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February		The EFO Officers	2023
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No Mailed Ampeer Subscriptions	The Next EFO Meeting: Wed. February, 8, 2023 Time: 7:30, Place: ZOOM		

What's In This Issue:
 EFO Meetings, Winter 2023 - Pontiac Indoor Info - Brighton Indoor Info - Introducing Aspect Laser Cutting - Aspect Laser Lil' Bubba - COVERING IRON SHORTAGE? Substitute? - Cubic Wing Loading (CWL) Update - Wing Storage - Rubber Powered RC - Classic Jim Ryan Kits Available - Upcoming Events

EFO Meetings, Winter 2023

The EFO meetings for February, March and possibly April will be ZOOM meetings.

The reason for ZOOM meetings is the continued threat from COVID and now the severe outbreak of the common Flu in the more senior population.

Also, I am really no longer capable of clearing the drive and street of snow and ice for safe walking to the house.

I'll see you all via Zoom in February, Ken.

Skymasters' Winter Indoor Flying in Pontiac, MI

From Pete Foss via email

Hi All,

I'm very happy to announce that we have secured a spot at the UWMSC (UWM Sports Complex), 867 S Blvd E Pontiac, MI 48341, calendar for indoor flying.

WE ARE BACK TO TUESDAYS FROM 9 AM - 12 PM!

Registration for indoor is up for gold cards!

<http://www.skymasters.org/index.php?page=events&id=15924>

Gold Cards, season passes, are \$150 and single sessions \$10.

Thanks,

Pete Foss

President Skymasters RC of Michigan
www.skymasters.org

Winter Indoor Flying at the Legacy Center in Brighton, MI

Indoor flying takes place from November 2nd, 2022 until April 26th, 2023 at the Legacy Center Sports Complex, 9299 Goble Dr., Brighton, MI, 48116 phone: 810-231-9288

Wednesdays from 12:30 PM until 2:30 PM.

The cost is \$10 per drop-in session.

Aspect Laser Cutting
From John Hoover via email

Good morning,

We closed our hobby store in Michigan, Flightline Hobby last year.

I am now designing, manufacturing and selling my laser kits. Could you please pass along our website?

Check it out!

www.aspectlaser.com

Thanks and good flights,
John and Tracie Hoover
Aspect Laser

And From Joe Hass via email:

Introducing Aspect Laser

Model Aviation Hall of Famer John Hoover and his wife Tracie have opened a new online store called Aspect Laser.

<https://www.aspectlaser.com>

John is using his decades of aeromodeling experience to supply high quality kits, laser services and a vast line of hardware (over 200 items)

specifically packaged for the modeling community. The website is a work in progress so check back often.

There are currently 4 kits available:

Lil'Bubba (balsa) (*photo in John's info about this plane KM*)

<https://aspectlaser.com/collections/balsa-rc/products/lil-bubba-laser-cut-balsa-rc-radio-controlled-airplane-kit>



15/16's (balsa)

<https://aspectlaser.com/collections/kits/products/15-16th-laser-cut-rc-radio-controlled-balsa-airplane-kit>

**Aurora (foam)**

<https://aspectlaser.com/collections/foam/products/aurora-foam-rc-airplane-kit>

**F-106 (foam)**

<https://aspectlaser.com/collections/foam/products/f106-delta-dart>

I have flown the Aurora and the F-106. Both are fantastic with wide flight envelopes.

Attached are a few words from John on the Lil' Bubba. (*The info from John is after Joe closes his email. KM*)

John has power systems for all of his kits.

John can provide laser engraving and laser cutting too. Attached are pictures of some of his laser products. These would make great, practical prizes for club events.



International shipping is available.

More kits are on the way.

You can reach John at aspect5429@yahoo.com.

Joe Hass

248-321-7934

**Aspect Laser Lil' Bubba 17.75" Span Laser Cut
RC Radio-Controlled Balsa Airplane
Kit RC-1**



- Full laser cut wood kit that you build
- Detailed full size plans and instructions
- American hardware where possible
- Photos of the build are available, many detailed shots, available in the "Media" section of our website.

-The "Small Plane Foam Stand" you see in the photo on the Webpage is included in the kit. This stand is CNC cut by my friend Scott at Mega Jets.
 -Power system and all necessary building tools are available from Aspect Laser.

