

the

# Ampeer

September

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2021

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The Next EFO Flying Meeting: Sat., Sept. 4, 2021  
Time: 10 a.m., Place: Midwest 7 Mile Rd. flying field

**What's In This Issue:**

Lithium Ion and Lithium Polymer Battery Confusion - Keith Shaw's Stingray Flying Wing, Another Update - The 37th Annual Mid-America Electric Flies Report Continued - Addison Oaks Float Flying 2021 - - Upcoming C.A.R.D.S. of Annual Electric Fly In - Upcoming Events

**Lithium Ion and Lithium Polymer Battery Confusion**

From Michael McIntyre via email

Hello Ken,

I received this email from Tandy Walker about two packs he received from Hobby King.

Would you or your members know what is going on?

Did anyone else get battery packs from Hobby King like this?

Thanks,  
Michael McIntyre

**From Tandy Walker to Mike McIntyre via email**

**Subject:** Lithium Polymer or Lithium ion Battery Packs

I received the two new battery packs shown below for the Cloudster 600 in the mail on Friday, July the 9<sup>th</sup> (2021).

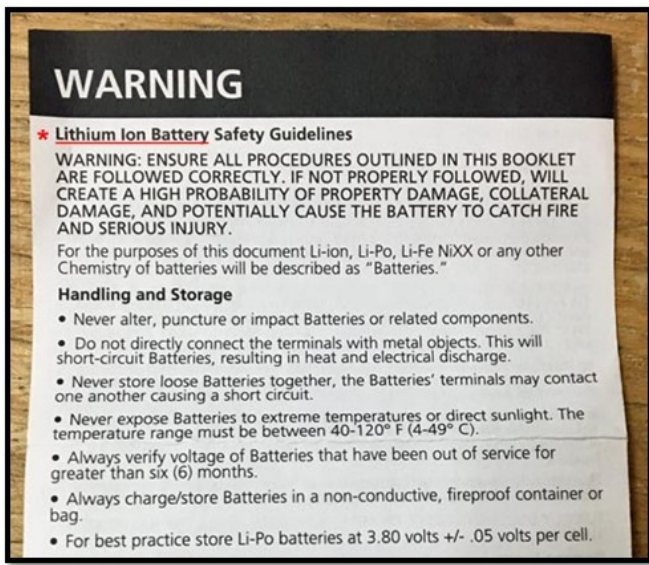


They are the same Turnigy Graphene 1000 Mah 2S 75C that I have been using in my 1/2A Fubar 600 which also weighs 40 ounces.



I thought they were LiPo's, but I discovered that they are labeled LiIo's instead, as you can see below. All this time I have been selecting LiPo on the Hitec X2AC for charging and discharging the

LiIo packs in the 1/2A Fubar 600 %\$#\$@& !  
Wonder if I have damaged them in any way.



However, on the label on the back of these packs show them to be LiPo as you can see below which totally confuses me.



Jay Burkart thinks the warning label has been misinterpreted by its Chinese manufacturer and they found a generic warning label verbiage and put that on the battery. I have tried to contact Hobby King customer service, but to no avail.

Can you help me determine which battery type these packs are?

Tandy

**My reply:**

Hi Mike and Tandy,

It is not surprising that there is confusion regarding the batteries that we mainly use for our models. Most battery supplier's marketing departments have seen to that.

### What is a Lithium Polymer (LiPo) battery?

There is a Website dedicated to battery information, all kinds of battery information. It is called Battery University.

Battery University's "Lithium Polymer batteries (LiPo)" page states, "The term polymer is commonly used to describe certain type of lithium-based battery that may or may not be polymer based. These typically include pouch and prismatic cells."

Please note the Li-ion polymer description near the beginning of the following paragraph where the ion part is retained in the description, which I have bolded. Also note where Li-polymer comes near the end of the paragraph and the ion part has not been retained, which I have also bolded.

"Most **Li-ion polymer** cells today incorporate a micro porous separator with some moisture. Li-polymer can be built on many systems, the likes of Li-cobalt, NMC, Li-phosphate and Li-manganese, and is not considered a unique battery chemistry. The majority of **Li-polymer** packs are cobalt based; other active material may also be added."

<https://batteryuniversity.com/article/bu-206-lithium-polymer-substance-or-hype>

From the preceding paragraph you should have noted that Lithium Polymer is **one type** of Lithium Ion battery.

It appears that Hobby King is using LiIo to reference Lithium Ion type batteries.

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### What Are the Various Types of Lithium Ion Batteries?

Battery University has another page titled, "Types of Lithium Ion batteries".

<https://batteryuniversity.com/article/bu-205-types-of-lithium-ion>

The various types of Lithium Ion batteries are found on that page, along with a lot of technical descriptions, their history and uses.

