

the

r
e
e
p
m
A

May

The EFO Officers

2012

President:

Ken Myers
1911 Bradshaw Ct.
Commerce Twp, MI 48390
Phone: 248.669.8124

Vice-President:

Richard Utkan
240 Cabinet
Milford, MI 48381
Phone: 248.685.1705

Secretary/Treasurer:

Rick Sawicki
5089 Ledgewood Ct. W.
Commerce Twp., MI 48382
Phone: 248.685.7056

Board of Director:

David Stacer
16575 Brookland Blvd.
Northville, MI 48167
Phone: 248.924.2324

Board of Director:

Arthur Deane
21690 Bedford Dr.
Northville, MI 48167
Phone: 248.348.2058

Ampeer Editor:

Ken Myers
1911 Bradshaw Ct.
Walled Lake, MI 48390
Phone: 248.669.8124

No Mailed Ampeer
Subscriptions

The Next Meeting:
Saturday, May 5, 10 a.m. MRCS Flying Field

What's In This Issue:

Is a 50 a 50? - Keith Shaw Birthday Party Electric Fly-in - The March EFO Meeting - Keith Shaw's New, Little Halberstadt DV - Belfort's Tri-Pacer Update - Analyzing What You Read - Upcoming Watts Over Wetzel - Upcoming Skymasters' Electrics' Over Lake Orion - Thayer Syme Joins 2 Brothers Hobby - Upcoming E-vents

Is a 50 a 50?

From Robert Fishwick via email
Vancouver, Canada

Hello Kenneth,

I have had my eye on an 80 inch WS Canadair CL415 ARF for some time now. I have loved this aircraft since the day, several years ago, when a friend and I sat on a mountain ridge and watched one scoop up water from the lake below and fly it down the valley where it dumped the load on a forest fire burning several miles away.

The aircraft ARF kit calls for a couple of 50-52 sized glow motors.

As you may know, one of the premiere glow motor manufacturers, OS, has started to manufacture, or market, a series of outrunners that directly replace glow motors that they manufacture. They have even given them the same numbers as their glow counterpart. There is a 50 sized outrunner and I was wondering if, in fact, I would need two of the 50 outrunners to power this amphib. From what I can see,

two six cell Li-Poly packs in parallel should do the trick for power and duration.

I know that I should give you the weight and all of the aircraft's info, unfortunately this is not at hand at this time but I was wondering if you had any information that confirms that these outrunners are plug in replacements for the glow motors.

All the very best to you,
Robert Fishwick

Hi Robert,

As I am sure that you are aware, the name of the motor means absolutely nothing, no matter who the supplier is.

I'm very aware of the OS outrunners, as I have the ".30" and a pair of ".25"s.

The ".50" is listed at Tower Hobbies (<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXBHES&P=7>) and on the OS Motors site (<http://www.osengines.com/motors/index.html>).

Bob Boucher was one of the first, if not the first, to name electric motors for their glow counter parts.

In a way, you'd think that it makes sense, but it doesn't.

The OS ".50" has the nomenclature of OMA-5025-375, but that still does not tell us much about the motor. For a good comparison, it needs to be translated to a universal nomenclature for comparing to other outrunner motors that have a similar glow designation and then compared to the typical, in this case, .50 2-stroke output.

The universal nomenclature that makes the most sense to me for outrunners is; diameter and length in mm then a dash followed by the Kv, and then a comma followed by the weight in grams.

The OS .50 then becomes a 5054-375, 405g. (Tower Hobbies actually has the length wrong on their information page. They did not subtract the 4mm thickness of the "+" mount.)

Tower Hobbies also sells another line of motors that uses the glow designation. The one closest to the .50 designation is the Rimfire .55.
<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXMHP5&P=ML>

In MY universal designation it is a 4260-480, 268g outrunner.

Horizon Hobby's E-flite line of outrunners also uses the glow motor designation. Their similar size is known as the Power 52.

