce students to new ideas, careers, and activities. It incorporates the outside community to support the effort.

Four to five club members attend and present everything from heli's to biplanes and military aircraft. Both kids and parents were reported to be impressed with the club's presence there.

The board this year sets guidelines as to where helicopters can fly to avoid interference with pattern flight,

Todd Davis donates the huge propeller for possible decoration at the field and the club makes its first bulk order of Omega Nitro fuel to try to reduce the increasing cost of flying glow planes.

The club acquires an RC video library of tapes from the exiting manager of ABC Hobby as he retires. The VHS video tapes are made available for checkout by club members and the year-end Christmas Party draws over 100 in attendance. Late in the year, Jim Wahner, a great friend of the club, advocate, and dedicated member, suffers a massive stroke and all are shocked by the news.

**2007**

Both Jim Wahner and Marv Ingerson Sr. are bestowed lifetime memberships for their contributions to the club over the years.

**HISTORY** *Continued next page*

**HISTORY** *Continued*



Marv Ingerson, Sr receives his Lifetime Membership Award at May's meeting

(Marv senior actually re-certified me as a pilot when returned to the Menomonee Falls area after my job had taken me to Southern California for five years..)

Other members to receive this honor to date are Bob Gialdini, Gar Simon, and Russell Knetzger.

The large propeller that graces the shelter at the airfield is expertly re-finished by Joe Burzinski and Mike Doma is elected to create lettering that will read "Welcome to Tamarac Field" and "Home of the Flying Electrons."

An anonymous donor offers to fund purchasing the field outright from the Village, so the Village management is approached once again with an offer. The Village elects not to pursue it suggesting that it could stir the "political pot" and get some people worked up about it. The club decides to back-off and not wake the bear as they put it.

In April the propeller finally gets mounted to the field shelter and "WOW!" is the reaction. There was actual applause when the prop was mounted.

The Pattern Event AKA "Bud Weber / Tamarac Challenge" continues to be a big event with the previous year's pilot count being somewhere in the order of 24 or 25 contestants. It's still a hard sell to the rest of the club membership as it is today but these pilots are the finest of the lot. That



probably scares the vast majority.



On August 23rd the first Dead Chicken Event is held at the field to honor Jim Wahner and award him his lifetime membership beginning a yearly tradition that lasts to this day.

**2008**

The club is granted funds from the RC Association for field repairs, which takes some of the pressure off the budget. In addition, the club decides to include a float in the July 4th parade so

preparations get underway in early May. The club plans to pass out flyers during the parade to promote the upcoming Charity Event in August. Over 1000 flyers are distributed.

The Charity Event drew 45 pilots onto the airfield and 135 cars onto the parking lot for one of the best events ever according to reports. The Boy Scouts received a bonus of \$500 added to the usual

\$1,000 donation due to its success.

The club investigates use of the Currie Park Golf Dome for indoor flying over the Winter months.

**2009**

Paul Hohensee is elected president, and over the past two or three years, much has developed in the hobby; 2.4GHz radios have entered the market, Li-poly

**HISTORY** *Continued*

batteries are being used more and more, and servo technology is being advanced providing incredible torque from a small package. Turbine jet engines are now also available for the ultimate scale effect in jet aircraft.

Everyone is now seeing a great wave of new technologies coming into the hobby and people are wondering if ARF's and Park

Members at the field started to become alarmed and called 911 while ushering spectators away from the area. First responders arrived within 10 minutes of the call. By this time, the fire was closing in on the Village building and was creeping over the hill adjacent to the club parking lot.

The fire eventually required units from Butler, Lannon, Sussex, Mer-



Flyer's are going to replace the art of scale and kit-building eliminating the knowledge that is derived from that experience.

During a very dry Spring in April of this 2009, the club experienced grass fire at the field which apparently started when a train's wheel locked up and generated sparks as an igniter.

At first, flying members assumed the fire would burn out and it was seemingly doing so until it got hold of a larger key area of dry combustible field cover.

ton and Germantown to bring the it under control. It was written that the fire had traveled west along the tracks, all the way passed Marcy road.

