



February, 2008
Volume xxi, Issue 2

PEAK CHARGE

*Dedicated to the promotion of electric propulsion
in all types of aeromodeling*

Monthly Meeting

Aerospace Museum, Balboa Park

4th Tuesday, 7:00 PM Feb 25

Electroglide

3rd Saturday, preceding meeting



SEFSD INVITES YOU TO ATTEND THE 2008 MWE SPRING FLING!

Join us at the West Coast's largest electric airplane event in warm sunny San Diego. Enjoy three days of electric aircraft flying at our beautiful Mission Bay site. There'll be great weather, lots of airplanes, plenty of flying time, out of this world demonstrations, vendors with new products and great show prices and scrumptious catering.

Pilots-\$15/day or \$30 for three days. For updated information go to www.sefsd.org. For sponsor and vendor information, contact Stello Jackson at stelloj@cox.net or call 619-429-9042

MAY 16, 17 & 18

Event Sponsors: **FLYER**, **NEUMOTORS**, **HITEC**, **THUNDER POWER RC**

Only minutes from the world famous San Diego Zoo, Sea World, Balboa Park's wonderful museums, Old Town and many other attractions.



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Mission Statement

The objective of the Silent Electric Flyers of San Diego is to promote and further the technology of electric powered R/C aeromodeling; encourage competition in Electric Soaring, Pylon Racing, FAI-F5B/D, Scale, Old Timer, and Pattern Electric categories by hosting major Industry-sponsored events and sanctioning "Fun-Fly" types of contests; provide forums for the exchange of technical information, instruction and experience; and participate in demonstrations of electric propulsion in area-wide model aviation events.

The Cover Story

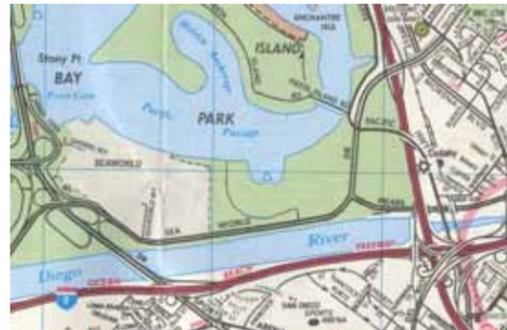
by Steve Neu

www.neumotors.com

Here are a few pictures from flights of the new F7F Tiger Cat. Flies just fine--as usual with my planes it is a little over powered:) --short take-off roll followed by a rather steep climb . A bit of trim and it was quite happy. First flight was with the gear down--second flight the gear was retracted. No major problems to report--flies and looks very nice. Power was 1902/4Y motors with 3300mah 4S battery and APC 9/5 props. Full power is 25 amps/motor. It is a happy cat!



Aerospace Museum
Monthly Meeting site



Field

AMA Charter Club 3078
Flying Field GPS Coordinates
Latitude 32.7626416 N Longitude 117.2143138 W

web site: <http://sefsd.org/>

Zip Code 92109



Don Gulihur is shown getting an outstanding service award for the many years that he has served as Associate Vice President for District 10. Don lives in Lakeside and is a member of the Wedwackers Club at Cactus Park.

San Diego Electroglide -- January 19 January 2008

This is the first contest of the new schedule of having the monthly Electroglides on the 3rd Saturday of each month. From now on, there will be no confusion such as we had in the past, scheduling it on the Saturday following the General meetings of the SEFSD. Since I communicate to the Electrogliders only via e-mail, I expected that there would be a few who wouldn't get the word of the change, however, we had a fine turnout -- 11 to be exact! So, mark your calendars for the coming months. As I said, I think that we can easily and safely field 20 pilots for our mass launches, so those of you who have been holding back, come out and join us!

No lift at our field this Saturday, but the winds were calm and spot landings piled up the points. Zeke pulled ahead with a 20 pointer on his last flight to firmly solidify his lead. Fred Daugherty had a fine first two flights, but in preparation for his third had an unexpected motor start-up and a severe hand injury. Those small props can really get to you!

