

The Officers:

President:
Ken Myers
1911 Bradshaw Ct.
Walled Lake, MI 48390
phone: (810) 669-8124

Vice-President:
Richard Utkan
240 Cabinet
Milford, MI 48381
phone: (810) 685-1705

Secretary/Treasurer:
Debbie McNeely
4733 Crows Nest Ct.
Brighton, MI 48116
phone: (810) 220-2297

Board of Directors:
Keith Clark
2140 E. Highland Rd.
Howell, MI 4848843
phone: (517) 546-2462

Board of Directors:
Jeff Hauser
18200 Rosetta
Eastpointe, MI 48021
phone: (810) 772-2499

Ampeer Editor:
Ken Myers
1911 Bradshaw Ct.
Walled Lake, MI 48390
phone: (810) 669-8124

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The Next Meeting:
Date: Friday, December 6, 1996
The McNeely's, 4733 Crows Nest Ct., Brighton
See Map in this Ampeer time: 7:30 P.M.

Happy Holidays!
from all of us at the EFO
to all of YOU!



EFO members, the December meeting will once again be held at the McNeely's, but **THEY HAVE MOVED.** Please see the map elsewhere in this issue. The DATE: is Friday, December 6. TIME: 7:30 The McNeely's new address is 4733 Crows Nest Ct., Brighton, MI 48116. Their new phone number is (810) 220-2297. E-mail at JimMcNeely@aol.com Bring any planes, video or other "toys" to share. Refreshments will be provided. We sure would like to see all of our members and guests there, especially the newest ones. Ya all come!

Electric Nats Date Change
from Doug Ward
R.D. #1, Box 189
Irwin, PA 15642
(412) 446-5891
DWard79207@aol.com

This you will want to know: The Nats dates for next summer have been shifted by one day. They are now (etched in stone) August 2, 3, 4, and 5. This came about when the sailplane guys cancelled their last day, Saturday, allowing us to take that as our opener instead of Sunday as was originally planned. This news is not generally known, so maybe you could put it in the Ampeer as I will in Watts Current.

This means that E-Nats will now be Saturday, Sunday, Monday and Tuesday, August 2 - 5, 1997.

New E-Meet
from Tim McDonough
127 S. Oaklane Road, Springfield, Illinois
62707
(Email: tpm@inw.net)

Ampeer

What's in this issue?

December Party/Meeting - AMA/NEAC Nationals Change - New E-meet - EFO e-mail addresses - Report Stolen Equip. - Safety Note - Make a Cowl - KRC/Mid-America Videos - Shaw Visits KRC - Heli Challenge Won - Cats Meow - MEC new address - Plane Ratings - AF 204 ? - NEAC "stuff" - more

The Knights of the Air R/C Club in Springfield, Illinois will hold its first annual "Land of Lincoln Electric Fly" on June 28th and June 29th, 1997. To receive further information as it becomes available please send your name and address via regular mail or email to Tim McDonough, 127 S. Oaklane Road, Springfield, Illinois 62707 (Email: tpm@inw.net) This will be an AMA sanctioned event.

EFO E-mail Addresses

Bob Clapp BobAL7EV@aol.com
 Mark Couling mark_couling@pyramidvideo.com
 John Geyer
 Jeff Hauser 104346.2556@compuserve.com
 Debbie & Jim McNeely JimMcNeely@aol.com
 Ken Myers 102575.3410@compuserve.com
 Larry Rice Rice@Morawski.com
 Don Skiff 70140.200@compuserve.com
 Ken Welch ken_welch@AEGIS.cecom.com
 Mike Wizynajty 103125.126@compuserve.com

Stolen R/C Equipment -DO SOMETHING ABOUT IT!

from Leon H. Raesly, LCSW
 7900 Old Branch Ave. #208
 Clinton, MD 20735
 (301) 599-7530
 lee@erols.com
 Web Page: <http://www.erols.com/lee/>
 via e-mail with author's knowledge:

Next is some sad news (at least it was sad for me) and some good news. I had three R/C planes stolen, and decided to do something about it. I have established a National Clearinghouse for 'Stolen R/C Planes & Equipment' List. Here are detail descriptions (with photos) of the planes. If you are unfortunate to have planes or equipment stolen, send me details and descriptions, and I will post them! If possible, send me photos, and I will scan them, post the scans, and return the pictures to you. If you have had planes or equipment stolen in the last 6 months, send me the details, and I will add them.

another e-mail arrives:

Well, unfortunately, we have another R/C Pilot that recently has equipment stolen. Dave Gripe. Two Ultra 300's Get the details and be on watch for them on the "National Clearinghouse for Stolen R/C Planes & Equipment" on my R/C Site.

end of Lee's material:

I would like to offer this same service for e-fliers. If you have your electric flight equipment stolen, please send me a description and photos and I'll post on the EFO homepage at <http://members.gnn.com/KenMyers/hompage.htm> and

then I'll pass the info and photos onto Lee. I've a feeling, that should we be unfortunate enough to have this happen to us, we might be "lucky" in the fact that most of our planes are unique to us. You can either snail mail the info to me, or you can e-mail it. If you have a digital image of your aircraft you can also send it as an attachment and speed up the process.

