



Fort Worth Thunderbirds Radio Control Association Inc. **The Pilot's Log**



Issue 4479 January 2021

Next club meeting: January 30th, 2021, 2PM at our Flying Field

Presidents Corner: by *James Meadows*

Happy New Year Thunderbirds!

It has been a busy start to 2021, beginning with our first function of the year the Mega Black Eyed Pea event. This was a little different than years past with a combination of first flights of the New Year for some of you, a gift presentation to members who preregistered, and something new, 'The Cancer Awareness and fundraiser activity'. Despite the cool (cold) weather, by all account it was a great success. The Thunderbirds are made of some truly generous and companionate folks. We had participation from all, so to those who donated items, to those who purchased tickets, THANK YOU! More fly and community events are planned, and we want you to add others. If you have idea or want to host or manage an event, shoot an email to one of the officers, so we can add it to the calendar. Hoping that 2021 will allow us to return to a more maintainable schedule of events. Speaking of club events the next club meeting will be on Saturday January 30th, 2021, 2pm at our flying field. Hopefully, the weather will cooperate. I promise to keep it to an hour or less but, would ask that if you are present that flying be halted, so we can conduct the meeting.

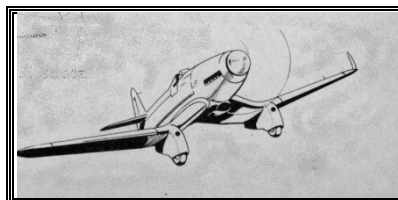
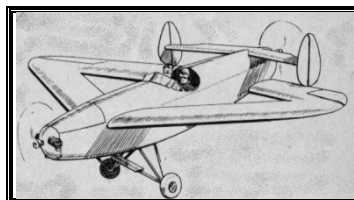
We continue to work with the USACE on our lease and hope to have an update at the meeting. As we negotiate thru this issue, I would remind you all to follow the

rules of the park and Thunderbird field. Pilots must display a current AMA card in the Frequency board prior to flight. I understand that this may seem obsolete, with most of us now flying 2.4, but it's not just about radio interference. This is a requirement of our agreement with the Corps to show that all pilots are covered under the AMA insurance and know and follow the AMA rules and Thunderbird Field. When you do not display your card, or fly with a current membership, YOU place the club and yourself in considerable liability, so please place your card in the board. Also be aware that the Thunderbird field is located on Federal Property. Some recent news feeds, state that President Elect Biden has announce that he will sign an executive order mandating, mandatory wear of masks on Federal Property. If this comes to pass, then I am asking you to please abide by this order, as the nation works to control the Pandemic.

Your membership with the Thunderbirds and AMA is important and I want to say thanks to all who have renewed and become involved in the hobby. See Vice President Lowe's comments on the difference you have made with your membership and voice.

Happy flying and see you soon

James



Vice Presidents Corner: *by Rob Lowe*

Hello Thunderbirds and a Happy New Year! For those that didn't make it out to the New Year's Day mega event, we missed you. It was a little cold, but other than that, a great event. You'll recall we had to cancel our annual Christmas party in December due to COVID, but your officer group turned that disappointment into a positive with a gift to each member who registered to attend New Years Day. There were a small handful of members who registered ahead of time for the event and for one reason or another, were not able to attend. We still have your gift and it's waiting for you in the shed at the field! If that was you, just connect with any officer and we can get your gift to you.

Your officer team has been busy already in 2021 on a number of other fronts as well. Some of those include renewal of our lease with the US Army Corps of Engineers (USACE), future meeting locations/times, etc and application of the recently issued final rule for Remote ID and UAS flight over people.

