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December		The EFO Officers		2023
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No Mailed Ampeer Subscriptions	The Next EFO Meeting: Dec. 2, 2023 (see note) Time: 11:00 a.m., Place: Midwest RC Flying Field			

**What's In This Issue:**  
 EFO Meeting Reminder - Winter Indoor Flying at the Legacy Center in Brighton, MI - Dave Stacer's Remote ID Project - Skymasters' Indoor Flying Season Has Started - An Important Note Regarding Skymasters Indoor Flying - November EFO Flying Meeting - A Few More Mid-Am 2023 Photos - 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 Sat., December 2 at 11 a.m. at the Midwest RC Society 7 Mile Rd. flying field, weather permitting.

If the weather is not good for Saturday flying at Midwest, the meeting will be held at the Legacy Center, in Brighton, MI, starting at 12:30 on Wednesday December 6.

**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.

**Dave Stacer's Remote ID Project**

From: Dave dstacer@dsemail.com



I created my own FAA Broadcast Remote ID Module.

Around 9 months ago I got interested in how the Remote ID system worked. I thought at that time, eventually all of the new receivers would just include that functionality. It was hard to find good detailed information and you had to purchase the official specification to find out the details.

The FAA requires the Remote ID module to send out GPS coordinates of the take-off location and the current location of the airplane via Bluetooth or Wi-Fi. Regardless of what your opinion is about the FAA ruling, it's here and required if you are not flying in a FRIA.

Our club flying site is surrounded by woods and we have a few airplanes that end up flying away. Mostly pilot error or faulty "something" but lost, so if we had Remote ID sending out the airplane location, then we would need a receiver that would just be collecting the last few minutes of GPS coordinates. That would make finding the "lost" airplane so much easier, or better information on where to start the search. My goal was to make a receiving station for Remote ID.

I never intended to make a broadcast remote ID module, but if I was going to build a receiving station, then I needed a broadcast module to send out the packets to test with. None were available yet, so I found some sample code and at the time thought it would work. The deeper I got into that code the more I realized how deficient it was. One thing led to another and I bought the specifications document to gain the knowledge on making the transmitter side accurate.

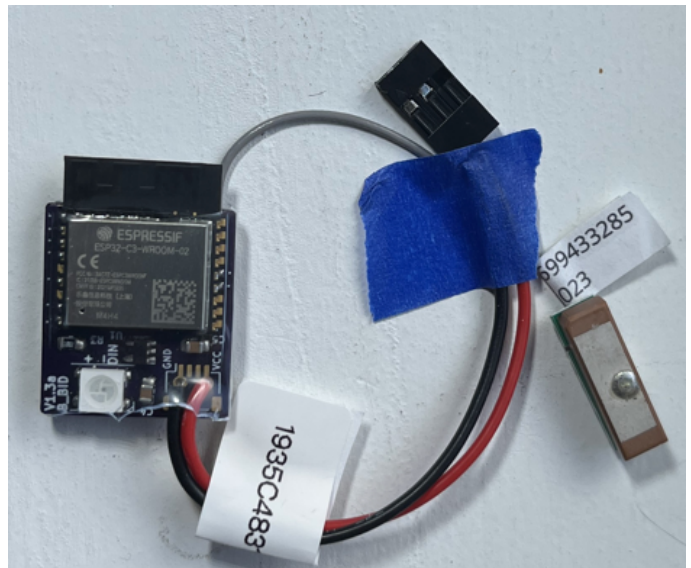
In addition to R/C Airplanes my other hobbies are electronics, software development and like having a challenge to solve.

What came out of my effort is a FAA accepted Broadcast ID module. RID000000678  
It's 3 x 2.2 x .8 cm in size. 7 grams without GPS antenna. Transmits Bluetooth Classic (4.0) and Bluetooth 5. It's designed to run off an extra receiver channel or Y cable, 6 volts max.

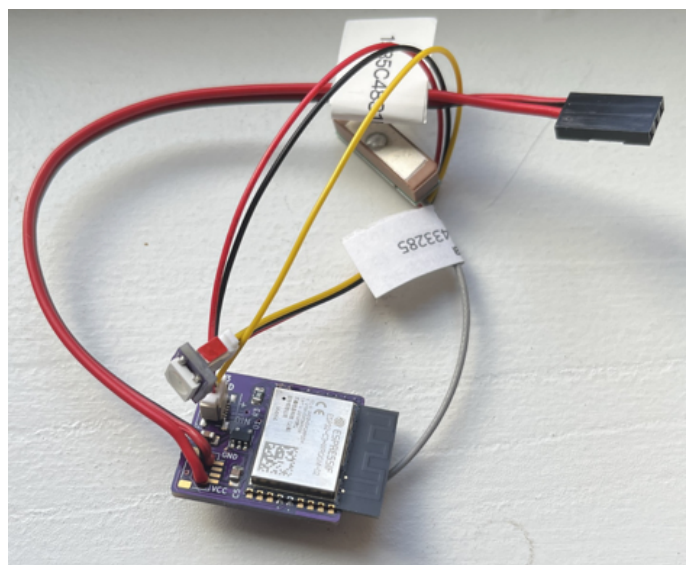
One of the requirements in the specification is to have some kind of pilot notification of status. I chose a multi color LED neopixel that is either mounted on the PCB or can be remote. The remote

LED was designed so the module could be left in the fuselage and have the LED mounted where it could be seen from the outside. The design was for me and I had no intention of moving it from model to model but just build more and leave them in the model.

