



**THE OLDEST CHARTERED  
SOARING CLUB**

**IN THE  
A.M.A.**



**CHARTER # 128**

## **AUGUST MEETING**

**THE AUGUST MEETING WILL  
BE HELD ON WEDNESDAY AU-  
GUST 7, 1991 AT 7:30 P.M.**

**LOCATION: CLUBHOUSE AT  
LAKES AT SEABRIDGE CON-  
DOS. SEE MAP AND INSTRUC-  
TIONS INSIDE.**

**MARK HAMBELTON FROM  
D.C.U. AIRCRAFT WILL BE  
THE GUEST SPEAKER.**



**P.O. Box 1673  
Costa Mesa, CA 92628**



## **FIRST CLASS MAIL**

**WILL CONRAD  
9359 SHRIKE AVE  
FOUNTAIN VALLEY, CA 92708**

August 1991



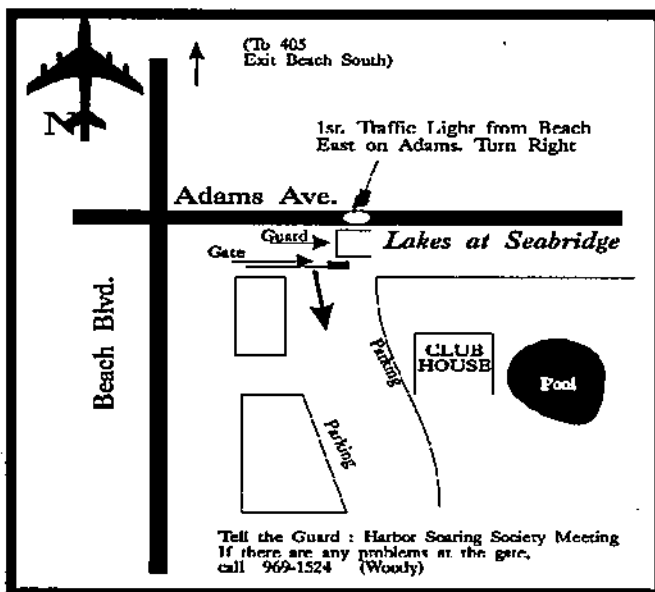
**(The Soaring)  
Society Column**

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
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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. A big THANKS to Woody Grosvenor!



**CLUB MINUTES**

The meeting was called to order at 7:35 P.M. July 3, 1991. Guest speaker Mark Hambleton could not make it. He will be at our next meeting. Frank Chasteler gave the treasurer's report. Permits for the rest of the year for the field have been obtained. Jim Parsons brought one of DCU's Wind Weasel kits for the club to see. Jim complemented Pete Young's article about our last contest. Good work Pete. The "dawn-to-dusk" sailplane event will conflict with the club-sponsored slope race on the same date.

Pete Richardson presented a possible format for club records and a discussion. Records would be for duration and distance, not leaving the field area. Norm Kutch suggested that we have at least four of our members try this type of distance as a guideline.

Frank Chasteler gave a report on the S.U.L.A. S.C.<sup>2</sup>. Roger Lackey now moves to Expert in S.C.<sup>2</sup>. H.S.S. is in first place with a comfortable margin. Out of 89 contestants, H.S.S. had 20 entries.

Norm Kutch suggested that the club buy winches so that more winches would be available on Wednesdays and Saturdays. He also suggested possibly fund raising projects to help offset the cost of this proposal. We could also try to pick up damaged winches that could be repaired for club use. The idea of a night flying session was discussed. Tony Martin described how it is done. The possibility of having a night session after next month's meeting was discussed. The meeting closed at 8:25 P.M.

Ross Thomas, Acting Secretary

**PRESIDENT'S COLUMN**

Norm Kutch

Here it is, August and Summer is in full swing.

My Summer projects are falling behind as I enjoy the wide open skies. I have been accused of working the thumb on my right hand too much. Well, there are these good flying sites that must be flown, sites other than in Costa Mesa. I would like to share some of these places with you, especially if you need a break from those Summertime projects around your house.

Turtle Rock

A climb up to the top provides a great view and some high flying.



- (Turtle Rock Dr./Rimrock Dr., Irvine)
- 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)
- Back Bay            Where you can fly over the boats. (Newport Beach, Westcliff Dr./Morningstar Ln.)
- Dana Point        The Bluff is over 300 ft. high It is bowl-shaped & exciting to fly. (Dead-end of Green Lantern)
- Sea View Park    You can fly forever. (off Crown Valley/Pacific Island Dr.)
- Kite Hill          Tops it off. (Laguna Niguel Regional Park)

I could go on and on on the merits of flying some of these sites as well as many others, but you probably have some projects awaiting you and I wouldn't want to keep you from your work. But remember, all work and no play made Jack a dull boy. Oh yeah, my projects are still there, but I have the rest of the Summer for those.

P.S. A special thanks to Pete Young for his well-written & enjoyable article on our June contest. Pete Richardson -- who is picking up the ball and doing something to create the rules for the H.S.S. club records (duration and distance goals).

**JULY CONTEST REPORT**

Brett Young

On the 7th. of July Ross Thomas opened the Harbor Soaring Society monthly contest at Fairview Park. This contest would be a tune-up for the July SC<sup>2</sup> contest, which was hosted by the North County Clouds. A 4 or 7 minute task was set with a carrier-type landing system. the scorers were using cheat sheets to calculate scores.

The landing was measured with a long pipe, measured off in inches. A landing judge measured off the centerline of the runway with the pipe to get a landing score. The pipe also served as a crowd control device and anti-sandbagging weapon, although neither seemed to be too much of a

problem. One new rule was being used at this contest. The club Board decided prior to this contest that if a sailplane came off the towline less than half-way up, it would be considered an equipment failure and a relaunch was appropriate. Above halfway (ed.: actually at the point of rotation), however, you had to fly it out unless the line broke.

