

guides the user through common tasks. Twenty-five interactive graphs highlight trends at a glance. Graphs and results are recalculated automatically with every data edit, encouraging experimentation and speeding up the learning process.

Designed as a set of workbenches, each component (motors, airfoils, etc.) can be analyzed independently. A consistent layout for each workbench makes knowledge transfer easy. More advanced workbenches for airplanes and power systems combine multiple components together.

Accuracy has not been Compromised

Dennis from Tracy, California says, "Wow, that's a pretty nice calculator. I input my TwinJet at my altitude and average temperature, and the max speed (level flight) is almost exactly what I measured! Very nice, and Great Job!"

Advanced Design and Features

The calculator and extensive component database reside on fast server networks in the United States and Europe. The calculator is no larger than popular homepages and loads very quickly. The user's data is saved every three minutes to the same server networks to prevent data loss.

The calculator requires no installation and runs on Windows, Linux and Mac OS X. It is very fast - the power system optimizer can analyze 40,000 configurations every second.

About RCadvisor.com

RCadvisor's goal is to help individuals design and build better flying model aircraft through the use of an advanced free online model airplane calculator. Founding RCadvisor.com in 2007, Carlos Reyes has had lifelong love affairs with airplanes and computers. He holds a Private Pilot-Glider Certificate from the FAA and has enjoyed flying model airplanes for many years. A Computer Science degree from Columbia University and 25 years of experience prepared him well to tackle programming the calculator.

Contact: Carlos Reyes
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Albuquerque, NM 87112-3037
Web site: <http://www.rcadvisor.com>
Email: carlos@rcadvisor.com
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Here are a few Screenshots:



Entry Screen and Chart

Sort Screen allows data sorting

Power System Optimizer Screen

Airplane	PowerSystem	Battery	SpeedControl	Motor	Gearbox	Propeller	Lo	
Inputs								
Name *	Sig Kadet Senior						On	Knobs
Wing Span *	78	inches						Throttle
Wing Area *	1,150	square inches						Airspeed
Wing Type *	Monoplane						Location	
Fuselage Length *	62	inches						Results
Flying Weight *	5	pounds						Wing Loading
Landing Gear *	Tricycle						Wing Reynolds Num	
Mission *	Trainer						Thrust	
Power System *	Sig Kadet Senior							
Edited By	guest							
Last Edited On	Wed Apr 30 2008 11:44:42 AM							

• The efficiency of the power system is low (43%). This can lead to overheating and reduced flight times. Review your component choices and examine the power system efficiency graphs to determine where the optimum efficiency region lies.

• The voltage of the motor is low relative to its current. The power losses are probably higher than they need to be. Examine the entire power system to determine whether this is acceptable.

Part of Main Screen Shown with Pop-up Advisor

You'll want to check this one out soon. KM

The May EFO Flying Meeting

The Saturday, May 10, EFO flying meeting was excellent in every way. There was a lot of flying on the beautiful Michigan spring day, one of only a few we've had this year!

We had all types of planes flying; EDFs, Scale, sport, wings, little ones, big ones and more. Everyone was in great spirits. What an absolutely wonderful day and get-together!

EFO member James Maughan sent along a few photos from that day. Thanks Jim!



An E3D Type on a fly-by



Bill Brown with his Taylorcraft



Rick Sawicki's Japanese Profile Canard



Ken Myers' Son of Swallow Mk II on a Fly-by

Specifications for the finished and flying Son of Swallow Mk II

Wing area: ~415 sq.in.

RTF weight: 1171.95g or 41.34 oz.

Wing Loading: 14.34 oz./sq.ft.

CWL: 8.45 oz./cu.ft.

Power System: Wrong Kv (1200) Hyperion Z3019-10, Castle 45 low timing, 3S1P A123 Systems 2300mAh pack, Master Airscrew 10x7 standard wood prop

Averages for 5 data captures on Hyperion Emeter 5 seconds apart on freshly charged pack.

