HARBOR SOARING SOCIETY

THE OLDEST CHARTERED SOARING CLUB IN THE A.M.A.

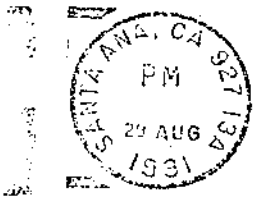
CHARTER # 128

SEPTEMBER MEETING

THE SEPTEMBER MEETING WILL BE HELD ON WEDNESDAY SEPTEMBER 4, 1991 AT 7:30 P.M.

LOCATION: CLUBHOUSE AT LAKES AT SEABRIDGE CONDOS. SEE MAP AND INSTRUCTIONS INSIDE.

STEVE SCHOFRO WILL DISCUSS THE HEALTH AND SAFETY ASPECTS OF WORKING WITH COMPOSITES



P.O. Box 1673
Costa Mesa, CA 92628

FIRST CLASS MAIL

WILL CONRAD
9359 SHRIKE AVE
FOUNTAIN VALLEY, CA 92708

SEPT 1991

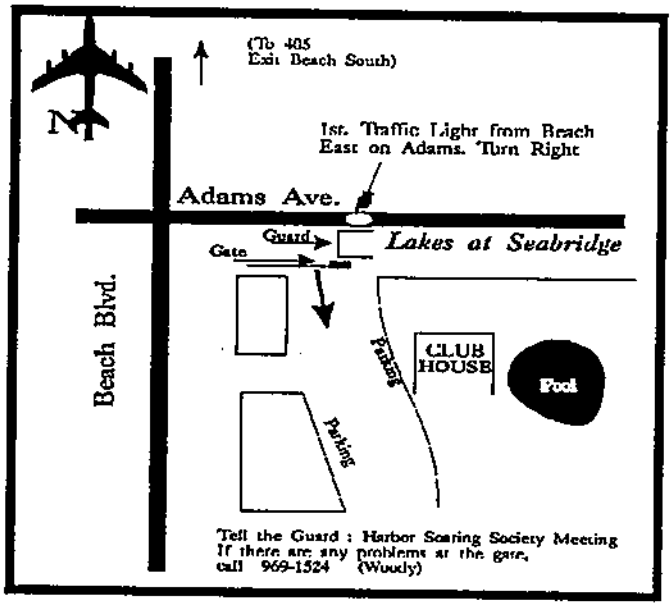
(The Soaring) Society Column

President:	Norm Kutch	(714) 662-0182
Vice Pres.:	Jim Parsons	(714) 636-9867
Secretary:	Brian Germaine	(714) 241-3878
Treasurer:	Frank Chasteler	(714) 545-2185
Contest Coord:	Ben Clerx	(714) 721-8848
General Dir:	Bob Sliff	(714) 895-1203
Newsletter Ed:	John Ostrowski	(714) 847-4871

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 John Ostrowski in person or by mail to: 8902 Lawrence Ave, Westminster, CA 92683.

MEETING LOCATION

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.



CLUB MINUTES

The meeting was called to order by Acting President Brian Germane at 7:37 P.M. New members George Siposs and Andy Sanders were welcomed. The minutes of the previous meeting and treasurer's report were approved. Mark Hambelton from D.C.U. discussed his line of gliders and demonstrated the Wind Weasel and the new Wind Storm fuselage.

In old business, the club newsletter name was discussed again, without closure. Ben Clerx discussed the August contest and pointed out that CDs are needed for future contests or the August format will be repeated every month (No, no anything but that - ed.) The September contest will be CD'd by Brian Germane and will be a 4 - 7 format with runway landing.

New business. Pete Richardson discussed the proposed club records (see August newsletter) and proposed a time in September be allocated for attempts. Frank Chasteler asked for approval to buy SC^2 trophies, the motion passed. Frank also discussed the F3E contest. The meeting was adjourned at 8:20 P.M.

THE SLOPE RACE

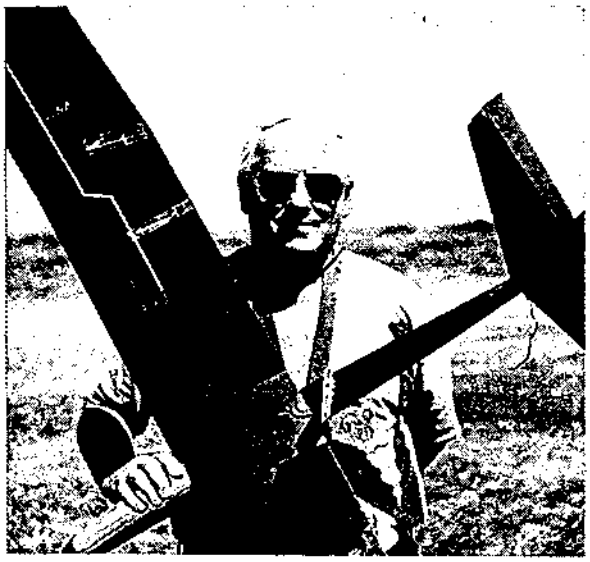
The first attempt at a HSS-sponsored slope race took place over the August 24-25th. weekend. A large turnout of pilots and spectators on Saturday failed to convince the wind gods to cooperate and after an attempt to run several elevator-rudder class heats resulted in mostly DNSs and DNFs due to the crosswind, the contest was postponed until the next day.

On Sunday, 17 entrants convened at the Newport Back Bay site for the race. Under generally good but fading conditions, the full contest was completed. In Division 1 (aileron control) Duane Gibbs took first place flying a Snipe. A fiercely contested fly-off was necessary to determine 2nd. and 3rd. with new club member Manny Tau edging Tony Martin by about 6 inches with his Swift 800.

In Division 2 (elevator-rudder control), newcomer Mike Barnett placed 1st. Club Prez. Norm Kutch finished 2nd. and Pete Richardson took 3rd. Contest CD Keith McLellan reported that all participants had a good time and declared the contest a full success. Good Job!

PILOT OF THE MONTH

Our pilot of the month for September is the proprietor of Hobby Horn and 1990 F3E World Team manager:



Bob Sliff

Occupation: Hobby Horn

Started flying sailplanes: 1975, in Long Beach.

Reason for Interest: A friend with whom I flew gas models built a Windward so I did too.

First R/C sailplane: Windward.

Favorite part of the sport: Thermal soaring and F3E electric flight.

Goal for 1992: Lead the USA F3E electric power team to 1st. place at the World Championships in Holland.

Current Gliders: 1.5 meter, 2 meter, 3 meter Gnomes, Mueller King, Snipe & many others.

Greatest flying strength: I try to work the best I can within the limitations of my abilities.

Advice for beginning pilots: Enter the HSS club contests and practice flying like you are in a contest. Learning comes much faster if you discipline yourself when you fly.

THERMAL HUNTING PART III

Ben Clerx

In Part II we talked about flying at best L/D speed while searching for lift and slowing to min sink speed when lift is found. This month we'll expand a bit more on this information.