Another Safety Warning

from Don Skiff, EFO member

Reading Bernard Cawley's piece about stupid things reminded me of an incident that happened at Milan Field recently. A new flier had the channel numerals on his antenna switched (25 instead of 52, or something like that), and picked the wrong pin from the frequency board. Of course, someone was flying when he turned his transmitter on. I went home and CA'd my numeral flags together so that they cannot be reversed on my antenna, and put Dymo labels on both my transmitters. The only thing worse than smashing up my plane would be smashing up somebody else's. (*Thanks Don - Great idea! km*)

A Good Way to Make a Cowl

from Plenny Bates via e-mail
 PlennyB@aol.com
 with permission of Plenny and Bob

My friend Bob Livin has a way to make cowlings that works fairly well. He uses papier-mache (that is the correct spelling - just looked it up) that is made from brown paper bags and yellow carpenters glue. I think MAN just had a thing on this but used newspaper. I am sure newsprint is not as good as brown bags.

Make a male mold from blue foam about 1/16 inch undersized. Be careful you have no negative areas.

Mount a heavy stick in the back side so you can hold it in a vise. I used a drill press vice so I could move it around.

Wax the heck out of it with Johnson's paste wax. I used six coats.

Cut brown paper bags into 1/2 inch strips. Soak strips for one half hour in 50/50 water and yellow carpenters glue. "Mache" the strips up so they are very flexible.

Wipe water/glue from strips with fingers and lay them on mold with some overlapping. Proceed to do at least four layers with a different pattern on each layer. In areas of sharp curves make sure you have six layers or more with overlaps. I think it is important to have the strips fairly "dry" when you place them on the mold.

Let dry for at least seven days in a warm place. Do not try to take cowl from the mold until it is dry inside and this

takes a lot of time.

Remove the cowl from the mold. At this point it will look bad. Place it back on the mold and using 60 to 80 grit paper or sanding drum semi finish the outside. If an area gets thin build it up on the inside with brown bag strips and thick "Hot Stuff" or fiberglass and epoxy. If an area on the outside needs building up use SIG "Epoxolite." Use finer papers to finish.

Paint with gray primer (stuff in a spray can OK), sand and reprime before finish coat of enamel.

As they say in Brainard, MN "That's it."

I know CA and epoxy do not bond to carpenters glue but they seem to in this application because there must be a lot more brown bag than yellow glue.

Bob has used this method at least three times and I have used it once.

KRC and Mid-America Flies Video

from Clay Howe

Here's an update on Clay's videos

In addition to the '94 KRC, '95 KRC/Mid AM, I now have the '96 MID Am (1hr 37 min), and the '96 E-NATS (2 hrs 25 min) available.

Pricing is as follows - 1 tape \$20, 2 tapes \$35, 3 tapes \$47.50, all four tapes \$57.50. This price includes shipping to US or Canadian addresses. Canadian orders payable in US funds.

Checks or Money Orders payable to: CHVideo - Clay Howe.

Clay Howe

310 S Jefferson St
Sturgis, MI 49091 USA

The Master Visits KRC

from Keith Shaw

The drive over was long as usual, but beautiful weather, which is very unusual. The perfect weather held until 4a.m. Sunday morning, so once again, Sunday was a wash-out. The only good news salvaged on Sunday is that the airport let us use a hanger, so all the vendors, sales, and manufacturers could set up dry, even some room left for some display airplanes to be set up. Sunday was spent talking to people and looking at goodies. Sort of like an enlarged east-coast version of our Sunday at Mid-America this past year.

The seminar series on Friday was packed. My talk was well received, even though I only organized and finalized it on Thursday night! I gave a talk on the history and aerodynamics of the Horten brothers and their wings. My

favorite talk was Clyde Geist's, about winning the Model Airplane News slow flight contest. His plane looked like a 6 ft. span Easy B, covered in jap tissue, featuring coaxial, counter-rotating props, and "turn thrusters" out by the wingtips rather than conventional control surfaces. The turn thruster radio was one of those \$12 blimp units. He estimated the entire cost of developing the project was about \$30, so the \$1000 award was a pretty good return! By the way, it did 4.1 mph in the required figure-eight course. You could nap on the straightaways!

The new field is a 3000 ft. paved runway, about 75' wide, with runway lights another 10' from the edge. The usable grass area was only about 20' wide beyond that, so you had to walk across the paved runway to get to the grass. Beyond that was about 50' of grass/rock mix, then very heavy, dense vegetation 6' high. It was very apparent from the countless premature lift-off crashes and non-flaired landing impacts that most people had never flown from a hard surface. Several planes also lost arguments with the landing lights.