With all the technicalities aside, the twenty-nine open contestants got ready to fly. The air was beginning to look very promising for thermals. A light wind was coming from the bluff and a few high clouds were in the sky. These conditions persisted throughout the contest with an increase in wind later in the day. Moderate thermals were abundant all day, except, of course, when I flew. In that case they seemed to deteriorate just when I decided to go for a 7 minute flight. there were no major problems with frequencies but the lack of a good winch and retriever batteries made 3rd. round launches marginal at times. every battery counts at the contests. Remember to bring `em out!.

At the end of the day, Tony Martin won 1st. for two-meter. Larry White was 2nd., and Roger Lackey came in 3rd. Jim Boese won Sportsman in Open class while first-time contest flyer Don Ramsey placed 2nd. with a Gemini. Advanced was won by Steve Hendry, followed by Brian Joy in second with a trusty Gnome. In Expert, Roger Lackey took 3rd. with his Falcon 880 and Tony Martin placed 2nd. Ben Clerx won the class flying his Falcon 880. My only question is this: would Ben have done better if he had two working ailerons?

**AUGUST CONTEST**

**Ben Clerx, C.D.**

**Date: August 11, 1991**

**Format: All rounds are 2 minute precision. Four rounds will be run. Best 3 of 4 rounds count. Total flight points per round = 500 (bell curve). Total landing points per round = 500. Landing procedure will be a runway (carrier) landing.**

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

**Launch Order: Two-Meter first**



## THERMAL HUNTING PART II

Ben Clerx, Contest Coordinator

In Part I we talked about search patterns and the importance of keeping the plane moving, searching until lift is found. The more ground (sky) that is covered, the more likely you are to find lift (or sink). That brings us to this month's topic -- how to make your plane cover more ground. I'll keep the explanation simple, but add enough detail for those interested in aerodynamics.

Full-scale sailplanes (as should models) are generally flown at one of two air speeds: best L/D speed while searching for lift or minimum sink speed while circling in lift. The best L/D (lift-to-drag ratio) speed is the faster of these two speeds, and the sailplane covers the most forward distance for a given altitude (although at a higher descent rate). This speed is noticed as a fast cruise in model sailplanes (unless your high-tech bird is equipped with angle-of-attack or airspeed indicators that can be referenced, *fast cruise* is the only definition I can offer).

The minimum sink speed is noticed as a slow, gentle glide, just prior to the stall, and the sailplane remains airborne for the greatest amount of time for a given altitude (but doesn't cover much ground). (Note: Those of you with some knowledge of aerodynamics will know that best L/D and min. sink refer to specific angles of attack [angle that the airflow strikes the wing]. Since angle of attack is proportional to airspeed at a specific weight and g-loading, airspeed is generally used to describe these two angles-of-attack conditions.)

Well, there you have it: fly a bit faster than normal when searching for lift and slow down when you've found it. You probably won't be able to precisely determine these two speeds, but you can get pretty close by experimentation. One technique is to use half your available down elevator trim on your transmitter to approximate the best L/D speed and half your up elevator trim for min. sink when you've found lift. Experiment! Just don't make the mistake of circling and floating around at min. sink speed, the plane comes down a bit slower, but you probably won't float out the 7 minutes for a max. Two-to-four minutes is all you should expect from a normal launch without lift. Watch the way gulls and hawks vary their speed.

Next month I'll talk more about optimizing best L/D and min. sink in your flying technique, including the use of ballast.

## HARBOR SOARING SOCIETY RECORDS

Pete Richardson

**DURATION:** The duration record will be defined as the total time of flight beginning at the moment of tow-line release and ending at the moment of contact with a ground-based object. Restrictions: The sailplane must land within the normal boundaries of the field. The flight must be sustained by thermal lift.

**DISTANCE 1:** The distance 1 record will be defined as the minimum time to fly from a base point (current launch area) to a remote point (northwest corner of the park) and return to base point. Discussion: this allows records to be safely set within the confines of the park. Full-size sailplane records are similar to this description.

**DISTANCE 2:** The distance 2 record is defined as the maximum distance (course length times number of laps) over a set triangular course confined to the park area. Discussion: This allows for unlimited distances within the confines of the park.

**DISTANCE 3:** The distance 3 record is defined as the minimum time to complete a required number of laps (e.g. 10) over a set triangular course which is confined to the park area. Discussion: The course for distance 2 and 3 may be set up in such a way that the pilot does not have to chase the sailplane around the course.

**CLASSES:**

- Open: over 2-meter wingspan and winch-launched.
- Two-meter: under 2-meter wingspan and winch launched.
- Hand-Toss: under 70" wingspan and hand-launched.





## PILOT OF THE MONTH

Pilot of the month for August is one of the younger members of H.S.S., who flies like an old pro. He is also the current club secretary:



Brian Germane

Occupation: Full-time student at Mater Dei High.

Started flying sailplanes: 1988, at Turtle Rock.

Reason for Interest: My dad gave me that first trip to Hobby Shack when I was five years old.

First R/C sailplane: Dynafite Wanderer, which I still have.

Favorite part of the sport: Both thermalling and and slope, although slope planes are better looking.

Goal for 1991: To finish my airplane and place higher in the club standings.

Current gliders: A Gemini and my own design slope racer, soon to be completed: my own design thermal ship.

Greatest flying strength: Thermalling.

Advice for beginning pilots: Get all the advice you can and make every flight a contest flight.

## FORGET THE MEMORY EFFECT

The infamous label *memory effect* has haunted nickel-cadmium cells since the mid-1960s. It was originated to describe a phenomenon observed in the power system of a U.S. satellite. The memory effect implies that a ni-cad cell can forget how to deliver all of its charge if continually partially discharged to the same level. In other words, if a rechargeable 2-h battery runs 5 min. each day, it will turn into a 5 min. battery.