Helicopter & 3D pilots request that an area be set aside for heli flight a safe area to fly.

The club uses temporary fencing to relocate helicopter and precision aerobatic flying at the field as a test and it seems to work out very well. Discussion begins regarding a permanent fence to

**HISTORY** *Continued next page*

## **\$10.00 Renewal Discount When You Renew Your Membership Before January 15th, 2021!**

Remember to get your renewal in before the closing date to lock in your savings. The discount will not be extended beyond the postmarked closing date of January 15th.

You'll find the special renewal application located in the back of this newsletter.

Don't delay!



## **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.

**HISTORY** *Continued*

designate that area for heli's and 3D flying.

The club's Charity event get's unexpectedly rained-out causing a drop in attendance and 50% drop in revenues. Because the Charity Event was already underway, the rain date alternative could not be used. The scouts donation for the year suffered as well.

The year closes with a strong bank account and a good mem-

bership renewal rate. The club had hoped to have electric power at the airfield in 2009 to support the growing dependency on electric flight but it couldn't pull it off this year. Electric power had become a driving force in the hobby this year and members needed an outlet.

No pun intended.

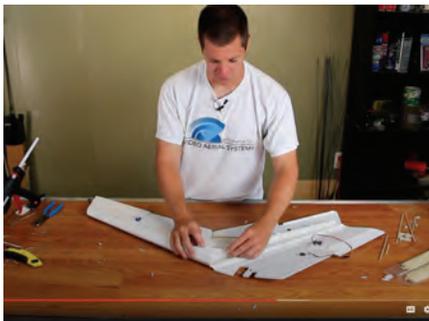
The next issue will follow the years 2010 through 2019. Our history series will come to a close with this next edition in that it makes sense to reflect on a dec-

ade to observe the changes our club goes through to really understand the impact people and technology has played on our lives and the hobby.

**SPECIAL NOTE:**

If members have additions to this history, I would love to have them. I've done the best I can to collect and verify the information but if you have anecdotes, they would be greatly appreciated.

TJ



**FPVWRA Legal Foam-board Delta Wing**

This is the FPVWRA Spec legal foam board airplane. Extremely low cost, the builder takes you step-by-step through his construction process. The wing is said to be able to reach speeds of over 80 mph. Free plans are available at this link for download.

[FPVWRA Legal Delta Wing](#)



**Discus Launch Gliders**

For anyone with deep pockets, these gliders sell for \$750 to \$1,000 and are made almost completely from carbon fiber. The wing tip contains a "throwing blade" which is gripped with two finger and thrown like an Olympic discus.

They're designed to reach incredible heights with a well-orchestrated throw. See more on these European favorites at this link.

[Discus Launch Gliders](#)

# NEW MEMBER SPOTLIGHT



## Jack Korducki Certifies as Solo Pilot.

One of our recent IP students has graduated to pilot and joined the club. Jack Korducki certified on October 11th of this year after several training sessions and flying a variety of trainers along the way. During one training session, Jack was doing loops under full power when the wings folded up midair.

We all stood there and watched while the fuselage went straight down like a dart and the wing halves floated slowly to the ground.

Steve Huelsbeck and I went out to see if we could locate the fuse but returned empty handed. On October 16th Dave Wandrey was tracking around the swamp

area, undoubtedly looking for another aircraft, when he stumbled across the fuselage and sent out a text. Thanks Dave!

We were able to recover the receiver, .46 engine two out of four servos and hardware, so it wasn't a total loss.

Jack was able to pick up a used Timbre from Doug Colton at our last swap meet and he took his certification test a month later while flying his own plane. I should mention that he took his certification test in 20 mph winds.

Jack's dad Ken has been practicing on the flight simulator and expects to begin lessons in the spring.

**(RESEARCH** *Continued from page 1)*

monthly editions. And, although it's taken a lot of reading and sorting, it's been a very rewarding effort.