The next Electroglide will be held on February 16th with the first toss at 9:30.

For more information check our web site at <SEFSD.org> or give me a call at (619) 469-5566.

Don Wemple

Results

Pilot	Model/Motor/Battery	Toss 1	Toss 2	Toss 3	Total
Zeke Mazur	Allegro-Lite, Hacker copy, 2c Lipo	37	30	75	142
Norm Arndt	Ascent Albatross, Hacker 20-20L, 2c Lipo	34	40	47	121
Roger Pedersen	Sky Sergio, sp400, 7cNiMh	32	46	20	98
Bob Stinson	EPP Eagle, 4001, 3c	21	29	32	82
Bob Anson	Albino Eagle, 400T, 3c 1300	0	29	47	76
Fred Daugherty	Ascent, 400T, 3cLipo	37	35	0	72
John Sigurdson	Pinnacle, Axi 2208, 3c 1320	50	0	15	65
Dick Prentice	Eagle, Axi 2208/34, 3c 910	30	0	22	52
Duffy Cannello	60", 460, 1000mA	21	0	19	40
John Forester	Ascent, AXI 2202/34, 3c 800mA	16	21	0	37



2008 AMA convention found new president of AMA Dave Mathewson handing out awards to second from the left, Jim Giffin, IMAA pres and AVP, Tim Attaway, CC and AVP, Don Gulihur, retiring AVP CA, Jim Reynolds, AVP AZ, Jerry Neuberger, AVP special projects, Bill Malvey, AVP LA, Darwin Barrie, AVP AZ, Wayne Hamada, AVP Hawaii, Derek Koopowich, AVP Utah. Dave is on the extreme left and Rich Hanson is taking the photo



The January 08 AMA Convention Ontario USA



The President's Corner

By David Fee



Welcome to the February issue of Peak Charge. I hope everyone has survived the recent rain storms. We've had some cold and wet mornings lately, but the days are getting longer and the sun is getting

warmer, which means it's time to finish up those winter projects and head on down to the field for some flying!

One of the great things about SEFSD is the wide range of modeling interests expressed by our membership. A great many club members enjoy participating in group activities, in addition to our regular casual sport flying. These group activities are varied, of course, from our annual fun-fly events like the MWE to monthly Electroglide contests, regularly scheduled EMAC aerobatic contests, pylon races and F5B contests, as well as occasional practices in support of the USA F5B electric glider and F5D pylon racing teams. Schedules for all of these

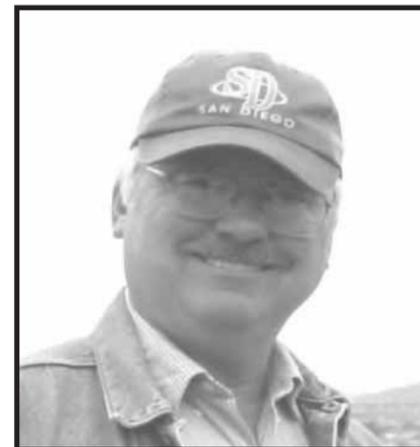
events can be found on the SEFSD website, and are generally listed on the front cover of Peak Charge as well. So, check the calendar and then come on out to participate, or just to watch.

I'd just like to take a moment to thank everyone who faithfully follows the field rules, and to encourage everyone to speak up if you ever see someone acting irresponsibly. Safety is everyone's responsibility, and it is in everyone's best interest for us to "self police" as much as possible. If we all strive to be a good neighbor and lead by example, the flying field will be a happier place for everyone.

Happy landings, and see you at the field!

Tim Attaway

AMA District X Assistant Vice President



SEFSD Member Tim Attaway has been named by our AMA District X Vice President Rich Hanson to be the AMA Assistant Vice President for our area since the incumbent Don Gulihur resigned after many years of outstanding service.

Vista Model R/C Club. He has been a competitor in precision aerobatic competition in IMAC events and currently competes in its top class. He also has been a driving force in our clubs EMAC series. Thank 's Tim for taking on this important position.