<http://www.horizonhobby.com/products/power-52-brushless-outrunner-motor-590kv-EFLM4052A>

Using my universal designation it is a 5060-590, 346g outrunner.

The three motors, all ".50-size", are then designated as the;
OS 5054-375, 405g
Rimfire 4260-480, 268g
E-flite 5060-590, 346g

It is fairly obvious that two are of a physically similar size, but they all have different weights and Kvs, yet their suppliers have chosen to use nomenclature that indicates that they are ".50-size". Are they ".50s"?

A glow prop chart, that I use, can be found at;
<http://www.coastalplanes.com/tools/propchart.htm>. It shows that a .53 glow 2-stroke typically turns an 11x7 prop at between 10,000 and 11,000 RPM.

An APC 11x7 sport prop requires a power **out** at the shaft of about 635 watts when turning at 10,500 RPM (I picked the middle of the RPM range). Power **out** at the shaft is also known as shaft horsepower. That is a shaft horsepower (shp) of about $635 \text{ watts} * 0.00134102209 = 0.8515$ shaft horsepower.

A power system with a 75% efficiency (most common for these larger outrunners) would require $635 * 1.3333333 = 846.6$ watts in to provide 635 watts **out**.

A power system with 80% efficiency (most unusual or costly for these larger outrunners) would require $635 * 1.25 = 793.8$ watts in to provide the 635 watts **out**.

I found an ARF of a similar size to the one you described at NitroPlanes.

<http://www.nitroplanes.com/cacltw0en80n.html>

It has a wing area of 976.5 sq.in. and weighs 10 lb. (160 oz.) A **pair** of .52 glow motors with APC 11x7 sport props turning at 10,500 RPM would require an equivalent of about 1700 watts in (75% efficient power system) or 170 watts in per pound. The pitch speed for a 7-inch pitch at 10,500 RPM is about 69.6 mph. The stall speed for this particular model is about 18 mph. The pitch speed to stall speed ratio is about 3.87:1.

Many electric modelers, including myself, would feel that the watts in per pound, pitch speed and pitch speed to stall speed ratio are quite high and that a successful model would result if all of the numbers were lowered somewhat. With a pair of .50 glow motors on it, it would appear to be flying like a warbird.

Based on the model's wing area it is about 1/12.6-scale. Based on the wingspan the model is about 1/14-scale. Using the average of the model's wing area and span the scale is about 1/13.25-scale. A scale prop is about 11.8". These calculations show that 12" diameter props could be used and still clear the fuselage.

This information is important as electricians are more efficient when using larger diameter props.

The question still remains, when is a 50 a 50?

The O.S. .50 motor requires 10,500 RPM / 375 Kv = 28 volts **OUT** to be turning at 10,500 RPM.

635 watts **out** / 28 volts = 22.7 amps. 846.6 watts in / (22.7 amps + 2 amp no load current of the OS motor) = 34.28 volts in or a bit less than 10 Li-Poly cells.

You specifically asked about six Li-Poly cells. OS has a specifications chart for this motor.

<http://www.osengines.com/motors/specifications.pdf>

It shows that an APC 16x10E draws 43 amps when using a 6S Li-Poly (about 21 to 22.2 volts) or about 903 watts in to 955 watts in.

903 - 955 watts in certainly falls in the range of a .50-size power-wise. The problem is that you cannot use a 16" diameter prop. A higher Kv motor is required.

The E-flite .52 motor requires 10,500 RPM / 590 Kv = 17.8 volts **OUT** to be turning at 10,500 RPM. 635 watts **out** / 17.8 volts = 35.7 amps. 846.6 watts in / (25.7 amps + 2.3 amp no load current for the Power .52) = 30.56 volts in or a bit more than 8 Li-Poly cells. Horizon Hobby has no prop data available.

Your question was, can the O.S. .50 be a drop in replacement for a 2-stroke .50? The answer is, not really. Can it be equivlant to a .50 2-stroke, yes, but it can also be a lot more or a lot less. There is absolutely nothing in the naming of outrunners that is generally helpful when doing an electric conversion.

