

Steve Dente Mike Morgan and Braden Moore with the Morgan Special foamie



March, 2007  
Volume xx, Issue 3

# 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 March 27  
Electroglide  
Saturday  
following Meeting  
9:30 AM, March 31

Frank Gagliardi with a new Corsair



DeGroot and Perry



May 18th thru 20th  
Pilots - \$10 a day or \$25  
for three days - free to public

The Silent Electric Flyers of San Diego  
Invite You to Attend the  
**2007 MWE Spring Fling**  
For 3 Days of Fun-Flying and  
Vendor Demonstrations.

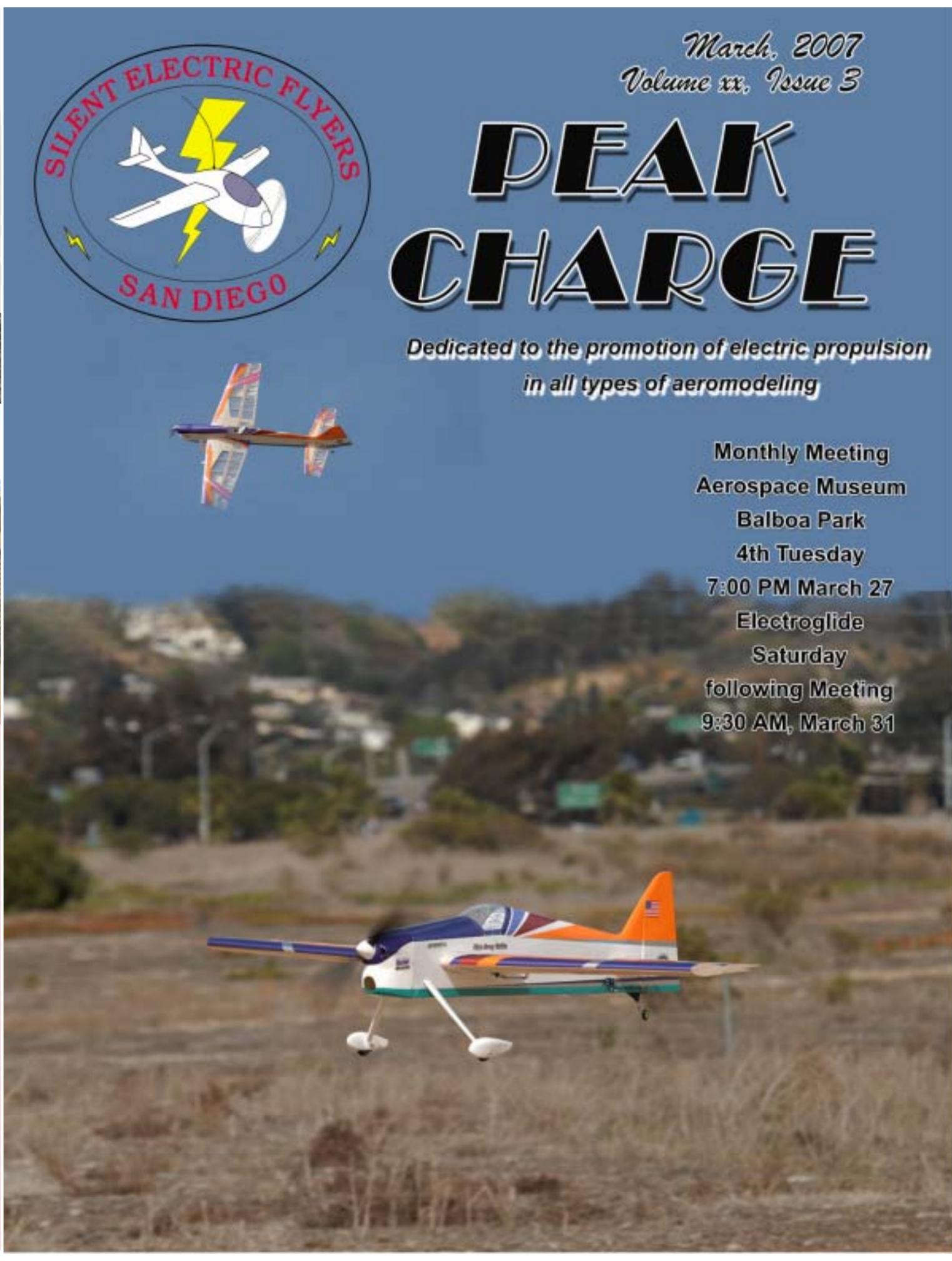
Join us at the West Coast's largest electric airplane event in warm sunny San Diego. Enjoy three days of electric aircraft flying at our beautiful Mission Bay site. It's just minutes from the world famous San Diego Zoo, Sea World, Balboa Park's wonderful museums, Old Town and many other parks and attractions.  
See our website for updated details and information at [www.sefsd.org](http://www.sefsd.org).  
Contact Pedro Brantuas at [pedro@san.rr.com](mailto:pedro@san.rr.com) or call 619-723-6882

SPONSORED BY:



V E N D O R S

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Sponsor and vendor inquiries welcome.



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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.

**This Month's Cover**

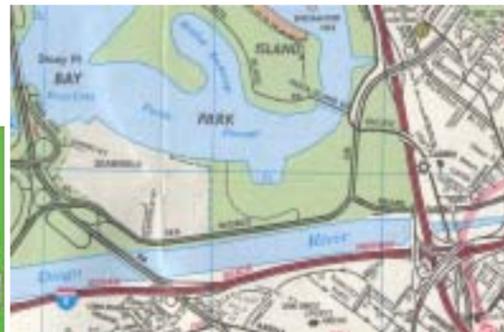
*Doug Rubin's Inspire 60 Acro by Chuck Grim*

The plane is his new electric aerobatic plane he used in last weekends EMAC They have changed the electric IMAC event to EMAC. IMAC stands for International Miniature Aerobatic Club so EMAC must stand for Electric Miniature Aerobatic Club. The plane is the Fliton Inspire 60. The specs are listed below. He flew the plane to fifth place on march 10th in the Basic class.



**Wingspan** : 1,540 mm (60.62 Inches) , **Length** : 1,570 mm (61.81 Inches), **Main Wing Area** : 46 sq dm2 The motor is a Hacker C-50 10L with a gearbox using a Castle Creations speed controller running a 18x10 prop using Neu batteries 6S 4900

**Aerospace Museum Monthly Meeting site**



**Field**

Flying Field GPS Coordinates

AMA Charter Club 3078 Latitude 32.7626416 N Longitude 117.2143138 W

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

Zip Code 92109

the metal part that rotates, but not the plastic housing at the rear of the motor. With a model weighing 22 ounces or less, a 28x16 motor is all you need to get out of sight in 60 seconds, I guarantee it! But, yes, you can still fly in our monthly Club contest if you have a bigger outrunner or if you have a more powerful battery, but let's line up with this new class, Gentlemen! It costs no more!

