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October	The EFO Officers	2019
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No Mailed Ampeer Subscriptions	The Next EFO Flying Meeting: Sat., Oct. 5, 10 a.m., Midwest 7 Mi. Rd. Flying Field	

**What's In This Issue:**  
 Upcoming MIDWEST R/C SOCIETY R/C SWAP MEET - ESC Advice Requested - Speaking of A123 System Cells - Info 2019-2020 indoor flying in Pontiac - A Report on the C.A.R.D.'s Electric Fly-in - The September 14 EFO Flying Meeting - Advice Requested for a Power System for a Big Stik 40 with a 58.5" Wingspan -  
 Upcoming Events

**MIDWEST R/C SOCIETY  
R/C SWAP MEET**

**Sunday, November 3rd, 2019  
8:30AM to 11:30AM**

**Location**

Northville Senior Community Center  
303 West Main Street  
Northville, Michigan  
Latitude 42 43 04 North  
Longitude 83 48 60 West

**Admission Charge**

\$5.00 per person-donations always welcomed  
(active duty military, kids under 12, and women are admitted FREE)

**Vendor Table Cost**

\$20.00-\$25.00 per table, payable in advance, depending on table location  
The vendor table cost includes one admission.

Vendor set up time is 7:45am.

Advance table reservations are recommended since it costs more at the door!

**For Information and Table Reservations**

Call Rudi at: 248.631.8205 or  
e-mail: therudi@icloud.com

**Directions**

Take the 8 Mile Road exit off of I-275 and go west 2.5 miles to Center Street. Go south on Center Street for a 1/2 mile and then west on Main Street. The Northville Senior Community Center is located at 303 West Main Street. There is free parking in the back of the building, off of Cady Street.

**THIS IS THE LARGEST and BEST swap meet in Southeastern Michigan!**

**ESC Advice Requested**

By Ken Myers

*I recently received a request to recommend an electronic speed control (ESC) from a long-time electric flyer. He's been an Ampeer reader for many, many years. His name is John Konstantakatos and he lives in Greece. We've had a long time, long distance relationship and enjoy exchanging Christmas cards every year. Here is what John asked.*

Hello Ken,

Please help. Please recommend an ESC for brushless, at 20A, (for airplane), that could be PNP, i.e. no need for programming.

If this can be ordered from HobbyKing, it would be very convenient.

Thank you.

Best regards

John

**My Response**

Hi John,

It is always a pleasure hearing from you! :-)

As far as I know, the vast majority of today's ESCs are plug-and-play, PNP.

Living in Greece, I can understand why you'd want to order from HobbyKing.

I've not followed HobbyKing products for a long time, nor have I seen any reviews of their ESCs.

It is my "guess" that their own brand should work well, as HobbyKing's parent company, HXT, is known for its ESCs. That statement is pure speculation.

Personally, I always look for ESCs that ARE programmable, as I am still mostly using the LiFePO<sub>4</sub> A123 cells.

Right now I am using the Cobra line of ESCs available through Innov8tive Designs here in the USA.

<https://innov8tivedesigns.com/parts/speed-controllers-beccs?cat=63>

They have been working well for me in both LiPo and A123 applications.

Thanks for asking,

Ken

**Speaking of A123 System Cells**

From Dave Stacer, EFO member, via email

A123 cells are still available locally in Livonia, MI.

The following information is copied from his email forward.

**Lithium Werks Acquires Industrial Business of A123 Systems**

Tue Mar 27 2018

Amsterdam, The Netherlands / Austin, Texas, USA

March 27, 2018

LithiumWerks announces that it has acquired the original A123 Systems manufacturing plants located in Changzhou, China. These plants were the first to introduce the revolutionary NanoPhosphate® technology in the form of cylindrical cells that have been used globally in a wide array of applications, especially in the industrial market.

As part of the transaction, Lithium Werks has taken over the customer relationships in China, Europe and the United States as well as the operations, staff and product designs associated with the Changzhou business. LithiumWerks is also the new owner of the POWER. SAFETY. LIFE. trademark that characterized A123's product portfolio in its early years. The transaction was financed through the working capital of LithiumWerks.

"We are confident that this acquisition helps propel LithiumWerks into a leadership position in the Lithium Iron Phosphate market globally," said Knut H. Nylænde, LithiumWerks' Chairman. "A123 Systems is pleased to have concluded this agreement and is confident that our former customers in the industrial market are in great hands with LithiumWerks. A123 is sharpening its focus on world-class automotive applications ranging from mild-hybrids to fully electric vehicles," said Jeff Kessen, A123 Systems' VP of Corporate Strategy.

**About LithiumWerks**

LithiumWerks is a fast growing global lithium ion battery company with production facilities in

China and offices in the USA, the Netherlands, Northern Ireland, Great Britain and Norway. LithiumWerks provides cells, modules, and battery management systems into markets such as material handling, stationary energy storage, medical and commercial marine.

