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February		The EFO Officers		2024
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No Mailed Ampeer Subscriptions	The Next EFO Meeting: Jan. 10, 2024 (see note) Time: 12:30 p.m., Place: Legacy Center, Brighton, MI			

**What's In This Issue:**

EFO Meeting Reminder - Info on Winter Indoor Flying at the Legacy Center in Brighton, MI - The January 2024 EFO Indoor Flying Meeting - Keith Shaw's Latest Project, a 1931 Darmstadt D-22 - Note About ¼ scale Marquart Charger Sold at the Northville, MI Midwest Swap Shop - Wing Cube Loading, Again - Upcoming RCCD Swap Meet - An Important Note Regarding Skymasters Indoor Flying - Skymasters' Indoor Flyer - Upcoming Events

**EFO Meeting Reminder**

Please keep in mind that winter and early spring monthly EFO meeting dates are to be determined (TBD), as well as the place.

The meetings could be on Zoom or possibly at the Legacy Center in Brighton, MI. It all depends on the weather.

Members will be notified, via email, as to the time and place.

Everyone is welcome, with indoor type planes and proof of AMA membership, and a \$10 fee, to fly at the Legacy Center.

Spectators are free.

The next EFO monthly meeting is scheduled for Wed., February 10 at 12:30 p.m. at the Legacy Center in Brighton, MI. (See note in this issue.)

If the weather is not safe for driving on that date, the meeting will be postponed to a future date and members notified, via email, regarding any change in date, time or place.

**Winter Indoor Flying at the Legacy Center in Brighton, MI**

Indoor flying is now taking place through 2024 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.  
Spectators Are Free

**The January 2024 EFO Indoor Flying Meeting**

The January EFO Indoor Flying Meeting was held on Wednesday, January 10, 2024 at the Legacy Center in Brighton, MI.

The meeting was well attended by EFO members. There were many members flying in the mix of other attendees for the indoor flying session that day.

The following photos were taken that day.





**Bill Brown, Jr.** heading to the flight line for his first flight of the day.



**Roger Wilfong and Keith Shaw** set up. **Mark Couling** can be seen flying. He's the one furthest back in the photo.



**Dave Stacer** readies for his first flight of the day as Roger Wilfong seeks power for his charger.



Keith and Roger use some of the netting of a soccer goal to hold their planes up off the floor to avoid having them stepped on.



Dave, Roger and Keith are flying.





Keith prepares his beautiful Deperdussin for flight. His specially built carrying box for this beauty can also be seen in the photo.

A video clip of the Deperdussin can be found here.

<https://youtu.be/vP64Pw-5Cis>



Lynn shares the bottom view of this light, great flying indoor pattern F3P plane.

This YouTube video, “F3P Indoor flying championships | 3D flying” gives an idea as to what F3P is all about.

[https://youtu.be/SuzZiQ\\_QdUk](https://youtu.be/SuzZiQ_QdUk)

Once again, a fun time was had by all.

**Keith Shaw’s Latest Project**

A 1931 Darmstadt D-22

From Keith Shaw via email



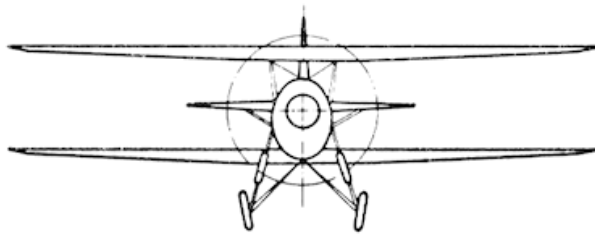
Lynn Morgan can be seen flying his F3P plane and practicing his “pattern” maneuvers.



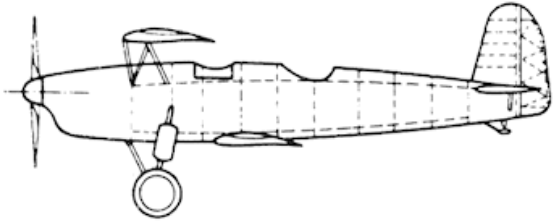
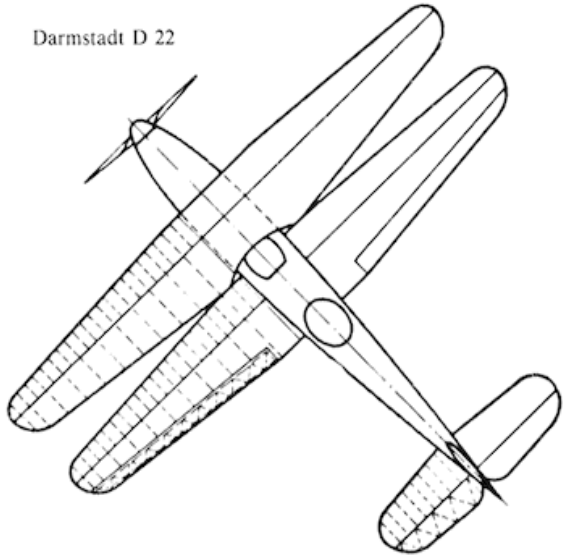
Hi Ken,

As promised, here is some info on my latest project. I think it has become my lifelong mission

to find and build ultra-rare subjects that have never been built in R/C.



