



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



Issue 4457, February 2019

Next club meeting: February, 25th 2019, 7:00 pm, Buffalo West Restaurant, 7101 Camp Bowie Blvd

Presidents Corner: *by James Meadows*

To borrow part of a movie title, February has shaped up to be a “Fast and Furious “month. Fast, in that we are halfway thru February, furious in the changes of weather, and all the preparation that is going on in the club as we prepare for the SAE Event. Big thanks to all those who have stepped up to assist with the SAE event, and a gentle reminder that we can always use more assistance.

Besides the SAE event in March, and if you feel like a road trip, there will be a clinic on AMA pattern in Georgetown, TX on the 23 March. April 6-7, the Thunderbirds will host an AMA Pattern Event at Thunderbird Field. If you have ever wanted to give it a try, here is your chance. Check out the Website for additional information. May will see the Warbird event at the field, so dust off your goggles, and start checking your six.

Please take a moment to look at VP Lowe’s section of the newsletter! There are new marking requirements for our aircraft that take effect soon. It’s important

Vice Presidents Corner: *by Rob Lowe*

Hello Thunderbirds! Happy belated Valentine’s Day – Here’s hoping your Valentine got you some new RC stuff! This month I am mostly passing on info from other sources related to UAS updates, but first...

Please continue to send me your suggestions for meeting topics and items you want to learn about or see.

There has been some recent activity following the Government shutdown related to UAS (including us as RC pilots). I hope you are continuing to monitor the AMA web for updates etc. Here are a few highlights. First, the FAA published an Interim Final Rule on marking your aircraft with your FAA registration number. An interim rule creates direction for compliance with its content, but also leaves open the opportunity to provide comments on the item. I’d encourage you to let

your voice be heard on this and any item when you get the opportunity. The FAA will consider comments from the public on this Interim Final Rule, and will then review any submissions to determine if the provisions of the ultimate Final Rule should be changed. The 30-day comment period will end on March 15, 2019. To submit comments, go to <http://www.regulations.gov> and search for "RIN 2120-AL32."

Please note that you are now **REQUIRED** to have your **FAA** registration number on the **OUTSIDE** of your aircraft beginning February 25, 2019.

You may have received this directly from AMA in an email, but just in case, here is what AMA issued on Feb 13th...

Dear members:

We're writing to let you know the FAA issued an [Interim Final Rule](#) today that will require drone pilots and model aircraft pilots to display their FAA-issued registration number on the outside surface of their aircraft. The rule will take effect on Monday, February 25, which means the markings must be in place for any outdoor flight beginning on that date.

Although most AMA members already have their FAA registration number posted on the outside of their aircraft, AMA will be submitting comments to the FAA requesting a waiver process for those who might be burdened by external markings, such as members who fly scale replica model aircraft. Most importantly, this rule does not change the original acceptable methods of external marking, nor does it specify a particular external surface on which the registration number must be placed. The requirement is simply that the registration number must be seen upon visual inspection of the aircraft's exterior.

As you know, the registration requirement is not new. Congress reinstated this requirement in December 2017 with the [passage](#) of the National Defense Authorization Act. Although this rule was flexible and allowed the registration marking to be placed in an enclosed compartment, law enforcement officials and FAA partners have expressed concerns about the safety risks a concealed explosive device could pose to first responders when opening a compartment to find a registration number.

If you would like to submit your own comment on the Interim Final Rule, simply visit www.regulations.gov and search for "RIN 2120-AL32." You can also visit www.faa.gov/news/updates/?newsId=93045 to learn more. The deadline for public comment ends on March 15, 2019.

If you are uncertain if you have a valid FAA registration, you can access your FAA account at <https://faadronezone.faa.gov/#>. This site will allow you to view your personal FAA registration number and expiration date. We strongly advise you to avoid registering your model aircraft anywhere other than the official FAA website. If you register under Section 336, there is a \$5 fee for a three-year registration, and hobbyists receive one identification number for all of their aircraft. Please be aware of unofficial registration websites that charge exorbitant fees or require separate registration fees for each recreational aircraft.