It appears that the term "graphene" may have been first used by Hobby King. In my article "Learning About LiPo Batteries", first published in 2015 and updated in 2016, search for the word graphene, you'll find that it is associated with Hobby King.

<http://theampeer.org/Learning-LiPo/Learning-LiPo.html>

I have found a couple of other manufacturers/suppliers, other than Hobby King, that now use the term graphene as well in the description of their LiPo batteries.

### **Lumenier Graphene 700mAh 4s 75c Lipo Battery (XT-30)**

[https://www.getfpv.com/lumenier-graphene-700mah-4s-75c-lipo-battery-xt-30.html?afid=aVIOV0hBdmd6THc9&gclid=Cj0KCQjw0K-HBhDDARIsAFJ6UGjXycSpUqwAUuYTXZdhtCWeUDkUIXkgaoAVHKTy-gYq2371D-OFXJYaAIBAEALw\\_wcB](https://www.getfpv.com/lumenier-graphene-700mah-4s-75c-lipo-battery-xt-30.html?afid=aVIOV0hBdmd6THc9&gclid=Cj0KCQjw0K-HBhDDARIsAFJ6UGjXycSpUqwAUuYTXZdhtCWeUDkUIXkgaoAVHKTy-gYq2371D-OFXJYaAIBAEALw_wcB)

“The Lumenier Graphene series of LiPo batteries push the limits of battery technology by utilizing carbon in the structure of the cells. With the addition of graphene the battery has improved attributes such as higher energy density, lower internal resistance, higher discharge rates, and a longer life cycle.”

and

### **Blend420 SILVER Label 70C GOPACKS**

<http://www.store.revolectrix.com/Products/Blend420-SILVER-Label-70C-GOPACKS>

“The new Silver Label GO (GrapheneOxide) range of packs won't be beaten on performance & price.....our guarantee!”

I would not be surprised if there are other companies, as well, that are using the term graphene to market their LiPo products.

Here are some references for a bit more information regarding Li-ion and LiPo type batteries, which are a specific type of Li-ion battery.

### **Battery University “How Lithium Batteries work”**

<https://batteryuniversity.com/article/bu-204-how-do-lithium-batteries-work>

and

### **“Lithium Polymer Battery Technology: An Introduction”, by Frank Siegert**

<http://theampeer.org/lipo-intro/lipo-intro.html>

Even if it says “Graphene” on the label, it is still a version of a LiPo and should be charged and treated as such.

Hope this helps and clarifies some,

Ken

### **Keith Shaw’s Stingray Flying Wing, Another Update**

From Keith Shaw via email

In the August 2021 issue of the *Ampeer*, we found out that Keith’s Stingray is flying great, but, unfortunately, the motor “blew”. Here is the latest from Keith where he tells us about re-motoring this fine airframe. KM

<http://theampeer.org/ampeer/ampaug21/ampaug21.htm>

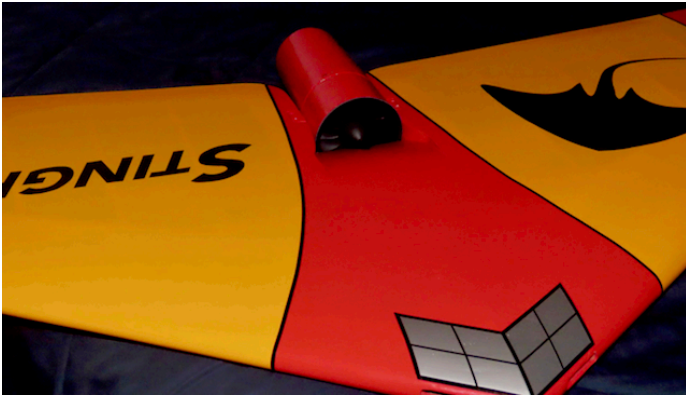
This afternoon (*July 12, 2021*) I finished up the Stingray conversion to replace the Mercury fan that so gloriously died on the fourth flight.

Attempts to get the Mercury fan apart so that the winding slug could be replaced were futile, so I had to reconfigure the area to accept a 70mm FMS fan and a 1850kv in-runner.



I made a tailpipe out of 1/64th ply and added some 1/16 balsa so that it could be filmed. I also added some sheet balsa to the fan body to complete the fairing behind the bell-mouth.





## The 37th Annual Mid-America Electric Flies: A Report, Continued

By Ken Myers

### Keith Shaw Shares His Thoughts About This One

The Mid-Am 2021 was possibly one of the best on record. There were comfortable temperatures, with good wind direction and speed, and picturesque skies. But more than anything else, it has become a tribal gathering of friends to enjoy it. The time can be measured in just a few minutes before a "KRC" reference is spoken, followed by a series of well-loved stories of events, places and people from those magical years.

