

# PEAK CHARGE

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

SEFSD Newsletter

October 2001

Volume XI Issue X

## CALENDAR

### October Meeting

7:00 pm October 23 2001  
Automotive Museum, Balboa  
Park

Electro Glide Saturday  
October 27 at 9:15 am

## OCTOBER RAFFLE

L-19 ARF  
Simple 400 kit  
Aveox ESC & motor  
Atomic Force motor  
Forstner drill set  
Dial caliper  
Electric props

## Comparison of Various Covering Materials for Model Airplanes

By Wayne Walker & Bill Knoll, SEFSD 9/25/01

Most weights below courtesy of Flying Models fm clinic column Mar 2000

Type	General Characteristics	Weight per Sq. Ft.
MonoKote	High Temp Polyester Film commonly available in a variety of colors. Both Opaque & Transparent, weight for each is given.	.49-.37 oz/ft <sup>2</sup>
Coverite 21 <sup>st</sup> Century Film	Similar to MonoKote, but possibly tougher & better to work around compound curves. Good color selection.	.51 oz/ft <sup>2</sup>
White Super Coverite Film	Similar to MonoKote, but possibly tougher & has pressure sensitive adhesive backing.	.53 oz/ft <sup>2</sup>
Colored Super Coverite Film	Similar to MonoKote, but possibly tougher & has pressure sensitive adhesive backing. Good color selection.	.60 oz/ft <sup>2</sup>
Flight Cote	Low Temp Polyester Film commonly available at Hobby People. Only Opaque colors available.	.45 oz/ft <sup>2</sup>
Oracover Lite	Low Temp Polyester Film available from Europe or Hobby Lobby, very easy to work with, excellent adhesive, transparent colors only. About the weight of MonoKote.	.22 oz/ft <sup>2</sup>
Fiberglass Cloth w/Epoxy resin	Adds strength based on glass weight. Very common in high performance models best when hollow construction is used. 1.5 oz / yd cloth with Epoxy resin over foam with spar is a light layup, (S400 planes).	Wt. per sq yd & divide by 9, then X2 for resin wt. .33 oz/ft <sup>2</sup>
Fiberglass Cloth w/Varathane	Adds less strength than resin, but is much lighter & fills grain well, but still needs filling before painting. Wt. per sq yd & divide by 9, then X1.2 for Varathane. 1.5 oz / yd cloth with Varathane over balsa & foam wings.	.20 oz/ft <sup>2</sup>

# Silent Electric Flyers of San Diego

## Club Information

Web Site: <http://sefsd.org/>

### 2001 Officers

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Instructor & Gate Keys Bill Knoll  
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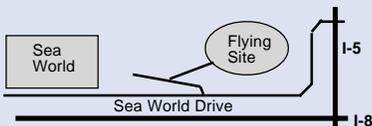
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### Flying Site

Located one half mile East of  
Sea World on Sea World Drive  
at South Shores Park Drive



### Membership or Subscription

\$25 per year, \$15 for subscrip-  
tion only. \$10 for under 18 or ad-  
ditional family member. Mail to  
the Subscription Secretary:  
Dennis Collins, 5150 Corte Playa  
Catalina, San Diego, CA 92124.

## 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.

## President's Corner

It's **time to nominate your favorite Club-E's** for the positions of **President, Vice-President, Editor, Secretary, Treasurer, and Safety Officer**. Bill Knoll has agreed to run for the office of President for Life, if anyone else would like to run too come to the meeting and throw in your hat. Tom DeShon is running on his ticket as Vice President. Be sure to come and vote early and vote often.

**Entrance to the Automotive Museum is now restricted** to using the door at the north end (the one we usually use), and we must have a club representative there until the maintenance person locks it so that no others can enter. If you are late you may find it impossible to get in. **We will keep someone down ther until 7:10 PM**, but that's all I can promise at this time. Please be a little early to avoid being locked out.

**The F5B USA Team Trials and "Inter-Galactic F5B Championships"** for **7Cell** and **10 Cell** as well as the **1.1 Kg class** was held on the 20<sup>th</sup> & 21<sup>st</sup>, Results will be available at the meeting on Tue. Oct. 23<sup>rd</sup>. We had the largest field of pilots vieing for the F5B Team ever! We'll tell you all about it and show the latest F5B planes from Russia and a peek under the hood!

I'll be making our reservations for the **Christmas Party at Tom Ham's Lighthouse** on Sunday Dec. 9<sup>th</sup>. We'll have as great a party as always and install our new club officers too! I'll start the sign up this month and finalize it next month.