We continue to work closely with the FAA to determine the best path forward regarding recreational UAS operating requirements. As always, thank you for your continued support, and please reach out with any questions.

Thank you, AMA Government Affairs

On a related note, I thought you might find interesting how the FAA is explaining some of the background on why the marking changed. Here is a sample response from FAA to a major newspaper on the east coast:

Late [Wednesday afternoon](#), xxxxx xxxxx asked why the FAA originally allowed drone owners to place identification numbers in a drone's battery compartment, and when the agency expects to issue a rule on remote identification for drones. We said on background that when the original drone registration rule became effective in 2015, traditional aircraft modelers and other industry stakeholders expressed concerns about placing an FAA registration number on the external surface of their unmanned aircraft, so we determined it only needed to be easily accessible without any tools. We explained

that in late 2016, nefarious actors began using drones maliciously to observe and attack government facilities, large gatherings of people, and other targets for the purpose of disruption and destruction, and their tactics included hiding explosives in the battery compartment to target law enforcement personnel handling a recovered drone. We said due to the use of such tactics and concerns expressed by the U.S. national security community in light of such attacks over the last two years, the FAA published the Interim Final Rule to require marking on an external surface. We also said remote identification is a lynchpin for moving forward on a number of other UAS integration priorities, in terms of safety, security, and airspace management, and we are working to develop a notice of proposed rulemaking for remote identification requirements. We said we prioritized remote identification rulemaking and are committed to implementing requirements quickly and effectively.

Lastly, the FAA has issued proposed rulemaking for flying UAS over people and at night (Part 107 commercial operations). This is not normally an RC aircraft operation and you will see on the AMA website that they don't support doing either with RC aircraft. However, if you are interested, here is the link so you can go look for yourself... (cut/paste the link into your browser if it doesn't work directly).

The comment period is open for the FAA's proposal to allow drone operators to fly over people and at night under certain conditions. Learn more and submit your comments at <http://bit.ly/2RX0vpm>.

Sorry this was lengthy, but this is important info you need to know in addition to taking the opportunities to make your voice heard. Don't forget to put your FAA registration number on the OUTSIDE of your aircraft by Feb 25th. Fly safe, Fly informed and help us ensure our hobby is viable into the future! Here is my "Virtual Low Pass Salute" to you, Thunderbirds. See you at the field!

January 2019 Meeting Minutes: by Mike Schroeder

Meeting started at 7:00 and James welcomed members, visitors and new members:
Bill Boro and his wife of thirty plus years
Phil and Jodie Mitchel of twenty one years

Event Recap

Toys for Tots

Three different pick up dates with over 175 toys donated, two bikes and eighty dollars in cash. Rob Lowe picked up and delivered the toys.

Christmas Party

Ninety five people including guest. First time we used automated ticket sales and it went well. Fun time and thanks to Bill Lake for being the MC for the event.

Black Eye Pea Event

We should really call this the Freeze 2019. Great turn out and it was a little too cold and windy. Amazing how many people we can stuff inside a storage shed with the promise of food. First flight went to Ken Knotts and Brian Gates. No first crashes.

2019 Corp Environmental Inspection

Passed with flying colors. Thanks to Ken Knotts and his crew Bill and Pete.

Field Clean Up

Good turn out and we were able to get most of the debris off the field. We will have to have another day for final clean up. Thanks to all for coming out to clean our field from the flood.

Future Events

Club Calendars events on website

SAE: March 8-10. Field set up for March 7. If you still can volunteer please contact Bill Lake or Mike Schroeder. There is still opportunity to volunteer for a great event. It takes all of our club members help to make this a success. As it stands there are eighty three teams from all over the world registered.