Volts: 8.5

Amps: 33.9

Watts in: ~288

RPM: ~8500

Watts in per pound: 111.5

Theoretical pitch speed: 56 mph

Theoretical stall speed: 14 mph

Pitch speed to Stall speed ratio: 4:1

Performance Factor: 3.51 (see the May 2008 *Ampeer* for description of this term -

<http://homepage.mac.com/kmyersefo/ampmay08.pdf>)



Looking East



Ken's dragging the SOS Mk II in low and slow

A couple of the previous photos give an idea of what the field looks like for those planning to attend the 2008 Mid-Am on July 12 and 13.

Keith and I flew at this field the week before the EFO Flying meeting. He said that he would have no problem flying any of his planes there, so you can expect to see some of his "best" at the Mid-Am.

When we were flying, he could not stop praising the new Cellpro 10s from FMA Direct! He honestly feels that is great and highly recommends it. That is good enough for me! He's also replacing the NiCads in his planes many with the 26650 M1 cells from A 123 Systems, Inc. That's another "vote" for these outstanding cells.

Here are a few more photos of the Midwest RC Society 7 Mile Rd. Flying Field taken a few weeks before the flying meeting.



Looking West



Partial Flight Line Shot

The next EFO Flying Meeting will be held at the Midwest 7 Mile Rd. Field on **Saturday, June 21.**

This will allow members to attend The Keith Shaw Birthday Party Fly-in and the Skymasters' meet the first two weekends of June.

Smitty Gets the Shaft!

From Sterling Smith smitty559@comcast.net



Friend and EFO member, Sterling Smith, sent along the following info and photos of his new Shaft from Steven's AeroModel.

<http://www.stevensaero.com/StevensAero-SHAFT-400-Electric-RC-Airplane-Sport-Parkflyer-SA-KIT-SHAFT400-p-19120.html>

KM

Check out my new electric model (Shaft). It's a great kit. It is all laser cut and goes together just like putting an interlocking puzzle together. The kit is by Stevens AeroModel.

Wing Span: 39"

Length: 35"

Area: 340 sq. in.

Weight: 17.5 ounces ready to fly

Wing Loading: 7.41 oz./ sq.ft.

Motor: Hacker A20-20L

Prop: APC 10x4.7SF

Battery: Thunder Power 1320 mAh Li-Po



Miss Texas

From Dan Bono DBono99@aol.com

Dan and I have been exchanging emails on the Swallow/Son of Swallow and various power systems. He's completed a Miss Texas, which is similar in size to the SOS, and here is the info he sent. KM



Hi Ken,

Your SOS looks really good. When do you get to fly it?

I'm sending you some pictures of the almost finished Miss Texas. I haven't run the motor yet, so I don't have any numbers. It will be awhile before I get to fly the Miss Texas.

The wingspan is 46-inches and it has a wing area of 365 sq.in. That gives it a wing loading 16.6 oz./sq.ft. with an all up weight (AUW) of 42 oz. The motor is a Hyperion Z3013-16 with a Titan 50 amp ESC. The APC 10x7E or 11x7E will pull the amps from a Grayson 3S1P 4100mAh Battery.

Dan

PS I had it out in backward yesterday and it kept on tipping over. I did manage to break two of the stringers in the turtledeck already. I will deal with THEM after the 1st flight.

And in a follow-up email

Here are the numbers I got with the Hyperion Z3013-16 and Titan 50 amp ESC. All batteries are 3s4000, different discharge rates

APC 10x5E

21 amps/217 watts--Skyshark 10/c

21 amps/239 watts--Grayson 12/c

25 amps/280 watts--MaxAmps 20/c

APC 10x7E

25 amps/240 watts— Skyshark

27 amps/280 watts— Grayson

30 amps/335 watts--MaxAmps

I first tried an APC 11x7E, but it was drawing way too many amps for the Z3013-16.

