

The Harbor Soaring Society Newsletter

SEPTEMBER 1993, VOL. 30 NO. 9



AUGUST MEETING MINUTES

The meeting came to order at 7:35PM with club president Andy Sanders presiding. The minutes from the July meeting were accepted as written. No new members were seen at the meeting. Frank Chasteler gave a Treasurer's report which covered checking balance, income, and expenditures such as trophies, name badges, and beginners' packages. The Treasurer's report was accepted as read.

Competition Coordinator Curt Nehring talked about the upcoming club contest and gave a summary of the rules. Curt asked that members with winch equipment and spare batteries bring the equipment out to the contest.

Editor Pete Young thanked all those turning in articles on building and flying. Pete suggested that the club purchase videos that would help the club. Some possible choices were discussed. The club voted and decided to purchase a video on composite construction techniques.

Dave Nemecek asked about the status of the Legend foam cores that were donated to the club by Bob Reynolds. A

raffle or auction was suggested, and this will be decided soon.

Pete mentioned that Aerospace Composites owner George Sparr has moved to northern California, and a local retail source is Joe Sessa, 2941 Grace Lane, Unit A, Costa Mesa 92626, (714) 549-2597. Joe will be stocking the Aerospace Composites inventory on a "walk-in" basis, mail orders will be handled by the Sparrs - magazine ads will soon be seen with their new address.

A social function for club members
(continued, page 2)

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	(909) 459-2105
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.

was discussed as to where it could be held, and who would organize it. Connie and Norm Kutch will gather more information and report back at the next club meeting.

Norm suggested that new club officer nominations be coordinated early for more active competition in the nomination and voting process. It was decided to have Norm head up a committee to seek out qualified candidates for election to the club offices. Norm's title will be Committee Chairman for the Candidate Committee.

The meeting adjourned at 8:12PM. Pete introduced the guest speaker, Brian McLean. Brian is a lifelong slope flyer who is currently kitting some composite gliders. His Zephyr is available in 2M or 90" span and features a bagged composite wing with Kevlar and carbon fiber reinforcement; a choice of two Selig airfoils is offered. The fuselage contains Kevlar and S-glass reinforcement making it very strong and rigid with very light weight. The Zephyr's wingerons makes it very agile and competitive on the racing circuit.

Brian's main objective is to produce the best slope planes for a reasonable price. The Zephyr kit produces pre-bagged wings, reinforced Kevlar LE, and all wingeron hardware included. T-tails seem to perform quite well in slope racing, and future plans include that planform as an option. An unplanned development test for wing strength was explained. The plane was inadvertently put into a dive from very high altitude with a hard pullout, causing maximum stress on the wing structure and wing attachments. Even though an effective test, it is not advised on a regular basis as it is hard to get the pilot's heart back to a regular beat afterwards.

Brian passed around some Zephyr components for inspection by the picky HSS audience. The composite work on the wings, stabs, and fuselage was extremely impressive. Brian's future plans include kitting an all-composite Thermal Duration model to provide superior performance at reasonable retail prices. Brian closed his presentation by showing a video of the Zephyr flying on the slopes in the Laguna Niguel area.

-- Woody Grosvenor, Secretary

FYI

...at the July TOSS SC2, Roger Lackey 2nd, Don Edberg 5th, Frank Chasteler 8th, Ben Clerx 12th ... Pasadena Soaring Society, Harbor Soaring Society, and Torrey Pine Gulls are 1-2-3 in SC2 team standings for the year, it's almost a dead heat between HSS and TPG for 2nd ... HSSers in the magazines: outstanding article by George Siposs in Model Aviation on modelling in Hungary; Ben Clerx's Mako highlighted by Bill Forrey in Model Builder; and Don Edberg appears out of the mists in the Futaba ads ... Progress, Ain't It Terrible: Hughes Hill is no more, it's fenced off and bulldozers are ripping up the territory ... New planes seen: George Azvedo's Gunsaulus-designed Heatseeker, very sharp looking; Manny Tau flying up a storm with an RnR Genesis ... Rest In Peace Dept: Gordon Poulsen's 3M Gnome augured in at the August Monthly, after only eight flying seasons; Dennis Brandt's LJMP Excalibur, victim of a mid-air... Don't Try Free Flight, It's Too Hard: at a recent Saturday session, two HSSers couldn't find their plane in the mounds, a passing Costa Mesa Police chopper took pity and vectored them in ... FLASH from the SULA Summer Festival: HSS takes 1st Team! Lackey, Aguirre, and Clerx place 1st, 4th, and 10th, all with MAKOs!

HSS AUGUST MONTHLY

by Curt Nehring

I knew it would a great day for flying, a perfect day for a club contest. The Bimmer settled in southbound on the 57 as patchy, clearing skies and a hazy view of the foothills soon disappeared in my rearview mirror and 80 mph suddenly felt really good with ZZ Top helping me push the pedal. Somewhere around Brea Canyon, heavy clouds began to cover the sky. I popped off the CD and tuned in NOAA's weather station "... high of 83 degrees, 64% humidity, winds west to southwest at 12 mph, morning clouds ..." Back to the music, crack the sunroof, watch for cops.

Arriving at the field, the morning air is still fresh and slightly sticky. Ambient temperature is 66 degrees, cool enough for a light jacket. A few guys are launching downwind off a high start, not a good sign, but it's early and the wind is changing. An hour passes and by the pilots' meeting, a slight breeze is blowing in our favor and a few hawks signal lift over the mounds. The first round is a mandatory 4 minute task and no one seems to have a problem making time. Two meter and Open fly simultaneously. Thermals abound and the sky seems to be breaking loose everywhere. Scored at 1 point per second and 5 points per second penalty over target time, most fliers were early throughout the day. A few complained about lingering rotors on the easterly approach, making even carrier landings less than a thing of beauty. The 2nd and 3rd rounds were interchangeable 4 and 8 minute durations which proved to be challenging as the winds increased and the thermal cycles widened. Settling down on the tape became more critical

with 4 minute landings at 10% of the flight score and 8 minutes at 5%.

Tragically, Gordon Poulsen's 3M Gnome blew apart a wing at the top of a full pedal launch - this proved to be the only major incident during the competition. Dave Nemecek's Falcon 880 managed to suffer servo problems at the end of the first round, taking him out of the race. In addition, temporary brain-fade allowed four pilots to lose all points for a round by neglecting to add the initials required on the scorecards. An excitable Norm Kutch campaigned a new sailplane that he claims is a real confidence-builder. Apparently, it's a DCU fuse with an original tapered wing weighing in at the mid-70's. Ben Clerx was nice enough to choose work over model gliders, flying nonstop to London thus increasing our chances for victory. Except for a few broken lines, the equipment worked flawlessly and by noon the trophies had been awarded and most fliers were on the road home.

In closing, I want to thank those who provided, manned, and repaired winches and retrievers (Andy, Al, Steve, and the Hendry-meister); to Maxine Thomas for once again capably handling the scoring table; to Frank, Sean, and Ross for assisting throughout the day, and to Pete Young for preparing a detailed computer-generated points chart. I'm sure I missed some names, but because of everyone's involvement, things ran very smoothly. I hope you all found the contest to be both challenging and fun.

