the Ampeer

December 2000 Page 1

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

**The Next Meeting:**
**Date**: Saturday, December 9 **Time**: 7:00 P.M.
**Place**: Ken Myers's house & Oakland Yard (see details in issue)

**What's In This Issue:**



### THANKS FOR ASSISTANCE

From: Barrie Hill baz@idx.com.au
To: KMyersEFO@aol.com, pjhaworth@tassie.net.au (Peter Haworth)
Ken and Peter,

You both were helpful early last August re info about a Jeti radio that I planned to put into a ME110 that I was building. Well it is finished and was flown late September.

Here is a picture of the ME110. It has two Graupner speed 400 6v motors, 5x4 props and 7 Sanyo 600AR cells. Flies quite nicely for approximately 5 minutes at half throttle and screams around most un-scale like for about two minutes at full throttle. I was amazed at how fast and steep it climbed out, also it required full down trim and still wanted to climb, so the thrust must be out. Anyway, trim seems to have sorted that out. All up weight is just under 24 oz.

By the way, the ME 110 was scratch built using foam for the top and bottom of the fuselage. The wings are also foam with the lightest fibreglass I could find as covering. It is referred to as "tissue" fibre by the shop that I purchased it from. First attempt at foam.

**Great Planes SloFli Press Release**
(*for informational purposes only*)

### DUE IN STOCK EARLY DECEMBER A VARIETY OF POWER SOURCES FOR LIGHTWEIGHT PLANES

ElectriFly* Battery Packs from Great Planes in compact sizes and light weights for today's popular Park Flyers! You can choose

NiCd or NiMH chemistry, in different voltage levels, capacities and pack configurations.

At only 2.6 ounces, the 9.6V NiCd Square Pack contains eight, very small "N" - size, 150 mAh Sanyo cells. Panasonic power is featured on three NiMH packs: 6- or 7-cell configurations of 550 mAh "AAA" cells, plus a 7-cell pack of 1200 mAh, 4/5AA cells that promises much more flight time. Their weights range from 4.9 to 7.1 ounces.

An 8-cell flat pack of 700 mAh "AA" NiCd cells is also available that's ideal for aerobatic models such as the Great Planes Fundango*. All packs come with the "plug & play" simplicity of a 2-pin connector except for the 8-cell 700mAh "AA" NiCd Flat Pack, which has a standard connector.

Retail

GPMP0050 Sanyo 8C 150 N-Size NiCd Square Pack $49.99

GPMP0100 Panasonic 6C 550 AAA NiMH Tri-Pack 44.99

GPMP0101 Panasonic 7C 550 AAA NiMH Tri-Pack 49.99

GPMP0200 8C 700 AA NiCd Flat Pack 29.99

GPMP0300 Panasonic 7C 1200 4/5 AA NiMH Sq/Tri Pack 49.99

**PEAK CHARGING CONVENIENCE FOR SUPER-LIGHTWEIGHT PLANES**

It's designed specifically for (but not limited to) small, electric-powered aircraft such as Park Flyers and transmitters as well. The ElectriFly* Peak Charger from Great Planes* offers advanced peak detector circuitry, along with the versatility to charge both NiCd and nickel metal hydride (NiMH) batteries from 6- to 8-cells. You can select from two peak charge rates: 600 mAh for larger motor and transmitter batteries, or 200 mAh for smaller flight batteries. There is a 15 mA trickle charge function. An on-board red LED stays lit continuously during fast charge, and flashes during trickle charge.

Because the ElectriFly Peak Charger plugs into a car cigarette lighter or auxilliary power receptacle, you can charge virtually anywhere, even while en route to the field. Its pulsed charge current means you can charge even the smallest batteries without fear of overheating. The 2-pin connector offers "plug & play" simplicity and connects directly to most ElectriFly batteries; adapters are sold separately for use with transmitters and other batteries.

Retail

GPMM3000 ElectriFly Peak Charger $49.99

**Thoughts on the EFO Site Beginner's Page**

From: Jens Damhøj jd.oe@fsnvaer.dk

Hi Ken,

I have read your page for beginners into E-flight and have some opinions of my own on that page.

