the Ampeer

September 1999 Page 1

The EFO Officers:

President:
Ken Myers
1911 Bradshaw Ct.
Walled Lake, MI 48390
phone: (248) 669-8124

Vice-President:
Richard Utkan
240 Cabinet
Milford, MI 48381
phone: (248) 685-1705

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

Board of Directors:
Jim McNeely
4733 Crows Nest Ct.
Brighton, MI 48116
phone: (810) 220-2297

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: (248) 669-8124

Ampeer subscriptions are $10 a year US & Canada and $17 a year world wide.

The Next Meeting:
Date: Thursday, September 2 Time: 7:00 or ASAP Rushton Road Flying Field, South Lyon – rain or shine

What's In This Issue:

Electric Fly. These folks have spared no effort in putting together the ideal electric flying event, and year after year, they succeed.

Mid-Am Feedback

Well, once again, many folks took the time to write us about their experiences at the 1999 Mid-Am. Thanks to all of you for your kind comments. Mid-Am workers, this praise is for you!

Jeff Hauser and Bob Livin's son provided the photos used here.

Note: several of these messages were posted to the eflight mailing list as public posts and are repeated here:

Hi All,

I just have to publicly thank Ken and Keith, along with the all the members of the Ann Arbor Falcons, EFO, and Midwest R/C Society for another outstanding edition of the Mid-America

This year, attendance topped 100 registered pilots. Saturday's weather was a little breezy, but that certainly didn't keep people grounded. Sunday's weather was perfection. I almost hated to leave and waste this ideal flying weather.

Folks, if you haven't been to Mid-America, do yourself a favor next year and GO. The whole emphasis of the event is on fun and participation. The impound is run smoothly, with a minimum of fuss. Rank beginners share the flightline with some of the leading lights in the electric flight world, and the flow of information is infectious.

When I arrived at this event in 1996, the only electric models I'd even seen in person were my own. I drove back home with my

brain fairly bursting with information and new ideas.

With no PA system, the event is like a day at the park. Folks chat quietly in the pits and enjoy the models cruising by. It all seems to flow so effortlessly that it's easy to under-estimate the effort that goes into making it that way.

The Saturday evening potluck dinner is always great, and then everyone waits for darkness for the inevitable night flying. What a hoot to have half a dozen planes ghosting around in the dark.

Space just doesn't permit talking about all the great models that were present. In the middle of Sunday afternoon, Keith and I were chatting, and he pointed out the irony that electric models overall (not just the elite few) have progressed so far so quickly, that models that would have belonged in the noon demo 4 or 5 years ago are almost the norm today. It has to be gratifying for the few who carried the flag and helped bring us to this point to lean back and see so much success.

The only sad thing now is that it's like the day after Christmas; I have to wait 362 days for the next Mid-America!

Keith as Robert's plane takes off

One tired puppy dog, Jim Ryan (jimryan@sprintmail.com)

Many thanks to Ken Myers and those who helped with this year's Mid-America fly-in. I went on Saturday with my family, and we had a great time. There were 87 registered pilots (if I remember correctly), and interesting aircraft of every sort. The weather was beautiful, although there was a strong cross-wind. I made my first flights on a Hobbico Viper I'm reviewing. The heavy cross-winds made me quite nervous, but the flights went well (outside of several of my battery packs going belly-up). My son was enjoying his plane, but broke the wing (where it had previously been repaired) coming out of a very fast dive.

The faster planes dominated most of the day on Saturday, but towards the evening a whole squadron of slow fliers came out. The B-2's really sounded like something out of Area 51! If you have the opportunity to attend next year, I would highly recommend doing so.
Steven Horney (srhorney@juno.com)

I need to add my 2 cents worth for Mid-America 99 as well...

I was only able to attend Saturday, and I'm still suffering the blues over that one. Luckily I got there Friday evening and flew a bit, then started all over again bright and early (and a little chilly) on Saturday morning.

Jim with his award winning Corsair

As usual, Ken and Keith put a lot of effort into planning and organizing this and it all went off without a hitch. It's amazing how fast a day goes when you have that much fun. It was TOO much fun, as I stayed well into the night and got back into Fort Wayne about 2:30 that night!

Speaking of night, the "night flying" is always a blast to watch and the gentleman (ack! forgot name again!) (Howard Kendall!!! KM) who flies the gas helicopter with full lighting on it put on an EXCELLENT show again. Totally unbelievable...

Dinner was very, very good on Saturday night, and a whole host of people brought in potluck dishes so we were all quite well fed.

Really wish I could have been there Sunday as well, but I'm sure people will fill me in on what happened.