Memory effect seems to be brought on by certain conditions. First, the battery must be designed with cell cutoffs above 1 V. Second, it must be repetitively discharged to about the same shallow level. Third, it must receive no overcharge. If the three conditions are satisfied, then there is a remote chance of permanent loss of some capacity.

Since the mid 1960s, memory effect has been the 'cause' of almost every conceivable rechargeable-product malfunction. To avoid it, fearful users have vigilantly enforced complete discharge of the battery on each cycle. But in reality, memory effect has been officially diagnosed in only that one instance in outer space. The overuse of the term may be a case of confusing memory with a similar phenomenon called *voltage depression*.

Voltage depression refers to a drop in Nicad discharge voltage. It is caused by a combination of poor design and product misuse which lowers anode oxidation efficiency during discharge. Again, cutoff voltage must be above 1 V. In this case, however, the battery must excessively overcharge for extended periods of time. When these conditions coincide, products may experience voltage depression which, like a high cutoff, reduces runtime.

Voltage depression was something of a problem with early Nicad cell technology of the late 1960s. It was common with improperly applied batteries made with primitive technologies of that time. Modern electrode technology, however, has nearly eliminated the problem.

The ability to prevent voltage depression is in the hands of the designers. Keep the cutoffs below 1 V, and the effect will not be noticed. Users could help by varying the depth of discharge or runtime occasionally. But voltage depression is practically a nonissue because it is completely reversed after the first duty cycle. If it does occur, it shortens only the first run.

Source: Basics of Engineering Design



**SWAP SHOP**

**FOR SALE: TOP FLITE ANTARES**, 100 in. span sailplane 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

**MFA HIGH SIERRA 2-meter**. Polyhedral, glass fuse, foam-core sheeted wings. Penetrates well, good first slope ship. No radio gear. \$75 or best offer. Call 847-4871 ask for John.

**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 wing** \$200. Call Phil, 589-9136

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

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.



**EDITOR'S NOTES**

Last month we ran a long list of potential names for the newsletter. In that article I asked you to express your preferences. Since noone has seen fit to do that (or come up with anything better), I will give you mine. Of the names listed, my favorites are:

- AirWaves
- Pop-Off
- Thermal Currents

Unless I hear objections, I will select from one of these names for the newsletter. If you don't like that, then you come up with a better name!

By way of a short review, I recently purchased a Feather-Cut foam-core wing cutting kit. I am impressed with the device. It certainly seems to operate as advertised, although Dale Lemmons and Ross Thomas suggested (and made) some very useful modifications. The first plane with the cores cut with the Feather-cut is nearing completion. I just hope it flies as well as the cores cut! One last note, the manufacturer recommends using two templates (upper and lower) per side. I've found that it is necessary to allow about 1/16 inch additional width at the trailing edge, otherwise the chord gets shortened. Perhaps using a male template would solve that problem. If anyone has any tips or experiences in using the newer construction techniques, write them up for us. There is certainly a lot of interest in foam wings and vacuum-bagging in the club.



See you're practising inverted flying again Steve!  
But there is an easier way!!

## 1991 CONTEST SCHEDULE - Ben Clerx Contest Coordinator

DATE	CONTEST
August 11	HSS Club Contest
August 16-17	F3E Team Selection (Bid by HSS) (18th. makeup)
August 18	SC <sup>2</sup> Pasadena Soaring Society
August 24	HSS Sponsored Slope Soaring Contest (25th. Makeup)
September 8	HSS Club Contest
September 29	SC <sup>2</sup> Harbor Soaring Society
October 5-6	CVRC SoaringFest (Visalia)
October 13	HSS Club Contest
October 27	SC <sup>2</sup> Silent Wings Soaring Association
November 10	HSS Club Contest
November 24	SC <sup>2</sup> Harbor Soaring Society Lee Renaud Memorial
December 8	HSS Club Contest

### AUGUST SC2 CONTEST

Location : Pasadena Soaring Society

Date: August 18, 1991

Format: Standard 3-5-7

No flyer with details was provided

### 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.

## HARBOR SOARING SOCIETY SUPPLEMENTAL MEMBER DIRECTORY AUGUST 1991

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### F3E TEAM SELECTION

On August 16 - 17, Harbor Soaring Society will host the 1991 F3E team selection trials.

**Workers are needed for this event!**

If you would like to assist and be able to observe the top electric fliers in action, contact:

**Frank Chasteler: (714)545-2185**

or

**Bob Sliff: (714)893-8311**



HSS JULY CONTEST - OPEN DIVISION

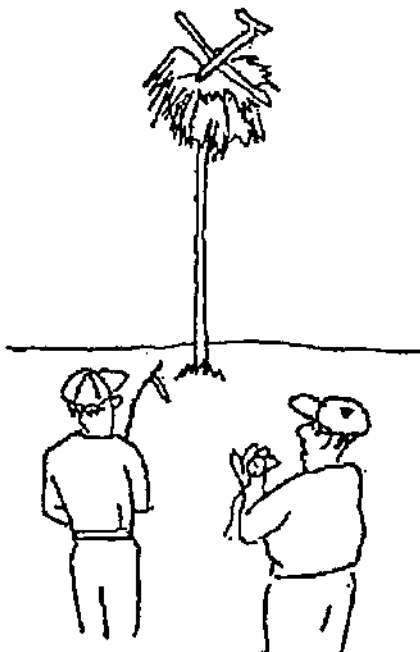
HSS YEAR-TO-DATE STANDINGS  
OPEN CLASS (BEST 6 OF 7)