### About A123 Systems

A123 Systems is a global leader in providing complete energy storage solutions through advanced battery cells and systems primarily for transportation applications. Offering a full range of world-class products, A123 delivers superior performance, reliability and cost savings from concept through commercialization.

### Summertime Announcement from StorTronics!

StorTronics® is excited to announce the launch of our newest website,  
[www.lithiumwerksbatteries.com](http://www.lithiumwerksbatteries.com)

In March of 2018, LithiumWerks purchased the A123 Systems cylindrical cell division. Following this email, we have included the announcement for your reference.

Since 2014, StorTronics® has been the only North American authorized cell distributor for A123 Systems and is now the sole authorized distributor of LithiumWerks cells in North America. We maintain a great selection of the 18650 and 26650 cell format with the LiFePO<sub>4</sub> chemistry.

StorTronics® is an ISO 9001:2015 certified company and has been an authorized pack assembler for A123 Systems, LithiumWerks, Saft in addition to other quality cell manufacturers. StorTronics® looks forward to supporting all your battery pack assembly and distribution needs.

Thank you for doing business with StorTronics®!

Visit our website or call us today at (248) 912-1200 to discuss your power requirements and/or assembling needs.

### 2019 - 2020 Indoor Flying at the Ultimate Soccer Arenas

2019 -2020 Skymasters R/C Club Indoor Flying at the Ultimate Soccer Arenas

The Best Indoor Flying Venue Anywhere!

Join Us on Tuesdays\*

At the Ultimate Soccer Arenas

Where It Is Always Warm and Dry!

Located at 867 South Blvd., Pontiac, MI 48341

October 29th through April 14th

From 10 AM through 1 PM\*

Spectators Welcome and FREE

Trainer Planes on Site

Come Check It Out

Single Flying Session ONLY \$10

Any 5 Session Punch Card \$40

25 Season Season Pass \$120

Pay at the door or register online at:

<http://www.skymasters.org>

Have Any Questions?

Contact the Event Director at:

[indoorfly@Skymasters.org](mailto:indoorfly@Skymasters.org)

Or call Fred at 248-770-3239

All Pilots MUST Have Proof of Current AMA Membership

A Special 3 Month Trial AMA Membership is Available

\* Consult the Schedule on the Skymaster's Website for Exact Times and Dates



East Side of Flight Line at the C.A.R.D.'s Flying Field  
**A Report on the C.A.R.D.'s Electric Fly-in**



West Side of Flight Line at the C.A.R.D.'s Flying Field

Saturday, August 24 was a beautiful, late summer day at the C.A.R.D.'s flying field near Grand Ledge, MI.

The flying field was in beautiful shape. The weather was a bit cool, for the end of August. It was quite a bit windier than the "guessers" had predicted, and that did play into which planes were flown that.



Keith's Planes

was provided to the pilots as part of their entrance fee.

Even though the winds persisted in the 15 mph range with higher gusts, **Robert Throne** and I both flew versions of my RUA 2-4-10 in formation for a bit.



EFO Vice-President, **Richard Utkan**, with one of his planes

Many of our "flying buddies" from around the state showed up for the event, and it was great getting together and sharing what we'd been doing all summer, or at least since the Mid-Am in July.

**Keith Shaw** flew several of his great scale planes during the noontime demo period, while the rest of us chowed down on pizza and pop, which



Denny Sumner checks out Robert Throne's Plane

After we landed, several folks came over and asked what it was we were flying.

This is a wonderful, low-key event that you should plan on attending next year. The flying field is remarkable, the C.A.R.D.s' members are warm and welcoming, the event is well run and it is just a load of FUN!!!



The weather guessers were extremely far off with their weather guesses for this day.



‘They’ said that it was supposed to be partly sunny, mild and with winds in the 10 mph range.

(Top photo) Ken’s Planes  
(Bottom photo) Keith Shaw flying Dick Flemming’s plane with Robert Throne looking on.



The September 14, 2019 EFO Flying Meeting

When I arrived at the flying field it was cloudy, cool and windy, with a good 15+ mph wind, with gusts.

Midwest member, **Lynn Morgan** was already there practicing pattern flying.

Denny Sumner, Paul Sockow and Arthur Deane also made it out, but only Lynn and Denny chose to fly.

Hopefully, the October EFO monthly flying meeting will have better flying weather and more participants.

**Advice Requested for a Power System for a Big Stik 40 with a 58.5" Wingspan**  
Via email from Rich

Hi Ken,

Talked to the guy at INNOV8TIVE Designs about what he recommends for the big Stik 40 with a weight of 5 lb. to 5.5 lb. He recommended a Cobra C-3520/14 brushless motor with a KV of 700, Cobra 60A ESC with 6A switching BEC, an APC 12x6E prop, and 5S 18.5V LiPo battery 18.5v.