Let's focus on the Remote ID rule for a minute. HUGE thanks goes out to each of you who took the time to comment on the proposed rule. The FAA received more than 53,000 comments and they made a difference. The final rule is much less cumbersome and impactful to our RC hobby as a direct result of those comments. The AMA played a huge role as well, but the masses taking the time to submit comments carried a ton of weight. Thanks to

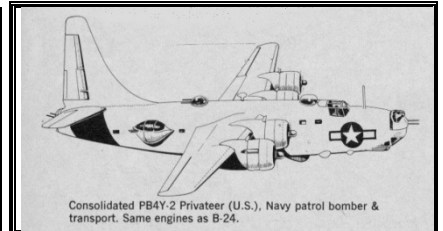
January Club Meeting Minutes: *by Mike Schroeder*

January 2021

Thanks for all the help on our New Years Day Black eye pea combo event. We were able to have a great raffle fund raiser for such a cold wet day. What a great turn out and the generous giving to our fund raiser. Thanks

The board officers would like to say thanks to those who have been so generous giving to the AMA Donations fund. Several of our club members were mention for donating to the AMA in the last couple of AMA magazines.

No meeting minutes to report as of this time.
Stay safe



each and every one of you! Your officers are working on next steps to ensure our field is included in the right airspace and operational capability. We will keep you posted as those times move forward but things are looking good.

Here's a reminder that the USACE is beginning to use the self-pay kiosk at our entrance gate. USACE representatives were on duty this weekend to help park visitors learn and use the machine. Don't forget that the USACE has allowed us to continue our free access...for now the gates should be open and if there is a representative there, continue to show your AMA card and tell them you are going to Thunderbird field.

Lastly, once you are in the park, please remember the speed limit is normally 30mph. I followed a couple of you in from the gate Sunday afternoon and you were doing over 50mph. Speeding is enforced by the USACE, but more importantly you are putting our club at risk as tenants in the park. Just like you follow the safety rules at the field; please follow the rules inside the park getting to and from the field. Thanks in advance for self-policing and for keeping an eye out for each other.

Here's my virtual "Low Pass Salute" to you, Thunderbirds. Stay safe, social distance and wear a mask. See ya at the field!

Rob

From the Treasury: by Chris Berardi

2021 Thunderbird Officers

The new 2021 officers are in place and have already conducted the first board meeting of the year. With the exception of the safety officer the board remains the same for this year. Please welcome Bill Lake as our new Safety Officer. In past years, Bill also did duty as our club secretary and it's clear he felt a calling to do some further good - either that or Mike wasn't willing to let him have another go as secretary.

If you are a club member you will have received a welcome letter that contains our personal contact information to include both an email address and phone number. If you don't have these ready, we can be reached at the club's email addresses listed below as these will be forwarded to our personal addresses. We are always available to take your questions and concerns when it comes to club matters.

With a large club such as ours and with all the activity concerning the virus and our upcoming lease renewal, each of us stays busily engaged dealing with it all. This has

certainly driven our thoughts regarding involving more of the membership in these projects. Our hope is that more of the membership is involved in actively directing these efforts; for example, fundraising for our new training center or clearing the extended runway line south above the scrub trees that have sprouted since 2012 (when we moved to our current location). You will be hearing more about this approach as we build out member led committees with the chair of those committees reporting to the Vice President or other assigned board members.

Please keep your eye on the Pilot's Log for these projects especially since the pandemic is impacting our ability to have our regular club meetings. You will probably read about the upcoming club meeting on January, 30th elsewhere in this month's newsletter.

Below is a table with your updated board members listed: we are also club members just like you and always need your support to get anything accomplished. Let's hope that in 2021 we can complete our outstanding projects and move on to real changes like a training center and toilet facilities.

	BOARD MEMBER	EMAIL
President	James Meadows	president@fwthunderbirds.org
Vice President	Rob Lowe	vicepresident@fwthunderbirds.org
Secretary	Mike Schroeder	secretary@fwthunderbirds.org
Treasurer	Chris Berardi	treasurer@fwthunderbirds.org
Safety Officer	Bill Lake	safety@fwthunderbirds.org

New Thunderbird Life Members

We are fortunate to have dedicated, hard working club members who routinely devote their time to the club. Many of you do that. But then there are members who have done this for years - in some cases decades. They give not only their precious time but in many cases they donate equipment and money to advance the legacy of the Thunderbirds.