More fun than what a person should be allowed to have.

Thanks again!
Pat Mattes
9732 Lafayette Center Road
Yoder, IN 46798-9723 or Pat-Ingrid-Mattes@Juno.com

In reply to a response I'd made:
Ken Myers wrote:
Snipage...

Laddie's Russian Bomber

You've got that right! :-) Seems way too fast for the effort, but I love it, even after "working" all day today on the "ending stuff" including the policing of the field - and there wasn't much left behind. You folks are fantastic!!!

So sayeth the happiest garbage man that ever lived! I don't think I've ever seen anyone smile so much in a single weekend...

Add my many thanks to the pile. I had more fun than should be legal. I had a few days of vacation after the event and even though it was fun, I was seriously into e-flyin withdrawal.

Les's Autogyro

Ward Shelley (now waiting patiently for the Fall Fun Fly in San Diego)
Tracy, CA – ward.shelley@cyberstar.com
p.s. I loved the bell! (So did we! KM)

Hey Folks,

Well, better late than never, here's my 2 bits on Mid Am.

As usual there were a staggering array of neat planes, many of then on the smaller end of things. Les Garber had a really neat flying wing for geared 280 motors. The plans call out for a Titanic Airlines 3:1 geardrive, 7 550 NiMH cells with flight times in the 15 min. range. The design has an elliptical planform, a flat bottom airfoil, and around 315 square inches. Les gave out plans for his little monster, but they don't have a name to put with it. The title block just says "A Small Electric Flying Wing". Those who saw it will agree that this thing is hell on wheels! Les can be contacted at lgarber@d.umn.edu

Many Sp400 and similar watt range motored planes flew over the weekend. Some that stood out were Raptor Aerosport's Petrel, Jim Ryan's Bearcat, Marc Thompson's SkaT, and a Wingo that (I think) won AULD. (IT DID! KM) For the first time, there were a few Sp400 racers that had 020's in to compare notes with and see in action. Mostly, I just wanted to see somebody else fly that combo to convince myself that it really isn't just me.

Unfortunately there were a few "sharks" in the air.

The Roy Clough award was a little hard to say this year... A gentleman had a Roswell Flyer that flew pretty darn well, Les Garber had his autogyro from last year as well as his wing, and the performance of the Zagis was credible if the launch method a little foreign.

I got to handlaunch Pat Mattes' Stock motored T-33 and was surprised at how well it got out. It was flying before I let go and climbed right out. He had a skid mounted underneath that made for an easy handhold, made for an easy time of it. I was expecting it to drag the antenna and got ready for a javelin throw, but it was pulling from my hand at half stride, so I followed through and let it go. My Grandma could throw it!

Late in the evening after official flying was over there were a little mock 400 racing. Maybe next year we could arrange to have some pylons available and rope a few guys into making a race. It's awful hard to complain about time taken from an event if you run the race after hours...

Best heli goes to an ECO (forgot the owner's name) that had the Ikarus power package in it. The heli was mostly stock and gave long, very spirited flights and even (gasp) autorotations. This was the first time I'd been able to see an E-heli with a pilot that could really fly one. Having seen the performance, it's easy to justify the cost of the full monty Ikarus setup. It's awfully close to a .30 glow chopper, and the glow chopper would not be any cheaper.

The dinner that was on Sat. night was just as good as last year. I didn't stay for long in the evening, but I did get to see a few night equipped planes that were going up when it got too dark for the park flyers.

Bob Livin's prize winning Antic

And finally, I'd like to thank those that took an interest in my LMH project. I'll admit that I have not been enthused about continuing the conversion because I thought that it was something that guys on the list only cared to argue about. I'll have tried a few things by Ft. Wayne and she'll be all dolled up to boot. I'll let just about anyone fly it, so if you are interested, let me know at the field.

Ken and Keith make for a great pair of organizers, and you can't ask for a better place to fly. I was expecting a horde of homeless KRC refugees, but it did not come to pass and the event is still small and friendly. A good time had by all.

I'll miss the folks I met until next time around. It's amazing how off you can be when you put a face to a name that you've emailed for the last year! See you around next year guys!
Dave Campbell – cdcampb@ismi.net
P.S. And next year, I'll be more careful when I say: "Dinner is on me!"... (inside joke)

Hi Ken,

Just returned home to Georgia after spending the week following Mid-Am in Michigan. I just want to personally thank you, Keith, and Jeff for the great time at

Mid-Am.

Maybe I can have my twin 020-powered JanR P-38 finished for next year!