First of all let me introduce myself. I am a 32 male, who flew small free flight models as a kid. I am an officer in the Royal Danish Airforce today. This summer I was talking with my brother and the subject went on what we did as kids. We talked about the models, and how we wanted to fly R/C (but it was expensive for the gear).

I got inspired and went on the net. I found a club in Denmark solely for Electric flight. I wrote an e-mail, and they told me to stop by the club. This I did and I was amazed. After that day I joined the club.

Now it was time to buy a plane and equipment. I saw the TwinStar from Multiplex at the club and I liked it instantly.

I ordered the TwinStar along with the Multiplex Cockpit international.

The TwinStar is very easy to build, and it uses standard servos for elevator and rudder, and smaller servos for ailerons. It flies on 7 x 1700 mAh.

I started with an instructor and he taught me the maneuvers of basic flight.

I have now been flying since July, and I still love my TwinStar.

I have had 4 major crashes (and a number of small incidents) and every single time I have been able to fly either ½-1 hour later or the next day.

The TwinStar is made of Styrofoam, and when it breaks it does it in parts that are easy to glue back together (it usually breaks into 3-4 big pieces).

The flight characteristics are very suitable for a beginner, since it is very stable and you can fly for 7-10 minutes on the standard 7 x 1700 mAh Sanyo pack. I have bought an 8 x 2400 mAh and have experienced flight times up to 15 minutes.

I really recommend the TwinStar as a beginner plane, since it is easy to assemble and easy to fly.

Yours sincerely,

JD

(*Thanks for sharing your experiences with the TwinStar. It certainly does have some great qualities, as you've mentioned, that make it a good trainer. I've flown several TwinStars and can certainly recommend them, especially when learning with a good instructor. I would not recommend it to someone who has to learn on their own. Again, thanks.*)

**Digital Scale**

From: Mike Finnan mfinnan@acadiacom.net

I found a digital scale at Sam's Warehouse that is pretty good...it cost $20.00 and can handle 4 lb. in 0.1 oz. resolution...not great but better than my mechanical scale...it is a Royal eX2.

**Free Airfoil Plotting Programmes**

From: Lex Davidson LDavidson@hrc.govt.nz

Ken,

I downloaded and read some of the November *AMPEER* this morning.

I noted the Profili site is down or missing. You might be interested in having a look at http://www.rc-soar.com/hardsoft/profilerev.htm

This is a review and download area in R/C Soaring of a plotting programme called Profile. Excellent. US or rest of the world measuring units too!!!!

Profili is neat, but this is even better (well I think so). It uses "normal" format data files. You can download new sections, or bring in .TXT files. Supper easy to thin section for tips or change camber etc. Super easy to install and use. It can only print one profile per page and is aimed at foam rather than built-up wings. Neat----The download is only 130K --not bad.

It only comes with a few sections but it is not to much of a problem to download all of the sections from Dr. Michael S. Selig's site.

Hope this is of interest

Lex D

**R/C Site for Cardboard Planes**

From: Brian Cardinal AceBird@aol.com

Hi Ken,

I have been surfing the web to get info on electric flight and came across your site. My forte' is cardboard planes and trainers. I like to work with school teachers because they have the attention of today's youth. All of my creations have been liquid fuel to this point, but I am now in pursuit of electric powered flight.

If you have the time and would like to see my site have a look.

Rc Concepts Paper Planes

You have quite the site.

Good job,

Brian Cardinal

Acebird@aol.com

**Where to Get Profili**

From: David Theunissen dwt@ukgateway.net

I also cannot find the Profili site any more. So I've put the copy I downloaded a year ago onto my www.flyelectric.ukgateway.net site (look on the 'Further Info'/links page). I've got a space constraint so I'm not sure how long I will be able to keep it there. Your friends should be able to download it from here for a while.