We do not appoint new Life Members every year, in fact, many years we have not had new Life Members at all but this year is different. This year, we are recognizing two individuals who are responsible for supporting virtually all of the club events. They have done this for years and have donated far more than their time to us.

It was with great pleasure that the existing Life Members and the club's board announced the recipients of this award at our January, 1st New Year's event held at the field. While we could never repay them for what they have done for us, what we can do is publicly acknowledge them and offer a small token of our thanks and respect by designating them: Thunderbirds Life Members. When you see them at the field, please thank -

Gary Alphin and Tab Bowland.

Membership Update

Have any of you experienced some frustration with getting hobby gear such as tools, instruments, kits? Or, have you tried to get into bicycling or another activity? There has been a huge growth in activities and pastimes. Even trying to buy a chess set over Christmas was nearly impossible

due to an explosion of interest in board gaming in general and as result of the Netflix move, “Queen’s Gambit.” I was able to buy a nice wooden checkers set though; thankfully Amazon Prime hadn’t streamed something depicting checkers as an action sport, fraught with intrigue and suspense.

On the other hand, I have wanted to get involved with astronomy ever since my dad left me with a small Meade telescope. This telescope was not sophisticated at all and was somewhat damaged when I received it. It was also completely manual so that observing anything smaller than the moon required a real knowledge of the sky and some dexterity in manipulating the Right Ascension and Declination knobs - no computer tracking there.

But it did pique my interest to the point that for the last year I’ve been devouring astronomy magazines and learning the ins and outs of German Equatorial Mounts, reflectors, refractors, astrophotography and all that goes with it. And there is indeed a lot to go with it. I am still most definitely a “noob” but sufficiently informed to purchase a ‘scope, mount and accessories. But not so fast...due to a huge demand equipment is hard to come by and I must line up behind everyone else with a backorder. Apparently, I’m not the only one to take a sudden interest which has led to a lack of equipment availability in the median price range. Gear is available at the higher end and this is the same situation with other sports and hobbies like bicycles and model airplanes.

One local hobby shop (Bobby Jacks Hobbies) has told me that this past year has been the best for business out of the last five years. It looks like shortages and delays are going to continue for at least the next 6 months as the world

continues to get a grip on the pandemic. I’ve got my gear on order and it’s now just a matter of reading and waiting.

This renewed interest in all things hobby related - particularly if they have an outdoor component, has had its own impact to our membership too. Last year was one of the highest membership totals the club has ever had and this year has started off extremely well with renewals flooding in. It seems that everyone is has had an urge to leave four walls behind and to take in the fresh air and beauty of our flying site. As evidence of this I would point out that on a freezing New Year’s Day we had 60+ members attend our traditional first flying day of the year. It used to be our “Black Eyed Pea” event but this year we were forced to do something completely different; a combination of Black Eyed Pea without the food and our Christmas Party without the party (but with lots of gifts). The officers squeezed those events together and came up with a fund raiser for a good cause.

Despite the freezing cold weather, overcast clouds, lack of food and the need to stay virus free we had an incredible turn-out. Quite frankly, we were all taken aback at the support from the membership and their generosity. Perhaps we simply provided the opportunity to spend some time in the hobby meeting friends and getting away from the limiting boundaries of our homes. Who knows what drove us to convene on that dull day - but it was fun even if it took several hours to defrost once we returned home. Ultimately, I think we all have the same feeling about our hobby, about the need to get out of the house for some exercise, fresh air and fellowship; Perhaps our hobby is the perfect mechanism and excuse to touch on all those reasons.

Here is our latest membership count as of 1/19/2021.

Membership Type	Count
Individual	125
Family	6
Associate	6
Life	14
Service & Gift	2
TOTAL	208

How to Renew

The most expedient way is via the club website on the membership page. You actually don’t need a PayPal account to pay electronically. If you want to write a check, you can get mailing information from the same page - the link is shown below.

Whatever method you choose, please fill out the “Member Update” form. Many of you have minor updates, particularly email addresses. Also, as part of an upcoming survey for our membership, your birth date would be most useful to generate data on whom and how the club is being utilized. If you haven’t filled a contact form out and if you

think I may not have your complete info please complete it and I'll get back to you.