I purposely didn't mention a lot of names behind the decisions made over the years aside from those that were truly outstanding. And, I know that there were members of the club that did make a real difference that I probably missed, so I apologize for that.

What I've learned over the course of this research, is that we have a club that has been truly professional from day one. It's mission has been to further the interests of model aviation and support our local community with annual charity fund raising events every year ... without fail.

The club has had struggles with keeping its airfield just like other clubs but volunteers have jumped in and served to work together to solve these problems to make our club the best club in Southeastern Wisconsin.

When I took over the presidency of this club, I wasn't sure what to expect. It turns out that I really felt honored to have been trusted enough to take on this role. There were many great, outstanding volunteers that have come before me.

This year has been a quiet year for us but the machine continues to hum and get things done in the background. I'm sure that we'll be back in force someday soon. It may look a little different in the future but if the leaders of the past could do it, we can too!

TJ

# Getting Started in RC



## Flight-Trimming Your Aircraft

Whether your aircraft is large or small, flight trimming can be a frustrating experience for the beginner. We know that some aircraft exhibit peculiar tendencies but until you step through and treat all the aspects of flight trimming, you really can't determine which are peculiar to the aircraft design and which are flight trimming related.

I hope that this article provides you with a good guide getting your new aircraft, or even one that's been behaving badly, under control.

Much of the information included in this article was taken from the May 1979 edition of *Flypaper*, where it was reprinted as written by Jim Kirkland of Model Airplane

News back in 1971. Nothing much has changed since that time. The advice focuses mainly on getting the most out of your



aircraft for completion flying, be it either pattern or aerobatic meets. The article closes with an updated quick reference chart provided courtesy of the N.S.R.C.A., The National Society of Radio Control Aerobatics.

## Getting Started

To begin, your aircraft must be constructed as accurately as possible. Any other misalignments, or deviations from the original plane's design will have to be corrected on the ground or while in the air. These corrections are often difficult to camouflage or at time, may take more pilot skill to overcome, but don't be too hard on yourself, not many aircraft are built to perfection.

With your aircraft's construction completed, the model must be bench trimmed. We covered much of bench trimming in our October 2020 edition. Bench trimming assures that you have a really good chance of getting your plane up and in the air to begin the process of flight trimming.

### IMPORTANT

One other point under this tutorial; if you make an adjustment to the aircraft to compensate for a flight abnormality, you must go back and repeat all trim steps up to the point where the adjustment was made Why? Because a later adjustment can have an effect on the work other control surfaces are doing to maintain straight and level flight of your aircraft.

*(Continued next page)*

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## Step 1

Trim for upright level flight while using full engine power. Normally only elevator and aileron transmitter trim should be required here for this adjustment.



## Step 2

Trim for inverted straight flight using only down elevator to maintain altitude. If the model has a persistent tendency to turn in a certain direction, adjust the rudder trim until that tendency is corrected while flying inverted. If rudder trim was required, go back to step 1 and re-trim the ailerons to compensate for this adjustment to achieve upright, level flight.

Next repeat the inverted flight trim process until the model flies straight and true both upright and inverted. The true test will be that the plane will fly upright and level with hands off the controls, and will fly inverted straight and level with slight down elevator applied.

If a significant amount of down elevator is required to maintain level inverted flight, your center of gravity, thrust pitch, or decalage (see sidebar) may be off.

## Step 3

Trim for glide conditions. While flying upright and level under full power, cut the throttle to idle. The model should continue on a straight and level path without rising or nosing down-

ward. As speed decreases, the nose should gradually drop and only a slight amount of up elevator should be required to maintain a constant glide speed and rate of descent.

If "ballooning" (rise in attitude) or diving occurs when the throttle is abruptly cut to idle, then a vertical (up or down) adjustment to engine/motor pitch is required. If a lot of elevator is required to maintain a consistent rate of decline, then the center of gravity or incidence is off and requires ad-

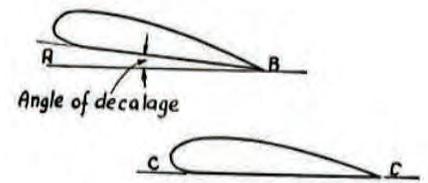


Fig. 12. AB parallel to CD.