Hope this helps,

David

*It certainly did. Thanks David. I'm planning a major revision of the EFO site for the first of the year, and I'll also add Profili for downloading. KM*

**EMFSO Web Site Moves**

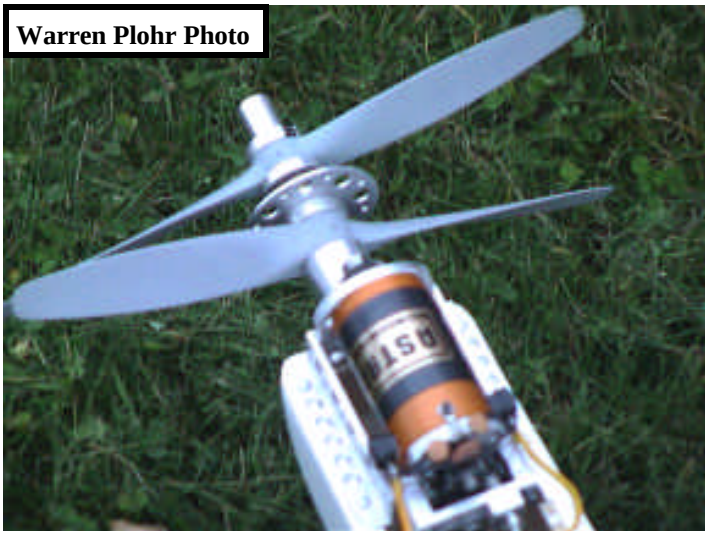
From: Benjamin Feist benfeist@home.com

I'm creating a new site for the EMFSO (Electric Model Flyers of Southern Ontario) at www.emfso.org

**Counter-Rotating Gearbox Flies!**

From: Keith Shaw

**Warren Plohr Photo**



I wanted to let everyone know that I flew the counter-rotating gearbox (for the Bugatti racer project) this weekend, seven successful flights so far.

Power is an Astro 40 on 20 x 1700SCRC cells, 2:1 reductions, front prop11x8R, rear prop 11x11 (both Graupners). It's mounted in an old pattern plane/testbed.

I removed the entire structure from the nose to the TE down to the top spruce longerons. Everything is bolted onto the rails and "out in the breeze", gearbox, ESC, battery, radio; ugly but VERY serviceable!

It happens to be about the same wing area as the

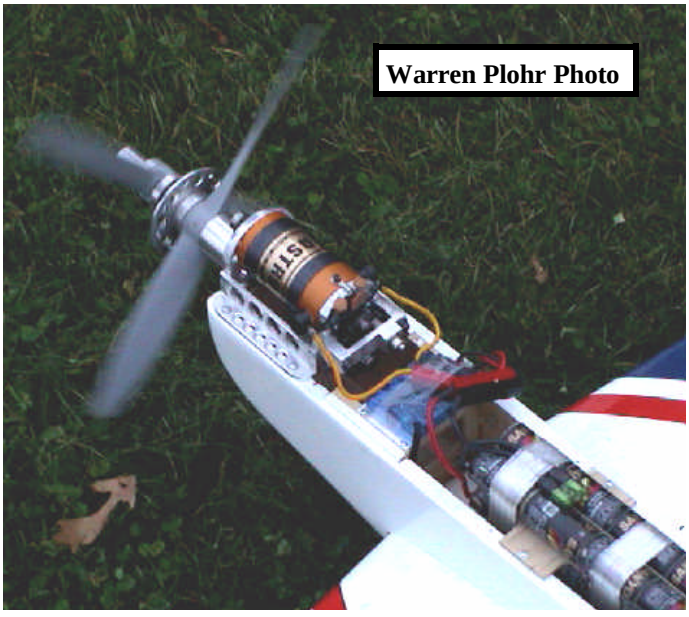
future Bugatti (730 sq.in.), weighs 7.25 lb.

Static current was higher than I hoped, 36 amps, static thrust showed about 4.5 lb., so I knew it would take off. The first flight I throttled back soon after takeoff to take the load off the motor. At reduced power, speed was not impressive (~50 mph). but it would do mild aerobatics. I landed after a few minutes to check over gear mesh and general temperature of motor, ESC and battery, found everything barely warm.