The Lil Bubba model was originally based on my "Auffangen" design #47 built in 1983. She flew with a Charlie's RC Goodies G Mark 061 glow engine.

My idea was to design a good flying, small plane that built quickly.

The wing is a flat bottom airfoil that builds flat to the plan and the fuselage is built upside down in the same flat fashion. Bubba is a quick build, I could frame one in a day,

The Lil' Bubba is a nice size, fitting in even a small car in the car.

Lil' Bubba is a quick but predicable flyer.

Later I decided to manufacture a few kits, The new 2022 Lil' Bubba (Aircraft #433) is very close to the 1998 plane except I added a top front magnet hatch to facilitate battery change. She is a steady flyer for her size but requires previous flying skills to fly her.

New electric motors and batteries allow for a nice bird like the original.

She could still be built as a glow model without too much modification. If you go glow, I would suggest .061 size range engines.

Good Flights!
 John Hoover

COVERING IRON SHORTAGE? Substitute?

From Mike McIntyre via email

(Note: The Mike Myers mentioned in this email is not directly related to me, that I know of, although I did have a brother and first cousin named Mike Myers. Ken)

Hello Mike Myers, Jack Hiner, Glen Poole and Ken Myers,

Jack emailed me the newsletter of the SAM 35 chapter where Mike Myers had a problem getting a replacement iron?

Here is what was in the SAM 35 newsletter, edited slightly for brevity.
 Here's Mike Myers:

I'm getting ready for the Champs. I have a couple of old covering irons. The one I was using had a frayed cord.

Okay - time to treat myself to a new one. I hied myself down to the hobby shop, cash in fist and said, "I want to buy a new covering iron". Well sez the guy behind the counter, "No can do. Nobody makes them anymore."

Son of a gun.

I went on the Internet and Horizon Hobby and Hobby King don't list any covering irons. At Hobby King they are backordered and will arrive who knows when if ever - maybe on the 33rd of February 2045 at their Bossier City warehouse. Maybe.

You might order a weird looking little iron from some "No Name" warehouse in China—but the plugs on the irons didn't look like they'd work in the States etc.

Well guys it looks like the time has passed by for those who use plastic films to cover their models. Maybe it's time to revert to tissue and dope for most small models. But for things like say a Kloud King, which I can still cover with Ultracote and such, even if I can't get a new covering iron.

Allan Laycock, down in Oz, has a solution for us, or at least for me. Allan showed me how to use a domestic iron, like Her Indoors uses. Works great. That soleplate has a lot of mass and thermal energy, and the covering films sit right up and take notice and behave. You could spend forever with a conventional iron and not get the same result. Residual heat and thermal mass matter.

Now after Allan showed me this, I said I had to follow. But not being dumb or reckless enough to purloin my wife's high end Rowena steam iron, I went down to Target and bought a nice little Black & Decker steam iron for maybe \$22.50. If and when the soleplate gets gunked up and can't be cleaned with an acetone wipe down, a quick sanding on my 36 inch by 4-inch belt sander sets things right.

Mike (Myers)

(Mike McIntyre continued)

Well, for a replacement for a covering iron, you can use the iron used for veneering edge banding.

The heat range is a little higher than the "old" TopFlite or 21st Century Iron or the Hanger 9 iron. The heat range on them starts at 200°F and goes up to 400°F.

At the low end (200°F) will do the job for tacking the covering like Ultrakote.

I did a quick look on Amazon for R/C covering heat gun (Hanger 9) and it cam up with this page: Amazon.com: Hanger 9 Heat Gun HAN100 Hand Tools Misc : Tools & Home Improvement data.

https://www.amazon.com/Hangar-9-HAN100-Heat-Gun/dp/B0006N6XZW/ref=sr_1_4?keywords=hangar+9+heat+sealing+iron&qid=1671126450&sr=8-4

Now "IF" you scroll down a bit, you will notice a bundling of the heat gun / sealing iron / and iron sock. As seen below:



Hangar 9 Heat Gun HAN100 Hand Tools Misc - amazon.com

Buy Hangar 9 Heat Gun HAN100 Hand Tools Misc: Heat Guns - Amazon.com
FREE DELIVERY possible on eligible purchases
www.amazon.com

I think this is going to be our option from now on to acquire covering irons for our airplane coverings?

