

# Ampeer

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Ampeer subscriptions are \$10 a year US & Canada and \$17 a year world wide.	<b>The Next Meeting:</b> Date: Thursday, Jan. 7 Time: 7:30 Place: Ken Myers's house, Walled Lake, MI	

**What's In This Issue:**

Reply On Microbe – Tiffy info – Schoolyard Foamie Rating – New Eflight info server – Fold the Prop – 800AR Source – Last Chance Videos – LazyBee – New Fuses – It's a Beaver – Shaw on Props – Shaw's 1/4-scale DVIII – RCTV – Wingo Review – Gyro info – More on DVIII – Holiday Party – Roswell Flyer

**Microbe Info Direct From the Manufacturer**

Rob Bulk email: rbckits@cistron.nl

I'm sorry, I had promised you some pictures from the E-fly in, but the weather was really bad, everyone kept their plane inside the car and most important I had forgotten to take the picture box with me.

Well it was very busy, very wet, very cold. I did fly a lot and had a great day (fell almost asleep on the way home). I hope to have something for you next time (next year).

I would also like to reply to the **Microbe** test in the Ampeer from November.

1. Very nice Microbe in the see through clothes.
2. The Microbe is intended to fly with the geared drive (recommended) and is to my personal opinion the nicest set up (spinner, big prop, more power). It can, however, be flown with direct drive, but I don't like this set up, so I did not test it either.

In the geared drive we don't need side thrust or down thrust and the CG is also at the correct position as in the plans.

The Microbe can be ground started just go into an empty field open up the amperes and let it go. It will turn around a lot but it will somehow somewhere take off (maybe not your chosen direction). Don't practice this in public. Yes hand launching is the easiest.

3. The plans steps are already changed some months ago, after EFI test.

We have flown a special **Microbe** made from foam board for indoor use with direct drive (speed 300) small cells and it was very light. It did however fly still too fast for indoor use (there was almost no difference between a standard Microbe and the very light one) So not recommended for indoor.

I will just point out that the indoor set up with direct drive did not need down, up or side thrust and no change of CG to be flown okay. It might be the big prop that makes a good airstream over the wings.

When I have the time and the weather permits I will test a **Microbe** with direct drive set up and inform you about it all.

**Here is more recent news on the direct drive version from Rob, the designer.**

Date: 11/24/98 1:02:09 PM Pacific

## Standard Time

From: rbckits@cistron.nl (Rob Bulk)

Hello Ken,

About the Microbe with direct drive:

After some worrying E mails I decided to test the Microbe for direct drive, remember the Microbe is not meant for direct drive speed 400.

As I was a little nervous after all this bad news, I tried the Microbe ....., and .. no problem at all. It flew straight and level without any bad habits. It was lacking some power, as with the gearbox and running time was shorter but overall it was okay.

I don't know what it is that makes it have lesser flying capabilities and trims than the geared drive. Anyway, I don't recommend direct drive. It looks ugly with the small prop.

After the testing I wanted to change the Microbe to gear drive. As I was pulling off the prop, (Guhnter prop) it suddenly came off and the Microbe fell to the ground and broke its wing tip (another good reason to use the gearbox).

Greetings and happy flying,  
Rob Bulk



### Mid-America Electric Fly

From: Ron Daniels email: ADani60140@aol.com

Dear Ken,

Thanks again for the wonderful event back in July. I will very likely attend again next year.

I was flying the 1/12 Typhoon with the car motor in it. I've attached a shot of it flying at its service ceiling.

At any rate, I have some news for e-flyers. HobbyHangar will begin kit production for the entire series of airplanes that this came from very soon. This includes the Hawker Typhoon, Tempest Mk V, Temp est Mk II, and Sea Fury in both 1/12 and 1/8 sizes. George has asked me to include electric conversion drawings on the version of the plans being shipped with the kits. I think it is an excellent idea. I will be suggesting an Astro 05 G or better with a 3:1 gear ratio and an 11 X 9 prop for the geared version (do not omit rudder control!) and a

speed 600 or better for the direct drive. In the 1/8 size, these planes should come out about 5 lbs. with a .46 2 - stroke. In other words, they'll be even better candidates for electric conversion. The HobbyHangar 1/12 Typhoon should be in production by Christmas, with the Tempests and Sea Fury about a month behind. The 1/8ths will come along later in the year.