Congratulations to the winners: in 2 Meter, Roger Lackey 1st, Mike Aguirre 2nd, Sean Monahan 3rd. Mike Carrico, 1st Sportsman. In Advanced, Manny Tau - 1st, Nick Buzolich - 2nd. Dennis Brandt wins Expert, Jim Markle and John Bikle 2nd and 3rd.

PILOT OF THE MONTH

After an absence of several months, the HSS Pilot of the Month column returns! The HSS September POM is Dave Nemecek, a superb builder and dedicated flier. Without further ado, here's Dave -

OCCUPATION: Systems engineering manager for Hughes Ground Systems in Fullerton, currently working upgraded development of shipboard combat information displays.

STARTED FLYING SAILPLANES: Dave returned to the soaring hobby in 1976 with an Olympic II scratch-built from Lee Renaud's RCM article. Two weeks after he finished it, Airtronics released the Oly II in kit form!

REASON FOR INTEREST: ... for the enjoyment and opportunities to use his building and engineering skills ...

STRENGTH: Sheer tenacity, staying with the sport despite setbacks.

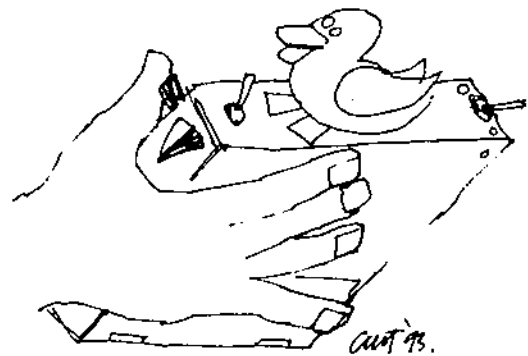
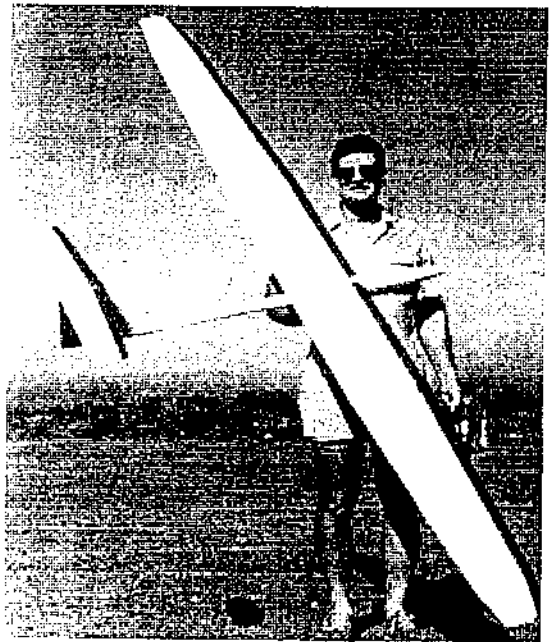
FAVORITE PART OF THE HOBBY: ... the flying field camaraderie, and the challenge of flying long thermal flights under changing flying conditions.

GOALS: Maximum enjoyment at HSS' flying sessions!

CURRENT R/C SAILPLANES: Falcon 880, Legend, Gnome 2M.

FAVORITE R/C SAILPLANE: His new Falcon 880! He especially likes the way it performs and handles in all flight regimes.

ADVICE FOR BEGINNERS: Buy a tape recorder, tape 3 min, 5 min, and 7 min precision countdowns, use it to hone your precision duration skills. Fly every practice flight as if it was a competition flight.



WINCHES by Steve Fink

There is no question that electric winches are a primary piece of equipment on our flying fields. Without them, our choices for launching diminish rapidly to other, less controllable sources like hi-starts. It can be said that we need three elements to have a good day of flying: the sailplane of our choosing, a reliable radio system, and a dependable winch.

Within organized soaring clubs there are basically two schools of thought. One school is that the club should own the winches and ancillary equipment such as batteries, turnarounds, and retrievers. All members have a stake in the capital expenditure for the winch system. And it follows that the system is available to all club members without exception. This arrangement works well because few individuals are able to afford the \$800 to \$1000 necessary to purchase their own winch system. On the other hand, it is often very difficult to find individuals willing to volunteer to transport, store, and maintain winches to addition to a schedule and time commitment for providing the winch on the field for use by others.

The second school of thought involves winches that are privately purchased and owned by a club member. This may be the better choice since a winch purchased with one's own funds usually receives better Tender Loving Care than club-owned equipment and, as a result, has superior performance over the long run.

Being an early riser by nature coupled with a desire to maximize my weekend flying time led me to one conclusion: I wanted my own winch system! Serendipitously right here in So

Cal a commercial winch was available from Cy Rahm. Cy is what I call a "practical engineer." He couples great machinist ability with a winch design that he refined through several cycles to produce a winch that ultimately became the AMA's choice for eight complete systems now in use at our National Flying Site in Muncie. How lucky could I get? I purchased and now own a Rahm winch!

Ask any electrical engineer with electric motor knowledge and he will tell you that the absolute worst thing one can do to a motor is to stall it out. The stator, rotor, armature, and brushes suffers tremendous damage with this type of abuse. Just the heat produced by this type of operation is enough to kill a motor for good - basically throw it away and start over! This translates to two things: #1, many other pilots are denied use of that winch because one or two selfish "individualists" have wrecked the winch and #2, time plus money are required to get that winch repaired and operating again.

My parents instilled many things in me. One was to maintain my property neatly, cleanly, well-organized, and always functional. A house, car, boat, models, clothes, etc. have to be earned, cannot be easily replaced, and therefore deserves good care. Another thing they taught me was a healthy, well-developed respect for other people's property. Don't trash someone's home, don't hotrod their car when loaned to you, treat their property with the same respect you have for your own. Unfortunately, this thinking is far from universal.

If one considers for a moment, one realizes how lucky we all are. We gather as friends on weekends to fly and to socialize, to share and to support, to

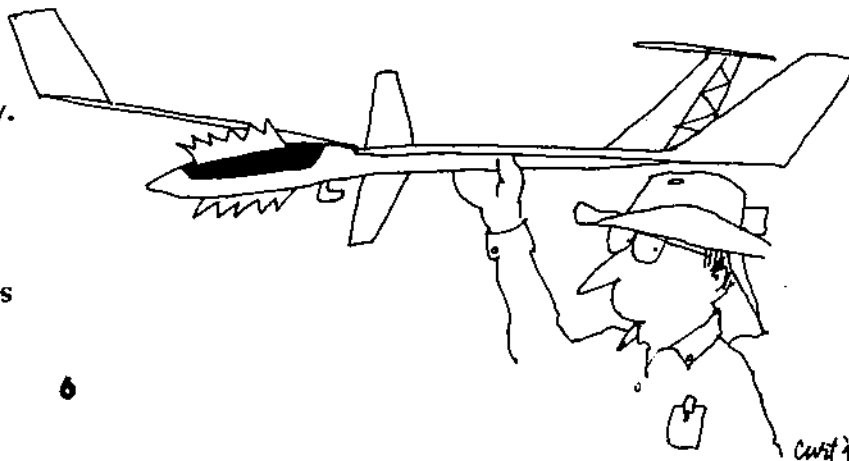
compete and to grow. Where else does this tremendous camaraderie exist? Few places, I'm sure. And my personal equipment is available and gladly given to those who enjoy this hobby with me. But it is not available to anyone who regularly abuses it, not under any circumstances!

