

Ampeer

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Ampeer subscriptions are \$10 a year US & Canada and \$17 a year world wide.	The Next Meeting: Date: Thursday, February 1 Time: 7:30 P.M. Place: Ken Myers's house (weather permitting)	

What's In This Issue:
 Park Flier Gear Boxes – Word to the Wise About Trexler Wheels – Give Your Plane a Pitch – Casa 212
 Aviocar – Upcoming Freeze Fly – Electric NATS 2001 – MiniStreak is Back – Graupner Eindecker –
 New EDF Kit Available – Upcoming VA Meet – Super Decathlon 40 – Upcoming Triad Weekend –
 Recommendations For Electric Powered Flight Systems

The January EFO Meeting

What a successful and timely EFO meeting. The meeting started with general information and plane talk. Don Skiff showed his beautiful new Four Star conversion, which features him as the pilot. The meeting then moved to the basement where we all learned how to use the Charlie White hammerhead soldering tip in Ken's new Weller SP40L iron. We also learned how to use Ken's new crimping tool to crimp Anderson Power poles. Several club members noted that this was a very successful evening, since they were just

about to make up some packs.

After the packs were made, we went back upstairs and got into quite a discussion on a "Mystery Plane" in RC Report.

We finished up the evening by flying planes on Ken's computer with the new R/C simulator, Cockpit Master.

I'd forgotten to get Don's info when he was here, as well as take a picture, so he emailed me the following:

Notes from Don on his Four Star

I've followed a number of e-modelers in electrifying the Sig Four-Star-40. I'm using an Astro Flight 25 with standard 1.7:1 gearbox and 16 cells. The plane is pretty



much stock except for a carved balsa nose and a hatch on top for access to the battery tray over the wing. I also opted for open cockpit design (the molded canopy supplied with the kit just didn't seem right on a boxy 1930-design airplane! And with the high grass I usually fly from, I mounted 4 1/4-inch wheels--from an old baby stroller I found. Inside the fuselage, there's barely enough width for inline battery sticks, not enough for my usual parallel-cell packs. Our stick-pack-soldering workshop at the last meeting was just in time!

My first aileron model--can't wait to get it up.

After Rick left, I'd sent the URLs for some sites we'd talked about at the meeting. Rick sent back the following:

The Mystery Plane

Here's the scale site we looked at at the meeting and another one as well. Both provided by Keith.

<http://robertlundin.www5.50megs.com>

Also look at www.acf.clara.net this has more civilian stuff

Here is the Senior Kadet site I talked about: <http://members.nbc.com/robbron>

Here's the info about the planes we were talking about, Rick Sawicki sent it over that same evening.

Hi Ken, very interesting and helpful meeting. I received my RC Report today, but did not look at it prior to the meeting. After hearing Richard's description of the aircraft, I just had to look at it to see if I knew its identity. Interesting, ...the magazine says it is "difficult and challenging ." WRONG the three views shown are of the "General Motors P 75 Eagle." Construction started late 1942 and utilized many existing parts....p -51 Mustang outer wing panels....Douglas A -24 tail assembly...F4U-Corsair landing gear assy....etc. It had a mid-ship engine like the P-39. Counter-rotating props were required to harness the power of an Allison 24 cylinder engine...approx. 2900hp. Only 5 built...one is in the rear annex at Wright Paterson Museum. I am quite familiar with the aircraft since I drew it up 35 years ago for a semi-scale control line stunter. There... now we know what the "difficult" mystery plane is. If you have Richard's web address please feel free to forward this info back to him.

Now you can help me...please don't forget to send me the URL of the "Walk around" web site we were looking

at earlier today...thanks...Richard Sawicki

PS....XP-47H...utilized the Chrysler 16 cylinder inverted V engineXP-72 (last T'bolt variant) utilized the P+W R-3480..28 cylinder and 3450 hp. Vs base T'bolt with 18 cylinders 2300-2800 hp. I hope all of this "useful?" knowledge helps.