Regards, Randy Roman Lilburn, Georgia
RJRoman@att.net

Is Eflying so expensive that Efliers can't afford modern cars?

Ken:

Thanks very much to you and Keith for hosting this great event! I found it to be great fun, and with a muc h more relaxing atmosphere than KRC. I'm sure I'll be back next year.

Stefan Vorkoetter – smvorker@maplesoft.com

Mid-Am Correction

Sunday's results for the Mid-Am had several errors. They have been corrected in the August issue online, bu t for the paper version, here is the correction.

Sunday, July 11

Best Looking – Robert Livin – Proctor Antic
Best Scale – Allen Gustine – Gee Bee "D" Sportster
Best Ducted Fan – Don Belfort – BD-10
Best Mini – Jim Ryan – Corsair
Longest Timed Flight – Clay Howe
All Up/Last Down – Corky Boyd – 21:00 Wingo!
CD's Choice – Paul Bradley – Micro "Livewire Trainer"

I'm sorry for any confusion this may have caused.

Addition to Sponsors:

I also forgot to thank the Michigan RC Flying Times as one of our great sponsors. This Michigan newspaper/ magazine is fantastic. You can get your subscription by sending $12 (well worth it) to Flyin g Times, P.O. Box 1, Imlay City, MI 48444-0001 Corrections made online.

The PT-29

Weldon Smith, 311 Wooded Knoll Dr., Cary, IL 60013-3118

Here are some pictures of my PT-29. (Actually there was no PT-29. The last PT was the 27, a Stearman with canopy, for Canada.) It is jut painted like a pre-WWII Army trainer, because I like the color scheme.

The model has only been flown three times, but it appears that it will do five minutes of aerobatics. It has a 62-inch span, 620 square inches, and it weighs 4.75 pounds. Power is an Astro 25FAI on 10 cells, direct drive 11x7 prop.

Triad Electric Weekend

From Colin McKinley, 4003 Poindexter Ave., Winston-Salem, NC 27100

Two Winston-Salem clubs. WSRC, and R AMS, cooperated on a weekend electric contest May 1 and 2, 1999. The WSRC hosted the contest at their field May 1 and the RAMS used their field on May 2. This way each field was only lost to the wet power pilots for one day of the weekend. A local motel eq uidistant to each field offered reduced rates to contestants.

While May in the Carolinas usually has good flying weather, this year there were five days of rain, followed by high winds. Only six flights were made on Saturday, but Sunday participants flew from 8:00 am. to 5:30 p.m. Keith Shaw made the majority of flights Saturday, and spent the rest of the time answering Electric F light questions. Sunday there were more than 80 assembled aircraft and about 1 50 flights. Models ranged from a Top Flite DC3 to 22-inch span speed 400 models There were three Wingos, but the wind prevented them from flying or racing.

TF DC-3, 2 AF-25, 26 cells

There were more than 25 contestants on each day, and total registration was 35 contestants. Ten other modelers interested in electric flight came to observe and ask questions. Several of these people traveled more than 200 miles to the contest. There were contestants from coast-to-coast (California to Virginia Beach, and from New York to Florida). A local Boy Scout troop camped at the field Saturday night and were spectators at the contest the next day. The windy weather prevented the running of most planned events, but eve ryone had a good time.

Plans are underway for the first weekend in May next year. Hopefully, we'll have a barbecue at the WSRC field on Saturday and breakfast at the RAMS field on Sunday.

Bristol Brabazon

From: Simon Kidd simonkidd@learnfree.co.uk

In response to my loss of the TigerShark when a cell in the Rx pack went to zero volts. KM

I recently suffered from a Tx pack going. The worst part was that the Tx battery alarm went soon after launch an I thought that I must have forgotten to switch the charger on the previous night. Consequently with the fear of loosing the plane I brought it in quickly (too quickly) and broke the fuse. Just to add insult to injury I then found that one cell had failed so that the voltage was just on the point of the alarm going - I could have, in fact, flown with the Tx on 7 cells and taken my time to come in for a better landing >:-{

I went to an electric flying day arranged by the BMFA last weekend and saw a really challenging electric plane - a Bristol Brabazon. 4 contra-rotating props and retracts on 21 cells. Owner is Dave Chinnery (I think). Pics attached. I think I would be too scared to fly a plane like that.

News seems to be around of some Sub-C cells of 3000 mAh coming out soon – seen any sign of these?

Ralph Weaver has the NiMH cells here in the US, if these are what Simon's referring to. KM

Twinstar

Dear Ken,

I live in Princeton, NJ but I'm currently visiting Peru where I just had to log in and read the latest *Ampeer* newsletter, it having been almost a week since I've read anything about electric flight and I was starting to get withdrawal symptoms.