In my Tiffy, I was limited to 7 cells, and had to "leave her pretty wide open" to avoid losing too much speed in the climbs and turns. This is what killed my run times. Much better would have been 9 cells, flown at a lower current setting, but I did get bitten by the electric bug (especially when I zoomed past some "fast" gassies at my home field!). I have a HOB Chimpunk sitting in the box downstairs, waiting for me to assemble it around a geared speed 400. I'll be building the v-tailed Bonanza, as well, seeing as they kindly supplied the plan on the back of the Chipmunk, and the wings are virtually identical. I also hope to get to building a Stubb-E at around 50" span (469 sq in) with the "Tiffy's" motor, speed control and a 1700 mAh pack. The motor runs for 7 minutes flat out on a 6 cell 1700 mAh pack. I'll add another cell and throttle back a bit. The reverse feature may actually come in handy during Lumceveks! The Stubby 100 shown on page 22 of Jan's MAN will come out to all nice stock sizes, if I print it out at 50% size.

Also, if anyone is looking for light fixed landing gear for electric, I have about 80 sets in my basement. 11" X 3" rise good for 3-5 lb. planes, 14" X 4" rise, good for 5 - 8 lb. planes. Epoxy/carbon with a glass core. About 2/3 the weight of similar sized aluminum (for Stubby 100 carbon /glass gear weighed 9 oz, and over a pound for aluminum). I'll sell 3 for the price of 2. I need the building space!

Take Care! - Ron Daniels

### Schoolyard Foamie Rating

Albert Wahrhaftig email: wahrhaft@metro.net

**Plane:** Schoolyard Foamie

**Rating:** 5 stars \*\*\*\*\*

What??!! Give my one and only 5 star rating to an ugly little \$23(US) throw-it-together-in-2-hours foamie? You bet. The Schoolyard Foamie (360 square inches, 15 1/2 oz. with typical equipment, 6.2 oz wing loading) is a very basic but carefully engineered little plane available from Joa Harrison in Redmond, OR. Intended for a direct drive Speed 400, you throw whatever equipment you have in it, and off you go. The little devil ain't much to look at, but it flies great. And since, being

primarily foam, it is all but indestructible and therefore great for flying backyard combat (which is exactly what I do with my buddy). With a plane that assembles in no time, survives crashes, and costs next to nothing, you can fly free of anxiety in any small space. Died in the wool glow flyers are impressed with this airplane because it truly can do things that theirs can never do. In short, it's FUN.

### Message Bases, Listservers, IRC Chat and a Lot More

From Kim Rossey email:sales@teamesp.com

Date: 11/23/98 3:10:57 PM

Ken,

I have added a very powerful conference server to my system that is dedicated to **R/C Electric Flight**.

The address is:

<http://rserve1.teamesp.com:8080/~electricflight>

It is new and therefore quite void :) but I hope to get more interested.

It has message bases, listservers, IRC Chat and a lot more.

*(Kim is asking for some help. Km)*

I need some input on how to set up this site with topic areas.

For example

Batteries

Motors

Speed Controls

etc....

Any input please email me.

Although I sell some of you batteries my goal here is mainly to give you your own conference area.

If anyone would like to help in running it let me know.

*(Many of you already use the great resource of the eflight list, run by Jim Bourke, of the EzoneMagazine <<http://www.ezonemag.com>>. This is another source we can use. Check it out. Km)*

### On Computer Usage:

Ken Myers

Many of you receiving the paper version of the *Ampeer* have commented that you just don't get the computer things that I frequently mention here. The reason that I keep bringing up this "issue" is that, person for person, there are probably more eflight modellers online than any other group of aircraft modellers. This means that you can contact many of the well-known folks

that you read about, and that you can directly ask them questions or express concerns you may have. With brand-new computer prices now under \$500 for the computer and monitor, isn't it time to "take the plunge?" To find out what a \$500 machine has to offer, stop in at a Best Buy or Office Depot and ask to see the Emachines Inc. etower, or have a friend with Internet access visit <http://www.e4me.com> to get you the information. Hope to see more of you online soon.

