

THE CLIPPINGS

FEBRUARY, 2013



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ELECTRIC RACING THIS YEAR!

by Phil Zuidema, President

Electric Formula One is coming to Grassfield. Commonly referred to as EF-1, it is a racing class which is governed by the National Miniature Pylon Racing Association (NMPRA) rules and is an AMA event. The airplane is a standard class, with many versions available from Horizon Hobbies, Tower, and others.



Above is a Pogo, LR-1A ARF. I have not yet put one together, but I hope to have one for the meeting Friday. We'll see. This is just one of many very sharp looking planes, all part of the Goodyear Racing class of the 1950s.

The Cosmic Wind (at right) was one of four identical airplanes built by some friends that had a "double-dog-dare" going. Herman "Fish" Salmon, Tony LeVier, Vincent Ast, Robert Downey, and Genn Fulkerson all worked at Lockheed under Kelly Johnson (yes, the same one that designed the SR-71 Blackbird, the P-38, and the U-2). All were friends and decided they would build four identical planes, and they were all called something different. The Minnow was another version of the Cosmic Wind as was the Ballerina.



The Shoestring by Great Planes (shown here) is modeled after the Formula One racing plane by Vincent Ast, originally known as the "Ast Special" and "The Mercury Air Shoestring".



These were all Goodyear racers, and most of the EF-1 models are modeled after these good-looking racers. The EF-1 event is an attempt to capture these vintage racers and race them together with a setup that you can buy at your local hobby store.

These planes will do about 110 mph, which is fast enough to have a lot of fun, but reasonable enough for someone who would like to try their hand at pylon racing, to be able to get involved without too much angst.



Tony LeVier is flying his full-size Cosmic Wind, a single-engine, single-seat racing monoplane.

I hope there are some electric flyers, some adventurous pilots that are ready for their next challenge, and some "hot dogs" that will want to get involved. This is a low-key, simple event, and the whole package can be put together for about \$250 with one LiPo battery. You will need several if you want to race, but if you sport fly it, you can get in for about that price. We have two races scheduled, but can add more if the turnout warrants it. I hope you give it a try.

As an added bonus, EF-1 planes make great everyday sport planes. You can race your EF-1 one day, and with a change of the prop, you can sport fly it the rest of the year.

NEXT MEETING: FEBRUARY 8TH

Date: Friday, February 8, 2013

Time: 7:00 pm

Please bring a plane for Show-and Tell. Richard Steine is bringing his Nick Japanese fighter plane.

Location: Osseo Community Center
415 Central Avenue, Osseo, MN, 55369

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THE JANUARY 11TH GRASSFIELD MEETING

Last month's meeting was held on Friday, January 11th at the Osseo Community Center. Several members renewed their memberships for 2013, including Robert Ellis, shown at right.

Al Schwartz, Don Granlund, James Brown, and Stan Zdon made presentations at this meeting, sharing their expertise with us on various RC topics.



AL SCHWARTZ: BATTERIES



Al Schwartz talked about the advantage of using LiPo batteries, which hold their charge longer than NiCad batteries, even if they have been sitting on the shelf for a long time. LiPo (lithium polymer) and NiCad (nickel cadmium) batteries come in series packs to increase the total available voltage.

When selecting batteries, check the milliamps (mAh). The higher the milliamp (mAh) rating of the battery, the longer you will be able to fly.

Al explained that, when you connect a battery pack in electric planes, the electronic speed controller (see explanation of ESC at right) beeps to let you know that the throttle is armed and to count the number of cells in the battery pack. (If you have a four-cell battery, it will beep four times.) If it doesn't beep the correct number of times, it's trouble, and you'd better not fly the plane!

Voltage Regulators

In nitro-powered or gas-powered planes, you need a voltage regulator if you use a LiPo battery pack over 6.6 volts. Installed between the switch and the receiver, the regulator reduces the number of volts going to the receiver and servos. For example, if you are using a 7.2-volt LiPo battery pack, and your servos are rated at 5 volts, the regulator reduces the voltage to 5 volts before it goes to the servos. (When using NiCad receiver packs, you don't need to use a regulator, because they come in 4.8 and 6 volts.)

DON GRANLUND: ELECTRIC POWER



Don Granlund, who flies electric planes for the most part, discussed the electric power systems. He talked about brushless motors and referred to KV, ESC, and BEC, terms unfamiliar to most pilots of nitro-powered or gas-powered planes.

Understanding KV

When you use brushless motors, you should have a basic understanding of KV, which is the RPM per volt. Every electric motor has KV. Basically, if you want more torque, choose a lower KV motor. For more speed, choose a higher KV motor. For the same speed and torque, use a medium KV motor. Keep in mind that, as the motor gets bigger, the KV gets lower. Prop size is related to the KV; small props are used for higher KV motors, and larger props are used for lower KV motors.