(Don't reply to this email. Tomorrow I'm heading out on an expedition to the Amazon, Cuzco, Macchu Picchu, and a few other remote places like that and this site will be closed down. My permanent email is goresky@ias.edu Hoping that the Peruvian keyboard symbols all come out OK.)

Anyway I loved the review of the Twin Star. I bought one about a year ago and have had about 50 hours of air time on it.

It does fantastic touch and goes, or perhaps they should be called scrape and goes, on a grass runway. I haven't tried separate controllers but the article makes me want to give it a try.

I put gears on mine. Graupner 1705 or 1703, I forget exactly the number. Hobby Lobby sells them. I used 1.85 gear ratio. I had to cut the bottom of the nacelles off, level with the bottom of the wing, then I mounted the motor and gear to a piece of plywood and glued the whole thing onto the wing, using epoxy. It doesn't look great but it works just fine. The sound is very realistic and I routinely get 12 minute flights. Using my 2000mAh 7 cell pack I've succeeded in getting 18 minute flights, provided I don't do much fooling around. I usually set my timer for 10 minutes and have lots of spare time. I've forgotten the exact size props I used, I think it was 7.5 by 5.5. If you want to know Ill check when I get back to Princeton and let you know.

My first attempt was with the 2.33 gearbox, but I didn't get enough power with this. (You have to keep the props small enough so that they don't touch the ground while doing a touch and go, and so this limits the advantage given by the gearbox). I think the 1.85 gear ratio is a better choice. (The plane flew just fine using the 2.33 gearbox, but I couldn't maintain inverted flight and it made me nervous as the plane slowly got lower and lower because a roll-out needs quite a lot of vertical room for recovery.)

OK, you're right. Having glued in the motors you cant change the gear ratio. This is actually my second Twinstar. I got became so confident with the first one that I started flying it in 20 and 30 mph winds until one day, when I was doing loops in highly turbulent air, an unbelievable micro-burst plowed the thing into the ground, shrinking the fuselage length by almost 50%. I ran out and bought a second one and put the 1.85 gears on it.

Anyway, I love your site. Read it every month, or more like every week.

Thanks, Mark (Goresky)

Folding Flyer

From: Grant Calkins CasinoOp@thegrid.net

This $19 plane kit is constructed from 1/4" foam board, cut, bent, epoxied, and taped as required to make a fuse, wings with ailerons, and tail section with elevator. WS is 30", all-up weight about 22 oz with 7x500 pack, geared Speed 400 motor, JR Rx, two Hitec HS-80 mini servos, and Pixie14 ESC. This is a cleaver idea, but falls way short. Assembly time is claimed to be 2.5 hr - reality is about 15 hr. Flight performance is poor, very scary in turns

(the folded wing apparently "unloads" rapidly during turns), and hard to climb. Afraid I must rate it a * (one star).

Great Planes CAP 232 Conversion

From: Dereck Woodward woodwadd@erols.com

(Here's a snippet for the next *Ampeer* - a quickie on building and converting the Great Planes CAP 232 to electric. DW)

Converting a fairly hefty glow model while running up to a house move is not the best of ideas! I'd been sold on the Great Planes CAP 232 by the best sales technique going - saw Michael Cross, GP's designer, fly his. As Michael has been the US IMAC Freestyle Champion twice, watching him fly is pure pleasure. All the hovering, rolling circles and stuff magazines drool over folk doing with huge, expensive models, Michael did with the 59" CAP, powered by an everyday OS 70 Surpass and a four channel, four servo radio.

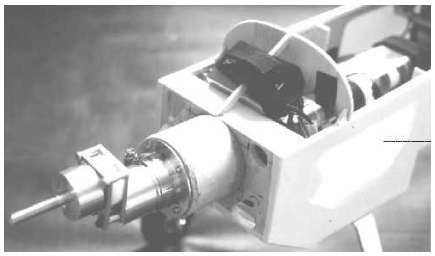
So - the CAP can perform. Back in the pits, it was obvious that it was pretty light also. Then Michael's wife, AnnMarie Cross - GP's Product Support Manager and a top line IMAC pilot - found out I flew electrics. She'd been toying with the idea of an electric model for IMAC aerobatics - but had received some laughable advice. One "expert" had suggested that seven 1,000 mAh cells were needed for real power!