### Fold the Prop

Ken Myers

EFO member, Bob Henderson, had asked me how to get a prop to fold without a brake on the ESC (electron ic speed control). Before brakes became readily available, I used a "ring washer" as an aid in folding a prop. The photo shows a close-up of the prop on my wife's Oly 100. You might want to give it a try. I got my ring washers at a hardware store.



The front end of Chris's Oly 100 showing "ring washers" to aid in folding the prop.

### Source for NEW SANYO 800AR's

Jim Porter. 5349 Heather Glen Circle, Bettendorf, IA 52722

via telephone (9AM to 9PM CST 319-332-4926) to check availability and to reserve desired quantity. *(Please Check with Jim before sending check. Km)*

New and unused cells. (redundant yes, but people have asked)

Cells manufactured and assembled in April '96

Welded, shrink wrapped and glued in packs of ten cells.

Must be disassembled before use:

- 1 - Welded straps between cells.
- 2 - Thermal breaker inline internal to shrink wrap.
- 3 - 0.91 ohm resistor inline internal to shrink wrap.

Sold in packs of ten (10) cells only. \$10.00 each.

Shipping: \$3.00 first pack.

\$1.00 each additional pack.

Payment: Check or money order - US \$

Payable to: Jim Porter

*(The above was sent to me via Plenny Bates, who went on to say... km)*

A great spread in MAN (January 1999). Some of the best in-flight shots I have seen. They also covered some of the small interesting stuff. You put on a great fly-in. July '98 was my third one and they have all been great. I never thought about the lack of a PA until I read the MAN piece. For old fellows like myself, the lack of a bullhorn is a godsend, as I have a heck of a time understanding them anyway.

Thanks, Plenny Bates email: plennyb@comic.net

From Ken: Plenny, it's not just me and Keith. The Falcon members, EFO members and our friends, as well as all of you pilots have made the Mid-America flies what they are today. Keith and I send a very sincere thanks to all of you folks mentioned above. You are the greatest!

### **Great Eflight Videos While They Last!**

CHVideo

310 S Jefferson St  
Sturgis, MI 49091

Hi all,

I am ending my video business, and have already sold some of my equipment. I still am able to make copies of my Electric Flight Videos, and am offering them for the last time at greatly reduced prices. In the past, all videos were priced at \$20 each (including shipping).

I am now offering the following videos for only \$10 each (including shipping to US and Canada)!! At this price there is no multi-video special - in other words, 1 for \$10, 2 for \$20, 3 for \$30 - etc...

The '96 E-nats is \$15 including shipping and is 2 1/2 hours long.

The videos are:

1994 KRC - 1 hour and 47 minutes - VHS

1995 KRC/MidAmerica - 1 hour 52 minutes - VHS

1996 MidAmerica - 1 hour 37 minutes - VHS

1997 MidAmerica - 1 hour 53 minutes - VHS

After this special sale is over (I'll accept orders for a couple months) - I will then also offer for sale the MASTER copies of the videos, including the 1996 E - NATS (2 hours 25 minutes) to anyone who may wish to continue selling copies, and I will provide a written release to these original masters for use of the new owner with no obligation to me...

If you are interested in any of these, just leave me an e-mail at this address: clayhowe@net-link.net

And finally... thanks to the many electric people out there who have purchased my videos in the past - it was greatly appreciated.

Regards, Clay Howe



### **Alone in Northern Colorado & A LazyBee Tale**

From Nick Mati email: nickm@cyrix.com

Hi Ken,

Thanks for trying. So far I have gotten one email response from a fellow in Grand Junction which is about 4-5 hours away from Longmont.

Attached is a photo of my "Bee". The motor mount was raised 3/4-1" over stock for better ground clearance with a big prop. While an exposed motor might get better air flow, I preferred a more finished look and added a motor cowling built from 1/8 sq. sticks glued side to side over a paper form wrapped over the motor. The lower front of the plane was given a rounded cross section by building up layers of cross grain balsa, and then hollowing out as much as I dared from the inside to save weight. The rudder is held on with 1/4 scale (large) hinges and can be quickly detached from the plane by removing a piece of music wire threaded through both hinges as a pin. I also recommend LARGE control throws. Speed control is a home-brew based on an HC11 microprocessor. Covered in Monokote. Weight was 44 oz. with 7 cells. 150+ flights and still going.