My demo flights went mostly okay, although taking off and landing on a narrow runway in a 10-15 mph crosswind (toward the crowd) was nerve-wracking, compounded by the fact that the crowd was standing right on the edge of the pavement! I had to take several steps out onto the runway to see the plane better on landing. The Bearcat flew and sounded great, even better than the test flights. I did a "routine" similar to the second test flight.

About the only "down" of the weekend is that I lost the Horten to radio failure, broken wire in the Rx battery pack. It went down soon after launch in the very dense vegetation, took 6 people about an hour to find it, even with good sightings from many different positions down the flight line. Amazing how well camouflage works. The airframe is a write-off, but all the equipment survived unharmed. One fan unit is unscathed, the other has some damage that might be able to be repaired. If I decide to build another one, I would make it somewhat larger to make use of the EJT rotors.

This would let me get more efficiency, less cells of higher capacity, longer flights and more sane launching conditions

The nightmare of the weekend was thinking what would have happened if the wire would have broken a few seconds later when the plane was heading toward the crowd.

Sobering thought to all R/C pilots.

Keith



Helicopter Challenge Met!from: **Martyn McKinney**

mmckinne@learn.senecac.on.ca

Ken:

I have just received some more technical information from Wolfgang Nitschmann regarding the 63 minute flight of the ECO helicopter piloted at at the Schramburg Germany meet by Norbert Gruentjens.

Lift off weight of the helicopter plus battery was 53.7 ounces (1520 gm.).

Helicopter weight was 33.2 ounces (approximately the same as the Kalt Whisper), which included a 9-11 gm. Piezo solid state gyro. A new grease to reduce friction in the main gear was used.

The battery used was a special custom made and not commercially available Lithium battery: 12 volt, 13,000 mah. capacity, Primary (non-rechargeable) with a weight of 20.5 ounces (580 gm.). The maximum current rating for the battery was 8 amperes.

Mr. Nitschmann indicated that the battery still had some more life in it when the helicopter landed.

Any helicopter that can fly for an hour most certainly will be able to hover for 15 minutes and I would like to offer Mr. Nitschmann and Mr. Gruentjens both my congratulations for a job well done and my \$100 U.S. prize for their successful flight. I am anxious to try one of the ECO helicopters.

There are some other power sources that might be suitable for those wishing to experiment with longer duration electric helicopter flights. The limiting factor will be the amount of current that the battery can supply and the amount of money they can afford to spend.

Toshiba makes a 9.6 volt 5,600 mah. rechargeable Lithium battery that weighs 23 ounces. Sony makes a number of rechargeable Lithium packs for their camcorders. Two examples are a 7.2 volt 1350 mah. pack and a 7.2 volt 2300 mah. pack weighing approximately 3.5 and 7 ounces respectively.

Sony also makes a 3.6 volt 1200 mah. rechargeable Lithium pack for their Walkman.

I would be interested in hearing from any others that may be experimenting with the newly available rechargeable Lithium batteries.

I wanted to thank you for providing me a forum to air my views.

I, as well as a number of my colleagues, eagerly look forward to each new issue of the Ampeer.

Keep up the good work!

(Thanks Martyn - glad to help spread the e-heli news. km)

Cats and Other Things

From Dale Wilde

74723.2170@compuserve.com

Hello Ken:

I have been busy flying the two e-planes I have, the PussyCat and the TigerKitten, The Tigerkitten has an Astro 15G on 12 cells and is by no means marginal, even at the 7000' Santa Fe altitude. I've attached a photo of them. I have learned a lot, and have much to go.

**Dale's Cat & Kitten**

Note: these were sent to me as a .tif file. That's a great way to send me photos, since they can be directly put into MicroSoft Publisher. km

Two things to learn were old habits to break. In the past, when a plane was down for some reason, I would shut off the transmitter and walk over to collect the plane. Ha! Twice, I knocked the landing gear off the Tigerkitten with hard landings on pavement. 10% of the damage was done on the landing and the other 90% when I shut down the transmitter. I now have a locking plug on the transmitter to make me think (I hope)<g>. The other learning experience was that I had the habit of doing a few touch and goes prior to landing, now I've learned with electric you'd better do that at the start of the flight when batteries are fresh. Anyway, the planes survived all of this with assorted monokote patches, etc.

I'm building two new planes, one is a conversion of an old Cox .09 powered plane similar to the Tigerkitten called a Terrier. (cats to dogs) This will take the speed 600 straight. The other is a reduced size version of the Double Impact twin of Dick Sarpolus, this will take two geared S600 or maybe Astro 15g. I'll see how heavy things get.

