# JAYHAWK MODEL MASTERS NEWSLETTER

**Jayhawk Model Masters | AMA Club #2013 | April 2024**

jayhawkmodelmasters.com

## Club Meeting April 20th

***Six-Mile Chop House**, 4931 W 6th St, Lawrence, KS 66049*

11:00 a.m.: Lunch & socializing
Noon: Business meeting

Club meetings—normally on the **3rd Saturday** of the month except:

- No meeting in *June* or *August*
- *September meeting a week early*

## 2024 Flying Events

*Note new dates for Rocketman Rally and Big Bird.*

May 4 – Jayhawk Open*

June 1 & 2 – Rocketman Rally*

June 15 – Blue Sky Open Fly-In

June 22nd – Jayhawk Float Fly *(at Clinton Lake)*

July 27th – Jayhawk Fun Fly*

Sept. 21 – Blue Sky Big Bird

Sept. 28 – FAE Fall Fly-In

October 5th – Jayhawk Big Bird*

*At Clinton International Model Airport

**Newsletter Committee:** Dave Alexander (Ed. In Chief), Scott Stordahl and Glenn Minor

***NOTICE***: As of 3/14/2024, all local clubs—Cap City, Blue Sky, and FAE—have approved FRIAs!! Alright!!

## 2024 Club Officers

*President* Patrick Deuser (785) 766-2604
*Vice Pres.* Scott Stordahl
*Sec./Treas.* Glenn Minor
*Field Safety* Vernon Nelson
*Board 3yr* Mike Brown
*Board 2yr* George Jones
*Board 1yr* John LaGesse

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**THIS MONTH'S MEETING RAFFLE PRIZE**

**Phoenix Models Corsair 59" ARF**

**OR**

**E-flite *Night Radian* 2 meter Illuminated Motor Glider**

**(see Show-n-Tell, below)**

## March Club Meeting

By Dave Alexander

12:40 – Prez Patrick Deuser called the meeting to order. We had 16 in attendance, including new members Dave and Shelly Barnhill and Andrew Augustine.

Treasurer Glenn Minor presented reports for January, February and March. In summary, our net worth was $7,614.90 to begin the year. It dropped a bit in January because dues income did not quite offset raffle prizes and AMA fees, to $7,442.90. We began Feb. with checkbook balance of $5,774.93 plus $2,000 CD. Raffles and dues income amounted to exactly $500.00 and with expenses of $621.81 (mostly raffle prizes), gave an ending bank balance of $5,653.12. With cash on hand and the CD, our ending net worth was 8,110.02.

Field report: Scott Stordahl reported the mower as running fine, and with some routine maintenance in the coming months, will be ready for the season. He also announced that JMM has gotten FRIA approvals for both our main field and the float fly location, WOO HOO!

Patrick reminded us it was time for a work day before our spring events. Tasks include lowering the work tables, repairing and protecting the electric box by the shelter, and painting the outside of the shelter. The date was tentatively set for Sat. April 13 so that it could be postponed if needed for bad weather.

Our lease is up for renewal and the officers are going to try to have an automatic renewal clause added this time.

We had a spirited discussion of whether it would be effective and practical to simply use the pits fence as a safety barrier at club events. This would do away with the need to set up and take down temporary barriers for every event. Members suggested we all try flying from inside the pit fence to make sure it doesn't compromise lining up for landing.

We had several show-n-tells:

I showed the Gypsy ARF parkflyer donated by Nate Ericson.

Dan Reid showed his Night Radian with adjustable LED light sequences (with a Wingnuts-tech module allowing Tx control).

Dan also showed his plans-built Depron autogiro "Kwirl".

Dan again, showed his unique (bizarre?) Magnus effect model that flies using the same process that causes a curve ball in baseball or a hook in golf.

**March Meeting (cont.)**
Glen showed his Eartek Pro ear protectors (wish I'd had them back when I was flying Cox .049 models!)


Scott won the raffle and chose the Sig 4 Star 60 kit.

George added a big receiver battery to the raffle, which was won by Patrick.

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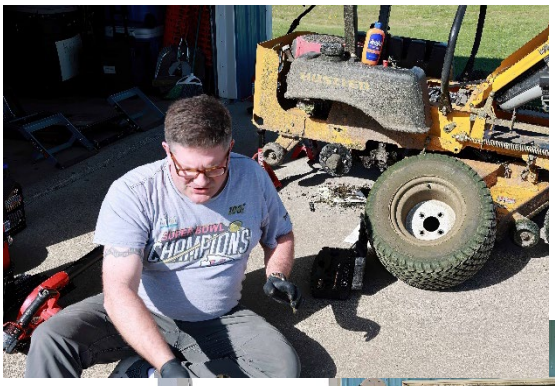
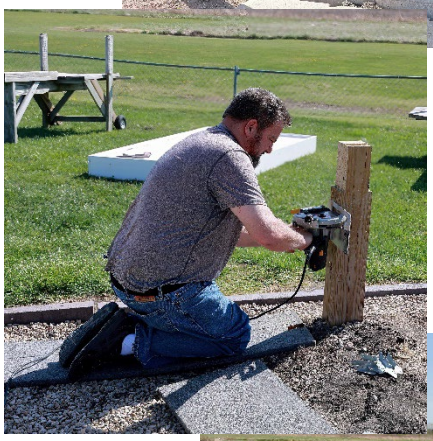
## Scenes from the Work Day (4/13)