The March Electroglide will be held Saturday, March 31st with the first toss at 9:30. If you need further information, give me a call at (619) 469-5566 or e-mail me at <donk126@sbcglobal.net>

Don Wemple

**Results**

Pilot	Model/Motor/battery	Toss 1	Toss 2	Toss3	Total
Don Wemple	Chimera, Hacker 20/20L, 2cLipo	42	75	74	191
Norm Arndt	Ascent Albatross, 400+, 2cLipo	53	57	61	171
Don Wilson	Ion, Lehner Basic, 8 GP3300	42	58	53	151
Fred Daugherty	Ascent, 400T brushless, 2cLipo	35	37	42	104
Roger Pedersen	Sky Sergio, sp400, 7cNiMh	32	37	32	101
Zeke Mazur	Allegro, \$26 outrunner, 3cLipo	34	0	0	34

**....More Board Meeting Notes:**

*by Steve Manganelli*

1. MWE. Ray paying \$1400 to City Tomorrow for Permit which will be his closing action for MWE; AMA Sanction submitted; only 1 add will appear in AMA magazine, total fee \$65; Stelio says T-shirts coming along, due in April. Discussion of open flying vs scheduled events, no resolution/decision. Will put Speed Stick Pylon with micro pylon on Friday.
2. Field. Norm Arndt and Paul Jacob to meet and resolve shoreline discrepancy, necessary prior to us proposing a new Field location.
3. Bank Balance \$25,093; 2007 dues to date \$8,630. Newsletter monthly costs average \$100 mailing + \$300 printing
4. EMAC. Tim A. discussed popularity of this new event and suggested some kind of club sponsorship. So far event is popular and barbeque is self supporting; will defer to S. Dente as to what is desired.
5. Board voted to approve new opening in Pit Fence creating the 6th pilot station believing the runway lengthening to the East warrants it.
6. F. Gagliardi and M. Morgan to be asked to pose a schedule for SPEED Stick 200 Racing to be posted on newsletter and WEB.
7. F-5B practice starts this Weekend Sunday, 3-18 and each 3rd Sunday thereafter.
8. Annual Float Fly in November to be jointly sponsored by Weed Wackers and CVRC. Discussed tri-sponsorship including SEFSD. Will obtain more info about costs and defer to future meeting.
9. CVRC will be the new sponsor of the SD Association Swapmeet to be held July 14th, 2007.
10. Morely Field. Currently no viable club managing. Discussion of proposing SEFSD management as auxilliary field for 2.4 Ghz Spread Spectrum, Helos and maybe small 72 Mhz. Looking for local champion to take this project forward.

## E-MAC SEFSD SAN DIEGO RESULTS AFTER 2 EVENTS

**HOW THE STANDINGS ARE CREATED:**

Best 5 of 8 contest results for 2007

After the 5<sup>th</sup> contest we will select the top 5 contest results from then on.  
15 points for the winner and 1 additional point for each competitor flying.  
14 points for second place plus 1 additional for each competitor flying.  
13 points for third place plus 1 additional for each competitor flying.  
and so on down the line to the last competitor.

**BASIC CLASS RESULTS**

NAME 2-17-07 3-20-07

Steve Neu 27 27 54  
Doug Rubin 25 19 44  
Craig Hunter 17 23 40  
Cris Boutelle 23 11 34  
Rob Ferro 15 15 30  
Randy Marsden 3 25 28  
Steve Belnap 21 0 21  
Dickson Lopez 0 21 21  
Frank Gagliardi 19 0 19

Lucas Worthen 5 13 18  
John Garrison 9 9 18  
Steve Manganelli 0 17 17  
Roy Raphael 11 5 16  
David Snyder 13 0 13  
Norm Arndt 7 0 7  
Craig Bosworth 0 7 7  
Hong Chen 0 3 3

**SPORTSMAN CLASS RESULTS**

NAME

Pedro Brantuas 22 21 43  
Bruce Brown 20 19 39  
Ray Fulks 18 13 31  
Mike Root 14 15 29  
Howard Pilcher 12 11 23  
Steve Dente 10 9 19  
Stephan Veillard 0 17 17  
Braden Moore 16 0 16  
Chuck McGuire 8 0 8

**REMEMBER: FLY SMOOTH, FLY STRAIGHT, FLY QUIET, BURN ELECTRONS**

### San Diego Electroglide -- February 3 March 2007

It was probably one of the most beautiful days ever at our S. Mission Bay field. The rain had passed, it was shirtsleeve weather, the Santa Ana winds were blowing strongly inland, and we were between them and the sea breeze front -- in almost completely calm conditions! Although there was not sustainable lift, there was enough zero sink so that we were able to easily climb almost out of sight with our 60 second motor run (Actually, Bob Anson did go out of sight on the first toss, but he was able to find his ship, a bit worse for wear, in the Sea World parking lot).

With our original eight contestants, there was plenty of room left for several more in our classic mass launch. So I hope that there are lots of you out there who either have flown in previous Electroglides or are planning to join us in the future. There is room for you!

And, when you are in your planning stages, I'd like to remind you that it appears as though the new standards for the proposed F5J class of Electrogliders is an outrunner motor with a flux ring diameter not to exceed 28 mm and a length of not more than 16 mm, and a limit of 7 Nicad/Nimh or a 2 cell Lipo. There are lots of outrunners out there that are or about this size -- Zeke found one that cost \$26 including an ESC! Be sure to take your mm ruler along with you when you go to the model shop and measure before you buy! BTW the "flux ring" is the metal part that rotates, but not the plastic housing at the rear of the motor. With a

## The President's Corner

*By David Fee*



Welcome to the March issue of Peak Charge! I have a couple of apologies to make. The first is that I've not done a good job of keeping up with my New Year's resolution of getting down to the flying field more. The second is that I've also not been checking the [sefsdpres@yahoo.com](mailto:sefsdpres@yahoo.com) e-mail account as frequently as I should. The good news is that, to my knowledge, neither of these short-

comings has caused any significant trouble. I will, however, be more diligent in the future.