My Recommendation

At 10 lb., 1000 watts in (100 watts in per pound) usually provides better than adequate performance, but since this plane will most likely be flying off the water, let's go with 1300 watts in or 650 watts in per motor. Using a 75% efficient power system indicates about 487.5 watts **out**.

It appears that a 12" diameter prop should work, so an APC 12x8E should be about right. An APC 12x8E turning at about 8,850 RPM requires about 487 watts **out**. The pitch speed is about 67 mph.

How Many Cells?

I prefer to keep the amp draw under 50 and greater than 25 on planes this size.

This is how I figure the Kv for each cell count.

7S (3.7v * 7 = 25.9v under load) 650 watts in / 25.9v = 25 amps. I use a generic 2 amps as the no load amp draw of the motor, but some will be

higher and some lower. 487.5 watts **out** / (25 amps - 2 amps) = 21.2 volts out. 8,850 RPM / 21.2 volts = 417.5 Kv For the Kv range I go up and down about 5% - 400Kv to 440 Kv.

6S (22.2 volts, 29.3 amps underload), (487.5 **out**, 27.3 amps out, 17.86 volts out) 8,850 / 17.86 = 495.5 Kv Range 470 Kv to 520 Kv

5S (18.5 v, 35.1 amps under load), (487.5 **out**, 33.1 amps out, 14.73 v out) 8,850 / 14.73 = 600 Kv Range 570 Kv to 630 Kv

4S (14.8 v, 43.9 amps under load), (487.5 **out**, 41.9 amps out, 11.63 v out) 8,850 / 11.63 = 760 Kv Range 720 Kv to 800 Kv

Next I look at the weight range of the possible motors. I use 3 watts in per gram of motor weight as the lightest factor and 1.75 watts in per gram of motor weight as the heaviest. 650 watts in / 3 watts in per gram = 217g for the lightest motor and 650 watts in / 1.75 watts in per g = 371g for the heaviest to look at.

You specifically mentioned OS brushless motors. The OS OMA-5020-490 (5049-490, 350g), which they call a ".40", meets the weight and Kv criteria when using a 6S Li-Poly. It is on the heavy end of the weight range and will actually be "loafing" along at only 650 watts in, since it is rated to a maximum of 1110 watts in.

With about a 30 amp draw a 40-amp ESC should be sufficient and a 3000mAh to 3300mAh 6S Li-Poly will give decent duration.

My outrunner motor preference has been the Scorpion brand, mainly because Lucien Miller provides excellent service and has posted accurate 'real world' prop data on his site. I switched over to OS, partly because of the Scorpion price increase and partly because I was curious about them. So far I have had no problems with the OS motors. When their weight and Kv fit the application, I will continue to use them.

I hope you find this information useful.

Ken

Keith Shaw Birthday Party Electric Fly-in 2012

The Balsa Butchers will once again be hosting the “Keith Shaw Birthday Party Electric Fly-In” at their field near Coldwater, MI. The event will take place on June 2 and 3, 2012.

Contest Director: Dave Grife - E-mail: grifesd@yahoo.com or Phone: 517.279.8445

Please e-mail or call with any questions.

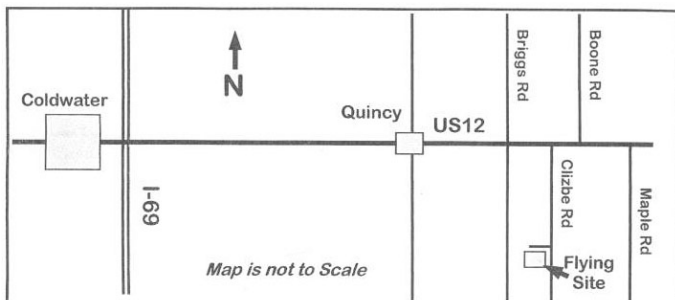
The Flying Field will be open Friday, June 1 for early arrivals

Saturday, June 2, hours are from 9 a.m. 'til 5 p.m.

