the Ampeer

July The EFO Officers 2022

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No Mailed Ampeer Subscriptions

The Next EFO Meeting: Sat. & Sun., July 9 & 10, 2022
Time: 10:00 a.m., Place: Midwest RC Flying Field

What's In This Issue:

EFO Flying Meeting Reminder

Please keep in mind that all summer monthly EFO flying meeting dates are tentative and quite fluid depending on the predicted weather.

The meetings are usually on Saturdays, but may change to the following Sunday or even possibly a week or more later.

Everyone is welcome and proof of AMA membership is required to fly.

The next EFO monthly meeting is the Mid-Am on Saturday, July 9 and Sunday, July 10. Details are in this issue.

Another Reply to: Where to Get Modeling Supplies Today?

From John Konstantakatos Via Email from Greece

In the June 2022 issue of the *Ampeer*, John Konstantakatos asked where in the USA he could order modeling supplies.

Pete Foss sent an email with the following; "Prop Shop is a good source of supplies even mail order. It's really nice that you can search their online inventory."

From **Joe Hass** I received; "Both Nankin and Prop Shop ship everywhere."

Prop Shop Hobbies, Inc.
https://www.propshophobbies.com/

Nankin Hobby
https://www.nankinhobby.com/

Thanks gentlemen. That's much appreciated. KM

Denny Sumner's Mini Mite

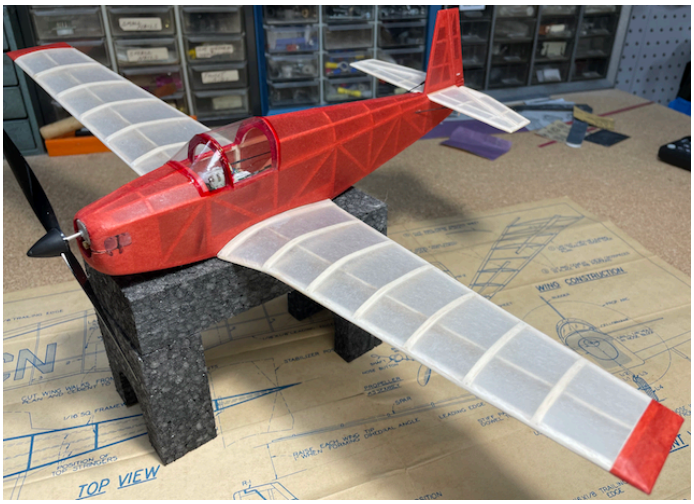
From Denny Sumner via email

Keith,

I finished up my Mite yesterday. I guess I'll wait a week for the test flights, although this morning's weather is better than what I thought we would have.

It weighs 1.1 oz. or 30g with a 220mAh LiPo. I duplicated what I used on my ME-109 conversion. Wing 0, 2 degrees down thrust, and +1 degrees for the stab.

I have a Vintage Models kit from the UK for a Jodel D18 and thought I'd used the same setup. Do you remember what



you used on your Jodel? Mine will be motor, rudder, and elevator.

Thanks,
Denny

The Keith Shaw Birthday Fly-in 2022

The 20th annual event was held at the Balsa Butchers' flying field near Coldwater, Michigan.

Saturday, June 4, 2022 was the most absolutely perfect day for a flying day in memory. The winds were quite light and out of the south. The Balsa Butchers' field is aligned north and south. The temperature could not have been better, hovering right around 70 degrees for most of the day.

The turn turnout was good and the camaraderie was exceptional.

The flying field was in great shape.

A flying field "lunch" of hot dogs, chips, pop and water was available for a donation to the club.

A look to the north along the flight line.

A look to the south along the flight line.

Mark Wolf and **Ken Myers** pitted next to each other. Mark's planes are on the left and Ken's on the right. A highlight for Ken was when **Keith Shaw** flew his restoration/recreation of his 1963 Minnie Mambo. The wings of Ken's Minnie Mambo were originally built by **Dick Flemming** in about 1964 and Ken recreated the exact fuselage and vertical stabilizer using an original kit as templates thanks to **Joe Hass**. Ken's Minnie Mambo is electric powered and uses throttle and rudder only for control.

The photo above shows **Dick Flemming** flying his old-timer as **Keith Shaw** looks on.

Keith Shaw shares the joy of the day. (His actual birthday is June 6, 1946.)

Dave Grife, CD, is seen welcoming folks at the registration table. The event was free, but donations were accepted to help the Balsa Butchers maintain their flying field.

The photo shows **Dave Grife's** planes, which he spent a lot of time flying on this glorious day.

Pete Foss is seen strolling through the planes that Keith Shaw brought to fly.

Joe Hass brought some of his air force to fly and spent a lot of time flying them all!