Frequently bought together



Total price: \$93.97

Add all three to Cart

i These items are shipped from and sold by different sellers. [Show details](#)

- This item: Hangar 9 Heat Gun HAN100 Hand Tools Misc \$22.99
- O'SKOOL Display Veneer Edge Banding Sealing Iron \$62.99
- Hangar 9 Sealing Iron Sock HAN141 Hand Tools Misc \$7.99

I checked out some of my usual web favorites and MPI has a covering iron on their website available.

<https://mpihobby.com/collections/tools/products/acc604-covering-iron>

It's not exactly like the old 21st century iron but is a close second?



ACC604 MPI Covering Iron with Digital Temperature Control

ACC604 MPI Covering Iron with Digital Temperature Control

mpihobby.com

[See More from M. McIntyre](#)

Looks closer to the old "Black Baron" iron from years ago?

Mike McIntyre

Cubic Wing Loading

From Andrej Marinšek

Hi Ken,

Here I am again about some new development regarding the Cubic Wing Loading (Wing Cube Loading, 3DWL).

(See the April, May and June 2022 Ampeers April 2022

<http://theampeer.org/ampeer/ampapr22/ampapr22.htm>

May 2022

<http://theampeer.org/ampeer/ampmay22/ampmay22.htm>

June 2022

<http://theampeer.org/ampeer/ampjun22/ampjun22.htm>

KM)

About a month ago I became aware of a study made at Hamburg University in Germany regarding the use of CWL for designing real (passenger) aircrafts. It takes under scrutiny the CWL as a possible substitute for the classical wing loading (2DWL). So I wrote a short comment about the findings of this study which is attached to this e-mail and I propose to publish it as it covers the topic which is already presented in The *Ampeer*.

I also wish you Merry Christmas and Happy New Year.

Sincerely,
Andrej Marinšek

Cubic Wing Loading (CWL) Update

by Andrej Marinšek

The concept of CWL (WCL or 3DWL) is around for many decades, yet it was used only as the flyability criterion regarding aircraft models and until recently was not recognized and used outside this field. Now emerged an interesting new development of its use. Professional aerodynamics from the HAW Hamburg University (Germany) opened an investigation regarding the use of CWL at designing real aircrafts. Master Thesis (MT) with the title "The Cubic Wing Loading Parameter in

Passenger Aircraft Preliminary Sizing” was produced (<https://www.fzt.haw-hamburg.de/pers/Scholz/arbeiten/TextLainezMuniz.pdf>) and was published on the internet in July 2021.

It uses also two texts from aircraft modeling, namely Ken Myers, Wing Cube Loading, 2018 and Francis Reynolds, Model Design and Technical Stuff, 1989; they are cited among references.

In my first article about this subject (The *Ampeer*, April 2022) comparison of the classical wing loading (WL or 2DWL) and the CWL was presented regarding their use for estimating performances of aircraft models. Now, MT put to the proof the CWL when it is used for designing genuine aircrafts.

MT is written from the professional's point of view, so it is a complicated and long study (about 90 pages) and covers different aspects of aircraft performances (landing and take-off distance, climb rate, speed, fuel consumption etc) for the specific case of passenger aircrafts. Yet the conclusions are straightforward and easy to understand. This survey shortly summarizes some of the goals and main conclusions of the MT.

First, some general statements and goals are presented, namely:

- investigation was limited to preliminary sizing of passenger aircrafts
- today, aircraft design is based on WL
- MT seems to be the first report to fully investigate CWL in comparison with WL
- MT introduces CWL and use it instead of WL to establish if it is reasonable and if it provides some advantages over WL
- MT investigates CWL regarding its independence of aircraft size
- it is examined if equations used in design can be rewritten with CWL instead with WL
- the concept of flyability does not make sense when we are speaking of passenger aircrafts, but is often used regarding performances of aircraft models.