Sunday, June 5, hours are from 9 a.m. 'til 3 p.m.

Landing Fee is \$10 for the weekend.

Directions: Quincy is approximately 4.5 miles east of I-69. Clizbe Road is approximately 1.6 miles east of Quincy. The Flying site is approximately 1.5 miles south of US-12 on the west side of Clizbe Road.



I love this meet. There is a lot of laid back flying with some of the best and friendliest fliers/builders around.

The March EFO Meeting

The March 15 EFO meeting was held at Ken’s house. It was a night of severe thunderstorms, giant hail and tornadoes here in southeastern Michigan. A few brave souls managed to make it to the meeting.

Roger Wilfong brought along his new Tactic AnyLink 2.4GHz Universal Radio Adapter (<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXBPKE&P=ML>) which came FREE with his Hobbico Fokker Dr.1 Micro EP Tx-R 14.1" (<http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LZ1272&P=ML>). It does NOT require the Futaba, Hitec, JR and Spektrum brand radios to

have an RF module, as the AnyLink attaches to the back of the transmitter via an “industrial grade” type hook-and-loop fastener. Futaba and Hitec transmitters must have trainer jack as the power is picked up via the trainer cord plug.

Roger has flown the Dr. 1 and noted that it seems to have a pretty noisy gearbox. Jim Young thought that a lot of the “noise” might be coming from the frame rate/low frequency ESC.



Next the vacuum forming machine was set up on the kitchen counter and **Jim Young** supervised and advised on the pulling of a canopy for **Denny Sumner’s** LoPresti Fury and Ken’s new, as yet unnamed twin.



It took several tries to get some “good” canopies. Denny’s successful canopy was pulled

after a styrene version was pulled, as shown on the previous page. He used the styrene version to create a cutting template for his final canopy.



Both of the photos come from Denny's build thread on RC Groups.

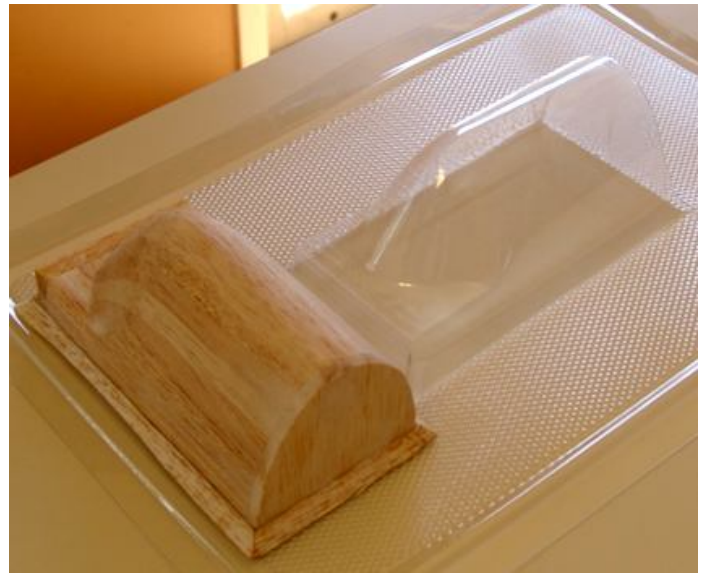
<http://www.rcgroups.com/forums/showthread.php?t=1511865>

Ken was not successful in pulling a clear canopy over a styrene version. For his final try, he "greased" the plug heavily with Vaseline. This produced a very usable version for him.

While the canopy pulling didn't go as smoothly as Jim, Denny and Ken had hoped, both Denny and Ken achieved very usable canopies and everyone learned a whole lot more about this process.



The photo shows Ken's canopy plug in rough form before sanding. It is made of 1/4" balsa cut to cross-section and then sanded to shape and filled with light-weight filler and sanded to final shape.



The meeting closed with refreshments and the video of the 15th Annual Mid-America Electric Flies.