<http://www.fwthunderbirds.org/Membership.html>

More Beer

Some would argue that the following is the most satisfying part of this month's Pilot's Log and I would have to agree but then I am a little biased. Some of you may know that my sister and brother-in-law have opened a craft brewery in Hudson Oaks. The city council was excited that Hudson Oaks would have a brewery of their own: Apparently, they suffer from thirst there too. In the last few years, craft breweries were being built in just about every metropolitan area in Texas and around the country; however, like any other business in the food and catering industry, they have been hit hard by the pandemic with several closing in the DFW area already.

Safety: by Bill Lake

Happy New Year. I believe we are all happy to have 2020 in the rear view mirror, so I want to take this opportunity to steer us toward looking forward. What I mean by that is to encourage each and every Thunderbird to not only think ahead, but to think of others. We talk a lot about safety. We have a long list of safety rules approved by the AMA and our club, and we regularly discuss unfortunate experiences that have taken place at home or at the field. Some are minor (fortunately) and others are not so much. What they all have in common is that they could have been prevented and they could have been worse.

My appeal to all is to know the rules, adhere to the rules, look out for one another, and correct things before something has a chance to go wrong. All of that starts with awareness, discipline, and respect for each other. Here are some fairly common (too common in my opinion) simple measures to help us help each other: fly from inside the pilot boxes; takeoff and land on or east of the concrete runway; do not stray beyond the published airfield flight boundaries; keep loose clothing, neck straps, and body parts clear of propellers; disarm electric motors until ready to fly; remove propellers before working on an airplane; do not taxi aircraft beyond the "no engine run" lines; do not operate engines in the pavilion area; do not exceed your abilities when flying; do not enter or cross the runway without clearance from active flyers.

Fortunately, business is improving at the "Pathfinder Brewery." This clean and modern facility is able to host outdoor music, food and beer on most days and evenings during the week. Eric, my brother-in-law, is an accomplished brewer winning many awards in California before bringing his take on our nation's oldest liquid staple to Texas. If you haven't made it out to Hudson Oaks in the past couple of years - take a trip and you will be amazed at how this town has grown. There are several chic places to eat and the whole area has a rising modern and alternative ethos about it. If you would like something to do this weekend it is worth a visit. You can read a more about the brewery here: <http://pathfinderbrewery.com>

That's it for my report this month - see you at the field. I'm ready for 2021

There are many others, but the main point to remember is Murphy's Law is always lurking around airplane operations - "Anything that can go wrong will go wrong". Anyone who knowingly or intentionally violates the safety rules or parameters is selfish and is putting others in danger. Don't be that person. Fort Worth Thunderbirds RC Association is a fantastic club. It is not the airfield alone that makes it so. It is the people. You, me and the others. Let's each play our part.



Black Eye Pea Fly-in: January



Center Of Gravity

The following are two web sites for determining the CG of your airplane. Just fill in the measured values and 'viola' your CG is computed for you.

Aircraft Center of Gravity Calculator
Aerodynamic Center (AC), Mean Aerodynamic Chord (MAC), Center of Gravity (CG), Neutral Point (NP) and Wing Area

Enter the variables at left using the same units for all entries.
For an aircraft to be stable in pitch, its CG must be forward of the Neutral Point NP by a safety factor called the Static Margin, which is a percentage of the MAC (Mean Aerodynamic Chord).
Static Margin should be between 5% and 15% for a good stability.

