the

October

The EFO Officers

2011

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The Next Meeting: Saturday, October 8, 10:30 a.m. Place: Midwest RC Society 7 Mile Rd. Flying Field

What's In This Issue:

Mid-Am Thanks – Sending in Chargers to FMAdirect for Service – H K Lipos Gone for Good? – Radical RC Blog and Podcast – "Stick - E" Update – Fred Reese Swallow Under Construction – 4 Interesting Flying Machines - Identifying the Usefulness of an Unknown Brushless Outrunner - Electro Flight RC– ARF Bashed Champ - Rick Sawacki's Latest Project: a P-38 – News from RCBKits - Upcoming E-vents

Mid-Am Thanks to ALL of our GREAT VOLUNTEERS!

I am sharing the following so that all of the folks who made the 2011 Mid-Am a huge success know that all of their hard work was very much appreciated. Guys and Gals, this is for you. Keith and I can never truly express our gratitude to you. Without your volunteering, this meet could never be. We appreciate your efforts more than you can ever know!



This is the last set of pictures taken at Saturday's Mid-America Electric Flies. (*Thanks Willie*. *I used several in the September Ampeer. KM*) You Guys

put on a grand meet. The food at the potluck was excellent and I appreciate what you did for me. I shall never forget it. I have learned a lot from you and Keith Shaw. I hope to see you and Keith at Mid America as long as I am able to come.

Again Thanks and hope to see you at our event.

Willie McMath



How the time flies. We sure enjoyed your meet last weekend (July 9 & 10). I'll be back next year.

Ken Sulkowski







It was great meeting you on Saturday at the field. What a glorious day, with perfect weather!

I want to congratulate you and your gang for the terrific effort on running the Mid-America, and you in particular for also doing the great newsletter. I regret that I was unable to return.

Regards, Phil Alvirez



Thanks Keith and Ken for another GREAT Mid AM (and to all the workers from EFO, Ann Arbor Falcons, and Midwest R/C!) Had a great time flying and photographing an event I look forward to every year.

I've loaded my photos to http://www.gmcdesign.com/gallery/midam. Pictures are from 2011 back to 2004.

Greg Cardillo

The Ghirardelli brownies (at the potluck) ...oooohhhh my, they were wonderful.

It was great to see you all at the Mid-am.

ciao Ray Foley – Toledo, OH



Great job on the event guys, fun as usual...why is it always so stinkin' hot? lol

Thanks for all the hard work you've put in. It shows and it's appreciated.

Mark Rittinger



Where did the E-flight SE5 kit Carolynn won come from? I always like to email the sponsors to say thanks.

Pete Foss

All 4 of the very cool E-flite biplanes were donated directly from Horizon Hobby. We do owe them a big thanks. I'm sure I said it, but might not have, and from me, thanks a ton Horizon Hobby! Ken



Just wanted to thank Ken and Keith for hosting another great Mid-Am!!

A little hot but recovering.

I'll post some pictures tomorrow.

Pictures at:

http://www.rcgroups.com/forums/showpost.php?p= 18733484&postcount=27

Denny Sumner



Great seeing everyone at the Mid-Am. Sorry it had to be a one-day trip.

Take care, Don Belfort

Thanks once again for a great Mid-Am cake, Don. It is always a highlight for us! KM

Congrats for the magnific event it was yours Mid-Am! Even not having attended it personally (is a bit far away for me) it's a pleasure to read about it and enjoy the pictures. Next Saturday we will have a scale event at our local club and I hope to be there. Will send you some info later. Don't expect me to be even close to your wonderful coverage, but at least I can return you some good moments.

Thanks for making us happy and willing to share this fantastic science-hobby!

Best regards, Paulo Scheidegger

Great coverage of the Mid America. Excellent photographs of very interesting and novel models. Thanks! Alan H. Siegel, WRAM

It was great seeing you and many familiar faces. I'm sure you have a lot of pictures from the Mid-Am, but I thought I would send along the ones I took. I hope there is something of interest. See you soon, Mike Holroyde

Thanks so much for the photos Mike. I've used some of them here to illustrate this article. Thanks especially for the photo of Richard Utkan. He's been vice-president of the EFO since its beginning in February of 1988. Great flying buddy for all these years! KM



Richard Utkan, EFO vice-president

Sending in Chargers to FMAdirect for Service Phone conversation with Joe Hass

Joe had a problem with his CellPro 10S. It was giving an error message that he could not figure out. He packed up the unit and the adapter board(s) and sent it ALL in for service.

When he received it back, he was told that there was nothing wrong with the unit. He hooked it up,

and it still would not charge. He changed the adapter board to a spare that he had. It worked.