The plane was originally to be set up for a Master

Airscrew 2.5:1 with Magnetic Mayhem similar to what Steve (*Minter km*) suggested. However while I was waiting for the backordered motor to arrive, I dropped in a SPEED 600 and Graupner 3:1 gear box. The Graupner doesn't have quite as much offset as the MA gearbox, so it's flying with a MA 12x8 electric prop that is trimmed down to an 11-1/2". The LazyBee flew "O. K." on a Tower seven cell 1500 pack. It really comes alive on an 8 cell 2000 matched pack. After reading about Steve's 10 cell Bee, it may be time to give this Bee some more sting.

Depending on how little air there is in the tires, LazyBees can have a nasty tendency to ground loop on the take off roll as they sway to one side and the other. I find it more manageable if the throttle is slowly advanced; just stay on the rudder!

Flying with 8 cells now, Tom Bauer and I discovered that if you take the Bee to the top of an inside loop so it is inverted, and punch and hold full down and rudder (I don't remember exactly what we were trying to do), it will start to tumble in all directions. Some tumbles are better than others; sometimes you get more inverted spin; other times an end-over-end; every tumble is different. Recovery on my Bee only requires neutral controls, but be sure to leave enough altitude for recovery. My CG is fairly neutral based on hands off dive recovery.

#### New Fuses Available

From Dave Behner email: Dave\_Behner@adc.com

Ken,

I really appreciate the job you do on the Ampeer!!! Very informative, well written and just a great publication. Thank you for your efforts.

Checking out my new Digi-Key catalog (<http://www.digikey.com>) I noticed they are now supplying Littelfuse ([www.littelfuse.com](http://www.littelfuse.com) <<http://www.littelfuse.com>>) ATO fuses (Auto Type 257 series) to 40 Amps. In addition they now carry the 299 series – Maxi Fuses to 60 amps. Fuse holders are also available.

Digi-Key also carries Panasonic Nickel Cadmium batteries. They are good people to deal with too.

#### It's a Beaver

Todd Ablett email: todd\_ablett@hotmail.com

The *Ampeer* looks great as always. I look forward to it more than I do MAN or RCM. (*blush km*)

I wrote a while back and asked about plans for a B-17. I'm still working on that one but I decided to send a picture of my latest project.

It is a Unionville 6' wingspan semi-scale de Havilland beaver. It uses an Astro Flight 25 geared driving a 11x7 prop with 16 2000 mAh cells. The ESC is an Astro Flight 217D. I have done 6 minutes of touch and goes.

After each touch and goes I climb back up to circuit altitude (about 100 feet) as we have one large plane eating tree on one corner of the local field. I lightened the model considerably (even though it is an electric kit) and the all up weight is just under 6 pounds. I also increased the cord by 1/2 inch. This plane is very stable in the air and handles the wind really well. I normally fly aerobatic aircraft but this plane is fun to fly in a scale-like manner. It can loop and roll, but it just doesn't look right. If I bring it in slowly and do a couple of low fly-bys, I get more comments than any aerobatic maneuver I have ever flown.

Just thought I would share some of my successes, seeing as you and your *Ampeer* are responsible for helping me switch from gas to electric.



#### Shaw on Props

A Tech Talk to the Midwest R/C Society, November 4, 1998

Keith Shaw

Most people don't think too much about their props, although the prop is very important to the aerodynamics of the plane. There can be performance improvements of between and 30-40% selecting the correct prop for a job.

A prop is a rotating wing with span, diameter and aspect ratio. The materials that make up a prop can vary. The characteristics of the material are important in selecting the correct prop. The way to measure the pitch varies, but in modeling it is measured to the bottom of the prop.

Early props were made of gum wood while many of today's are made from rock hard maple.

Wood happens to be good at keeping itself together when tremendous forces are trying to pull the blade off from the center. An important safety aspect is to remember **NEVER** to stand in line with a spinning prop.