Denny Sumner is getting ready to fly one of the many models he brought. They are all great fliers!

Keith Shaw is flying his 8 ounce Monocoupe as **Pete Foss** looks on, while **Dave Grife** is seen flying in the background.

The next three photos were sent to me by **Joe Hass** via email. Thanks so much for sharing them with us Joe.

The first one shows Keith Shaw's Monocoupe. The other two show one of many EDFs that took to the sky on this beautiful day.

Thanks to Dave Grife and the Balsa Butchers for putting on this fantastic annual event! Great Job Folks!!!

The June EFO Flying Meeting

The June EFO flying meeting was held on Saturday, June 11.

The weather cooperated, although the winds varied from moderate to a bit breezy at times.

The turnout was good and there was quite a bit of flying despite the somewhat unpredictable wind from the south. South winds are not really enjoyable at the Midwest RC Society flying field as it is laid out in an east and west direction.

We were thrilled that **Mike Russell** could join us for the second time this year. He was able to get in two flights as well.

Jim Pollack also came up and flew his Ken Myers' redesign of the Flite Test Simple Cub. Keith Shaw lent a hand at getting it trimmed out. It was flying very well by the time he left with big a smile on his face.

Keith Shaw also brought out an interesting gaggle of the some of the smaller planes he's flying now, as well as the Sausewind.

It was a great day of flying and friendship and enjoyed by all.

What's the Best "Name" to Describe An Electric Power System?

From Joe Hass via email

This email was sent to me on October 10 of 2021 and a lot of water has gone over the dam since then, including the closing of FlightLine Hobby. I thought that the topic was still current, so I've published the question along with Keith Shaw's and my responses. KM

Keith and Ken,

Thanks again for making the journey to join the festivities for John's induction into the HOF.

John is embarking on some new kits. He asked me about how to label the power systems he will create for each aircraft. The power systems will include the motor, ESC and prop.

His question revolved around whether to use terms like "Power 25", "Power 32", etc. equating to a glow version or some other nomenclature.

Here are my thoughts.

There are 3 types of customers.

For those of us who are familiar with the expected performance of a glow engine the "Power 25" name is helpful. To anyone who is only into electrics it is meaningless.

For those that are only looking for a turnkey kit and power system the name of the power system is meaningless. They will buy what is recommended.

For those who want to use some power system we may have there is a need for an additional source of information. The use of Motor Calc or some other program would help but my experience is that most people won't bother.

My suggestion is that the name could be "Power 25" but that all the specs for the components be specified in detail. For example: The AJAX Wizbang motor has 1200 Kv which with a 3 cell lipo (12.6 volts) will turn an 8 x 6 prop at about 12,000 RPM and draw 40 amps.

With this information I can see if I have a motor, ESC, battery with similar characteristics.

I have used this type of information myself with numerous projects. Hint to Ken and Keith - That is why I contact you for confirmation of my SWAG.

If you have a moment I am sure that John would appreciate any insight you can provide.

Thanks.
Joe Hass

248-321-7934
And from Keith Shaw:

Hi John,

I think the days of trying to relate equivalent electric power to glow are long over. There are electric fliers in every club now, so word-of-mouth about quality and performance is much more important. Electrics are so much more versatile that it is a disservice to electric motors to try to link them to the much more restricted glow engine. By juggling cell count and prop, a "25" name could easily function as a mild .15 to a hot .40. By juggling nitro and props, a .25 engine MIGHT be able to fill the need of a .20-.30

I think the better way is the dimensions of the stator and Kv, like AXI, Cobra, Scorpion, BadAss, Predator, and endless others have adopted. The first couple of digits indicate a class of power capability, while the last two plus Kv fine tune the behavior at cell count and prop changes.

Anyone who is at the point of adapting a power system package to their own needs is probably already familiar with these concepts, so as long as stator dimensions, Kv (maybe also R and Izero), max current and max power for each number of cells are included somewhere on the advertisement and/or instruction sheet, they will be fine.

It would be some extra work for you, but you could bench test appropriate props at various cell counts and offer a table of the results on your website. If there are only a few power system packages offered, this would be reasonably easy to do. Lucien does this at Innov8tive designs.com. He has a good set-up and really does test samples of each of his products. This method is vastly superior to simulation programs like MotoCalc, Ecalc, or DriveCalc. Those depend on accurate motor parameters, ESC parameters and battery quality (internal resistance). DriveCalc is the most accurate, but only to about 10%, and is mostly suited to European products.

Hope all this helps.
Keith

And from Ken Myers:
Hi Folks,

Sorry to be late to the party, but I just got home from the UP last night at 6:30 p.m.