PLACE	NAME	CLASS	SCORE	NORMALIZED	TROPHY
1	CLERX BEN	EXPERT	2637.0	1000.0	1ST. EXP.
2	MARTIN TONY	EXPERT	2630.0	997.6	2ND. EXP.
3	LACKEY ROGER	ADVANCED	2659.0	987.1	3RD. EXP.
4	GARNER RICH	EXPERT	2665.0	975.5	
5	HENDRY * STEVE	ADVANCED	2854.0	971.7	1ST. ADV.
6	KUTCH NORM	EXPERT	2792.0	950.6	
7	JOY GEORGE	EXPERT	2756.0	938.4	
8	JOY BRYAN	ADVANCED	2745.0	934.6	2ND. ADV.
9	RICHARDSON PETE	EXPERT	2633.0	896.5	
10	DANRICH DAN	ADVANCED	2616.0	890.7	
11	BONANNO TONY	ADVANCED	2554.0	869.6	
12	FINK STEVE	EXPERT	2543.0	865.8	
13	SLIFF BOB	EXPERT	2497.0	850.2	
14	WHITE LARRY	EXPERT	2484.0	845.8	
15	BOESE JIM	SPORTSMAN	2456.0	838.2	1ST. SPTS.
16	RAMSAY DON	SPORTSMAN	2441.0	831.1	2ND. SPTS.
17	THOMAS ROSS	EXPERT	2432.0	828.1	
18	LAIR DAN	SPORTSMAN	2407.0	819.5	
19	CRON AL	EXPERT	2358.0	802.2	
20	RESETAR EDWARD	SPORTSMAN	2353.0	801.2	
21	POULSEN GORDON	SPORTSMAN	2351.0	800.5	
22	RITSCHKE GORDON	EXPERT	2272.0	773.6	
23	NEMECEK DAVID	EXPERT	2178.0	740.9	
24	YOUNG BRETT	SPORTSMAN	2061.0	701.7	
25	PARSONS JIM	SPORTSMAN	2055.0	699.7	
26	NEHRING CURT	SPORTSMAN	2004.0	682.3	
27	AZVEDO GEORGE	SPORTSMAN	1963.0	668.4	
28	ROWELL WAYNE	SPORTSMAN	1863.0	634.3	
29	CHAMBERLIN RALPH	SPORTSMAN	1737.0	591.4	

\*STEVE HENDRY MOVES TO EXPERT

HSS JULY CONTEST - TWO METER

PLACE	NAME	SCORE	NORMALIZED	TROPHY
1	MARTIN TONY	2641.0	1000.0	1ST.
2	WHITE LARRY	2898.0	985.4	2ND.
3	LACKEY ROGER	2667.0	974.8	3RD.
4	KUTCH NORM	2754.0	936.4	
5	THOMAS ROSS	2743.0	932.7	
6	NEHRING CURT	2721.0	925.2	
7	RICHARDSON PETE	2720.0	924.9	
8	CHAMBERLIN RALPH	2573.0	874.9	
9	JOY BRYAN	2564.0	871.8	
10	JOY GEORGE	2475.0	841.6	
11	YOUNG BRETT	2461.0	836.8	
12	PARSONS JIM	2390.0	812.6	
13	SLIFF BOB	2181.0	741.8	
14	CONRAD WILL	1974.0	671.2	
15	BUZOLICH NICK	1392.0	473.3	



"Well, wait until nine minutes and thirty seconds then go shake the tree."

- Courtesy DUST "Dust Devil"

PLACE	NAME	CLASS	SCORE	CONTESTS
1	JOY GEORGE	EXPERT	5728.0	6
2	CHASTELER FRANK	EXPERT	5673.4	6
3	ZINK DON	EXPERT	5647.1	6
4	LACKEY ROGER	ADVANCED	5593.6	6
5	KUTCH NORM	EXPERT	5545.2	6
6	SLIFF BOB	EXPERT	5453.1	6
7	GARNER RICH	EXPERT	5432.9	6
8	JOY BRYAN	ADVANCED	5427.3	6
9	FINK STEVE	EXPERT	5404.4	6
10	THOMAS ROSS	EXPERT	5392.5	6
11	RICHARDSON PETE	EXPERT	5372.7	6
12	DANRICH DAN	ADVANCED	5323.3	6
13	WHITE LARRY	EXPERT	5270.1	6
14	SMITH MORRY	ADVANCED	5219.3	6
15	NEMECEK DAVID	EXPERT	5162.8	6
16	PANTZAR DICK	EXPERT	5160.6	6
17	CRON AL	EXPERT	5130.2	6
18	MARTIN TONY	EXPERT	4988.6	5
19	RITSCHKE GORDON	EXPERT	4898.0	6
20	YOUNG BRETT	SPORTSMAN	4872.7	6
21	NEHRING CURT	SPORTSMAN	4787.0	6
22	HENDRY STEVE	ADVANCED	4773.7	6
23	PARSONS JIM	SPORTSMAN	4647.8	6
24	POULSEN GORDON	EXPERT	4595.7	5
25	GERMANE BRIAN	ADVANCED	4320.6	5
26	RESETAR EDWARD	SPORTSMAN	4224.2	5
27	LAIR DAN	SPORTSMAN	4070.2	5
28	GERBIN ROBERT Jr	EXPERT	3800.0	4
29	GERBIN BOB	EXPERT	3741.5	4
30	SANDRONI HUGO	ADVANCED	3641.8	4
31	GATES MATTHEW	ADVANCED	3600.6	4
32	BOESE JIM	SPORTSMAN	3174.4	4
33	EDBERG DON	EXPERT	2978.5	3
34	CLERX BEN	EXPERT	2956.3	3
35	RENAUD TIM	EXPERT	2892.4	3
36	BUZOLICH NICK	SPORTSMAN	2791.4	4
37	LUPFERGER JOHN	EXPERT	2779.7	3
38	COLLETT MATT	SPORTSMAN	2499.6	4
39	MILLS ARCHIE	SPORTSMAN	2479.8	3
40	LONG DICK	ADVANCED	2430.7	4
41	McLELLAN KEITH	SPORTSMAN	2314.8	3
42	CHAMBERLIN RALPH	SPORTSMAN	2256.2	3
43	STALLS JARED	EXPERT	1846.2	2
44	SCHOFFRO STEVE	SPORTSMAN	1753.5	2
45	AZVEDO GEORGE	SPORTSMAN	1568.4	2
46	GIBBS DUANE	ADVANCED	1563.3	2
47	VON GROTE BRAD	SPORTSMAN	1317.9	2
48	STOKER PAT	EXPERT	892.2	1
49	OSTROWSKI JOHN	SPORTSMAN	841.8	1
50	STOVALL LEE	SPORTSMAN	815.5	1
51	HARRIS PHIL	EXPERT	882.5	1
52	BONANNO TONY	ADVANCED	869.8	1
53	BYRNE JIM	SPORTSMAN	855.7	1
54	RAMSAY DON	SPORTSMAN	831.1	1
55	DUNCAN BILL	SPORTSMAN	808.6	1
56	CONRAD WILL	ADVANCE	789.8	1
57	STOVALL WILL	SPORTSMAN	705.5	1
58	HARVEY TIM	SPORTSMAN	677.0	1
59	ROWELL WAYNE	SPORTSMAN	634.3	1
60	GROSVENOR WOODY	SPORTSMAN	583.5	1
61	GREENE DENNIS	SPORTSMAN	514.8	1