I've had a project in the background for some time to build a model that was a twin tilt-rotor, such as the Bell-Boeing V22 Osprey. (I wouldn't model the Osprey, it's an ugly beast, just design a model using the same principles) I've been thinking for some time that this would be most practical using electric. It would be heck to rotate an engine, fuel tank and servo, etc. I have in mind several ways to do it with electric, but I'm wondering if you know of any of any others who have tackled this kind of project? *(Can we help here folks? km)* I think with electric one could just have the

motor pods on a common shaft, probably a carbon fiber arrow shaft, with a strong servo in the fuselage to rotate the shaft, maximum rotation would be say 95 degrees. Of course you'd need bearing blocks, etc. but that's not too hard. I've also included a 3-view of the Osprey so you'll have an idea of it's design. Anyway, what do you think of this project? Will it work? (*Well folks, what do you think?*)

Just Another E-Flier

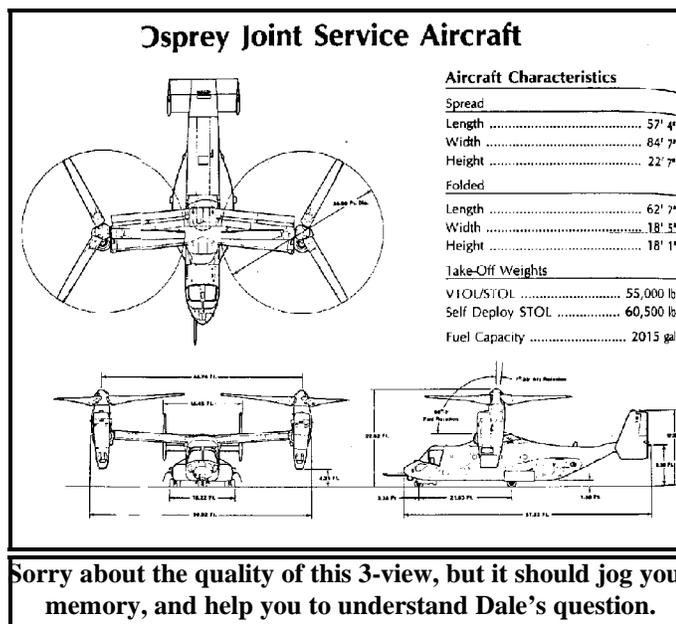
from: Orville Shields

orville.shields@central.sun.com

17208 Cedar Road

East Moline, Illinois 61244

309 496-9252



Sorry about the quality of this 3-view, but it should jog your memory, and help you to understand Dale's question.

Model Electronics Update

from: Bernard Cawley

Bernard.E.Cawley@compuserve.com

Auburn, Washington

I was talking with Pete Peterson yesterday and I was reminded that he's moved MEC to his home. Consequently there is a new address and phone numbers.

They are:

Model Electronics

14550 20th Avenue Northeast
Seattle, Washington 98155

Telephone (206) 440-5772

FAX (206) 440-5095

Apparently the old number is forwarded to this one, and, of course, for awhile the post office will forward mail, but if you have a phone list or mailing list, you might want to update it.

(*Thanks for the timely and thoughtful information. km*)

(*Please be advised that the following article contains personal opinions and does not necessarily reflect those of myself and/or other EFO members. But, hey, I liked his plane ranking idea! Anyone with a different point of view will be offered equal access to this forum. km*)

Hi Ken,

I have been reading about electric flying on the internet for the past year or so but have not sent anything out because I have not had a good solid connection to the internet. I found your website (<http://members.gnn.com/KenMyers/homepage.htm>) and I am quite impressed with what information you have assembled. Keep up the good work.

I like to read about what works and what doesn't so I thought I would share my experiences as well. I hope they help someone else be successful right off the bat.

I have flown many different models and have been dabbling in electrics since 1984. At that time I didn't even take the electrics to the regular flying field because of the constant questioning of why I would want to waste my time with something that just doesn't work. I just went to the local soccer field and industrial park and never shared my electric elation.

I started flying glow engine R/C in 1982, right after spending 8 years in night school studying electronics. Family (3 girls), church, job, golf wasn't enough I guess, I needed to get back to my childhood pastime of balsa airplanes. I started in probably the most efficient way, a club and a good friend that saved my plane about a billion times that first summer. About the third year of flying a friend gave me an unflyable electric airplane called a Kraft Cardinal. All foam, weak 05 can motor, 6 cell 600 mAh battery, and a resistor timed charger. I found out that yes indeed it was not flyable in it's sold form. I did get it to fly with a new battery charged to the point of feeling warm to the touch, a new propeller, and a liesure LT-50. The challenge I guess is what kept me going.

I found myself each year spending more money and time with electrics and less time on glow until this year I only flew a glow engine once and then sold it. I think that finally the others at the field are used to seeing electrics perform at an acceptable level.

Over the last 2 years I have been flying electrics in the

contests, not picking out specific events, but competing head to head with success.

Below is the list of airplanes I have flown over the past 12 years or so. There are only about 5 or 6 in this area of about 200 club members that fly quietly. I will say I didn't build all of them but I have had the pleasure of being the test pilot.

I put 1 to 5 stars after each to give **my opinion** of how they fly.