Keith is so right about the versatility of electric power systems and points to some excellent sources! Would you expect anything less! ;-)

Personally, I like using weight, in grams, and Kv to identify motors. There are two reasons for this. For outrunner motors, weight can give a somewhat good idea about how much power a given motor might be able to handle. Many times the stator dimension is not given for many motors and the outside dimensions are given and those outside dimensions can be confused with the stator dimensions.

If you look at the Power 25 Brushless Outrunner Motor, 1250Kv: 3.5mm Bullet on Horizon Hobby's Web site, there are no stator dimensions given. https://www.horizonhobby.com/product/power-25-brushless-outrunner-motor-1250kv-3.5mm-bullet/EFLM4025B.html

The outer diameter is given as 36mm and length at 53mm. The weight is given as 0.4 with no units. I'm guessing that the missing unit is pounds and that would be 6.4 oz. or about 181g.

In my article "Selecting an Electric Outrunner Motor Power System for an ARF, Kit or Plans Built Electrically Powered or Glow Conversion Prop Plane" By Ken Myers, Original date of publication March 2017, Article and Spreadsheet Workbook updated April 2021, I have a chart that shows the Cobra C-3515 line of motors has a weight of 178g, obviously close to the weight of the "25". http://theampeer.org/Select-Pwr2017/Select-Pwr2017.htm

The Cobra C-3515/12 weighs 178g and has a Kv of 1100, which is the highest Kv for the 3515 series and not quite as high as the "25" with a 1250Kv. The C-3525/12 has a maximum continuous amp rating of 45 amps and the "25" rating 50 amps.

The two motors are therefore somewhat similar.

As Keith noted, Lucien Miller has prop charts for his motors and they can be extremely useful. The prop chart for the C-3515/12 is at https://innov8tivedesigns.com/images/specs/Cobra_3515-12_Specs.htm. For props the "25" notes only "8x6E to 8x8E (4S) or 8x8E to 10x10E

(3S)" while Lucien's tested chart shows a lot more possibilities.

By looking at, and comparing the data, it can be seen that weight, in grams, and Kv can be used to find similar motors of different brands. To me, this means that whatever motor and battery cell count John uses, and finds successful, for his prototype power system(s), he can then recommend a weight, in grams, and the noted Kv for a similar motor with the same number of LiPo cells.

I think Joe was right about recommending a "turn-key" power system and letting those who know use it as a guide, and those that don't know can just purchase the recommended power system.

Later,
Ken

Putting What Ken Noted Previously to the Test
From Joe Hass via email

I am looking for a prop recommendation for a BP Hobbies A 4130-8.
Kv 380
6 cell LiPo but could go to 8
Max current 60 amps
Max watts 1300

It is going into a Ohio Model Products (OMP) YAK 55 60" span.

Not much data on any website I could find.
Thanks.
Joe Hass

Ken's Reply:

Hi Joe,

If you had given me the weight in grams, I could be a bit more specific.

This Cobra motor, https://innov8tivedesigns.com/cobra-c-4130-16-brushless-motor-kv-390.html, seems similar. Outrunner motors with about the same weight and Kv will have very similar characteristics.
Cobra weight: 396g
Kv 390
Maximum continuous amp draw 55A

The data chart for this motor is found here: https://innov8tivedesigns.com/images/specs/Cobra_4130-16_Specs.htm

This Cobra page shows recommend, and more importantly, actually tested props for 5, 6 and 8 cells.

Hope this helps,
Ken

Joe's Response:

Thanks.

Prior to asking you. I went to the same page. I guess I should have had confidence in my decision

For what it's worth I used a 16 x 10 APC electric prop on 6S and got:
25 volts
33 amps
730 watts
6300 RPM

All well below the maximum specs for both the motor and ESC.

Again, thanks for your time.

Joe Hass

Giant RC Estate Sale
Sunday, July 24, 2022
10 a.m. to 2 p.m.

Oxford Community Room at Seymour Lake Park
2795 Seymour Lake Rd., Oxford, MI 48371

Balsa RC Kits
RC Engines
Tons of Covering
Mufflers, motor mounts, tools, props, servos...

For More Information
Email Pete Foss: president@skymasters.org

Visit the Skymasters' Website
http://www.skymasters.org/

C.A.R.D.S. of Lansing 12th Annual Electric Fly
Friday August 26 1:00 pm - 9:00pm and
Saturday August 27 from 9:0 am to 9:00 pm

Pilot and Aircraft Requirements:
Current AMA — Open to All RC Electric planes, helicopters, and multicopters.