The LED flashes red while its waiting for a GPS lock. Flashes green while averaging the take off location and finally solid green when ready for take-off. Solid green takes about 45-60 seconds after power on when outside.



Onboard LED version (LED is white square thing bottom left)



Remote LED version (LED stuck between the black and yellow wire for the photo)

In the photo, the light tan thing on the short grey wire is the GPS antenna. I'm still experimenting with different GPS antennas. It is a double-sided PCB with the GPS module on the other side with a connector for the GPS.

It's not a very fancy module: no case, no battery, 6 volt limit on the input, no GPS integration with the receiver, but it is compliant with the ASTM F3411-22a-RID-B standard and the FAA Method of Compliance.

Over the summer, our club flying field received its FRIA, but in the spring it's too wet to use that location and we fly at a local park so will need them for that location.

Now I need to get back to my original goal - the receiving station and get that ready to go.

I would like some feedback on this and if anyone thinks the receiving station would be something they would want.

dstacer@dsemail.com

### Skymasters' Indoor Flying Season Has Started

From Pete Foss via email

Hey indoor pilots,

I'm very happy to announce that we will be hosting indoor flying at UWM Sports Complex again this year! Tuesdays 9-noon just like last year. Please see attached for the complete schedule. First flying date was Tuesday October 17th, so get your indoor planes in order!

Thanks,  
Pete

Pete Foss  
President  
Skymasters RC of Michigan  
[www.skymasters.org](http://www.skymasters.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](#).

### The November 2023 Flying Meeting

Saturday, November 4, 2023 was a cool, but not cold, fall day here in Michigan. There was a bit of very light drizzle to start the flying session, but it dissipated early, and the best part was that there was no wind at all.

Flying was fun and easy, as everyone took turns.



Arron takes off his Sensei for a great day of flying.

There were lots of stories to share and information exchanged.



It was great to see Keith getting around without the aid of a cane!



Rick is smiling because he got in a bunch of great flights on the many planes that he brought.



Aaron flies as Rick preps one of his many planes. Some of the planes that flew can be seen on the ground behind the cars.



After a few hours of flying, at about 1:30 p.m., most of the group headed home, but Aaron stayed for that “one more flight”.

With all of the really relaxing flying, it actually turned out to be a great day!

### More from the 2023 Mid-Am



A sight you seldom see in the *Ampeer*, **Ken Myers** actually flying a plane!



A look down the flight line early on Saturday with **Jim Ryan's** helicopter getting ready on a table.



# 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\***



<b>OCTOBER*:</b> Tues. 17 <sup>th</sup> Tues. 24 <sup>th</sup> Tues. Oct 31st	<b>NOVEMBER*:</b> Tues. 7 <sup>th</sup> Tues. 14 <sup>th</sup> Tues. 21 <sup>st</sup> Tues. 28 <sup>th</sup>	<b>DECEMBER*:</b> Tues. 5 <sup>th</sup> Tues. 12 <sup>th</sup> Tues. 19 <sup>th</sup>	<b>JANUARY*:</b> 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>	<b>FEBRUARY*:</b> Tues. 6 <sup>th</sup> Tues. 13 <sup>th</sup> Tues. 20 <sup>th</sup> Tues. 27 <sup>th</sup>	<b>MARCH*:</b> Tues. 5 <sup>th</sup> Tues. 12 <sup>th</sup> Tues. 19 <sup>th</sup> Tues. 26 <sup>th</sup>	<b>APRIL*:</b> Tues. 2 <sup>nd</sup> Tues. 9 <sup>th</sup>
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Flying sessions start at 9 am and end at 12: PM \*  
Please Bring Proper Change For Payment.

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

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

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 (detail in this issue)

**December 2, Saturday, EFO Monthly Flying Meeting**, 11 a.m., Midwest RC Society 7 Mile Rd. Flying Field, proof of AMA membership required to fly - weather permitting. See note at the beginning of this newsletter.



The Ampeer/Ken Myers  
1911 Bradshaw Ct.  
Commerce Twp., MI 48390

<http://www.theampeer.org>

**October Monthly Flying Meeting:**

**Date:** Sat. Dec. 2, 2023 **Time:** 11:00 a.m.

**Place:** Midwest RC Society 7 Mi. Rd. Flying Field ???