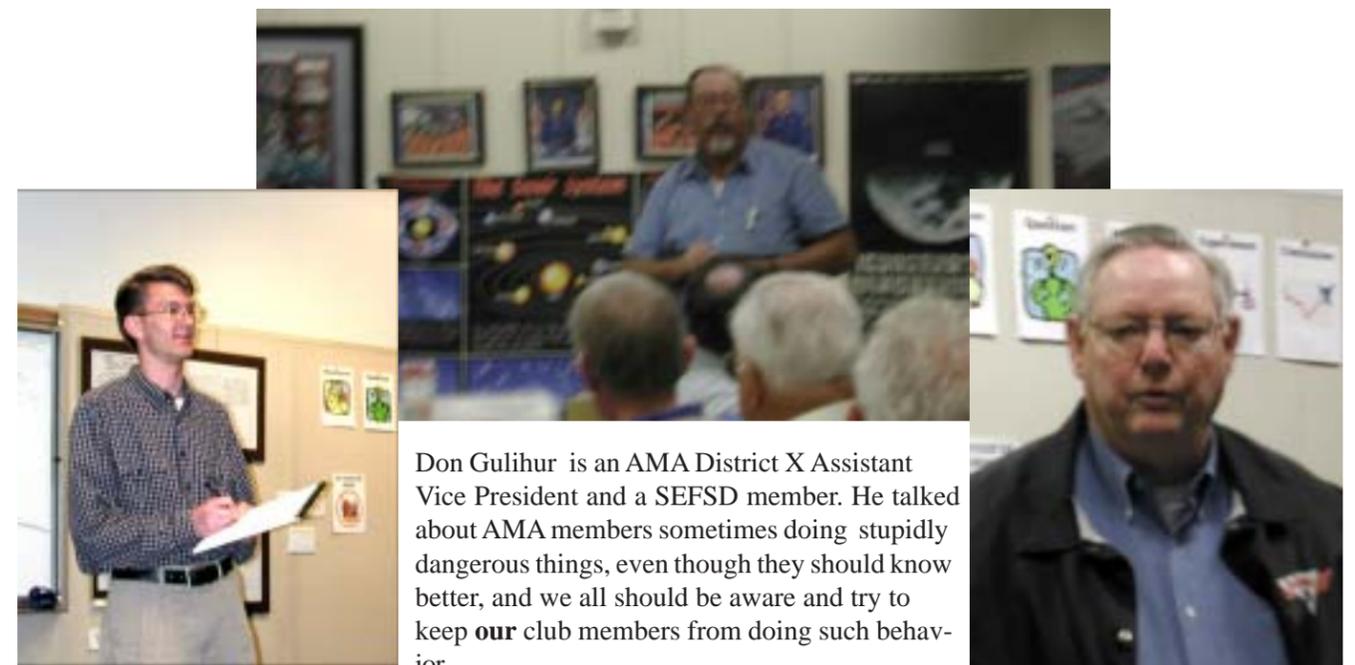
I'd like to direct your attention to the Board meeting minutes for this month. As always, club members are welcome to attend and share input and voice concerns. I'll not repeat what is covered in the minutes, but I will comment on a few items. Firstly, last month I mentioned that the County Association of Model Clubs annual swap meet in July was without a home or sponsor. I'm happy to report that the Chula Vista R/C Flyers have taken up the reins and will be hosting the event on July 14<sup>th</sup>. I'm sure this will come as great news to many of you.

Also of potentially great interest is the status of Morley Field. Some of you will be familiar with this former flying site at Balboa Park. This site is currently not in use because of concerns with interference on the 72 MHz band. The

advent of 2.4GHz spread spectrum radios could well be the magic pill that makes Morley Field viable again. The Board of Directors discussed the possibility of obtaining the appropriate city permits to make it happen, as well as possible self-imposed restrictions on models dictated by the somewhat limited available airspace. Club members who would be interested in SEFSD obtaining custody of this field should contact any member of the board.

I'd also like to quickly mention the EMAC precision aerobatics series being run by Tim Attaway and Steve Dente. This event has really taken off and participation has been so good that the addition of a third class may be needed to handle all of the pilots! For more information, keep watching the newsletter and don't hesitate to contact Tim or Steve.

That's about all I have for now so, until next time... happy landings!



Don Gulihur is an AMA District X Assistant Vice President and a SEFSD member. He talked about AMA members sometimes doing stupidly dangerous things, even though they should know better, and we all should be aware and try to keep **our** club members from doing such behavior.



Mega-Jumbo A380 Lands in New York

Last	First	mo	day
Garrison	John	3	2
Brown	Charles E.	3	5
Boutelle	Chris	03	06
Harris	Robert	3	8
Pointon	Stephen	3	8
Collins	Dennis	3	10
DuPont	Henry	3	12
Everitt	William	3	13
Kosta	Larry	3	13
Olsen	William "Ray"	3	14
Brown	Tom	3	15
Marshall	Phillip	3	15
Ramirez	Paul	3	16
Bala	Pandi	3	18
Davis	Robert	3	18
McGinnis	P. Michael	3	20
Nelson	Steve	3	25
Vanmatre	Nicholas	3	25
Rea	Stuart	3	26
Hawks	Jackie	3	27
Phan	Nam	3	27
Hix	Jack	3	28
Jackson	Stilianos	3	30



### Dreamlifter Wrapping Up Certification



Boeing is wrapping up certification on the 747-400 Dreamlifter, an aircraft Evergreen Aviation Technologies is modifying to transport major composite structures of the 787, said Mike Bair, Boeing vice president and general manager of the 787 program. Four 747-400s eventually will be part of the Dreamlifter program, said Bair. The first two are going through flight testing and the third just entered Evergreen Aviation Technologies' modification center in Taipei, he said. Boeing said Evergreen is scheduled to modify all four aircraft. The 747-400 Dreamlifter can transport parts now between partners because route proving and parts carrying are part of the certification program, said Bair.

## All SEFSD Precision Aerobatic Pilots

.....23 total

### Here are the results:

keep in mind that 4 sequences got judged and the lowest was thrown away and the best you could have was 3000 points after normalizing the raw scores to 1000 points for the highest raw score.