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

SPECTATORS WELCOME
Landing Fees: $20

Marv Thomson/CD 517 802 7675 Email Marv mthomson@wowway.com
Website: www.cardsrc.com
Address: 8328 Otto Rd, Grand Ledge, Mi 48837

38th Annual Mid-America Electric Flies 2022

AMA Sanctioned Event (Proof of AMA membership required to fly - Sorry MAAC membership is no longer accepted)
Saturday, July 9 & Sunday, July 10, 2022
Hosted by the:

Ann Arbor Falcons, Electric Flyers Only and **The Midwest RC Society**
The 7 Mile Rd. Flying Site, Salem Twp., MI, is Provided by the:
Midwest R/C Society
Contest Directors are:
Ken Myers phone (248) 669-8124 or email kmyersefo@mac.com –
Website for updates:
http://www.theampeer.org for updates & info
Keith Shaw (734) 973-6309
Flying both days is at the Midwest R/C Society Flying Field - 7 Mile Rd., Salem Twp., MI

Registration: 9 A.M. **Saturday**
Event Flying from 10 A.M. to 4 P.M. Saturday
Open Flying 10 A.M. Until You Leave Sunday
(Open Flying Saturday after the Event & All Day Sunday)

No Pilot Landing Fee

Donations will be gladly accepted

No Parking Donation Will Be Requested from Spectators
Donations will be gladly accepted

<u>Awards on Saturday Only!</u>
Best Scale
Most Beautiful
Best Mini-Electric
Best Multi-motor
Best Sport Plane
Foam Flurry for NCM aircraft
CDs' Choice

Planes Must Fly To Be Considered for Any Award
Plaques for the winner in each category

The Field is Open for Open Flying All Day Friday Night Flying Possible, Weather Permitting, Friday & Saturday Nights
Field Lunch is provided to pilots and friends (hot dogs, chips, water or pop) Available on Saturday -

Field Dinner is provided (Burgers, Brats on Saturday evening for Pilots & Their Guests

Come and join us for two days of fun and relaxed electric flying.

The NCM (Not Conventional Materials) Event
Traditionally, model aircraft airframes have been mostly constructed from balsa wood, plywood, spruce, and fiberglass. For the purposes of this meet, NCM airframes are mostly constructed from not conventional materials i.e.; sheet foam, foam board, cardboard, block foam, foam insulation material, etc.

Foam Flurry for NCM aircraft: This is a true event. It is based upon the all up/last down event of early electric meets. Any NCM aircraft may be used (no ARF types). Power systems are limited to a maximum of 3S (no paralleling) LiPo batteries or 4S maximum, no paralleling, for A123 packs. All planes qualifying for this event will launch at the same time, and the last one to land will be declared the winner.

VERY IMPORTANT REMINDER FOR 2022 - THE FLYING FIELD ENTRANCE TO THE MIDWEST FLYING FIELD CHANGED THREE YEARS AGO!

The old entrance to the Midwest RC Society flying field is **permanently closed**!!! **DO NOT ATTEMPT TO USE IT!!!**

This what the flying field entrance looks like. Please Drive SAFELY

The field entrance is on the north side of Seven Mile Road about 1.5 Miles west of Currie Rd.

entrance is on the north side of Seven Mile Road about 1.6 Miles west of Currie Rd.

The address is 7621 Seven Mile Road, Northville, MI 48167. The entrance is through a private residence drive and out past the barn.

Directions from Google Maps to the flying field
https://www.google.com/maps/place/MIDWEST+R%2FC+SOCIETY/@42.422025,-83.6170775,805m/data=!3m1!1e3!4m13!1m7!3m6!1s0x8823559bdf962b57:0xd100df97d9dcebf1!2s7419+7+Mile+Rd,+Northville,+MI+48167!3b1!8m2!3d42.4187058!4d-83.6190072!3m4!1s0x882355a2c9e29cb5:0xaaf592068692b984!8m2!3d42.422025!4d-83.6148888?hl=en

To locate the Midwest R/C Society 7 Mile Rd. flying field, site of the Mid-America Electric Flies, look near top left corner of the map, where the star marks the spot, near Seven Mile Road and Currie Rd.

Because of their convenient location and the easy drive to the flying field, the Comfort Suites and Holiday Inn Express in Wixom, MI have been added to the hotels' listing. They are only 10 miles northeast of the field and located near I-96 and Wixom Road. See the map-hotel .pdf for more details.

http://www.theampeer.org/map-hotels.pdf

Upcoming E-vents

July 9 & 10, Saturday and Sunday, 38th Annual Mid-America Electric Flies, 10 a.m. both days (Details in this issue.)

July 24, Saturday, 10 a.m. - 2 p.m., Giant RC Estate Sale, (details into this issue)

August 26 (Friday) and August 27 (Saturday), C.A.R.D.S. of Lansing 12th Annual Electric Fly (Details in this issue.)

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

March Monthly Meeting:
Date: Sat., July 9 & Sunday July 10, 2022 **Time**: 10:00 a.m.
Place: Midwest RC Society 7 Mi. Rd. Flying Field