Wing Root Chord (A) []

Wing Tip Chord (B) []

Wing Sweep Distance (S) []

Wing Half Span (Y) []

Stabilizer Root Chord (A2) []

Stabilizer Tip Chord (B2) []

Stabilizer Sweep Distance (S2) []

Stabilizer Half Span (Y2) []

Distance between Root LE's (R) []

Stabilizer Efficiency (Rel. V) []

Enter Static Margin (SM) (%) []

Mean Aerodynamic Chord MAC = []

Sweep Distance @ MAC (C) = []

From Root Chord to MAC (d) = []

From Wing Root LE to AC = []

From Wing Root LE to NP = []

From Wing Root LE to CG = []

Wing Area = []

Stabilizer Area = []

Wing Aspect Ratio = []

Tail Volume Ratio, Vbar = []

Low Static Margin gives less static stability but greater elevator authority, whereas a higher Static Margin results in greater static stability but reduces elevator authority.
Too much Static Margin makes the aircraft nose-heavy, which may result in elevator stall at take-off and/or landing.
Whereas a low Static Margin makes the aircraft tail-heavy and susceptible to stall at low speed, e.g. during the landing approach.
* Choose Low Stabilizer Efficiency if the stall is close to the wing's walk or behind a fat fuselage in disturbed flow. Choose T-tail for most gliders.

For wings with two different panels click [here](#)
For wings with three different panels click [here](#)
For wings with four different panels click [here](#)
For wings with five different panels click [here](#)

C.G. Calculator

This form will calculate the position of a Center of Gravity (CG) on a model airplane wing as measured from the leading edge of the Root Chord. If you need to know the % of the Mean Aerodynamic Chord (MAC) for a given position of the CG you should use the [Mean Aerodynamic Chord Form](#).

Enter Root Chord (A): []

Enter Tip Chord (B): []

Enter Sweep Distance (S): []

Enter Half Span (Y): []

Enter %MAC Balance Point: []

[Click Me to Compute:]

Sweep Distance @ MAC (C) = []

Mean Aerodynamic Chord (MAC) = []

MAC Distance from Root (d) = []

Balance Point @ Root Chord (CG) = []

The Equations

$$C = (S(A+2B)) / (3(A+B))$$

$$MAC = A \cdot (2(A-B) + 0.5A + B) / (3(A+B))$$

$$d = (2Y(0.5A+B)) / (3(A+B))$$

$$CG = \%MAC \text{ B.P.} \cdot (MAC) + C$$

https://rcplanes.online/cg_calc.htm

https://www.scaleaero.com/CG_Calculator.htm

Members Projects: by Woody

Purchased this Starmax A1H Skyraider about 10 years ago from John George. A great flying airplane, real stable in flight (at least when the pilot is paying attention). Wing span is 63 inches, stock four bladed prop, four cell 4000 Lipo battery and a 6 volt, 2000 mAh battery for flight controls.

Not a new airplane but it was in much need of refurbishment. Repaired the usual hanger rash/dings, lower air scoop, and paint job. Finally I decided on the "Lieutenant America" livery. Still a great flying airplane, when the pilot pays attention. The following are before and after photos.

Thanks again John.



Before



After



THUNDERBIRD 2021 CALENDAR

<u>DATE</u>	<u>EVENT</u>	<u>POINT OF CONTACT</u>
24 April	SPA Contest	Gary Alphin
15 May	SPA Contest	Pat Ensign (Texas Wings Field)

11-12 June	Warbirds Over Dallas	Ed Kettler
19 June	SPA Contest	Frank Cox (Golden Triangle Field)
4 July	Independence Day	Club Officers
23 October	SPA West Championship	Todd Blose

WWW.FWTHUNDERBIRDS.ORG

Club Officers 2021



Pres: James Meadows



VP: Rob Lowe



Sec: Mike Schroeder



Safety: Bill Lake



Treas: Chris Berardi

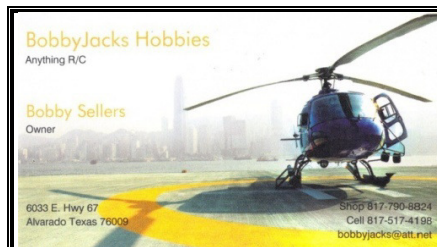
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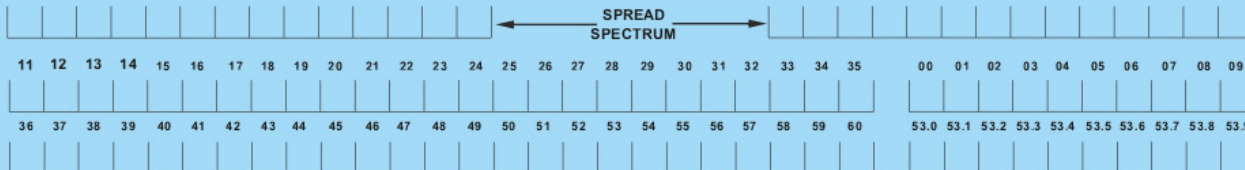
Roy's Hobby Shop 817 268-0210
 1309 Norwood Dr. Hurst TX 76053
www.royshobby.com