- 1) **Kraft Cardinal**, Leisure LT-50, 6x1200SC battery, motor control, on-off switch. *
- 2) **Goldberg Eaglet** wing scratch fuselage and tail, Leisure LT-50 w/Astro-Flite belt drive 11x7 prop, 6x1200SC battery, 46oz. **
- 3) **Skynight** wing 48" span, RCM 05 Trainer fuselage, 05 car motor, then Kyosho AP-29, 6x1200SC, 6x4 Cox prop, 35oz. ****
- 4) **Sig Riser 78"**, Mabuchi 550 can motor, 6-7x1200SC battery, 8x4 prop, 46oz. **
- 5) **Electric Sparky 64"**, Leisure LT-50, Astro 035 G, 6-7x1200SC, Jomar SC-4, 11x7 prop, 54oz. ***
- 6) **Sig Seniorita**, Astro 25G, Astro 207, 14x1400, 13x8 prop, 80oz *****
2nd Seniorita modified w/aileron, Astro 25G, Astro 210, 16x1700SCRC, 12x8 prop, 78oz. ***** My favorite so far.
- 7) **Liesure Amptique**, Astro 035G, 5x800, High Sky on/off, 10x6, 38oz *****
- 8) **Cox Canario**, came with motor, 5x450 mah, on/off switch, came with prop **
- 9) **Goldberg Electra**, Goldfire 550, 7x1500SC, Futaba electric radio, 8x4 prop, 44oz. *****
- 10) **Piece o' Cake**, Goldfire 550, 7x1500, Futaba electric radio, 8x4 prop, 38oz. *****
- 11) **Sig Kaydet Junior**, Astro 05G, Astro 15G, 7x1500, 14x1500SC, Astro 207, 12x8 prop, 54oz. ***
- 12) **Red Zypher 72"**, Astro 05G, Futaba electric radio, 7x1400, 11x7 prop, 60oz. **
- 13) **Sig Senior**, Astro 40G, Astro 205, 21x1500, 14x8 prop, 8.5lbs. *****
- 14) **Cleveland Rearwin Speedster 64"**, Astro 25G, Astro 207, 14x1500, 13x8 prop, 5.75lbs. *****
- 15) **Cleveland Stinson Taper Wing 82"**, Astro 60 sport, Astro 205, 28x1500, 15x8 prop, 10.5lbs. *****
- 16) **Liesure Lanzo Bomber**, Astro 05G, Jomar SM-4, 7x1700 P170, 11x7 prop, 46oz. *****
- 17) **Graupner UHU 66"**, 3301 motor, on/off relay, 7x1700 P170, 8x4.5 folder, 48oz *****
- 18) **Scratch Ace foam straight cord, Quicky 200** style, 05 Twister, 6x1200SC, Jomar on/off, 6x4 Cox prop, 22oz. **
- 19) **Scratch Ace foam tapered, Sig Hummer fuse**, Astro 020, 6x800AR, Hitec on/off, 6x4, 24oz. ***

- 20) **Astro Porterfield**, Astro 25G, Astro 205, 14x1400, 13x8 prop, 6lbs. ****
- 21) **Easy Built Beaver**, Astro 05G, Novak M-5, 8x1700P170, 11x8, 60oz. ****
- 22) **Easy Built PT-19**, Astro 15G, Astro 207, 14x1400, 12x8 prop. not successfully flown yet
- 23) **Sig Piper Cub 71"**, Astro 25G, Jomar SM-4, 16x1700SCRC, 12x8 prop, 6lbs. ***
- 24) **Sig Asto Hog 71"**, Astro 60, Astro 205, 28x1400, 13x10 prop, 9.75lbs. ****
(later changed to Astro 40G, 21x1800 cells, 8lbs) *****
- 25) **Sig Riser 100**, Speed 700 BB 9.6, Jomar on/off, 8x1700 P170, 10.5x6 folder, 64oz. ***
- 26) **Sig 4-Star**, Astro 25G, Astro 210, 16x1700SCRC, 11x9 prop, 96oz. ****
- 27) **Easy Built Stinson Voyager 50"**, Astro 035G, Astro 215, 7x1400, 10x8 prop, 40oz. ***
- 28) **Hiliner 40"**, (2) black & decker screwdriver motors, 8x650SC, 7x4 prop, 30oz. ***
- 29) **Lowatt 37"**, Speed 400 6v, 6x800AR, Hitec on/off, 6x3 folder, 23oz. *****
- 30) **Liesure American Eaglet**, Astro 05G, Futaba electric radio, 11x7, 60oz. ***
- 31) **Astro Portanavia**, (2) Speed 600 7.2 v, Futaba electric radio, 7x1400, 7x4 props, 72oz. **
- 32) **Goldberg Electro-Streak**, Goldfire 550, Jomar on/off, 7x1400, 8x4 prop, 46oz. ***
- 33) **Goldberg Gentle Lady**, Goldfire 550, futaba electric radio, 7x1500, 8x4 prop, 48oz. *****

The following have not been flown yet but will be next flying season..