Here is a picture of the gear that we used and the packs we created. The completed pack is a 9-cell Sanyo 1250SCR pack for a Herr Mustang. The two three cell sticks will be mated to another cell to make another 7 - cell Panasonic 2000NiMH pack for the X -250.



should be able to get it at your local hobby shop, since it

I've had a chance to "play" with Cockpit Master a little more. I have found out how to change the parameters of the planes for different electric power systems. I have to say that the planes fly just like I expect them to. If you've been thinking about a R/C flight sim, this could be the one for you. It is built with electrics in mind from the get go. You

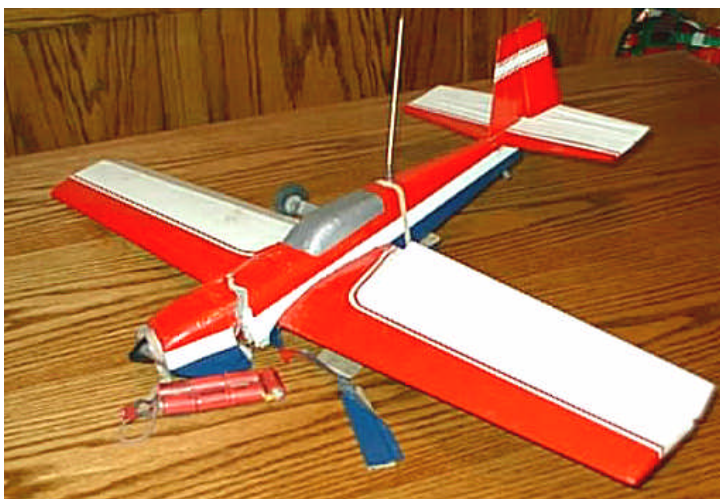
is distributed by Multiplex. Here is some information you might find helpful:

Cockpit Master
Radio Control Model Flight Simulat or
MachineWorks Northwest LLC
Distributed by Multiplex USA
Visit: <http://www.critterbits.com> and
<http://www.cockpitmaster.com>

For more information

Lost Plane Found

Here is a photo of a plane that was lost at the Mid - Am 2000. Obviously, it has been found. If it is yours, could you please give me a call at 248.669.8124.



Hobbico Press Release – Park Flier Gear Boxes DESIGNED WITH PARK FLYERS IN MIND

ElectriFly gearboxes from Great Planes are real "efficiency-boosters" for the smaller 280-size electric motors that are popular with today's Park Flyer airplanes. They maximize battery capacity for longer flight times, while allowing you to utilize bigger props as well. These gearboxes are available with economical bushings (standard) for long-lasting sport use, or with ball bearings for smoother, all-out performance. You can choose from several different ratios; all are compatible with APC's lightweight, durable Slo-Flyer propellers.

GPMG0200	Gearbox S280 5:1 Std.	\$14.99
GPMG0201	Gearbox S280 4.5:1 Std.	\$14.99
GPMG0202	Gearbox S280 4.1:1 Std.	\$14.99
GPMG0203	Gearbox S280 3.8:1 Std.	\$14.99
GPMG0204	Gearbox S280 3.5:1 Std.	\$14.99
GPMG0210	Gearbox S280 5:1 BB	\$19.99
GPMG0211	Gearbox S280 4.5:1 BB	\$19.99
GPMG0212	Gearbox S280 4.1:1 BB	\$19.99
GPMG0213	Gearbox S280 3.8:1 BB	\$19.99
GPMG0214	Gearbox S280 3.5:1 BB	\$19.99
GPMG0220	Gearbox S400 1.7:1 BB	\$16.99

A Word to the Wise About Trexler Wheels

From: Plenny Bates plennyb@home.com

Ken,

The inside of the inflation tube/valve of the Trexler wheels can stick to itself. To prevent this, NEVER inflate by mouth and load the inflator bulb with some talcum powder. Occasionally pump the tire up with the inflator outlet pointed down loading some talc into the tire. This keeps the inside of the inflation tube/valve coated with talc which prevents it sticking to itself. Deflating the tires at the end of every flying day is also a good idea. We all know how important it is with car and truck tires to inflate to the proper pressure. For the Trexlers I made a "solid state" "tire gauge." It is really a "C" shaped piece of plywood with the limbs of the "C" 4.5 inches apart for the #11 - G wheels. When the tire touches both sides of the caliper it is properly inflated.

Give Your Plane a Pitch

From: Grant Calkins CasinoOp@worldnet.att.net

My SR Batteries (<http://www.srbatteries.com>) X - 250 has a 480 geared drive, 8x5 ATP plastic prop, and 7x2000 mAh NiMH power. Flying was adequate, but only so. Thrust was OK, but speed was lacking. At higher altitudes (the Edwards AFB site is about 2600 ft) flying was barely adequate, and folks urged me to use a larger motor with direct drive. I thought about it, but instead decided to try a prop with more pitch.