Members request:

Paul Mayhan emayhan@ems-isd.net

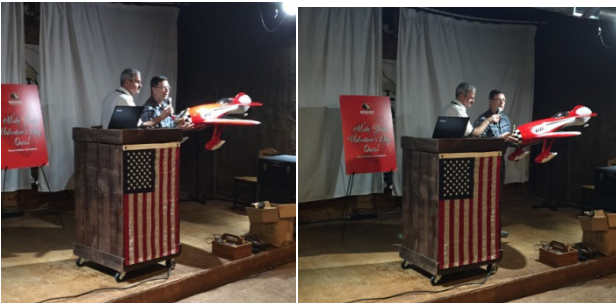
Need a speaker who has worked in aircraft design, preferably an engineer or related. Talk to middle school engineering class. The topic is work and career. Date is to be in April or May. Please contact Paul if you can volunteer.

Show and Tell

Paul showed us the fiberglass molds he is working on to build his scratch build jet. He now has most of the body done and working on the nose.



Gary James 1932 Mighty G Bee R3 kit was a fantasy plane that was never built as a real plane but there is a kit for an RC plane.



Treasury Report: Chris Berardi reported our current membership is 151; 127 individual, 10 family, 3 associate and 11 life.

Mugs and shirts for sale. Bank checking and saving accounts are in good standing.

Secretary Report: Mike Schroeder Bill Lake made a motion to defer the reading of the minutes. Ken Knotts second, a Vote was taken and passed.

Safety Report: Ed Kettler presented the annual reading of the club safety program to members. Three pages that are to be read to the members on rules. The rules are in the newsletter for everyone to read on their own. Bill Lake made a motion to defer the reading of the rules and it was second by Ken Knotts. Passed with a show of hands by all.

Vice President: Rob Lowe is looking for monthly topics to talk about and speakers. If you have a how to item that you could demonstrate at a club meeting get with Rob. AMA page has a government topic article on what is going on with the FAA and new regulations that is being discussed.

Presentation:

Speaker for tonight is Bill Lake. Bill gave us a great insight into his career in the Air Force from the time of being drafted until he retired. Bill's rank at retirement was Brigadier General. His service to the Air Force spanned a career of twenty nine years. Bill flew 4200 hours as pilot in command in eight different planes. He participated in Operation Desert Storm and flew 15 missions over Iraq. It was a great and a long career of how a middle child growing up in Brooklyn was able to have a great journey in life flying some of the coolest and best planes made. Thanks for your service in the Air Force and sharing your career with all of us Thunderbirds.

Club Auction: A Hanger 9 - 60 size F4U Corsair. The winning bidder was Kenneth Killgo

Members Present

James Meadows
Tom Muller
Bill Boro
Aaron Mc Morris
Ian Waring
Mel Wells
Woody
Gary James
Sam Corlett

Phil & Jodie Mitchell
Bill Lake
Tracy Kobs
Tab Bowland
Rob Lowe
Pete Devlin
Tom Benke
Johnny Hunt
Brian Lowe

Mark Ehlers
Rex Anderson
Gary Nelson
Clarence Konkle
Ed Kettler
Mike Schroeder
Chris Berardi



January's Meeting Attendees

Treasurer Report: by *Chris Berardi*

Tarrant County College

This weekend I was fortunate to represent the Thunderbirds at the 5th annual “Fab Now 2019” conference. This is a local event featuring different areas of the “maker” community. You may have read magazines such as, “Make:” (<https://makezine.com>) or visited web sites such as, “Adafruit” (<https://www.adafruit.com>) for your own home-grown devices. Also participating from the club were father and son team, Mike and Grant Schroeder. Mike, the Dad, attends TCC and has some of his artwork hanging along the walls of this huge and beautiful facility - this is the complex downtown that was formerly the new Tandy building.



We put together a couple of new items for the event including a new banner and full color flyers. There was a lot of interest in our display which included a P40, electric helicopters, 3D printed P38, quad racer and goggles. As modelers we are all “makers” pulling together different aspects of craftsmanship and technology to synthesize something new and expansive. In particular of course, are drones and other UAS (Unmanned Aerial System) that are finding huge commercial markets and are having an impact into other areas of our hobby. Just this past week the FAA (Federal Aviation Administration) announced that we are now required to have our FAA registration number readily visible on the outside of our models.