Tim Is also President of the Chula

Editor's Note:

"Let Tim do it". Tim as usual stepped forward to "get the job done", and rest assured, whatever the task, it will be done right. When he retired from the SEDSD Board of directors he left a hole that was not easily filled, but he is always available at the other end of the phone, or at the field (note the full page article elsewhere in this issue).

Minutes of the January Meeting

By Steve Manganello (subbing for J. Keesaman)

1. Meeting called to order @ 7:02 P.M. by Safety Officer Doug Rubin; President David Fee not present; 30 members present.

2. Discussed passing of Howard Harvey and services January 20th at Crystal Pier. 200 folks present; services conducted by 2 of his sons and 1 grandson; light refreshments. We'll miss Howie and his everpresent dog Shorty!

3. AMA District X associated Vice President Tim Attaway and Chuck Grim brought up an unfortunate incident at the Weedwackers field in Santee. A Lipo equipped trainer flown by a guest crashed and caught fire which was extinguished by a combination of fire extinguishers and shovels of dirt. The President of the Weedwackers ("Fred") without input or permission from his Board, subsequently wrote a letter to the County of San Diego recommending that Lithium Polymer batteries be banned for Model Aircraft use. The County apparently accepted this document and as a result, Lithium batteries are now banned from SD County Flying sites! At the next scheduled meeting of the Weedwackers, "Fred" resigned and was replaced by Glen Merrit. Tim read off a long letter sent to the Weedwackers by AMA outlining general safety guidelines and suggestions for all manner of emergency and risk mitigation measures related to many different types of Model Aircraft activities. Implicit in that was the Weedwackers might consider a less draconian risk mitigation measure to the use of Lipo batteries than an outright ban. Also note that SEFSD Field is in the City of San Diego and unaffected by the Weedwackers' ban.

4. The AMA convention/show was held January 11th through 13th at the Convention Center in Ontario CA. The top buzz was the new AMA Park Flyer Program. The program differs from standard AMA membership in that the models allowed to operate under this umbrella are limited to 2 lbs. and 60 MPH flying speed. The membership fee is just \$29 and includes \$500,000 of liability insurance only. AMA chartered clubs (such as SEFSD) are being encouraged to allow "Park Flyer" members to fly at Club fields. This will be decided by the Board of Directors at a future meeting.

5. The MARKS club of San Bernardino/Redlands is developing a new field on US Govt. lands. Tim Attaway believes this field has the potential to be a "National" caliber flying site and suggests that SEFSD make a financial contribution to its development. This will be decided by the Board of Directors at a future meeting.

6. Indoor flying in the Gym at Balboa Park was discussed. Tim Attaway to pursue. Also note that the Aerospace Museum personnel have been encouraging us to fly in their rotunda for some time.

7. Doug reminded us to keep the gate closed when not transiting and stay off the field when soft from rain. The footprints remain and harden into obstacles!

8. Show and Tell. Frank Gagliardi showed a \$66 GWS A-4 Sky hawk retrofitted with 88 gram, \$139 air power retracts. Model was painted in camouflage and fitted with a kyosho fan. Frank reports a fairly straight forward conversion; did not record

whether model has flown or not.



9. Show and Tell. Frank Gagliardi trumped his own Sky hawk with a beautiful Stagger Wing Beechcraft D-17 he built for Dick Kantner <check spelling pls!> from a Top Flight ARF. Frank relayed that this not the first Stagger Wing he built, the earlier ones having complex wood wing fillets requiring copious amounts of both sand paper and scotch whiskey! Frank instead concentrated



on scale taxi lights and a super sanitary job of hiding the E-Flight 160 outrunner into the scale radial engine turning an 18X 8 prop. The model is powered by a (2) 5S 5200 Lipo packs and includes the Robart retractable landing gear made for this model. Frank reports the Beech weighs just 18 lbs which is a lb less than suggested for glow power!