Second flight I still flew at reduced power, but flew out the pack at over 8 MINUTES! I knew the load must have reduced a lot in the air, so during the third and fourth flights I kept increasing power levels, performance and the speed kept getting better. Finally on the fifth flight, I took off at full bore and flew continuous aerobatics and never throttled back, speed now is about 65-70 mph (great considering the incredible draggy configuration). It flew for 4.5 minutes before the pack started to fade, landed at a little over five minutes. These are old 1700s that check out at under 1600 mAh now, so the in flight current must have dropped to about 20 amp!!!!!!!! Static current still checks out at about 35 amp, so the counter-rotating props must suffer monumental interference in static conditions, while working really well in the air. I may be able to run a couple more cells, just need to stay at a reasonable current limit for the initial roll on takeoff.

Now if my life stays reasonable this winter, on to building the Bugatti !

Keith



**Warren Plohr Photo**

PS I'm presently madly building the new more scale wing for my 6' Zlin with a set of retracts that I plan on using in the Bugatti. They are Asian imports, very low profile, clever engineering, but I want to see how well they hold up on a 7 lb. plane. I'm cheating on the Zlin, making the gear fold inwards, rather than the scale rearwards action, but this lets me test the configuration that would be on the Bugatti.

**Electric Tu-4**

From: George Maiorana dmaiorana@voyager.net

Hi Ken,

Keith has probably told you this already. The electric Tu-4 took third at the Masters with Dave Pinegar of Warren as pilot and myself as builder in Team Scale. We also received plaques for: Pilots Choice, Engineering Excellence Award and Most Realistic Flight. Wow! Made believers out of a lot of modelers that electrics are here to stay. :-)))))))

See attached story of how the Tu-4 became a reality.

**The Soviet Superfortress**
**Tupolev Tu-4 "Bull"**

In the late months of 1944, three damaged B-29s were diverted to Vladivostok in the Soviet Union. The crews were allowed to "escape" but their B-29s remained behind.

Two of the B-29s were disassembled for detailed

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evaluation and their parts were sent all over the Soviet Union to be copied. The third B-29 was kept intact for flight testing.

The results were an exact external copy of the B-29 designated the Tu-4. The Soviet Superfortress first flew in late 1946. Approximately 1200 Tu-4s were produced from 1946 to 1953.

The prototype aircraft is the last remaining example of the Soviet Tu-4. This aircraft (minus some of it's original markings) is on display at Monino Air Museum just outside of Moscow. The prototype aircraft made the first air drop of a Soviet atomic weapon on 18 October 1951. The model reflects the complete markings of the prototype aircraft on that historic day in the Soviet Union.

**Model Specifications**

Builder: George Maiorana
Wing Span: 115 inches
Wing Area: 1150 square inches
Weight: 27.25 pounds
Scale Ratio: 1 : 15
Radio: Futaba 9ZAP
Power: MaxCim NEO 13Y x 4
Gearing: 2.73 : 1
Batteries: 48 Panasonic 3000 mA cells
Propellers: 13x10 Master Airscrew wood electric

**Notable Features:**

**Fuselage, cowls, vertical fin, flaps** and **turrets** are epoxy/glass construction from molds made by the builder.
**Ailerons, elevators**, and **nacelles** are epoxy/carbon fiber construction from molds made by the builder.
**Wings** and **horizontal** stabilizer are foam cores covered with 1/64 ply.
**Landing gear** were designed and fabricated from aluminum stock by the builder.
**Covering** is sticky backed aluminum tape except for the painted control surfaces per the prototype.

**Electric Tu-4 Project**

The most difficult part of this story is putting into words how the electric Tu-4 was born. Multi engine planes have always fascinated me for as long as I can remember. Hanging out at the local hobby shop in the "scale" corner each week watching the likes of Ron Sears, Cliff Tacie and Skip Mast work on their multi engine scale planes fed the urge.

After pitting for Skip Mast at Top Gun a couple of times with his C-130, the inevitable stage was set. Skip had always wanted to build another B-29 for competition. He had done all the home work on what scale the B-29 should be and one evening he was asked to show how he had cut the foam fuse for his C-130. At the club meeting he cut the fuse for the B-29 but he did not have the time to start the project for many reasons. On the other hand I had lots of time on my hands.