More on the FMA CellPro 10S



Graphic from the FMADirect Web site

Earlier in this issue I noted how much Keith Shaw really likes this charger. On May 1, 2008 I received an email from Bob Aberle that his review had been posted. Here's what Bob had to say. KM

Ken,

<http://www.masportaviator.com/ah.asp?CatID=7&ID=202> is my online review of the new FMA/Revolectrix 10S Charger that was just posted to the SPORT AVIATOR Web site. This has to be the best charger there is on the market.

The best features include charging up to two 5-cell packs at the same time and charging up to a 3C (20 minute) rate. Also, something that is right up your alley, there are all kinds of download capabilities.

Bob

To whet your appetite to follow up by reading this article, here are two quotes from his summary on the Web site mentioned. KM

“The FMA Direct CellPro 10S is certainly the state-of-the-art (2008) in lithium battery charging. If you haven't as yet bought a lithium battery charger, you should consider the 10S for your first and only charger. If you already own a CellPro 4A, there is still rationale for purchasing the new CellPro 10S charger. The higher charge current, larger number of cells, the ability to charge two packs simultaneously, to charge at up to a 3C rate in twenty minutes and to establish pre-set charging conditions make this charger one of the best offerings to date.”

“But if you want the best and want it all, the new CellPro 10S (Catalog No. LC10S10ADC) at \$189.95 (plus the optional \$19.95 PC interface cable) makes even more sense. In my case, this is now my primary lithium battery charger.”

Large Electrics from California

From Don Hofeldt bladerunner1955@verizon.net

Thanks for your great Web site and information. I always like to see it in my inbox.

Here are a few of our larger electrics that a couple buddies and myself are flying these days thanks to the AXI motors. I'll stick a couple address you can copy and paste to view.

P-51

<http://www.youtube.com/watch?v=KW58ZfS7xbg>
AT-6 & P-47

<http://www.youtube.com/watch?v=RNTAhicEtBU>
Hangar 9 Pawnee

<http://www.youtube.com/watch?v=mQ0WnGHkEdY>
FW 190

<http://www.youtube.com/watch?v=m3pRFtBAWVE>
Stinson

http://www.youtube.com/watch?v=8x0mFuR_Nz8

Let me know how ya like these.

Don Hofeldt the electric guy from Huntington Beach California

I liked the videos and planes a lot! Maybe you could send the info and some stills of them to share with others. ☺ KM

A Miss Kitty

From Randy Smithhisler
Randy.Smithhisler@PACCAR.com



And More on the 26650 M1 Cells from A123 Systems, Inc.

From John Riese jriese@hotmail.com

Ken,

Thanks for passing along the newsletters. They have really come in handy.

I just purchased my first Lithium battery pack of any kind. It's a 6-cell A123 type pack from Pete Peterson (Model Electronics). I have charged it only once (on a new Astro Flight A123 charger) and did some balance and taxi tests. I will be installing it in my "Miss Kitty" (Bob Benjamin design) and flying it at the Celebration of Silent Flight event on May 3rd and 4th.

I was previously using a 20-cell NiMH pack. The model now is 28 oz lighter. I'll let you know how it goes.

Best regards,
Randy Smithhisler

An Indoor SE5a

From Paulo Faustino chispas@sapo.pt

Hi, Ken.

Always a pleasure to hear from you and your fine magazine. Hope your Mid-Am goes well.

Here is my latest indoor, an SE5 for the Minium electronics. It came well at 20,4g and 4,2Dm².

I send you a photo and a video. More photos on <http://fotos.sapo.pt/chispas> and the video is also at <http://br.youtube.com/watch?v=rmLR7cAFK4o>

Best regards.
Paulo Faustino

Hi Ken,

The latest *Ampeer* was interesting. I spend most of the day on rcgroups following the A123 charge thread. Isn't this reverting back to the early days of electric with the windup chargers before the peak detector stuff came out? (*I'd say so, but to me it is pure and simple KISS. © KM*)

I finally got the Astro 19 flying in a plane. It gets really hot but doesn't seem to hurt it. I read somewhere that the cobalt magnets are good for 200 degrees C.