Let's try twenty of Sanyo's finest 2,000 mAh jugs instead? These feed a MaxCim NeoMax 13Y with MaxCim's BEC controller - there's enough nicad already, without adding more:). 3:1 gearing topped off the power package, all well tried in my Four Star 40. Didn't take long before I had a kit and was into another "Heavy metal" conversion.

Building was interesting - read the manual, marvel at how easily it = would go together, then change it. The wing is superb for aerobatics, but has mainspars that are proof not only against aerodynamic stresses but any known lawsuits! 5/16" square all the way to the ends - where they just about touch in that little tip rib. Mine has 1/4 x 1/8 spruce full length spars, doubled to 1/4" square out to the middle of each wing. As I had to change the spar cutouts, I cut a set from light 3/32" rib stock, complete with all the assembly jigging tabs that come on the originals.

The kit fuselage is a large Liteply box, built inverted on a full length Liteply top piece. Great idea, lot of ply! I used the kit sides, copied most of the formers in balsa, cut down the ply doublers, lost the top and bottom ply in favour of balsa cross members and built it in my fuselage jig. I added were strips of 1/4 x 1/8 spruce along the top, inside faces of the fuselage sides, to compensate for the now fully open top and - this hurt - a large 1/16" ply battery tray above the wing. Once together, it is strong and rigid, the rest being CAP-shaped trimmings.

Taking off the wing to reach the nicad always smacks of the primitive, so I built a top hatch from cowl to canopy front, put a ply plate low over the wing and Velcro'd the nicad to that. The hatch is held down by a real high tech rubber band and the nicad can be pulled out in moments without disturbing the wing.



The MaxCim is lost under a vast cowling made from three well moulded ABS plastic pieces. I've heard of fibreglass aftermarket copies that weigh twice as much as the kit cowl - as I have no bad vibes to worry over, I'll stick with the kit cowl. A 1/64" ply tube moves the motor forward - thanks to AnnMarie Cross for this, it works well and retains the lightweight and flexible MaxCim mount.

The radio got shuffled around - the controller is "under the hood", the elevator servo moved back a tad and the rudder servo moved forward a lot to under the canopy. The kit puts it in the fuselage bottom just ahead of the rudder - I don't care what the monster model lot get up to, servos belong the inside. I dropped the torque rods for a pair of FMA Direct S200 mini's mounted inside the wing - not poking out of the bottom.

Covering is white "Towerkote" as a base for a complex red, white and = blue colour scheme, then I found I'd packed the red and blue trim stuff for our house move! So, nicknamed "Casper", it was off to the field at 6 3/4lbs - a tad more than hoped for, but 600 watts into a 13 x 8 Zinger for test flights promised an adequacy of performance.

The CAP 232 is a potent model. The controls are powerful and neutral, and the CAP inspires trust - loops, rolls and some knife edge on flight one! Despite her weight - a two stroke powered, kit built CAP232 can easily be under five pounds - she is a good, honest flier.

Measure the control throws - the instructions specify high and low rate settings, suggesting the lower for radios without rates. I'll go along with that, those big

elevators are very powerful. She is designed to be an all out aerobatic model - not one to learn what ailerons are for. If she can't do a maneuvre, it's likely the pilot, not the Great Planes CAP 232, going "outside the envelope".

The MaxCim controller has excellent mid-range throttle response and efficiency, so I will be trying for more in the vertical, without losing duration, with 14 or 15" props. So far, I have been flying just under six minutes and recharging has indicated that these used around 1500 mAh. I also have some ideas floating around to pare off a little weight this winter.

"**Downers**"? (if you concentrate hard on forgetting the cost!). 20 cell packs make life hard on really hot days. They get hot in flight and are hard to cool for recharging in three figure temperatures - makes constant flying a real trick. For this level of sports aerobatic performance, I can live with those.

The Verdict? My Great Planes CAP 232 is definitely a "Keeper"! If you fancy one, drop by on woodwadd@erols.com and I'll be happy to chat about CAP-tivation.

Fans of Flight

From: Tord Eriksson tord.s.eriksson@swipnet.se

(Note: The following came in three emails over a period of time. KM)

On my British Odyssey this summer I bought two fans - originally for the Graupner Comet, a highwing glider, with two underwing fans, Graupner part number 1380, These are podded fans (the unpodded version has order number 1379), of the most elegant CF-epoxy design you can imagine!

At the shop I asked if you could put a 480 in them and the owner said: Oh, no, nothing more than a 400!

Anyway, he was both wrong and right, as the centrebody fairing of the fan (which is 58 mm diameter, the pod being 80 mm in diameter) is slightly conical, so anything but a 400 is hard to fit.