There was a real sense of accomplishment for the evening. We should have seen Denny's plane in the air by the time you read this! **(Breaking News: Second place in non-military sport scale at Toledo!)**



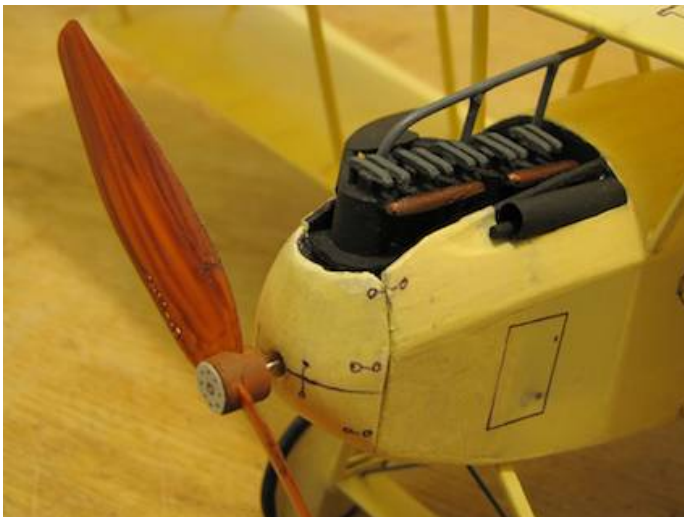
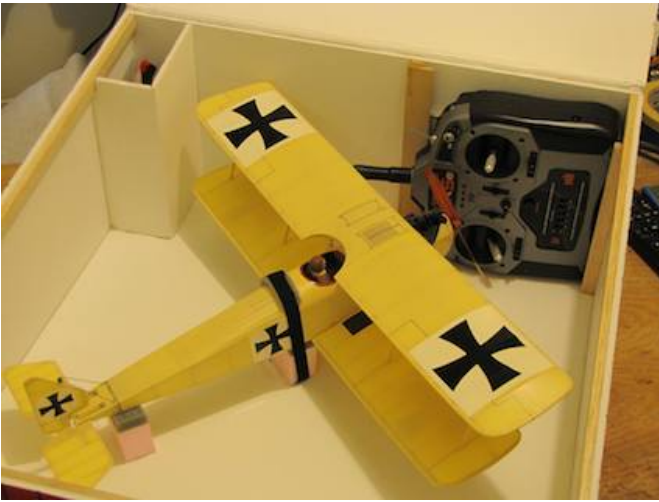
Keith Shaw's New, Little Halberstadt DV

While Keith was recovering from his surgery, he had a bit of time to finish up this nifty little guy. This is from an email sent to many of his "followers". Thanks, Keith. KM

I finished my small Halberstadt DV fighter. It has a 19" span and came out at 2.7 oz. I had to add 0.3 oz. of nose weight and carry a bigger 250 mAh

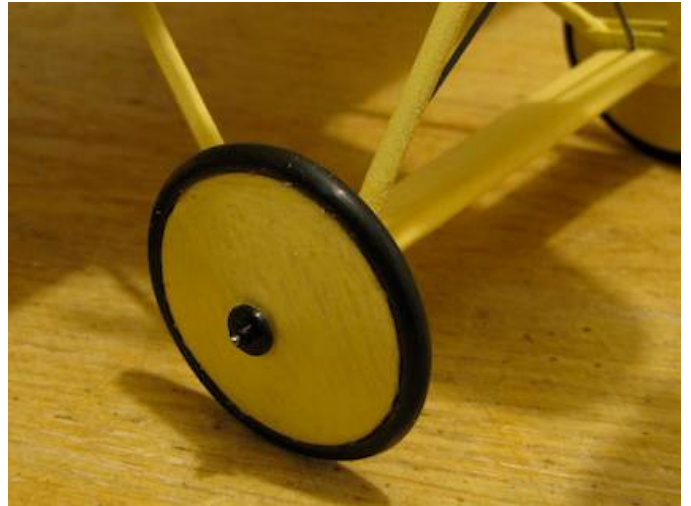
cell to get it to balance, mostly due to the ridiculously long tail moment of this design.