The flying field is our haven. On it we pursue our hobby for the joy it brings and as an escape and respite from the tough weekly grind our professional careers require. It's a place of friendship and mutual respect, not Bart Simpson's "Out of my way, man!" attitude. Come on out and let's have some soaring fun!

FOR SALE

- Harbor Soaring Society hats, shirts, and vinyl patches - contact Frank Chasteler at (714) 545-2185
- Falcon 880, SD7037 airfoil, beautiful condition, \$350. Bob Martin Jaguar slope racer, NIB, \$75. P-51 Penetrator high performance slope ship, NIB, \$65. Davey "Miss LA" scale 05 electric racer, partially built, \$35. Kyosho scale Zero, ARF electric with 05 motor, battery, props, etc, still in box, \$130. Contact Pat, (310) 598-9029.
- "Tango 3," modified straight wing Falcon 880, SD3021 airfoil, 4 wing servos mounted in Ziegelmeier servo mounts; flaps and ailerons use alum tubing full length Ziegelmeier gapless hinges. Rudder and elevator servos are Airtronic 102 servos in a glassed-in tray. Rudder is tube hinged, not taped. Fuse recently refinished with automotive lacquer, highly visible at altitude. Includes battery pack and switch harness, just add your receiver. Includes

- custom carrying box and spare stabs, \$675 firm. Call Steve Fink @ (h) 714 645-0459, (w) 714 261-2825, ext 229
- 2 Agnew Banshees, 78" span, complete. Available with servos installed; or airframe only - @ \$300.
- Airtronics Module 7SP radio, TX and RX only - \$150. Call Don, (805) 526-3145.
- LJMP Pantera kit, glass fuselage, polyhedral, rudder/ elevator/ spoilers, E-205 airfoil, new-in-box, \$110.
- Airtronics Legend kit, new-in-box.
- Pierce Ridge Rat, fiberglass fuselage, ready to fly, \$75. Call Dave at (714) 775-7196
- 2M Whisper, less radio, \$125. 2M Gnome, 4 channel Airtronics PCM, ready to fly, \$225. Call Bill Duncan, (714) 892-8665.
- Sealy Laser: S-3021 airfoil, fiberglass fuse, balsa/foam wing, 124" span, slip-on nosecone, kit new-in-box, \$140. Call Mike at (714) 645-6419
- 2M Gnome, \$125 with servos, \$100 without, includes wing bag. 2M Vortex, NIB, \$30. 2M Sealy Lumina, SD7032 polyhedral with flaps, \$125, needs radio and wing covering. LJMP Cheetah, \$200 with 7 servos, \$150 without, includes wing bag. Sealy Pulsar, \$225 with servos, \$165 without, includes wing bag. Contact Curt @ (909) 592-2105.
- Airtronics Adante, new-in-box, glass fuse, Quabeck airfoil, \$75. Foam-lined carrying case for TXs, holds two, \$15. Call Pete @ (714) 892-3473.



HARBOR SOARING SOCIETY

RADIO IMPOUND RULES

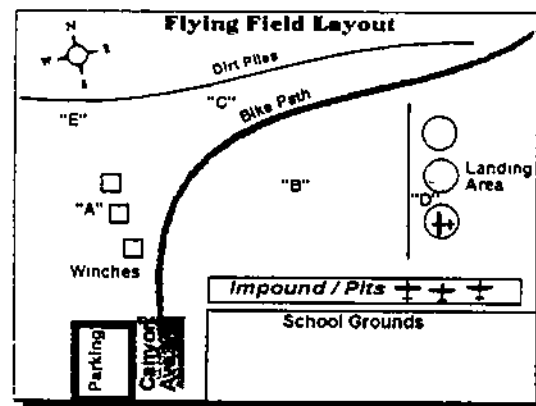
1. Place transmitter in the impound area (under IISS sign) by channel # in rows on channel number tapes (if available.) Each transmitter will have a Channel # on the antenna or the top of the transmitter in accordance with AMA specifications.
2. It is required that you have your name on or over your transmitter so that other flyers will know who is up next. (Ross Thomas has a labeler.)
3. Your position in the row of transmitters determines your turn to fly. Your transmitter coming to the front and the frequency pin coming back in, you may fly.
4. Frequency control rules apply every day of the week, 365 days a year. Never turn on your transmitter without a frequency pin from the frequency board. If a frequency board is not in use, then each pilot must place a frequency pin into the "In Use" board located on the "Handicapped" parking sign in the parking lot. A frequency pin must have the frequency number and pilot's name written on the pin. You must call out your frequency number for all pilots to hear when placing your pin on the "In Use" board.
5. As an extra precaution, always call out your channel numbers as you walk out to fly and before you turn on your transmitter.
6. Upon landing, be sure to collapse your antenna before you walk out to pick up your plane.
7. After flying, return the frequency pin to the pin board, make sure your transmitter is switched off, and return your transmitter, with the antenna collapsed, to impound behind the other transmitters in your row. Do not remove your transmitter from impound unless you have the frequency pin and are going to fly or are leaving for the day.
8. After flying of Electric models, make sure your airborne pack is turned off and make sure the motor arming switch is off or the airborne pack is disconnected.
9. Make double sure that your transmitter power switch is off.
5. Hand launching of models either for test gliding or for thermal hunting shall take place to the North of the winch launch and pilot standing "C" & "D". (Obviously a pilot hand launching does not have to stand in the normal pilot standing area.)
6. All intentional low level approaches to landing shall be from the North and East (except when Santa Ana winds or other field conditions dictate). All high speed approaches shall be to the North of the winch launch and pilot standing area "C" & "D", and shall not carry into the landing or standing area.
7. Under most circumstances, launching models have right of way over sailplanes in flight. But the bottom line is to maintain courtesy and consideration for others whether you are flying or launching. (Note: Right of way for launching models is an AMA rule for contest flying, where the intention is to keep flying sailplanes from holding up launches and thus delaying the operation of a contest.)
8. When other flyers are on your frequency, you should limit your flight to 15 or 20 minutes. This courtesy time limit also applies to Electric and Hand Launch thermal hunting, but is not intended to limit the number of hand launches made in search of thermals. (Remember, common courtesy prevails!) Exceptions to this are if one is attempting to achieve an LSF goal or if prior arrangements have been made with the other flyers on one's frequency.
9. The AMA safety code requires that your model be identified with your name and address or AMA number on or in your model. (Note: For AMA sanctioned contests, all non scale and non-indoor models ... shall be identified by the contestants AMA license number permanently affixed to the upper side of the right hand lifting surface...[with the] height of the numerals...[being] at least one inch or 1/3 of the wing root chord, which ever is less.)
10. Visiting pilots from other clubs are welcome on a limited basis with proof of AMA insurance.
11. Beginner pilots are welcome, and we will offer help in learning to fly through our Club Trainer Program.
12. Be aware of full scale aircraft over flying our field. Always give right-of-way to, and avoid flying in the proximity of full scale aircraft. Have another flyer spot for you to help you maintain clearance. As the FAA has chosen the Huntington Beach Steam Plant as a reporting point, full scale airplanes often fly directly over us.