He found out that they do not automatically check the adapter board when the unit is sent in for service.

He ordered a new adapter board and also found out that they now have a new design that makes it much harder for the adapter board to short via protruding pins through the shrink-wrap around the circuit board. Reference to this adapter board problem can be found in the article "A Problem with FMAdirect Adapter Boards Discovered" in the October 2010 Ampeer.

It is our recommendation that you include a note to FMAdirect, when service is required, to check out EVERYTHING you have returned to them. Not doing so left Joe without a charger for quite a long time.

Hobby King Lipos Gone for Good to the USA?

http://www.rcgroups.com/forums/showthread.php?t=1507541

Many of the EFO members use Li-Poly batteries from Hobby King in Hong Kong. I found this information on RC Groups. The thread is noted. I've copied the first two posts here. You can research more by accessing the thread. KM

Posted by Ldm: Hey guys, has anyone tried to order a lipo larger then 1100 from HK and have it shipped to the USA ?

I just tried to order 4, then I simple tried 1 and you can no longer order a simple normal size lipo due to new restrictions in international mail.

The HK website suggest buying them from the USA distribution center but everytime I try to use the USA Hobby King distribution center it will kick you back into international when you do a product search.

In addition the USA DC of Hobby King seems to have very little goods on hand!! Has anyone had the same problem?

Looks like Hobby Parts will be my new source unless HK can get some stock in the USA DC

2nd posted by Ldm: This is the auto message ! Attention

Due to recent changes in Air Transport safety, we cannot ship orders from Hong Kong containing a box length of more than 1 meter with Lithium batteries of more than 1,000mAh Please kindly order your batteries and large planes separately.

Orders from our regional warehouses (DE, US,

AU, UK) are not affected by this restriction

Check Out the Radical RC Blog and Podcast

From Dave Thacker davthacker@aol.com

Ken,

I put up a link on my podcast and blog site to your site and newsletter. I'm not completely certain I have the link to the EFO site described correctly. Is it possible the site is called "The Future is Electric"?

Check it out here if you get a moment. I want to be accurate.

www.radicalrc.com/blog

Thanks!

Dave

The EFO site does display The Future Is Electric at the top of most pages. You got it right. KM

"Stick - E" Update From Nicholas Bisonni via email



Hi Ken,

I wanted to report back to you regarding my finished and successfully "maidened" Stick-E.

All-up weight came in at 34 ounces with:

• Hobby-People 3S1P 2.2AH LiPo (these batteries are performing just as specified - very good dollar value)

• Heads Up RC 3530-14, 1400Kv (RPM/v) brushless motor

- ElectriFly Silver Series 45 AMP ESC
- APC 8x4E prop
- Airtronics RX500 receiver

• ElectriFly ES80 servos (2 - aileron and elevator only)

Happily the CG balanced with the battery "upfront" so battery change outs can be made via the hatch w/o wing removal.



It ROGs off short grass with an aggressive climb out > 45 degrees.

After the first two initial flights I flew an extended flight to determine the duration. I brought it down after 20 minutes with mixed flying/throttle management and still had some electrons left.

I figure 16 -18 minutes is easily attainable without pushing the LiPos too much for future flights. This worked out to be a great power system for this plane.

Also, I'm very pleased with the Hitec X-2 Ultima balancing charger I just purchased. It can balance charge 2 packs simultaneously at 200 Watts output each.

Stay well, Nick

Fred Reese Swallow Under Construction From Dan Bono via email



I put the Swallow on the scale today. It weighed 2 lb. 14 oz. I just need to cover now.

I should be under my 3 1/2 lb. AUW. The CG worked out good also.

Thanks,

Dan



Four Interesting Flying Machines From Robert Ness via email

Ken,

I saw you at the electric fly at Potterville (*near Lansing, MI KM*) this last weekend, and wanted to ask you a question, but when I went to find you, you had already left. The question I have for you (if you could help me) is too hard to explain by email. Could I possibly call you at your convenience, regarding a question about a plane I just built? I can almost always find an answer on the Internet, but I can't find an answer to this one. I know you would probably be able to help me if you had a few minutes.

I thought I would attach pictures of 4 planes I am just finishing up. The miss Budweiser does about 60 on the water and also flies!





Anyone who'd like to 'talk', rather than email may call me at 248-669-8124. Thanks for the photos Robert. Ken Myers

Identifying the Usefulness of an Unknown Brushless Outrunner From Art Lane via email



Hi Ken,

Hope you can help me. This is the first outrunner I bought a few years ago and have used it on a small high-wing craft called the SkyKnight.

