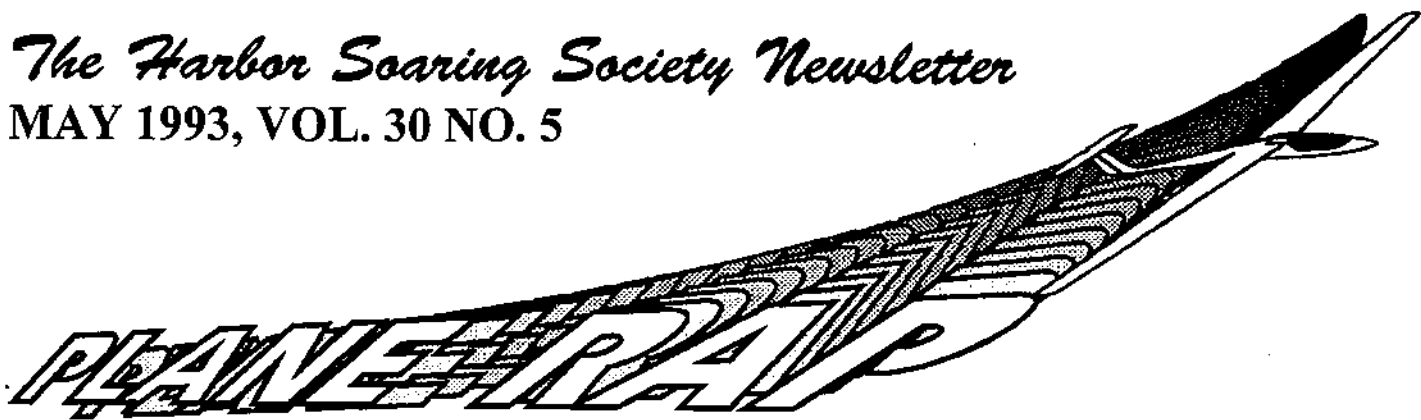


The Harbor Soaring Society Newsletter

MAY 1993, VOL. 30 NO. 5



"The Most Fun I've Had In A Long Time!"

by Curt Nehring

Sunny blue skies, puffy clouds, and light breezes marked the start of the Second Tri-Cities Challenge, a fun-fly competition featuring thermal flyers from SULA (Soaring Union of Los Angeles), EDSF (El Dorado Silent Flyers), and this year's host club, the Harbor Soaring Society. This event developed into a dual meet as SULA was a total no-show, neglecting to send any representatives. SULA claimed that they weren't informed, although the meet had been highly publicized for several months!

Blessed with genuine ten minute air, the first round, two minute dead-reckoning, went off without a hitch. To keep time I sang a short tune to myself, and other fliers practiced various techniques similar to Roger Lackey's famous "metronome." I'm not sure what Bob Sliff used, but his score read 1:59.58!

The second round was a tad tougher since it was the timer's responsibility to advise the pilot while the pilot kept his back to the airplane. Polyhedral sailplanes seemed to dominate this task although both

Norm Kutch and Manny Tau took a pretty decent shot at it with straight-winged full-house ships.

Although unannounced until the pilots' meeting, the last event would prove to be the most challenging and entertaining of the day. The task seemed too easy - the "top guns" were almost cocky! The requirement: land in a dry, inflated children's wading pool. Right! Spectators gathered semi-circle around the target as pilot after pilot gave their best shots, which usually meant they missed! Gordon Ritschke, Sean Monahan, and Roger Lackey

H.S.S. BOARD MEMBERS

President: Andy Sanders	(714) 751-9235
Vice President: Pat Scheer	(714) 744-3375
Secretary: Woody Grosvenor	(714) 969-1524
Treasurer: Frank Chasteler	(714) 545-2185
Contest Coord: Curt Nehring	(714) 592-2105
General Dir: Ross Thomas	(714) 638-0705
Newsletter Ed: Pete Young	(714) 892-3473

MEETING LOCATION

Lakes at Seabridge Condos. On Adams Ave. in Huntington Beach. Turn right at the first traffic light heading East from Beach Boulevard. You will need to check in at the gate. Tell the guard you are there for the HSS meeting. If there are any problems, call 969-1524

The Harbor Soaring Society newsletter is published monthly. Editorial comments and articles are welcomed. **Please provide all material for consideration by the 15th. of the month prior to publication.** Wordprocessed material is appreciated (any major IBM compatible disk format and program). Handwritten material must be clear and legible. The editor reserves the right to edit all material. Submissions should be made to Pete Young in person or by mail to: 6592 Belgrave Ave., Garden Grove, CA 92645.

The Most Fun.... continued

nailed it - congrats! This event was marked by chanting and loud, boisterous commentaries by numerous self-appointed line judges and an occasional bleacher type "wave".

But it was the impromptu 4th round's cash prize that inspired Bob "Slam Dunk" Sliff to plop his well-campaigned 3M Gnome dead center for the big bucks - about \$20!

In the final results, Harbor topped the team totals, with EDSF putting up a gallant effort to finish 2nd. SULA, by virtue of their non-attendance and subsequent zilcho scores, wins the infamous toilet seat, by default!

The festivities were followed by pizza and refreshments at a local pizza parlor. A great time was had by all!

At a subsequent SC2 tournament, Ross Thomas awarded the coveted Tri-Cities toilet seat to the lone SULA-ite present who reluctantly agreed to deliver the infamous trophy to his club.

I want to thank everyone from HSS and EDSF who participated, and of course to Mike Aguirre for his capable leadership and imagination as the CD.

APRIL MEETING MINUTES

The meeting started at 7:45PM with Andy Sanders presiding. Robin Theron was introduced by George Siposs; Robin has a 2M Gnome which he hopes to fly with the club.

Frank Chasteler gave the treasurer's report which was accepted as written. Frank also passed out the club's 1993 membership rosters.

Nick Buzolich said that anyone interested in the past two year's of RCSD magazine can check out copies from him at the meeting, or at the flying field.

Ross Thomas talked about the upcoming Astro Flight contest which HSS is hosting Memorial Day weekend. He urged the club members to come out and help

out. The club is also hosting the SC2 tournament May 23, and club help needed due to the expected heavy turnout. A raffle will be held for the club members helping out.