I bought an 8x6 wooden prop.....and what a difference! Same plane, same motor, etc, but much more spirited performance. And I'm still getting 12-13 min flights. Now, all the other flyers gather around the plane after a flight to admire, ask questions, etc. Amazing what a little more pitch (and switching to wood) can do for a slow airplane.

Casa 212 Aviocar

From: Bertil Klintbom bkm@algonet.se

Dear Ken,
Thank you for your help on connecting twins. I am now doing some progress on my Casa 212 Aviocar. I



enclose photos of the model. The weight with Ni-cad, 2 servos, receiver and ESC still missing is only 810 g.

Upcoming Fort Wayne Freeze Fly

Our 4th annual Freeze Fly will be held on Saturday, February 17th, 2001 at our field just outside of Fort Wayne, IN. Heated clubhouse, VERY large flying field with no nearby trees or obstructions, and some hot food in addition. Mostly flying, but perhaps a few fun events too, if people are interested. For more information, go to the web page at: www.flyingcircuits.org/events/freezefly/index.html Any questions, write me. Hope to see you there! Thanks Pat Mattes, 9732 Lafayette Center Road, Yoder, IN 46798-9723 or email Pat Mattes at: Pat-Ingrid-Mattes@Juno.com

Electric NATS 2001

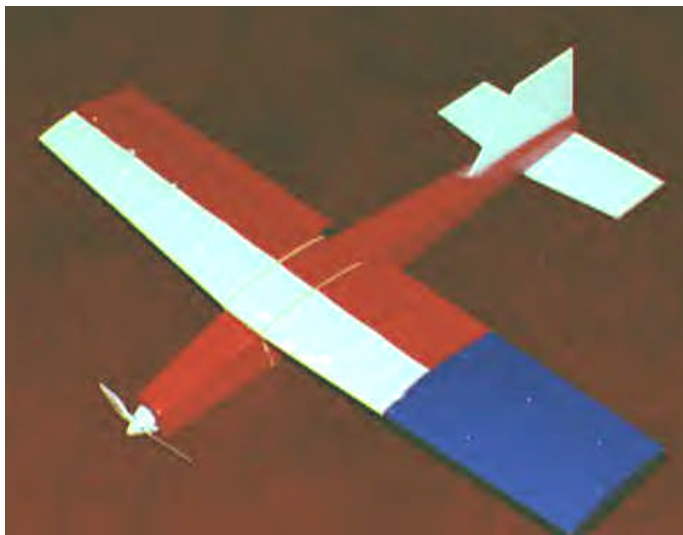
Word from Ralph Weaver is that the schedule and rules for the 2001 Electric NATs are now posted at www.electricaircraft.org.

His site is www.ralphweaver.com.

His MTI products site is www.magtechinc.net. He is chairman of the Electric NATS and a great source for Panasonic 2000 mAh NiMH batteries.

MiniStreak is Back

From: Tim McDonough <tim@mcdonough.net>



I'm pleased to announce that my Speed 400 MiniStreak design is back in production and ready for shipment. Those interested please check out my updated web page... <http://www.tim.mcdonough.net>.

Besides having the MiniStreak back in stock, Tim also carries the Flash E-74 Electric Ducted Fan, Kestrel Wind Speed Meters and his laser cut motor mounts for Speed 300, 400 and 600 motors.

Graupner Eindecker

From: Joe Hass joehass@cmconnect.net

Dear Ken:

Thanks for the positive comments on my Graupner Eindecker. I thought you might like the details.

The kit will definitely fly indoors with the recommended geared 280 power system. I flew it outdoors with this system but consistently got into trouble if there was any wind at all. After an all night session with the best super computer the US has to offer, making innumerable complex calculations, I came up with the power system you saw fly. It was that or I walked over to the shelf and picked out what I had on hand. It was definitely one of those.

Here is the combination:

Graupner	GR170518	Speed 400 Geared 1.85 to 1
Graupner	GR1270	Prop Adapter
Slim Prop	9" X 5"	Prop

The building sequence as written leaves a bit to be desired. For example the vertical and horizontal are to be glued to the fuselage before the fuselage is painted. Then they are to be hinged. Then the decals are put on. You get the picture. Just study everything and use common sense and it is easy to build. Apply the hinge tape and decals before the things get glued to the fuse.

