



Wing Tips



March 2019

The Newsletter of the Mid-Hudson Modelmasters

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2019 Club Officers

President: Kent Wien

Secretary: Larry Kunz

Sgt. at Arms: Flavio Ambrosini

Vice President: Scott Fellin

Treasurer: Tom Eng

Club Calendar

Coming Up:

- **CLUB MEETING , Friday, March 22:** Highland Middle School Gym, 71 Main St., Highland, NY 12528. Indoor flying begins at 6:30pm, meeting will begin at 7:30pm or 8pm. *Note: Please limit flying to indoor types -- fly the larger, more aggressive models outdoors or at larger indoor sites. Sneakers or other gym floor type footwear should be worn*
Barry Knickerbocker: We will have another "fun fly" event at our March 22 meeting. This month's challenge will be: TOUCH AND GO
Do as many "touch and goes" as you can in one minute.
You must cross the gym centerline in the air between each "touch and go".
Modelmasters Dollar prizes will be awarded as follows:
1st place (\$50), 2nd place (\$25), 3rd place (\$15), any participant (\$10) See you at the meeting!!
- **April Wing Tips articles & photo submissions due, Thurs., April 4:** Send your submissions to wingtips@modelmasters.us Due date is first Thursday of each month.
- **Wings & Wheels Expo 2019, Sat., June 15 – Sun., June 16:** Fairfield, NJ. For more information see www.njahof.org

Other Events:

- **MONTHLY MEETINGS:** At Highland Middle School, April 12. Watch for emails from our Google group for updates and cancelations due to weather.
- **OUTDOOR FLYING SESSIONS AT WEST ROAD FIELD** – Every Saturday Morning, weather permitting.

MEETING MINUTES – February 15, 2019

Feb 15, 2019 Model Masters Meeting Minutes:

- **Meeting location:** Highland Middle School

- **Open flying 6:00 until 7:40 PM** +

- + Barry set up a taxi slalom around the gym – with a flying hop over a barrier at the end ! This was a timed event with at least one wheel on the ground (until the last 10 yards) The tail wheelers seemed to have great difficulty avoiding ground loops, and the Vapors predominated after all ! 1st Rick Rizza, 2nd Tom Eng, 3rd Larry Kunz

Business Meeting called to order at 7:40 PM

- + Next meeting will be Friday March 22, at Highland Middle School
- + The FAA is changing the rules and will require the FAA registration number to be on the **outside** of your plane. This is an ineffective nuisance and will de-face your model. **WRITE to them !** 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.”
- + If you fly with another club member you are due MM dollars, so report your sessions ! Also post a note to modelmasters@googlegroups.com when you plan to fly, so that others may join you. Rick Rizza, Larry Mesic, and others often fly at New Paltz H.S. on Sunday mornings Several members fly most Saturday mornings at the Van Wagner road flying field.

- **Treasurer’s report:** by Tom Eng

- + \$1691.75 (\$117.21 of which is the mowing fund) plus \$500 in escrow at Highland Middle School.
- + 2019 **Membership stands at 31** with Kristin Acadia joining at the meeting.
- + Membership for 2019 will remain \$25 if paid by the MM party , **(\$35 after Feb 24)**
- + **Bring your membership \$ to the party,**
or mail to Tom Eng (27 Briar Patch Lane, Pleasant Valley, NY, 12569)
- + Larry will have your membership cards to the party.

Holiday Party: Frozen our and re-scheduled for Sunday Feb 24 @ 10:30

- + Bob Santoro is coordinating again this year.
- + It will start at 10:30 with brunch available (until 2 ?)
- + Please send \$20 per person to Bob Santoro (10 Squiresgate, Pok. NY 12603)
- + We will do our usual auction with Model Master dollars by Bill Bolitho (if you wish to participate, please bring a gift - try to aim around \$15, more or less)

Science Olympiad:

- + There is another Science Olympiad event coming to John Jay H.S. soon. This will be a catapult glider event, They are looking for volunteers. Date unknown.

AMA East show:

- + A number of ModelMasters may carpool to this show on Feb 22 or 23. If interested, send a note to modelmasters@googlegroups.com.