The meeting entertainment this month will be a presentation on how to build a mould for fiberglass fuselages and other parts. Bill Knoll & Mike Morgan will show us the steps need to build a large B-58 Hustler complete with nacelles and moulded in wing roots.

A progress report from the **UCSD CORAX Cal-Space** project on the flying wing for balloon launching to almost outer space and maybe the famed video of its early flights will also be shown.

Be sure to bring your latest and greatest for the Show & Tell. We're always interested in what's new & what's been built in your shops!

See you then, and fly safely,  
Wayne

**Introduction –**

The September meeting was called to order on 9/25/01. There were no visitors or new members.

**Old Biz –**

As discussed in the last few meetings, the new field proposal is still moving forward. The club is searching for someone who would be willing to donate the use of a water truck during the new construction. If any members have access to used telephone poles, the club would gladly accept the donation.

There are still some “club” sponsored products for sale. T-shirts, polos, and club patches may still be available for sale at the meetings and at the field on selected weekends. Please see Wayne Walker.

**New Biz –**

Club Competition –

*The S400 Electroglide will take place Saturday, 9/29 at 9:15 AM. This event always occurs on the Saturday following the monthly meeting. A change in rules was announced for the future. All Junior pilots, 17 years old and under, will now be able to fly any configuration of plane regardless of motor size or cell count. Future competitions are planned for 9:15 AM on 10/27, 12/1, and 12/29.*

*The F5B Selection Trials will be Fri – Sun (10/19 – 10/21). First flight will be at 8:00 AM on 10/19, with the last event on Sunday at noon. No sport flying will be permitted at the field during these World Trials. See the club web-site for more information on registration, tech insp, etc.*

Club Programs -

Discussion regarding the 2002 Mid-Winter Electric competition revolved around the proposed date of Washington’s B-Day, 2002. The tentative program will include at least four events: Scale flight and static display, sky scooter “all up last down” event, S400 and open Electroglide events, and S400 pylon racing. Set-up is scheduled to start Thursday; competition on Friday and Saturday; and finals and awards on Sunday. Proposed changes will be discussed at future meetings. Volunteers will be needed as usual.

This month’s raffle was even more robust than usual as the club received a large donation from Lee Norton and Hobby People.

Other Events –

A reminder for those interested, the Miramar Air Show is cancelled this year. The Weed Wackers club in Lakeside is sponsoring its annual Scale Warbird Event. More information relative to date, time, and location is available at local hobby stores.

Special Presentations –

Jason Dorvee, a UCSD Engr student attended this month’s meeting to present his second prototype design of the high altitude experimental vehicle he and peer students are designing. Development of the airframe is ongoing and the students wanted to express their gratitude for all of the club-sponsored help thus far in the project. For those interested in following this experiment in more detail, Jason is usually available to answer questions at the monthly meetings or on selected weekends at the flying field.

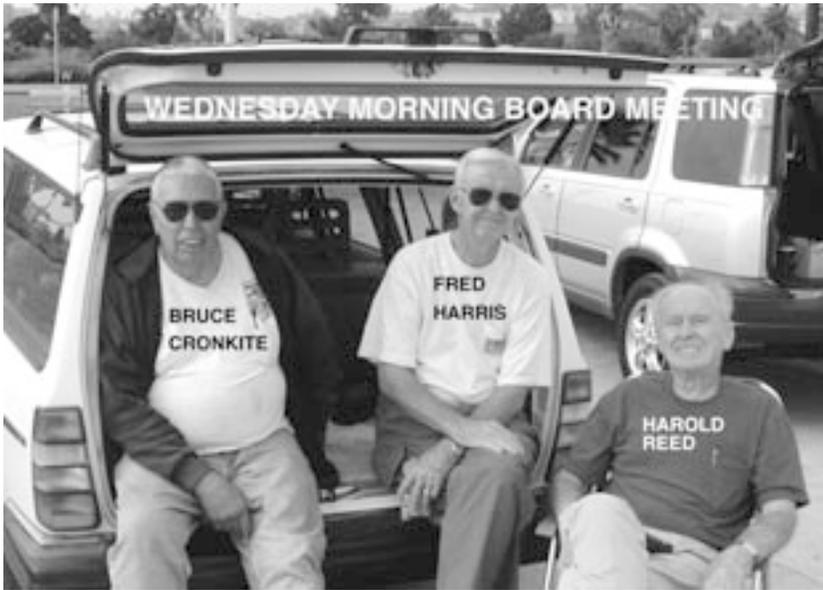
**Safety, Safety, Safety....**

There was no specific discussion regarding safety at this evening’s meeting.