## Decalage

The term decalage refers to the alignment of the two wings of a biplane. If your aircraft is a monoplane (one wing) this will not apply.

Decalage is the angle of incidence between the two wings. Wings that are exactly parallel, and, in exact alignment with the stabilizer will provide a true flight path.

If one or both of the wings are out of alignment, then this can have an adverse affect on the straight and level flight of your aircraft.

An incidence meter is a great tool to have to measure incidence for both mono planes and biplanes. It includes a leading and trailing edge grip and a leveling meter which rides along the center. With this tool one can make sure that both wings are at the same incidence as the stabilizer.

An incidence meter is very effective in identifying wing warp. This on its own can cause the aircraft to turn left or right. A flat an level building surface is the most important thing to watch for but wings can warp from improper storage as well.

To check for wing warp, attach an incidence meter at the farthest outside tip of both wings and compare that the angles are exactly the same.

(Continued next page)

justment.

If adjustments are made, repeat all steps in the flight trimming process.

These three steps constitute basic flight trimming and must be completed to satisfaction before proceeding further. These adjustments are critical to the aircraft's basic performance. At this point, with transmitter trim controls set, you should observe the aircraft's control surfaces and trim positions on your transmitter.

If a trim position on the transmitter is set excessively in one direction, it will limit the amount of correctable trim you'll have at your disposal for future flights. For example; if straight and level flight requires that your rudder trim on the transmitter be set nearly full to the left, then you should note the amount of deflection in the rudder and mechanically adjust it at the linkage point to that position, then set the rudder trim back to neutral. This will provide you with additional trim movement at the transmitter should you need it in the future.

Of course, after making this mechanical change you should recheck the flight trim of your aircraft to be sure you got the mechanical adjustment right.

## The Trim Chart

The trim chart on the next page is a shortcut guide to much of what is covered earlier in this article. It also covers some aerobatic trim adjustments that take your model to the next level. You can find this chart and a lot more great information at the N.S.R.C.A. web-

site at this link [www.NSRCA Trim Chart](http://www.NSRCA Trim Chart).

These tests assume that the plane has been built perfectly aligned, wings square to fuse, stab in line with wings, vertical fin is exactly 90 Deg. to horizontal stab. Thrust, incidence, and balance (CG) are set according to the specifications. Also, the wings must not be warped as checked with an incidence meter, and the elevator



halves are moving together as checked by a "Throw Meter."

These flying tests should be done in near calm conditions. Double check each of the following tests before making any changes. The most critical component of aircraft setup is finding the proper Center-of-Gravity. It must be correct for each airplane, regardless of differences due to building variables and weight. Because of this requirement, it is important that this trim chart be followed in the order in which it is written.

### Trim Chart Footnotes

Note A: These two methods for determining the C.G. of a model will give approximate results only. Start out with the C.G. where the Designer suggested, or somewhere between 25% to 35% of the Mean

Aerodynamic Cord. The optimum C.G. for your model will require further testing while performing maneuvers. The results will only be an approximation at best.

Note B: This portion of the trimming chart may be unclear for the following reason; In order to maintain level upright flight, the wing of a plane with a symmetrical airfoil needs to have a positive Angle of Attack (AOA, usually less than 1 degree). This positive angle provides the lift required to cause the plane to fly level. If the plane is balanced slightly to the nose heavy side (required for pitch stability), it will require a slight up elevator trim to hold level flight. A plane with a zero/zero wing to elevator angle will also need a slight amount of up elevator trim to hold level flight. Therefore, a plane trimmed in this manner will have a tendency to pull to the canopy on a straight, thumbs off, down line because the elevator is controlling the AOA of the wing.