Photos by Vernon Nelson





## From the Safety Officer

By Vernon Nelson

As Field Safety Officer I would like to review some of the things that we should remember as we are flying at our field. Remember that if someone is flying before you and you put your airplane in the air with them, ***fly the same pattern***. If they are using the East/West runway and you want to use the North/South, then ***wait until they land*** and let them know that you are going up and you are flying on the North/South runway. ***Never*** fly over any unprotected people, moving vehicles or occupied structures. Smoking in the pit area or flight line is ***prohibited***. Always ***check your controls*** to make sure they are hooked up right before first flying your plane. Do ***NOT*** fly over the golf course. High speed passes are to be *at least 25 feet from the flight line*. Be safe and courteous and have fun. Here is the safety code that you agreed to as an AMA member.

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

Vernon Nelson

# Get into the Cockpit: *FPV* for Newbies

By Tom Bomstad

So……you want to fly your bird from the cockpit, eh?

Well now you almost can with FPV = First Person View, a weird name for one of the coolest things ever to come about in the hobby of RC flying aircraft. To actually "sit" in the cockpit of your aircraft and fly it as if it were the real thing is an absolute blast for everyone who has ever flown this way. With the advent of high-quality micro electronics and video gear, both analog as well as high-definition, the cockpit of our birds now within our "reach".

So, where to start you ask? Well first it is better if you are at least decently fluent in flying RC as while you are flying FPV, you can get distracted and find yourself flying into the ground as well as becoming "lost-in-space" from the unique view - even if you've flown your RC field a million times. So taking it easy and having a spotter is a very good idea for your first few forays into the FPV sky.

For your first aircraft I would suggest an easy flyer, something that is relaxing to fly and you could fly it blindfolded. Because you can only see a nice view in front of your aircraft and the more "automatic" and gentle your flying the more successful you will be.

The coolest thing about FPV is it doesn't take a fat bank account to get in the air(it helps though…) It can be done for less than $500 for economy analog or around $600 for HD, depending on what you are willing to live with.

The difference between the two boils down to image quality and range. Analog is a lot like color tv was in 1968 - cruddy but it worked ok. The image quality of the better systems is worth every dime you spend on them over the cheap stuff mostly because if you buy cheap sooner than later you will want better stuff and the better stuff isn't that much more when you look at it like that.

And I will throw in just a tiny bit of radio link info - make darn sure you got a long-range receiver in your bird as otherwise it is likely your video will out fly your radio link and you can watch yourself crash into the top of a tree or middle of the lake, both reducing your fun and maybe costing you your bird. You want a minimum of a mile range and if you want to do long-range you will need to step up to the plate and go with 900 MHz to get you there. I flew a LR flight last year that went out 2.5 miles, was in the air for 18 minutes and total flight miles was 13. Can't do that on 2.4 GHz.

It is no longer a thing where analog is cheaper than HD - you want good analog with a good picture so analog can run as much in the beginning as HD. The biggest thing on your list are the goggles and there are many things to consider when shopping for goggles - do you want to wear them with your eyeglasses which make the goggles bulkier and heavier that the ones used without goggles but not that much of a difference - you're still going to look a bit out of this world(but you won't care). Box goggles usually let you wear glasses but aren't focusable otherwise and analog box goggles are really big.

For the type worn without glasses, such as the classic FatShark goggles, have focusable eyepieces for both focus and IPD adjustment and they tend to have the best screens and best experience.

I could ramble on all day about the fun FPV flying has been for me but until you try it yourself you won't know how right I am about the whole thing. So I will start by giving suggestions for my favorite FPV -

High definition as provided by the once expensive system that can be had for about the same as good analog, DJI FPV.