#### Safety and Care of Props

Look for good wood in a prop. The grain should be

close and going with the blade. There should be similar patterns on both blades. A lot of the available props have the grain cut at an angle. The same band of props can be made out of good and bad grained wood. The wood should be knot free. Wooden props are by far the better props. Plastic props are getting better but can't be modified like wood.

Be sure to check the prop on the plane from time to time. Props can become fuel soaked through the hub.

#### **Plastic Prop Care and Feeding**

The hub area on the plastic props is getting better. The Graupner props and APC props have a good size at the hub now. Be sure to remove the flash ing on the trailing edges of a plastic prop. **All props should be balanced.** Don't cut the prop down to fit a spinner. Make the spinner fit the prop. The prop should not touch the spinner holes. Use a reamer not a drill to enlarge a prop hole. A drill can cause an off center or angled hole.

**Every prop needs to be balanced.** Vibration kills airplanes. Vibration kills wire connections in the radio and its components, including the crystal, servos and NiCads. A lot of radio problems are caused by vibration. The structure of the plane can break and the fuel tank can foam. **One reason that electricians live longer is because of less vibration.** Propellers, even a little out of balance, can have a big effect.

Balancing is not just having the prop stay in a horizontal position, but the prop should hold its position at any attitude. You can balance a prop by using clear dope, if the blade is only a little out of balance. If it's too far out of balance to use the dope method, you need to remove some material. To remove prop material use a single-edged razor blade held at 90 degrees to the front of the blade. Never remove material from the back of the prop. If the varnish is removed, remember to reseal the prop.

Another method is to use a clear tape. **The ONLY tape that works is 3M decorator tape in clear.** 3M clear decorator tape is fuel proof. It is to be put on the back of prop. The tape has stayed on at up to 20,000 RPM.

When cleaning the plane you should clean the prop too! Clean off all of that green crud and inspect it. Is it fuel soaked? Is it nicked? Is it secure?

#### **Why One Prop Works "Better" Than Another**

Why one prop works better than another was always a question for Keith, and electricians have allowed him to compare props with better results than were possible with internal combustion engines. Keith noted that the best props off the shelf are Rev-up, which have a nice airfoil all the way through the blade, and the APC props,

which seem to work well at high RPM. The Graupner prop is better for 4-cycle engines. In the middle are Top Flite and Master Airscrew.

Keith considers the Zingers to be a good prop kit. He has found some of the best wood in Zinger props, as well as some of the worst! Besides the varying wood quality, the main flaw with a stock Zinger is the tip. At lower speeds, anything less than racing, **the tip is best if it has an elliptical shape.** The shape of the tip should be like that of a Spitfire wing.

There are two-stage props that have a larger pitch towards the tip. Everything happens in about the outer 1/3 of the prop. The lower pitch on the inside is to allow it to work easier, while the outside portion of the tip is working harder, at the same RPM.

Props do make noise, but it takes a really high rpm to generate it.

If a multi-bladed prop is desired, find a two-blade prop that flies the plane well. The 3-blade prop should have the same pitch as the two blade and the diameter should drop an inch. With four-bladed props follow the same procedure. Multi-bladed props are not as efficient because each blade is following too close in the wake of other.

The diameter to pitch ratio is important. 12x6, 11x8, and 10x10 props absorb about the same amount of horsepower. Trainers and biplanes should use a diameter to pitch ratio 2:1 (i.e., 12x6). Very draggy planes like a tripe might be better off using 3:1 (i.e., 14x6). Sport planes can use a 1.5:1 (i.e., 9x6). Fast planes racing planes might use a 1:1 ratio (i.e., 10x10).

A close approximation to the prop speed is pitch in inches times RPM in thousands. The prop pitch speed is NOT how fast the plane is flying. It is the theoretical speed that the prop would move, if it weren't attached to a plane! Prop speed should match the type of plane.

P-factor is caused when the plane is flying in a different direction than the prop is spinning. It is particularly noticeable in a climb.

#### **Keith Shaw's 1/4-scale Fokker D-VIII**

**Keith Shaw**, besides being the guest speaker, brought in his fabulous Fokker D-VIII. Many of you have had a chance to see this plane fly at eflies and big bird flies in the area. Keith is still putting on the finishing touches, which is another nice thing about an electric.