With your plane cruising at the best L/D speed you'll want to keep the wings as level as possible, using only gentle turns to steer along your search pattern (or to a known lift location). Smooth flight will allow you to see the effects of lift. If large control deflections are used (erratic flight path), you may fly right through a thermal and not notice it. You should then think of a deflected control surface as a speed brake as they do create a lot of drag.

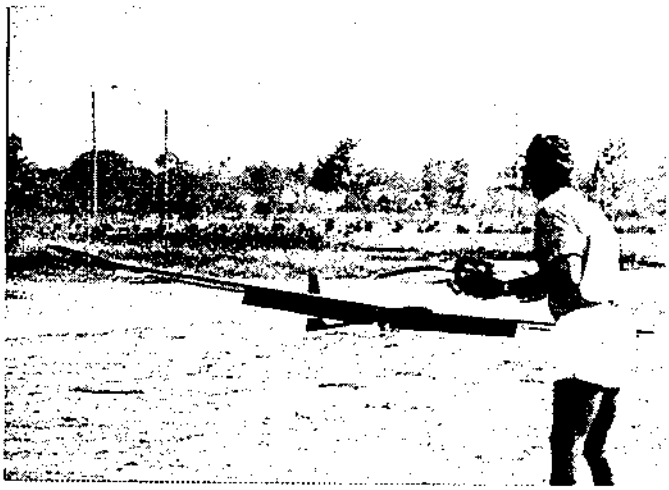
A plane with an L/D of 20 to 1 (20:1) will travel forward 20 feet through the air for every foot of altitude lost in a no-lift condition (I'm hesitant to use *altitude lost* since this implies that sailplanes only come down. They do come down vertically through the air, even in lift while altitude is increasing.) If the configuration of the plane doesn't change (eg. you don't deploy speed brakes, flaps, control surfaces, or other drag devices), the L/D won't change regardless of weight. This means a 3 pound Falcon will fly as far as a 7 pound Falcon for a given altitude. The best L/D angle-of-attack will be the same for both Falcons since they have the same airfoil. The only difference is that the 7 pound Falcon achieves best L/D angle-of-attack at a higher speed. All angle-of-attack conditions that use airspeed as reference will occur at higher airspeeds as weight is increased. This means that your stall speed is also higher and the min sink speed used while thermalling will be faster (the disadvantages of using ballast).

To summarize: The 7 pound Falcon will fly just as far as the 3 pound Falcon since they have equal amounts of drag and identical airfoils (lift). The heavy Falcon will get there faster (but faster means it stays up for less time). Adding ballast is good when you want your plane to be efficient at a higher speed - as in cross-country flying and racing (speed and distance). It also serves to reduce the effect of wind on a model's ground speed. A plane with a best L/D airspeed of 20 mph will efficiently go nowhere into a 20 mph headwind. You can dive to increase speed, but since the plane is not at its best L/D airspeed, it is not flying efficiently. It is much better to add ballast at the plane's center of gravity to increase the best L/D airspeed. For thermal flying then, the main use of ballast is for wind penetration. Aileron equipped planes like Falcons and Legends are usually heavy enough to do well in windy weather even without ballast. Floaters like Para-

gons (for example) that don't do well in wind will see a great improvement with a few pounds of lead under the wing (make sure the ballast is properly secured).

Add ballast in increments and get used to the flying characteristics before adding heavy amounts of ballast. Don't go from a 3 pound Paragon to a 6 pound Paragon until you are comfortable at the 4 and 5 pound weights. This also allows you to see the effects of weight on the plane's structure. It is probably not a good idea to pull your tightest loop with a 6 pound Paragon unless the wings have been strengthened. Likewise, don't make hard landings (3 pounds of lead doesn't like to be confined to a ballast box.)

Experiment and find out how much ballast is best for certain wind conditions. An experienced flyer can measure the wind and know exactly how much ballast to add. Next month I'll expand on min sink speed and flying while in lift.



Here Falcon, here Falcon, Good Falcon!

HSS SC^2 Contest

Harbor Soaring Society will host the SC^2 contest for September on September 29, 1991. Even if you are not planning to compete in this event, your help in staging the contest is needed. If you would like to volunteer your services for this contest, contact Frank Chasteler for details.

BASIC TECH TALK

George G. Siposs

Gravity is the attraction exerted by the earth on all objects. Gravity makes things fall. for centuries, inventors tried to make things that fly, i.e. fall slowly. Gravity is also the driving force that makes our gliders fly. Without gravity the models would merely float. Once tossed, they would float aimlessly like objects you have seen in spaceships. That is not flying.

The key to converting gravitational force (which is downward) to a forward movement is the airfoil, the cross-sectional shape of the wing. Many different kinds of airfoil shapes have been developed for a variety of purposes: speed, load-bearing, stability, etc. They are named after their inventors (Eppler, Selig, Benedek) or the institutions where they were developed (NACA, Gottingen, RAF, etc.) Many model sailplanes use the simple and elegant CLARK-Y airfoil which has a flat bottom and a fairly thick cross section. It can be built into a strong structure and is easy to cover. It is also known for stable flight characteristics and a tendency to balloon up when the plane turns into the wind. the more blunt the leading edge and the thicker the cross section, the slower the plane flies.

An airfoil will not fly unless air is moving past it either: (1) by the plane moving in still air, (2) by air blowing past it, or (3) a combination of 1 and 2. The faster the air moves past the wing, the more lift is generated. Remember this: no air movement, no flight!

Lift is the result of two forces. (1) The air molecules on top of the curved wing have to cover more distance than their sister molecules rushing past the straight flat bottom. A basic law of physics says that faster flow reduces air pressure, i.e. it creates suction upward. This supplies about 2/3 of the lift. (2) The airfoil bottom deflects the airstream downward (called *downwash*) and this produces about 1/3 of the lift. In a glide, the lift almost equals the weight of the plane. Our aim is to come as close to 100% as possible. More lift is produced by the front 1/3 of the airfoil than the rest. If all lift forces could be concentrated at a spot 35-40% from the leading edge, the wing would not have a tendency to rotate. that's why the weight of the plane is balanced at that point. The center of gravity is brought as close as possible to the center of lift. If the c.g. is behind the center of lift, it pulls the tail down and the plane is called nose light, and vice versa.

If the flat bottom of the airfoil parallels the air flow, the wing generates little lift. If the wing is angled so that the leading edge is higher, the wing will generate a lot more lift but there will also be more air drag. Increase the angle (called Angle

of Attack) and even more lift and drag will be produced. But, too much angle and the wing stops lifting and produces drag only, like a billboard in the wind. This is called the stall point. The glider suddenly reverts from airplane to a pile of balsa and plastic.