### Basic

Steve Neu (should be flying sportsman next time) 3000  
 ....notice big gap.....400 points  
 Doug Rubin (not bad with a borrowed airplane)..... 2580  
 Chris Boutelle (young gun has the right stuff) .....2572  
 Steve Belnap (nice skills) .....2388  
 Frank Gagliardi (gliching all through the seq)..... 2317  
 Craig Hunter (First up and did fine)..... 2310  
 Robert Ferro (Good job as newbie)..... 2126  
 David Snyder ( flying well with the Sting Ray.....) 2031  
 Roy Raphael (Friendly, happy, making progress)..... 1876  
 John Garrison ....giving it his best .....1862  
 Norm Arndt (Tim crashed his good airplane)..... 1824  
 Lucas Worthen ( potential..fix mechanical stuff)..... 1567  
 Randy Marsden (technical difficulties) .....830  
 Justin Coe part of a flight only .....498

### Sportsman class results

Pedro Brantuas (move up!) .....3000  
 Bruce Brown (caught fire just in time)..... 2678  
 Ray Fulks (Mz Ellie was smoking)..... 2670  
 Braden Moore (Could have been higher with luck)... 2606  
 Mike Root scored well without his canopy .....2589  
 Howard Pilcher just a few mistakes,, next time..... 2520  
 Steven Dente....busy busy busy boy..... doing stuff for others..... 2473  
 Chuck McGuire...breaking in a new Jesky .....2153  
 Fourth through second was very tight....anybody's guess.

Final words....Fly straight, Fly calm, Fly smooth, Burn Electrons.....until next time.  
 Exiting the Box,

Tim Attaway, CD

Thanks to everyone who participated . It was all the Pilots, helpers and spectators that made it such a great event.

Tim served as Contest Director and Chief Judge. He

supplied the computer, scoring software, and sat in the Judges chair for most of the day so we could all fly. This required that he not join the fun and fly with us. It wouldn't have happened without him.

Pedro, Ray, and the Browns also served as Judges. They did a great job. Howard, let us use his motor home to power the scoring computer. Lee did a great job with the radio impound. No incidents. Scott, brought his incredible motorized party bar, the BBQ and served as line boss. And of course, Denise, Nora, and, Pamela , who spent their day cooking that fantastic lunch. Steve Neu and Steve Belknap for donating the batteries and Lipo charging bags. Mike Morgan for donating two of his new foamy planes. I have never flown a foamie that is even close to these planes. You gotta try one!

None if this would have happened without their efforts so make sure you thank them next time you see them.

“Please take the time to go to the FlyingCirkus website and post your experience with the contest. Pictures are badly needed. I took a lot to post, but my car got broken into last night and they stole my camera and all my transmitters. Now I have no pictures to post so I am relying on you guys to do it. Even worse, I have no radios so I'm grounded until I get them replaced and re-programmed  
 Steven Dente”

Editor's Note: We've come a long way since I was a boy. In those days people didn't have to lock the door at night. Today purses get stolen in a church choir dressing room. It starts with something as small as rolling through a stop sign, and it ends with anarchy. It seems that cheating, stealing, whatever is okay as long as you don't get caught. Right or wrong is only in the eye of the beholder. Be careful whose hand you shake. You might be accused of molestation, or worse. A smile can be interpreted as unsolicited enticement.

...But Steve will fly again, and so will the Flying Cirkus. Unfortunately, insurance will not replace missing pictures, but no one was physically hurt. Equipment can be replaced and reprogrammed.

A while back SEFSD had a new generator stolen right from under our eyes at MWE. BE vigilant.

# Do you feel you have reached the end of the Radio Control Experience??

from the Chula Vista Model RC Club Flypaper

by VP GERRY NICHOLS

Have you thought a change might be in order; it just might get your juices flowing again?? You know there are many different avenues to take. If you are caught in the middle, maybe bigger might get you going again, or smaller might be the way to go, if you are fixed wing, you might think of helicopters, or from glow to gas, or to the latest craze electrics.

A year ago I was at a point where bigger was better, more expensive too, electric seemed like toys and not for real men, and of course those helicopters. My choice was electric fixed wing and I couldn't be happier, it has opened up a real different way to fly. Some are all up cheaper than glow, some are more expensive than glow, but they have a challenge I had never worried much about and that's lighter is better. Not just a little better, a whole lot better. One type I still have no desire to try, and that's helicopters. Many of you have heard my reasons why and for me it's just the way I feel. However a transformation has occurred at our field. The .40 to .91 gang that used to park at the west end of the pits, particularly on Sunday mornings, have been replaced by people with small tables, some strange looking tools,

and different kinds of air vehicles. These are the Chula Vista club Rotor Heads. Some, not many, still tinker with fixed wing types, like the rest of us, but their real love is the helicopter. Helicopters, as in the fixed wing vehicles, come in all shapes, sizes, and power options. Glow, battery, and even a gasser and a turbine have been seen, mostly on the tables, they seem to always need tweaking, but in the air too. It's amazing what can be done with one of these when they are set up right, and when there is a problem of some kind, they have a different way of coming down. If it's a serious problem, they land in a pile, not so serious, it's an autorotation. Most of the time a few parts are all that is needed to get airborne again.

My purpose in writing this is not to discourage anyone from going to

helicopter route. My purpose is to let you know how the helicopter flying has increased and to invite you down to the field to see for yourself. If you have heard fixed wing and rotary wing can not fly at the field at the same time, you will be surprised. We can and do get along with a lot of respect for each other. Another thing you will see is the help they provide to each other and how willing they are to help any and all newcomers to helo flying. (Hello is two "L's"). Sometimes they have food, and have even invited us old fixed wingers down to enjoy their hospitality. These are the guys that put so much work into the Helicopter Fun Fly last year, an event I thoroughly enjoyed and they are now hard at work on this year's event. As soon as the dates are finalized, we will publish them so you can make you plans accordingly.

So as I have said before, Come on Down. You might just get interested in, well even a Frog. If you don't know what that is, you'll have to come down to see. By the way, don't forget your friends and neighbors, we always have room for new members.