The model name is a Fokker D-VIII in 1/4-scale. It has a wing span of 82.5" and wing area of 1100 sq. in. It weighs 13 pounds and is powered by a

MaxCim MegaMax3.7 (prototype) electric brushless motor. The motor swings a HIGHLY reworked Zinger 24 X 16 at 3500 RPM. (*Prop speed approximately 56 mph – according to Keith's prop talk. Km*) Power comes from 30 cells with a MaxCim brushless, prototype high cell count controller providing the speed control. The radio is Keith's favored Airtronics using 102 servos on the rudder and ailerons and a 102BB servo conversion on the elevator.

The radio and servos are under the pilot's seat and they directly drive the control column and rudder bar. Scale push/pull cables drive the surfaces. A flexible full-body pilot "operates" the controls. He's working on a scale engine to rotate with the prop, ala a rotary.

The plane is modeled after Ernst Udet's postwar airshow plane (unarmed). He and a fellow named Greim "borrowed" two planes from the confiscated aircraft after the war and flew illegal airshows during the fall of 1918 and the spring and summer of 1919. The color scheme was pieced together from various written descriptions, no photos exist of his plane. The standard D-VIII had dark green doped wing, struts, cowl, and landing gear sub-wing, lozenge fabric on fuselage, wheel covers, and horizontal tail, white fin/rudder. Udet painted the cowl, fuselage, upper struts, and wheel covers dark red, white stab and LO! lettering on side of fuselage in honor of his girlfriend, Lola Zink. I found a photo of her, a real beauty in any time.

The model received a third place in Monokote at 1998 Toledo show.



### Multiplex Twin Star Rating

Albert Wahrhaftig email: wahrhaft@metro.net  
To: KMyersEFO@aol.com

Plane: Multiplex Twin Star – Rating 4 stars  
This foam plastic ARF looks like a high wing

twin motor transport. For \$90 US. It comes complete with two Speed 400 motors and props. The engineering is excellent. Parts fit together very well. Without landing gear, the plane is hand launched and skimmed in on its belly. With 7x1700 cells I get 6-7 minute flights with moderate aerobatics. This is a fun plane to fly, has a distinctive and realistic look (once it is in the air) and, to top it all off, the twin motors make a great sound!

### R/C on TV

Jeffrey Maturo email: jeffrc@rctv1.com

Dear Electric Flyers Only members,

Were you aware that R/C TV is airing on two PBS stations in Michigan?

WCMU/CHANNEL 14 (517-774-3105) Mt. Pleasant  
WTVS/CHANNEL 56 (313-873-7200) Detroit

R/C TV is a 30 minute program dedicated to all aspects of radio control.

We cover cars, boats, planes and helicopters. Check out our web site for more info on the show - [www.rctv1.com](http://www.rctv1.com)

If you are in these viewing areas don't miss the show, contact your PBS for air times. If these are not your PBS stations contact your PBS station and request R/C TV. You can get to the PBS locator page from the schedule page of our website to find your PBS. If you are already watching the show and would like to see it continue - let your PBS know, a phone call or an email will help. Thank you for your time, we know that you will enjoy the show.

Sincerely,  
Jeffrey Maturo  
Producer - R/C TV

### Wingo Review

Patrick Shuss email: [Patrick\\_Shuss@compuserve.com](mailto:Patrick_Shuss@compuserve.com)

I've been flying the Hobby Lobby Wingo for about a month and think that it's a great airplane. It will ROG, loop, roll, and perform any maneuver that a polyhedral rudder-elevator craft will do. Average flights are ten minutes with low-and-slow excursions of over thirteen minutes with the 8 X 500ARs. All up weight is 20 oz. and flying speed can be down to a fast jog for easy touchdowns. Most flying is done at half throttle with the power reserved for thrilling aerobatics.

In most cases, the plane self recovers from almost all problems...except one. At three-quarters to full throttle, the plane refuses to pull up from a steep dive. This is probably from the tiny elevator and the motor placement. The only solution is to throttle back to regain control. Apart from that, its a great plane.