I was really impressed with the TCC campus - as modern as you can get regardless of whether on a school

campus or office building. The college is most certainly aware of the importance of fabrication using advanced technologies and materials. One area that was impressive was 3D printing: This has been around quite some time but the materials aspect of it is still developing. On display at the event was a brake lever for a Ducati motorcycle. It had a bronze bearing pressed through the lever through which a bolt secures the lever to the clip-on handlebar. It was extremely light and tested to failure at 22,000lbs! It was printed using one of the newer plastics that utilized nano-particles of carbon within the plastic matrix. The resolution of the printing was quite amazing being an order of magnitude better than anything I've seen recently.

It makes sense that the club support this event again next year now that we've been exposed to the organizers and other businesses that attended. In my opinion, with the right promotion this event could become huge and involve many more businesses, students and industries. I think we should take advantage to expose ourselves to these technologies and to promote ourselves in the community next year. If you have ideas for what you think we can display, let us know and we'll be sure to include it.

Glow Plugs

In 1947 Ray Arden invented the modern glow plug after noticing that some ignition engines continued to run even after the ignition was shut off. Modern glow plugs utilize platinum wire elements to catalyze the alcohol in our fuel. Generally, the platinum content ranges from between 80% to 100% with the balance being made with rhodium and iridium. A spool of wire used to make the elements can vary greatly depending on the market price for platinum. These spools can cost upward of \$60,000.

I had a very interesting conversation with Aldon Kelly, one of the 3 manufacturers of glow plugs in the USA. When I called to order a handful Merlin plugs he explained many aspects of manufacture including that fact that attaching the wire to the body and post of the plug was essentially micro surgery. Unfortunately, Mr. Kelly recently passed away and the business is not currently in operation. I wonder if there is enough of a demand now for it ever to be resumed. It seems everywhere one looks; more traditional aspects of the hobby are reaching end stage. But, then again other areas such as UAS, robotics, telemetry and stabilization

are leading the way forward for the next decade. The Merlin web site is, "<http://merlinglowplugs.com>"

Constitution and Bylaws Update

Minor updates have been made to the bylaws to reflect our current processes and to clean up a few things. On the other hand, I have extensively revised and re-written the constitution based on feedback from the board of officers and you, the membership. In part the update to the constitution was driven by the fact that until recently, we could not locate an original document and copies of it have been lost over the course of the last 15+ years.

Fortunately, I was able to obtain a copy and used it as the template for our new constitution. At the next club meeting I'll review both the constitution and updated bylaws with membership to obtain your feedback. This will be incorporated and presented again at the March club meeting. At that time we can decide whether to vote the changes in or to run through another cycle of revision. We'll get a link to the draft documentation and pass that on after the club reviews them at the February club meeting.

Kit Auction - February Club Meeting

At the February club meeting we will once again have another kit auction! Last month, we had a Horizon Hobby F4U Corsair - a really beautiful big kit (ARF). It was a fun auction and all proceeds go to the club. I'm not sure which kit it will be this month, so you'll just have to come to the club meeting to find out!

Jet Turbine Training Available

I'm not sure if there will be more details in this issue of the Pilot's Log regarding turbine training. If not, we'll have photos and more information about it next month. It will be DST next month and flight training will have begun (Thursday evenings). For the first time ever, you will be able to get hands-on gas turbine training. A unique model has been assembled by JT's Hobby Shop and flown in the past couple of weeks at the field. Essentially, a gas turbine has been mounted to the large Horizon Hobby Ultra Stick (green and white). Apparently the model flies beautifully with plenty of speed but with the easy and predictable handling of the Ultra Stick. I'm sure this is going to be a popular program, so we'll have to feature more of it next month.

Membership Update

This month, I'll provide a basic update to the membership numbers. I don't expect much change until the flying weather returns and the clocks spring forward on March, 10th.