The company I worked for had offered an early out program earlier in the year and I was more than happy to be Mr. Mom to my 2 year old son, Justin. April Fools day was my first day off. I told Skip I would cover the foam plug with 1/16 balsa for him and make a mold so we both could start a B-29. I believe it was mid October of '95 that I took the foam plug home. Two weeks later the plug was finished. Fiber Glass Specialties is close by so I made a trip to see Steve Durecki and learn what was involved in making a mold of a 7.5 inch diameter by 80 inch long object. That was the beginning of my monocle bestowed on me by our Saturday breakfast club, "Mr. Mold".

With information in hand I constructed the fuse mold in the next week. What a chunk of epoxy and glass it was! Per Steve's directions I proceeded to lay up a fuse. Both halves were completed and joined in the next couple of days. Off to skip's house I went with the unopened mold. In Skip's basement we slowly, and with great anticipation, removed the 36 bolts securing the mold halves together. A large screwdriver was inserted between the halves at one end and with a slow twist there was a loud pop as the upper half separated from the fuse. A little tug on the fuse and it popped out of the other half. What a gorgeous site it was to see that first fuse! Smiles all around for sure.

Next came the wing, nacelles, cowl, stab, fin, retracts, motor choice and prototype. The wing and stab would be cut from foam and covered with 1/64 ply. Cowl , nacelles and fin would be epoxy / glass from molds. Retracts would have to be home made. Skip suggested that 40 four strokes would be ideal for power and I had noticed that Travis Air Museum had just recently finished restoring a B-29 named "Miss America 62".

"Miss America 62" was completed in the spring of '97. She placed second at Toledo that year in Designer Scale. Then we were off to Top Gun a couple of weeks later with a hangar queen yet to be flown with a 50 ounce wing loading. Arriving in Florida we set her up at a club field with a paved runway. We sat all day waiting for the winds to calm. The sun slowly began to reach the horizon. As dusk approached and the orb of the sun began to touch the horizon the winds died. We had been

ready for this moment. Dave Pinegar slowly taxied her down the strip and turned into the wind. With throttles up she rolled quickly. Up into the dimming sky she went. A couple of clicks of elevator and aileron and we were in heaven as Dave slowly flew the B-29 on her first flight. Wow, you can't buy a thrill like that anywhere!

Top Gun was a blast. Skip flew the new B-29 three times that weekend. Top Gun is always an enjoyable event.

After returning home from Top Gun we rested for a month. In July of '97 we decided to fly "Miss America 62". Off to the field we went, set her up and into the air for her 7th flight. Turning for a fly past #4 quits. Trying to nurse her around she stalls and goes in from 75 feet. Ugh!

A month passes and it's time to decide what the future is going to be. Looking back I remember the engine set up problems and all that oil all over plane. I never did get the aluminum finish on the fuse clean and the engine problems that lead to the loss play on my mind. Snap!. I start to sell all my wet planes and engines. I'm going electric! A call around finds Tom Cimato of MaxCim Motors more than willing to talk about powering the new B-29 with his electric motors. "It can be done," Tom says confidently, after I supply him with the specs of the downed B-29. To get experience in electrics, Tom suggests a Hangar 9 Cub ARF and a suitable set up of one of his motors. Done! The Cub flies in late September of '97.

I spent most of '98 converting a Great Planes 40 size Extra 300s to electric. Crashing it (now you know why I'm the builder- not a very accomplished pilot), rebuilding it and also making molds for a 1/5th scale electric Extra 300s. All the while I'm making molds of the flaps, ailerons, rudder and elevators of the downed B-29 and start pulling parts for two planes.

In '99 Skip finished his B-29, "FiFi", and takes her to the FAI team trials. "FiFi" is lost on the second flight due to radio interference. I pull another fuse before Skip gets back from the trials (befitting name isn't it?). Get back on that horse! Skip starts rebuilding and I get the electric finished in primer for test flights in September. I pack her up and trek out to the RCCD field to see if all that Tom Cimato and Keith Shaw have told me about the setup of the electrics is true. The plane is assembled, photos taken, packs charged. 55 ounce wing loading now that it's electric! Groan! Where is the "Bob Hoover" of south east Michigan, Dave Pinegar my pilot! We wait and nervously chat about the coming moment of truth. "Oh, here comes Dave Pinegar now!" someone yells. We check and double check. Not knowing how much available take off power we have, the plane is carried to the far end of the field, set down and pointed into the wind. A brisk quartering wind prevails from the left. A click of throttle and the MaxCim's spring into life. Dave yells from 200 feet away, " Say good bye George."