Roger Lackey gave an update on the club hats. They will be blue corduroy with the club logo on the front. A motion was approved to authorize purchase of the hats.

Dave Nemecek talked about the frequency problems and the political point of view, as opposed to the RC pilots' views, and the differences between the two. Ross commented on the frequency issue as to its origins, and the politicians need to hear from the RC community.

The meeting closed at 8:15. The guest speaker, Tim Renaud of Airtronics, was introduced by Andy Sanders. Tim gave a brief rundown on the frequency issue and how it is being handled by the RC industry.

Airtronics is now in partnership with Flite Lite to market composite glider kits. The kits will be very complete with truss hooks, bellcranks, strong wing rods, and pre-routed servo wiring channels. Wings and stabs will be presheeted with obechi, and the kits will be produced to the same high standards as the rest of the Airtronics line.

The Legend will soon be offered with a pre-sheeted foam wing, and a wing and stab kit will be available for conversion of built-up Legends. The new foam wing will weigh about the same as the built-up version.

Some of the new Airtronics gliders and products were displayed by Tim.

Woody Grosvenor, Secretary

FYI

... OOPS, significant typo in last month's HSS Newsletter: the 19th Astro Champs will be held 29-30 May, Memorial Day weekend, not on the dates printed last month ...new planes at the field: Mike Aguirre's Agnew Banshee 2M, Norm Kutch and Nick Buzolich's 2M Tekoa Shadows, Don Zink's Levoe-designed Super V... BEWARE! Parking tickets have been handed out at the field for parking at the curb, blocking the school's fire lanes!...CONGRATS to Steve Hendry for finishing an superb 2nd under tough flying conditions at Pasadena's March SC2 tournament... Steve clocked over ten minutes in a "man to man, last flier down wins" flyoff with his RG-15 composite original...anyone needing customized Intermediate-level flight instruction, contact Ross Thomas... For an excellent two part series on vacuum bagging composite wings, refer to Flying Models magazine, February and March 1993 issues; written with Roger Chastain's assistance, this series should be mandatory reading for anyone even thinking about building composite wings!

FOR SALE

- Harbor Soaring Society shirts and vinyl patches - contact Frank Chasteler at (714) 545-2185
- Vision 8SP installed into LJMP Cheetah with flaps, ailerons, new 600 mah RX pack, complete, ready to fly, \$625 OBO; Sealy Pulsar, 95% constructed, wings covered, fuselage ready to paint, \$250. Call Rich at 714 528-4984.
- Falcon 800, like new condition, with integral wiring harness and carbon fiber skegs, \$350, call Ben at (714) 721-8848.
- Weston WACO Magic, 100% ready to fly, 6 servos, JR X347 radio system, \$700. Bob Sealy Javelin flying wing, ready to fly less equipment, \$40. Call Carl at (714) 537-8180.
- VOR-2500, 100" Italian sailplane, ready to fly. Includes two wing sets. \$80. Call George at 540-5452 (h).
- 2M (78" span) Sealy Lumina, glass fuse, T-tail, NEW polyhedral wing with flaps. Buyer needs to cut out flaps and cover wing. Price includes a wing bag. \$125 - firm. LJMP Cheetah, ready to fly, less RX, includes wing bag, \$265. Gnome 2M ready to fly, less RX, includes wing bag, \$100. Gnome HLG, less radio, ready to fly, \$50. LJMP Pantera ready to fly, less RX, includes wing bag, \$175. 2 Airtronics Vanguard radio systems, less servos, includes TX bag, channels 28 and 56, each \$125. NEW, never used: 5/16" wing rod, 8 3/4" long. Contact Curt @ (714) 592-2105.
- Sealy Laser - kit new-in-box. For price, call Mike at (310) 439-4173
- Modified Kincaid Scooter, with Airtronics Module 7SP radio system, completely ready to fly, excellent condition, \$600. Call Ed Hawley at (714) 821-8768.



HSS APRIL MONTHLY

Although the weather conditions were persistently gusty, flying conditions for the HSS April Monthly were excellent when thermal activity moved through. Throughout the morning, hundreds of thermalling birds passed overhead in giant thermals, an unusual and inspiring sight. Of course, giant thermals are followed by giant sink, as many fliers found out to their chagrin.

CD Bob Sliff ran a tight and challenging format for the conditions. The first round was a three minute precision, the second and third rounds were four or 7 minute precision - pilot's choice. The gusty conditions made precision landings tough, and trying to make decent flight times in sinking air was, well, extremely challenging.

When the flying ceased, Roger Lackey and Tom Vincent took first and third in Two Meter with Falcon 600s, with Larry White taking second with his Mesa Flier. Tom Vincent used his Falcon 880 to win Sportsman and moves to Advanced - good showing Tom! Duane Gibbs topped Advanced with his Falcon 880, followed by Mike Aguirre and his Tekoa Shadow. Don Edberg won Expert with his Modi, with Roger Lackey and Ben Clerx close behind with their original Mako's.

Thanks to Dick Pantzar for mowing the field, to Maxine Thomas for scoring, and to the many club members who helped out. Don't forget: in May, the May 16th Monthly is for 2 Meter only, and Open fliers should fly at the May 23rd SC2 tournament to have their scores count in the yearly totals - details can be found on page 11. All club members are encouraged to support the May 23rd SC2 tournament which HSS is hosting - come out, help out, and fly!

ALTERNATE PROGRAM IN VISION RADIO — Sang

Here is something I would like to share with Vision radio owners which I found out accidentally. Since this was the first time for me to own a computer radio, I played with it with great interest — a few nights of staying up till the wee hours, experimenting with all the possible options in the menu. My finding relates to the "alternate program" and access level zero. My finding does not concern anyone who does not use the alternate program. The alternate program is a program mode that you can switch to during flight either to experiment with different flying configurations or just simply to change your flying characteristics depending on varying flying conditions, with out having to bring your plane down and reentering the data.

