



PEAK CHARGE

Newsletter of the Silent Electric Flyers of San Diego
AMA Charter #3610

1994 Officers

President, Steve Manganelli	225-1152
Vice-President, Steve Neu	284-0816
Secretary, Steve Belknap	693-3739
Treasurer, Chuck Grim	274-7322
Newsletter Editor, Roger Jaffe	463-4453
Safety, Phil Moore	459-3133
Newsletter Publisher, Jerry Berman	

Volume IV, Number 8, August 1994

Club meetings are held on the third Tuesday of each month at the Serra Mesa Recreation Center, 9020 Village Glen Drive, San Diego, at 7:15 pm. Full membership is open to all Academy of Model Aeronautics (AMA) members. Next Fun-fly: Saturday, August 20th at Dusty Rhodes Park, NW corner of Hwy 8 Nimitz Blvd. Next meeting: Tuesday, August 16th

MINUTES OF THE JULY MEETING

The meeting was called to order at 7:30. All officers except the Editor were present. A total of 18 members attended.

- Mission Bay Park Flying Site:** As of July 19, the Parks and Recreation staff informed Steve M. that no use of the area will be permitted until the park is complete! Supposedly the Army Corp. of Engineers has to "buy off the whole project" before any use will be permitted. Apparently the Parks and Recs. folks recently tried to use the area for overflow parking for some event and was denied. Steve M. was referred to Assistant City Manager John Leppert for additional details. (Steve M. said he had not had the time to contact Mr. Leppert prior to this meeting, but definitely will before next meeting). See Steve M.'s article for more details.
- Alternate Site:** A discussion was initiated on the subject of possible club flying sites (other than Mission Bay). Individuals tossed out many suggestions for sites but most had clear and obvious use problems attached. Some of those suggestions were: Poway Business Park, Torrey Pines, Eastgate Mall, T.P.G.s site in Poway, Black Mountain Middle School, Town Center Drive, & Sorrento Valley Blvd/Calle Cristobal. Those individuals were asked to investigate the suggested sites and report by next meeting. Of course, any other suggestions are welcome. Please contact Steve M.
- Meeting Room:** As if the above were not enough, a call has been issued for a new meeting place. At the present place there are two problems: the time available is shorter than what is really needed and the City has proposed a \$5 per use charge for the room. Some of the suggestions at this time were: Roger Jaffe's business, American Legion Hall, Aerospace Museum, Tecolote Center, & a meeting hall near Steve N.s house. Again, there seemed to be obvious problems with most of these ideas also. If anyone has a line on a suitable meeting spot please call Steve M.
- Fantasy E-Power Conversion:** The fuselage is complete and ready for equipment installation and covering. Adhering to the wishes of the provider, the fuse. was built stock with only

the minimum necessary modifications needed for the E-conversion. As such, the bare fuse. weighs in at a whopping 17 ounces! As of this writing, Bob has completed the major portion of the wing. Wayne has done a fine job on the tail feathers and is anxiously awaiting his chance to cover the entire model.

- Hobby Horn:** According to reports, Hobby Horn is no longer. There is no merchandise left for sale and the phone will not be answered.
- Raffle:** Russ Tynan must have been a real good boy lately; he won both the Davey Systems Heron and the Steve Neu motor controller. Bob Davenport took home a stack of old M.A.N. magazines donated by Rick Cutler. Rick Cutler, in absentia, and via Harold Wood, won an Astro battery charger. Steve B. snagged a \$5 gift certificate for Tower Hobbies. More goodies next month!
- Treasurers Report:**

Previous Balance (May 17, 1994)	\$ 767.44
Dues Income	160.00
Newsletter Expenses	94.35
Raffle prizes	<u>136.85</u>
Current Balance (July 19, 1994)	<u>696.24</u>
- Show & Tell:**
 - Steve M. gave a demonstration of his E-modified Kyosho Concept 30 helicopter on the grass prior to the meeting. Because of Steve's attention to detail and quality craftsmanship during the modification, his machine runs and hovers flawlessly.
 - Steve B. showed the Fantasy fuse. and explained the E-modifications necessary. A small compartment was added to the fuse. area just behind the wing to hold the receiver & battery and to separate them from the elevator and rudder control rods. The fuel tank floor was replaced to become the compartment ceiling. Finally, Velcro straps were added to hold the motor battery.