I stand behind her looking through the view finder of the camcorder as the throttle is fire walled. She springs from my feet towards her destiny and shrinks quickly in the camcorder's view finder as the ground slips from her gear. Oh no! I see too much of the side of the plane through the finder. It's only a heavy weather vane in the quartering wind I hope. She rises majestically and turns gently to the right. Dave has full control. Circling the field, Dave gently wiggles the controls to check response. A couple of clicks of elevator, a click of aileron and she swoops by on the first of many fly pasts to be. Yes, Tom and Keith are right! The electrics have more than enough power to fly her. She's down wind now and gear coming down, turning base and slowing slightly, losing altitude and turning final and coming home. Nose down, gear down, over the threshold and here comes the ground. Flare and touchdown, what a perfect first landing! It's been 6 minutes since that lady left my feet and an eternity has passed. Dave taxies her back. Absolutely beautiful! There's that feeling again, just can't buy that feeling as you see your "baby" leave the ground for the first time. Packs are charged and two more flights are made without the slightest problem. Looking back it was a beautiful fall day.

As October of '99 began the electric B-29 (soon to be the electric Tu-4) was put to hangar and disassemble for covering. It took until the night before Toledo 2000 to apply the aluminum covering (another story) and assemble all the little pieces into the Soviet Superfortress. During my search for an all aluminum subject for this project I kept noticing that the Russians (Soviets at that time) had copied the B-29. I began searching the internet for Tu-4 information and eventually found a Russian fellow, Eugene Dvurechenski, with his own website. He was invaluable in locating the small amount of info on the Tu-4.

I had assembled the Tu-4 on the pool table the night before Toledo, completely attired in static apparel, and my 7 year old son, Justin, came into the basement and slowly walked around the table. Looking up he remarked, "It's magnificent, Dad!" Yet, another thrill you can not buy at any price.

Into the van she goes the next morning and we are

off to Toledo. It's electric, yes I kept telling the skeptics - electric. The Tu-4 placed third in Designer Scale. More thrills.

May 2000 arrives and we are off to the Mint Julep Scale Meet in Kentucky. Dave flies the Tu-4 two test flights on Friday (flights 4 & 5) and 4 flights during the contest. We place first in Team Scale and receive NASA's Flight Achievement Award. We qualify for the US Scale Masters. Wow!! What a great event the Mint Julep is at the Falls of Rough air strip. You just have to go.

After a few flights in June we head for the NATS in Muncie. The Tu-4 Team places first in Team Scale. The electric power of the Tu-4 blows everyone away. Yes it's electric we keep saying. What a great memory the NATS 2000 will be to look back on.

And in October 2000 we flew the electric Tu-4 in the U S Scale Masters Competition's Team Scale event. We finished third and received plaques for: Most Realistic Flight, Engineering Achievement and Pilots Choice. I know we have died and gone to heaven having competed along side the countries best builders and fliers. Yet and again a thrill that can't be bought.

The Tu-4 is in the hangar for the winter eagerly awaiting the trip to Top Gun 2001.

**New Twin**
From: Lee Richter LRich84542@aol.com

Thought you might like to see my new plane. It's all made of expanded beaded foam. I'm running two speed 480 electric motors with 6"x3p props.using one 7-cell 1700 mAh battery. It weighs 67 oz. and flies great. Wing span is 62" w/ a modified Clark Y airfoil

**My Site Pages**
From: Ron Fikes srfikes@earthlink.net

Ken,

I want to include some of my electric planes in your EFO column - I finally got a couple of simple web pages so people can see my planes. They include indoor and outdoor flying wings, a rogallo and a couple of 'regular' configuration planes (for indoor/outdoor). Of course inexpensive plans are available.
Here are the sites:
http://www.geocities.com/srfikes/RonsModels.html
http://www.geocities.com/srfikes/MOOsquito.html
Thanks,