GENERAL FIELD RULES AND FIELD SAFETY RULES

1. Do not fly at low altitude over the pit or pilot standing area.
2. All winch launching shall be in a Westerly direction from the launch area. Electric powered models will be launched ROG'd to the North of the winch launch area in a Westerly or Northerly direction.

EXCEPTIONS:

- a) Relocation of the pits and launch area to the Western end of the field.
 - b) Electric powered models, in the event of South winds, may be launched to the South or East provided launching is not over the pit area and is clear of people.
 - c) Relocation of the pit and launch area due to flood conditions on the field and, or Santa Ana winds.
3. All pilots shall fly standing in the area "B" (between the bike path and the landing area) or in area "C" well clear of the winches, and not East of area "D" (the landing area.) In order to minimize inter modulation possibilities, pilots should not stand in tight groups.
 4. All Electric power planes (planes other than pure soaring types) shall be flown only to the North of the launching and standing area "C" when operating at low altitudes. F3E models doing laps should operate in the area between the winches and



T.O.S.S.

FIRST ANNUAL

TEAM THERMAL DURATION CONTEST

SATURDAY OCTOBER 9, 1993

TEAM INFO:

Team Name _____
Team Leader Name _____
Address _____
City _____ State _____ ZIP _____
Phone (____) _____
AMA Number _____
Freq. (one per team) _____
1st _____ 2nd _____ 3rd _____
Pilot # 2 _____ AMA _____
Pilot # 3 _____ AMA _____

TASK: To have the single longest flight of the day!

LAUNCH WINDOW: 9:00 am to 12:00 No launches after 12:00 p.m.

TEAMS: Three man team per plane (one plane three pilots)

ELIGIBLE PILOTS: Any three pilots from any club. Must be AMA insured. No back-up pilots

ELIGIBLE PLANE: Any AMA legal sailplane. Each team can bring as many planes as they want, but only one plane per team per flight.

THE CATCH: Each pilot must fly at least 27% of the total team's flight time or the flight does ^{NOT} count.

WATCHES: You will need four watches. One for total time and one for each pilot.

CD: Mike Reagan
phone: (805) 529-5513

ASSISTANT CD Paul Trist Jr.
phone (818) 545-7551

TROPHIES: First three teams + Perpetual

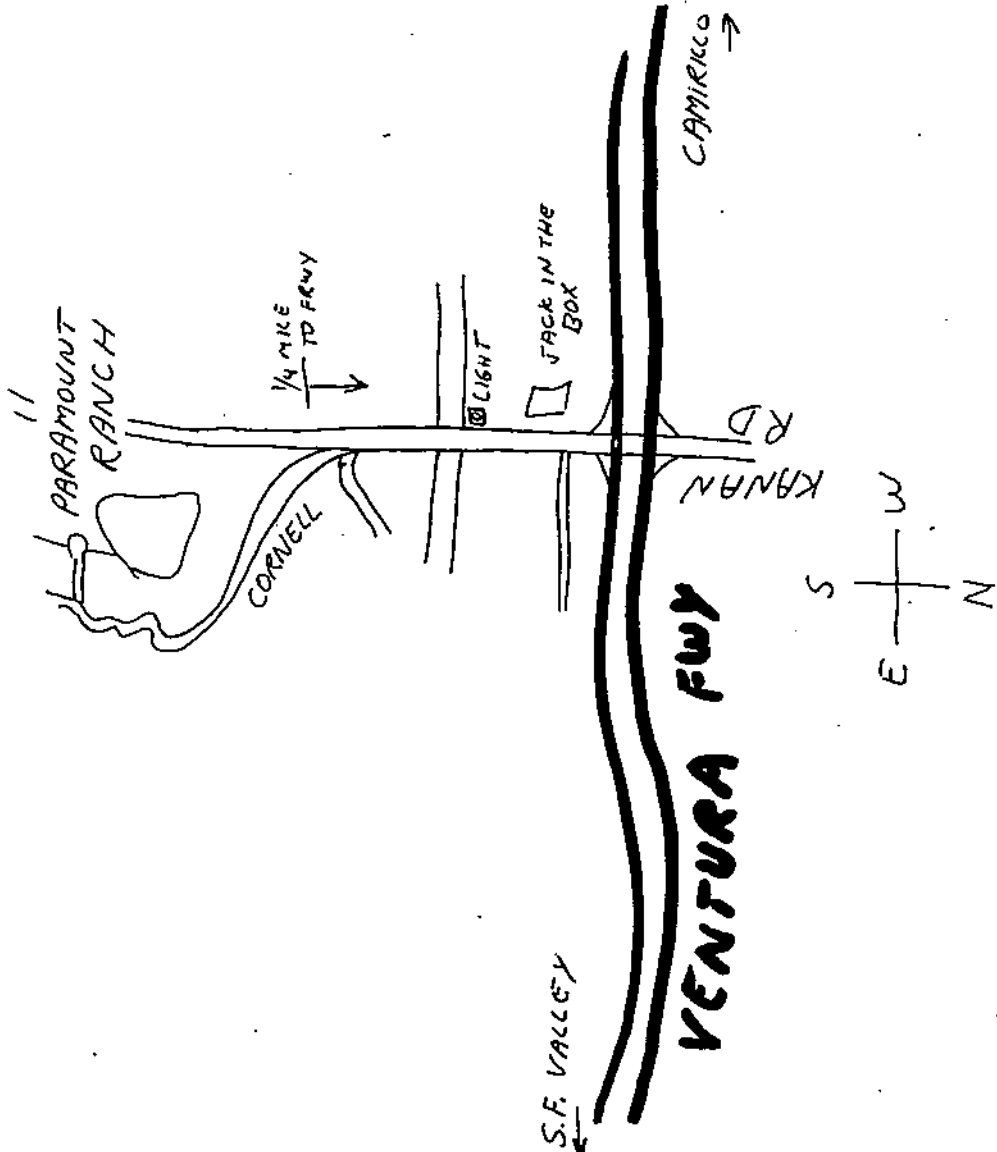
LOCATION: Paramount Ranch (see map)

ENTRY FEE: \$60.00 per team (non-refundable) make check payable to T.O.S.S.