- c. Harold Reed, as usual, has his finger on the pulse. He brought in a new propeller made by Windsor (Master Airscrew) that is expressly designed for electric power. It was a 13X8, very lightweight, had a concave undersurface, and sold for about \$4.50. He purchased it from Hobby Shack on Convoy and said that they also carry an 11X7, 11X9, & 12X8. (According to Windsor, new sizes are due out soon such as: 12X10 & 13X10). All these props. are made of beechwood. Harold agreed to give us an evaluation of his prop. next meeting.
- d. Steve N., giving his best impression of Julia Child, entertained us with a demonstration and detailed explanation of composite propeller making. He showed us just how easy it is to make a virtual copy of any propeller shape whether it be store-bought or one found on someone else's airplane. Steve's example was a blade from one of his folding propellers. The prop.'s composition was two layers of carbon cloth cut on a bias, three strips of carbon tow wrapped around the pivot point,

Spectra added for durability, and all held together with 15-minute epoxy. The mold halves were also made from epoxy. The procedure was pretty simple: get a master prop., make two mold halves, place the carbon etc. in one half, pour epoxy in both halves, place halves together and clamp. Easy.

9. Forward Dates:

- August 7 Black Sheep Electric Fun Fly. Site: Apollo II Model Airport, 2121 N. Hollywood Way, Burbank.
- August 12 Watts Up Electric Flyers' "Speed 400 Pylon Races", Orange Show parking lot, 5505 N. "E" St., San Bernardino.
- August 16 Club meeting, Serra Mesa Rec. Center, 7:15 PM.
- August 20 Funfly at Dusty Rhodes Park, 8:30 AM.
- Sept 3 Canyon Crosswinds' "Electric Fly-in '94" near Castaic. See flyer.

PRESIDENT'S CORNER

Mission Bay Park Flying Site

Had an encouraging talk with Assistant City Manager John Leppert today. First of all, the unfavorable news I reported at July's meeting was greatly exaggerated. As we already knew, the contractor is held liable for the condition of the site until their contract is complete. Once the City accepts the work, then they become liable. If the City sanctions an event (like say an unruly OTL, 4WD, firepit digging, soiree) during the construction and some "alteration" to the field occurred, the City would be liable for the repairs. With no one sanctioned to be there, the contractor is held liable no matter what occurs. There are still a few contentious points between the City and the contractor that have to be resolved, but completion of the contract is near. Once the construction is complete, I was assured Mr. Leppert would get with the returning Parks and Recreation official (the one who gave us our last Permit) in order to work something out for us. The P & R guy with whom we got along with real well is to return on August 8. I might have some news to report by August's meeting. Keep your fingers crossed!

On the other hand, by Sunday's *Union-Tribune* one of the City's top priorities for Mission Bay Park development is the South Shores area (our site). Supposedly, construction is to begin "immediately" after the City Council votes on the Park Master Plan which is scheduled for the 2nd or 3rd of August. However "immediately" in City terms could be 2 years! From scrutinizing past plans, we think the initial phase of the South Shores development is a parking lot adjoining the boat launch ramp and an amphitheater(?). As long as the whole mess is on the West end (near Sea World), we know we can coexist with the construction and think we can easily convince the P & R folks.

Project Fantasy

I'm having a hard time keeping up with the progress of the E-Power conversion effort for the Major Hobbies "Fantasy"; it is

happening that fast! Steve Belknap brought the 16 ounce framed-up fuselage to July's meeting. This is a bit heavier than we would have liked, but still on track for a 7 1/2 pound all-up weight. Steve was able to rearrange a few parts to better accommodate our E-Power intentions without making any alterations to the kit contents. The fuselage is now complete except for the wing mating. Wayne Walker had the tail feathers expertly framed-up and ready for covering and Bob Kreuzer has now completed a wing and has passed it back to S. Belknap for the integration effort. Lynn Heffern has taken photographs of the fuselage for the magazine article and I fabricated a suitable motor mount. We should be mating the wing and fuselage shortly and passing the whole thing to the "monokoter".