**The Training Program-**

The club simulator is again available for loan. As a note, this software requires an 8mb (or larger) video card and 366 Mhz operating system to run properly. See Bill Knoll with questions.

continued on page 6



San Diego Electroglide  
Results of September 29th, 2001

	Flight	One	Two	Three	Total
Bill Knoll (Impuls)		50	54	9	113
Tom DeShon (Sunbird)		55	53	0	108
Larry Brown (E-Joy 1.5)		47	29	15	91
Don Wemple (Pulsar)		0	32	45	77
Tim Ardoin (Sunbird)		29	0	17	46
* Aaron Vigil (Pepo)		0	26	18	44

This months Electroglide featured two firsts!

The first first is indicated by the asterisk before Aaron Vigil's name. The decision was made to allow (encourage!) young pilots (17 and younger) to fly with any ship/motor combination -- they don't have to conform to the 7-cell, speed 400 motor rule and they will be scored with the rest of the pilots, but indicated by an asterisk in the scoring each month. Congratulations, Aaron. I hope that other youngsters can join us oldsters in future months.

The second first was the occurrence of a mid-air collision! We had been afraid of this happening ever since the beginning of the Electroglide, what with the simultaneous launching of all ships. Immediately after I threw the Pulsar, I heard what sounded like light machine gun fire. What caused the sound was Tims prop tearing through the outboard ribs of Larry's E-Joy! Anyway, both landed safely and Larry's ship is repaired and ready to fly in next months competition.

Moral to this story is that we should perhaps spread out a little more before our launches and maybe the best bet is not to all head off into exactly the same direction. The idea of a "destruction derby" is not the concept behind the Electroglide!

The October Electroglide will be Saturday, October 27th with the first launch at 9:15 AM.

If you need further information regarding the rules and regulations, call me at (619) 469-5566 or e-mail me at <DonK126@cts.com>. Don Wemple

## Why Do Zagi's Fly?- Ask Dr. Science

Recently, I observed an interview with Dr. Science and a 14 yearold boy who asked- "Why do Zagis Fly?" Here is the answer.

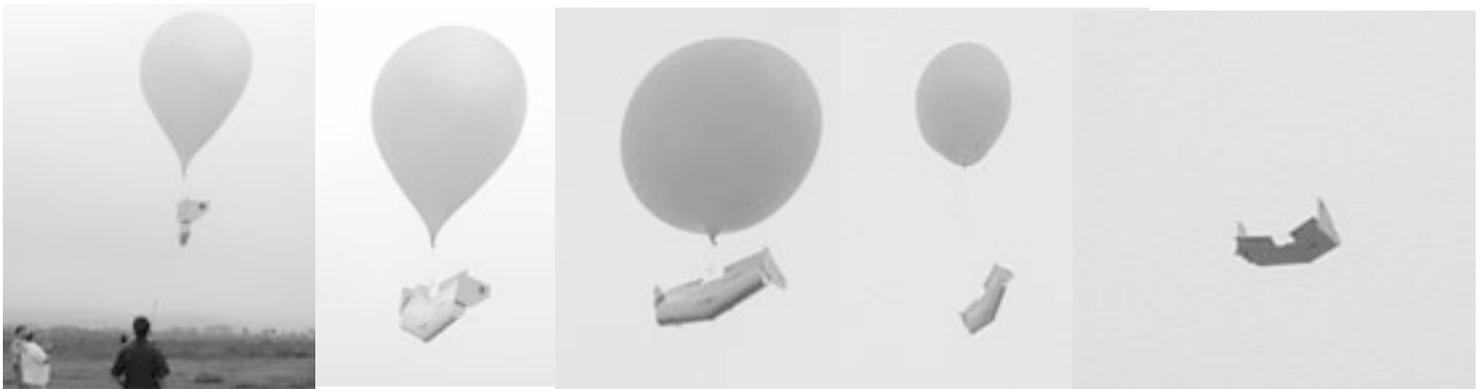
DR. SCIENCE: Little boy, you have made a common mistake. You have observed a Zagi in the sky, twisting and turning in such violent maneuvers that real airplanes cannot do. No doubt you have also observed that Zagis don't land as conventional airplanes, alighting gently to earth. Instead, Zagis must always dive to the ground at high speed, arriving with a loud thwack. Zagis after all are the noisiest electric airplanes, and some clubs have already passed noise ordinances prohibiting glow models and Zagis.