### Electric Powered Autogyro

Lester W. Garber email: lgarber@d.umn.edu

*Wings are for wimps!* Build this unique electric powered autogyro! Powered by a Rocket 400 motor and seven 500AR cells, this R/C direct control autogyro weighs 18 oz. and has a rotor diameter of 35 inches. Typical flight times are about four minutes. This original design, the first of it's type in the US, has been extensively developed and has several hundred flights. 36 page design and construction manual has eighteen photographs and four pages of detailed CAD drawings. \$15 for manual with plans plus \$5 S&H. Lester W. Garber, 2324 East 5<sup>th</sup> Street, Duluth, MN 55812.

### More on the Fokker D-VIII from Keith

The airfoil search was much harder than I thought, there have been dozens of inaccurate articles and 3-views. The most accurate is by Ian Stair, has 5 view, and a lot of detail sketches. As no D-8 still exists, except for an Italian copy of unknown parentage, it probably will never be really known. However, interviews with Reinhold Platz confirm that the root was 17%, tip either 9% or 11%, depending how you measure it. By most modeler's method, it would be an 11%. The mean camber line was the same; at 17%, this produces a very blunt nosed "flat bottomed" airfoil, but at 11 %, the under surface has slight negative curve and an \*apparent\* wash-in. The best guess airfoil

for the root (home design - NOT a Gottengen) has appeared in some ecsoteric articles, was pulled from a side-view photo. I found that a scaled up Clark Y was VERY close to the indicated airfoil. Just reference all coordinates to the bottom line, not the datum line, and multiple by 17/11.8 for the value. This will produce a nice approximation of the root section. For the tip I thinned it to 11%, foregoing the mild "undercambered" appearance. No washout was built in, the wing panel was built flat on the board. The thickness change will cause about a 1 degree wash-out. The Clark Y has about a 2 degree angle between the bottom surface and the datum line. Blowing it up the 17%, produces about a 3 degree angle between datum and bottom surface, hence the wash-out.

My D-8 flies fine with quite a soft stall, no bad handling quirks. The D-8 must be kept light. My first D-8 many years ago was about a 4' span with a ST.23, weighed 52 oz, and was a bear to fly. About 20 years ago, I built a very light "fun-scale" D-8 57", also powered by the ST.23, a great flyer! About 15 years ago I converted it to electric, Astro 15 geared, 12-900SCR cells, weighs 50 oz, and actually flies better due to the larger more efficient prop.. It is still one of my favorite sport planes. The big 1/4 scale D-8 is still getting sorted out, mostly learning to land it correctly. The tall scale landing gear causes the rudder to blanket and lose authority when the plane settles down to 3-point stance. I find the I need to do a nose high wheel landing, and keep a little power on for the prop draft to keep the rudder working.

### The EFO Annual Holiday Party

Jim and Debbie McNeely, once again, hosted the annual EFO holiday meeting/party. Debbie had the house decked out in the holiday spirit and ready for us to party.

All of the EFO members in attendance had a very good time and would like to thank the McNeely's for their great hospitality.

There were lots of photos to share from past happenings. Ken brought several photos from the Ampeer archives and Jack Lemon shared an album of his L-O-N-G career in the R/C hobby. We also watched the tape of Les Garber's Autogyro - way cool. Thanks Les. If anyone would like to "borrow" this tape, be hold of me



and I'll ship it to you.

While a lot of general plane talk and electric talk was going on, the BIG screen TV was showing Ken's old tape, "Electric Flight in the 90's", which was actually made in 1989 and featured planes from the mid -80's through '89. It was fun to watch this historical tape and note that many of us there had some very fine flying aircraft "way back then." We really have come a long way baby!

Again, thanks to Debbie and Jim for hosting this fun event.



From right to left: Richard, Keith & Al



From right to left: Doug, Ken, Jack



From right to left: Ken, Jack and our great hosts, Debbie and Jim

**It's a bird! It's a plane! It's a Roswell Flyer?  
Indoor outdoor electric R/C UFO**

From: Mike Dammar email: jammer@mr.net  
<http://www.afot.com/index.html>  
Info from the web site:

The Roswell Flyer is a special kind of flying device. It can and does hover as well it flies forward, reverse, up, down and can spin like a top, (not that you want to do that).