So, after you are finally satisfied with your main and alternate programs, you would want to set the access level to zero to protect your programs from accidental change. According to the manual, zero access level allows no setting in the program to be changed. What I found out is that under the main program this is true, but under the alternate program, zero access level protects Main and Basic but DOES NOT PROTECT Surface, Mixing and Preset. In other words, if you flipped your alternate switch to the alternate mode and set access level to zero, you would assume all surface, mixing and preset data in your alternate are safe-guarded and that accordingly you could press any buttons to go to different windows in the menu without worrying about changing the data. In fact, you could accidentally increase or decrease values by pressing the wrong keys. At the least this could be trouble, if not disaster for a novice Vision user like me — especially since I tried to utilize the alternate mode during flight to help set up my initial main program.

Note that when alternate and main programs are identical (same aircraft number or name — version 3.0), then the zero access level will protect all data under ALTERNATE. Of course, in this case you don't have an alternate program because main and alternate are the same.

I talked to one of the Vision radio program designers on this matter. He was not aware of it and his answer the next day, after some checking, was that's the way it was designed. If your radio functions differently from what I have described above, I would appreciate your comments.

from CASA Comments, the
newsletter of the Capital
Area Soaring Association,
Gus Peleuses, Editor

AIRTRONICS JOINS WITH FLITE LITE

by Tim Renaud

Airtronics is proud to make an announcement that will have an exciting impact on every R/C soaring and electric enthusiast. Airtronics will be selling high performance sailplanes and electric aircraft by Flite Lite Composites. The combination of Airtronics' tradition of quality and engineering with Flite Lite's industry-leading technology is exactly what members of the soaring community have been seeking for the last several years.

Obviously, a major shift like this one cannot happen overnight. It will take some time for the Airtronics touch to be applied to the Flite Lite kits. In March, Airtronics will begin answering customer requests for product information and booking advance orders for kits. Kits will not be available for shipment until April 15, so please be patient. The improvements being made to an already good kit line will make it worth the wait.

Each kit will include an epoxy fiberglass fuselage that will impress you with its quality and light weight. A unique wet seaming process eliminates the joining tape usually found in fiberglass fuselages and results in a lighter and stronger fuse. Some fuselages will add kevlar or carbon fiber reinforcements for greater strength with minimal weight gain.

Complementing the fuselage will be a set of pre-sheated obechi foam wings and stabs. That's right, the obechi veneer will be epoxied to the white foam cores at the factory. Spars, root ribs and joiner tubes will be also installed before shipment. Wings will include carbon fiber reinforcement for straight trailing edges, and glass or carbon fiber cloth where required for strength and durability. As a finishing touch the servo pockets and aileron and

flap hinge lines are machine routed to further reduce building time.

Rounding out the package will be all necessary hardware for the plane, including control cables and linkages, hinging tape, wing and stab joiners and custom control horns. Detailed plans and comprehensive written instructions will answer questions regarding assembly, radio installation, electric motor and battery combinations, and setting the plane up for flight.

You'll find a complete listing of the kits which will be available below. You can order any of these premium quality kits directly from Airtronics Specialty Division, or your dealer can order one for you from ASD. All product inquiries and orders will be handled by Airtronics so Flite Lite can concentrate on producing airplanes in their brand new custom built manufacturing facility. We accept Visa or Mastercard, or you can have your order sent COD at a slight additional cost. We're excited about providing you with the finest in electric and soaring performance!

The following kits will be available from Airtronics in mid-April. Please call (800) 621-3072 to place an order or obtain further information.

Falcon 880 63 oz.	112" \$329.95	S3021-3014
Falcon 800 62 oz.	100" \$314.95	S3021-3014
Falcon 600 42 oz.	78" \$249.95	S3021
Thermal Eagle 65 oz.	118" \$399.95	RG-15
Falcon 550E 40 oz.	80" \$249.95	E-387

THE MAKO!

The Mako is a competition sailplane designed for precision duration and F3J thermal contests, and which retains the crisp handling characteristics of an F3B sailplane. This is the fourth version of a design which dates back to 1987. Construction of the third version, the Dazzle, was too complex for most builders (glass bagged with a \$90 carbon fiber spar system) and needed to be simplified. The Mako's construction is similar to other competition sailplanes and is intended for the advanced to expert builder and pilot.

The primary design criteria was to easily "max" thermal duration requirements and cover plenty of ground searching for lift. Handling should be responsive and aerobatic - not only to fight off boredom after "skying out" but to improve all-important landing scores.

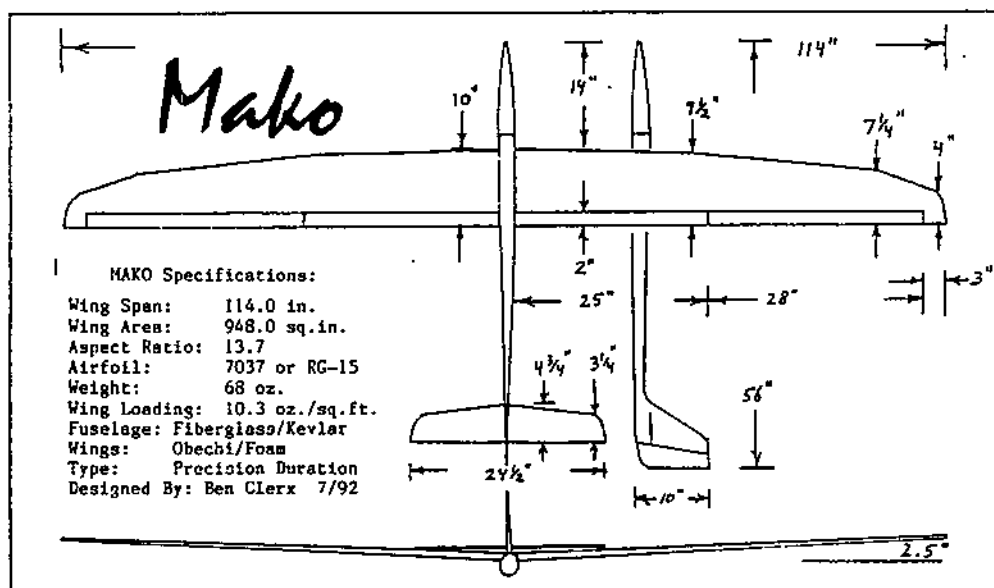
The flat wing with a triple tapered leading edge has no tipstall tendencies and tracks as if on rails during final approaches, particularly in gusty winds. Although polyhedral tips or winglets make an aileron equipped plane more stable and easier to fly, they add drag and reduce maneuverability. Advanced pilots don't need these "training wheels"! The lack of bent-up tips made it possible to increase aileron area, roll response, and landing accuracy - couple the flaps to ailerons via computer radio for great aerobatics!