Darmstadt D 22



This year's addition is the 1931 Darmstadt D-22, a two-seater biplane with high aspect ratio cantilever wings mounted with 100% stagger and no inter-plane struts. The fuselage is a monocoque elliptical cross section beauty with an inverted four cylinder nose and spinner.

The Darmstadt Akaflieg was a German flying club that specialized in building high performance sailplanes. As a way to finance their planes, they also designed and built a series of sport planes for competition and sale. The D-22 was one such design, and three were built. One went to Britain (fate unknown), another was flipped over and destroyed by a night time wind gust, and the last was lost/destroyed early in the war.

Apparently it did well in the sportsman air competitions. Color was red fuselage, red wing

leading edges and stab, with the rest of the plane in clear doped linen. The old photos make the red appear black. There are only about 8 photos of this plane in existence, so I had to do a lot of guessing on the shapes and structures.

My model will be about 1/6th scale (48" span), and will be powered with a BadAss 2814-870kv motor on 4 A123 cells and a 12x6 prop.

I had the tail framed and the wings mostly built when I contracted a serious case of Covid just before Christmas. With the help of Paxlovid I weathered the storm, but all holiday activities got cancelled, along with any thoughts of working on this plane. It was a rough few weeks, but I am finally feeling better and ready to return to the shop.

Keith

### **Note About ¼ scale Marquart Charger Sold at the Northville, MI Midwest Swap Shop**

From Joe Hass via email

Someone bought a ¼ scale Marquart Charger from Jim Lapham at the Midwest Swap Shop.

Jim has a number of parts for the airplane (N Struts, plans, pictures, etc.). If you purchased it or know who did Jim can be reached at 248-342-5405.

Thanks.

Joe Hass

### **Wing Cube Loading, Again**

By Ken Myers

Wing Cube Loading (WCL), which is sometimes noted as Cubic Wing Loading (CWL), is a means to identify how a plane, with a certain weight and wing area, might fly compared to other planes with different weights and wing areas.

I recently came across two recent YouTube videos on this topic, although I have been using it for many decades.

Wing Cub Loading

The TRUTH About Wing Cube Loading

<https://youtu.be/3QTsjsnZl6c>

RC Airplane Cube Wing Loading for Dummies!

<https://youtu.be/XUDjpkpfVOQU>



The formula used for a WCL value has no direct relationship to the actual wing volume. It is just another useful means to determine the flyability of an unknown plane.

The formula: the value for the weight in oz. divided by the wing area in square feet raised to the 1.5 power

THE UNIT VALUES ARE NOT NECESSARY AS THE RESULT HAS NO UNIT VALUE, BUT IT STILL PRODUCES A USEFUL COMPARATIVE NUMBER!

Example: 60 oz. and 576 sq.in.

$$576 / 144 = 4$$

$$4^{1.5} = 8$$

$$60 / 8 = 7.5$$

Using a WCL chart, the 7.5 value indicates that the plane would have a flyability similar to sport types, many biplanes, light type scale, some 3D planes, and pattern. The greatest number of RC planes are found in this category. Avg. WCL is 8.51 for electric, and 8.60 internal combustion planes.

To understand more about WCL/CWL, I have several articles regarding it, and its usefulness on the Ampeer Website.

Wing Cube Loading (WCL) Calculator  
<https://www.ef-uk.net/data/wcl.htm>

3D Wing Loadings - A Better Way to Scale Models  
by Larry Renger - Dec. 1997  
<https://theampeer.org/CWL/larry.htm>

Aircraft Performance Parameters Revisited  
by Roger Jaffe - June 1994  
<https://theampeer.org/CWL/jaffe.htm>

Model Design & Technical Stuff  
by Francis Reynolds - September 1989  
<https://theampeer.org/CWL/reynolds.htm>

Wing Cube Loading  
By Ken Myers - Jan. 2014  
<https://theampeer.org/M1-outrunners/M1-outrunners.htm#CWL>

Wing Cube Loading (updated)  
By Ken Myers - Feb. 2018  
<https://theampeer.org/CWL/myers2018.htm>

A chart with WCL values related to typical types of planes with these values can be found in this article

Note that this “idea” is not new. It is also not complicated and it does have value, and CAN be more comparative and useful than typical wing area loading.

I found it interesting that some folks are just catching on to it.


### Upcoming RCCD Swap Meet

From Bayard Temple via email

The annual RCCD Swap Meet is coming up on January 28 at the K of C hall in Warren.

As in years past, in addition to the swap meet, there will be waffles available!