Some more important findings of the study are:

- as the CWL can not be obtained directly from the lift equations, calculations are intricate and do not correlate with other aircraft parameters
- when we introduce CWL, expressions became more complex, mainly due to the exponent $3/2$ in the equation for CWL
- CWL has not a constant value for different passenger aircrafts
- not enough advantages were found to justify the use of CWL.

Findings show that CWL is not appropriate for use at designing real aircrafts, so its use stays limited to model aircrafts.

Anyway, modelers have even more options for estimating performances of our models: we can use WL regarding objective performances or one of the two CWL version regarding flyability, whichever suits our flying experiences the best.

In a follow-up email

Hi Ken,

Thank you for the response. With regard to the holiday season and also to the harsh winter conditions in your country, priorities in life, of course, change.

The weather is really different than it was some time ago. For decades, in our part of the Europe there should be at least some snow from December to February and temperatures around 0 degrees Celsius (32 degrees Fahrenheit) or lower. For the time being we have only some rain from time to time and temperatures about +15 deg. C (approx. 60 deg. F)!

Best regards,
Andrej Marinsek

I printed his follow-up email to “note” how weather and climate conditions appear to be changing everywhere.

Wing Storage - What took me so long to think of this?

From Joe Hass via email

I usually hang completed aircraft for storage.

This wouldn't work for the 21 pound Staggerwing or the ANTIC with its wire wing bracing.

I can't tell you why this came to me, but I got the idea of using pants hangers from the dry cleaners to support the wings from pipes in the basement.



These wings are relatively light. Two hangers for each wing panel.



Small aircraft can be supported in the same way.

The pictures explain it all.

Joe Hass
248-321-7934

Joe, I received this note from Scott McKie regarding your Staggerwing in the December 2022 *Ampeer*.

“Beautiful shots of the Staggerwing — what a gorgeous design.
Thanks for including them here.

Scott"

Thank you Joe!

Rubber Powered RC

From Bob via email

Ken,

About a year ago I sent an email to you that I wanted to get back to R/C after ~47 years away... we exchanged a few.

To that end I have built two rubber stick and tissue models trying to get back my build acumen and learn the latest techniques I think I enjoy building more than flying, it lasts a lot longer.

These models are best flown in a field of high grass, being quite fragile.

I have located a couple of fields but have not yet obtained permission.

My first, a PT-19 was about 31 grams... second was the the PT-17. Both of which my father learned to fly in the Army Air Core'.

In the second build I incorporated the “latest” techniques... sliced wing ribs, laminated wing tips (tail and elevator), and foam wheels. Despite a heavy 7 cylinder rotary “motor”, second wing and struts, this Stearman was only 2 grams heavier.

My next model, sitting on the shelf for a year, is the Canadian “Beaver”. It has about twice the wingspan (30"!) as the previous models and I plan to outfit this one with R/C and rubber power.

I'm hoping the “new” techniques will lower the weight and support the electric equipment. Receiver/servo brick from Parkzone, which is my current choice, supported by a 40mAh battery Tinycircuits!.. total weight about 4.6g.

I would have purchased same, except, it seems that the battery needs to be in a state of rest until it's time to use.

So, what charger? I looked at your info, but alas, the times, they are a'changin. You recommended the TME charger, it has been discontinued.

The adapter board, charging four 1s is available, and I have my sights set on the S44 Micro 4-port AC/DC 1S LiPo Smart Charger.

Note that at this point in my life, cost is no object. That being said, my sister got my results from Ancestry.com and I found I had an appreciable amount of Scottish genes. That explains my living below my means and success as a project manager with the Chinese and Korean customers, they live to negotiate.

For now, I see a low power environment, 1S. I have DC portable power available and that would be the best solution for a field adventure.

On my Christmas list, but not received, was the my transmitter of choice, the Spektrum DX6e.

Given my current criteria, I would be foolish not to "consult" with your vast knowledge of the subject, and I do so here.

I hope all went well in your family/care process.

Bob

Hi Bob,

Glad to hear you are enjoying building. You have a lot more patients than I do to tackle those models. :-)

I have heard, over the years, of folks using RC and rubber power, but I've never seen one in person. Interesting.

Actually, for more than a decade I've been recommending Revolectrix chargers, but they are no longer available. I've also recommended Hitec chargers.