Flying's Fun, Crashing Sucks

### SCHEDULE OF INTERESTING EVENTS

- March 24-25 ..... IMAC in St George Utah
- March 31 A 1 ..... IMAC in Ukiah CA
- April 14 10 AM SEFSD Precision Aerobatics contest 3
- April 21-22 ..... IMAC Tucson
- May 5-6 ..... IMAC Las Vegas
- May 12 10 AM SEFSD Precision Aerobatics Contest 4
- May 18-19-20 ..... SEFSD Midwinter Electric Fest
- May 19-20 ..... IMAC Riverside CA
- June 2-3 ..... IMAC Oakdale CA
- June 9 10 AM SEFSD Precision Aerobatics contest 5
- July 14th San Diego County Association of Model clubs Swap Meet at the Chula Vista Model Radio Control Club
- Aug 25 10 AM SEFSD Precision Aerobatics Contest 6

# The March Raffle

by Robert Abel



The raffle for February was supplemented by donations from Steve

Belknap of Diversity Models and Steve Neu of Neu motors. We will have another of the Neu motors in the raffle prizes this month. My thanks to both parties. If you missed the meeting you missed an opportunity to buy some Neu Lipo 3-s, 2100 20c continues discharge batteries. That translates to 42 amps constant discharge. Thanks Diversity Model Sports. Steve Neu was the guest speaker and the session turned into a pick Steve's brain. I learned a lot about motors, speed controls and a whole bunch of other related subjects. Thanks Steve for sharing your

knowledge. Oh, back to the raffle, a ducted fan jet from Phase 3, comes with fan, brushless motor and speed control. The Neu motor, Du-bro hinge tape, another Astroflite watt meter, yes had one in February also, a couple of micro servos and a small electronic scale from Diamond hobbies. I'm waiting for the 5 day sale at Hobby People to get some more items. If you haven't signed up for volunteer work for the Mid winter do so at the meeting, lots of help still needed. See you all on the 27th of March. Safe Landings, Robert Abel, Raffle Chair person.

## At the Field ...

### THE FLYPAPER Land Buck



the "Newest" Fliton line of Extra 330's. Andrew Jesky designed this light but true flying Extra 330-s. There were two of them at the field Saturday on the 17th of February. They seem to fly a little better than the Seagull Extra 300 that is slightly over two pounds. The wing-span is about 50.4". We all had a fun and safe day of competition with no crashes or injuries. The food was tasty and the flying was great! Steve Dente and his wife did a good job with the lunch, drinks, and snacks. Also, Tim Attaway did a good job with the fly-in and everyone helped out in their own way. Hats off to Scott who brought the "Over-the-line" portable bar to the

field; you name the soda and he had it. Oh, did I mention the weather...it was FANTASTIC !!! Not too hot and not too cold. Steve said that it would be nice



the day before when your hat would out-fly your airplane. All-in-all I was really happy that everything went so smoothly.

Lots of 3-D "foamies" dancing on the field. At one time there were around three side-by-side. Very nice and flies excellent. Its wing-span is around 60.5". Bradley brought out his large Tom-cat for its maiden flight, but he decided not to trim it let

alone fly it because of the conditions. Smart move! There were a few gliders here Sunday the 18th. Hungry looking plane huh? Check out those teeth. Maybe its mother was a P-40 Warhawk!

Bradley brought out his large Tom-cat for its maiden flight, but he decided not to trim it let



alone fly it because of the conditions. Smart move!



# Minutes of the February Board Meeting

## by Chairman of the Board Steve Manganelli

### Introduction-



Steve Manganelli here, pinch hitting for Jeff Keasaman who was in Kentucky for the Evening. I trotted in at ~ 7:10 to find

the meeting underway with David Fee at the helm so we'll assume he started at the appointed hour. I counted 55 full chairs in attendance; on 3 of them were guests Mike Chambers, Greg Ervile and Bill Clark, welcome folks!

Stelio Jackson summarized the ongoing progress of MWE Spring. Plans are well underway, Permits are drafted, AMA sanction is applied for and Advertisements are appearing in Quiet Flyer and soon Model Aviation. Sponsors and Vendors are lining up and we're looking forward to a great event. Volunteers are needed; keep May 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> open on your calendar!

### Announcements and Club Business-

Don Guliher reported on the death of Dr. Larry Fogel this past February 18<sup>th</sup>. Larry was a long time Torrey Pines Gulls member, friend and leader in the San Diego R./C modeling community. Larry was instrumental in getting Torrey Pines designated as a Historical Modeling site. A Remembrance for him was held Sunday, March 4<sup>th</sup> in Pacific Beach. Don also informed us that he in concert with AMA district X Vice

President Rich Hanson are seeking an indoor flying site and requests any input on that.

Ray Fulks received an overlay of the South Shores Park from Norm Arndt to use in ongoing input to the City for continued and hopefully permanent use of the Field. We'll hopefully get a meeting with Senior Park Planner Paul Jacob to that effect in the near future.

Tim Attaway reported on the 1<sup>st</sup> SEFSD E-patten event held February 17<sup>th</sup>. Weather was perfect and we had 23 entrants! Steve Neu and Doug Rubin were #1 and #2 of 15 in Basic; Pedro Brantuas, Bruce Brown and Ray Fulks, 1-2-3 of 9 in Sportsman. Tim did a selfless job in judging and scoring, looked like he even brought out his desktop computer to experience the field dirt first hand! Main thanks go to event sparkplug Steve Dente whom superbly organized the event and even dragged in the wives to serve us a great Lunch; Thanks Steve and Thanks Ladies! Thanks also to Steve Neu and Steve Belknap of Neumotors/Neuenergy and Mike Morgan of Morgantech.com for donating prizes. Much appreciated guys, and by the time you read this, we'll have done it again on March 10<sup>th</sup>.

Frank Gagliardi announced the next AT-6 race and the first in the SS 200 class to be held at our field on a non-interfering basis on March 17<sup>th</sup>. The SS 200 is a new one design model designed by Frank and Mike Morgan to get you into racing without have to build the fairly complicated HOB AT-6. The SS-200 is computer designed and NC router cut. The parts interlock and construction is a snap. Get yours from Mike Morgan at

Morgantech.com and get out there and race.

Frank then reported on the very well run Arizona Electric Flight Festival in Phoenix. The weather was great, with minimal winds all three days, 203 pilots and over 400 airplanes! Spread spectrum was used in concert with regular 72 Mhz at each flight station to keep things moving; we should take a lesson. Also separated Park Flyers and Helos to get all those models in the air. Noon demos included Chip Hyde and Mark Leesburg.

Robert Abel then teased us with all the raffle prizes including an X-RAY 3D model regifted from Treasurer Mike Neale. We had a universal case for a transmitter or whatever, some long nosed pliers, servos from Dymond, 5-minute epoxy and a 3S2100 Mah LiPoly battery donated by Steve Neu.

### Show and Tell-

Show and Tell was led by Daniel Belknap showing a Horizon Models Miss America P-51. It is powered by 6S4900 Neu Energy LiPolys and a 1910-2Y Neumotor direct drive using a 14 X 10 APC prop. Daniel's Mustang has retracts and weighs 8 lbs, 12 ounces.