The Roswell Flyer is based on four motors, opposed at the poles of the flyer, the motors rotate counter to each other in order to counter act the torque.

There are no servos, your radio supplies data from the control sticks into the brain of the Roswell Flyer. The brains of the Flyer then decides how to slow down or speed up the motors to affect the input that you have given to the control sticks on your radio.

The Roswell Flyer, not only hovers, it flies forward, backward, spins, floats, and in general defies gravity. You control the Flyer with a bit of input and a few beads of sweat.

The Flyer is like flying a helicopter, and a frisbee all wrapped in one. The Flyer "Brains" also incorporate some very specialized control devices that help you keep the fly by electric system from going crazy.

The Flyer is made up of some very interesting frame material, which has been machined so that the kit goes together in almost no time. From start to flying, it should take you less than 10 hours to complete your own Roswell Flyer.

Who can fly the Flyer. Well anyone who has a radio and a few hours to build the kit. Care must be taken to keep body parts away from the rotating blades. The blades are not made of a overly stiff material but can cause damage if proper care is not taken. The same respect that you would give any radio controlled flying device applies to the Roswell Flyer, an ounce of caution is worth a ton of cure, in short, fly safe, it makes sense, and will add to your flying time.

We are making a production run of only 100 units, which should be out of the skunk works, by December, but we don't have total control on everything so we will just say the following. We will NOT bill your credit card or cash your check until we do ship the Roswell Flyer. You won't be out the money until we are ready. Prior to shipping we will send you email letting you know that you are one of the lucky first 100 special people to get to defy gravity and have a great time. Soon after the first shipment of 100 we will have thousands coming on the mother ship, so we won't have any delays. The price for the Roswell Flyer is \$350.00 plus S/H. (us funds)

IF you wish to order via mail send checks to:

AFOT INC.

Make Check payable to  
Impulse, Inc.

7250 Peak Drive Suite 102  
Las Vegas, Nevada 89128

To order by phone call toll  
free at 800 328 0184

If you wish to fax your order  
use 702-948-1104



**February 12, 13, and 14** SEFSD (Silent Electric Flyers of San Diego) Mid-Winter Electrics, President's Day weekend. Event structure will be much like last year, but we will be stressing F5B and F5D "information" and flying more.

Contact Minton B. Cronkhite email: [minton@san.rr.com](mailto:minton@san.rr.com)

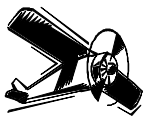
**March 13** The Southwest Florida Aeromodelors will be

hosting their first Electric fly in at their field in **Fort Myers, Lee County, Florida**. Private field, large flat grass runway, well maintained, portajohn and lots of room. All types of electric aircraft welcome for a noncompetitive fly in. This is an AMA sanctioned event #90062. For further information contact Chris at [Mzettel@aol.com](mailto:Mzettel@aol.com).

**May 30** Spring E-Fly, Rockville MD. Field will open for flying on Saturday too. off I-270. Rockville, 15 miles north of Washington, DC. Campers, there is a site around ten miles away. Maps and fliers will be out early January, anyone who wants to get ahead can drop Dereck Woodward an e-mail at [weekendpilot@juno.com](mailto:weekendpilot@juno.com).

**North Carolina Meets - 1999** Two Winston-Salem clubs, the Winston-Salem Radio Control Club (WSRC) and the Riverside Aeromodelers (RAMS) are planning on an electric weekend for **May 1 and 2, 1999**. Sanction will be applied for as soon as possible. For more information contact: Dr. Colin McKinley (336) 924-5890 or Dr. John Mountjoy (336) 772-7609

**May 8 OR** May 9 (not both) - *Dave Strathman Memorial Electric Fly* - Springfield, OH - 2nd Annual electric meet - contact Azarr at [Azarr@WPAFB.AF.MIL](mailto:Azarr@WPAFB.AF.MIL) or phone: 255-5039 ext 340 The date will be May 8th, with rain date May 9th. The field will be open for flying on the 9th



The Ampeer

Ken Myers

1911 Bradshaw Ct.

Walled Lake, MI 48390

**Next Meeting: Thursday, January 7  
7:30 - Ken Myers's house, 1911 Bradshaw  
Ct., Walled Lake, MI**