The fuselage is painted with Krylon 7221 Canary Yellow Living Color Latex Enamel. This was the only paint I found that matched the wings and tail and was compatible with the foam. The cowl and the front of the fuselage were painted with Dutch Boy 3737 Aluminum Fresh Look Acrylic Enamel. This is not foam compatible but works over the Krylon and the ABS cowl. This aluminum paint makes the cowl look like a spun aluminum.

The geared Speed 400 needs to be mounted in a slightly different position in the foam. Simply use a razor saw and cut out the foam. I used 1/8 balsa epoxied to the foam to create a mount to screw the gearbox to. The receiver now goes between the servos with foam mounting tape. The 8 600AE in the form of a brick now goes where the receiver was previously located. This will all make sense if you had the plans in front of you. I

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Walled Lake, MI 48390

glued in a couple of balsa blocks with a removable piece of 1/8 X 1/4 spruce wedged in to hold the battery in place. The speed control (I used the Castle Creation Pixie 14) floats between the firewall and the first bulkhead.

Other mods include a balsa reinforcement lengthwise on the hatch with a small balsa handle on the back. I cut 2 holes in the hatch to get a little air through the battery. I also epoxied the wheel bushings to the wheels and created a small fillet to spread the landing loads. The wheels are finished with a coat of Krylon yellow followed by black fine line Sharpie to create the separation line, then a wide marker to color the rest.

You may have noticed how the decals looked. I used a soapy solution to get them in position (they are very fragile) after at least 24 hours of drying I applied a product called SOLVASET (Walthers Co., Milwaukee, WI). Solvaset is used by train guys to make decals conform to complex surfaces. After you put it on the decals look like they are melting. A couple hours later they have sucked into the surface and look like they are painted on. The trick is to make sure the decals are completely dry before you start.

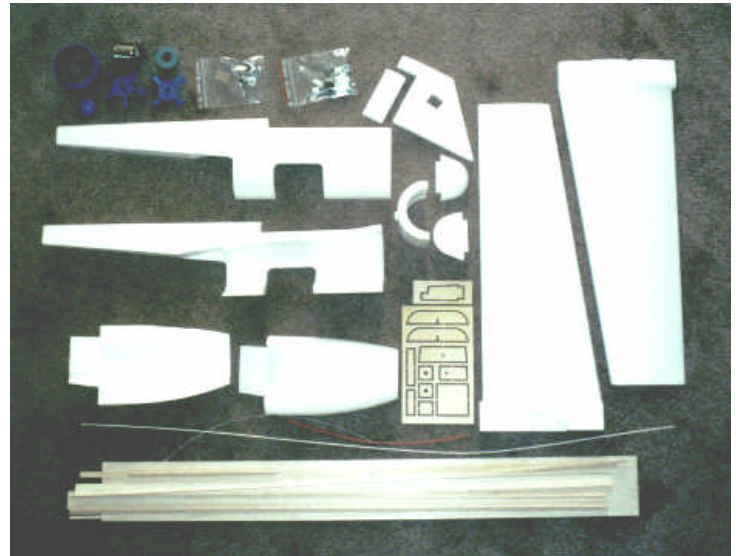
I use lots of control throw with lots of exponential to soften the neutral. The speed 400 allows instant take offs and will get you out of trouble if your outdoors. I get 5 minutes outdoors and 7 to 8 minutes inside. Circling around on one wheel is a trip. Next time you're out at the dome you can fly it.

I now have a building service. We are advertising in Michigan R/C Flying Times and R/C Report. If anyone is looking for a custom built aircraft have them give me a call at 248-601-1707 or e mail at joehass@cmconnect.net.