TWO METER (BEST 6 OF 7)

PLACE	NAME	SCORE	CONTESTS
1	RICHARDSON PETE	5851.8	6
2	JOY GEORGE	5634.5	6
3	KUTCH NORM	5581.3	6
4	THOMAS ROSS	5569.8	6
5	WHITE LARRY	5460.5	6
6	SLIFF BOB	5348.3	6
7	JOY BRYAN	5321.1	6
8	NEHRING CURT	4920.0	6
9	MARTIN TONY	4897.8	5
10	FINK STEVE	4518.5	5
11	LACKEY ROGER	3326.7	4
12	PARSONS JIM	2586.4	3
13	CHAMBERLIN RALPH	2464.4	3
14	LONG DICK	2317.3	4
15	EDBERG DON	1958.5	2
16	BUZOLICH NICK	1920.0	3
17	McLELLAN KEITH	1699.3	2
18	HENDRY STEVE	1608.1	2
19	CONRAD WILL	1513.8	2
20	ANKENBAUER STEVE	1294.1	2
21	MILLS ARCHIE	1088.3	2
22	HALL HERMAN	942.1	1
23	LAIR DANIEL	922.8	1
24	DONAT KURT	855.9	1
25	YOUNG BRETT	836.8	1
26	OSTROWSKI JOHN	184.2	1