Fun Fly ideas:

- + If you have any ideas for a fun-fly event, please contact Barry Knickerbocker at 845-444-3006

- **Show & Tell:**

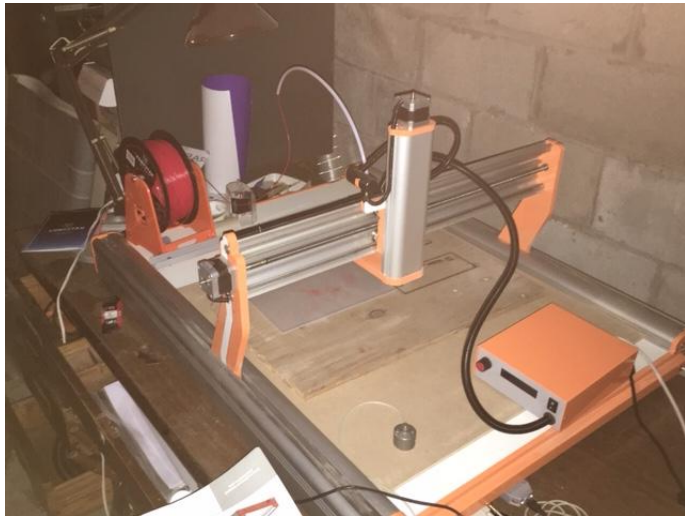
- + Barry. showed his “Albino Cub” It’s about a 24” wingspan Cub, built to general Cub specs, using electrics scavenged from another plane.

I BOUGHT A CNC MACHINE By John Knight

I bought a CNC machine as a Christmas present for myself. The question that usually follows is, what is a CNC machine? CNC is an acronym for Computer Numerical Control. A CNC machine automatically controls tools (drills, lasers, knives, 3d printers, etc) by means of a computer to alter a blank piece of material (metal, plastic, wood, ceramic, glass, composite, etc.) to meet precise specifications by following programmed instructions and without a manual operator. The next question is, what are you going to do with it? I'm going to alter blank pieces of material, of course or I'm going to do stuff with it, the details of which remain to be worked out, but I do have ideas.



I first saw the Stepcraft machine at the WRAM show now, AMA East about 2 years ago. I have been researching various CNC machines since then. At that time, there were very few CNC machines available for the hobbyist. Most were earmarked for industrial purposes, cost as much as a luxury car and were about the same size. They have since come way down in price and can easily housed in a basement workshop. The Stepcraft machine is made in Germany. Their US distributor is in Torrington, CT, about 75 minutes from my house, very convenient. I visited the Torrington site. I got to meet the people who would be my contacts in the building process. I got to see the machines up close and in operation. I was very happy with what I saw. I wanted a machine where all the parts came from one place. I could have saved money if I built the machine from parts provided by several different manufacturers. That would have left me on my own without any real product support. I placed my order in late December and was called to pick up my machine and accessories a few weeks later. It all came in 3 boxes. One of them very large and heavy (about 70 lbs.). I could have had it shipped, but I decided to save the \$75.00 shipping charge.



When I opened the boxes and started inventorying all the parts, I knew right away that this was not going to be a simple weekend project. There were 100's of pieces. Most of them nuts, bolts, washers, and screws of various sizes and then all the things to which the nuts, bolts, and screws would later be attached. It was not all smooth sailing, I had 3 incidents during the several weeks of assembly. A bent washer, a set screw was cross threaded in a pulley, and a faux pas of my own doing. I broke the ball of a ball end hex wrench in a set screw while trying to tighten a series of roller guides. This was the worst part of the assembly process for me. I could not get the screw out of the part, and finally had to replace the part. That was a \$50.00 mistake and week of no building.

What is the building process like? The machine came with a book containing detailed instructions. However, it is somewhat out of date as the machine has gone through some revisions since the printing of that manual. There is a building instruction pamphlet resembling an IKEA instruction sheet. No words, just pictures. There is also a video build manual. I found this to be the most effective. I watched the video as I built my machine. If you are going to get one of these for yourself, please be aware that this is a precision machine. It is best to take your time building. Don't try to do it in a day. I made sure to double check things during the construction process and sometimes that was not enough, which I will detail later. Think of the build process is 4 stages: mechanical, electrical, software, and testing. Once I finished putting it together, I then had to download software (all included) and plug everything in to see if it would work. This is another stress filled moment. I was wondering if everything would function perfectly, or would it be dead, would I see smoke, would there be defective components, or what. I plugged in all the parts and powered it up. To my surprise, I got the 3 green lights that I needed. Next was to move the gantry via the keyboard control buttons. Two of the 3 axis moved without difficulty. The motor for the third axis just hummed but did not move. I was disheartened to say the least. After thinking about what to do next, I turned off the power, flipped the 70 lbs. behemoth on its side, and removed the bottom plate to re-

view the electrical connections. One wire had come loose from the wiring harness. Was this the reason the motor didn't run? I checked the other 15 connections all seemed well. To cut to the chase, that wire was the reason.