The last batch of shirts have been handed out and I'm preparing to mail out badges to our most recent members. I also have caps for sale, \$13 and a limited number of coffee cups, \$5. Please email me to reserve yours or see me at the February club meeting.

Membership Type	Count
Individual	140
Family	10
Associate	5
Life	11
Service	2
TOTAL	168

Here is the latest membership count for February, 2019. This is approximately 79% of the membership present in December, 2018.

That's it for this month. See you at the field.

Safety: by Ed Kettler

Safety Officer Notes

This month I am covering Safety of a different type, not the typical "keep your fingers out of the prop" stuff. I am going to focus on Internet safety, because our hobby is becoming more online and less the local hobby shop. The consequences of an Internet safety issue can be very damaging in a financial or reputation basis. The following information is derived from Kaspersky Labs.

1. Keep personal data professional and limited. Not everybody on the Internet should know your relationships, partying or address.
2. Keep your privacy setting ON. Most browsers and mobile apps have privacy setting that should be used, and one of those settings are location based service. These should only be allowed while you are using the app, otherwise you are leaving a breadcrumb trail of your travels.
3. Practice safe browsing. There is a lot of click bait out there, sometimes leading you to dangerous places. You can usually place your mouse over the button and look at the link to decide if it is going to take you where you want to go.
4. Make sure your internet connection is secure. Are you connecting to a secure network, or the local coffee shop?

Consider getting a personal virtual private network (VPN) on your laptop

5. Be careful what you download, and from where. There are reputable sites and stuff, like the old music sharing services that were malware distribution centers.
6. Choose strong passwords. There a couple of ways to do this and not have to memorize random strings of letters, digits and symbols. One way is to get a password manager like Password Safe and store all of your userids and passwords, and then all you have to do is remember the vault password. Copy paste the userid and password, boom, you are good to go. As pilots, we have an almost unlimited set of airplanes to choose from, like Cessna172 or FockeWulf190
7. Be careful what you post. Even if you delete a post, there are audit trails, screen shots, archives and other means to store, search and re-tweet something. It is a write once, regret many times environment these days. Just ask AOC.
8. Make online purchases from secure sites. Crooks want your credit card number. The simplest way is to look at the URL: if it starts with HTTPS, it is secure/encrypted. However, it could still be a crook at the other end!

9. Be careful who you meet online. Fake social media profiles abound, and that is a primary way bad guys cozy up to unsuspecting folks. Why, we like people who are like us!

advice. New threats come out every day, and even as an IT professional I couldn't keep up. Also, keep your computer up-to-date with patches and releases.

10. Keep your antivirus up-to-date. What else would you expect from a purveyor of AV software? Still sound

Surf safely!

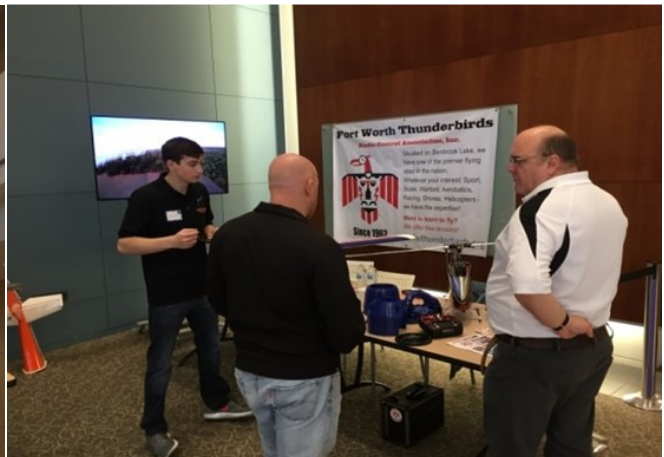
Field Maintenance





FAB Conference: *by Grant Schroeder*

TCC Trinity River campus hosted a ‘FAB Now’ event Saturday February 16th to encourage makers. Fort Worth Thunderbirds had a static display and handed out fliers during the event. There were many people interested in what an RC plane was and asked who/what the Thunderbirds are. We all talked about our amazing Thursday training program and everyone seemed to be interested when we mentioned that it was free. The event had many people with 3D printers and new technology, but the Thunderbird display stole the show. We were asked to come back next year and it will be held February 14th and 15th 2020 with a valentine’s makers theme.