Two airfoils are available for the Mako. The SD7037 airfoil with a 10-11 oz/sc wing loading produces outstanding flight performance in the lightest lift conditions.

The RG15 airfoil, once thought of as suitable only for F3B, thermals quite well at lower wing loadings using camber control, and has an excellent speed range. I think the choice of the SD7037 or the RG15 airfoils covers two of the best airfoils available for thermal soaring.

With a fiberglass fuselage and obechi over foam wing cores, construction is straightforward and typical of current high-tech sailplanes, but no high tech tools are required. The obechi can be applied by stacking on weights and pressing between the core beds, or by using a vacuum bagging system. Four wing mounted servos operate flaps and ailerons, and two fuselage mounted servos operate the rudder and horizontal stab from within a slip-on nose cone. The two piece wing, incorporating a builtup spar reinforced with kevlar and carbon fiber, is joined with a hardened steel rod. Foam core full flying stabs sheeted with balsa or obechi and a builtup rudder round out the Mako's construction.

Several prototype semi-kits have been produced, available June 1993. The semi-kits include a fiberglass fuselage, wing and stab foam cores, hardware, kevlar, and carbon fiber. Introductory price will be \$185, plus shipping.



Ben Clerx
39 Seabrook Cove
Newport Beach, CA 92660

TYPE	NEUTRAL	TO SERVO	TO BATTERY
KRAFT "C"	1.4MSEC	RED + BLACK - ORANGE S	RED + BLACK - X
KRAFT "A"	1.9MSEC	RED + BLACK - YELLOW S	RED + BLACK - X
KRAFT KD PROPD "KB"	1.4MSEC	RED + BLACK - BLUE S	RED + BLACK - X
FUTABA "G"	1.31MSEC	RED + BLACK - GREY S	RED + BLACK - X
FUTABA "J"	1.5MSEC	BLACK - RED + WHITE S	BLACK - RED + X
AIRTRONICS	1.5MSEC	RED OR WHITE STRIPE + BLACK - BLACK S	RED OR WHITE STRIPE + BLACK - X
JR	1.5MSEC	BROWN - RED + ORANGE S	BROWN - RED + X
HITEC/RCD WORLD-FM POLKS/ARISTO	1.5MSEC	BLACK - RED + WHITE S	BLACK - RED + X
DEANS ACE	1.5MSEC	NEGATIVE - POSITIVE + SIGNAL S	NEGATIVE - POSITIVE + X
		+ POSITIVE - NEGATIVE S SIGNAL X NOT USED	+ POSITIVE - NEGATIVE S SIGNAL X NOT USED

BLACK +
 WHITE -
 PURPLE RA +
 BLUE RB +
 BROWN RF +
 YELLOW RS +

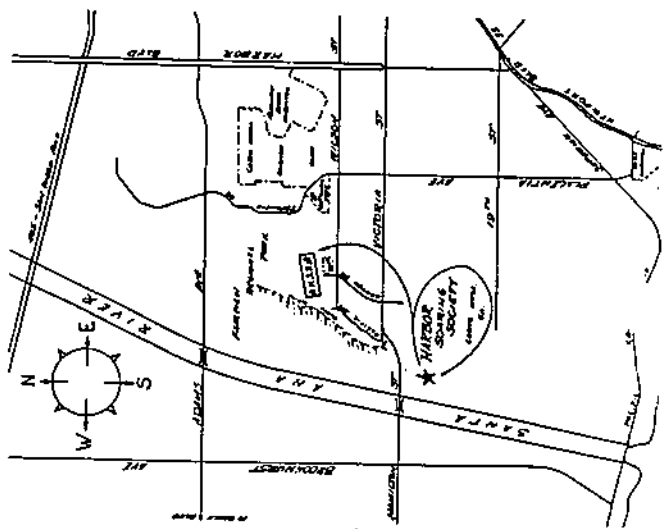
HARBOR SOARING SOCIETY
(SC)² CONTEST
MAY 23rd, 1993

SIGN IN: 8:00 AM
PILOTS MEETING: 8:45 AM
FIRST FLIGHT: 9:00 AM

ENTRY FEE: \$6.00
3 ROUNDS OF FLYING --- CONTESTANT FLYS EITHER "A" OR "B" PILOTS OPTION.
BUT MUST FLY ONE OF EACH.
"A" J MINUTE FLIGHT AT 700 POINTS. 3 POINTS/SECOND OFF OF TIME. LANDING AT 300 points.
"B" 7 MINUTE FLIGHT AT 900 POINTS. 2 POINTS/SECOND OFF OF TIME. LANDING AT 100 POINTS.
LANDINGS WILL BE STANDARD 25 FEET CIRCLE.

WINCHES ARE ALL 12 VOLT.
LINE LENGTH IS 650 FEET.
LANDING SURFACE IS MOWED WEEDS.
ALL (SC)² RULES APPLY

- NOTES:
1. HSS FLIERS MUST FLY IN THIS CONTEST TO ACCUMULATE OPEN SCORES FOR MAY. THE 16 MAY MONTHLY IS FOR 2H ONLY!
 2. HSS CLUB MEMBERS ARE NEEDED TO PROVIDE HELP DURING THE CONTEST: LANDING JUDGES, WINCHMASTERS, ETC. PLEASE TURN OUT TO HELP THE CLUB!
 3. THERE WILL BE A WORKERS' RAFFLE FOR HSS MEMBERS WHO WORK THE CONTEST!