New EDF Kit Available

From: Mark Nankivil nankivil@flashcom.net

photos on a EDF model and power package I am importing from Switzerland. The model is called the Flash E-74 and comes complete with fan unit and motor. The airframe is primarily a molded fine grain EPS foam with some wood for structural purposes and for the turtledeck and horizontal stabilizer. The specs on the Flash are:



Wingspan - 45 inches

Length - 34 inches

Wing Area - 330 square inches

Weight - airframe with a 4 cell 110mah nicad pack, 1

HS-60 servo, 2-HS-80 servos, 30 amp Jeti ESC and

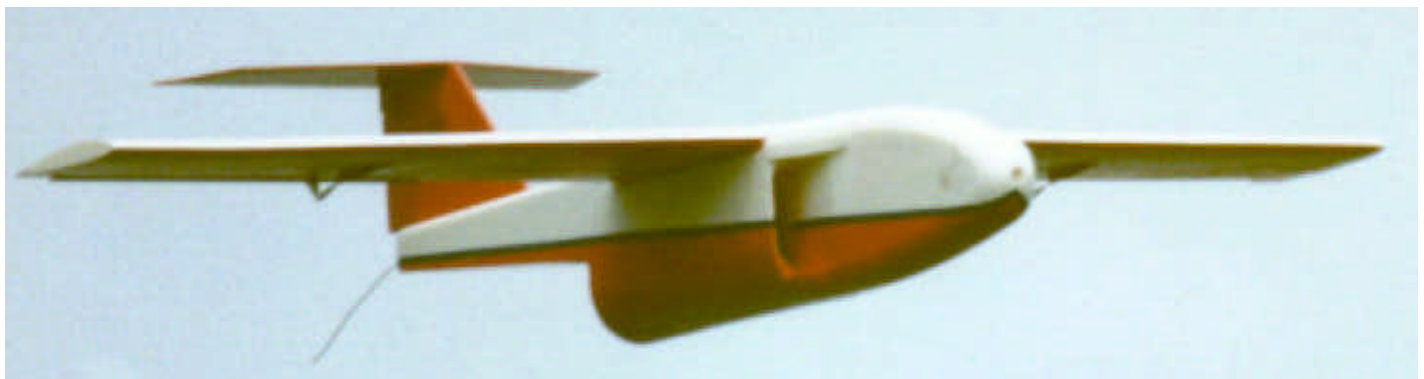
Hitec 555 receiver - 28.3 ounces

weight of 10 cell 2000 mAh NiMH Pack - 15.1 ounces

Total Flying Weight - 43.4 ounces

Wing Loading - 18.86 ounces/sq. ft.

The complete kit is available from David Roberts of EAM at: <http://eam.net/>



Greetings Ken!

I wanted to pass on to you some information and

or from Tim McDonough of Electric Flight Products at: <http://www.mindspring.com/~tmcdonough/>

or direct from me at nankivil@flashcom.net

The Flash EDF power package is now available as a separate item for those of you who like to scratch-build or would want to re-fan your Kyosho T-33 or F-16. The specs on the power package are:

- Rotor Diameter - 74 mm
- Thrust - on 10 cells (1250SCR or 2000NiMH cells) is 24 ounces on 12 cells (1250SCR or 2000NiMH cells) is 28 ounces
- 4 blade impeller design
- Fan unit design allows for optimum cooling of the motor
- Specially wound motor with dual ball bearings. Housing is 500/550 size
- Fan unit with motor has an assembled weight of 8 ounces
- The power package includes a molded two piece foam nacelle



All parts are included to complete assembly of the motor and fan unit. All you have to do is wire up an ESC and add power! EAM and Electric Flight Products may be carrying these power packages by the time you read this, so check with them on availability. Otherwise, contact me directly. The power package costs \$115.00 which covers shipping as well within the US.

This is an excellent model with performance that you will be pleased with.

All-Electric Fun Fly June 16, 17 2001

From: Brad Tennant Btenn_10@aol.com

Dear Ken,

I wanted to let you know about a planned all-electric fun fly weekend coming up on June 16 & 17 this year. It will be at Fentress Navy Airfield in Tidewater, VA. Our

local flying club will be the sponsors and we will try to get the word out through the AMA magazine and word of mouth. This site has been used for Giant Scale and All Jet rallies in the past with good success. The field is only 1/2 hour drive from Virginia Beach, and should be very convenient for all the southern flyers that didn't want to drive 10 hours to the NEAT fair in New York this past fall. As the schedule gets firmed up, I will keep you posted.

PS- I have enjoyed the Ampeer immensely, keep up the good work!!!

Great Planes Super Decathlon 40

From: Greg Potter Potter.Greg@saugov.sa.gov.au

I have just finished a Great Planes Super Decathlon 40 in which I have installed a Tom Hunt H1000 Belt Drive with an Astro 25 installed turning a 13x10 MA Electric wood prop, a Gordon Tarling 40 amp ESC and 16 1700SCR cells. It looks great in Ford Flame Red with White and Blue star burst colour scheme. I have not flown it yet. I intend to take some photos before I do and hopefully some in flight (with someone else flying it of course).