Mail to
14705 Loyola Street
Moorpark, CA 93021

Must mail entrance fee by July 31, 1993

See back for more info:



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 flier.)
AUGUST, 1993

JR RADIOS

	LIST PRICE	HH PRICE
X-347 FM W/4-507 SERVOS	\$529.95	\$344.99
X-347 FM W/4-517 SERVOS	\$599.95	\$384.99
X-347 FM GLIDER W/2-341 SERVOS	\$609.95	\$384.99
X-347 PCM W/4-507 SERVOS	\$659.95	\$424.99
X-347 PCM W/4-517 SERVOS	\$669.95	\$414.99
X-388S* FM A/C W/4-507 SERVOS	\$719.95	\$454.99
X-388S* FM A/C W/4-517 SERVOS	\$769.95	\$494.99
X-388S* PCM A/C W/4-517 SERVOS	\$979.95	\$604.99
X-388S* FM GLIDER W/2-341 SERVOS	\$739.95	\$464.99
X-388S* PCM GLIDER W/2-341 SERVOS	\$799.95	\$504.99
MAX 4 AM W/3 507 SERVOS	\$199.95	\$124.99
MAX 4 AM GLIDER W/2-341S + 270 PK	\$249.95	\$154.99**
MAX 4 FM W/3-507 SERVOS/226RX**	\$249.95	\$154.99**
MAX 6 FM W/4-507 SERVOS/226RX**	\$319.95	\$194.99**

(* New-increased capability radio based upon the 2047. Now features a model memory and more glider features. Four pages of information sheets will be sent upon request.)
(** THE #226 IS THE "Credit Card" RX)

JR SERVOS

507 Standard servo	\$29.95	\$16.99
517 Standard W/BB	\$39.95	\$24.99
4131 Ultra precision/coreless	\$89.95	\$55.99
4721 Ultra torque/coreless	\$89.95	\$60.99
4735 Ultra speed/coreless	\$95.95	\$65.99
901 Mid size	\$59.95	\$37.99
9021 Mid size/coreless	\$79.95	\$50.99
321 Mini	\$59.95	\$40.99
341 Micro	\$59.95	\$34.99
3021 Mini/coreless	\$79.95	\$50.99
3025 Mini highspeed/coreless	\$79.95	\$50.99
3321 Glider wing/coreless	\$89.95	\$55.99
605 FET high power	\$109.95	\$66.99
7005 Low profile/coreless	\$109.95	\$66.99

JR ACCESSORIES

001 DELUXE SWITCH HARNESS, GOLD	\$14.95	\$12.99
003 SMALL SW HARNESS	\$8.95	\$8.00
004 CHARGE SWITCH HARNESS	\$19.95	\$16.75
023 JR NECK STRAP	\$13.95	\$11.99
100 ALERON EXTENSION 12", GOLD	\$7.95	\$7.05
270 RX 270 MAH FLAT PACK	\$18.95	\$17.99
500 RX 550 MAH FLAT PACK	\$19.95	\$17.99
FM RF PACK-529 RX AND TX MODULE	\$169.95	\$124.99
PCM RF PACK-910 RX AND TX MOD.	\$239.95	\$174.99
S-PCM RF PACK-649 RX	\$249.95	\$174.99
S-PCM RF PACK-940 RX	\$269.95	\$189.99

JR RECEIVERS

228 FM RX, 6 CH CREDIT CARD 72MHZ	\$149.95	\$94.99
528 FM RX, 9 CH 50/53/72 MHZ	\$144.95	\$89.99

JR RECEIVERS (CONT)

236 PCM RX, 6 CH CREDIT CARD 72	\$194.95	\$124.99
910 PCM RX, 10 CH 50/53/72 MHZ	\$199.95	\$134.99
940 PCM DUAL CONV, 10 CH 50/53/72	\$229.95	\$154.99

JR SERVO GUIDE (28 PAGE GUIDE TO ALL JR SERVOS, GIVES FULL DETAILS ON ALL JR SERVOS, WITH MANY PICTURES AND ALL DATA, FREE WITH ORDER IF YOU REQUEST ONE, OR SEND \$3.50 TO COVER POSTAGE.)

AIRTRONICS:

VG4R VANGUARD FM 4 CH W/3 102s	\$249.95	\$132.99
VG4R VANGUARD FM 4 CH W/2 501 MICRO & MICRO RX	\$299.95	\$189.99
VG6DR VANGUARD FM 6 CH W/4 102s	\$319.95	\$179.99
150P INFINITY 600 PCM W/4 102s	\$649.95	\$389.99
160P INFINITY 660 PCM W/4 102s	\$679.95	\$384.99
160P INFINITY 660 PCM W/4 102s	\$729.95	\$409.99
V88SP VISION FM, 72 MHZ	\$999.95	\$604.99
V88SP VISION PCM, 72 MHZ	\$1049.95	\$634.99
102 STANDARD SERVO	\$34.95	\$16.99
831 MINI SERVO	\$49.95	\$29.99
141 MINI METAL GEAR SERVO	\$79.95	\$39.99
501 MICRO LITE	\$79.95	\$39.99
765 FM STD 6 CH RECEIVER	\$89.95	\$69.99

FUTABA

4NLB AM 4 CH W/3 148 SERVOS	\$244.95	\$119.99
4NLB AM 4 CH ELECTRIC	\$299.95	\$184.99
S-148 STD SERVO	\$39.95	\$16.99
S-133 MICRO SERVO	\$59.95	\$31.99
S-5102 MICRO METAL GEAR SERVO	\$79.95	\$43.99

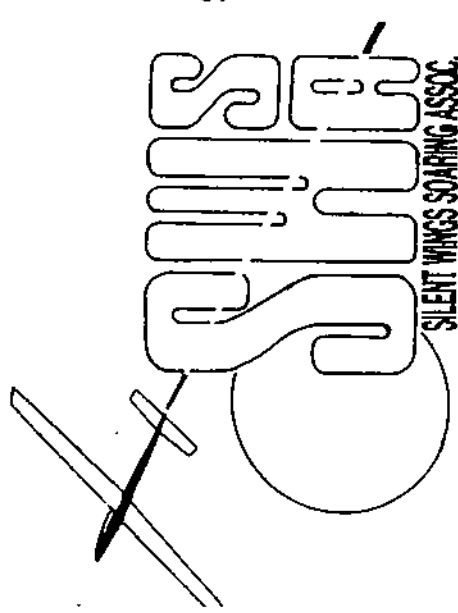
GENERAL

SERVO SAVERS (FOR YOUR FLAPS) FOR FUTABA SERVOS	\$3.00	\$2.35
FOR AIRTRONICS OR JR SERVOS	\$3.00	\$2.35
HOBBY HORN SUPER DUTY TOW HOOK	\$2.50	\$2.00
HOBBY HORN WING SERVO FAIRINGS (4)	\$4.00	\$4.00
HO EXPANDED SCALE VOLT METER	\$19.95	\$14.95
HD TRANSMITTER CASE (DOUBLE)	\$74.95	\$47.99
FEATHER CUT MACHINE	\$149.95	\$149.95

NOTE: WHILE I CARRY SOME OF THE ITEMS ABOVE IN STOCK, MANY SPECIALS INVOLVE THE FREQUENCY OF THESE ITEMS SUCH AS RADIOS AND RECEIVERS. PLEASE CHECK THE SPECIAL ORDER SHEET IT IS IMPASSIBLE TO CARRY ALL POSSIBLE FREQUENCIES WHILE AVAILABILITY CAN BE DEPENDENT ON STOCK AT OUR SUPPLIER. MOST OF THE ITEMS ARE OBTAINABLE WITH ONLY ONE OR TWO WEEKS LEAD TIME. PLEASE CALL US AT 714-893-8311 FOR YOUR ORDER. AND WE CAN TRY TO CALL YOU TO ADVISE YOU OF ANY DELAYS. DELIVERY ON FUTABA AND ON SOME AIRTRONICS IS NORMALLY 7 DAYS. WHEN APPROPRIATE, PLEASE SPECIFY DESIRED FREQUENCY. (GIVE ME SOME ALTERNATES IF YOU CAN)

AS THE PRICES FROM OUR SUPPLIER ARE BASED UPON HIS SPECIALS, WHICH CHANGE MONTHLY, OUR PRICES ON THE ABOVE ITEMS MAY NOT BE VALID OUTSIDE OF THE MONTH OF OUR SPECIAL. IF YOU DO NOT HAVE A CURRENT MONTH FLYER CALL FOR CURRENT PRICES.