When the leading edge is raised so that the angle of the wing is excessive, lift ceases, the wing stalls. At this point the plane free-falls and would cartwheel out of control. To prevent this, a little bit of washout is built into the wing tips so that they fly at a lesser angle of incidence than the center of the wing. Thus, when the center stalls, the wing tips still fly and keep the wing level. In a properly built model, the nose will dip during the stall while the wing remains level. With a small loss of altitude, and some down elevator, the plane can be made to regain its flying speed with minimum loss of altitude. Another method of retaining lift at the wing tips is to introduce a small amount of undercamber at the tip. this is more efficient than the washout solution because in the latter case wing tips do not contribute to lift during normal flight.

No matter how stable flight is, the angle of the wing changes constantly as it meets the oncoming airstream. The larger the angle, the further forward the concentration of lift occurs and vice versa. Thus, a wing flying by itself would soon start to rotate around a spanwise axis. To prevent this, a stabilizer is mounted on a boom, (i.e. at the end of the fuselage) to provide a stabilizing influence, like the feather tail of an arrow. The angular relationship between the tail and the wing keeps things on an even keel. More about this in Part II.

EDITOR'S NOTES

This has certainly been an educational summer for me. I promised myself at the beginning of summer that I would try to learn how to cut foam cores and vacuum-bag wings. While I still have a tremendous amount to learn about these processes, they are not as difficult and intimidating as might seem. Okay, so my first scratch-built effort (the Glass Dodo) turned out to weigh just a tad less than an elephant. I'll do better next time. I want to thank all of the club members who took the time to explain things to me and make suggestions. Hey, if I can do it anybody can.

I want to thank Brain Tinkler for contributing the map of slope flying sites that Norm listed in his column last month. I've got 2 more maps of wider areas that I will publish as space permits in future months. Also, thanks to George Siposs for his beginner-tech articles. Finally, if you've got any decent photographs you would like to see in the newsletter, drop 'em off. Roger Lackey does a super job of half-tone reproduction!

SWAP SHOP

2-meter Sensor with spoilers & World Engines 7-channel radio (gold stickered). Radio gear is installed. Contest proven and ready-to-fly. $250. Call Dan 645-1934.

Airtronics Vangard FM 6-channel radio (dual rates, 1991 gold) with servos. $125, call John 847-4871

Futaba G-Series 7-channel with a micro 4-channel receiver on channel 40 AM, NOT GOLD STICKERED with servos, $40 or best offer. Gnome hand-launch glider kit, $15. Speed Astir, 1/5 scale glider kit, glass fuselage, built-up wings, some scale documentation, $80. Contact: Dennis Brandt (714) 821-4181 (leave message).

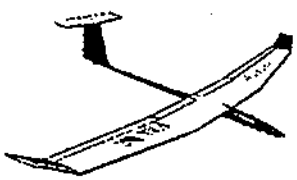
For sale: foam and glass Legend wings, built to order $200 and up. Call Phil, 589-9136

Synergy III, includes 4 servos in the wings, wire harness for Airtronics receiver. $475. Legionair 100, polyhedral $30. Call Pete at 557-4782, evenings.

Graupner W22 B, 3-meter, foam wings. 95% built. Cost $260. Will sell for $300 with Airtronics Vanguard 6-channel radio. $175 without radio. Call Steve 722-8673

FOR SALE: TOP FLITE ANTARES, 100 in. span sailpane kit, $55.00. VOLT-OHM-AMP METER, 0-1000 volts DC - 12 ranges, 0-1000 volts AC - 8 ranges, 0-20 MegOhms - 5 ranges, 0-10 Amps - 10 ranges, $25.00.
Call after 6:00 P.M. Ask for Dave. 839-4317

Place your ad in Swap Shop for the low, low price of - FREE. Just make sure you provide the information to the editor by the 15th. of the month. Ads must be renewed each month. Please indicate whether radio equipment meets 1991 standards.



F3E TEAM SELECTION FINALS, 1991

REPORT BY BOB SLIFF:

Over the two days of August 16 and 17 1991, the HSS club hosted the finals to select the US team for the 1992 E-Power World Championships to be held in Holland in about one year.

Led by Frank Chasteler (contest director), an experienced contingent of HSS members put on a very smooth and efficient contest. Each and every member who helped deserves the highest of praise and has the gratitude of all the contestants.

In addition, the Jury, made up of Don Jehlik and Miles Moran made sure all aspects of the event were run in accordance with AMA and FAI rules. They both deserve our thanks for their wise counsel in operations matters and their great common sense in handling the problems that arose.

The event, with the exception of the weather problem (we had a low overcast most of the time), went off rather smoothly. On the first day, flying did not start until after lunch, as it was hoped the ceiling would lift enough so that the models would not disappear into the clouds. The sky did finally clear just enough to get started, but began to close in before the end of the first round. After some minutes of considering the worsening weather, the CD and Jury decided that the flying would have to continue anyway. Flyers would just have to adapt to shorter climbs and fewer laps per climb.

The first day's flying continued through three rounds, finishing around 6 P.M. Even with the lower ceiling, scores were high for most flyers.

The Second day began like the first with a low ceiling. But, it was decided to go on anyway. As yours truly was to go first this day, I got to try the low ceiling. As it turned out, it was plenty high for a 7 second climb and four laps, and from then on the event continued with no further interruptions until 4 rounds were complete.

In the end, 7 rounds were flown (8 had been planned), and after dropping the lowest round, contestants finished as follows:

1st. Jerry Bridgeman 4181; 2nd Steve Neu 4135; 3rd Jason Perrin 4055; 4th Bob Sliff 4036; 5th Brian Chan 3766; 6th Rick Schrameck 3723.

While the above scores may not mean anything significant to most, a little analysis and comparison with the Austria World Champs of 1990 may be interesting. As a different number of rounds were flown (8 in Austria and 7 here), I took the total scores and in each case divided them by the number of rounds counted to get the average round score.