My question is what battery type: how many mAh and what C rating should I use. I will be flying just normal maneuvers, no 3D.

Thanks,  
Rich

Hi Rich,

I use a Cobra 3525/12 with a 12x8 prop in a similar plane. I use a 6S A123 2300mAh pack for 6.5 minutes of good flight time. A 5S LiPo, of 4000mAh should give you all the flight time and performance you might like as you describe your flight desire to me.

I double checked the performance data for the motor you purchased.

[http://innov8tivedesigns.com/images/specs/Cobra\\_3520-14\\_Specs.htm](http://innov8tivedesigns.com/images/specs/Cobra_3520-14_Specs.htm)

Lucien's test shows an APC 12x6E pulling 38.56A, and that too indicates that a 5S 4000mAh LiPo pack should serve you well. Any C-rating from 10 up would work without stressing it.

I don't fly with too many LiPo packs, but I do have both Revolectrix and Hyperion that are several years old and working very well.

Hope this helps,  
Ken

Hey Ken,

Wow thanks for the fast info. You're the BEST.  
Rich

Hi Rich,



I forgot to include a photo of my Sig 4-Star Forty that I wanted to share with you.

I also forgot to mention that when I do a glow to electric conversion, I like to get the heaviest motor that I can that will give me the performance that I want. Why? It is much easier to get the CG right with a heavier motor. Even the weight of the batteries is usually not enough to get the CG at the correct location without adding weight.

For some further reading on that topic, you might want to check out our Electric Flyers only Website at <http://www.theampeer.org>.

The *Ampeer* is the electric flight newsletter that I've been publishing since March 1988.

There are also several useful articles on the Website.

Later,  
Ken

Hi Ken,

I love the color scheme of the Sig 4-Star Forty, looking good.

I have a couple more questions about the Great Planes Stik 40 that I am converting to electric.

1. How much air flow do I need for cooling of the speed control and battery, right now there is a 1" hole in the center of the fire wall. Do I need more holes for cooling? Also I would assume that I will cut a hole in the floor of the fuselage just around where the servos are for flow through the fuselage and to exit through the hole so that the air flow is not deadheaded.
2. What are you using for a receiver battery? Are you coming off the main battery through a voltage regulator or are you using a separate battery? I would like to come off the main battery which is a 4000 mAh battery at 18.5 volts with a voltage regulator to conserve on weight. I know that if the battery fails then I will have no way of having control of the servos. I guess my question is what is the norm?

Thanks,  
Rich

Hi Rich,

My speed controller has a switching battery eliminator circuit built into it. Battery eliminator circuit is abbreviated BEC. It is a separate circuit in the electronic speed control (ESC). It drops the voltage into the ESC to about 5V or so for use by the receiver.

The link below is to one that would be suitable for your Stik. It is a 60A ESC with a 6A switching BEC (battery eliminator circuit)

<http://innov8tivedesigns.com/manufacturers/cobra/cobra-60a-esc-with-6a-switching-bec>

I don't know if I have that one, or a similar one, in my 4-Star at the moment, but it is a brand that I am now using all of the time.

Later,  
Ken

Hi Ken,

Ok so I have one lead ( which I think is the ESC lead) that comes out of the speed controller, does that plug into the throttle on the receiver and that also gives the 5.5 volts all the rest of the servos in the receiver? Maybe you missed the air flow question in my last email.

Thanks,  
Rich

Hi Rich,

Just home the Skymasters' electric fly-in in Lake Orion, MI. It's 58 miles round trip.

Yes, the lead that looks like those on a typical servo plugs into the throttle channel. Warning - do not have a propellor on the plane when setting up the radio system. Most electronic speed controllers have a circuit that keeps them from arming if the throttle is reversed from your transmitter, but not all. No prop on the plane until you are all done with everything, ever.

You just need to get air over the ESC. What you have in the firewall should be fine. You should have approximately twice the square inches for the outlet hole, on the bottom of the fuselage, in a handy location.

Later,  
Ken

Ken,

Thanks for All the info. It's getting closer to completion.

Rich

PS hope you had good time at the fly-in.

### Upcoming E-vents

**October. 5, 2019, Saturday**, EFO flying meeting, 10:00 a.m. Everyone with an interest is welcome. AMA membership required to fly - watch for possible date changes on the EFO Web site.

**October 29th** through April 14th, Indoor Flying at the Ultimate Soccer Arenas in Pontiac from 10 AM through 1 PM (details in this issue)

**Nov. 3, 2019, Sunday**, Midwest RC Society Swap Shop, 8:30 a.m. - 11:30 a.m., Northville, MI (details in this issue)

**See you at the next EFO Flying Meeting and the Midwest Swap Shop.**



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

#### **The Next Monthly Meeting:**

**Date:** Saturday, October 5, 10 a.m.

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