DJI FPV goggles v2 (NOT goggles 2 - that is a less versatile system ) are about $ 350 and can found here - you have 90 day return window which is cool ;

https://www.amazon.com/DJI-Goggles-Immersive-Experience-Supports/dp/B0BSB54F82/ref=sr_1_2?crid=ILILY1BK4OGT&dib=eyJ2IjoiMSJ9.74i5wScCL7htA27PftyEXbXPPrlaFnnqVVhotVC0Y5LAU5a77jsalVI7OsqALIFYe7Xo7qLkaU9atXytQPSCkquzt5qnFcb5J4KV1SxsJAv9X-N5RP1dlzIpUOlJz4hJxbFfxSh8gj6iOB_QyBM9z3CntsLbTI6hcEjxwRG_47aSsXverVHqRWVp1HN7KnlUont4aHrNdOaW4aqSjdACdubPhv_grm-Z2aLZM9CcJb-RQlz8_OAknXBlI1MxUcJsCTH6wc3RxHycCHtLi1HSxRYT-kMM3-bmTS1idoA8fqY.Q6X_Uo9_m2LImupHBA_YJwPJjLvs7pttrl2PSvDUsFY&dib_tag=se&keywords=dji+goggles+v2&qid=1710886465&sprefix=dji+gog%2Caps%2C140&sr=8-2

The goggles need an air-unit mounted on the plane for video feed and the best for the coin is still the 1 st generation air-units as they are the cheapest. This particular camera/air-unit combo will also let you fly after the sun sets for some of the coolest FPV ever and its pretty darn cheap. Also an easy hook up with just a minor bit of soldering.

https://www.racedayquads.com/collections/all-video-transmitters/products/caddx-polar-micro-starlight-vista-kit-choose-color

You will also need to download a DJI activation and update program(mostly used for updates) but its easy.

https://www.dji.com/downloads/softwares/dji-assistant-2-dji-fpv-series

Thats all you need to put HD FPV on your bird and you have about a mile range with this set up, more than you'll ever use on your home field. Also you can have up to 8 pilots flying at the same time on this system.

One add on if you want to would be using the fine DJI goggles for analog too is an adapter that looks good such as this, the one I use;

https://pyrodrone.com/collections/vrx-and-goggle-modules/products/bdi-digidapter-v2-analog-module-adapter-for-dji-digital-fpv-goggles

And you will still need to add to the digi-adapter an analog goggle VTX and antennas for the module. These links will be included in the analog shopping list.

And now for analog, one of the best analog goggle deals that that saves you about $50 is buy the HDO goggles and Rapidfire module in this bundle:

https://www.getfpv.com/fpv/video-goggles/ultimate-fpv-bundle-v2-fat-shark-hdo-2-rapidfire-lumenier-axii-2-diversity-antenna-bundle.html

You still need antenna for the module and this bundle deal is for some very good antenna;

https://www.racedayquads.com/collections/rhcp-antennas/products/lumenier-axii-2-5-8ghz-long-range-diversity-receiver-antenna-bundle-rhcp

And if all you are going to use the analog module only on the goggles the VTX alone;

https://pyrodrone.com/products/immersionrc-rapidfire-w-analog-plus-goggle-receiver-module?gad_source=1&gclid=CjwKCAjw7-SvBhB6EiwAwYdCAT3pdhnloKidA7nhcc43SDY9VA3Tusd_YURysHFxCcxZhjzZdRGsLxoCUQ0QAvD_BwE

Yes, this module is a tad expensive but I've tried 4 or 5 modules, even a few claiming to be as good at a cheaper price and they have never performed as well as the Rapidfire so imo, buy the best up front and don't be disappointed. And you may have to buy a battery or two for the goggles and should already have a charger for your lipos. Also add-on head-straps and other ways to customize your goggles can be found on the web.

If you want a decent set of analog goggles that won't break the bank because these include a diversity VTX module built in:

https://www.getfpv.com/fpv/video-goggles/skyzone-sky040-fpv-goggle-with-oled-screen-and-60fps-dvr-steadyview-x-receiver.html

If my suggestions are too pricey just make sure you read/watch more than one review on the gear you are interested in and then your expectations will match what gear you chose.

I also suggest buying off the web for your FPV gear unless you like over-paying because most local stores will stock few options for FPV, most of which they will have to order it for you at a higher markup and probably won't take it back because of the special order.

For a simple VTX system on a fixed wing module the only stuff you need, be it digital or analog, should be listed above. If enough of you want to run a flight controller on you bird complete with auto-leveling and a Return To Home function I can do an article and maybe link soldering demo-videos to the article on that as well -been wanting to do something like that for a while anyway and I have a new uTube channel I can do it on.

About half my FPV fixed wing planes fly gyros only - gliders don't need gyros but it can help a bit in the wind - and the other half RTH capable flight controllers (FC's). HD FPV birds have iNav FC's and Analog birds fly Sparrow v3 no-computer-required FC's because the analog planes can go out 5 + miles and beyond and the iNav birds will too but likely more geekiness is required. And of course you can fly with no gyro and no fight controller and still have a blast although if you have a problem in flight might just be a nice day for a walk in the woods/field, etc.