SOUTHERN CALIFORNIA SOARING CLUBS  
S.U.L.A. CONTEST OF JUNE 30, 1991  
CONTEST DIRECTOR - JIM BARNHART

SOUTHERN CALIFORNIA SOARING CLUBS  
N.C.C. CONTEST OF JULY 28, 1991  
CONTEST DIRECTOR - KEN RAYMOND

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	PERKINS DARYL	PSS	EXPERT	2984.4	1000.0	1ST. EXP.
2	WURTS JOE	PSS	EXPERT	2905.0	980.0	2ND. EXP.
3	CLEFX BEN	HSS	EXPERT	2893.4	978.0	3RD. EXP.
4	ZINK DON	HSS	EXPERT	2893.6	972.7	4TH. EXP.
5	CHASTELER FRANK	HSS	EXPERT	2876.7	970.4	5TH. EXP.
6	ATWELL BLAIR	DUST	EXPERT	2875.0	968.8	
7	REAGAN MIKE	TOSS	EXPERT	2874.1	968.5	
8	SPENCER RANDY	SULA	EXPERT	2872.7	968.1	
9	FINK DAN	SULA	EXPERT	2867.1	967.2	
10	HENDRY STEVE	HSS	EXPERT	2863.5	966.0	
11	VICKERS DON	SULA	EXPERT	2859.8	964.7	
12	EDBERG DON	DUST	EXPERT	2857.8	964.0	
13	BRANDT DENNIS	HSS	EXPERT	2852.5	962.3	
14	SAGE FRED	NCC	SPORTSMAN	2839.9	958.0	1ST. SPTS
15	LACKEY ROGER	HSS	SPORTSMAN	2832.0	955.3	2ND. SPTS
16	ANDERSON GARY	TPG	EXPERT	2831.1	955.0	
17	SHELBY RICH	HSS	EXPERT	2828.8	954.5	
18	PARSONS JIM	HSS	SPORTSMAN	2787.9	940.5	3RD. SPTS
19	RICHARDSON PETE	HSS	EXPERT	2786.1	939.9	
20	BLEDSCOE RICH	TPG	EXPERT	2782.8	938.7	
21	JOLLY LARRY	SULA	EXPERT	2780.5	938.0	
22	TILLMAN NORM	NCC	EXPERT	2768.8	933.0	
23	CHASTAIN BLAYNE	PSS	EXPERT	2750.8	927.9	
24	ADDIS STEVE	SULA	EXPERT	2744.1	925.7	
25	THOMAS ROSS	HSS	EXPERT	2699.8	910.7	
26	VAN GUNDY DON	TPG	SPORTSMAN	2687.8	906.6	
27	FINKENBINER KEITH	NCC	EXPERT	2680.4	904.2	
28	MORAN MYLES	TOSS	EXPERT	2645.2	892.3	
29	BUTOVICH DAVID	PSS	SPORTSMAN	2636.1	889.3	
30	MCGAMEE ART	TOSS	EXPERT	2635.8	889.2	
31	CHILD MARK	EDSF	SPORTSMAN	2618.5	883.3	
32	LEVCOE MARK	PSS	EXPERT	2565.2	875.5	
33	RITTER CHRIS	DUST	SPORTSMAN	2568.8	873.3	
34	MEIENBERG KEN	NCC	EXPERT	2587.5	872.9	
35	GORDON ALAN	DUST	SPORTSMAN	2566.7	872.6	
36	FINK STEVEN	DUST	SPORTSMAN	2580.9	870.6	
37	LONG DICK	DUST	SPORTSMAN	2577.2	869.4	
38	JCY GEORGE	HSS	EXPERT	2544.0	858.2	
39	BONANNO TONY	SULA	EXPERT	2541.1	857.2	
40	FARLESS DAVID	PSS	EXPERT	2540.9	857.1	
41	NEMECEK DAVE	HSS	EXPERT	2540.8	857.0	
42	STARK TONI	PSS	EXPERT	2517.3	848.2	
43	KEIL DAVID	NCC	SPORTSMAN	2481.0	838.0	
44	CRON AL	HSS	EXPERT	2480.8	838.0	
45	PUCHALSKI MARK	SULA	EXPERT	2445.9	825.1	
46	DOIG AL	NCC	EXPERT	2440.8	823.4	
47	MEININGER	PSS	SPORTSMAN	2440.7	823.3	
48	BHIRT	SULA	EXPERT	2399.9	809.6	
49	DEVLIN	PSS	SPORTSMAN	2389.8	808.2	
50	RAGANS	EDSF	SPORTSMAN	2382.6	803.7	
51	FOSTER WILLIAM	MRCSS	SPORTSMAN	2364.7	797.7	
52	GLASS ROBERT	PSS	SPORTSMAN	2364.2	797.5	
53	PETTEN MICHAEL	HSS	SPORTSMAN	2321.3	783.1	
54	RATNER MIKE	PSS	EXPERT	2321.1	783.0	
55	WEISMAN EDGAR	TOSS	EXPERT	2308.9	778.9	
56	SANDRONI HUGO	DUST	EXPERT	2304.1	777.3	
57	AKERS THOMAS	TOSS	SPORTSMAN	2280.5	772.3	
58	MERENDA KEN	DUST	SPORTSMAN	2280.0	771.8	
59	STROBEL RICH	TPG	SPORTSMAN	2280.1	771.2	
60	AVESON DAVID	SWSA	EXPERT	2285.4	770.9	
61	GABRIEL PINA	PSS	SPORTSMAN	2276.7	768.0	
62	AVESON BRUCE	SWSA	SPORTSMAN	2282.9	768.0	
63	KARP BILL	MRCSS	SPORTSMAN	2224.8	753.9	
64	KLATSKIN SULA	SPORTSMAN	2205.5	744.0		
65	DANRICH DAN	HSS	SPORTSMAN	2203.1	743.2	
66	MORTON MRCSS	SPORTSMAN	2190.6	738.0		
67	NEHRING CURT	HSS	SPORTSMAN	2178.9	735.0	
68	WAGER MARVIN	TPG	SPORTSMAN	2177.2	734.4	
69	GARNER RICH	HSS	EXPERT	2172.5	732.9	
70	CALLAHAN SULA	SPORTSMAN	2086.2	703.8		
71	DOUGLAS IAN	SWSA	EXPERT	2030.6	685.0	
72	MARTIN TONY	HSS	EXPERT	2029.3	684.8	
73	FRAZEE BART	EDSF	SPORTSMAN	1988.1	674.0	
74	SMITH STEVE	DUST	SPORTSMAN	1980.5	661.3	
75	CHASTELER TOM	HSS	EXPERT	1915.0	645.3	
76	STEVENS	SULA	EXPERT	1850.9	624.4	
77	GRISANTI PAUL	MRCSS	SPORTSMAN	1828.9	617.0	
78	VAN GUNDY SUE	TPG	SPORTSMAN	1723.1	581.5	
79	JULIEN HERBERT	MRCSS	SPORTSMAN	1707.1	575.9	
80	YOUNG BRETT	HSS	SPORTSMAN	1683.9	561.3	
81	RITTER GEORGE	DUST	EXPERT	1636.8	552.2	
82	WILSON	EDSF	SPORTSMAN	1618.2	545.2	
83	GOODWIN BROWNE	MRCSS	SPORTSMAN	1452.8	480.0	
84	BATAIS PETER	TOSS	SPORTSMAN	1384.9	467.2	
85	MILLS ARCHIE	SULA	SPORTSMAN	1342.1	452.7	
86	JOHNSON	EDSF	SPORTSMAN	1340.8	452.3	
87	POULSEN GORDON	HSS	EXPERT	784.0	264.5	
88	BUZOLICH NICK	HSS	SPORTSMAN	0.1	0.0	
89	DeANGELO	MRCSS	SPORTSMAN	0.1	0.0	

\* FRED SAGE AND ROGER LACKEY MOVE TO EXPERT

TEAM SCORES

HSS 26	BULA 12	PSS 12	DUST 10	NCC 6	TPG 6	TOSS 6
978.0	989.1	1000.0	980.8	958.0	955.0	969.5
972.7	967.2	980.0	964.0	933.0	938.7	962.3
970.4	964.7	927.9	873.3	904.2	906.6	889.2
966.0	936.0	880.3	872.6	872.9	771.2	778.9
2885.1	2839.0	3797.2	3678.7	3666.1	3571.8	3529.8
MRCSS 7	EDSF 5	SWSA 3	HSS 2	SFVF 0		
797.7	883.3	770.9	964.5			
753.9	803.7	780.0	783.1			
739.0	674.0	685.0				
617.0	545.2					
2907.6	2906.2	2215.9	1737.6			0.0