Now that all the motors are functioning, and I can use manual controls (a fancy way of saying that I am pushing buttons on the computer) to move the spindle forward, back, up, down, left, and right. One would think that now I can get to work and begin altering blank pieces of material. Not so quick. The lead screws have to be perfectly aligned so that the tool does not bind. I am now in the process of fine tuning and playing with the different tools. That also means learning the software.

You design your item using a CAD (Computer Assisted Design) software. Adobe Illustrator or within a program like Vetric Desktop which is available for free for educational purposes. In Vetric, you set up tool paths. That is where do you tell the software the kind of cutting device you are going to use, where you want the spindle to cut and at what depth. Once that is done, you can see a simulation of the completed project. If you like how the simulation looks, Vetric will convert the tool paths to G code, a language that is understood by the software that runs the CNC Machine.

I have used the drag knife to cut letters, the spindle to cut patterns into wood, the laser engraver/cutter, and the 3d printer. I have had the most challenges with the 3d printer. My basement, where everything is set up, is rather cold. I think the material is cooling too rapidly. I have some ideas on how to rectify that problem.

As I said earlier, I am still setting up the machine, and making adjustments to get the machine to purr like a kitten. Stepcraft is producing another video on how to make those fine adjustments without having to disassemble the machine. I'm waiting for that video which is nearing completion. I have a feeling that if I ask, they will send me a pre-release.

I am looking forward to beginning some real projects. However, I need some help. If there are any MM members with a band saw that can cut some blocks of balsa into thicknesses of 1/16", 1/8", and 3/16", I would appreciate your assistance. I also have some exotic hardwoods that are need of being re-dimensioned. I could use some help with that as well.

The pictures show my machine with the 3d printer attached. The bed is 24"x36". I hope that by the next Wingtips I can show you the fruits of my labor.

You can reach via email at wjknight@aol.com

1st Brunch / Auction by Bob Santoro

25 members and guests attended our 1st brunch/auction held at Coppola's restaurant in Hyde Park on February 24th. The brunch had an extensive number of offerings. The gift exchange organized by Lloyd and Brad Quick kicked off the event with a great selection of both, hobby related and other assorted items. Gift certificates for Hobby House and various chocolates were popular as was a pocket quad-copter.

Bill Bolitho developed a challenging trivia contest centered around aviation and its relationship to famous movies and their actors. And thanks to Bill for all his effort in designing and printing the Model Master Dollars, the artwork of which is always very creative and theme oriented.

As always, the highlight of the day was Dom Fusca conducting the auction. In his humorous and witty way he auctioned off an exceptionally large number of both club purchased and donated items. The bidding process was very animated and drew much laughter, particularly for the most coveted items. Many thanks to Dom, for purchasing items and doing a great job. And thanks also to all of those who donated some real fine items.



Recipients of Appreciation Awards from left to right: Tom Eng, Bill Bolitho, Bob Santoro, Barry Knickerbocker, Dom Fusca



Brad Quick receiving Proclamation of Appreciation from DJ Amodeo.



I would like to thank Brad for being the MC. Brad introduced our new President, Kent Wien. Kent is an avid model aviation hobbyist and commercial pilot for American Airlines. We welcome Kent to our Club and look forward to his leadership. And thanks to the members and their guests for attending and participating in the event. Without your support our events would not be successful.

Auction Statistics:

- 2018 Modelmaster Dollars earned by the membership: \$51,080
- Spent during auction: \$45,890
- Number of items auctioned: 32
- Average cost of an item: \$1434
- Most Expensive item: \$5000, 3 cell 2200 mah Lipo battery, Brad Quick
- Who spent the most: \$5900, Larry Kunz

Interesting Stuff

Kent Wien: Photos from 2019 AMA EXPO EAST



For Sale by our members

R/C Airplane for sale. The plane is a Sig LT-25 converted to electric power. It comes complete, ready to fly, with two 3S 4000mah flight batteries. It has a brushless out runner motor and a Spectrum compatible receiver with flight stabilizer. The transmitter is not included. The kit was bought for me as a gift. After flying it a few times, I decided that even though it is a great flyer, it is just too big for my tastes. If you are looking for a larger size trainer that flies great and is in like new condition, this plane is for you. The price is \$125. Please contact Barry Knickerbocker at bknickerbocker2@hvc.rr.com if you are interested.