Some photos are included, including the scale hanger carrying case.



The first couple of short hops in the gymnasium were quite scary until I added the nose weight. It is much tamer now.

I put the scale all-flying tail on it and it was tough to cut the throw down enough. I'll just have to live with sensitive touch.



Also I had to make my own wheels as they are an odd size and/or too heavy. The wheels use an O-ring for the tire and weigh 0.1 oz each.

I am hoping this good weather holds (*mid-March KM*) as I would like to fly it outside to get used to it and see what aerobatic potential is available. Apparently we set a high temp record almost every day I was gone (*to the east coast KM*). It was the same as on the east coast, several days were in the 80s. That's ridiculous for this time of year, we should still have 3-4 weeks of snow yet.

Take care,
Keith

Belfort's Tri-Pacer Update



Hi Ken,

Had a great time at E-Fest but now I need to get back to work on the Tri-Pacer to have it ready for the MidAm.

Take care,
Don

Looks like it is coming along very nicely. KM

Analyzing What You Read

By Ken Myers

I never know how my day is going to go when I get up in the morning. I decided that I wanted to add as much data as I could garner from the “New” June 2012 *Fly RC* for my plane database.

<http://www.theampeer.org/new-power-theory/metricnewtheory.xls>

It should have been a fairly straight forward and easy process. Unfortunately, *Fly RC* has changed the amount of pertinent information it provides. This is not a good thing for me, as some of the reviews no longer provide the type of information that I am seeking.

The first review that I tried to gather data from was the Kondor Model Products Canadair CL-415 review by Cliff Becker, starting on page 70.

As usual, I scanned the SPECS box on page 72 to input the data. The data in my workbook is arranged by the wing cube loading (WCL) factor. I entered the reported wing area (492.3 sq.in.) and the reported weight (2 lb. 8 oz.) of 40 oz. and the spreadsheet showed a WCL of 6.33. Huh?

I redid the math with my calculator. $40 \text{ oz.} / (492.3 / 144)^{1.5} = 6.324$. Okay!?! The reported area wing loading was 12 oz./sq.ft. $40 \text{ oz.} / (492.3 / 144) = 11.7 \text{ oz./sq.ft.}$ Close enough.

The stated WCL 12.5 was in the range of typical twins. (See: Electric Twins: Are You Ready? in the March 2012 *Ampeer*

<http://www.theampeer.org/ampeer/ampmar12/ampmar12.htm#TWINS>)

A WCL of 6.3 put this plane in the range of typical parkflyers with WCL 5 to WCL 7.

I went to the Kondor Model Products (KMP) site to verify the information.

http://www.kmp.ca/product_info.php?products_id=272

The KMP site did not list a wing area, only the following information.

Wingspan: 55in

Length: 30in

weight: 1 lb 8 oz



KMP photo

I tried to see if the reported wing area was somewhat scale. Using information regarding the wing span and the fuselage length for the full-scale, I calculated that the model is about 1/20.5-scale. The full-scale has a wing of of 1080 sq.ft. An accurate 1/20.5-scale model would then have about 370 sq.in. of wing area.

Based on the supplier’s wing span of 55 in. the average scale chord would be 6.735 in. Obviously, the average chord of the model has to be greater than 6.735 in. to achieve Cliff’s 492.3 sq.in. $492.3 \text{ sq.in.} / 54.5 \text{ in. (Cliff’s stated wing span)} = 8.95 \text{ in. (chord)}$.

A fellow on RC Groups gave a measured area of 465 sq.in. and weight of 3 lb. for his version.

<http://www.rcgroups.com/forums/showpost.php?p=19192232&postcount=592>

The wing has tiplets. Whether the span or area of the tiplets is included in either calculation is unknown. What is apparent is that the designer has increased the chord in relationship to the full-scale.

In the thread on RC Groups about this plane <http://www.rcgroups.com/forums/showthread.php?t=1410952> the reported ready to fly weights range between 2.4 lb. (38.4 oz.) to 3 lb. (48 oz.) I believe the weight given by the supplier is the airframe weight only.