Next myself showing a new China Model Products Quest 50 which I modified to E-power. Coincidentally I use the same motor and prop as the P-51 but only on 5S which draws 44 amps. I can use from 3200 to 4300 Mah to balance it currently using 3700s. The Quest uses a custom motor mount and battery tray and I made a custom removeable canopy frame to access the batteries quickly through the canopy. The Q50 weighs



In the beginning ... a handful of model

aviation pioneers saw the potential in electric flight. It was quiet and clean (I doubt that they gave much thought to it being environmentally friendly at the time).

It was off-beat, a novelty, even a challenge and an adventure. They formed Silent Electric Flyers of San Diego to explore the possibility and do what they could to advance the state of the art.

### Mission Statement

The objective of the Silent Electric Flyers of San Diego is to promote and further the technology of electric powered R/C aeromodelling; encourage competition in Pylon Racing, FAI-F5B, 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.

weren't welcome at many fields; others restricted when they could conduct their experiments. Glider clubs were a little more understanding, and many of the early modestly successful electric models were glider conversions.

Things have changed. Many fly both gas and electric, but a growing number of model aviators have entered the hobby as electric enthusiasts, with no prior experience except perhaps free flight.

Somewhere along the way the term electric soaring was added to the supported activities, but otherwise the club's initial Mission Statement has remained unchanged.

# An Editorial

by Bill Fee

Other clubs have different agendas. Out in the valley, The Black Sheep Squadron supports all kinds of aeromodelling from free flight to control line to RC, rubber, gas, CO2 and electric, indoors and out. I am not aware that they have a mission statement, but they are very active annually at the AMA show in Ontario, training young pilots.

Obviously, the Black Sheep can't all be doing their thing at the same time in the same place, but they manage to find a way to have fun.

Some fun flyers do their thing, before the wind comes up. A few venture forth occasionally in the evening. Performance activities typically take place after ten in the morning, often after noon. If you have concerns about free use of the field, consider the club's unchanging mission statement, and be proud that you can be a small part of the operation.

Remember, the radio, motor, speed control, servos and batteries that you are using, as well as plane designs and construction materials were all developed by modelers who pursued our mission statement, whether they be in Southern California, Germany or elsewhere.

We have been flying at Mission Bay for over ten years on "borrowed

time." In effect, we have a restricted use permit. Some charters have their own club rooms, hobby work area, canteens and shop, even covered field areas, lakeside launch facilities. We have Mission Bay.

It is your Editor's intention to publish monthly an activity timetable, but I rarely receive input in timely fashion.

Membership should be kept informed about what is coming up so they can schedule their time and/or involvement accordingly. Posting something on the internet (ie:<http://www.teamflyingcirkus.com/>) will not

inform other members who are not involved in the activity. Many don't have access, and that is their choice.

We have a library, but nobody uses it. Our volunteer librarians gave up. Chet Tussey even reviewed material and wrote up reviews.

We often get asked why we don't carry a classified section for individuals who want to sell or trade. Every other year I get an input. And as for swap meets, members buy and sell at the field all the time; less frequently at our monthly meeting.

There is no doubt that the club could do more for its members, but since everyone is a volunteer, and because of our permit with the city, there are some natural constraints to what can be implemented. John F. Kennedy said it best: "Ask not what your country can do for you, ask what you can do for your country." Study our

## Everything you always Wanted to Know About Balsa

Q: WHERE DOES Balsa WOOD COME FROM?

A: Balsa trees grow naturally in the humid rain forests of Central and South America. Its natural range extends south from Guatemala, through Central America, to the north and west coast of South America as far as Bolivia. However, the small country of Ecuador, on the western Coast of South America, is the primary source of model aircraft grade balsa in the world. Balsa needs a warm climate with plenty of rainfall and good drainage. For that reason, the best stands of balsa usually appear on the high ground between tropical rivers. Ecuador has the ideal geography and climate for growing balsa trees. The scientific name for balsa wood is *Ochroma lagopus*. The word balsa itself is Spanish meaning raft, in reference to its excellent flotation qualities. In Ecuador it is known as *Boya*, meaning buoy.

Q: HOW DOES Balsa WOOD GROW?

A: There is no such thing as entire forests of balsa trees. They grow singly or in very small, widely scattered groups in the jungle for hundreds of years. Balsa was actually considered a weed tree. They reproduce by growing hundreds of long seed pods, which eventually open up and, with the help of the wind, scatter thousands of new seeds over a large area of the jungle. Each seed is airborne on its own small whisp of down, similar to the way dandelion seeds spread. The seeds eventually fall to the ground and are covered by the litter of the jungle. There they lay and accumulate until one day there is an opening in the jungle canopy large enough for the sun's rays to strike the jungle floor and start the seeds growing. Wherever there was an opening, made either by a farmer or by another tree dying, balsa will spring up as thick as grass. A farmer is often hard put to keep his food plot clear of balsa. As the new balsa trees grow, the strongest will become predominant and the weaker trees will die. By the time they are mature, there may be only one or two balsa trees to an acre of jungle.

Q: IS Balsa THE LIGHTEST WOOD IN THE WORLD?

A: No! Most are surprised to hear that botanically, balsa wood is only about the third or fourth lightest wood in the world. However, all the woods which are lighter than balsa are terribly weak and unsuitable for any practical use. The very lightest varieties don't really resemble wood at all, as we commonly think of it, but are more like a tree-like vegetable that grows in rings, similar in texture to an onion. It is not until balsa is reached that

there is any sign of real strength combined with lightness. In fact, balsa wood is often considered the strongest wood for its weight in the world. Pound for pound it is stronger in some respects than pine, hickory, or even oak.

Q: HOW LONG DOES IT TAKE A Balsa TREE TO GROW?

A: Balsa trees grow very rapidly (like all pesky trees). Six months after germination, the tree is about 1 1/2 inches in diameter and 10-12 feet tall! In 6 to 10 years, the tree is ready for cutting, having reached a height of 60 to 90 feet tall and a diameter of 12 to 45 inches. If left to continue growing, the new wood being grown on the outside layers becomes very hard and the tree begins to rot in the center. Unharvested, a balsa tree may grow to a diameter of 6 feet or more, but very little usable lumber can be obtained from a tree of this size. The balsa leaf is similar in shape to a grape leaf, only a lot bigger. When the tree is young, these leaves measure as much as 4 feet across. They become progressively smaller as the tree grows older, until they are about 8-10 inches across. Balsa is one of the few trees in the jungle which has a simple leaf shape. This fact alone makes the balsa tree stand out in the jungle.