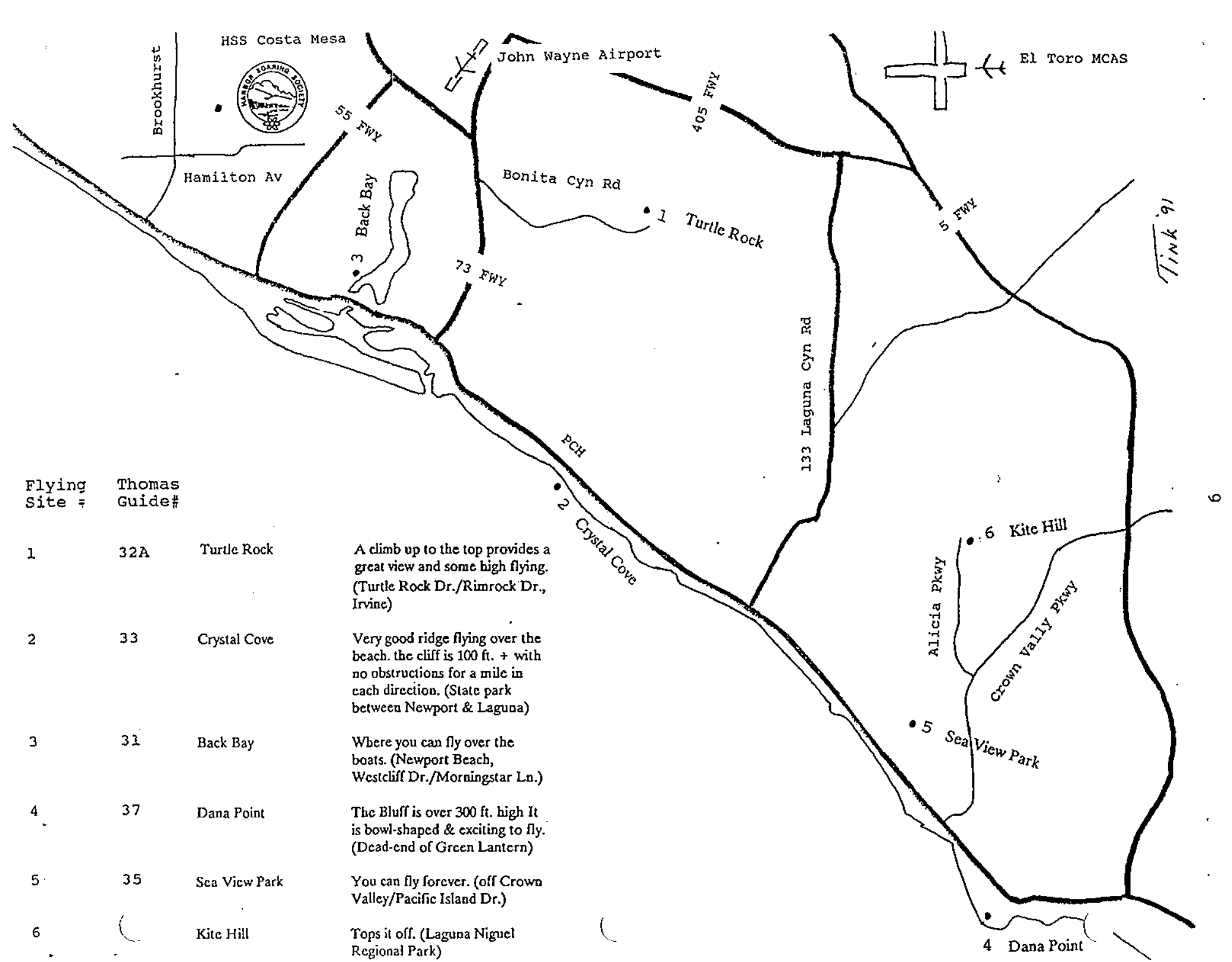
W/C score		TSF scores	
1. Freudenthaller	697.86	Bridgeman	696.83
2. Perrin	688.71	Neu	689.17
3. Weissgerber	678.29	Perrin	675.80
4. Leodolter	672.71	Sliff	672.67
5. Schiltknecht	672.28	Chan	627.67
		Schrameck	620.50

As you can see, the scores of Bridgeman and Neu were just under the World Champion (in fact, Jerry is only one point below) and above the second place finisher, our Jason Perrin. Jason, who had some equipment problems on his two final flights, still would have placed only a few points below Weissgerber, while even yours truly was only 4 hundreths of a point below Leodolter. Chan and Schrameck finished farther down, between and 16th and 17th and the 18th and 19th WC finishers respectively. But, even that is a respectable placing.

With the WC event about a year away, I feel very positive about our team's chances to win it all. With design work and specific training and practice, I expect we will be able to increase the scores appreciably. So, wish our team well for the coming year and the 1992 World Championships. (Oh, I am a nominee for Team manager again.)

All of us who were involved want to thank those who made this Team Selection Finals possible, especially the Harbor Soaring Society and The Adacemy Of Model Aeronautics.Thank you all for your support, BS.

8-20-91



Flying Site #	Thomas Guide#		
1	32A	Turtle Rock	A climb up to the top provides a great view and some high flying. (Turtle Rock Dr./Rimrock Dr., Irvine)
2	33	Crystal Cove	Very good ridge flying over the beach. the cliff is 100 ft. + with no obstructions for a mile in each direction. (State park between Newport & Laguna)
3	31	Back Bay	Where you can fly over the boats. (Newport Beach, Westcliff Dr./Morningstar Ln.)
4	37	Dana Point	The Bluff is over 300 ft. high It is bowl-shaped & exciting to fly. (Dead-end of Green Lantern)
5	35	Sea View Park	You can fly forever. (off Crown Valley/Pacific Island Dr.)
6		Kite Hill	Tops it off. (Laguna Niguel Regional Park)

1991 CONTEST SCHEDULE - Ben Clerx Contest Coordinator

DATE	CONTEST
September 8	HSS Club Contest
September 29	SC^2 Harbor Soaring Society
October 5-6	CVRC SoaringFest (Visalia)
October 13	HSS Club Contest
October 27	SC^2 Silent Wings Soaring Association
November 10	HSS Club Contest
November 24	SC^2 Harbor Soaring Society Lee Renaud Memorial
December 8	HSS Club Contest

SEPTEMBER CONTEST

Brian Germane, CD

Date: September 8, 1991

Format: 4 - 7 Duration. Runway landing will be used.

Schedule: Pilot's meeting at 8:45 A.M. First round at 9:00 A.M.

Launch order: Open class first.

HSS VIDEO LIBRARY

NAME	COMMENT	RATING (0-5)
RC Video Magazine (Vol. 7 - 86)		
Striking Back		4
Foam, Fiberglass, Flight		4
Tournament of Champions (88)		
Monokote 1 & 2	Interesting	3
MIG Killers		3
Hook down, Wheels Down	Navy Aviation Hist	4
F3E - Bridgeman's Plane		
Electric Flight		none
Dawn Patrol	WWI Movie	4
Thunderbolt, Flight for the Skys	WWI Air Combat	5
F3E USA Finals 6 -22-88		

More tapes are being added all the time. All tapes are VHS format. For information about borrowing a tape, ask at the next meeting.