In Search of a New Meeting Location

We are now officially in search of a new location for our meetings. The City of San Diego Administrators of the Serra Mesa Recreation Center have now added insult to injury by trying to impose a fee for our continued use of the center. Not only are they cutting our time short, but want money for the privilege! Current candidates for a new location are:

1. Aerospace Museum, Balboa Park (Costs \$400/year, nice place but have to double dues to support)
2. American Legion Hall (free but patronizing bar is expected)
3. Meeting room associated with City School System.
4. Joyce M. Beers Recreation Center, Hillcrest
5. Scottish Rite Center, Mission Valley.

We are still looking for ideas/suggestions

July's funfly

July's funfly started ominously as the City Parks and Recreation trailer/stage arrived at approximately 10:00 A.M. for an approximately 11:30 start of some kind of kids event. However, the placement of the equipment did not interfere with our

activities which continued until the wind and kite flyers took over.

Highlights included Steve Belknap's improved EZ-25L, which flew markedly better with a resculpted round leading edge wing. Phil Moore brought plans and a kit for a Stick and Tissue B-25. Phil plans to use the Tyco differential throttle motor steering system from the toy he previously acquired (and flies regularly). This should be cute as a bug in a rug, but oh so many small sticks. Phil will need stronger glasses after he completes his little baby! Meanwhile the helicopter flying (and crashing) continues.

I now have 3 battery packs to keep my so far virgin Concept 30 SR(E) in the air longer, while Mr. Neu is winning the crashing contest 2-0 after having motor failure due to an ill placed strap tie interfering with a motor brush. Motor failure for inexperienced "rotorheads" is usually followed by a crash! Last but not least, the Club Smashie is back in service in the capable hands of Phil Moore.

Update: SVF FOAM

As shown at February's meeting and discussed in March's *Peak Charge*, the SVF Surf Products SVF foam has been made into its first wing, flown, and folded in the air, whoops! In early July, an airfoil test wing built by Steve Neu and flown by fellow US F-5B team member Jerry Bridgeman, folded in flight in the middle of an F-5B distance task (laps). The wing was an attempt to get a test airfoil in the air as quickly as possible in order to compare its properties to a similar planform with a different airfoil. The usual multistep carbon fiber spar making process was shelved in favor of just carbon skins over the SVF foam. The thought was that the non-isotropic "vertical grain" foam would act as a big shear web and obviate the need for the complex carbon spar. The wing definitely went together easier, but it folded. The fuselage was a pretty untidy mess but the wing separated and came down with little collateral damage.

The failure appeared to be the bond between the top skin and the foam in an approximately 6" X 6" area around the root of the wing, near the start of the flaperon. The more typical foam compression failure followed by downward buckling of the top skin did not occur. In other words, the failure of this wing was not related to the advanced qualities of the foam, so those qualities essentially remain untested. Skin-Foam debond is a fairly common malady of composite wings and can be caused by any of several things:

- 1) a "dry layup" whereby there is insufficient resin in the layup to both wet out the carbon/fiberglass and bond to the foam,
- 2) foam cutting "feathers" left on the foam thereby preventing a good bond (supposed to sand them off and vacuum the core),
- 3) excessively closed cell foam which can resist a good bond.

The failure of the test wing was probably a combination of 1) and 3). What we failed to consider (but will now) is the cell structure of this new foam. SVF foam's nearest cousin, so called "blue Foam" (2 lbs/cu.ft) comes in 2 varieties: extruded and cast/poured. The extruded stuff is the more common Dow-Corning insulating foam and is usually sold in 2' X 4' X 2" sheets and bears Dow Corning markings. The second type is cast or poured type that is primarily marketed for the full-scale aircraft "homebuilder" market. The difference is that the cell structure of the cast/poured type is much more open than the extruded type, thereby facilitating epoxy flow into the cells and enhancing the bond. It appears that SVF foam has a closed cell structure like extruded blue foam. Some experimentation is necessary in order to determine what will enhance the foam to skin bond to the point that the foam fails in the "typical" foam compression/skin buckling mode. Some options include "pricking" the foam with a pinwheel, or just using extra epoxy to ensure a better bond. Stay tuned.