This positive AOA may also be achieved by a positive incidence change, which requires an offsetting down elevator for level flight. Thus, a power-off down line should fall straight down, with neutral controls. There are significant interactions between wing incidence changes and CG, therefore it is most important that the C.G. of the airplane be established first.

In the final analysis, flight trimming an airplane is a personal preference issue after you have taken care of the basic essentials.

(See Trim Chart next page)

## Basic/Aerobatic Trim Chart

Use this chart as a handy reference when trimming your aircraft. The chart also contains some additional trimming activities to make your aircraft ready for aerobatic maneuvers if that is the type of aircraft you are attempting to flight trim.

Test for	Procedure	Results	Adjustments
Control Neutrals	test response to each control	Adjust trims for straight & level flight	Adjust clevises to center TX trims
Control Throws	Apply full deflection of each control	Check for response; Aileron hi rate 3 rolls in 3 second. Elevator, square loop corners Rudder, 35 to 40 Degrees	Change control horns, ATV, and Dual Rates as required
Center of Gravity Method 1 Method 2	1. Roll into a vertically banked turn 2. Roll into inverted flight	1. A. Nose Drops 1. B. Tail Drops 2. A. lot of down required to hold level flight 2. B. up elevator needed to hold level flight	A. Add tail weight B. Add Nose weight (see Note A at bottom)
Up/ Down Thrust, test 1	Fly model straight & level, then cut throttle. Note Either change B or C requires retest of Decalage and Verticals	A. Model continues level flight with a gradual drop B. Model abruptly dives C. Model abruptly climbs	A. No Change B. Increase down thrust C. Reduce down thrust
Up/Down Thrust, test 2	Fly model straight & level, then pull up. Note Either change B or C requires retest of Decalage and Verticals	A. Model continues straight up B. Model pulls to canopy C. Model pulls to belly	A. No Adjustment B. Increase down thrust C. Reduce down thrust
Decalage, Angle of Incidence	Power off vertical dive from high altitude (neutralize elevator)  (see Note B at bottom)	A. Model continues straight down B. Model pulls to canopy C. Model pulls to belly	A. No change needed B. Increase wing or stab incidence C. Reduce wing or stab incidence
Knife Edge Pitch	Fly model on normal pass, roll to knife edge, left and right, use rudder to hold model level	A. Model does not change pitch B. Model pitches to canopy C. Model pitches to belly	A. No adjustment needed B. Either move CG aft; or increase wing incidence; or mix down elevator with rudder C. Reverse of B;
Tip Weight - Test 1	Fly straight; level, roll inverted, release aileron stick	A. Model does not drop a wing B. Left wing drops C. Right wing drops	A. No adjustment B. Add weight to right tip C. Add weight to left tip
Tip Weight - Test 2	Fly model towards you / away from you, pull tight inside loop, repeat with outside loop	A. Model comes out with wings level B. Model comes out with right wing low C. Model comes out with left wing low	A. No adjustment B. Add weight to left tip C. Add weight to right tip
Side Thrust	Fly model away from you and pull up to vertical	A. Model continues straight up B. Model veers left C. Model veers right	A. No Adjustment B. Increase Right thrust C. Reduce Right thrust
Aileron Differential	Fly model toward you, pull into a vertical climb before it reaches you. Neutralize controls then half roll .	A. No Heading Changes B. Heading change opposite to roll command C. Heading change in direction of roll command	A. Differential settings OK B. Increase differential C. Decrease differential
Dihedral	Fly model on normal pass, roll to knife edge, left and right, use rudder to hold model level	A. Model does not roll B. Model rolls indirection of rudder C. Model rolls opposite to rudder	A. Dihedral OK B. Reduce dihedral C. Increase dihedral

**(ELECTIONS** *Continued from page 1)*

concession stand when we held events and also took care of our club apparel inventories.

After a little encouragement I'm please to announce that Mark Polzin will be accepting the office of treasure for 2021. I want to thank Mark for accepting the nomination and I know he'll do a great job in the role.