I didn't mention FPV quadcopter's because I've never seen anyone but myself flying quads at the Lawrence field and quads require more practice to master if coming from fixed wing. But once you get the hang of it and start flying 100% acro (no gryo) your quadcopter can do any and everything you want it to: shoot small gaps, flips, roll, back flips and my favorite of proximity - getting up close to trees and wires, etc. The only real downside to multirotors is flight time from having to spin its wings to fly which eats more battery. Flight time with a 1600 mah 6s pack is 3.5 minute to 7 minutes depending on the throttle position. A 5000 mah 6s can get you 20 minutes cruising or 7 - 10 standing on the throttle. Lower voltage quads 4s and below can compensate with higher KV motors OR bigger props.

Hopefully this is sufficient to get you started on the satisfying experience of FPV. Feel free to contact me with questions and I will do my best to answer them or direct you to the right place for answers. Happy Flying!

## The P Factor

Greetings fellow Model Masters! If you are reading this, then you didn't get blown away by the crazy March and April winds. I for one am ready for some decent flying weather. How about you?

I want to start off this month by thanking those that made the time to come out and help on our workday last weekend (see photos provided by Vernon elsewhere in the newsletter). Several of our regulars were unable to come out due to medical or personal reasons so we scaled back on some of the things we wanted to accomplish. Those things still need to be done so look for another opportunity to come out and help in the future.

I'm super excited that some of our members have opted to share their passions with the rest of us. First, I want to thank Tom Bomstad for writing the article about getting started in FPV flying. Tom has been flying FPV for a while now, and has shared some of the videos he has done in the past. Last year at one of our events he let several of us fly one of his planes with the goggles on. That plane had a head tracking camera on board so the view in the goggles was the same as if you were actually flying in the airplane and looking out the window. You could look up and down and side to side and the camera tracked the movements of your head and the video feed followed. Tom is super enthusiastic about this aspect of the hobby and willing to help anyone. Feel free to contact him for more information.

Next we have Bill Miller who is new to the Model Masters. Many of you know Bill as he has been to many of our past events as a member of the Blue Sky Squadron out of Topeka. Bill is an outstanding craftsman and modeler. He is also skilled at reconstructing models after unscheduled landings resulting in rapid disassembly of the aircraft. (Bill repaired several of Gary Raukman's models over the years). Anyhow, Bill has graciously volunteered to give us a presentation at the meeting about what it takes to build a giant scale model like the Bud Nosen Cessna 310 he built several years ago. It should be very informative!

Speaking of Cessna 310s, our own Mike Brown has been speedily creating a Nosen Cessna 310 of his own. The model Mike is creating has been modified from the original kit design to look like the full-scale plane his father used to fly. Mike has shared some photos and videos of his inspiring creation in the Balsa Model Aircraft Builders forum on Facebook and has been good to share progress with us when he's able to attend our regular Thursday night build nights via Zoom. Hopefully the model will make an appearance at one of our meetings soon. (hint, hint! Please?)

All of the people mentioned this month have strong passions for different aspects of the hobby. They are willing to share their time and talents to make the hobby more enjoyable for others and hopefully inspire more to do the same. It makes us all better in the end. So take your passion, make it happen, share it with others and inspire them to do the same!

Looking forward to the meeting this Saturday. We have much to plan for the upcoming Jayhawk Open event on May 4th.

Until then, Gentle winds and Soft Landings,

~Patrick

# 2024 JMM BUILD CONTEST

## WHEN

**May 4th, 2023**
**Jayhawk Open**

## WHERE

**Clinton International Model Airport**

1205 East 1000 Road, Lawrence, KS 66047

## PRIZE

**Sig Hog-Bipe Kit**

## OPEN TO EVERYONE

## RULES

+ Build any aircraft you like from kit, plans, personal design or even ARF.

+ Start a new project or complete one already under construction, just finish and show off at the 2024 Jayhawk Open.

+ Contest aircraft are required to fly at or before the event.

## JUDGING

All registered pilots at the event will vote on their favorite model.

JAYHAWK MODEL MASTERS
LAWRENCE, KS
Come Fly With Us!!!

Build and fly your own FREE glider!

presents the

# JAYHAWK OPEN! 2024

**Saturday, May 4, 2024!**

This event is free to the public!

**Clinton International Model Airport**
**1205 E. 1000 Rd. Lawrence, KS**

**Pilot Registration 8:00a, Landing Fee $10**
**Flight Time 9:00a to 4:00p**

**Unlimited RC SWAP Space**
**Only $5 Per Seller!**

**RAFFLE PRIZE!**

**Waco F5C 63"**

**Contest Director: Mike Randel, mikerandel@gmail.com, AMA Sanction 16122**