It turns out that the answer is somewhat complicated. You see, Zagis don't really fly. Instead, the Earth or Mother Nature, like many real R/C pilots, finds the Zagi an abomination and repels it. The Earth has established a Zagi repulsion field about 8 feet above the ground. Once the Zagi is thrown to this height, the repulsion field takes over. Thus the antics of a Zagi are not based on aerodynamics, but rather the tormented respnse of Mother Nature.

Since it takes a great deal of force to penetrate this Zagi Repulsive Barrier (ZRB), for Zagis to return to Earth, they must build up a great deal of kinetic energy. Of course, once the Zagis manage to penetrate the ZRB, their lack of aerodynamic efficiency becomes manifest and they simply fall to the ground. However, the Zagis are moving quickly through the ZRB and this impact with the ground can often be heard for some distance.

While most objects would not withstand the abuse of being repeatedly driven into the Earth, scientists have discovered a second Zagi repulsion field close to the ground. No part of the Earth is permitted to come into intimate contact with a Zagi. Thus the dirt, rocks, stones, mud, etc. that normally damage other objects by coming into contact with them, are not permitted to touch the surface of the Zagi. Scientists have been studying this Zagi Ground Repulsive Field (ZGRF) but are baffled by its composition, and report that it does not appear likely that the field will be able to serve any useful purpose. Scientists are also baffled by the ZRB, but since studying either the ZRB or the ZGRF more closely would require a Zagi, few scientists have wanted to delve into the mystery- claiming that Zagis are just simply too awful to have in a lab. Several scientists have claimed that lab mice have been seen to die of unknown causes within 5 feet of a Zagi. Thus little boy, Zagis don't really fly- the Earth repels them.

THANK YOU, DR. SCIENCE  
DR. SCIENCE- YOU'RE WELCOME.



UP UP AND AWAY IN MY BALLON



Fred Harris' Model "American Eaglet"  
 an old LEISURE KIT now produced by  
 "Spirit of Yesterday".  
 Wingspan...62" Wing Area ...571 sq.in.  
 Wing loading ...10.4 oz. sq. ft.  
 Weight.. 32 oz. Less Battery  
 Power...Astro .020 geared Brushless  
 Batt. ....7 -1100Mhr. Nicad  
 Prop .... Master Airscrew Electric 10x6

### How To-

Tonight's "How-To" was an explanation of various covering materials. Wayne Walker and Bill Knoll demonstrated, with examples, the pros and cons of 15 different covering materials. Generally speaking, on a 2-meter or larger glider, the covering alone may account for 50% of the total weight of the wing. As the information was delivered in much more detail than can be covered here, a copy of the handout is included in this newsletter.

### Show & Tell-

Michael Neale brought his delta wing creation made entirely from cardboard. It flies using a S400 motor, 8-cell battery pack, and Gunther prop. The plane looked very flight-worthy and Michael did a great job on the appearance.

Bob Davis brought his 52-oz Plaything. It flies using an Astro 05 motor with 2.38 gearbox. The planes uses an 11 x 8.5 prop and a 7-cell battery pack for power.

Mike Morgan brought the "plug" for his new P-58 Hustler airframe. This plug will be used to create the fiberglass mold for the future kit. Mike believes that the power source for this airplane will be 4-S400 motors. More details to follow as this airframe design becomes more mature.

Mike Blott brought his new "USS Enterprise" made entirely from foam. Mike used detailed drawings to copy the original craft including the impulse engines, etc. Power comes from a S400 motor and 8-cell battery pack. Flight-testing is still ongoing, but the plane seems to fly well thus far.

The meeting adjourned shortly after 9:00 PM.

Type	General Characteristics	Weight per Sq. Ft.
Light Japanese tissue w/3 coats dope	Classic tissue covering for indoor & FF models. Dope is always thinned 50%.	.19 oz/ft <sup>2</sup>
Lite white silk w/5 coats dope.	Silk like in women's scarves, can get good designs & colors.	.25 oz/ft <sup>2</sup>
Saran Wrap	For Indoor lightweights. Soft, pliable. Tears easily. Hard to get good finish. Can get some colors. A light misting cote of Krylon adds about 1 gm/ft <sup>2</sup> , Opaque is about 3-5 gm/ft <sup>2</sup> .	.020 oz/ft <sup>2</sup> or 2.5 gm/ft <sup>2</sup>
Silkspan	Has a Fabric texture, excellent for scale look of cloth. Like Monocote it can be stretched around curves when heated.	
Doc-U-Lam	Film material, OK working around curves. Clear only, sold in drafting supply stores.	.040 oz/ft <sup>2</sup> or 5 gm/ft <sup>2</sup> (About)
Litespan	Tissue like material, OK working around curves. Generally white, can be sprayed or dyed for colors., or painted (adds weight).	.19 oz/ft <sup>2</sup>
Polyspan	Very similar to Litespan, but a little easier to work around curves and possibly lighter (no data avail).	