10. Show and Tell. Zeke Mazur showed his 17 oz Allegro for

too little or too great. "Well gee I dunno. That's the way it come out," was the inevitable reply from the builder if questioned on the strange appearance of his model. Incidence, decalage, and down thrust were unknown to us. Sometimes a plan would give instructions about CG location. Most times it was simply, "If model stalls, bend flippers down. If model dives, bend flippers up."

So, why is it we want to build these quaint models of models, for that is what they are. For older Flying Aces Club [members] (FAC), it may be to make the changes allowable and needed to see them fly as they never did in their first childhood. To younger FACs it might be relaxing, for they are not very demanding. After all, they are not supposed to be FAC Scale models with a 16-inch span limit, nor were they intended as such. But, at an altitude of 25 feet or so, the visual effect is about the same.

The desire to have worked as a designer for one of those kit companies denied us by Father Time has brought about the Pseudo Dime Scale modeler who can travel into the past while at his drafting table. Many of these FACs have faithfully made their layouts in the same format as the Comet plans conformed to. Some have picked up on the features mentioned above, as well as the sketch of the broken razor blade to be used in cutting parts. (Back in those days a razor blade could be snapped without bending it.)



Here is a photo of me and my fourth scratch built aircraft; called obviously Mach 4. It is my own design, balsa/ply and monokote construction, but it is styled after an aerobatic full sized plane. The aircraft weighs 90oz (including battery pack) and has a static thrust of 60oz at a prop speed of 7700rpm. Its wing span is 55in and it has 3.75sqft of wing area giving a wing loading of 24oz per sqft. It's powered by an AVEOX 1412 5Y running from sixteen NiCd cells with a 12x8 Master Airscrew prop. The motor draws 24A at 17.2 volts on a fresh pack. That's 413Watts or 74Watts per pound. It was first built and flown in 1997 so the power system is older technology but it is still a nice plane to fly.



The earliest ad the author has found in which 10¢ kits were shown was that of Donald E. Duncan, Inc. of Chicago, Illinois. Although many model companies produced simple unsophisticated kits prior to this, their cost was high by comparison. It was by cutting the contents in the kit that the cost could be reduced. These early kits contained nearly everything needed to build the model. Some even had the tissue printed with the stripes, lettering, or insignia required. Pins, thread, brass washers, glass beads, formed wire parts, ready-made Paulownia wood propellers, vials of glue and banana oil, rubber etc. Typical of these were Ideal and National, to mention two.

If you decide to join the ranks of pseudo ten cent kit designers, why not take a few minutes to study the plans of the genuine renditions. Look over their shoulder as the designers sat at their drafting boards. Copy their style. You are sure to get more enjoyment out of your own work. Drawing your plan will take on a new meaning that will elevate it from being a task.

When you present your ship and plan to some wrinkled, gray haired CD or judge for a rules compliance check, his smile—or is it a grunt?—of satisfaction will be felt by your inner self as well. Who knows, he might even be the Comet Kid.

Michael Neale

and Mach 4

Just What Was a Ten Cent Kit?

Economical would be the first thing to mention in answer to the question above. The 10¢ kit became popular in times when a thin dime was not easy to come by in a society recovering from the Great Depression. But, this is not what concerns us as model builders today. Today, the Comet Kid has wrinkles and gray hair. One of a vanishing breed that would like to relate the endearing and enduring charm those unsophisticated kits infected many of us with.

10¢ kits were mostly renditions of contemporary full-scale airplanes, or war planes from the Great War of 1914-1918, with a few historically significant types included. More than half were American civil airplanes. Of course, no kit company would omit at least one stick model and sport model from its line.

Were they accurate scale models? Well, let's say they were identifiable to one degree or another. Most seem to have been drawn from photographs of their full-scale counterpart. Even those, which upon first impression seemed quite accurate, were not. If one took the primary dimensions of the full-scale airplane and converted them to model size, this became evident.

For example, models by Comet simply had longer than scale wingspans. Why? Perhaps to meet the advertisement ballyhoo and still be able to fit the rest of the drawing on the desired plan-size paper. For scale fidelity, none came close to the line of Cleveland Kits, the cost of which usually reserved them as birthday or holiday gifts to the boy modeler. (There were very few girls who found interest in the hobby then.)