Then came this follow-up:

The summer has been pretty warm so far. Today is 36C (almost 100F) but dry. I just spent 2 weeks in Queensland (NE Australia) where it gets almost as hot but with very high humidity - you feel like having a cold shower every 10 minutes. (*Humm, sounds like Michigan in the summer. KM*)

The Decathlon actually started as a 40 size sport - scale Corsair (Midwest kit) but when I got the motor and drive from Tom it was not going to fit nicely in the cowl, so I went hunting for something more suitable to the shape and size of the belt-drive.

I found the Decathlon (great Planes kit) at a local hobby store. The belt drive fits almost entirely within the cowl. The only protrusion is part of the motor pulley which pokes out just below the headlight location. It looks fine.

It came out a bit heavier than I would have liked (26 oz/sq.ft.) but I'm sure it's going to fly OK. Tom Hunt (who provides excellent service and advice as you would be aware already) and Electricalc have been most useful in deciding on the final configuration.

Greg Potter



Here are a couple of pictures of the CASA 112 under construction.

Upcoming Triad Electric Weekend

Coordinator: Dr. John Mountjoy

336.772.7609 or email jmtjoy@triad.rr.com

May 5, 2000 WSRC Field

CD: Nat Shepard

704.633.1788

Events:

Continuous Flying

All up-1st down (7 cells only)

Biggest Model

Smallest Model (must fly)

Pilots Choice

CD's Choice

Best Finish

Best Original

Best Scale

Two Min. motor run – Ten min. Max

“Wingo Racing” (Demo)

May 6, 2001 Rams Field

CD: Dr. Colin Mckinley

336.924.5890

Events:

Continuous Flying

2 min. motor run/10 min. flight

Best Scale

Most take-offs on a single charge in Ten minutes

Biggest model (must fly)

Smallest Model

CD's Choice

Pilot's Choice

“Wingo Racing” (Demo)

Best Original, Best Finish

Entry Fee: \$5.00 each day
Registration: 10:00 A.M. each day

Generators at both fields

Primitive camping at both fields

Both fields available Friday

Area Motels: *Mocksville, NC, Mocksville exit off I -40;
Comfort Inn (336.751.7310)

Clemmons, NC, Exit #184 and I-40; Equidistant from
both fields; Super 8 motel (336.778.0931), Ramada Inn
(336.776.9121), Holiday Inn Express (336.778.1 500)

*Contest Headquarters

Recommendations For Electric Powered Flight Systems

By Ken Myers

Forward

Over the years, I have been asked why I use a lot of “complicated” math when trying to explain how to select power systems for electric flight, especially since it is not an exact science. People have noted that no one seems to find this necessary for glow and gas powered models. My response is that it is **not necessary**, but it helps since the electric flight community is not as easily accessible for information as the glow/gas community of R/C fliers. Unless you are lucky enough to live in a few selected locations of the world, the chances of going to the local R/C flying field and locating someone with knowledge of electric flight is very slim. Using the following information puts an “expert” in the room while trying to figure out the power system for an electric flight project.

Today there are more choices for electric powered flight than ever before. People are now being introduced

to electrically powered models via slowflight and ParkFlyers. Manufacturers and suppliers are doing a reasonably good job with marketing electrically powered aircraft in this category. Many slowflight planes fly reasonably well with the recommended equipment.

Unfortunately for the person who wants to go to a R/C flying field and fly with the glow and gas fliers, the commonly available choices are still poorly executed. While the electric flight community knows where to get great electric kits and accessories, it is not yet general knowledge to the whole R/C flight community and hobby shops. It is the intent of this article to provide the knowledge necessary to create a radio controlled model aircraft that can be flown at a mixed power R/C club without the uninitiated observer noting that it is powered differently from the other models.

The math is not difficult and can be done using a simple calculator with square, square root and powers functions. Examples are given so that the reader can work the formulas through and see how the answers were derived. Using the following formulas is a straightforward way to predict a power system for successful electric powered flight success.

Electric Flight Takes Off

For many years, Dr. Keith Shaw of Ann Arbor, MI has led us through our electric flight endeavors. His landmark articles have provided the basis for successful electric flight for more than a decade and a half. His extremely successful planes, and skillful piloting, have moved thousands of people to try electrically powered R/C model aircraft. His basic formulas for success have spawned many computer programs and spread sheets to help in setting up aircraft for successful electrically powered flight.