HSS AUGUST CONTEST – OPEN DIVISION

PLACE	NAME		CLASS	SCORE	NORMALIZED	TROPHY
1	MARTIN	TONY	EXPERT	2940	1000	1ST. EXP.
2	CHASTELER	FRANK	EXPERT	2885	985	2ND. EXP.
3	JOY	GEORGE	EXPERT	2760	939	3RD. EXP.
4	RESETAR	EDWARD	SPORTSMAN	2740	932	1ST. ADV.
5	LACKEY	ROGER	ADVANCED	2700	918	2ND. ADV.
6	GARNER	RICH	EXPERT	2585	879	
7	STOKER	PAT	EXPERT	2470	840	
8	WHITE	LARRY	EXPERT	2395	815	
9	GERMANE	BRIAN	ADVANCED	2315	787	
10	JOY	BRYAN	ADVANCED	2220	755	
11	POULSEN	GORDON	EXPERT	2200	748	
12	LAIR	DAN	SPORTSMAN	2100	714	1ST. SPTS.
13	THOMAS	ROSS	EXPERT	2085	709	
14	RITSCHKE	GORDON	EXPERT	2055	699	
15	KUTCH	NORM	EXPERT	2045	696	
16	RICHARDSON	PETE	EXPERT	1925	655	
17	COLLETT	MATT	SPORTSMAN	1900	646	2ND. SPTS.
18	HENDRY	STEVE	EXPERT	1850	629	
19	NEMECEK	DAVID	EXPERT	1785	607	
20	CRON	AL	EXPERT	1745	594	
21	BUZOLICH	NICK	SPORTSMAN	1625	553	
22	PANTZAR	DICK	EXPERT	1610	548	
23	RAMSAY	DON	SPORTSMAN	1575	536	
24	HAWLEY	ED	SPORTSMAN	1560	531	
25	ROWELL	WAYNE	SPORTSMAN	1355	461	
26	BONANNO	TONY	ADVANCED	1345	458	
27	OSTROWSKI	JOHN	SPORTSMAN	1345	458	
28	KIELTYKA	MAC	GUEST	1000	340	
29	HARVEY	TIM	SPORTSMAN	835	284	

HSS AUGUST CONTEST – TWO METER

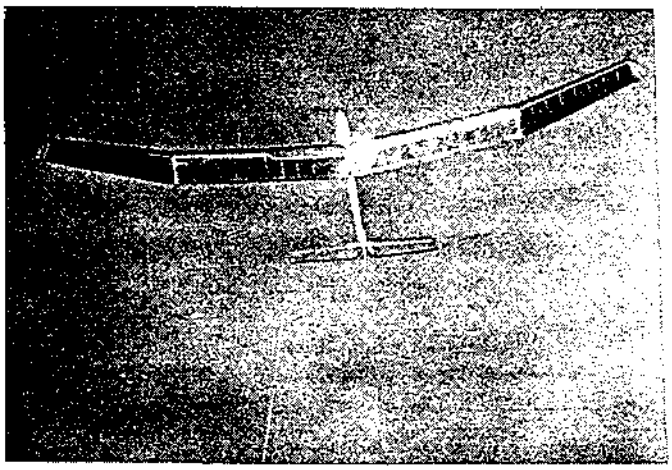
PLACE	NAME			SCORE	NORMALIZED	TROPHY
1	LACKEY	ROGER		2900.0	1000.0	1ST.
2	STOKER	PAT		2865.0	987.9	2ND.
3	WHITE	LARRY		2825.0	974.1	3RD.
4	JOY	GEORGE		2685.0	925.9	
5	MARTIN	TONY		2465.0	856.9	
6	KUTCH	NORM		2460.0	848.3	
7	THOMAS	ROSS		2255.0	777.6	
8	RICHARDSON	PETE		2225.0	767.2	
9	JOY	BRYAN		2090.0	720.7	
10	OSTROWSKI	JOHN		1420.0	489.7	
11	BUZOLICH	NICK		1320.0	455.2	

TWO–METER YEAR–TO–DATE (7 OF 8)

PLACE	NAME		SCORE	CONTESTS
1	RICHARDSON	PETE	6763.2	7
2	JOY	GEORGE	6560.4	7
3	WHITE	LARRY	6434.6	7
4	KUTCH	NORM	6429.6	7
5	THOMAS	ROSS	6409.1	7
6	JOY	BRYAN	6041.8	7
7	MARTIN	TONY	5754.5	6
8	SLIFF	BOB	5348.3	6
9	NEHRING	CURT	4920.0	6
10	FINK	STEVE	4518.5	5
11	LACKEY	ROGER	4326.7	5
12	PARSONS	JIM	2586.4	3
13	CHAMBERLIN	RALPH	2484.4	3
14	BUZOLICH	NICK	2375.2	4
15	LONG	DICK	2317.3	4
16	EDBERG	DON	1958.5	2
17	McLELLAN	KEITH	1899.3	2
18	HENDRY	STEVE	1608.1	2
19	CONRAD	WILL	1513.8	2
20	ANKENBAUER	STEVE	1294.1	2
21	MILLS	ARCHIE	1086.3	2
22	STOKER	PAT	987.9	1
23	HALL	HERMAN	942.1	1
24	LAIR	DANIEL	922.8	1
25	DONAT	KURT	855.9	1
26	YOUNG	BRETT	836.8	1
27	OSTROWSKI	JOHN	683.9	2

HSS OPEN CLASS STANDINGS YEAR–TO–DATE
BEST 7 OF 8

PLACE	NAME		CLASS	SCORE	CONTESTS
1	JOY	GEORGE	EXPERT	6667.8	7
2	CHASTELER	FRANK	EXPERT	6656.1	7
3	LACKEY	ROGER	ADVANCED	6512.0	7
4	KUTCH	NORM	EXPERT	6388.9	7
5	GARNER	RICH	EXPERT	6312.2	7
6	FINK	STEVE	EXPERT	6186.9	7
7	JOY	BRYAN	ADVANCED	6182.4	7
8	RICHARDSON	PETE	EXPERT	6132.2	7
9	THOMAS	ROSS	EXPERT	6101.7	7
10	WHITE	LARRY	EXPERT	6084.7	7
11	MARTIN	TONY	EXPERT	5968.6	6
12	CRON	AL	EXPERT	5932.4	7
13	NEMECEK	DAVID	EXPERT	5903.5	7
14	PANTZAR	DICK	EXPERT	5708.2	7
15	ZINK	DON	EXPERT	5647.1	6
16	RITSCHKE	GORDON	EXPERT	5585.0	7
17	YOUNG	BRETT	SPORTSMAN	5574.4	7
18	SLIFF	BOB	EXPERT	5453.1	6
19	HENDRY	STEVE	EXPERT	5403.0	7
20	POULSEN	GORDON	EXPERT	5344.0	6
21	DANRICH	DAN	ADVANCE	5323.3	6
22	SMITH	MORRY	ADVANCED	5219.3	6
23	RESETAR	EDWARD	SPORTSMAN	5156.2	6
24	GERMANE	BRIAN	ADVANCED	5108.0	6
25	NEHRING	CURT	SPORTSMAN	4767.0	6
26	LAIR	DAN	SPORTSMAN	4764.5	6
27	PARSONS	JIM	SPORTSMAN	4647.6	6
28	GERBIN	ROBERT Jr	EXPERT	3800.0	4
29	GERBIN	BOB	EXPERT	3741.5	4
30	SANDRONI	HUGO	ADVANCE	3641.8	4
31	GATES	MATTHEW	ADVANCED	3600.6	4
32	BUZOLICH	NICK	SPORTSMAN	3344.1	5
33	BOESE	JIM	SPORTSMAN	3174.4	4
34	COLLETT	MATT	SPORTSMAN	3145.9	5
35	EDBERG	DON	EXPERT	2978.5	3
36	CLERX	BEN	EXPERT	2956.3	3
37	RENAUD	TIM	EXPERT	2892.4	3
38	LUPPERGER	JOHN	EXPERT	2778.7	3
39	MILLS	ARCHIE	SPORTSMAN	2479.8	3
40	LONG	DICK	ADVANCE	2430.7	4
41	McLELLAN	KEITH	SPORTSMAN	2314.8	3
42	CHAMBERLIN	RALPH	SPORTSMAN	2256.2	3
43	STALLS	JARED	EXPERT	1648.2	2
44	STOKER	PAT	EXPERT	1832.3	2
45	SCHOFRO	STEVE	SPORTSMAN	1753.5	2
46	AZVEDO	GEORGE	SPORTSMAN	1586.4	2
47	GIBBS	DUANE	ADVANCE	1563.3	2
48	OSTROWSKI	JOHN	SPORTSMAN	1399.1	2
49	RAMSAY	DON	SPORTSMAN	1366.6	2
50	BONANNO	TONY	ADVANCED	1327.1	2
51	VON GROTE	BRAD	SPORTSMAN	1317.9	2
52	ROWELL	WAYNE	SPORTSMAN	1095.2	2
53	HARVEY	TIM	SPORTSMAN	961.0	2
54	STOVALL	LEE	SPORTSMAN	915.5	1
55	HARRIS	PHIL	EXPERT	882.5	1
56	BYRNE	JIM	SPORTSMAN	855.7	1
57	DUNCAN	BILL	SPORTSMAN	808.6	1
58	CONRAD	WILL	ADVANCE	769.6	1
59	STOVALL	WILL	SPORTSMAN	705.5	1
60	GROSVENOR	WOODY	SPORTSMAN	563.5	1
61	HAWLEY	ED	SPORTSMAN	530.6	1
62	GREENE	DENNIS	SPORTSMAN	514.8	1