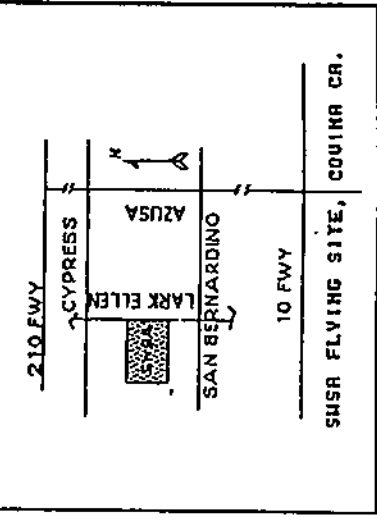
THANKS, BOB SUFT, HOBBY HORN
(Hams, Looking for JR 6 meter stuff? give me a call.)



SILENT WINGS
SOARING ASSOCIATION
INVITES YOU TO FLY
(SC & UNLIMITED)

DATE
TIME
CD
Club Pres.
LOCATION

SEPTEMBER 26, 1993
Pilot's Meeting 9 AM (Entry Fee \$6)
IAN DOUGLAS (909) 621-2522
PETE OLSEN (909) 597-2095
LAS PALMAS SCHOOL COVINA, CA



EVENTS
Three rounds Precision Duration Pilots Choice***
SC 2 Supplemental Rules apply.

LANDINGS
Carrier Style; 25 Foot Runway; Deduct one percent per inch from centerline. Grass surface

WINCHES
12 Volt Approximately 600 feet to turnaround.
Mechanical retrievers will be provided.

EVENTS
5 Min. Scored 800 flight/200 landing points
7 Min. Scored 900 flight/100 landing points
*** At least one flight must be scored as a 7 Min. round and no three the same. (I.e. go for 7-7-5)

ANY SPECIAL REQUESTS? GIVE ME A CALL FOR A QUOTE!

**HARBOR SOARING SOCIETY - AUGUST, 1993 CONTEST
OPEN DIVISION**

PLACE	NAME	CLASS	SCORE	NORMALIZED	TROPHY
1	BRANDT DENNIS	EXPERT	1029.8	1000.0	1ST. EXP.
2	MARKLE JIM	EXPERT	1003.8	974.8	2ND. EXP.
3	BIKLE JOHN	ADVANCED	1000.7	971.7	3RD. EXP.
4	CHASTELER FRANK	EXPERT	999.2	970.3	
5	VALDES AARON	GUEST	993.3	964.6	
6	DUNCAN BILL	EXPERT	991.7	963.0	
7	KUTCH NORM	EXPERT	974.9	946.7	
8	CRON AL	EXPERT	972.9	944.7	
9	HENDRY STEVE	EXPERT	953.0	925.4	
10	THOMAS ROSS	EXPERT	951.0	923.5	
11	TAU* MANNY	ADVANCED	947.4	920.0	1ST. ADV.
12	AGUIRRE MIKE	EXPERT	945.0	917.7	
13	RITSCHKE GORDON	EXPERT	944.0	916.7	
14	BUZOLICH** NICK	SPORTSMAN	938.0	910.9	1ST. SPTS.
15	CARRICO** MIKE	SPORTSMAN	935.8	908.7	2ND. SPTS.
16	FINK STEVE	EXPERT	906.6	880.4	
17	PARSONS JIM	ADVANCED	890.6	864.8	
18	RICHARDSON PETE	EXPERT	870.0	844.8	
19	NEHRING CURT	ADVANCED	849.8	825.2	
20	SANDERS ANDY	ADVANCED	844.0	819.6	
21	COLLETT MATT	SPORTSMAN	818.0	794.3	
22	SMITH MORRY	ADVANCED	794.0	771.0	
23	LACKEY ROGER	EXPERT	728.5	707.4	
24	POULSEN GORDON	EXPERT	719.0	698.2	
25	DURHAM JACK	GUEST	709.0	688.5	
26	PANTZAR DICK	EXPERT	698.1	677.9	
27	NEMECEK DAVID	EXPERT	257.4	250.0	
28	HAWLEY ED	SPORTSMAN	0.1	0.1	
29	POPE BOB	GUEST	0.1	0.1	

*MANNY TAU MOVES TO EXPERT
**NICK BUZOLICH AND MIKE CARRICO MOVE TO ADVANCED

TWO METER DIVISION

PLACE	NAME	SCORE	NORMALIZED	TROPHY
1	LACKEY ROGER	1029.9	1000.0	1ST.
2	AGUIRRE MIKE	1026.6	996.8	2ND.
3	MONAHAN SEAN	963.0	935.0	3RD.
4	CHASTELER FRANK	953.0	925.3	
5	THOMAS ROSS	949.0	921.4	
6	PARSONS JIM	945.0	917.6	
7	KUTCH NORM	922.0	895.2	
8	BUZOLICH NICK	788.0	765.1	

HSS SEPTEMBER MONTHLY

DATE: Sunday, September 5
LOCATION: Fairview Park
CONTEST DIRECTOR: Mike Aguirre
EVENTS: Unlimited, 2 Meter
FORMAT: 3 rounds AMA Triathlon.
 10" max per round = 800 flight pts,
 200 pts max per landing, 25' graduated
 tape. To minimize penalty points,
land on the whole even minute. More
 details at the pilots' meeting!
START TIME: Registration at 8:30AM,
 first round starts at 8:45AM.