Ron Fikes
Palo Alto, CA

**More GP Press Releases**
*For informational purposes only*

ELECTRIC TRAINER MAKES LEARNING TO FLY EASY AND CAREFREE

Some trainer models come with a price and level of complexity that can make even the bravest beginner think twice about getting into R/C flying. But Kyosho*'s EP Cessna* 180 Trainer is designed to put your mind at ease. It arrives approximately 80% preassembled. There's little finishing to do to get it flight-ready and Kyosho has taken the extra step of installing the 550 motor, direct drive system and all linkages. Foam construction means it's extremely lightweight and durable, and its compact size and quiet electric power allows you to fly it in smaller areas. The required NiCd battery installs quickly and easily inside the bottom of the plane's fuselage. Even though it's a trainer, you'll be impressed by the model's stylish Cessna profile, right down to the scale-looking cowl; the included spinner is an added convenience.

Specifications –
Wingspan: 51.2 in (1300 mm)
Wing Area: 408 sq in (26.3 sq dm)
Weight: 3.1 lb (1400g)
Length: 36.2 in (920 mm)
Motor: EP550 (included)
Requires: 2-3 channel radio, 7.2V 1400 mAh NiCd battery, charger
Retail
KYOA1010 EP Cessna 180 Trainer $109.99

A POWERFUL SERVO THAT'S SMALLER THAN "MICRO"

Ideal for use in the smallest aircraft such as indoor, park fliers and backyard planes, the CS-5 Nano* Servo from Hobbico* delivers excellent torque and speed in an extremely small size and light weight. It features state-of-the-art engineering and manufacturing, for precise operation and years of dependable service, and comes equipped with a universal connector.

Specifications
Speed @ 60 : 0.11 sec. (4.8V); 0.09 sec. (6.0V)
Output Torque: 16.7 oz-in (4.8V); 20.8 oz-in (6.0V)
Dimensions: 0.86 x 0.43 x 0.78 in (21.8 x 11 x 19.8mm)
Weight: 0.34 oz (9.5g)

Retail
HCAM0090 CS-5 High Speed Nano* Servo $39.99

**Slots Help Needed**

From: Craig Oakeshott
Oakeshott.Craig@saugov.sa.gov.au

I have designed and am about half-way through building a Me-163 with a span of about 34 inches or about 85 cm in the new money. Approximately to scale, it is all foam, the fuselage will be covered in brown paper and the wings use a profile from profili and are covered in 0.8 mm balsa. At this stage, the all up weight looks to be about 500 g with a speed 480 in the nose and 8 1200 mAh cells.

I have about 5 degrees of washout on the tips, but one of the things I wanted to ask you was about wing Slots. The original ME 163s had wing slots which reduced their tendency to tip stall. I have been looking for information on the design of these, but you certainly don't want to type slots into a web crawler as the results provide very little information on aircraft design.

I have essentially put a second leading edge in front of the main wings leading edge, as (from what I can gather) was on the real 163. What do you know about wing slots or where can you point me?
(*Absolutely nothing! ;-( That's why I'm putting this plea into the Ampeer. KM*)

Even if I don't hear from you over the slots, thank you very much for your replies and help.
cheers
Craig

**More from Craig**

*Just after posting the previous request, I received the following. I'm sure that Craig could still use information on slots and their application to model aircraft. KM*

Hi Ken,

I have been building! I went out and purchased a 1/24 scale plastic 163 kit and I am scaling it all up to give me a model that is approximately 34 inches span. I used and Internet flying wing design site that described appropriate airfoils etc. and have been speaking to an English chap that spent quite some time looking at the 163 in the museum at Duxford on what the slots look like. So, I have now cut 2 pairs of white foam wings, and covered them in 0.8 mm balsa sheet. One set of wings has slots, ailerons and flaps and the other just slots and ailerons. The fuselage is not finished yet but is made from the middle weight white foam covered in Brown paper. The fin will be a built up item. With a bit of luck I will have some photos for you later on, well before first flights. Power train at the moment looks like a speed 480 BB race on 7 or 8 cells (1200's or 800's) overall weight will be around 15 oz. Speed 480 BB Race on 7 cells and a 5x3 prop according to Ecalc should be good for plenty of power, like about 125W/lb. or to be really over the top up to a 5x5 which is over 150W/lb.