FAA Marking Requirements: by Woody

Greetings to all. In lieu of the marking identification requirements the following is a method I've tried:

I used my 'Brothers' label maker with clear tape to create my FAA registration number. It's been tried on my electric airplanes and adheres well to the foam. When applied to a light colored surface the tape virtually disappears.

Not sure how it would weather up to gas or nitro models and would guess some method of clear fuel coating would be needed.

Just a suggestion for y'all to consider.



Members' Projects



Mel's Piper Cherokee and Woody's B-25, work in progress from a B-25J to a Doolittle Raiders B-25B

WASP Women Air Force Service Pilots: by Susan Stamberg



Fifinella," the mascot designed for the WASPs by Walt Disney Studios and WASP Wings

In 1942, the United States was faced with a severe shortage of pilots, and leaders gambled on an experimental program to help fill the void: Train women to fly military aircraft so male pilots could be released for combat duty overseas.

The group of female pilots was called the Women Air Force Service Pilots — WASP for short. In 1944, during the graduation ceremony for the last WASP training class, the commanding general of the U.S. Army Air Forces, Henry "Hap" Arnold, said that when the program started, he wasn't sure "whether a slip of a girl could fight the controls of a B-17 in heavy weather."

"Now in 1944, it is on the record that women can fly as well as men," Arnold said.

Women Air Force Service Pilots (WASP), referred to by some as the Women's Army Service Pilots, was a civilian women pilots' organization, whose members were United

States federal civil service employees. The WASP and its members had no military standing. It had two predecessors, the Women's Flying Training Detachment (WFTD) and the Women's Auxiliary Ferrying Squadron (WAFS), both were organized separately in September 1942. They were the pioneering organizations of civilian women pilots, who were attached to the United States Army Air Forces to fly military aircraft during World War II. On August 5, 1943, the WFTD and WAFS merged to create the WASP organization.

Over 25,000 women made application to join the WASP; 1,830 were accepted but only 1,074 completed the training. The applicants all had prior experience and airman certificates. While the majority of those accepted into the WASP were Caucasian women, its members also included Hazel Ying Lee and Maggie Gee both Chinese Americans, Ola Mildred Rexroat a Native American, and two Mexican Americans. Mildred Hemmans Carter, the only African American applicant, was asked to withdraw her application because of her race. In 1940, at age 19, she had earned a Bachelor of Arts Degree from the Tuskegee Institute. The following year, she received her aviation certification. Because of her gender, Carter was also rejected from flying with the Tuskegee Airmen. Seventy years later, she was recognized retroactively as a WASP, and she took her final flight at age 90.

The WASP arrangement with the US Army Air Forces ended on December 20, 1944. During its period of operation, each member's service had freed a male pilot for military combat or other duties. They flew over 60 million miles; transported every type of military aircraft; towed targets for live anti-aircraft gun practice; simulated strafing missions and transported cargo. Thirty-eight WASP members lost their lives and one went missing.

They weren't granted military status until the 1970s. And now, 65 years after their service, they will receive the highest civilian honor given by the U.S. Congress. In July, 2009 President Obama signed a bill awarding the WASP the Congressional Gold Medal.