Going through my motor drawer, I found it and I am wondering if you can tell me anything about it. I lost all info I had.

Any idea?? It's 1-1/16" diameter and 2-1/2" long, shaft to shaft.

Ken: It is some kind of generic Chinese type. 1-1/16" diameter is about 27mm, but my guess is that this is a 28mm motor. The motor length would have been a little helpful.

To know how to use it, first measure the Kv (RPM/v) using the drill press method found at http://homepage.mac.com/kmyersefo/M1-outrunners.htm#KV

There is a spreadsheet, that I created, that can help you with the math. The link is in the article.

Second, weigh the motor in grams without the prop adapter and mount.

For its power rating, use a maximum of 3 times the weight in grams for planes that fly on the wing, but 2 times the weight in grams is better/safer. i.e. 100g * 3 = 300 watts in maximum but limiting it to 100g * 2 = 200 watts in would be better/safer for this 100g example. For 3D, limited motor run type planes, or if you don't care about the motor lasting very long, you can use a multiplier of 4.5. The motor is only used for short burst maximum power in these types of planes.

Art: As usual, I'm confused. The motor, sans prop adaptor and MM weighs 48g.

Now, how do I go about finding the KV using a drill press??? Do I connect an esc/battery to this or is it just the spinning of the motor, in the drill press, that gives the dc voltage????

Ha, like I said, I'm confused. I don't know the RPM of my drill press. Can a tach be used to find this? Mark the chuck with a white line and turn it on and measure????

Boy, there's more to this than I ever realized....

Ken: First you find the RPM of your drill press using a tach. The lid opens on mine to change the belt to different size wheels front and back to change the speed. If I recall correctly, and this only has to be done once, I took it outside, for natural light and marked the wheel driving the chuck with

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tape and measured the RPM. Alternately, the chuck can be marked. My tach has the ability to read only one blade, so I only needed one mark. You might need two if you can only read two blades and above with your tach or you can just do the math.

You need a voltmeter that reads <u>AC</u>.

Chuck the motor into the drill press. Be sure the motor leads are separated. Get good AC readings with all three phases. It doesn't matter what they are called, but lets say left to right, leads ABC. Hold the end where the motor mount attaches so that it cannot spin. Turn on the drill press and get and record measurements for A-B, A-C and B-C. Do it a few times. The measurements will only be slightly different. Use the spreadsheet I pointed you to. It will do the math for you.

It is not really hard at all, once you have a known RPM for your drill press. It always stays the same, unless you change it for some reason. There is nothing hooked up to the motor. I use leads on my voltmeter that have small alligator clips on them so that all I have to do is hold the motor "+" mount and look at my meter. I record the voltage on a piece of paper.

It may sound a bit "complicated", but once you've gotten the drill press RPM, the actual reading and recording of the numbers takes only a couple of minutes, and using the spreadsheet, the math is simple.

Art: Well, finally got the drill press outdoors and found the RPM to be 3700 RPM..

Then, chucked the motor in the chuck, and hooked up my voltmeter, on AC Volts, and turned on.... Between A-B, 4Volts

Between A-C, 4volts

Between B-C, 4 volts...

Then, I opened your spreadsheet for calculations, and got LOST. I typed in the AC volts in the green box, A, and when I went to type in the RPM in the B box, A disappeared.

Guess I'm asking you, can you do it for me? (Absolutely. Not sure what went wrong. KM)

Drill P	ress k	v Wor	kshee	t				
	drill							
volts	press	volts	1000/					
ac	RPM	peak	RPM	Ke	pre-Kv	Kv	Kt	
4.000	3700	5.66	0.27	0.00153	654.17	688.60	1.96	
4.000	3700	5.66	0.27	0.00153	654.17	688.60	1.96	
4.000	3700	5.66	0.27	0.00153	654.17	688.60	1.96	
4.000	3700	5.66	0.27	0.00153	654.17	688.60	1.96	Average
	Kv:	689						

Ken: With 4 volts AC measured on all the lead possibilities, and 3700 RPM for the drill press RPM, the Kv is about 688.6. I've attached the spreadsheet.

http://homepage.mac.com/kmyersefo/Kv-Worksheet.xls

I told you that getting the drill press RPM is the hardest part. ;-) Now that you have its RPM you are all set to check any other motors you might want to.

Afterthought from Ken

690 is an extremely low Kv (RPM/v) for a 48g motor. I believe that Art needs to check his drill press RPM and/or his AC voltage measurements again. (Next Month: How to use the numbers.)

Electro Flight RC

From Eric Babin via email

An Introduction

This email is to introduce you and your RC club to this great new online resource to help RC hobbyists in their endeavours with electric flight.