JT's Hobby Shop 817 244-6171
 8808 Camp Bowie Blvd. Fort Worth TX 76116
jtshobby@yahoo.com



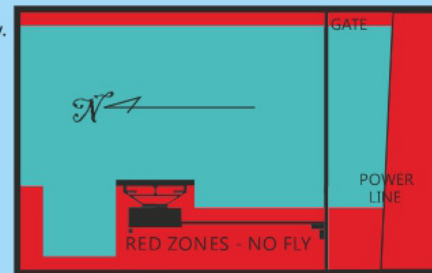
Bobby Jacks Hobbies Shop: 817 790-8824 Cell: 817 517-4198



CURRENT AMA CARDS ONLY. NO OTHER CARD IS ACCEPTABLE.

THIS FIELD IS LEASED BY, MAINTAINED BY, AND ITS CONSTRUCTION FUNDING WAS SECURED BY
THE FORT WORTH THUNDERBIRDS RADIO CONTROL ASSOCIATION
 ALL AMA, CORPS OF ENGINEERS AND THE FOLLOWING RULES APPLY TO EVERYONE FLYING HERE.

1. Neither the Thunderbirds nor the Corps of Engineers is responsible for accident or injury.
2. Place your AMA card in the proper slot above before turning transmitter on.
3. All engines must have effective mufflers.
5. Fly from the station nearest the downwind end of the runway. In case of a crosswind the first pilot to fly will select the station.
6. Aircraft must follow the takeoff and landing pattern in effect.
7. Landing aircraft have the right-of-way over aircraft taking off.
8. Running aircraft shall not be left unattended.
9. No more than 5 pilots shall fly in each designated zone at one time.
10. LMA rules are posted in the bulletin board



**Academy of Model Aeronautics
 National Model Aircraft Safety Code**

Effective January 1, 2018

A model aircraft is a non-human-carrying device capable of sustained flight within visual line of sight of the pilot or spotter(s). It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and related AMA guidelines, any additional rules specific to the flying site, as well as all applicable laws and regulations.

As an AMA member I agree:

- I will not fly a model aircraft in a careless or reckless manner.
- I will not interfere with and will yield the right of way to all human-carrying aircraft using AMA's *See and Avoid Guidance* and a spotter when appropriate.
- I will not operate any model aircraft while I am under the influence of alcohol or any drug that could adversely affect my ability to safely control the model.
- I will avoid flying directly over unprotected people, moving vehicles, and occupied structures.
- I will fly Free Flight (FF) and Control Line (CL) models in compliance with AMA's safety programming.
- I will maintain visual contact of an RC model aircraft without enhancement other than corrective lenses prescribed to me. When using an advanced flight system, such as an autopilot, or flying First-Person View (FPV), I will comply with AMA's Advanced Flight System programming.
- I will only fly models weighing more than 55 pounds, including fuel, if certified through AMA's Large Model Airplane Program.
- I will only fly a turbine-powered model aircraft in compliance with AMA's Gas Turbine Program.
- I will not fly a powered model outdoors closer than 25 feet to any individual, except for myself or my helper(s) located at the flightline, unless I am taking off and landing, or as otherwise provided in AMA's *Competition Regulation*.
- I will use an established safety line to separate all model aircraft operations from spectators and bystanders.

For a complete copy of AMA's Safety Handbook please visit:
www.modelaircraft.org/files/100.pdf

Blasts From the Past

SPA 2013