PLACE	NAME	CLUB	CLASS	SCORE	NORMALIZED	TROPHY
1	ATWELL BLAIR	DUST	EXPERT	2867.0	1000.0	1ST. EXP.
2	CLEFX BEN	HSS	EXPERT	2844.0	988.0	2ND. EXP.
3	LUEKEN JIM	NCC	EXPERT	2836.0	983.0	3RD. EXP.
4	WARNER GARTH	NCC	EXPERT	2826.0	980.2	4TH. EXP.
5	RAYMOND KEN	NCC	EXPERT	2823.0	988.5	5TH. EXP.
6	REAGAN MIKE	TOSS	EXPERT	2818.0	986.1	
7	CLARK DEAN	NCC	EXPERT	2811.0	984.4	
8	MEIENBERG KEN	NCC	EXPERT	2808.0	983.6	
9	BLEDSCOE RICH	TPG	EXPERT	2877.0	972.9	
10	SAGE FRED	NCC	EXPERT	2868.0	969.2	
11	AKERS THOMAS	TOSS	SPORTSMAN	2850.0	968.0	1ST. SPTS
12	STROBEL RICH	TPG	SPORTSMAN	2858.0	968.5	2ND. SPTS
13	VAN GUNDY DON	TPG	SPORTSMAN	2854.0	965.2	3RD. SPTS
14	CHILD MARK	EDSF	SPORTSMAN	2848.0	963.5	
15	HENDRY STEVE	HSS	EXPERT	2845.0	962.1	
16	LEVCOE MARK	PSS	EXPERT	2843.0	961.4	
17	EDBERG DON	DUST	EXPERT	2840.0	960.4	
18	JOY BRYAN	HSS	SPORTSMAN	2840.0	960.4	
19	ANDERSON GARY	TPG	EXPERT	2834.0	958.4	
20	JOY GEORGE	HSS	EXPERT	2813.0	951.3	
21	FINKENBINER KEITH	NCC	EXPERT	2811.0	950.8	
22	MARTIN TONY	HSS	EXPERT	2795.0	948.2	
23	GERMINE BRIAN	HSS	SPORTSMAN	2775.0	938.5	
24	VALDES AARON	TPG	SPORTSMAN	2756.0	933.0	
25	LEHAPPE RICHARD	NCC	SPORTSMAN	2756.0	932.0	
26	VICKERS DON	SULA	EXPERT	2754.0	931.3	
27	SHELBY RICH	HSS	EXPERT	2743.0	927.6	
28	PEITEN MICHAEL	HSS	SPORTSMAN	2742.0	927.3	
29	LACKEY ROGER	HSS	EXPERT	2737.0	925.6	
30	WAGER MARVIN	TPG	SPORTSMAN	2737.0	925.6	
31	CHASTELER TOM	HSS	EXPERT	2724.0	921.2	
32	MAZUR FRANK	NCC	SPORTSMAN	2716.0	918.5	
33	HUNTER JOHN	NCC	EXPERT	2715.0	918.2	
34	HALL DAVID	DUST	SPORTSMAN	2691.0	910.0	
35	BILLMAN TODD	HSS	EXPERT	2682.0	907.0	
36	CHASTELER FRANK	HSS	EXPERT	2681.0	906.7	
37	RODRIGUEZ JOE	HSS	SPORTSMAN	2674.0	904.3	
38	SANDRONI HUGO	DUST	EXPERT	2642.0	893.5	
39	BONANNO TONY	SULA	EXPERT	2614.0	884.0	
40	ZINK DON	HSS	EXPERT	2602.0	878.6	
41	WILSON DAN	EDSF	SPORTSMAN	2604.0	877.1	
42	VALDES AL	TPG	SPORTSMAN	2540.0	859.0	
43	SPITZER GEORGE	PSS	SPORTSMAN	2515.0	850.5	
44	LARSEN ORLA	DUST	EXPERT	2512.0	849.5	
45	WEISMAN EDGAR	TOSS	EXPERT	2508.0	848.2	
46	FINK STEVEN	DUST	SPORTSMAN	2498.0	844.1	
47	RICHARDSON PETE	HSS	EXPERT	2494.0	843.4	
48	GUSTIN RONALD	DUST	EXPERT	2485.0	833.6	
49	BUTOVICH DAVID	PSS	SPORTSMAN	2432.0	822.5	
50	DOIG AL	NCC	EXPERT	2422.0	819.0	
51	POULSEN GORDON	HSS	EXPERT	2413.0	816.0	
52	HIGGINBOTHAM MRC	HSS	EXPERT	2385.0	806.6	
53	DANRICH DAN	HSS	SPORTSMAN	2280.0	774.1	
54	NEHRING CURT	HSS	SPORTSMAN	2280.0	771.1	
55	KUTCH NORM	HSS	EXPERT	2274.0	768.0	
56	CRON AL	HSS	EXPERT	2271.0	766.0	
57	THOMAS ROSS	HSS	EXPERT	2271.0	766.0	
58	CONWAY PATRICK	TPG	SPORTSMAN	2234.0	758.5	
59	PUCHALSKI MARK	SULA	EXPERT	2230.0	754.1	
60	KEIL DAVID	NCC	SPORTSMAN	2157.0	728.5	
61	GRAHAM HUGH	SWSA	SPORTSMAN	2145.0	725.4	
62	STAFFORD IRV	NCC	EXPERT	2142.0	724.4	
63	MERENDA KEN	DUST	SPORTSMAN	2127.0	719.3	
64	FINK DAN	SULA	EXPERT	2109.0	713.2	
65	TILLMAN NORM	NCC	EXPERT	1957.0	661.8	
66	LANDERS AL	DUST	SPORTSMAN	1935.0	654.4	
67	SNEED TOM	TPG	SPORTSMAN	1878.0	635.1	
68	SHERMAN MORT	NCC	SPORTSMAN	1863.0	630.0	
69	MILLS ARCHIE	SULA	SPORTSMAN	1821.0	615.8	
70	BUZOLICH NICK	HSS	SPORTSMAN	1734.0	586.4	
71	PARSONS JIM	HSS	SPORTSMAN	1303.0	440.6	
72	WILSON DENNIS	EDSF	SPORTSMAN	1077.0	364.2	