On Saturday afternoon, as everyone was preparing to depart, we stood around savoring the day and wishing each other safe travels, as the weather forecast for Sunday was quite grim. It reminded me of similar near-tearful farewells at KRC and it struck me that we are STILL at the KRC meet, it just has relocated to Michigan.

While NEAT, SEFF, Joe Nall, and a host of others have tried so desperately to become the replacement KRC, the Mid-Am has seemed to accomplish it without really trying.

Last night I sat down to do the laborious, frustrating job of balancing the fan. I started out with the spinner removed and 3 cells. There was no vibration. Then I used six cells and increasing throttle, still no vibration! I added the spinner and noticed a tiny increase, so I rotated the spinner 90 degrees. It was absolutely quiet and smooth. I must have lit the correct number of candles that morning. When I got the fan up to full power it hurt the arthritis in my hand to hold it still. :-O

I remember spending DAYS balancing some of the earlier fans, so I am stunned that it went so quickly.

Final assembly was completed and CG was checked. There was no change needed.

This fan is slightly lighter, but its center of mass is slightly farther back, so the differences cancel.

I took some photos for your inspection, but sadly it may be quite some time before further flight testing can be done. I need to get my eye problem resolved first.

Keith



Keith Shaw Flying at the 2021 Mid-Am



Keith Getting Ready to fly before the Comet was out yet.

I would like to think that it is our relaxed atmosphere and commitment to honoring and admiring the builders and experimenters left standing in an ARF/foam world.

May you all continue to have good memories, and I deeply thank each of you for being a part of my life and the wonder that is MidAm.

Keith



Mark's planes. Look carefully and you'll see the new Baby Trishula under the wing of its "Mama".

**Email Response from Mark Rittinger:**

100%, Keith. It isn't just the models, it's the people, the camaraderie, the attitude and diversity of the meet. I for one think it's the highlight of my Summer.

Thanks for all the effort you put into putting it together. So glad I could be there!

Mark



Mark readies the Trishula for flight.



It was Great to see Pete Foss' Snoopy Back Again!

**Email Response from Pete Foss:**

Couldn't say it any better Mark!



**Denny Sumner's Mini-Hog on takeoff**

**Email Response from Denny Sumner:**

Keith,

I couldn't agree more with your comments and while I never went to KRC the Mid-Am is that event where I see friends made at Mid-Ams from twenty years back. I'm glad to be a builder and glad to be part of this group!

Denny

**Email Response from Dave Grife:**

Yes indeed, the tribal vibe was palpable on Saturday.

It was a wonderful flashback to the "good old days".

Thank you. It was a lot of fun to see everybody.  
 Dave Grife



Some of Dave Grife's planes



Again, Joe, thanks for all of your support, and especially for helping to make Mr. Brown's so very special this year!

**2021 Mid-Am Thanks**

From Pete Foss

What a great day to fly yesterday! Thanks Ken and Keith for the 37th Annual Mid America Electric Flies!

Great to see everyone!

Pete



Jim Ryan spots for Dave

**Thank You for the Wonderful Mid-Am**

From Joe Hass via email

Another great event!

Thanks for hosting and bringing together such great people.

I am very glad that **Bill Brown Sr.** was able to join us. What a remarkable man.

Joe Hass  
 248-321-7934

The photo of Joe's planes only includes a small fraction of them. Joe brought and flew more planes than anyone else at this year's Mid-Am.



Dave Grife and Pete Foss Ham it Up for the Camera

**The Great Foam Flurry Kerfuffle**

As previously mentioned in last month's *Ampeer* there were five aircraft in the Non-Conventional Aircraft Materials Foam Flurry.

Unfortunately, the event was not completed without incident.

Part way through the event, there was a loud crack in the sky as Roger Wilfong's Cub and Tim Young's Spitfire tried to use the same airspace at the same time. That never works out well!

The Spit's motor was knocked out of the airframe and dangled by its wires and the Cub suffered a huge gash in the wing.

Tim was forced to land the Spit, while Roger flew the Cub onto VICTORY over Ken's RUA 2-4-10.

As Bob Blau's eagle approached the flying field for a landing, it suddenly fell from the sky. Oops!



**Ken Myers and Keith Shaw give their annual pilots meeting.**



The photo of Bob's planes shows the eagle in better days.



**The "gang" sings Happy Birthday to Mr. Bill Brown**

### **More Thoughts On the Planes and Great People**

As I mention every year, Friday, set up day, is a great time to be at the Mid-Am. Our friends come rolling in and setting up their sunshades. We talk, catch up and do a bit of flying.