- 34) **Easy Built PBY Cat 56"**,
- 35) **Comet Taylorcraft 54"**,
- 36) **Cleveland Aeronca C-3 54"**
- 37) **Tigerkitten 54"**
- 38) **30 Sport 60"**,

Sorry this got a little longer than I first expected. I have a question that maybe you could answer. I have several small electric projects in mind and some would work with a limited function radio. I am looking for an electric motor on off switch that would start with a push of a button and then just run until a low voltage cutoff and shut off. No radio control. I have a couple Cox radio's that this would work with. Any ideas?

In another e-mail he added: I am just one of the regular guys that has tried a few of the different combinations of equipment and I tried to be fair in my quick and dirty 1 to 5 star assessment. I would be happy to elaborate on some of the airplanes in hopes of helping someone find electric elation.

I noticed that you have a spot in your home page that

describes how to be successful with the first electric and you have chosen a Seniorita. Great choice!

Thanks for posting my question about motor control.

Do you have to have a CompuServe account to get to ModelNet? I can get to the Internet but that is all. (Yes, you need a CompuServe account to access ModelNet Electric Forum. You can subscribe to an e-flight mailing list at James Bourke's site. Jim Bourke has started the E Zone. It is devoted to electric flight, and is the official home of the electric R/C frequently asked questions list. If you haven't seen the FAQ (Frequently Asked Questions) yet, then you should take a look. It contains a lot of valuable information and is growing every day. Excellent SITE! You can take a virtual visit to KRC '96. To visit the E Zone, <http://world.std.com/~jbourke/ezone.html>

Plane Rating Service

Orville's idea is so good that I would like to make it a regular feature of the Ampeer and an archive on the EFO WEBSITE. If you would like to submit your opinions on aircraft that you have personally flown, please use Orville's rating system of 1 to 5 * with the following modifications.

You may have only one ***** as the BEST EVER electric plane you've ever flown and only one * as the worst electric plane you've ever flown or TRIED to fly. Use ***** for outstanding/really good, *** for good/middle of the road, ** for well it flies. A few comments might be nice. Be sure to give details for the specific aircraft flown. The more details you can supply, the better.

Land mail or e-mail would be just fine. Thanks. I think this can be fun and very helpful.

Astro Flight 204 Problem?

I've recently been teaching Bob Clapp to fly with a Sig LT-40, ModelAir-Tech H1000/deWalt combo, Airtronics radio. After setting up the plane, we met at the field for the first flight. Unfortunately, we had no range with the motor running, so we aborted that day and Bob fixed the problem. The following day we met at the field again, ranged checked okay and went out on the field for a take off. Everything was ready to go - system on, plane pointed into the wind, antenna fully extended. While I was discussing what I was about to do, the plane started down the runway. I was holding the throttle stick back with my thumb, a habit, while talking to Bob. I pulled back even harder with the thumb - yes the throttle was in the off position, but the plane was moving ahead full bore! I immediately started "flying" the plane and frantically working the throttle up and down. Finally, near the end of the runway and at about 30 feet

altitude the motor shut down and stayed down. I glided ahead for a gentle landing in the weeds. No real damage. We got the plane and went back to the pits. We tried to replicate what happened. We were only successful once, after much fiddling with the throttle stick. I suggested that maybe we should not fly, giving Bob several options. He said to go for it. We had two successful flights, with no hint of the problem.

The following weekend, we met for another session. I was going to bring another speed control to put in the plane, I but didn't have one set up with an Airtronics plug. We elected to fly anyway and no hint of problem surfaced during the 4 or 5 flights we had that day.

The question is: Does anyone know what is happening with this speed control/plane/radio combination?

NEAC STUFF

The National Electric Aircraft Council is offering the following items for sale: 1) Hats with a three-color logo, \$7.50 + \$2.50 postage; 2) T-Shifts in medium (38"-40"), large (42"-44"), and X-large (46"-48"), \$16.00 + \$3.00 postage; and 3) Logo Decals in three colors, \$1.00 each + \$.50 postage or five for \$5.50 post paid. We can ship two shifts in one package for the postage of one, three hats or five decals, also for the single-item postage. The T-Shifts display an amusing four-color rendition of the NEAC GEEK at the flying field.

All of these items make nice gifts--useful and practical. They are also great for club raffles and fund-raisers.

If you want to order larger quantities than those mentioned above, please contact me at any address below. All profits go into the NEAC treasury.

Doug Ward
NEAC President
RD 1 Box 189
Irwin PA 15642

Phone: 412.446.5891
Fax: 412.446.0314
Internet: dward79207@aol.com



11 Minute Flights with the GP ElectiCUB

from: Wayne Savold
wasavold@aol.com

(Wayne and I had been exchanging info on the e-CUB and I asked him how he got such long flights. He responded:)

Ken,

The 11 minutes with a Goldfire on an *ElectriCUB*, is from hand launch to touchdown. I run it at half throttle after I get it to altitude but I think the real reason for the 11 minutes is the prop I am using.