Nature evidently designed the balsa tree to be a "nurse tree" which would protect the slower-growing species of trees from the scorching jungle sun during their critical early years. For instance, in an area of the jungle that has been ravaged by a tropical storm or other natural disaster, the balsa trees will quickly sprout and begin to shoot up to impressive heights in a very short time. Their fast growth, and the extra large leaves they have in their early years, provides shade to the young seedlings of the slower-growing forest giants. By the time the seedlings are established enough to take care of themselves, the balsa tree is beginning to die. Undoubtedly, the balsa tree's rapid growth, fast spreading crown of first very large and gradually smaller leaves, and its relatively short life span were intended to make it the "perfect nurse" in the jungle ecosystem.

Q: WHY IS Balsa WOOD SO LIGHT?

A: The secret to balsa wood's lightness can only be seen with a microscope. The cells are big and very thin-walled, so that the ratio of solid matter to open space is as small as possible. Most woods have gobs of heavy, plastic-like cement, called lignin, holding the cells together. In balsa, lignin is at a minimum. Only about 40% of the volume of a piece of balsa is solid substance. To give a balsa tree the strength it needs to stand in the jungle, nature pumps each balsa cell full of water until they become rigid-like a car tire full of air. Green balsa wood typically contains five times as much water by weight as it has actual wood substance, compared to most hardwoods, which contain very little water in relation to wood substance. Green balsa wood must therefore be carefully kiln-dried to remove most of the water before it can be sold. Kiln-drying is a tedious two-week process that carefully removes the excess water until the moisture content is only 6%. Kiln-drying also kills any bacteria, fungi, and insects that may have been in the raw balsa wood.

5.2 lbs with 572 in<sup>2</sup> wing area and will be my new pattern practice plane.

Jack Hix showed a ~ 15 inch span scale Pilatus Turbo Porter made primarily of depron-like foam trays! This incredible piece of workmanship has 1 gram proportional actuators, a 9 gram receiver, and a 12 gram airframe for an all-up weight of 9/10 ounce.

Show and tell was finished up with Steve Neu showing his new 26% League Model Products YAK-54. This is an approximately 1 year long project originating at a Hobby trade show in Beijing, China! The big Yak was designed to be 50 CC Gas powered, but we'd have none of that, now would we? The removable "motor box" lent itself to a custom composite replacement I designed and fabricated that puts the 1521-6.7 Neumotor and gearbox way forward, straddled by (2) 5S 4900 NeuEnergy batteries in series next to it for balance. The box has scale-like radial cooling louvers and the cooling air exits through the full size oil cooler exit. We also fabricated a custom all-carbon landing gear that shaved almost 400 grams off the stock unit (it was pretty awful). Steve is using Hitec 5985 MG digital servos and a 24 X 12 APC prop. Static current is ~ 80 amps. The Yak is controlled by a Futaba 12FZ radio and a new synthetic Fusion 9 receiver. First flew last weekend and lived up to expectations! Steve will definitely be graduating to Sportsman class!

### Program-

Next came the Program, also by Steve Neu, whom just continued up on the podium answering the rhetorical question "What is a Brushless Motor?" Steve fascinated us with subtopics such as commutator vs electronic commutation, geared "inrunner" vs outrunner configurations, thickness and quality of steel for stator laminations and strength and curie temperature of magnets. There is a heck of a lot of subtle features that make Neumotors more efficient and expensive than overseas-made units. By comparison, an equivalent outrunner to a geared inrunner of modest size will weigh 12 oz more! Best power density is a small, high Kv motor with a gearbox. With the advent of high power density Lipo batteries, does efficiency still matter? Compare a motor that's 80% efficient with one 90% efficient (i.e. overseas commodity type vs Neumotor). The 10% difference is extra heat you won't be needing to dissipate with the

more efficient motor, allowing you to run it 2X as hard or use a smaller, lighter, high quality motor for the same desired power level!

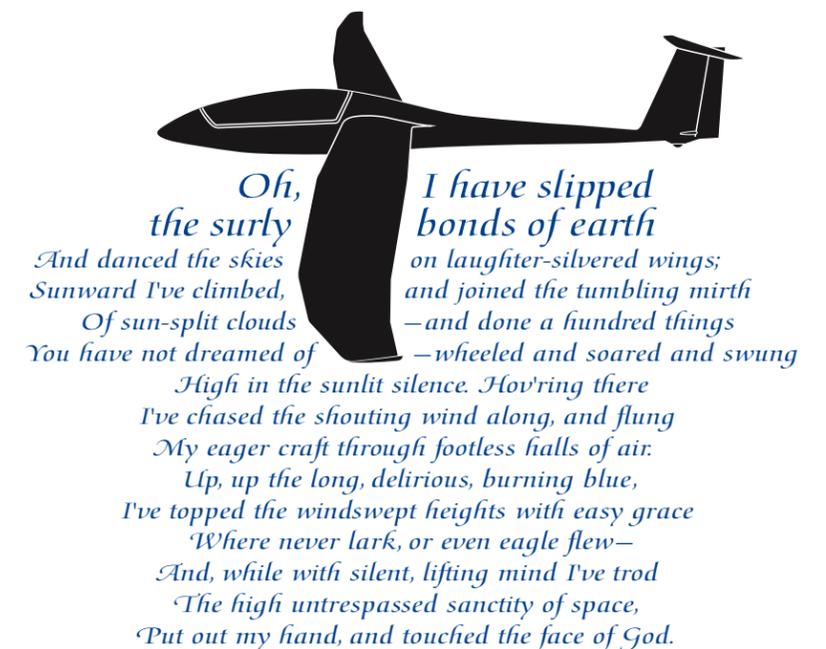
Steve gave some useful rules of thumb for motor selection: Scale 50 watts input/lb of model weight; Sport 50 to 75 w/#, Pattern 75 to 150 w/# and the ubiquitous "silly power" 165 to 250 watts/lb. Steve puts his \$ where his mouth is, the big YAK flying at 170 w/# nicely into the silly range!

Steve then answered questions about the future of E-power, alluding to a huge motor he was showing. To make that motor work, it requires higher voltage or over 250 amps current, not real practical. Right now, 14S is the limit, but look for 70 volts in the future for like 35% size and up IMAC pattern type applications. 70 volts is high enough for shock hazard folks! New care in handling will be required. Asked about best and worst brands, Steve politely advised avoiding "no-name" brands, you get what you pay for!

### Raffle-

The questions would have continued but we had to cut them off for the raffle commencing at 8:50 after thanking Mr. Neu for his informative talk.