This year turned out to be extremely special. The pandemic seemed to be winding down, so many of our friends could come from afar. The weather on Friday and Saturday was as close to perfect as it gets. And to top that all off, we got to celebrate **Mr. Bill Brown's 100th birthday!** Can it get any better than that?



**Rick Sawicki's planes at the meet**

Again, thanks so very much to **Rick Sawicki** for his great photos. Most of the ones in this issue were taken by him. Thank you Rick!!!

More **Rick Sawicki** Mid-Am Photos can be found here:

<https://photos.google.com/share/AF1QipPKKH6RrOdO6vZhl2wqkGbmWW63KPDdBuMQ0yXY8zQiVApKBq9odWiGngqcm-LB-w?key=YzJI0U5pX21SX0cwbWxjUVhGV2ZrNndYLUVIWDRB>



**Jim Young with his fleet**

It was great to see Jim Young back with his newly re-battered fleet of beautiful models. They are now almost all using “A123” 2500mAh cells in their packs. His latest, the red and white Cub is another great addition to his fleet.



**Larry Markey** shared his big, beautiful Skylark Type 37 motor glider with us. Once it takes off the dolly falls away and it soars majestically through the sky on its 15' 8" wingspan. This is a great one Larry!



Besides his award wing P-38 and a few other planes, **Jim Ryan**, flew his exquisite helicopters to perfection.





The photo shows the two CDs as Ken Myers assists Keith Shaw with the disassembly of his venerable Comet after a great flight!



The Comet Landing after another great flight.

I can't believe it. There is still more to share, so this great saga continues next month!

**Addison Oaks Float Flying 2021**  
**Sponsored by the Romeo Skyhawks RC Club**  
 Every Wednesday, June thru September  
 Addison Oaks Oakland County Park  
 at Buhl Lake

1480 W Romeo Road, Leonard, MI 48367  
 Main Park Entrance on W. Romeo Rd (32mile)  
 West of Rochester Road

Past the Toll Booth then follow the signs to the Boat  
 Rental

[www.oakgov.com/parks/parksandtrails/addison-oaks](http://www.oakgov.com/parks/parksandtrails/addison-oaks)

Flying from 9 am till noon, retrieval boat on site  
 Flying open to AMA Members -  
 Spectators welcome

Only 2.4 GHz radio systems are allowed  
 \$5.00 One Time Pilot Registration Fee

**All Cars Need Daily/Annual Oakland County  
 Park Sticker**

Plenty of Free Parking

No R/C Boats During Flying Times

Weekly Email Notifications

For more information call Joe Hass at (248)

321-7934 [joehass@gmail.com](mailto:joehass@gmail.com)

**GRAND LEDGE**  
CHAMBER OF COMMERCE

**AMA**  
MEMBER

**C.A.R.D.S.**  
OF  
LANSING  
RADIO DRONE SQUADRON

**Spectators Welcome**

Pop and Water Concessions  
 Pizza delivered on Saturday

**The Upcoming C.A.R.D.S. of Lansing 11th  
 Annual Electric Fly In**  
 from Marv Thompson

Friday August 27 1:00 p.m. to 9:00 p.m. and  
 Saturday August 28 from 9:00 a.m. to 9:00 p.m.

**Pilot and Aircraft Requirements:**

Current AMA — Open to All RC Electric planes,  
 helicopters, and multi-copters.

Social Distancing and Other Michigan Covid  
 Requirements Current to the Event Will Be  
 Followed.

Email or Text CD For any Updates

Pizza Lunch for Pilots on Saturday (Will be served  
 if necessary)

Water and Pop will be available

**Landing Fees: \$15**

Marv Thomson/CD 517 802 7675

[mthomson@wowway.com](mailto:mthomson@wowway.com)

### Upcoming E-vents

#### Addison Oaks Float Flying 2021

Sponsored by the Romeo Skyhawks RC Club  
Every Wednesday, June thru September  
Addison Oaks Oakland County Park

**September 4, Saturday**, EFO Flying Meeting, 10 a.m., Midwest RC Society 7 Mile Rd. Flying Field

**August 27, Friday** 1:00 p.m. to 9:00 p.m. and  
**Saturday August 28** from 9:00 a.m. to 9:00 p.m.  
C.A.R.D.S. of Lansing 11th Annual Electric Fly In  
(details in this issue)



Keith Shaw's famous deHavilland Comet as seen at the 2021 37th Annual Mid-America Electric Flies. More on this event is in this issue.



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

<http://www.theampeer.org>

#### The Next Monthly Flying Meeting:

**Date:** Saturday, Sept. 4, Time: 10:00 a.m.

**Place:** Midwest RC Society 7 Mi. R. Flying Field