The kit comes with a Windsor 8x4 and the plane really flies great with it. I got hold of a friends Graupner "slim" prop and tried it. I noticed a significant increase in performance so I took some measurements. I use a digital fish scale connected to the tail wheel for static thrust measurements with the plane on my pool table. I use a home made 0.01 Ohm meter shunt for current measurement and a digital volt meter. Here are the results:

Windsor 8-4:

Static Thrust = 13 oz

Current = 23 Amps

Slim Prop 8-4

Static Thrust = 16 oz

Current = 23 Amps

Voltage across the motor using a 7 cell pack is 6.21 Volts at 23 Amps. I didn't have a chance to measure RPM.

These measurements are all relative (relative to my measuring equipment), of course, but that's a 23% increase in thrust with the same power input to the motor. I would like to repeat these tests but somehow I lost the Windsor prop at the flying field during flight tests.

In Keith Shaw's article on "Buidling and Flying Electric Sport Scale", he eludes to the importance of the propeller mentioning 30 to 40% increases in performance with the right one. I thought this was all my imagination but now I'm a believer.

Another factor is the battery type. I have one pack of 7 Sanyo 1.4 AH SCRs. The difference is night and day between this pack and some commercial packs made for electric cars (one says SCR but I doubt it). The internal resistance is evidently a lot lower. You can tell on climb out that there is a lot more power available.

I'd be interested in other electric fliers experience with props and batteries.

New Electric Flight Supplier

from: Andrew Fok
andrew_fok@msn.com

Hi Ken

Just thought I would drop you a line.

After being disappointed with the availability, variety, cost of electric models that are ARC or ARF, decided to get into bringing these in myself. Hopefully there are enough of us out there who have little time to build but love electrics. Please check out <http://www.unbeatenpath.com/> when you have some time.

Regards,
Andrew

I checked out his site and found some VERY INTERESTING products. You can reach Andy at:

Contact Information:

Unbeaten Path Imports
P.O. Box 271,
Oconomowoc, WI 53066
U. S. A.
Tel: (414) 569-5711
Fax: (414) 569-5915

Hours of Operation:
Monday - Thursday,
7:00pm - 11:00pm CST

Email

Andy@www.unbeatenpath.com

A check of his site shows some really interesting planes available. I selected a couple here to show you, so you have some kind of idea of the range of products he is handling.



The picture on the previous page shows a Spitfire he has.



Details:

Wing span 31.5in (800mm), Fuselage Length 25in (635mm)
 Kit Weight 0.44lb (198g) MotorSpeed 400/6V on 7
 cellsWing ProfileMH32R/C Functions Elevator Ailerons
 Speed Control or Switch

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Last modified: 11/02/96

And here is a really unique one for you!

Just in time for the sequel to Jurassic Park! For the flyer who has everything else! The Dimorphodon is a mid-sized model from a series of Jurassic Era slope soarers from Pterotec. The kit is a beautifully handmade scale light wind sloper of 100% carbon fibre and kevlar construction! All body and limbs are made out of handlaid carbon fibre. The wing is made out of a handlaid kevlar membrane. The model is painstakingly constructed accordingly to scientific studies, publications and fossils uncovered by paleontologists, modeled after the sculptures of Stephen Czarkas and the paintings of John Sibbick. These aren't just models. With professionally airbrushed versions (available on special order), each model is a unique work of art!

Additional models are available on special order. Short tailed models will require the installation of a gyro for safe operation. Call for more information.

Specifications:



Wing span55in, Fuselage Length 40in, Flying Weight 1.55lb, R/C Functions An elevon effect obtained by bending the wingskin up and down. Rudder effect by tail movement left and right.

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Last modified: 10/30/96

Okay, so that last one's not electric, but it is unique. He has many more types of planes including lots of multi-motors, racers, sport, scale, etc. He also has power systems available. Write to him or check out his site. Way COOL stuff!

Dear Ampeer Reader,

Due to the passing of EFO member, Gus Wiklund, and at the request of the family, I am still offering the following items for sale. If you are interested in an item or items, please give me a call - 810-669-8124 or e-mail at 102575.3410@compuserve.com as soon as possible.

Speed Controls:

Astro Flight 207 (I believe) Hydro Racing Control (good for seaplanes) probably never used; \$70

Kits:

Sig Tri-Star: \$35

Motors:

Astro Flight #6610G FAI geared 15, new in box \$110.00

Electrical:

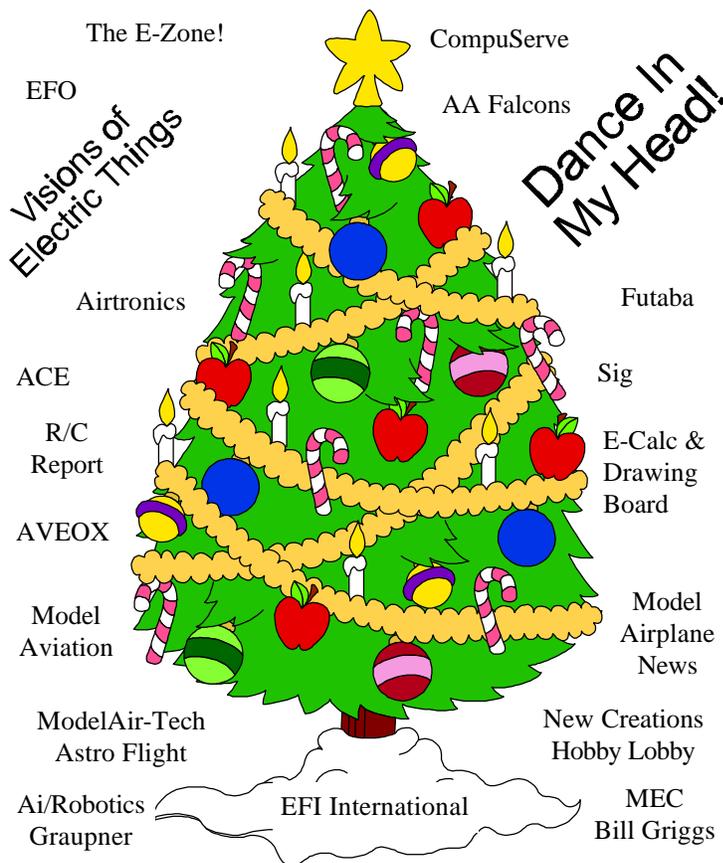
Astro Flight AC/DC charger for 6/7 cells, older model with timer but like new: \$20.00

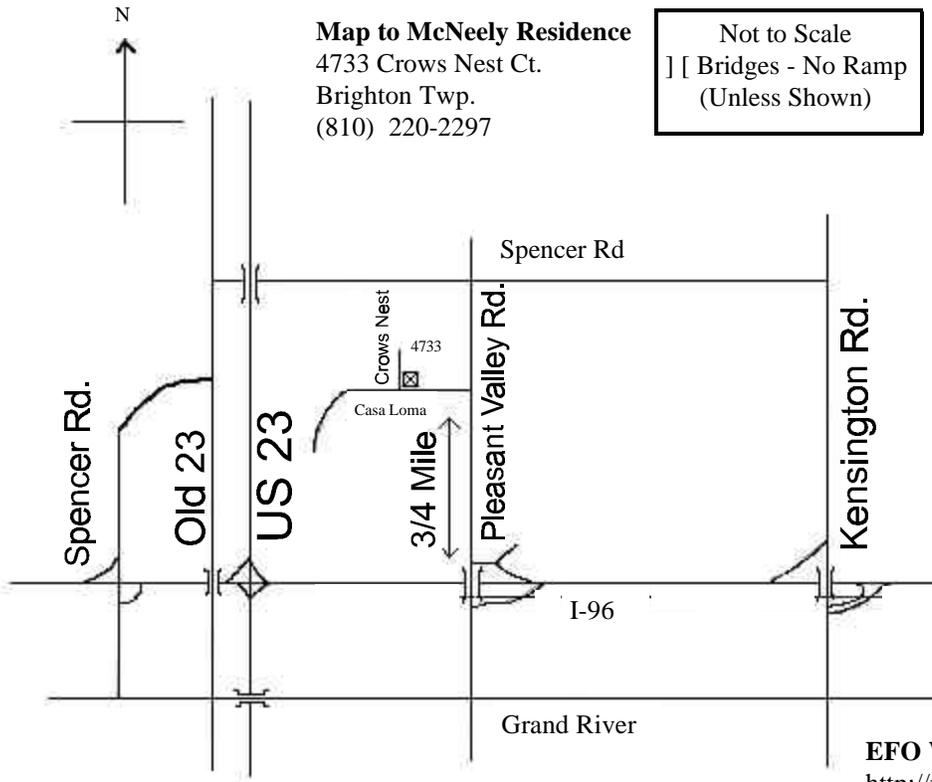
Accessories:

Selector Sealing Iron: \$7.50

Top Flight Monokote Iron, like new: \$10

I would like to thank the EFO members and Ampeer readers for helping out with this.





Upcoming Events:

December 6 - EFO get-together, at the McNeely's (see map)

June 28/29 - **Knights of the Air R/C Club**, Springfield, Illinois, Tim McDonough, 127 S. Oaklane Road, Springfield, Illinois 62707 (Email: tpm@inw.net)

July 12/13 - **Mid-America Electric Flies**, Ann Arbor Falcons/EFO, location, Midwest R/C Society Field, 5 Mi. Rd, Northville Twp, MI Ken Myers/Keith Shaw

Aug. 2 - 5 - **AMA Headquarters**, Muncie, IN Doug Ward, R.D. #1, Box 189 Irwin, PA 15642 (412) 446-5891 DWard79207@aol.com

To Reach Ken Myers, you can land mail to the address on the front page. My **E-mail address** is: 102575.3410@compuserve.com

EFO WEBSITE:

<http://members.gnn.com/KenMyers/homepage.htm>



The Ampeer
 Ken Myers
 1911 Bradshaw Ct.
 Walled Lake, MI 48390

Next Meeting: Friday, December 6
7:30 - The McNeely Residence
(see map above) - Ya All Come Now, Hear!