From the novice to the expert, ElectroFlightRC can help. On the site, RC pilots who are unfamiliar with electric power systems can learn all about the topic by reading through the section on Basics of Electric Flight. There may even be some useful info for the seasoned veteran. This is a resource, which is regularly evolving and updated.

The real interesting part of the website is the community driven database of airframes, motors, batteries, ESCs, propellers and power setups. We have worked very hard at developing this part of the website to make it as easy to use as possible and to also have as much data on all components as possible. So far we have uploaded all components from over 70 brands like 3D Hobby Shop, Aeroworks, APC, Axi, Castle Creations, Electrifly, Extreme Flight, Flight Power, Gens Ace, Graupner, Great Planes, Hacker, Hanger 9, HET and Hobby King to name just a few. And that's only what we have so far. Even though the database will continue to grow with the help of the community, we will also continue to import products from as many brands as possible.

So what is this all for? As well as an invaluable reference database of individual electric RC components, users will have access to a comprehensive repository of power setups for any airframe they want to electrify! How does this happen? Well, that's simple. We need help from the RC community. We need you to enter your current electric power setups so that ElectroFlightRC can become the incredible resource described above.

ElectroFlightRC is free to use and it's easy to create a new account which will allow you to enter data into the community database. ElectroFlightRC is not an online Hobby retailer. We are not trying to sell you RC stuff. We are however, genuinely trying to create a valuable tool to help the RC community and that can only happen with your help.

BETA

The site was only recently launched and is still in beta, which means that we want your feedback if anything should go wrong while using the site, or if you have any questions or suggestions on how to improve the site. Please be patient with us. We will make every effort to fix any problems and to improve the site wherever necessary.

Spread the word!

This email was sent to you as the primary contact of your RC club. If you find ElectroFlightRC useful, please help us by forwarding this information to the members of your RC club.

Thank you for giving us your time by reading this email

The ElectroFlightRC Team Support@ElectroFlightRC.com

> **ARF Bashed Champ** From Ben Rufli via email

Ken:

I thought you might be interested in a couple of pictures of modifications of the E-flite 15e Champ. I did the modifications to be like the full scale I owned in the '70's. (picture enclosed) It is covered using the Stits lite process. Weight gain with all the added features is only about 7oz.

Been modeling since 1955, and in electrics for about 10 years.

Hope you enjoy. Ben Rufli



Full-scale 1946 Champ, owned in the 1970's



Model 2011



That's 'Ben' in the Cockpit of the Model

It was a great pleasure to meet both you and your Champ at the C.A.R.D.S. meet near Lansing, MI this past summer. KM **Rick Sawacki's Latest Project: a P-38** From EFO Member Rick Sawicki via email

The plane came from Banana Hobby. http://www.bananahobby.com/1944.html

Best of all, <u>NONE</u> of the wiring was labeled! I had to put a servo tester on each one of the **9 servos** on the plane to figure it out.



P-38...a wiring nightmare



Ready for its first flight...August 30

News from RCBKits From Rob Bulk sales@rbckits.com

Hello Ken

We have some new models in balsa available.

The Monoprep

It is a sport scale model inspired by Doc Mathews. The 1929 Monoprep, from Mono Aircraft, has a wingspan of 1818mm/71.5". It requires a 35-type electric motor and 3 Li-Poly cells.





It is light. It is built up from CNC cut balsa and plywood parts and stringers and flies really slow and nice.

It is possible to build the Monoprep without ailerons and use only rudder,

Soon to be available is the Mig 25 for midi fan. We have no details yet, but it flies fast!

USA customers do not pay the 19% vat in my shop, so prices are lower than they are displayed on the Web site.

Greetings, Rob R.Bulk computerfreeswerk Rontgenweg 16G 2408AB Alphen aan den Rijn T 0031(0)172533954 F 0031(0)842290410 M 0031(0)654318182 www.rbckits.com info@rbckits.com

Upcoming E-vents

October 8 EFO flying meeting, 10:30 a.m., Midwest RC Society 7 Mile Rd. Flying field. All electric fliers welcome with current AMA membership card to fly. Everyone welcome to come.

Be sure to check out the HTML version of the *Ampeer* with even clearer photos and active links. http://homepage.mac.com/kmyersefo/ampoct11/ampoct11.htm

Upcoming Feature

A review and motor test results for the new O.S. Motor OMA-3825-750.





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

http://homepage.mac.com/kmyersefo

The Next Monthly Meeting: Date: October 8, 2011 Time: 10:30 a.m. Place: Midwest RC Society 7 Mile Rd. Field