SOUTHERN CALIFORNIA SOARING CLUBS
RESULTS OF P.S.S. CONTEST OF AUGUST 18, 1991
CONTEST DIRECTOR – BEN MATSUMOTO

PLACE	NAME		CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	KINDRICK	KEITH	PSS	EXPERT	2954.2	1000.0	1ST. EXP.
2	BILLMAN	TODD	ISS	EXPERT	2951.3	999.0	2ND EXP.
3	REAGAN	MIKE	TOSS	EXPERT	2944.5	996.7	3RD EXP.
4	WURTS	JOE	PSS	EXPERT	2935.0	993.5	4TH. EXP.
5	EDBERG	DON	DUST	EXPERT	2924.3	989.9	5TH. EXP.
6	JOY	GEORGE	HSS	EXPERT	2922.5	989.3	
7	MORAN	MYLES	TOSS	EXPERT	2921.0	988.8	
8	ANDERSON	GARY	TPG	EXPERT	2918.0	987.7	
9	MEININGER	FRED XX	PSS	SPORTSMAN	2906.0	984.4	1ST. SPTS
10	GARNER	RICH	HSS	EXPERT	2893.9	979.6	
11	MATSUMOTO	BEN	PSS	EXPERT	2888.2	977.7	
12	HENDRY	STEVE	HSS	EXPERT	2869.3	971.3	
13	HIGGINBOTHAM	MARC	ISS	EXPERT	2861.9	968.8	
14	RICHARDSON	PETE	HSS	EXPERT	2849.6	964.6	
15	LEPPLA	FRANK	PSS	EXPERT	2835.6	959.9	
16	MacKENZIE	SCOTT	SFVF	EXPERT	2831.9	958.6	
17	SAGE	FRED	NCC	EXPERT	2831.5	958.5	
18	ZINK	DON	HSS	EXPERT	2812.3	952.0	
19	SANDRONI	HUGO	DUST	EXPERT	2808.4	950.6	
20	VAN GUNDY	DON	TPG	EXPERT	2800.9	948.1	
21	FARLESS	DAVID	PSS	EXPERT	2798.3	947.2	
22	LACKEY	ROGER	HSS	EXPERT	2798.2	947.2	
23	KEIL	DAVID XX	NCC	SPORTSMAN	2779.3	940.8	2ND. SPTS
24	McNAMEE	ART	TOSS	EXPERT	2773.9	939.0	
25	TILLMAN	NORM	NCC	EXPERT	2773.5	938.8	
26	SHELBY	RICH	ISS	EXPERT	2770.4	937.8	
27	CHASTAIN	BLAYNE	PSS	EXPERT	2759.9	934.2	
28	WEISMAN	EDGAR	TOSS	EXPERT	2758.1	933.6	
29	DOIG	AL	NCC	EXPERT	2743.7	928.7	
30	SWET	BOB XX	TOSS	SPORTSMAN	2734.6	925.7	3RD. SPTS
31	BUTOVICH	DAVID	PSS	SPORTSMAN	2712.0	918.0	
32	STARK	TONI	PSS	EXPERT	2694.8	912.2	
33	NIGG	DON	SULA	EXPERT	2689.9	910.5	
34	RODRIGUEZ	JOE XX	ISS	SPORTSMAN	2663.0	901.4	
35	SMITH	JAMES	NONE	EXPERT	2660.4	900.5	
36	NORENBERG	LOWELL XX	SFVF	SPORTSMAN	2657.6	899.6	
37	ATWELL	BLAIR	DUST	EXPERT	2637.1	892.7	
38	DeGREVE	PATRICK	PSS	SPORTSMAN	2606.4	882.3	
39	JOY	BRYAN XX	HSS	SPORTSMAN	2604.4	881.6	
40	DOUGLAS	IAN	SWSA	EXPERT	2604.2	881.5	
41	GATTI	MARK	PSS	SPORTSMAN	2599.5	879.9	
42	GERMANE	BRIAN	HSS	SPORTSMAN	2591.3	877.2	
43	KARP	BILL	MRCS	SPORTSMAN	2577.7	872.6	
44	CHASTAIN	ROGER	PSS	SPORTSMAN	2566.6	868.8	
45	BLEDSOE	RICH	TPG	EXPERT	2561.9	867.2	
46	BONANNO	TONY	SULA	EXPERT	2555.4	865.0	
47	VALDES	AARON XX	TPG	SPORTSMAN	2554.3	864.6	
48	HALLFORD	PHILIP	PSS	SPORTSMAN	2542.2	860.5	
49	VICKERS	DON	SULA	EXPERT	2539.7	859.7	
50	SPITZER	GEORGE	PSS	SPORTSMAN	2524.7	854.6	
51	PETTEN	MICHAEL XX	ISS	SPORTSMAN	2485.3	841.3	
52	LONG	DICK	DUST	SPORTSMAN	2465.5	834.6	
53	AKERS	THOMAS XX	TOSS	SPORTSMAN	2436.6	824.8	
54	WALDEN	WILLIAM	PSS	SPORTSMAN	2427.4	821.7	
55	CONWAY	PATRICK	TPG	SPORTSMAN	2386.8	807.9	
56	MORTON	JEFF	MRCS	SPORTSMAN	2384.9	807.3	
57	CLERX	BEN	HSS	EXPERT	2358.9	798.5	
58	RODGERS	JOHN	NONE	EXPERT	2291.9	775.8	
59	DANRICH	DAN	HSS	SPORTSMAN	2210.1	748.1	
60	FOSTER	WILLIAM	MRCS	SPORTSMAN	2206.1	746.8	
61	BROOKS	NOEL	PSS	SPORTSMAN	2171.7	735.1	
62	FINK	STEVEN XX	DUST	SPORTSMAN	2134.7	722.6	
63	PARSONS	JIM XX	HSS	SPORTSMAN	2131.8	721.6	
64	SLOBOD	ED XX	SFVF	SPORTSMAN	2111.0	714.6	
65	GABRIEL	PINA	PSS	SPORTSMAN	1976.9	669.2	
66	HARDY	BOB	MRCS	SPORTSMAN	1951.1	660.4	
67	GLASS	ROBERT	PSS	SPORTSMAN	1913.5	647.7	
68	JULIEN	HERBERT	MRCS	SPORTSMAN	1909.6	646.4	
69	KOSHPOULOS	GEORGE	PSS	SPORTSMAN	1906.2	645.3	
70	RAYMOND	KEN	NCC	EXPERT	1843.1	623.9	
71	GORDON	ALAN	DUST	SPORTSMAN	1837.1	621.9	
72	SHORT	HOWARD	SULA	EXPERT	1789.5	605.7	
73	GOODWIN	BROWNE	MRCS	SPORTSMAN	1726.5	584.4	
74	RATNER	MIKE	PSS	EXPERT	1437.9	486.7	
75	VALDES	AL	TPG	SPORTSMAN	447.2	151.4	
76	STAIRS	PETER	TOSS	SPORTSMAN	146.0	49.4	
77	DEVLIN	ED	PSS	SPORTSMAN	0.1	0.0	
78	BUKSHPAN	ROBERT	PSS	SPORTSMAN	0.1	0.0	