For those of your that are new to the club, I wanted to take a moment here to introduce each board member for 2021



**Ed Malec - Vice President**

Most everyone knows Ed if you've been out to the airfield. Ed is there just about every day and is also our Student Coordinator and Safety Officer. Ed and I took on quite a few students this year in our effort to help offset the COVID-19 crisis and encourage new people into the club.

As I look at the tally, together we enlisted 11 new students this year into the IP program this year and some have already become club members.

Ed has agreed to serve another year in his current capacity. I want to also mention that Ed and his son Kevin are supporters of our Builder's Workshop Program that was unfortunately cancelled this year due to the pandemic.



**Chris Milbauer - Secretary**

Chris has been an active member with the club for many years and carries with him a wealth of knowledge. Some refer to him as a walking encyclopedia. Chris has offered to serve another year as club secretary and his support is invaluable.



**Mark Polzin - Treasurer**

In 2021, Mark Polzin has agreed to accept the responsibility of

Club Treasurer. Mark has a wealth of experience in managing business accounts and was solely responsible for our 2019 audit. This makes him uniquely qualified to expand the role of Treasurer and provide more detailed account of what's going on with the business side of the club.



**Cliff Evans - Director**

Everyone knows Cliff. Cliff is a longtime member and has served in a multitude of capacities to include past president. In fact, it was Cliff that called me to ask if I could take over the presidency when he was called out of retirement in 2018.

Cliff is a great "sounding board" and a voice of reason when discussions get testy. I'm personally glad that he has agreed to stay on as Director.



**Kevin Malec - Director**

Kevin is our technology guy. He's the "go to guy" when you're having problems with your radio system or why something isn't working properly. Somehow Kevin always makes the answer seem simple.



**Mike Batson - Director**

Mike was one of the principal members to spearhead FPV Flying at the airfield, a growing interest among young people.

Although FPV has not yet taken hold in a major way, Mike and other members have at least set the foundation for FPV guidelines on the East Field. If you have any questions about FPV, you should contact Mike.

**Steve Huelsbeck - Director**



Also known as our "raffle king" and Electric Event CD, will continue on as director. Steve has done a great job of pulling together raffle items both at deep discounts and also "freebies." He's also brought some new items to the club that previously we've never seen before.

**Tom Jacobs - President**

This year has been like a vacation for me. No events, no school meetings, no workshops, no club meetings, and I've been going through withdrawal.

Prior to my taking over the Presidency, I was Vice President. I was elected as Vice President mostly because the slot needed to be



filled. What I learned was that, as Vice President, I really didn't have anything to do. So I took on the concession. Then at our March budget meeting, both Ed Malec and I latched onto the young student recruiting idea as something we could take hold of and make a difference for the club.

After taking over the presidency our newsletter editor stepped down and that became mine as well, and now I have too much on my plate.

I don't know what 2021 is going to be like as of yet. I do know that for now, it's more of the same.

As the cold sets in, I hope that everyone stays healthy and plans to spend time building up their hangers for this next flying season. That's my plan. I have several projects that await and one includes building up my stable of trainer aircraft as I seemed to keep losing one every week or two.

But, it was worth it!

# RENEWAL 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 106<sup>th</sup> Street, Milwaukee, WI 53225

414-750-2740

chrismilb@att.net

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

The Flying Electrons Inc., www.flyingelectrons.com

## 2020 RENEWAL 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 Renewal	\$65.00	\$
Menomonee Falls Resident - Individual or Family Renewal	\$45.00	\$
Junior (18 Years or Younger by July 1st) Renewal Only	\$45.00	\$
Single Senior (65 or Older by July 1st) Renewal Only	\$45.00	\$
<b>Additional Costs</b>		
Add if renewing after January Club Meeting	\$5.00	\$
Add if renewing after February Club Meeting	\$10.00	\$
<b>Deduct if you paid initiation fee previous year</b>	<b>-\$20.00</b>	<b>-</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.

Renewal Application Form 9/1/2020 IJ

# 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.

## 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
Saturday, 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