I fitted a 7.2V in the fan and testing it with 8x500 AR showed about 30W on freshly charged batteries. I installed it on a Zagi THL and it did fly, if with marginal success – a 6v 400 is supposed to produce 60W and would probably be just fine (my geared 400 + prop produces over 100W initially)!

But I have no 6v 400 just now! On the other hand I have a 1114/4Y which has the same diameter as a 600. Tried it. Got stuck in the fairing! Rats! By the way the 400 is screwed onto an aluminum adapter, which itself is screwed into the centrebody fairing - this fan is worth a lot of nice design awards - excellent all through!

Hmm, if I could cut off the fairing, then! But how - it is integral with the ten stators, which are integral with the duct! Tried a cut off disc on my Dremel and reach in between the centrebody and the duct wall - no way without ruining the duct! Ah, cut it from the front, from the inside of the fairing! Easy as apple pie! Fairing wall thickness about 1/64"!

The Aveox 1114/4Y now slid in easily, and after some sweating managed to centre it perfectly - the 400 aluminum adapter had to be modified slightly and the collet drilled to fit the thicker (3.2mm) shaft (secured by Locktite in addition to the clamping function of the collet).

Eventually it was as perfectly centred as I could manage - half a millimetre off is a lot in a duct like this. The rotor hub is interesting as that too is a moulded piece, complete with cooling holes for the 400 normally fitted to the fan.

Time for testing - dragged out an old analog speed control connected and all seemed fine - but no! The fan was running backward. Cut the direction wire and all was fine! Slowly increasing - any odd sounds? None! Full throttle and the test rig seemed to want to move ahead despite its weight!

It was actually a bit difficult to hold ones hand steady behind the efflux – I guess a gigantic vacuum cleaner running in reverse would feel like this!

I have as yet only tried a very old pack of 8x1700 cells ... Now I'll try some amp readings and somehow measure static thrust. But as far as I can acertain, the fan works very well at power levels far beyond the original design goals! I do like these fans!

Addendum: With a freshly charged 8 cell pack I later got 130W - quite decent!

Fan addendum: I have now run it on 10 x 1000SCRs and hooked up a Whattmeter. 20A! Great! Some rubbing had occurred, so I would say 8 cells is better!

Could be ideal for a smallish powered glider, maybe even for a powered Mongo Jr! With eight 3 Ah NiMHs hooked up! Maybe even a gigantic slowflyer? With Upper Surface Blowing?

Will recharge the 8 cell pack and retest! This is fun!

By the way, the cabling, that originally goes out the side of the pod is now drawn through the end of the cut off fairing end and refitted (by press fitting) to the rear end of the motor. Seems to stay put but could be secured with a dab of Goop or similar!

fan conclusion: Having spent the day testing various packs and other items with my 400 fan (Graupner catalog # 1380) I have come to the following

conclusions:

One Graupner 4:1 Concentric 400 (7.2V) with a Graupner 11 x 8" folder and eight 500AR cells equals said fan, plus an Aveox 1114/4Y + an Aveox brushless speed control, in amps, when run on the same number of cells.

Thrust is always hard to check but there is ample for a Zagi in both cases, BUT there is a considerable difference in weight and cost. Maybe fivefold in cost and not far from that in weight terms.

The fan will probably have better top speed, and the propeller a better initial acceleration …

The question is, what is the ideal platform for this fan? Is a Zagi too small? Should I try to build a Learjet or should I instead buy a 480 6V and be happy, as it weighs less than the Aveox, and gives not much less power (I persume - at this a low cell count)?

Should it be mounted forward on a flying wing or more towards the rear? The rather heavy speed control has to be fitted behind the fan anyway, if I want to skip very long leads!

Or is the best position in the nose, with a long duct behind it?

(*Interesting question Tord. Folks, if you can help Tord, why not drop him an email or land mail? KM*)

Tord S eriksson
Övralidsg. 25:5
422 47 Hisings Backa
Sweden

Tiger Cat

From: Plenny Bates plennyb@comic.net

The Tiger Cat is finished. Here are the changes that I've made.

I took most of the big ply doublers in the wing out and used a tapered spruce spar. My cheap stress analysis says the bend strength at the weakest point in my wing 4 x the strength of Benjamin's at its weakest point - lighter and stronger.

I cut the turtle deck down about 1 inch and closed the cockpit.

I reduced the wing incidence from 3.5 deg + to 0.75 deg + As the wing zero lift angle is about 1.5 deg neg. the difference is from 5 deg to 2.25 deg. and it seems to fly well.