Horizon Hobby/Tower Hobbies owns the mass market for RC gear in the US. The charger you noted should be fine for your purpose.

Spektrum, which is a Horizon Hobby captive import, is by far the most prevalent brand at any flying field and works well with the "brick" you noted. The one you note should be fine for your purposes. (It is not a captive import. See the April 2023 *Ampeer* for clarification.)

I wish you continued success with your venture back into the hobby.

Feel free to drop me a line anytime.

Let's build and wait for spring and some flying weather. ;-)

Ken

and then

Hi Bob.

I just got off the phone with my flying buddy, Keith Shaw. I told him about what you were planning on doing. He told me about a YouTube channel that you might be interested in.

<https://www.youtube.com/@domoremath/videos>

You might want to check it out.

Enjoy,

Ken

Ken,

Thanks, been there, done that...in fact was checking a few things he said earlier this a.m.

Bob

FT Mighty Mini SE5 Biplane - Tail Heavy Question

From Jim Pollack, EFO member, via email



Ken,

I flew on Tuesday this week.

I took off a newly put together FliteTest SE5 "A" size build and it wanted to climb quite a bit. (This is only the 2nd foam board build that I didn't crash on the first attempt).

I brought it down early to adjust and at low throttle it seemed to glide. Is it tail heavy?

Thanks,
Jim

Hi Jim,

By your description, it does sound a bit tail heavy. Adding some nose weight won't hurt. It will only make the glide path a bit steeper, and depending on how much weight you add, you may need more elevator throw to flare.

Is it a Flite Test Design? Just curious.

Later,
Ken

Yes it is a Flite Test design. I will try adding weight.

I was a busy boy in 2021 and have 14 Flite Test designs in various stages of construction along with 8 completed and ready to fly. Also two balsa plains ready to fly and two in construction.

Jim

Hi Jim,

After watching several YouTube videos about this FliteTest SE5, you might want to try these suggestions.

1. Move the CG to the leading edge of the bottom wing. Maybe a bit larger battery? That always beats adding dead weight.
2. To try and tame the Dutch Roll, cut out and glue a foam board outline adding about 1/2" all the way around the vertical stabilizer and rudder.
3. Use about 1/2 of the FliteTest recommended throws for the rudder and elevator with a dual rate set up for the elevator with more throw for landing to keep the nose up.

Just some thoughts,
Ken

Classic Jim Ryan Kits Available

In the June 2022 *Ampeer*, I had some info about electric pioneer Jim Ryan and his famous Hellcat.

<https://theampeer.org/ampeer/ampjun22/ampjun22.htm#BITS>

Don Belfort, in the Summer 2022 *Park Pilot* provided information from Jim on where to purchase updated, laser cut kits of Jim's planes.

"I'm (Jim Ryan) pleased to report that I've inked a deal with Tom Jacoby at Manzano Laser Works (<https://manzolaser.com/>) to offer short kits for all of my classic balsa warbird designs. These include the F4F Wildcat, F6F Hellcat, F8F Bearcat, F4U Corsair, A6M Zero and the P-47 Thunderbolt. All of the kits include laser- and machine-cut parts, vacuum-formed canopies, and plans. Foam wing cores for all but the P-47 (which has a built-up wing) can be ordered from Eureka Aircraft Co.

(<https://www.eurekaaircraft.com/>)

These kits haven't been available since 2008, when supply chain issues and other challenges made it necessary to shut down production.

For all of my loyal supporters who continued to ask about the rerelease of my kits, this is happy news.

Tom already offers a wide range of outstanding models and I'm glad to know that my designs will be in good hands now and in the future.

Jim"



Upcoming Events

Wednesday, February 8, 2023 the EFO monthly winter meetings resume with winter meetings via ZOOM. The Zoom meeting URL will be placed on the EFO Website.

<http://theampeer.org>

Everyone with an interest is welcome.

Indoor Flying

Pontiac, Tuesdays 9 a.m. - 12 p.m. (details in this issue)

Brighton, Wednesdays, 12:30 p.m. - 2:30 p.m. (details in this issue)



The Ampeer/Ken Myers
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January Monthly Meeting:

Date: February 8, 2023 **Time:** 7:30 p.m.

Place: ZOOM