THE PERIOD OF THIS FLIER IS 1 APRIL TO 30 APRIL 1993

HOBBY HORN
15173 MORAN ST. // P.O. BOX 2212
WESTMINSTER, CA 92683
(714) 893-8311 PHONE // (714) 895-6629 FAX

MONTHLY SPECIALS ON RADIOS, PARTS AND ACCESSORIES
(Specials listed below are only good for the month of this special flyer.)
APRIL, 1993

JR RADIOS	LIST PRICE	HH PRICE	JR RECEIVERS (CONT)	LIST PRICE	HH PRICE
X-347 FM W4-507 SERVO	\$529.95	\$338.99	235 PCM RX 6 CH CREDIT CARD 72	\$194.95	\$128.00
X-347 FM W4-517 SERVO	\$589.95	\$377.99	910 PCM RX 10 CH 50/53/72 MHz	\$199.95	\$128.00
X-347 FM GLIDER W2-341 SERVO	\$609.95	\$389.99	940 PCM DUAL CONV. 10 CH 50/53/72	\$229.95	\$149.99
X-347 PCM W4-507 SERVO	\$619.95	\$389.99	JR SERVO GUIDE 128 PAGE GUIDE TO ALL JR SERVO		
X-347 PCM W4-517 SERVO	\$659.95	\$418.99	GIVES FULL DETAILS ON ALL JR SERVO, WITH MANY PIC		
X-388S* FM AC W4-507 SERVO	\$659.95	\$389.99	TURES AND ALL DATA) FREE WITH ORDER IF YOU RE		
X-388S* FM AC W4-517 SERVO	\$679.95	\$429.99	QUEST ONE, OR SEND \$5.00 TO COVER POSTAGE.		
X-388S* PCM AC W4-517 SERVO	\$749.95	\$469.99	AIRTRONICS:		
X-388S* PCM AC W4-4131 SERVO	\$939.95	\$579.99	VG4R VANGUARD FM 4 CH W/3 102a	\$249.95	\$128.00
X-388S* FM GLIDER W2-341 SERVO	\$659.95	\$429.99	VG4R VANGUARD FM 4 CH W/2 501 MICRO A MICRO		
X-388S* PCM GLIDER W2-341 SERVO	\$759.95	\$469.99	RX	\$299.95	\$179.00
MAX 4 AM W/3 507 SERVO	\$159.95	\$119.99	VG8DR VANGUARD FM 6 CH W/4 102a	\$319.95	\$189.00
MAX 4 AM GLIDER W2-341S-270 PK	\$249.95	\$159.99	150P INFINITY 600 PCM W/4 102a	\$549.95	\$384.99
MAX 4 FM W/3 507 SERVO	\$249.95	\$144.99	160P INFINITY 660 FM W/4 102a	\$679.95	\$379.00
MAX 6 FM W/3 507 SERVO	\$319.95	\$184.99	160P INFINITY 660 PCM W/4 102a	\$729.95	\$401.99
* New-increased capability radio based upon the X347. Now features 8 mode memory and more glider features. Four pages of information sheets will be sent upon request!					
** THE "9228" IS THE "Credit Card" RX					
JR SERVO			141 MINI METAL GEAR SERVO	\$79.95	\$39.00
507 Standard servo	\$29.95	\$15.99	501 MICRO LITE	\$79.95	\$40.00
517 Standard W/BB	\$39.95	\$22.99	745 FM MICRO 4 CH RX	\$89.95	\$75.00
4131 Ultra precision/coreless	\$49.95	\$30.99	765 FM STD RX 6 CH	\$89.95	\$69.99
4721 Ultra torque/coreless	\$59.95	\$34.99	985 PCM RX 8 CH	\$189.95	\$133.00
4731 Ultra speed/coreless	\$69.95	\$44.99	FUTABA		
901 Mid size	\$89.95	\$54.99	4NLB AM 4 CH W/3 148 SERVO	\$244.95	\$117.99
9021 Mid size/coreless	\$79.95	\$47.99	4NLB AM 4 CH ELECTRIC	\$299.95	\$182.00
341 Mini	\$59.95	\$34.99	S-148 STD SERVO	\$38.95	\$15.99
3021 Mid/coreless	\$79.95	\$47.99	S-133 MICRO SERVO	\$59.95	\$29.00
3023 Mid high speed/coreless	\$89.95	\$47.99	S-5102 MICRO METAL GEAR SERVO	\$70.95	\$41.99
906 FEET high power	\$109.95	\$64.99	GENERAL		
7006 Low profile/coreless	\$109.95	\$64.99	SERVO SAVERS (FOR YOUR FLAPS)		
*** BULK OFFER ON 341-BUY 6 OR MORE AND TAKE OFF AN EXTRA 10%!			FOR FUTABA SERVO	\$3.00	\$2.25
			FOR AIRTRONICS OR JR SERVO	\$3.00	\$2.25
JR ACCESSORIES			HOBBY HORN SUPER DUTY TOW HOOK	\$2.50	\$4.00
001 DELUXE SWITCH HARNESS, GOLD	\$12.95	\$11.66	HOBBY DYNAMICS DIGITAL MINI TACH	\$49.95	\$30.95
003 SMALL SW HARNESS	\$8.95	\$8.06	HD EXPANDED SCALE VOLT METER	\$19.95	\$14.95
004 CHARGE SWITCH HARNESS	\$19.95	\$16.75	FEATHER CUT MACHINE		\$149.95
023 JR NECK STRAP	\$13.95	\$7.16	NOTE: WHILE I CARRY SOME OF THE ITEMS ABOVE IN STOCK, MANY SERVO		
100 ALLERON EXTENSION 12", GOLD	\$7.95	\$7.16	RECEIVERS REQUIRE SPECIAL ORDER (PRICE IS UNAVAILABLE TO CARRY		
200 RX 270 MAH PACK	\$19.95	\$17.89	ONLY THE FREQUENCY DEPENDENT ITEMS SUCH AS RADIO AND		
5001 RX 550 MAH 50 PACK	\$19.95	\$17.99	RECEIVERS BECAUSE SPECIAL ORDER (PRICE IS UNAVAILABLE TO CARRY		
FM RF PACK 357 RX AND TX MODULE	\$169.95	\$114.99	IF YOU CANNOT FIND THE ITEM YOU WANT, PLEASE CALL US AT (714) 893-8311		
PCM RF PACK 910 RX AND TX MCOO	\$239.95	\$159.99	ON THE DAY OF DELIVERY (TO OUR SHOP) WE WILL GIVE US A CALL WITH		
S-PCM RF PACK 640 RX	\$239.95	\$159.99	YOUR SPECIFIC REQUIREMENTS. WE WILL TRY TO OBTAIN THE ITEM FOR YOU		
S-PCM RF PACK 940 RX	\$269.95	\$174.99	AND DELIVER IT TO YOU. WE WILL TRY TO OBTAIN THE ITEM FOR YOU		
			AS THE PRICES FROM OUR SUPPLIER ARE BASED UPON US, PLEASE CALL US		
			WHICH CHANGE MONTHLY. OUR PRICES ON THE ABOVE ITEMS MAY NOT BE		
			VALID OUTSIDE OF THE MONTH OF THIS FLYER. IF YOU DO NOT HAVE A CUR		
			RENT MONTHLY FLYER CALL FOR OUR BEST PRICE.		
			THANKS, BOB SLUFF, HOBBY		
			(Harm's looking for 6 meter stuff, give me a call.)		