## SEFSD Video List

### October 2001

1994 KRC Electric Fly  
 1996 KRC Electric Fly  
 1997 KRC Electric Fly  
 1996 London Bridge Seaplane Classic  
 1996 NATS Highlights  
 2000 San Diego Midwinter Electrics  
 A-10 Warthog  
 Airborne R/C Video ( In-flight video )  
 Airplane ( Joe Wurts )  
 Airforce Top Gun  
 Basic Construction for Beginners  
 Building with Foam  
 Byron Originals show season 1985  
 Celebration of Eagles ( AMA )  
 Combat Models / F-16  
 Desert Storm/ Tornado  
 Double Eagle  
 Electric Flight ( Building & Flying )  
 Electric Flight & Schneider Cup  
 Electrifying the FANTASY  
 Endless Lift  
 Float Flying – John Sullivan  
 Gas to Electric Conversions  
 Let's get serious about Electric Flight  
 Mini-Max Motor Gliders  
 Monokote I  
 Monokote II  
 Polyspan Covering Instructions  
 Power for performance Electric Flight  
 QSAA Fly-In 1994 ( Vol. 1 )  
 QSAA Fly-In 1994 ( Vol. 2 )  
 Schneider Sport Electric  
 Speedy Bee / Lazy Bee – Clancy Aviation  
 T-Birds  
 U.S. AirCore building tips  
 Vacume Bagging tips  
 Warbirds over Schenectady  
 Wring it Out ( Vol. 1 )  
 Wring it Out ( Vol. 2 )

Hello San Diego Electric modellers. My name is Tony La and I run a small business that provide hobbyists with a wide variety of electric flight accessories such as battery packs, Orbit charger, Sermos connector, Deans plug, Castle Creation electronic speed control (ESC), Hacker brushless motors, Kontronik ESC, and Schulze ESC. You can access the online catalog at <http://www.eflightpacks.com> to learn more about the products. Product support is just a finger tip away, whether via email or a phone call. So, drop by the website and see if anything fits your needs. I am also a member of the Ezone (under user name rcdude), a growing group of electric modellers. Please join the Ezone discussion group at <http://www.ezonemag.com> (click on the Discussion link).

Eflightpacks  
 576 South 5th St. #24  
 San Jose, CA 95112-5649  
 Email: [rcdude@ureach.com](mailto:rcdude@ureach.com)  
 URL: <http://www.eflightpacks.com>

Happy flying,

Tony La, owner of Eflightpacks

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Here's an english-french-german modellers dictionary  
<http://home.t-online.de/home/e-huber/dictio.htm>

Met vriendelijke groet, Ron van Sommeren

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If you like strange airplanes, check out this link to the INTER-EX <http://www.reply.mvcnederweert.nl>

Mike  
 Insanediego AMA# 2241  
<http://phreak.mine.nu/drblott/RadioControlProjects.htm>

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Mr. Town, A toy airplane, is a thing you wind up with a key, and it rolls along the floor"  
 from the movie "Flight of the Phoenix"

# Membership Application

NAME: Last \_\_\_\_\_ First \_\_\_\_\_ Middle Initial \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE: (H) \_\_\_\_\_ (W) \_\_\_\_\_

FAX: \_\_\_\_\_ E-MAIL \_\_\_\_\_

AMA NUMBER: \_\_\_\_\_ Dues Paid \_\_\_\_\_

Date of birth \_\_\_\_\_ Date \_\_\_\_\_

Note: AMA Membership **Required**

Flying membership \$25, Newsletter only membership \$15. Join after July \$10. Bring to club meeting or mail with copy of AMA card and check to **Subscription Secretary: Dennis Collins, 5150 Corte Playa Catalina, San Diego, CA 92124.** Do not mail your application or subscription to the SEFSD newsletter.

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SEFSD c/o Charlie White  
4420 Ladera Street  
San Diego CA 92107

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