BOB SWET ADVANCES TO EXPERT
"XX" AFTER NAME MEANS THE PERSON HAS WON ONE TROPHY AS A SPORTSMAN

TEAM SCORES

PSS 22	HSS 11	TOSS 7	ISS 5	NCC 5	DUST 6
1000.0	969.3	996.7	999.0	958.5	989.9
993.5	979.6	988.8	968.8	940.8	950.6
984.4	971.3	939.0	937.8	938.8	892.7
977.7	964.6	933.6	901.4	928.7	834.6
3955.6	3904.8	3856.1	3807.0	3766.8	3667.8

TPG 8	SULA 4	MRCS 6	SFVF 3	SWSA 1	EDSF 0
987.7	910.5	672.6	958.6	881.5	
948.1	865.0	807.3	899.6		
867.2	859.7	746.8	714.6		
864.6	605.7	660.4			
3667.6	3240.9	3087.1	2572.8	881.5	0.0

SOUTHERN CALIFORNIA SOARING CLUBS
YEAR–TO–DATE STANDINGS
BEST 5 OF 7 CONTESTS

PLACE	NAME		CLASS	CLUB	SCORE	CONTESTS
1	ATWELL	BLAIR	EXPERT	DUST	4981.9	5
2	EDBERG	DON	EXPERT	DUST	4939.9	5
3	REAGAN	MIKE	EXPERT	TOSS	4932.3	5
4	CLERX	BEN	EXPERT	HSS	4910.0	5
5	MORAN	MYLES	EXPERT	TOSS	4788.6	5
6	BLEDSOE	RICH	EXPERT	TPG	4743.3	5
7	CHASTELER	FRANK	EXPERT	HSS	4734.6	5
8	TILLMAN	NORM	EXPERT	NCC	4709.8	5
9	LACKEY	ROGER	EXPERT	HSS	4706.7	5
10	SAGE	FRED	EXPERT	NCC	4703.1	5
11	LEVOE	MARK	EXPERT	PSS	4698.8	5
12	ANDERSON	GARY	EXPERT	TPG	4682.9	5
13	VAN GUNDY	DON	EXPERT	TPG	4669.4	5
14	JOY	GEORGE	EXPERT	HSS	4652.9	5
15	RODRIGUEZ	JOE XX	SPORTSMAN	ISS	4645.0	5
16	CHASTAIN	BLAYNE	EXPERT	PSS	4632.5	5
17	VICKERS	DON	EXPERT	SULA	4619.8	5
18	WEISMAN	EDGAR	EXPERT	TOSS	4618.4	5
19	HENDRY	STEVE	EXPERT	HSS	4617.1	5
20	SHELBY	RICH	EXPERT	ISS	4591.2	5
21	MARTIN	TONY	EXPERT	HSS	4571.6	5
22	JOY	BRYAN XX	SPORTSMAN	HSS	4563.3	5
23	FINK	STEVEN XX	SPORTSMAN	DUST	4503.2	5
24	KEIL	DAVID XX	SPORTSMAN	NCC	4496.4	5
25	DOUGLAS	IAN	EXPERT	SWSA	4480.4	5
27	GERMANE	BRIAN	SPORTSMAN	HSS	4417.6	5
29	THOMAS	ROSS	EXPERT	HSS	4406.0	5
34	KUTCH	NORM	EXPERT	HSS	4142.1	5
35	PARSONS	JIM XX	SPORTSMAN	HSS	4133.9	5
36	ZINK	DON	EXPERT	HSS	4113.9	5
38	CRON	AL	EXPERT	HSS	4096.3	5
46	GERBIN Jr	ROBERT	EXPERT	HSS	3692.0	4
52	GATES	MATT	EXPERT	HSS	3378.3	4
53	RICHARDSON	PETE	EXPERT	HSS	3296.8	4
54	CHASTELER	TOM	EXPERT	HSS	3291.0	4
56	NEHRING	CURT	SPORTSMAN	HSS	3099.7	5
58	SLIFF	BOB	EXPERT	HSS	2879.2	3
60	POULSEN	GORDON	EXPERT	HSS	2804.1	4
61	GARNER	RICH	EXPERT	HSS	2781.4	4
78	YOUNG	BRETT	SPORTSMAN	HSS	2564.2	4
67	DANRICH	DAN	SPORTSMAN	HSS	2265.4	3
69	GERBIN	ROBERT	EXPERT	HSS	2228.0	3
131	BRANDT	DENNIS	EXPERT	HSS	962.3	1
135	HARRIS	PHIL	EXPERT	HSS	935.8	1
150	NEMECEK	DAVE	EXPERT	HSS	857.0	1
161	BUZOLICH	NICK	SPORTSMAN	HSS	586.4	2
182	CHAMBERLIN	RALPH	SPORTSMAN	HSS	0.0	1

1991 TEAM STANDINGS

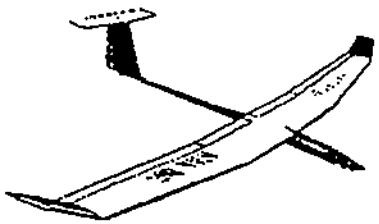
CLUB	SCORE
HSS	27372.6
HSS(#2)	26070.8
PSS	25448.1
TPG	25310.6
TOSS	24921.6
NCC	24181.8
DUST	23109
SULA	22082.6
ISS	20097
SWSA	15525.7
EDSF	11194.1
SFVF	10476.1
MRCS	8993.5

That's it! Next round we'll make him land it while he's standing on his head.