KMP lists this model in the category “Park Pilots” on their Web site. The WCL 6.3 does indicate that it flies like a Parkflyer, but the ready to fly weight (RTF) is not allowable under the AMA park flyer definition of “Park flyer models will weigh 2 pounds or less and be incapable of reaching speeds greater than 60 mph.” The

reported ready to fly weights indicate that this model exceeds the weight limit.

The props shown in the KMP photo show 3-blade props. The props shown in the *Fly RC* review show 2-blade props.

My spreadsheet indicated a low performance factor based on a combination of thrust and pitch speed to stall speed ratio. The pitch speed is quite low at the reported 7,400 RPM and reported 3.8" pitch and is only about 26.6 mph. With a pitch speed to stall speed ratio of only 2.1:1, that explains Cliff's statement in the IN THE AIR box on p. 72, "Loops are okay."

The rest of the data entry went very quickly. There were six propeller driven models reviewed, but only two others had sufficient data to be logged onto the spreadsheet. That was very disheartening.

This issue seemed to be less useful for me. It also seemed to contain less article space and more ad space. I like ads, but a bit more content would be appreciated. The magazine needs to return to publishing all of the useful information it had contained in the past.

Upcoming Watts Over Wetzel

The Radio Control Club of Detroit is having their Watts Over Wetzel Electric Fly-in on May 19 & 20, contact Mike Pavlock (586)-295-3053 or email wattsoverwetzels@gmail.com.

The WOW meet is on May 19 and RCCD is also celebrating their 60th Anniversary on Sunday May 20. Electric fliers are invited to join in the fun on BOTH days. The landing fee is \$10 a day or \$15 for both days. 8:45 pilots meeting and flying starts at 9:00.

More information is available at <http://www.rccd.org/WOW.htm>

Upcoming Skymasters' Electrics' Over Lake Orion

The Skymasters are also having a two day meet, June 9 and 10. The electric meet is on June 9 with a Pot Luck dinner at the field followed by night flying. Sunday June 10 will be Open flying with other Skymasters' members. The event starts at 10 a.m. on June 9 and will continue until Midnight. Contact Pete Foss email: petefoss@skymasters.org. For more information: <http://www.skymasters.org/events/flyers/electricfly.pdf>

Thayer Syme Joins 2 Brothers Hobby

Many of you know that Thayer is no longer editor of Fly RC and that Scott Stoops has also left Fly RC. Here is a press release from 2 Brothers Hobby & RC Flight Source. Thanks to Bob Aberle for the Press Release. Learn more at <http://2bfly.com> KM

THAYER SYME AND REGIONAL EDITORS JOIN 2 BROTHERS HOBBY

RC editorial coverage expands on both web and mobile platforms

COLUMBUS, OH; March 29, 2012 – We are very excited to announce that Thayer Syme has joined the 2 Brothers Hobby team as our Editor in Chief. In addition to the RC industry's #1 ranked mobile app and our expanding web experience, Thayer and his team of Regional Editors will be bringing editorial features, build projects, product reviews, event coverage and even more rich media content to the 2BFLY and RC Flight Source platforms.

Thayer is a life-long aviation enthusiast and modeler best known as the long-time Managing and Executive Editor for Fly RC magazine. He is respected for his honesty, objectivity and persistent drive to deliver the best product possible for his readers and advertising partners. Thayer has cultivated numerous key relationships throughout the industry over the years and brings with him the experience necessary to coordinate and enhance our content creation. An FAA-licensed pilot, Thayer is also passionate about the unique aircraft, colorful personalities and inevitable ties that bind the history of full-scale aviation to modeling. His strong publishing background and over 30 years of designing, building and flying models, make Thayer a valued addition to the 2 Brothers Hobby team.

Joining us as Regional Editors alongside Thayer are three prolific and well-respected RC writers, Terry Dunn, Steve Kessinger and Scott Stoops.