The motor is an Aveox 1412 4Y (old Sport 40) with a Astro 2.38:1 gear box. 21 1700's and a 14x12 prop 30 amps with a fresh pack static. It has 7 flights on it and the only change is going to be to replacement the plastic spinner (wobbles) with a TruTurn bar stock aluminum spinner.

and more…

Here is the story on the Robert Benjamin Tiger Cat. I call mine a Tiger Cat Mark II because of the many mods, some of which Bob might not approve.

Because I thought the open cockpit and high turtle deck might be blanking the fin/rudder did the following:

Cut the turtle deck down 1.25" front to back and closed the cockpit so there is no windscreen sticking up with an open hole behind it.

Because of suspected stabilizer stalling problems on a friends T.C.(see M.A.Feb 1999 Rick Allison's R/C Aerobatics column) I did the following:

Reduced decalage from +3 deg to + 0.75 deg. As the zero lift line of the foil is -1.5 deg. I have gone from Benjamin's recommended of an aerodynamic 4.5 deg to 2.25 deg.

To save weight I took about 3/4 of the plywood out of the wing, added tapered spruce spars and changed sheet wood leading edge from 3/32 to 1/16".

My C.G. is 1/2 to 5/8" to the rear of the suggested location.

Power:

Aveox 1412 4Y ("Sport 40") with Astro 2.38:1 gear box rather than the Astro 40 with gear box. Prop 14x12 Zinger pulling 30 A on 21 Sanyo 1700s.

All up weight is 124 oz. The weight is somewhat less than the original but should note Benjamin used silk and dope cover, and I used Ultracote.

It is a good flyer, in fact it can fly a lot better than I can fly it.

I sent two photos of it. One is of the left wing and shows the stripe pattern suggested by Jim Porter's trade show Sig Obsession. The wing bottom has big red, blue and white blocks (about 10x10") of color. The letter ing font was supplied by Ed Harris and the letters were cut by hand from Ultracote.

SAFT 3000mAH NiMH

From: Simon Kidd simonkidd@learnfree.co.uk

I managed to obtain some 3000mAH NiMH sub-C cells made by SAFT after some searching around. First I used a 7 cell pack on my Tucano (draws about 18A) and using my fast charger at 3.5 A worked OK. Also the model flew fine and I get get the longer duration I expected based upon the extra capacity (my other cells

are 1700 mAh (NiCd) and 2200 (NiMH). I then went up to 8 cells and I was really surprised at the difference in the way the model flew - before performance was OK and duration was about 10 minutes. However I found with the extra cell, (the current can't have gone up that much since I still get about 10 minutes of flight), the performance was good (big loops from level flight) and even impressed some of the 'gas' members who were also flying.

The Electric Wonder flies.....

From: Patrick S.Breen psbreen@cyberhighway.net

I finally escaped the house long enough last week to test fly my electric Wonder. It had been sitting almost a month waiting. It's a Sig Wonder with very minor mods, left out the center bulkhead and added a bulkhead/motor mount for the electric. It has a Warlock (22 turn) motor, standard Airtronics receiver with 2 CS-11 mini servos and a Jeti 35 speed controller. The first flight was with the planned 8 cell pack, performance was unreal. It went vertical and climbed out of sight, power and speed were awesome. Unfortunately the flight time was about 2 minutes (full throttle), and it glided like a brick at 40 oz. The second flight was with a 6 cell pack, it flew around 6 minutes. The performance was way down from 8 cells, flew more like a trainer. The final flight that day was with a 7 cell pack. The performance was very good, not rocket like but very sporty with a good glide. The flight time at full throttle was about 4 1/2 - 5 minutes. The 7 cell setup seems to be the way to go. I have enough speed to keep up with anything but the 1/12 scale combat planes at the field.

Amend to TwinStar Review

From: Jim Jager jimjager@prodigy.net

I have received a couple of inquiries regarding my recent TwinStar review, with readers wanting to know where they could purchase the tape/covering that I used. I told the first person that he could probably purchase it at an office supply store, but another person stated that he could not locate any at his local Staples. Therefore, could you please ad the following link to my review so that readers can get their tape from the same place I got mine, which is JK Aerotech? The address is:

http://www.jkaerotech.com/supplies.htm

The Electric Nationals

By Ken Myers

I was fortunate enough to be able to spend three and a half days at the eNats this year. Ralph Weaver, his crew and event directors did a great job.

The eNats, besides being the place where national competition takes place, are a lot of fun. Contrary to what was written in a major national magazine, all AMA events are run, and have been run, according to the rule book. The contestants are not cut-throat "big guys", but they do include some of the top competitors in their class from all over the country. There are many folks who show up for their first competition here too. The friendship and helpfulness is the same that is found in all eflight groups, fantastic.