**YEAR-TO-DATE RESULTS BEST 6 OF 7 CONTESTS
OPEN DIVISION**

PLACE	NAME	CLASS	SCORE	CONTESTS
1	LACKEY ROGER	EXPERT	5639.9	6
2	KUTCH NORM	EXPERT	5585.4	6
3	POULSEN GORDON	EXPERT	5520.2	6
4	CHASTELER FRANK	EXPERT	5510.1	6
5	FINK STEVE	EXPERT	5506.5	6
6	AGUIRRE MIKE	EXPERT	5498.9	6
7	HENDRY STEVE	EXPERT	5338.8	6
8	CRON AL	EXPERT	5277.0	6
9	THOMAS ROSS	EXPERT	5270.2	6
10	PANTZAR DICK	EXPERT	5038.6	6
11	TAU MANNY	ADVANCED	4989.2	6
12	NEHRING CURT	ADVANCED	4897.6	6
13	SANDERS ANDY	ADVANCED	4864.4	6
14	RITSCHKE GORDON	EXPERT	4679.1	6
15	VINCENT TOM	ADVANCED	4668.2	6
16	DUNCAN BILL	EXPERT	4525.4	5
17	YOUNG PETE	ADVANCED	4458.7	6
18	SLIFF BOB	EXPERT	4392.7	5
19	CLERX BEN	EXPERT	3926.0	4
20	EDBERG DON	EXPERT	3794.7	4
21	BRANDT DENNIS	EXPERT	3670.9	4
22	RICHARDSON PETE	EXPERT	3578.3	4
23	SMITH MORRY	ADVANCED	3463.9	4
24	PARSONS JIM	ADVANCED	3408.2	4
25	NEMECEK DAVID	EXPERT	3275.1	5
26	WHITE LARRY	EXPERT	2874.3	3
27	GIBBS DUANE	EXPERT	2825.6	3
28	BIKLE JOHN	ADVANCED	2752.7	3
29	CARRICO MIKE	SPORTSMAN	2733.4	3
30	BUZOLICH NICK	SPORTSMAN	2129.1	3
31	BRATRUD RANDY	EXPERT	1884.3	2
32	MONAHAN SEAN	ADVANCED	1705.9	2
33	HAWLEY ED	SPORTSMAN	1459.7	3
34	BIDDLE FRED	EXPERT	1138.4	2
35	YOUNG BRETT	EXPERT	1008.6	2
36	ATWELL BLAIR	EXPERT	1000.0	1
37	MARKLE JIM	EXPERT	974.8	1
38	COLLETT MATT	SPORTSMAN	794.3	1
39	BOESE JIM	EXPERT	775.8	1
40	LONG DICK	ADVANCED	699.9	1
41	MEARS BUD	SPORTSMAN	632.8	1
42	KIELTYKA MAC	SPORTSMAN	611.0	1
43	CONRAD WILL	ADVANCED	505.4	1
44	STUBB PAUL	SPORTSMAN	254.5	1

TWO METER DIVISION

PLACE	NAME	SCORE	CONTESTS
1	CHASTELER FRANK	5604.5	6
2	THOMAS ROSS	5230.7	6
3	KUTCH NORM	5107.6	6
4	AGUIRRE MIKE	4985.3	6
5	VINCENT TOM	4745	6
6	LACKEY ROGER	4734.7	5
7	MONAHAN SEAN	4633.5	5
8	SLIFF BOB	3910.5	5
9	PARSONS JIM	3542.5	4
10	YOUNG PETER	2938	4
11	EDBERG DON	2750.6	3
12	WHITE LARRY	2519.7	3
13	FINK STEVE	2478	3
14	BUZOLICH NICK	2301.5	3
15	DUNCAN BILL	2297.5	3
16	RICHARDSON PETE	1303.1	2
17	CONRAD WILL	1098.8	2
18	CLERX BEN	928.6	1
19	NEHRING CURT	866.2	1
20	MEARS BUD	565.5	1
21	CRON AL	562.2	1
22	STUBB PAUL	263.2	1

FOR SALE

"Soartoons" illustrated notecards and envelope
 - the perfect gift for the soaring enthusiast!
 - set of 12 for only \$10

Contact Curt Nehring
 1265 N. Van Buren, 210D
 Anaheim, CA 92807-1633
 (714) 592-2105

SOUTHERN CALIFORNIA SOARING CLUBS
JULY CONTEST, 1993

YEAR-TO-DATE STANDINGS
BEST 5 OF 6 CONTESTS

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	SAGE	FRED	TPG	2883.8	1000.0	1ST. EXP.
2	LACKEY	ROGER	HSS	2844.1	984.4	2ND. EXP.
3	LEPPLA	FRANK	PSS	2842.4	983.0	3RD. EXP.
4	BURNS	RICHARD	PSS	2838.0	982.7	4TH. EXP.
5	EDBERG	DON	HSS	2838.5	982.5	5TH. EXP.
6	McNAMEE	DON	TOSS	2838.2	982.4	
7	SADORF	STAN	ISS	2836.1	981.7	
8	CHASTELER	FRANK	HSS	2835.1	981.4	
9	MARKIEWICZ	ARTHUR	TPG	2829.8	980.5	
10	STARK	TONI	PSS	2822.7	987.2	
11	JOY	GEORGE	TPG	2910.4	983.0	
12	BAGGERLY	GREG	ISS	2901.0	979.9	
13	CLERX	BEN	HSS	2901.1	979.9	
14	RODRIGUEZ	JOE	ISS	2892.2	978.9	
15	HALLFORD	PHILIP	PSS	2888.4	974.5	
16	SPITZER	GEORGE	PSS	2888.5	983.2	
17	SCHARCK	RON XX	TPG	2884.8	987.8	1ST. SPTS.
18	VAN GUNDY	DON	TPG	2981.8	966.6	
19	REAGAN	MIKE	TOSS	2880.7	966.3	
20	WEISMAN	B J	TOSS	2855.0	964.3	
21	RODGERS	JOHN	PSS	2834.5	967.4	
22	CHILD**	MARK	EDSF	2829.8	965.8	
23	LEAL	MIKE XX	TOSS	2828.8	955.4	2ND. SPTS.
24	KLATSKON	BILL	EDSF	2787.8	941.6	3RD. SPTS.
25	TAU	MANNY	HSS	2783.3	940.1	
26	POPE	BOB	EDSF	2782.3	939.8	
27	MARKLE	JIM	EDSF	2772.0	936.3	
28	RICHARDSON	PETE	HSS	2769.0	935.3	
29	BIKLE	JOHN	EDSF	2768.9	935.2	
30	LEVOE	MARK	PSS	2744.8	927.1	
31	MATSUMOTO	BEN	PSS	2729.0	921.8	
32	VAN GUNDY	SUE	TPG	2728.2	921.5	
33	AGUIRRE	MIKE	HSS	2709.4	915.2	
34	PHIPPS	DAN	EDSF	2701.7	912.6	
35	WEISMAN	EDGAR	TOSS	2686.3	907.3	
36	WILSON	DAN	EDSF	2683.2	906.3	
37	SWANSON	NORM	TPG	2699.8	901.8	
38	SKINNER	JIM	EDSF	2680.8	898.7	
39	KUTCH	NORM	HSS	2621.0	885.3	
40	NORTHERN	DON	TOSS	2584.0	872.8	
41	SLOBOD	ED	SFVF	2582.3	872.2	
42	RATNER	MIKE	PSS	2566.8	867.0	
43	CRON	AL	HSS	2562.3	862.1	
44	NORENBERG	LOWELL	SFVF	2478.2	837.1	
45	McNAMEE	ART	TOSS	2389.4	807.1	
46	SHELBY	RICK XX	NCC	2355.4	795.8	
47	SNIDER	JOHN	NONE	2351.3	794.2	
48	FAULKENHAM	RON	ISS	2326.9	786.0	
49	YOUNG	PETER	HSS	2324.7	785.2	
50	DUNCAN	BILL XX	EDSF	2281.4	763.8	
51	DOUGLAS	IAN	SWSA	2005.7	677.5	