Economy was not limited to the purchaser. One of the chief characteristics of the 10¢ kit model was sparse structure, wing rib spacing especially. The less structure, the less wood cost to the manufacturer. Being able to cover a complete model with the tissue provided in the kit took nothing short of wizardry. Placing the wing and tail on the tissue sheet in any manner regardless of grain direction, one then saved each and every scrap in hopes of being able to cover the entire fuselage with what remained.

Common pins, not provided in the kit, were often called out to serve as wheel axels and motor pegs. "Stiff paper" was not provided either. "Make windows from candy wrapper" was another way of keeping cost down. There were no plastics other than cellophane, celluloid, and

Bakelite, so propellers were usually machine-cut balsa blanks. Some companies used sheet balsa blades from the print wood. Guillow hardwood wheels looked more like wooden buttons than wheels. Maybe Paul K. Guillow, former naval aviator, hit on a bargain carload of them.

Ease of production was also a consideration. One company defined the color scheme of its model thus: "cover wings and tail one color, and the fuselage and rudder the other," eliminating the need to package specific colored tissue. When Comet designed its 10¢ ROG model, the Phantom Flash, it was done so the kit parts would not differ from the standard used in the rest of the line. Landing gear legs were sheet balsa rather than wire. Another piece of sheet balsa spanned the gap between the legs and held the usual kit nose plug. The rear hook was a bent pin. In another clever move, the outer and inner face of wheels pants were made of paper cut from the plan.

In order to cut all the strip balsa one size (1/16 sq.) Comet had you glue two strips if 1/16 by 1/8 strips were needed. In order to limit the sheet wood in the kit, some companies had you form strip wood curves by rolling them under a pencil, or in the case of sharper curves, wet and kink the strip wood repeatedly with the fingernail.

Burd kits had the darkest, fuzziest balsa ever seen by anyone! There must have been a carload bargain in this also. Most kits included a hardwood nose plug, while some simply told you to push the propeller shaft through the balsa nose block! Comet instructed you to remove the rubber eraser from a pencil and rotate the ferrule to cut the nose plug hole in the nose block. One company called for a straightened paper clip to be used as a propeller shaft. The bonus in Comet 10¢ kits was the wire propeller shaft with hook ready bent, which was packaged by sticking it diagonally through the upper left corner of the plan. It was tough for a kid to bend a hook on the end of a piece of wire, especially without a pair of round nose pliers! Glass beads and brass washers to reduce friction were reserved for the more expensive kits regardless of who made them.

Did they fly as designed and built according to plan? Seldom. Most stabilizers were too small. No true view layouts were there to construct any of the landing gear or struts for biplanes and parasols. Consequently, the models sat close to the runway with biplane wing gap that was

electroglide made from a Mark Draela design. Zeke reports the Allegro is a great flyer on a Hacker motor and reminds us that Electroglide is now on the 3rd Saturday of the month instead of the Saturday following the Club members meeting.

11. Monthly Program. Steve Dente and Tim Attaway discussed the upcoming EMAC pattern series. Schedule in last issue of Peakcharge. Passed around new BASIC pattern for 2008; definitely a way to sharpen



your skills. Steve Dente went on a described a newly identified problem with Futaba's new FAST 2.4 ghz spread spectrum system highly desired for pattern use. Apparently, each transmitter is supposed to have a unique "GUID" signature which would prevent it from interfering with any other transmitter, supposedly they sometimes "revert" to a factory test setting which would definitely make it interfere with other systems that have the same reversion. Also, the receiver will "reboot" if it senses a drop in voltage to < 3.3 VDC taking

up to 10 seconds to reboot (plenty of time to crash) Steve reports these defects have been fixed in new production which he demonstrated; be careful what you buy!

12. Stelio Jackson reports MWE planning in earnest; he will be recruiting volunteers starting next meeting. Also it was realized that this will be our 10th MWE so we have an anniversary to celebrate!

Respectfully Submitted,
Steve Manganelli



Calling all volunteers, calling all volunteers!