The provisional events are just for fun and to see if they will make good events to continue and enter into the rule book during the rules cycle.

Although it is not intended to keep the scale as a separate event, as these types of planes can and should compete with their glow counterparts, it was a lot of fun, especially when the head judge was Greg Hahn!

While I was there I had a chance to help by running a shuttle to the museum (that's what happens when you drive a Suburban;-)), time for several contestants, (was there a reason Tom Hunt didn't ask me to time a third time for him – ask him), occasionally help with frequency control and be a judge at the number one pylon. There is nothing like starting your day by sitting at number one and having those little S400 racers streaking at you! And, it is pretty darn neat sitting there "jawing" with Bob Aberle the whole time.

You'll be able to see the results in the December issue of Model Aviation or by checking out Ralph Weaver's NEAC site on the web.

Electric Flight at the AMA Museum

On previous visits to the museum, I noted a tremendous lack of electric flight history in the museum. I had several electric flight items to deliver for Dorthy Booth, in memory of her husband, Bill. I met Michael Smith, head of the museum. During our discussions, somehow I volunteered to come up with a timeline of electric flight history. **I could really, really use your help!** If you know of any planes, systems, ESCs, people or events that you think should be on the timeline for possible acquisition or notation, please let me know. I could really use help from the west coast folks, especially those involved in international competition. It is time for us to have our own page in the history of model aviation.

Upcoming Events:

August 28 E-FLY-IOWA - Place: Seven Cities Sod Farm, Junction I-80 and Iowa 130. For further information: Jon McVay, 5 Hillcrest Heights, Mt. Vernon, Iowa 52314-9611 319-895-6527 or email: Togflier@aol.com

August 28 Anoka E-Fly at The Anoka County R/C Field, Mpls/St Paul Area, MARCEE WEB Site for Map, MARCEE Webmaster - Irvin John Cooper White Bear Lake, MN, MARCEE Web Page http://www.isd.net/mmmpc535

August 28 - 29 Fraser Valley R.C. Fliers field in Chilliwack, BC, Canada, contact Ron Dodd at RonDodd@aol.com Come early and spend a few days camping and sight seeing. Field will be available for you from Wednesday on. Fee of five Dollars for the weekend covers camping, and all the flying you can handle. If you have stuff to sell or trade (new or used) bring it along.

September 11 (Rain 9/18) Ron Kirk Memorial Electric Fun-Fly - CD Lyn Perry, email: perryl@sstaff.sunyerie.edu or phone 716.655.0775 - presented by the Clarence Sailplane Society of Western New York state.

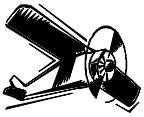
September 17-19 Voltaires of Central NY fall fun fly at the Grenadiers Field in Caudenoy, NY (a suburb of Syracuse, NY). Map is posted on the Bill Griggs Models web site www.aiusa.com/bgriggs

Sept. 18 Donnelsville, Ohio, USA Electric Only day on Saturday, Sep 18th. All are invited, AMA required, no fees, no events, no concessions or schedules, just come fly with us and bring your own coolers, food etc. Please contact Azarr at AzarrY2K@aol.com.

Sept. 25 and 26 San Diego Fall Fun Fly - two days of fun flying and outstanding vacations activities. Visit the web site a http://sefds.org for detail or contact the CD, Don Wemple, at DonK126@aol.com or call (619) 469-5566.

October 2 & 3 DEAF 13th Annual Fly-In at Seagoville, TX (south-east of Dallas) - Dallas R/C Field - Paved & grass runways, plus a nice sized pond! LMR events-7 Cell Old Timer (#618) and 7 Cell Sailplane (#610), Speed 400 LMR Sailplane, Speed 400 Pylon Racing, Stand-Off Scale w/ 2 minute flight, Percentage Weight Lifting, All-Up-Last-Down, Lightest A/C to Fly 10 Minutes w/ NiCadsGreg Judy email: vgg1@flash.net

October 2 the Burlington County R/C Club Spring Season Opener Electric Fly will be held...in October! (yes, that's right km) Club field in Hedding, NJ. Check the web site at: http://home.earthlink.net/~jgprusz/bcrc01.html or contact Bill Bowne at beaglvr@erols.com Competitions will be "light-hearted, fun" events.



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

The Next Meeting:
Date: Thursday, September 2
Time: 7 P.M. or ASAP
Rushton Road Flying Field, South Lyon