PLACE	NAME	STATUS	SCORE	CONTESTS	CLUB
1	LACKEY	ROGER	EXPERT	4852.8	5 HSS
2	SAGE	FRED	EXPERT	4843.6	5 TPG
3	REAGAN	MIKE	EXPERT	4813.1	5 TOSS
4	SADORF	STAN	EXPERT	4804.8	5 ISS
5	JOY	GEORGE	EXPERT	4802.5	5 TPG
6	CLERX	BEN	EXPERT	4807.1	5 HSS
7	RODRIGUEZ	JOE	EXPERT	4842.6	5 ISS
8	McNAMEE	DON	EXPERT	4821.4	5 TOSS
9	MARKIEWICZ	ARTHUR	EXPERT	4796.2	5 TPG
10	VAN GUNDY	DON	EXPERT	4771.3	5 TPG
11	EDBERG	DON	EXPERT	4785.4	5 HSS
12	MARKLE	JIM	EXPERT	4757.4	5 EDSF
13	HALLFORD	PHILIP	EXPERT	4737.8	5 PSS
14	LEVOE	MARK	EXPERT	4731.4	5 PSS
15	SKINNER	JIM	EXPERT	4721.5	5 EDSF
16	WEISMAN	EDGAR	EXPERT	4705.1	5 TOSS
17	WEISMAN	B J	EXPERT	4648.1	5 TOSS
18	AGUIRRE	MIKE	EXPERT	4616.3	5 HSS
19	BAGGERLY	GREG	EXPERT	4604.6	5 ISS
20	POPE	BOB	EXPERT	4563.4	5 EDSF
21	FINKENBINER	KEITH	EXPERT	4539.2	5 NCC
22	MORTON	RICHARD	EXPERT	4536.1	5 TPG
23	THOMAS	ROSS	EXPERT	4453.5	5 HSS
24	BIKLE	JOHN	EXPERT	4436.3	5 EDSF
25	LEPPLA	FRANK	EXPERT	4415.2	5 PSS
26	TAU	MANNY	EXPERT	4382.2	5 HSS
27	SUFF	BOB	EXPERT	4380.8	5 HSS
31	PARSONS	JIM XX	SPORTSMAN	4226.4	5 HSS
32	NEHRING	CURT	SPORTSMAN	4214.3	5 HSS
41	CHASTELER	FRANK	EXPERT	3779.8	5 HSS
44	RICHARDSON	PETE	EXPERT	3628.5	4 HSS
48	CRON	AL	EXPERT	3362.3	4 HSS
55	KUTCH	NORM	EXPERT	2962.7	4 HSS
63	VINCENT	Tom	SPORTSMAN	2455.7	3 HSS
66	BUZOLICH	NICK	SPORTSMAN	2078.8	4 HSS
72	ATWELL	BLAIR	EXPERT	1895.0	2 HSS
73	GIBBS	DUANE	EXPERT	1888.6	2 HSS
78	HENDRY	STEVE	EXPERT	1732.3	2 HSS
85	PINK	STEVEN	EXPERT	1621.3	2 HSS
86	YOUNG	PETER	SPORTSMAN	1618.4	2 HSS
88	BRANDT	DENNIS	EXPERT	1510.5	2 HSS
110	SMITH	MORRY	EXPERT	942.9	1 HSS
112	PANTZAR	DICK	EXPERT	922.0	1 HSS
122	RITSCHKE	GORDON XX	SPORTSMAN	851.5	1 HSS
123	ANDERSON	VAN	SPORTSMAN	842.7	1 HSS
127	POULSEN	GORDON	EXPERT	829.8	1 HSS
129	SANDERS	ANDY	SPORTSMAN	822.8	1 HSS
130	HAWLEY	ED	SPORTSMAN	821.4	1 HSS
137	CARRICO	MIKE	SPORTSMAN	789.5	1 HSS
141	BRATRUD	RANDY	EXPERT	766.3	1 HSS
145	NEMECEK	DAVID	EXPERT	725.2	1 HSS
147	LONG	DICK	SPORTSMAN	698.9	1 HSS

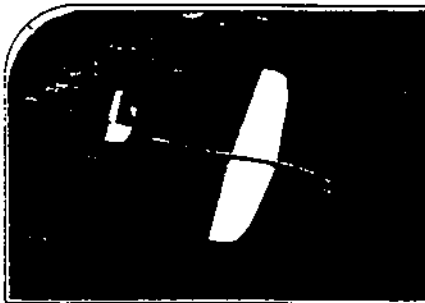
**MARK CHILD MOVES TO EXPERT

TEAM SCORES

HSS 10	3858.2
PSS 8	3948.7
TPG 8	3940.1
TOSS 7	3878.4
EDSF 9	3773.5
ISS 4	3734.5
SFVF 2	1709.3
SWSA 1	677.5

TEAM STANDINGS

PSS	23,487.2
HSS	23,457.2
TPG	23,455.4
TOSS	22,873.5
EDSF	22,789.7
ISS	22,433.8
NCC	15,542.4
SILA	10,581.7
SFVF	9,428.2
SWSA	6,211.3
DUST	909.4



ZEPHYR

From...McLean's Models

The Zephyr is a all composite 2 Meter sailplane designed for the high performance slope soaring and slope racing. The use of pivot wing technology, a streamlined fuselage, full flying stabilizer, and rudder results in an extremely fast and efficient sailplane. The Zephyr is also available with 90° wings for unlimited slope racing and light lift cruising. The Zephyr finished 2nd place at the in the Miguelito Canyon CSR race on March 2, 1993 in the Two Meter division. The Zephyr took two firsts and a second in three heats.

ZEPHYR Deluxe Kit contains the following: * Vacuum bagged wings with; 100% carbon fiber wing skins with Fiberglass outer layers, kevlar leading edge, PRB blue foam cores. * Fiberglass fuselage with; uni-s-glass and kevlar reinforcements, glass canopy, airfoil shaped vertical fin. * Deluxe hardware kit containing; 3/8" steel wing rod, heavy duty wing drive assemblies, precut 1/4" plywood for wing roots and servo tray, wing pivot hardware, 5/32" steel wing drive pins and misc., wood, brass tubes, wires ect.... * PRB blue foam SD 8020 stabilizer cores or optional composite stabs. * Full size drawings and construction manual.

Specifications:

Wing span	2 Meter - 90"
Wing area	450 - 560 Sq. In.
Wing Airfoil	SD-7003 or S-6062
Wing loading	14 - 16 Oz. /Sq. Ft.
Wing aspect ratio	13.5 - 14.0 to 1
Fuselage length	45 inches
Stabilizer area	65 - 72 Sq. In.

Prices:

2 Meter Kit	\$219.95
90° Kit	\$229.95
Partial Kit	\$99.95
Hardware Kit	\$29.95
Composite Stabs	\$19.95(w/kit)

Coming Soon! "Lil-Zephyr 60" Slope Racer

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The Oldest Chartered
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in the
A.M.A.



Charter # 128

HSS SEPTEMBER MEETING

DATE: Wednesday, September 1,
7:30PM

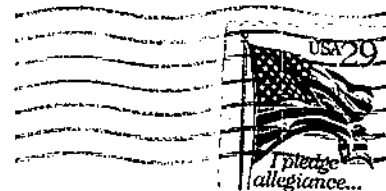
LOCATION: Lakes at Seabridge
Condos. Refer to page 1 for
instructions.

SHOW AND TELL: Bring in your
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GUEST SPEAKER: Steve Chao from
Cermak Electronics and
Model Supplies will discuss
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battery packs, imported kits,
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