Anyway thank you for your help, I have had a couple of contacts with other people with information and drawings. Thanks again
Craig

**Suggestions-Recommendations for SLOW Flying Indoor R/C Model**

From: Bill Boice WD8NCR@aol.com

I'm looking for a pusher type model for indoor single channel (Rudder) control using the speed BEC system for the motor. I have just started into electric R/C building and flying recently with some park type flyers and hope to get a suitable indoor model completed as my next project. The IR Pusher type of model featured in the Dec.1999 issue to "*Flying Models*" is the type of model that is of interest. I did build this recently using the HiLine Mini-4 direct drive motor, but the radio gear along with the batteries increased the total model weight so that at best it would not be a suitable model for slow flying indoors. I would appreciate any information and recommendations you can pass along . Thanks for your help.

*Can anyone help? I asked eflight list with no response. KM*

**Next EFO Meeting – the Holiday Gathering**

The next EFO meeting will be held on Saturday, December 9 at Ken Myers's house. The gathering will start at 7:00 p.m. and refreshments will be served. Eflight will be the general topic of discussion and then a little before 9:00 p.m., we will travel on up to the Oakland Yard for some indoor flying. Flying goes on at the Oakland Yard until 1:00 a.m. How long you stay is up to you!

Once again, the EFO will pay the general admission $1.00 for all of those who want to go. If you plan on flying, and are not a member of the Yard's club, the individual session cost is $15 minus the $1 from the EFO. You don't have to be an EFO member to attend the party or go with us to the dome. All electric fliers are welcome!!! We'd love to have you join us. Happy Holidays to all.

**Dues Due**

EFO members, the $20 yearly dues for members are due anytime soon. You can send a check to Ken or pay them at the December meeting.

**Notable Model Designer Looses Battle with Cancer**

From: Dave Jones djones@iland.net

Model Designer, and published author Fred Reese lost his battle with cancer on November 2, 2000. Some of his contributions include the House of Balsa Shoestring, ACE R/C simple series planes, and countless published designs in several leading model publications. Fred is survived by his wife Qwen Reese. Please keep her and the rest of Fred's family in your prayers

**November EFO Meeting**

The November EFO meeting was well attended. There were a lot of shared ideas and information passed around.

There were a lot of questions about NiMH batteries, and once again, Ken praised the 2000 NiMH that he purchases from Ralph Weaver:

Magellan Technologies, Inc.
10783 Northhampton Drive
Fishers, IN 46038
317-841-3851 5:00PM-10:00PM Indiana time
www.magtechinc.net

There was a great deal of discussion about EFO members joining MISS, and much more will be presented next month. Bottom line, Ken is urging all EFO members to become MISS members as well.

Rick Sawicki showed off his modification to the Lite-Stik. He added some monofilament line to increase the dihedral to make the rudder more effective.

Keith Shaw demonstrated his new counter-rotating gear box, which was mounted on his test plane.

Bob Hatmaker has agreed to build and report on Sture Schmidt's S400 plane.

The next meeting will start at Ken Myers's house on Saturday, December 9 at 7:00 P.M. and then move to the Oakland Yard about 9:00 P.M. Spectator admission will be paid by the EFO. If you want to fly indoors it is $15.

New members and guests are always welcome at

ALL EFO meetings!


The EFO Wishes

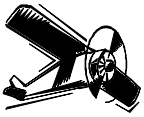
**A Joyous Holiday**

Season to All!

**Reminder:**

**EFO Meeting will be Saturday, December 9 starting at Ken's House and moving to the Oakland Yard for indoor flying and watching.**

**See You All Then**



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

**The Next Meeting:**
**Date: Saturday, Dec. 9, 2000 Time: 7:00 P.M.**
**Ken Myers's house – 248.669.8124**
**1911 Bradshaw Ct., Walled Lake, MI**