Hello fellow club members and friends of the SEFSD. It is that time of the year again to start thinking about what you can do for your club. With less than three months left for the MWE Spring Fling 2008 grand event, planning is well under way. This year the event will be held on May the 16th-18th, and you can help make it a success by volunteering your time, your knowledge, your expertise. Many of you have helped in

years past and find it a rewarding experience. For others it might be your first time, but there is nothing to be afraid of. There are jobs and tasks for every skill level and for as little as one hour of your time or as much as the whole three days if that is what you would like to contribute. For the next few general club meetings there will be volunteer sign-up sheets for you to look at and select the task and shift that you would like to work.

The MWE Spring Fling 2008 planning meeting went smooth this weekend (February 16-17), even though it was held in two parts, one on Saturday and one on Sunday to accommodate the people participating. For the most part the consensus is to repeat last year's successful formula. Two differences for this year are the military aviation theme as noted in this year's aircraft choice (P-51) for the event logo and the fact that we will be celebrating the 10 year anniversary. The special events besides the vendor lunch hour demos will be the SD Electroglide, Scale competition, and the trademark crowd pleaser Limbo Kombat. The limitations for the designers of this event are that we don't have to call the ambulance and that we don't get kicked out of the flying field. The

Limbo Kombat contest rules are that there are no rules. Electroglide by Don Wemple and Scale competition by Frank Gagliardi will be a little more structured. To mention a few other names, yours truly will be the organizer, Steve Manganelli the CD, the Griffins will handle registration/raffle ticket and t-shirts sales, Pedro Brantuas in signing up the vendors, Doug Rubin with raffle prize collection and catering, Chuck Grim with field preparation, Sam Wright will be the announcer, Ray Fulks takes care of our permit, Jack Hix takes care of the graphics, Mark Wood with raffle prize announcing (he does not know that yet), and you should you decide to join the group of dedicated people that make this event a success.

Stilianos Jackson

From the Wellsville Area Small Plane Society, Wellsville, New York

Autogyro Aerodynamics - by Ken Gough

After reading many explanations of how autogyros fly, I have come to the conclusion that the discussion can get too technical too quickly. Let's start with a simple analogy.

Some kinds of maple seeds have a wing with an airfoil. It spins as it falls, and the upward force on the blade slows the fall. The force that keeps an autogyro airborne is the same that acts on the maple seed. Now if you attached a thread to the seed and pulled in horizontally as it fell and spun, it would fly! Well, maybe it would need a tail and a more efficient blade, but you get the point. The arc of the rotor would angle back a bit, and the resulting upward force would be greater than the gravitational force.

Hopefully, from this explanation, you can see the differences between an autogyro and a helicopter. Most importantly, an autogyro rotor is not powered. It is simply freewheeling in the wind. The plane of the blades is titled back opposite the direction of travel, not forward like a helicopter. And the blades have a negative angle of attack. This makes sense because if they had a positive angle of attack they would spin backward when the wind hits from underneath.

Most autogyro blades have a special hinge to keep them at the proper angle of attack.

The hinge line is at an angle to the blade, so when the blade tilts up, the angle of attack decreases (leading edge is lower.) And if the blade tilts down, the angle would increase, but a stopper blocks the downward bend. You don't want the blades dropping and hitting the airplane. Hinging the blades also helps to decrease unwanted roll forces caused by the differences between advancing and retreating aerodynamics.

Today....(2-9-08)

Scott Rettig brought out a scratch built from Home Depot foam S-3 Viking. It was one tenth scale with a 7 foot wing span and length of 6 foot 2 inches. It weighed 8.2 pounds.

First flight was one slow procedure turn and a landing 3 weeks ago and it was underpowered. Scott added 2 EDF to the plane and on the second flight today the extra 2 motors that he put on board drew too many amps and burned up the wiring causing the airplane to crash.

Steve Dente was test flying the aircraft.

Craftsmanship was not evident but it was a fun effort that showed an innovative and creative spirit that was admirable.



Tim Attaway