Best regards  
Bayard Temple  
RCCD Secretary



**Radio Control Club of Detroit**  
Presents Their

## Annual Swap Meet

### Sunday January 28, 2024

<p><b>Time:</b> Open 9:00am – 12:00pm <b>Location:</b> Knights of Columbus Hall 23695 Mound Rd. Warren MI 48091 1/3 Mile North of 9 Mile Rd. on the West side of Mound Rd. (See Map) <b>General Admission:</b> Adults: \$5.00 Children: 6-12yr old - \$1.00 Children under 5: Free! <b>Free Parking</b> <b>Door Prizes, 50/50 Drawings,</b></p>	<p><b>Food and Refreshments: Waffle Breakfast served: 9:00 – 11:00.</b></p> <p><b>Contact info:</b> To reserve tables Or general info contact: Larry Penn-586 256 8665 email-pennlar@outlook.com Phil Laperriere-586 404 5438 email-lap.phil@gmail.com <b>Vendors:</b> Tables \$25.00 each (Includes 1 admission per table) \$22.00 if payment is received by Jan. 10<sup>th</sup>. Table set up at 7:00am. Vendors requested to stay until Noon.</p>
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RCCD Web site: [rccd.org](http://rccd.org)





**An Important Note Regarding Skymasters  
Indoor Flying**

From Pete Foss via email

Hi Guys

Please find attached the rules for flying indoors this year. I only made one change to them, **I changed the maximum battery size from a 3S 2600 to a 3S 1300**. We have been seeing some aircraft that were really too big to fly indoors over the last couple years so I decided to ratchet the max battery down

See you Tuesday at 9AM!

Pete Foss

President Skymasters RC of Michigan

While the PDF with the Rules is available on the Skymasters' Website, I've also posted them here with this link [2023-2024\\_Indoor\\_Rules.pdf](#).



# Indoor Flying

## United Wholesale Mortgage Sports Complex

867 South Blvd., Pontiac, MI 48341

# October 17<sup>th</sup> thru April 9<sup>th</sup>

Single Flying Session \$10  
25 Session Season Pass - \$150

## The Best Indoor Flying Venue In Metro-Detroit

All Pilots/Drivers must have proof of current AMA Membership. Spectators Welcomed Free.  
3 Month Trial AMA Membership is Available.

Contact us at [indoorfly@skymasters.org](mailto:indoorfly@skymasters.org) or 248-403-8279



**SKYMASTERS INDOOR FLYING**

**At UWM Sports Complex - Field # 1**

**For the 2023-2024 Winter Season\***

**OCTOBER\*:**

- Tues. 17<sup>th</sup>
- Tues. 24<sup>th</sup>
- Tues. Oct 31st

Flying sessions start at 9 am and end at 12: PM \*  
Please Bring Proper Change For Payment.

**NOVEMBER\*:**

- Tues. 7<sup>th</sup>
- Tues. 14<sup>th</sup>
- Tues. 21<sup>st</sup>
- Tues. 28<sup>th</sup>

**FEBRUARY\*:**

- Tues. 6<sup>th</sup>
- Tues. 13<sup>th</sup>
- Tues. 20<sup>th</sup>
- Tues. 27<sup>th</sup>

**DECEMBER\*:**

- Tues. 5<sup>th</sup>
- Tues. 12<sup>th</sup>
- Tues. 19<sup>th</sup>

**MARCH\*:**

- Tues. 5<sup>th</sup>
- Tues. 12<sup>th</sup>
- Tues. 19<sup>th</sup>
- Tues. 26<sup>th</sup>

**JANUARY\*:**

- Tues. 2<sup>nd</sup>
- Tues. 9<sup>th</sup>
- Tues. 16<sup>th</sup>
- Tues. 23<sup>rd</sup>
- Tues. 30<sup>th</sup>

**APRIL\*:**

- Tues. 2<sup>nd</sup>
- Tues. 9<sup>th</sup>

*\* Dates & Times  
Subject to Change or  
Cancellation Without Notice*

[www.skymasters.org](http://www.skymasters.org)



For rules & additional information go to: [www.Skymasters.org](http://www.Skymasters.org)  
[Indoorfly@Skymasters.org](mailto:Indoorfly@Skymasters.org) or 248-403-8279

**Upcoming E-vents**

**Tuesdays**, Skymasters' Indoor Flying starts at the UWM Sports Complex in Pontiac, MI (details in this issue)

**Wednesdays**, Winter Indoor Flying at the Legacy Center in Brighton, MI (details in this issue)

**February 10, Wednesday, EFO Monthly Indoor Flying Meeting**, 12:30 p.m., Legacy Center, Brighton, MI, proof of AMA membership and \$10 flying fee required to fly, NO SPECTATOR FEE, (See note at the beginning of this newsletter.)



The Ampeer/Ken Myers  
1911 Bradshaw Ct.  
Commerce Twp., MI 48390  
<http://www.theampeer.org>

**Upcoming January Monthly Flying Meeting:**

**Date:** Wed. Feb. 14, 2024 **Time:** 12:30 p.m.

**Place:** Legacy Center, Brighton, MI