I had the speed control cutoff set at 9 volts as I was using both 3-cell LiPo and 4-cell A123 packs. When the A123s reach that voltage there is nothing left! Usually one can stretch the glide by throttling back and creeping up on the power after a shutoff (Castle Creations control) but not in this case. Didn't even have enough to taxi after landing. When I charged the battery the Astro 109 put 2.3 amp hours into the 2.2 AH battery!

Soon as I get the Eagle Tree software installed on my new computer I'll record a flight and see how hot the motor really gets, and the current draw.

Astro Flight says 25 amps max but I'm sure it's closer to 30 with an APC 9x4.5E on 4 A123 cells.

Electricalc predicts that the climb rate with a 10x5 on 3 Li-Pos is about the same as a 9x4.5 on 4 A123s, but the top speed is slower, which is about what I have found out in flight tests. The plane is a high wing old-timer type with a thick wing; I like the fact that Electricalc takes the airfoil type and drag into account when calculating top speed. I think some other programs seem to give pitch speed only, without

taking the model characteristics into consideration, but I may be wrong.

The extra voltage of the A123's made up for the higher wing loading. They weigh twice as much as the 2100 ThunderPower Li-Pos but they seem to be more tolerant of abuse.

BTW, Electricalc also says that the Astro brushed 035 geared has about the same performance, but with higher efficiency. I have one that I might try to see if that is true. They say that the big breakthrough has been the brushless motors but I think it's the lightweight low internal resistance batteries. Maybe if one compares cheap brushed motors to brushless... Then I hear that the cheap brushless motors are not very efficient. Can't keep up with all the info.

I took the plane to a meeting of my R/C club thinking it would generate interest. They were more concerned about how much of a discount the local hobby shops give club members on ARFS than building their own planes. Thirty years ago "ARF" was what Orphan Annie's dog said.

I'm still looking at putting the motor in a flying boat. Now that I see how hot in gets I'll probably just leave the motor exposed with maybe a tail cone to enclose the wires.

Thanks again for the good info,
John in Kalifornia

Mid-America Electric Flies 2008

At the 7 Mile Road MRCS
Field

Note the new field location!

AMA Sanctioned

Saturday, July 12 & Sunday, July 13, 2008

Hosted by the:

**Ann Arbor Falcons and Electric
Flyers Only**

Site Provided by the:

Midwest R/C Society

Your Contest Directors are:

Ken Myers phone (248) 669-8124 or
KMyersEFO@aol.com –

<http://members.aol.com/kmyersefo/>

Keith Shaw (734) 973-6309

Flying both days is at the Midwest R/C Society Flying
Field - 7 Mile Rd., Northville Twp., MI
(see map on map-hotels flyer)

Registration: 9 A.M. both days

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

Channels 00 through 60, the six 27Mhz frequencies, & eight 53MHz frequencies, will be in use. Flying on five 49 MHz frequencies may be accommodated on request - Narrowband receivers are recommended for flying on Channels 00 - 60 - Very Wideband 27, 49, & 53 MHz, receivers may be accommodated on request – 2.4Ghz controlled at impound

Pilot Entry Fee \$15 a day or \$25 both days - - - -

Parking Donation Requested from Spectators

Saturday's Events

All Up - Last Down

(No Li ion, Li-Po, etc.– NiCads or NiMH only in

AULD – any size motor)

Best Scale

Most Beautiful

Best Ducted Fan

Best Sport Plane

CD's Choice

Sunday's Events

Best Scale

Most Beautiful

Best Mini-Electric

Best Multi-motor

CD's Choice

Planes Must Fly To Be Considered for Any Award

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

Refreshments will be 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!**

Saturday's & Sunday's Awards:

Plaques for 1st in each category

Merchandise drawing for ALL entrants



To locate the Midwest R/C Society 7 Mile Rd. flying field, site of the 2008 Mid -America Electric Flies, look near top left corner, 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, Northville Twp, MI 48167-9126 - numbers on the fence
Mid-America Flies Hotel List – 2008 Please call the hotels for current rates

Photo of Entrance to New Site off 7 Mile Rd.