I have been fortunate to know and fly with Keith for much of this time. I've also been privileged in being able to archive his landmark articles on the EFO site, thanks to Keith, Martin Irvine & the EMFSO and Model Airplane News.

The Articles:

“*Electric Sport Scale*” - Model Builder - July 1987

<http://members.aol.com/KMyersEFO/scale.pdf>

“*Electric Twins*” - Model Airplane News – December 1991

<http://members.aol.com/KMyersEFO/twins.pdf>

“*Building and Flying Electric Sport Scale*” - Transcript of Keith Shaw's presentation to the 1992 Electric Model Fliers of Southern Ontario General Membership Meeting, March 1992 – Transcribed by Martin Irvine of

Kingston, Ont.

<http://members.aol.com/KMyersEFO/shaw1.pdf>

“*Charging Into Electric Flight*” - Radio Controlled Sport Flying (from the publishers of Model Airplane News) - January 1994

<http://members.aol.com/KMyersEFO/chrg2ef.pdf>

A Lot of Beginner's Questions Remain Unanswered

Many people consider trying electrically power radio controlled flight after reading Keith's great articles or seeing him fly. Unfortunately, they are still confused about power systems and other components for electrically powered model aircraft. This is not Keith's fault. His writing is very clear. It is the unknown and vast variables of electric powered flight that cause many people to have some problems when getting into electrically powered model aircraft. Some of the variables include: Watts In, Watts Out, Volts, Amps, RPM, Motor Resistance, Direct Drive or Geared, Gear Ratio, NiCads, NiMH, ESC, BEC, Pitch Ratio, Battery Weight, System Weight, Radio Weight, Power to Performance Ratio, Type of Flying, Airframe Weight, Cost, Ferrite, Cobalt, Brushless, Sensor, Sensorless, System Efficiency, Motor Efficiency, Kv, Ra, Io, Kt, torque, thrust and on and on and on. It's amazing that any of us do this for fun at all!

Another area of confusion and disappointment is that the major suppliers of electrically powered aircraft are still not “doing it right”, except perhaps in the slowflight and ParkFlyer category. Manufacturers and suppliers have continued along the cheapest path with questionable recommendations for battery, motor and speed controllers.

Over the years, I have used many of Keith's formulas to make up spreadsheets to help me in recommending power systems and components for electric flight. I have published my thoughts and ideas in the *Ampeer* for years. Some have been confusing, some have been WRONG, and a few have been helpful.

Keith's Early Work

Much of Keith's early work was based on using Astro Flight brushed cobalt motors. All of his recommendations work very well when using these motors. When ferrite magnet motors and brushless motors are thrown into the mix, it gets interesting and even more confusing.

Acquired Knowledge

Over the years, electrically powered model builders and designers have created a general knowledge base about what works, just like the glow and gas fliers. Some of this general knowledge is available in the

modeling magazines and in the plane ratings found at <http://members.aol.com/KMyersEFO/page38.htm>.

Other Rules of Thumb

While trying to make life easier when using electric power, I have written many articles and a lot of dead ends you've never seen! The following is what I use and recommend today. Much of it is based on the work of Keith Shaw and Bob Boucher, Mitch Poling, Bob Kopski and Ed Westbrook for the motor and prop theory.

Keith's articles usually mention input watts, since they are easily measured. Unfortunately, when ALL types of motors are considered, input watts is not the "best" way to rate power systems. 150 watts of input power on a ferrite motor leads to a very different outcome than 150 watts of input power on a brushless motor.

For me, using **output watts** is the best way to compare and predict flight performance of various power systems. I use a general rule of thumb that gliders/old timers need about 35 watts of **output** per pound, trainers and high-wing planes about 45 watts **output** per pound and sport and sport scale types about 55 watts **output** per pound. Biplanes require about 50 watts **output** per pound, even though biplane wing loadings are less than trainers or light planes, their drag is much more. Twins and other multi-motored aircraft need to be looked at by performance type. Bombers and transports can use the 45 watts **output** per pound, while fighters and sport aerobatic types do better with at least 55 watts **output** per pound.