If you have any special requests, call for my best quote

Cerritos College Center for Composites in cooperation with Superior Aircraft Materials presents
Saturday May 22, 1993
8 a.m. - 12 p.m.

Modelers Symposium

MIKE TAIBI
 Superior Aircraft Materials
 8 a.m. - 8:30 a.m.

Presentation Outline:

BALSAWOOD:
 Origin
 History

UTILIZATIONS:
 Properties
 Applications
 Commercial Uses

GLASSWOOD DENSITY:
 What is the difference
 do you put it to use
 is it important

BALSAWOOD GRAIN:
 What is "A" "B" "C" grain
 where do you use them
 How can you benefit

PROCESSING BALSAWOOD:
 Grinding process
 Equipment used
 Special Blades
 Die cutting

ROGER CHASTAIN
 Feather / Cut
 8:30 a.m. - 9:45 a.m.

Presentation Outline:

FOAM BASICS:
 Styrofoam
 Urethane Foam

FOAM CUTTING:
 The Old Way
 What we have learned
 The New Way

TEMPLATE DESIGN:
 Single Template System
 Two Template System
 Free Form Cutting System

FEATHER / CUT DEMO:
 Theory behind Feather / Cut
 Blanking Foam
 Cutting Straight & Tapered Wings, Slabs

JOE WURTS
 World Soaring Champion
 10 a.m. - 12 p.m.

Presentation Outline:

VACUUM BAGGING:
 Balsawood, Obechi
 Fiberglass, Carbon Fiber

WHAT KIND OF LAY UP:
 How much material
 How strong
 How heavy

HOW TO:
 Prepare Core
 Wing joining
 Wing tip preparation

BAGGING PROCEDURES:
 Lecture walk through
 Hands-on demonstration
 Finished article

OK, I HAVE A PART:
 How to finish it
 Control surfaces, linkage
 Wiring
 Taking care of it

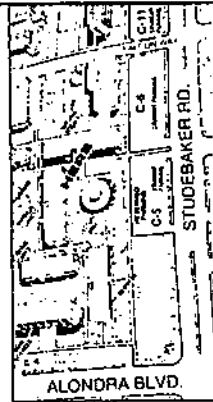
Come be our guest. Free Admission & Parking.
Bring your questions. This is your chance to consult with experts.

Classes taught at Cerritos College:
 • Composites Manufacturing
 • Mold Making
 • Fiberglass
 • Injection Molding
 • Mechanical Testing

Cerritos College has provided training for:
 • McDonnell Douglas Corp.
 • Northrop Corp.
 • U.S. Air Force
 • U.S. Coast Guard

DIRECTIONS TO CERRITOS COLLEGE:
 Take 605, exit east on Alondra Blvd. At Studebaker Rd. make right (South) you may park in Student Parking lots C-5, C-6 or C-11. The Symposium will be held in the Plastics Technology Building on Falcon Way.

For more information contact:
MIKE TAIBI
 (310) 865-3220



ASTRO FLIGHT CHAMPIONSHIPS

THE HARBOR SOARING SOCIETY WOULD LIKE TO INVITE YOU TO THE ...

19TH ANNUAL ELECTRIC FLIGHT R/C CHAMPIONSHIPS

30TH
 19TH
 and 20th, 1993

The 18th Annual Astro Flight Electric Champs will be held on Saturday and Sunday, May the 20th and 21st, 1993 at Fairview Regional Park, Costa Mesa CA. The events will be 7-cell Sailplane and Old Timer, Unlimited Sailplane and Old Timer, (and 7 Cell Pylon To-Be-Determined) SAILPLANE and OLD TIMER rounds one, two and three will be limited motor run with thermal duration and runway landings, and will be scored man-on-man. The motor run, duration, and landings will be as follows:

ROUND 1	7-Cell Sailplane	Unlimited Sailplane	Unlimited Old Timer
Motor run	20 seconds	30 seconds	10 seconds
Duration	3 minutes	3 minutes	3 minutes
Landing	100 points	10 points	100 points
ROUND 2			
Motor run	40 seconds	50 seconds	20 seconds
Duration	7 minutes	7 minutes	7 minutes
Landing	100 points	10 points	100 points
ROUND 3			
Motor run	30 seconds	40 seconds	15 seconds
Duration	5 minutes	5 minutes	5 minutes
Landing	100 points	10 points	100 points
ROUND 4			
Motor run	5 minutes	5 minutes	5 minutes
Duration	10 minutes	10 minutes	10 minutes
Landing	100 points	10 points	100 points

Round four will be a 5 minute penalty-duration with the same landings as the previous rounds. Time will elapse when the model becomes airborne. A second timer will keep track of the motor run which will be subtracted from the total flight time. Motor run is unlimited but for one run only at the discretion of the pilot. Scoring will be straight points per second with all classes flying the same task.

7 Cell Pylon Racing: Interested pylon racers should contact Ross Thomas ASAP as presently, there is insufficient interest to justify the event. This event will be held only if sufficient fliers (8 to 10) indicate a willingness to participate.

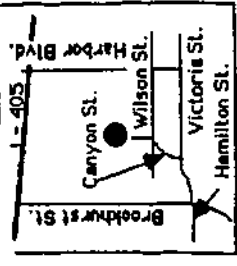
YES! I WANT TO ENTER!

NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE# _____
 AMA# _____

..... 7 CELL SAILPLANE [CH #]
 7 CELL OLD TIMER [CH #]
 UNLIMITED SAILPLANE [CH #]
 UNLIMITED OLD TIMER [CH #]
 7 CELL PYLON [CH #]
 NUMBER OF ENTRIES []
 TOTAL \$ ENCLOSED []
 ENTRY FEE: \$10.00 FIRST EVENT, \$5.00 FOR EACH ADDITIONAL EVENT

Send entries to: Ross Thomas (CD)

1406 N. La Bonita
 Santa Ana, CA 92703
 (714) 638-0705 (after 6PM)



JOIN

THE ELECTRIC
 AEROMODELING
 ASSOCIATION

Trophies will be awarded to third place in each class. There will be a pilots/workers drawing for valuable merchandise prizes donated by Astro Flight and several other manufacturers.

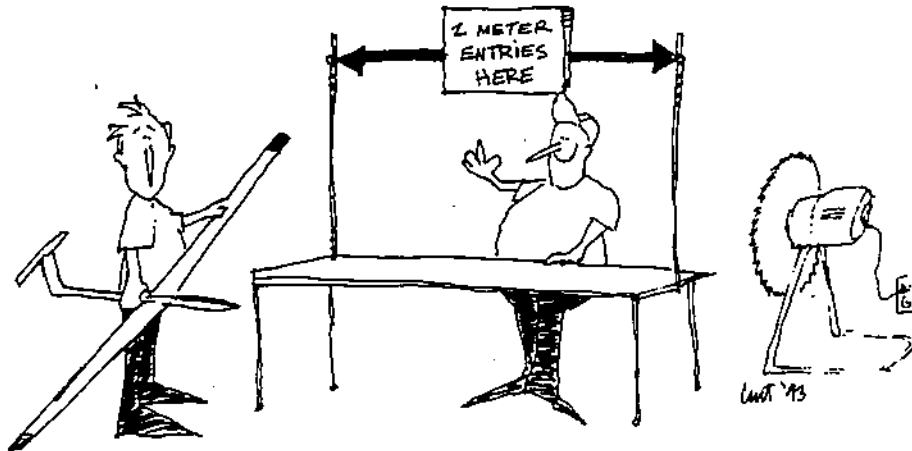
AMA SANCTIONED
 AMA LICENSE REQD.
 Fairview Regional Park
 Registration 8:00 AM
 First Round 9:00 AM

CONTEST LISTINGS

<u>Date/Location</u>	<u>Event</u>	<u>Point of Contact</u>	
5/1-2 Pasadena	12th Annual Rose Bowl Soaring Festival	R. Burns	818 812-0491
5/1-2 La Jolla	Intl Slope Races	S. Condon	619 565-4361
5/2 San Diego	Merrifield 2M Contest	A. Orona	619 571-0358
5/8 Carson	SULA 2M/SULABird	G. Boss	310 541-6296
5/15-16 Calif. Valley	F3H Cross Country	M. Hadley	805 922-5147
5/16 Costa Mesa	HSS Monthly (2M only)	F. Chasteler	714 545-2185
5/16 El Dorado	EDSF Monthly - 2M	G. Drought	310 867-8444
5/22 Cerritos	Modelers' Sympo	M. Taibi	310 865-3220
5/22 El Dorado	EDSF Monthly - Elec.		
5/23 Costa Mesa	SC2 May Tournament	R. Thomas	714 638-0705
5/29-30 Costa Mesa	18th Astro Flight Champs	R. Thomas	714 638-0705
6/6 San Diego	Menard 2M 6th Annual	P. Hoffman	619 276-6335
6/12-13 Taft	TOSS Cross Country	E. Weisman	805 498-8878
6/19-20 Visalia	North/South Challenge	CVRC	209 733-3390
8/14-15 Carson	1st Annual Summer Soaring Festival	S. Addis	310 320-2708

Note: for detailed information, contact the individuals listed. Not responsible for changes or cancellations. For any clarifications, contact Pete Young.

original Soartoon by
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SOUTHERN CALIFORNIA SOARING CLUBS
RESULTS OF MARCH, 1993 CONTEST

HARBOR SOARING SOCIETY MONTHLY CONTEST
APRIL, 1993
OPEN DIVISION

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	HENDRY	STEVE	PSS	EXPERT	2947.7	1000 C 1ST EXP
2	LEVOE	MARK	PSS	EXPERT	2947.7	1000 C 1ST EXP
3	WURTS	JOE	PSS	EXPERT	2930.3	994.1 3RD EXP
4	PERKINS	DARYL	PSS	EXPERT	2927.9	993.3 4TH EXP
5	KINDRICK	KEITH	PSS	EXPERT	2925.5	992.5 5TH EXP
6	JOY	GEORGE	TPG	EXPERT	2915.3	989.0
7	GATTI	MARK	PSS	EXPERT	2910.1	987.2
8	RODRIGUEZ	JOE	SS	EXPERT	2900.7	983.9
9	FOXGOLD	PAUL	NONE	EXPERT	2899.9	983.4
10	MARKLE	JIM	SSSF	EXPERT	2899.9	983.4
11	SKINNER	M	SSSF	SPORTSMAN	2895.0	982.4 5TH SPTS
12	EDBERG	JOHN	PSS	EXPERT	2892.9	981.4
13	ROBEL	RICH	TPG	EXPERT	2890.1	980.5
14	REAGAN	MIKE	PSS	EXPERT	2890.0	980.4
15	WEISMAN	EDGAR	PSS	EXPERT	2881.0	977.4
16	SADRAF	SPAN	SS	EXPERT	2880.3	977.1
17	SAGE	FRED	SS	EXPERT	2880.3	977.1
18	LACKEY	ROGER	PSS	EXPERT	2878.4	976.5
19	MARIEWICZ	ANTHONY	TPG	EXPERT	2867.9	972.9
20	FARLESS	DAVID	PSS	EXPERT	2860.5	970.4
21	BILLMAN	BOB	PSS	EXPERT	2857.7	969.5
22	WEISMAN	B	PSS	SPORTSMAN	2855.9	968.3 2ND SPTS
23	MORTON	RICHARD	TPG	SPORTSMAN	2853.4	968.0 3RD SPTS
24	SMITH	STEVE	SS	SPORTSMAN	2850.6	967.1
25	WACKENZEE	SCOTT	SSVFP	EXPERT	2850.1	966.9
26	CLERK	BEN	PSS	EXPERT	2835.2	957.0
27	AGUIRRE	MIKE	PSS	SPORTSMAN	2830.5	954.2
28	SLIFF	BOB	PSS	EXPERT	2815.0	949.6
29	THOMAS	ROSS	PSS	EXPERT	2814.2	949.7
30	BRATRUD	RANDY	PSS	EXPERT	2808.7	948.3
31	PARSONS	JIM	PSS	SPORTSMAN	2807.3	948.0
32	NEHRING	CURT	PSS	SPORTSMAN	2800.4	942.7
33	BUZOLICH	NICK	PSS	SPORTSMAN	1719.5	583.3
34	KUTCH	NORM	PSS	EXPERT	1556.9	522.6