The meeting was adjourned at 9:05 after the raffle prizes were distributed.



"High Flight" by John Gillespie Magee



Braden Moore next up with Fliton 330s  
Steve Dente Calling



CD Tim Attaway checking  
Lineup



Steve Dente Pedro Brantuas  
1st Sportsman. Neuenergy Battery



Mike Root and Katana



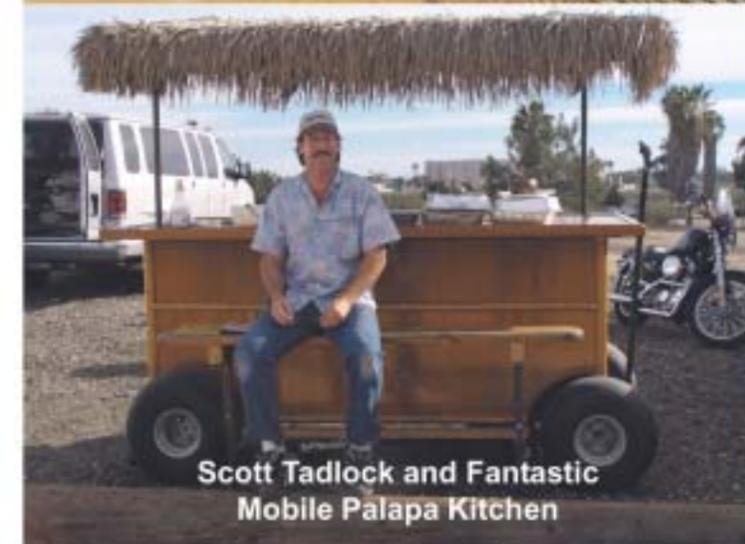
Ray Fulk's 30% Miss Ellie 330s



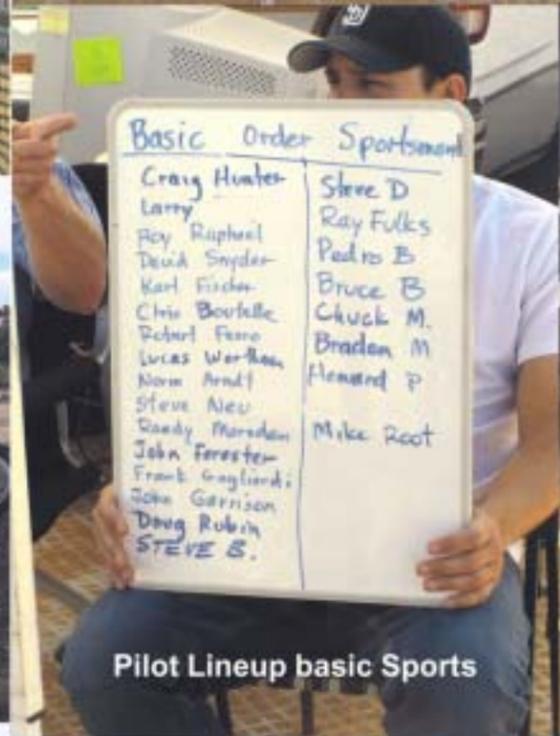
Chuck Brown getting Bruce's plane



Steve Dente Ray Fulks Doug Rubin  
Bruce Brown 2nd Sportsman



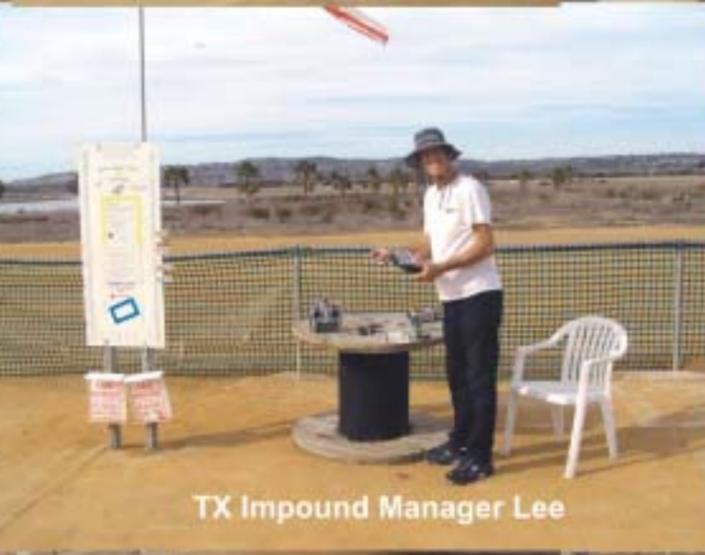
Scott Tadlock and Fantastic  
Mobile Palapa Kitchen



Pilot Lineup basic Sports



Tim Attaway CD and Mike Roo



TX Impound Manager Lee



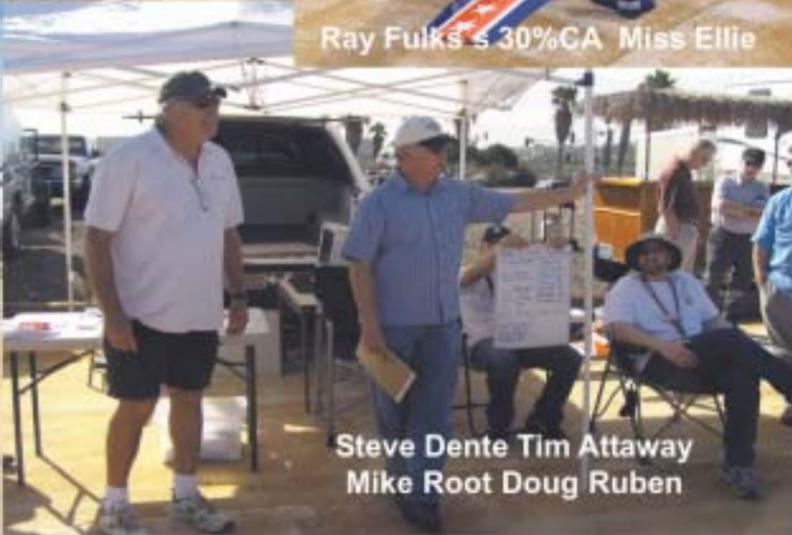
Ray Fulks Third Sportsman Morgan Foamy



Tim judging Browns Braden Moore up next



Electric IMAC 2-17-07



Steve Dente Tim Attaway  
Mike Root Doug Ruben



Steve Neu watching over Extra and Yaks



Ray Fulks's 30%CA Miss Ellie