My Rules of Thumb 2001

Output Watts

low-wing, mid-wing or high-wing (performance types)

55+ watts output per pound

trainers and light planes (moderate performance types)

45 watts output per pound

powered thermal sailplanes and old-timers (low performance types) 35 watts output per pound * **note:** does not include high performance sailplanes and competition old-timers

biplanes 50+ watts output per pound

multi-motor planes based on desired performance for type (see above)

I do not fly slowflight, ParkFlyers, ducted -fans, helicopters or very high performance aircraft. Since I have very little personal knowledge in those areas, I make no recommendations about them.

Target Weights Based on Wing Area

The following formula and its **flight factor** is used when the wing area of the model is known or proposed. There are two **flight factors** for each type of aircraft. The first **flight factor** is used to set a target finished weight for the proposed project, and the second sets a maximum weight for decent and reasonable performance.

Flight Factors:

low-wing, mid-wing or high-wing (performance types), target 2.5, maximum 3

trainers and light planes (moderate performance types), target 2, maximum 2.5

powered thermal sailplanes and old-timers (low performance types), target 1.15, maximum 1.5

biplanes, target = 1.65, maximum = 2

Finished Weight:

Wing area in square feet = wing area in square inches / 144

Wing loading = wing area in square inches raised to the 1/3 power * flight factor

(**Note:** There are two different wing loadings used. The target wing loading sets the "desired" target weight of the project, while the maximum wing loading sets the "maximum" acceptable weight for the project.)

Finished weight = wing area in square feet * wing loading

(continued next month)



A grouping of Skyvolts; 4 05 size, one 25 size and one 40 size. Still a great plane and still available as plans from Model Aviation.

A Plea from Ken

As many of you may know, I've edited this newsletter for a lot of years. I could really use your help. Putting together the information is a lot of fun, putting together the physical newsletter, which means the copying, collating, stapling and stamping is NOT! If you receive the paper version, whether subscriber or EFO member, and can get it online, please let me know at KMyersEFO@aol.com so that I can reduce my time spent with the mundane by deleting you from the paper version. If you do need the paper version, it is my pleasure to provide it to you. HONEST!

Up Coming Events

February 16, 17, 18, 19 San Diego Mid-Winter Electrics, open flying on Monday (no events), indoor flying Friday and Sunday, info: www.sefsd.org or contact Bill Everitt: phone: 760.753.1055 fax: 760.633.2271 email: billeveritt@cs.com - Lots of events and demos - great winter break!

February 17 4th Annual Fort Wayne Freeze Fly, at our field just outside of Fort Wayne, IN. Heated clubhouse, VERY large flying field with no nearby trees or obstructions, and some hot food in addition. Mostly flying, but perhaps a few fun events too, if people are interested. For more information, go to the web page at: www.flyingcircuits.org/events/freezefly/index.html
Pat Mattes, 9732 Lafayette Center Road, Yoder, IN 46798-9723 or email Pat-Ingrid-Mattes@Juno.com

May 5 & 6 Triad Electric Weekend sponsored by the Winston-Salem Radio Control Club, Inc. contact: Dr. John Mountjoy 336.722.7609 or jmtjoy@triad.rr.com

June 16 & 17 All-Electric Fun Fly at Fentress Navy Airfield

in Tidewater, VA. The field is only 1/2 hour drive from Virginia Beach. contact: Brad Tennant Btenn_10@aol.com

July 7 & 8 TENTATIVE - Mid-Am 2001, watch this space after Feb. 3 for confirmation.

September 14, 15, 16 Neat Fair 2001 - Peaceful Valley Campsite in Shinhopple (Downsville), NY Info: www.nyblimp.com/NEAT.htm or email neatfair@aol.com

For the February Meeting

Please bring your latest projects and products to share information with the members. Ken is planning on demonstrating how he takes motor constants, so bring a broken-in motor if you like, and we'll spec it. We'll also take a deeper look at Cockpit Master and how to change the plane's parameters to fit other electric flight planes and predict how a plane will fly as an electric.

See you on Thursday, Feb. 1 at 7:30 at Ken's house.



The Ampeer/Ken Myers
1911 Bradshaw Ct.
Walled Lake, MI 48390
<http://members.aol.com/KMyersEFO>

The Next Meeting:

Date: Thursday, Feb. 1, 2001 Time: 7:30 P.M.
Ken Myers's house - 248.669.8124
1911 Bradshaw Ct., Walled Lake, MI