Novi Hilton
 21111 Haggerty Rd.
 236 rooms
 800-445-8667
 248-349-4000

Sheraton Oaks
 27000 Sheraton Dr.
 206 rooms
 248-348-5000

Travelodge Detroit
 21100 Haggerty Rd.
 124 rooms
 800-578-7878

Detroit Marriott Livonia
 17100 Laurel Park Dr. N.
 227 rooms
 800-228-9290

Hampton Inn Northville
 20600 Haggerty Rd.
 125 rooms
 800-426-7866
 313-462-1119

Wyndham Garden Hotel
 42100 Crescent Blvd.
 152 rooms
 800-222-4200
 248-344-8800

Holiday Inn Livonia
 17123 Laurel Park Dr. N.
 225 rooms
 800-465-4329
 313-464-1300

Hotel Baronette
 27790 Novi Rd.
 149 rooms
 248-349-7800

Days Inn Livonia
 36655 Plymouth Rd.
 72 rooms
 800-325-2525
 313-427-1300

Comfort Inn Livonia
 29235 Buckingham Ave.
 112 rooms
 800-221-2222
 313-458-7111

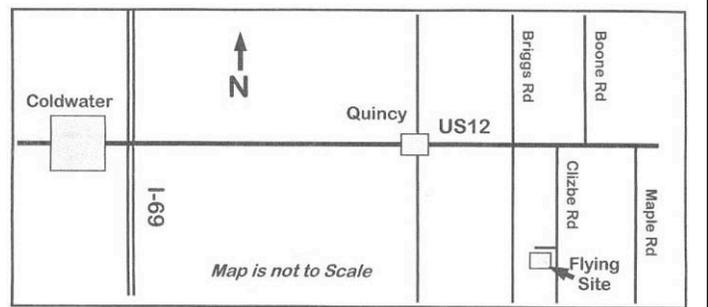
Ampeer Paper Subscriber Reminder

When subscribing to or renewing the paper version of the *Ampeer*, please make the check payable to Ken Myers. We do not have a DBA for the *Ampeer* or EFO. Thanks, Ken

Upcoming E-events:

May 31 Ravenna Thunderbirds Night Fly, Club Field at Jetway Airpark, 7600 Peck Road Ravenna, OH, Bob Ferrante CD PH: 330-297-8955, www.ravennathunderbirds.com, \$5 registration, Night fly, open flying starts at 7 pm till midnight. Bring your night equipped airplane or heli. Glow and Electrics welcome.

June 7 & 8 Keith Shaw's Birthday Electric Fly-in, Quincy (Coldwater area) MI, CD Dave Grife, for info email Dave at grifesd@yahoo.com, or phone 517-279-8445



Balsa Bashers Flying Site – map not to scale
Lots of Fun for Everyone. ☺

June 14 Skymasters R/C Club Electric Fly, Bald Mountain Scripps Road Field, 10 a.m., No Landing Fee, For more info Pete Foss 248-236-0676 or visit www.skymasters.org

June 21 EFO Flying meeting, 10:00 a.m., Midwest RC Society 7 Mile Rd. Flying Field (EFO meeting)

July 5 5th Annual Norm Hills Memorial Electric Fly-In hosted by the Jersey Coast Sport Fliers (AMA 1265), Dorbrook Park, in Colts Neck, NJ. info on the fly-in, including directions at www.jcsportfliers.org. CD Rob Kallok, phone: 732-263-1561 or rob.kallok@comcast.net



The Ampeer/Ken Myers

1911 Bradshaw Ct.

Walled Lake, MI 48390

<http://members.aol.com/kmyersefo>

The Next Flying Meeting:

Date: Saturday, June 21 **Time:** 10:00 a.m.

Place: Midwest RC Society 7 Mile Rd. Flying Field

Please NOTE the PLACE!