Thayer can be reached at thayer@2bfly.com or by phone at 203-617-9308.

Kurt Gornek | 2 Brothers Hobby, LLC. | kurt@2bfly.com
| 614-330-0397

About 2 Brothers Hobby, LLC. – Established in 2010, 2 Brothers Hobby is an independently owned and operated news and information resource, hosting the industry's most comprehensive Knowledge Base on RC flight and are the software developers of the #1 industry ranked mobile application, RC Flight Source.

Mid-America Electric Flies 2012

At the 7 Mile Road MRCS Field
5th Year at This MRCS Location!

AMA Sanctioned

Saturday, July 7 & Sunday, July 8, 2012

Hosted by the:

Ann Arbor Falcons and Electric Flyers Only

Flying Site Provided by the:

Midwest R/C Society

Contest Directors are:

Ken Myers phone (248) 669-8124 or

kmyersefo@theampeer.org

<http://www.theampeer.org> for updates & info

Keith Shaw (734) 973-6309

Flying both days at the Midwest R/C Society Flying Field - 7 Mile Rd., Salem Twp., MI

Registration: 9 A.M. both days

Flying from 10 A.M. to 5 P.M. Sat. & 10 A.M. to 3 P.M. Sunday

Pilot Entry Fee \$15 a day or \$25 both days
Parking Donation Requested from Spectators

Saturday's Awards

- Best Scale
- Most Beautiful
- Best Ducted Fan
- Best Sport Plane
- CD's Choice

Sunday's Awards

- Best Scale
- Most Beautiful
- Best Mini-Electric
- Best Multi-motor
- CD's Choice

Planes Must Fly To Be Considered for Any Award

Saturday's & Sunday's Awards:
 Plaques for 1st in each category

Open Flying Possible on Friday
Night Flying Possible, Weather Permitting,
Friday & Saturday Nights

Refreshments available at the field both days.

Potluck picnic at the field on Saturday evening.

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

Come, Look, Listen, Learn - Fly Electric - Fly the Future!

Merchandise drawing for ALL entrants

To locate the Midwest R/C Society 7 Mile Rd. flying field, site of the 2012 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.

The field entrance is on the north side of Seven Mile Road about 1.6 Miles west of Currie Rd. Address: 7419 Seven Mile Road, Salem Twp, MI 48167 - numbers are on the fence.

Two Hotels Added to the Hotel's List

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 northwest 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

May 19 & 20 Watts Over Wetzel, Radio Control Club of Detroit, contact Mike Pavlock (586)-295-3053 or email <http://www.rccd.org/WOW.htm>

June 2 & 3 Keith Shaw Birthday Party Electric Fly-In", Balsa Butcher's Field near Coldwater, MI, contact Dave Grife phone: 517.279.8445 email: grifesd@yahoo.com

June 9 and 10 The electric meet June 9 with a Pot Luck dinner at the field followed by night flying. June 10 Open flying with Skymasters' members. The event starts at 10 a.m. on June 9 and will continue until Midnight. Contact Pete Foss email: petefoss@skymasters.org . For more information: <http://www.skymasters.org/events/flyers/electricfly.pdf>

July 8 & 9 Mid-America Electric Flies, Midwest RC Society flying field, 7 Mile Rd., Salem Township, MI. Keith Shaw and Ken Myers CDs. Email Ken for info

Bill Brown & Bill Shaftmaster Honored



Bill Brown (far left), EFO member and Bill Shaftmaster were honored at the Pre-Horizon Toledo Meeting at the Ultimate Soccer Arenas on April 11. Joe Hass had cake and some very special early birthday surprises for these two active RC fliers. Bill Brown will be 91 this year and Bill Shaftmaster 94. We should all be active in the hobby for so long! Congratulations Gentlemen!



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

<http://www.theampeer.org>

The Next Monthly Meeting:

Date: Saturday, May 5, 2012 **Time:** 10 a.m.

Place: MRCS 7 Mile Rd. Flying Field