THUNDERBIRD 2018 CALENDAR

<u>DATE</u>	<u>EVENT</u>	<u>POINT OF CONTACT</u>
March 8-9	SAE	Bill Lake
April 6-7	AMA Pattern	Chris Berardi/Sam Corlett
May 11	Warbird	Ed Kettler
July 4	Club Picnic	Club Officers
August 4	Summer Float Fly	Woody Lake
September 7	Senior Pattern	Wichita Falls TX
September 15	Pylon Race	Golden Triangle
September 21	Senior Pattern	Valley Mills TX
September 18-21	B-17 Fly-In	Monaville TX
October 12-13-14	Alliance Airshow	
October 5	Senior Pattern	Gary Alphin
October 19	Texas Electric Expo	Tom Blakeney
October 26-27	Senior Pattern	Ken Knotts
November	Toys for Tots	
December	Club Christmas Party	Officers

[WWW.FWTHUNDERBIRDS.ORG](http://www.fwthunderbirds.org)

POSITION	BOARD MEMBER	CONTACT 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	Ed Kettler	safetycoordinator@fwthunderbirds.org

Club Officers 2019



Pres: James Meadows

VP: Rob Lowe

Sec: Mike Schroeder

Safety: Ed Kettler

Treas: Chris Berardi

SUPPORT OUR ADVERTIZERS



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

Proposed Projects

Project #	Proposed Project	Summary of Project	TYPE	EXPENSE	POC	Status	Notes
1	HELIPAD	10X10 Concrete flush with ground, Could be Self help or contracted	Self /Contract	\$1,000.00	Officers	APROVED 2016-17	Will require new Lease /or wait for expiration of 2018 Lease to negotiate Less \$\$
2	Line control Area	Develop area for line control modelers	Self /Contract	\$1,000.00	Officers	APROVED 2017	wait for expiration of Lease
3	Shed Update	Cross Ventilation fan	Contract				Suggest to member ship for Purchase Purchase
4	Larger shed/addon	Larger shed to store more stuff	self/contract				Will require new Lease /or wait for expiration of 2018 Lease to negotiate Less \$\$
5	Enclose some of the covered shelter area	utilizing rollup doors that can be pulled down when needed	Self /Contract	\$Unknown			
6	Extend current runway	More stopping distance for models	contract	\$ Unknown			Lease Renewel/cost
7	Tree Removal	Remove trees at approach end of runways. Requires root removal and new plantings	Contract	\$15-\$20,000		IN WORK	requires Corp Approval will request Corp permission and requirements
8	Solar power lights in PIT Area	Allow for some visibility	Self /Contract	\$400.00	james Meadows	testing in Aug	
9	Weather Station , with wind velocity	post on web site for real field condition s	Self	\$\$	Chris Berardi		
10	Taller Flag Pole	the old one needs replaced	Self /Contract	\$500.00	Mike Schroeder	Getting Pricing	
11	Quad GATES	Members Request	SELF	\$\$	UNK		used in Heli,quadand CL area

Flying Field Rules

← SPREAD SPECTRUM →

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

RED ZONES - NO FLY

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

Crossword Results

Thunderbirds Aero Crossword #1		Down
		1. You need 5 kills to be this.
		2. Every successful flight ends with this.
Across		3. Orville's brother.
		4. This hardwood is extensively used in construction projects.
Down		5. Aircraft controller.
		6. Art Scholl's best friend.
Across		7. US premier WWII fighter.
		8. Kelly Johnson's baby.
Down		9. R. J. Mecha's baby.
		10. Flying on your own.
Across		11. You can never have enough of this.
		12. One dimension of a wing.
Down		13. Crew Station.
		14. Source of high energy impulses for ignitions.
Across		15. Powerful alkali metal.
		16. Compression ignition engine.
Down		17. Associated with the Dirty Bird.
		18. His principle states that an increase in the speed of a fluid occurs simultaneously with a decrease in pressure.
Across		19. Exceed Angle of Attack.
		20. Official ABA club recognition.
Down		21. Instant glue.
		22. Determined runway in use.
Across		23. Type of warbird.
		24. Your first rc airplane.
Down		25. Fuselage station structure.
		26. NASA's second human space flight program.
Across		27. Just one of these beans will kill you.
		28. Pilot around the vertical axis.
Down		29. Opposes thrust.
		30. Roman god of war.
Across		31. Scale aerobatics club acronym.
		32. Scale aerobatics club acronym.