Update : MODIS On-board Data Acquisition System

February and March 94 *Peak Charge* and January's meeting discussed the MODIS computerized data acquisition system by Robbe Modelsport GmbH. The heart of the MODIS system resembles a receiver to which the various sensors plug into like servos. The "receiver" collects the data in RAM microchips to be later downloaded to a PC computer. At the time of the first discussion, sensors for Current and Altitude were the only ones available and were tested on the Javelin pattern plane and one of the 27 Cell, F-5B SE-XI variations. Since that time, sensors for Voltage, RPMs and Airspeed have been delivered to Mr. Neu. The RPM sensor turned out to be a hall effect sensor triggered by magnets mounted to the back of the spinner (or prop hub in this case). The airspeed being of most interest to Team F-5B is proving an enigma as the pitot static probe and differential pressure transducer are too large to integrate into the rather compact SE-XI fuselage. Like the altimeter, the airspeed sensor requires a daily use adjustment to establish barometric pressure at ground altitude. This requires that sensor be accessible for adjustments making it all the more difficult to locate into the SE-XI fuselage.

August's Meeting Program

August's program is not firm at this point. We still have oodles of good stuff for the raffle and we may continue with the foam theme and make/break some composite beams to establish the properties of the SVF foam. Failing that, we will try to have some video from August 8th's Black Sheep Squadron Scale/Fun-fly contest. Unless something happens in the next few days, we will still be meeting at Serra Mesa Recreation Center.

HANGAR NEWS



R/C Demonstrations August 13 & 14 Gillespie Field

The Confederate Air Force, Air Group I based at Gillespie Field El Cajon will be having a static display air show on Saturday and Sunday August 13 & 14. They have invited the First Weedwacker Aero Squadron to participate with an R.C. Airplane static and flying display. This is the second time we will be involved with an air show sponsored by the CFA.

As with the last show (May 94) we will have an area on the transit parking area to display our models. We will also have specific times throughout the day for flight demonstrations. The FAA will be closing the north/south runway which is where we will do our flying.



The types of aircraft we would like to display and fly are, large (1/5 or 1/4 scale), military scale, rotary wing, unique or unusual.



Anyone wanting to participate as pilots, display booth, set up or take down, contact Greg Skoglund at 449-1529 before Friday Aug. 5th.

Editor's Note : We extended the invitation to members of all clubs in the San Diego Association Model Clubs. to participate with us . This is short notice, but replaces the opportunities we've had in the past year when we have demonstrated R/C flying at the Miramar Air Shows. This year there is no R/C flying at Miramar.



CANYON CROSSWINDS HOSTS

ELECTRIC FLY-IN 94

SATURDAY SEPTEMBER 3rd, 1994

LOCATION: CANYON CROSSWINDS FIELD
LET'S GET TOGETHER AND HAVE A GREAT
TIME FLYING ELECTRIC POWERED R/C
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AMA MEMBERSHIP
REQUIRED

\$10.00 ENTRY



PILOTS
DRAWING

PILOTS CHOICE:

SCALE

DUCTED FAN

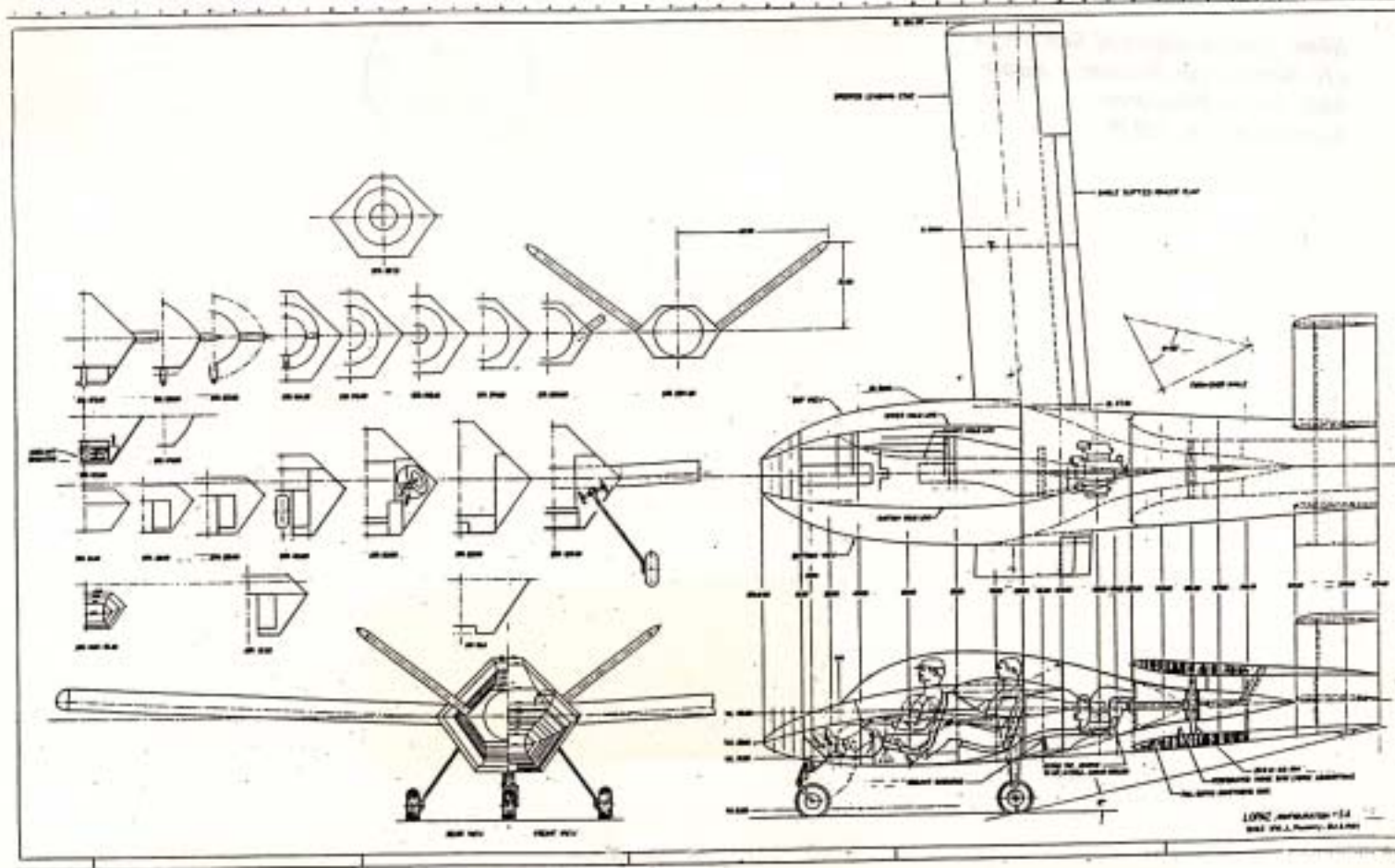
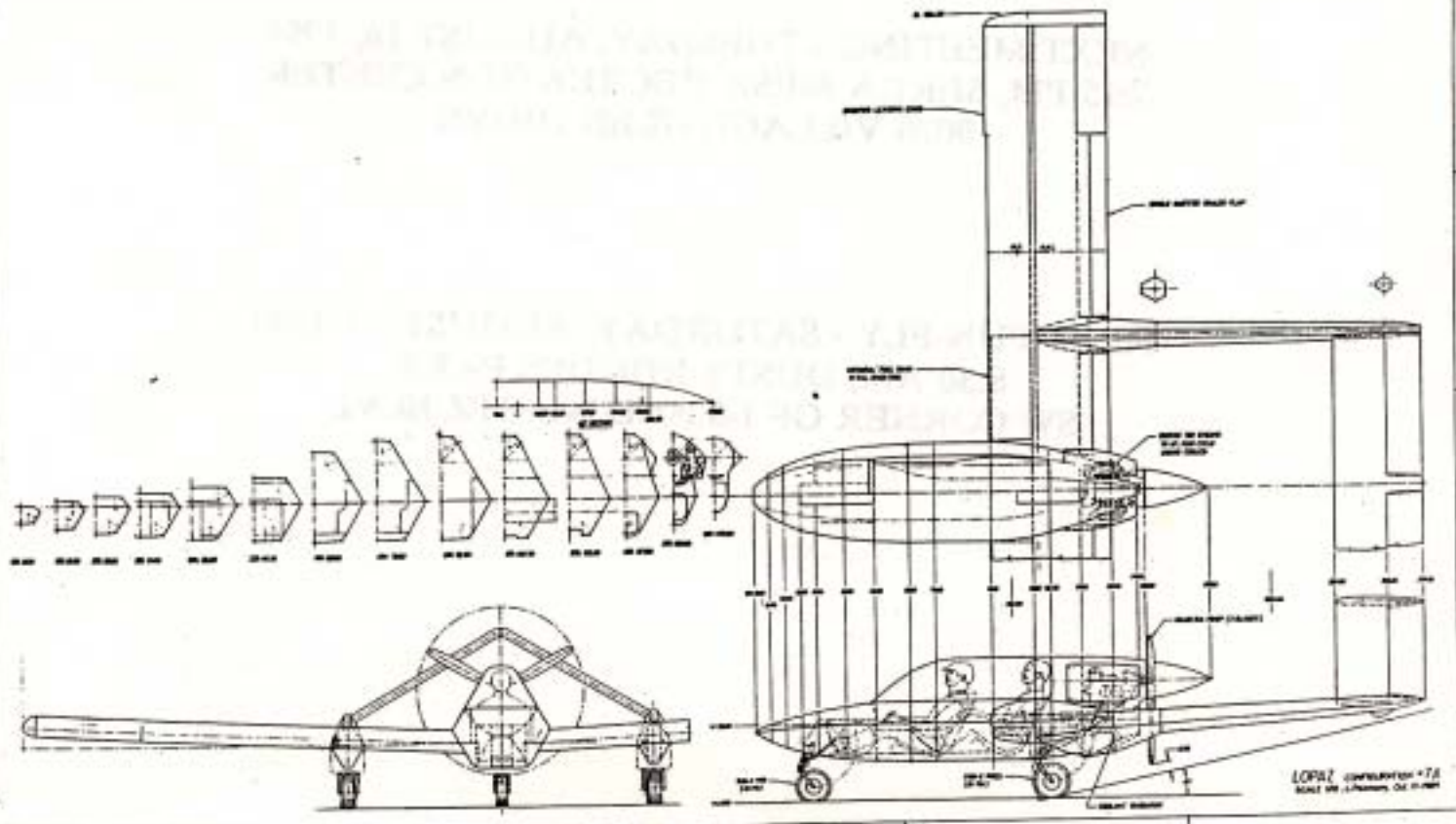
PATTERN

SPORT

OLD TIMER

DIRECTIONS: LOCATED IN THE
SANTA CLARITA VALLEY. TAKE 5
FWY TO LAKE HUGHES RD. HEAD
EAST PAST TWO STOP SIGNS AND
LOWER LAKE. FIRST LANE ON
RIGHT. SIGNS WILL BE POSTED.
REF. SITE 50 IN THE GUIDE TO
FLYING SITES

Here are the never built pilot rescue airplanes designed by L. Pazmany in October, 1989. These were brought to us by Bob Kreutzer at April, 1994's meeting and discussed in May 1994 *PEAK CHARGE*. Anyone want to build a model of # 7A?



**NEXT MEETING - TUESDAY, AUGUST 16, 1994
7:15 PM, SERRA MESA RECREATION CENTER
9020 VILLAGE GLEN DRIVE**

**NEXT FUN-FLY - SATURDAY, AUGUST 20, 1994
8:30 AM, DUSTY RHODES PARK
SW CORNER OF I-8 AND NIMITZ BLVD**

*Silent Electric Flyers of San Diego
c/o Roger Jaffe, Newsletter Editor
6462 Sunny Brae Drive
San Diego, CA 92119*