Electronic Speed Controls (ESC)

When choosing an Electronic Speed Control, or ESC, for your electric plane, it is good to use an ESC rated at a higher amperage than you intend to run your motor, as an insurance against over-stressing your ESC, which would cause failure and potential damage to your model. Use a meter to measure the amps and volts being generated by your power system to be sure you are not stressing the battery, ESC, or motor.

Don usually flies about five minutes, then lands. It is better to do short flights, so the battery doesn't quit on you! He uses 40 amps for five-minute flight times; if you go 60 amps, the flight time is too short. So Don said if you go over 40 amps, you should use a different prop size.

Battery Eliminator Circuits (BEC)

Similar to using a voltage regulator in a nitro-powered or gas-powered plane, you use a BEC, or a Battery Eliminator Circuit in an electric plane. In earlier days of flying electric planes, you would use a separate 4.8-volt battery pack to power your receiver and servos. Now, BECs power them, allowing you to get rid of the extra receiver battery pack. It can reduce your main battery voltage (e.g. 11.1 volts) down to 5 volts to safely power your receiver and servos.

TIPS FROM STAN ZDON & JAMES BROWN



CLEANING BURNT CASTOR OIL FROM METAL PARTS

Stan Zdon shared a tip for cleaning aluminum or steel parts that have burnt castor oil on them. To clean the grungiest mufflers and other metal parts with the nasty brown varnish, place them in an old Crock Pot, never to be used again for cooking. Fill the Crock

Pot half-full with a straight antifreeze, turn it on to the high setting, and cover it. Leave it overnight or, if necessary, for 24 hours; it does not hurt the parts. When you take them out of the Crock Pot, they will look great.

To make it easier to remove small parts from the Crock Pot, Stan strings the parts on a metal wire.

FREEING SEIZED-UP ENGINES

James Brown said, instead of building a new plane, he decided to clean out the basement. In doing so, he found several seized-up engines.

To free them up, he made a penetrating oil, using equal parts of ATF and acetone. The acetone thins out the ATF, allowing it to seep through and penetrate into the seized-up parts; then the acetone will evaporate.

James squirts the solution on the seized-up engine and lets it sit overnight. The next day, it will break loose.



NORTH CENTRAL PYLON LEAGUE HOLDS ANNUAL MEETING

RANDY ETKEN, NEW NCPL PRESIDENT

The NCPL held their annual meeting on Saturday, January 19th, 2013, at the Anoka County EAA Building. After many years as the NCPL president, Del Berryman, resigned from his position. Randy Etken was nominated and elected as the new president.

JERRY ELERT HONORED AS "MR. PYLON"

Randy Etken presented an Eagle Award to "Mr. Pylon," Jerry Elert, for his dedication to pylon racing. Jerry accepted the award with eyes watering, as his contributions to the hobby were recognized by all of his fellow racers.

A. J. HEMKEN AWARDED SHOOT-OUT WINNERS PLAQUE

A. J. Hemken, the 2012 NCPL Shoot-Out winner, was awarded the traveling shoot-out plaque at this meeting. Congratulations, A. J., on a great racing season!

ELECTRIC RACING ON THIS YEAR'S AGENDA!

The NCPL will hold two electric races at the Grassfield flying field in 2013. This gives electric flyers the opportunity to enjoy pylon racing, by participating in the National Miniature Pylon Racing Association (NMPRA) Electric Formula One (EF1) events. EF1 is designed to be easy to get into and reasonably priced, using off-the-shelf components.

To introduce electric racing to Grassfield members, NCPL racers plan to bring their electric racing planes to this year's Electric Fly-In, scheduled for June 1st. Try flying EF1 planes that day and get a taste for racing! The dates for the electric races are June 16th and July 20th.

For more information on pylon racing with electric models, go to the NMPRA website (www.nmpr.org); click the "Start Here" tab, and go to Class Rules; then click on Electric Formula One Provisional Rules.



Jerry Elert (at right) receives a special award of recognition from NCPL's new president, Randy Etken. Jerry's constant commitment and enthusiasm for pylon racing is central to the success of the NCPL.



Shoot-Out winner, A. J. Hemken (at left), was awarded the coveted traveling plaque at the annual NCPL meeting.

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Clint is an Aerospace Engineer and go-team member specializing in aircraft structures for the NTSB. During Clint's 10+ years at the NTSB, he has been the lead structures investigator on numerous domestic and international accident investigations including the Space Shuttle Columbia and the in-flight breakup of a China Airlines B747. He was the lead airworthiness investigator on the crash of the modified P-51D at the 2011 Reno Air Races that is being featured at the Safety Seminar. Clint earned his BS in Mechanical Engineering from the University of Nevada, Reno in 1993 and an MS in Aerospace Engineering Sciences from the University of Colorado, Boulder in 1997. He has worked in the private sector for Rocky Mountain Propellers, The Boeing Company and Winglet Systems Incorporated prior to joining the NTSB.

PLEASE, PLEASE, PLEASE!!!!

Whenever you change your email address, please give it to Del Berryman or send an email notification to him at del31@charter.net.