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	TEUBERG	JOHN	EXPERT	2980.0	1000 C 1ST EXP	
2	LACKEY	ROGER	EXPERT	2970.0	996.4 2ND EXP	
3	CLERK	BEN	EXPERT	2925.0	981.0 3RD EXP	
4	BRANDY	DENNIS	EXPERT	2949.0	986.0	
5	HENDRY	STEVE	EXPERT	2931.0	980.0	
6	PANTZAR	DICK	EXPERT	2815.0	944.0	
7	POULSEN	GORDON	EXPERT	2802.0	940.0	
8	FINK	STEVE	EXPERT	2784.0	934.0	
9	WHITE	LARRY	EXPERT	2760.0	922.0	
10	GIBBS	SUANE	ADVANCED	2739.0	919.0 1ST ADV	
11	KUTCH	NORM	EXPERT	2705.0	907.0	
12	THOMAS	ROSS	EXPERT	2681.0	899.0	
13	BRATRUD	RANDY	EXPERT	2640.0	882.0	
14	AGUIRRE	MIKE	ADVANCED	2637.0	881.0 2ND ADV	
15	BIKLE	JOHN	ADVANCED	2610.0	867.0	
16	CHASTELER	FRANK	EXPERT	2590.0	855.0	
17	NEMECEK	DAVID	EXPERT	2546.0	844.0	
18	RICHARDSON	PETE	EXPERT	2544.0	843.0	
19	PARSONS	JIM	ADVANCED	2499.0	831.0	
20	NEHRING	CURT	ADVANCED	2432.0	797.0	
21	RITSCHKE	GORDON	EXPERT	2425.0	795.0	
22	CRON	AL	EXPERT	2416.0	793.0	
23	VINCENT	TOM	SPORTSMAN	2369.0	780.0 1ST SPTS	
24	TAU	MANNY	ADVANCED	2354.0	779.0	
25	SANDERS	ANDY	ADVANCED	2241.0	742.0	
26	SLIFF	BOB	EXPERT	2236.0	740.0	
27	DURHAM	JACK	GUEST	2229.0	738.0	
28	DUNCAN	BILL	EXPERT	2224.0	736.0	
29	POPE	BOB	GUEST	2074.0	682.0	
30	YOUNG	PETE	ADVANCED	2025.0	670.0	
31	BUZOLICH	NICK	SPORTSMAN	1979.0	649.0	

TWO-METER DIVISION

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	LACKEY	ROGER	EXPERT	2885.0	1000 C 1ST EXP	
2	WHITE	LARRY	EXPERT	2834.0	982.0 2ND EXP	
3	VINCENT	TOM	SPORTSMAN	2776.0	962.0 1ST SPTS	
4	CLERK	BEN	EXPERT	2679.0	929.0	
5	PARSONS	JIM	EXPERT	2643.0	881.0	
6	YOUNG	PETER	EXPERT	2429.0	841.0	
7	CHASTELER	FRANK	EXPERT	2426.0	840.0	
8	THOMAS	ROSS	EXPERT	2408.0	834.0	
9	DUNCAN	BILL	EXPERT	2406.0	833.0	
10	AGUIRRE	MIKE	EXPERT	2364.0	819.0	
11	SLIFF	BOB	EXPERT	2329.0	807.0	
12	KUTCH	NORM	EXPERT	2295.0	795.0	
13	BUZOLICH	NICK	EXPERT	2204.0	740.0	
14	FINK	STEVE	EXPERT	2093.0	695.0	
15	RICHARDSON	PETE	EXPERT	2047.0	683.0	

PLACE	CLUB	FLYERS	TOTAL
1	PSS	21	397.9
2	HSS	12	397.7
3	TPG	10	397.3
4	PSS	8	389.7
5	SSSF	11	387.5
6	HSS	9	387.0
7	SSVFP	7	327.1
8	SS	4	293.9
9	SSLA	2	147.6
10	SSASA	2	146.4
11	SSMCS	0	0.0
12	SSUST	0	0.0

HSS MAY MONTHLY

CD: Frank Chasteler
 LOCATION: Fairview
 Park, Costa Mesa
 DATE: Sunday, May 16
 (the Sunday after Mothers'
 Day!)
 EVENTS: Two-Meter ONLY!
 Open fliers should
 fly at the 23 May SC2
 tournament to accumulate
 HSS Open points for May!
 FORMAT: Man-on-man, 7 minute/
 900 flight points, 100
 landing points maximum, 25'
 standard graduated circle.
 Four rounds minimum, fifth
 round optional depending on
 time.



Andy Sanders and original
 Viper - photo digitizing
 courtesy of John Ostrowski



The Oldest Chartered
Soaring Club
in the
A.M.A.



Charter # 128

MAY MEETING

DATE: Wednesday, May
5, 7:30PM

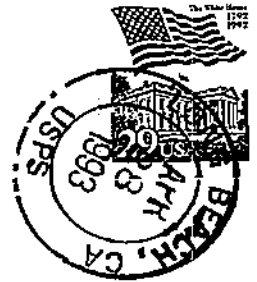
LOCATION: Clubhouse at
Lakes at Seabridge Condos.
Refer to instructions on
page 1.

SHOW AND TELL: Bring in
your latest projects!

GUEST SPEAKERS: Greg
Chun and Manny Tau will
be displaying the latest
products from GRECO!



P.O. Box 1673
Costa Mesa, CA 92628



FIRST CLASS MAIL

ANDREW SANDERS
388 BUCKNELL RD.
COSTA MESA, CA 92626