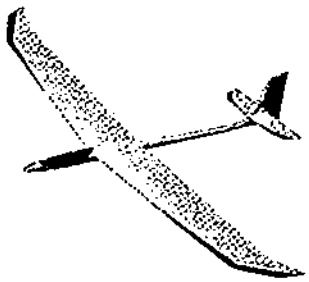
HARBOR SOARING SOCIETY

SC² CONTEST

SEPTEMBER 29, 1991



Contest Director: Ben Clerx
(714) 721-8848



Sign In:	8:00 A.M.
Pilot's Meeting	8:45 A.M.
First Flight	9:00 A.M.
ENTRY FEE	$6.00

FORMAT:

3 ROUNDS OF FLYING -- CONTESTANT FLIES EITHER A OR B
PILOT'S OPTION:

A: 4 minute flight at 700 points. 3 pts./sec. off of time. Landing at 300 pts.

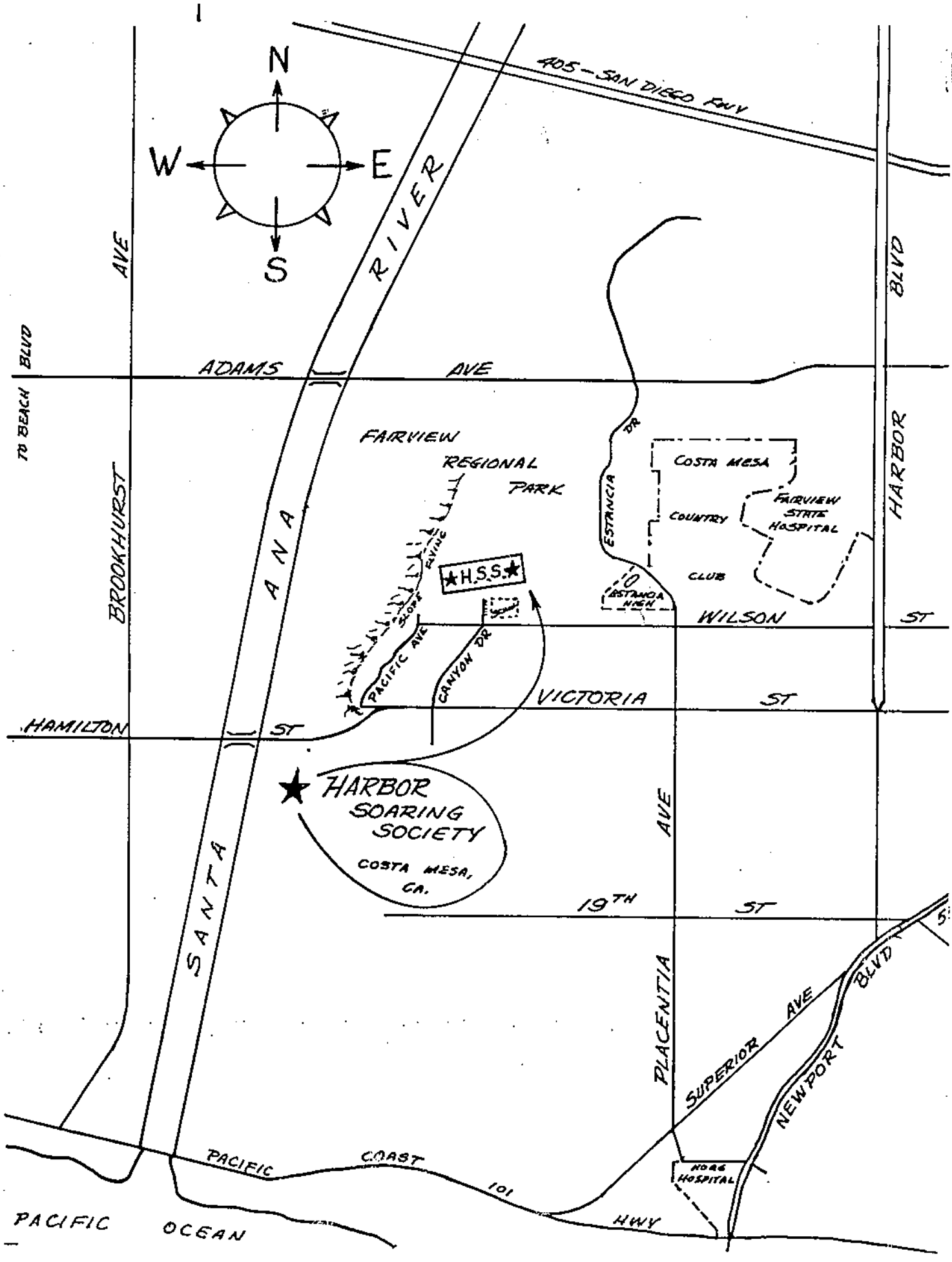
B: 7 minute flight at 900 points. 2 pts./sec. off of time. Landing at 100 pts.

LANDINGS WILL BE RUNWAY CENTERLINE AT 100 PTS.
PENALTY OF 1 POINT/INCH.

INFORMATION:

Winches are all 12 volt. Line length is 650 feet.
Landing surface is dirt and mowed weeds.
All SC² rules apply.

SEE MAP AND DIRECTIONS ON BACK


N
W
E
S
405 - SAN DIEGO FWY
RIVER
SANTA ANA
BROOKHURST AVE
TO BEACH BLVD
HARBOR BLVD
ADAMS AVE
FAIRVIEW REGIONAL PARK
FLYING SLOPE
H.S.S.
ESTANCIA DR
COSTA MESA COUNTRY CLUB
FAIRVIEW STATE HOSPITAL
ESTANCIA HIGH
WILSON ST
PACIFIC AVE
CANYON DR
VICTORIA ST
HAMILTON ST
HARBOR SOARING SOCIETY
COSTA MESA, CA.
PLACENTIA AVE
19TH ST
SUPERIOR AVE
NEWPORT BLVD
HOAG HOSPITAL
PACIFIC COAST HWY
101
PACIFIC OCEAN