\* DON VAN GUNDY MOVES TO EXPERT

TEAM SCORES

NCC 15	HSS 19	TPG 9	DUST 9	HSS 5
993.9	995.6	972.9	1000.0	927.6
990.2	982.1	968.5	980.4	927.3
988.5	990.4	985.2	910.0	907.0
984.4	951.3	958.4	893.5	904.3
3667.0	3689.4	3663.0	3783.9	3666.2
BULA 5	TOSS 9	HSS 3	EDSF 3	SWSA 1
931.3	881.1	861.4	863.9	725.4
884.0	896.0	850.5	867.1	
754.1	848.2	822.5	364.2	
713.2				
3282.6	2901.2	2894.4	2194.8	726.4

**SOUTHERN CALIFORNIA SOARING CLUBS**  
**YEAR-TO-DATE STANDINGS**  
**AS OF JULY, 1991**  
**(BEST 5 OF 8 SCORES)**

PLACE	NAME	CLASS	CLUB	SCORE	CONTESTS	PLACE	NAME	CLASS	CLUB	SCORE	CONTESTS
1	ATWELL BLAIR	EXPERT	DUST	4981.9	5	83	BILLMAN TODD	EXPERT	ISS	1757.3	2
2	EDBERG DON	EXPERT	DUST	4914.0	5	84	GUSTIN RONALD	EXPERT	DUST	1753.7	2
3	CLEFX BEN	EXPERT	HSS	4910.0	5	85	MacKENZE SCOTT	EXPERT	BFVF	1697.1	2
4	REAGAN MIKE	EXPERT	TOGS	4865.1	5	86	GOODWIN BROWNE	SPORTSMAN	MRCS	1691.7	3
5	BLEDSEOE RICH	EXPERT	TPG	4743.3	5	87	MCCOLGAN DON	SPORTSMAN	BWSA	1634.3	2
6	CHASTELER FRANK	EXPERT	HSS	4734.8	5	88	CHASTAIN ROGER	SPORTSMAN	PSS	1596.0	2
7	LEVOE MARK	EXPERT	PSS	4698.6	5	89	SADOFF STAN	SPORTSMAN	ISS	1580.3	2
8	LACKEY ROGER	EXPERT	HSS	4641.1	5	90	FOSTER WILLIAM	SPORTSMAN	MRCS	1536.6	2
9	TILLMAN NORM	EXPERT	NCC	4630.1	5	91	MEHA JOE	SPORTSMAN	DUST	1533.5	2
10	MARTIN TONY	EXPERT	HSS	4571.8	5	92	DANRICH DAN	SPORTSMAN	HSS	1517.3	2
11	ANDERSON GARY	EXPERT	TPG	4542.6	5	93	SMITH STEVE	SPORTSMAN	DUST	1459.9	2
12	WEISMAN EDGAR	EXPERT	TOGS	4533.0	5	94	LAUGHLIN SEAN	SPORTSMAN	EDSF	1450.5	2
13	VAN GUNDY DON	SPORTSMAN	TPG	4529.9	5	95	WILSON DAN	SPORTSMAN	EDSF	1412.3	2
14	VICKERS DON	EXPERT	SULA	4524.9	5	96	AVESON DAVID	EXPERT	BWSA	1395.8	2
15	JOY GEORGE	EXPERT	HSS	4521.6	5	97	ANDREWS ROBERT	SPORTSMAN	HSS	1382.1	2
16	FINK STEVEN	SPORTSMAN	DUST	4503.2	5	98	LEAL MIKE	SPORTSMAN	TOGS	1369.2	2
17	SHELBY RICH	EXPERT	ISS	4461.3	5	99	GORDON ALAN	SPORTSMAN	DUST	1345.9	2
18	JOY BRYAN	SPORTSMAN	HSS	4410.9	5	100	CROOK JIM	SPORTSMAN	HSS	1279.0	3
19	THOMAS ROSS	EXPERT	HSS	4408.0	5	101	POWELL REX	SPORTSMAN	DUST	1268.9	2
20	KEIL DAVID	SPORTSMAN	NCC	4285.1	5	102	KARP BILL	SPORTSMAN	MRCS	1263.8	2
21	DOUGLAS IAN	EXPERT	BWSA	4283.9	5	103	GRISANTI PAUL	SPORTSMAN	MRCS	1163.3	2
22	BUTOVICH DAVID	SPORTSMAN	PSS	4220.6	6	104	FAULKENHAM RON	SPORTSMAN	ISS	1121.5	2
23	SPITZER GEORGE	SPORTSMAN	PSS	4197.5	5	105	JULIEN HERBERT	SPORTSMAN	MRCS	1076.4	2
24	MORAN MYLES	EXPERT	TOGS	4146.8	5	106	NIBLEY BILL	EXPERT	TOGS	982.3	2
25	KUTCH NORM	EXPERT	HSS	4142.1	5	107	BURNS RICHARD	EXPERT	PSS	977.8	1
26	PARSONS JIM	SPORTSMAN	HSS	4109.2	5	108	THIBBS NORM	EXPERT	NONE	970.0	1
27	CRON AL	EXPERT	HSS	4096.3	5	109	NORTHERN DON	EXPERT	TOGS	966.6	1
28	WAGER MARVIN	SPORTSMAN	TPG	4092.8	5	110	BRANDT DENNIS	EXPERT	HSS	962.3	1
29	PETTEN MICHAEL	SPORTSMAN	ISS	4026.9	5	111	SWET BOB	SPORTSMAN	TOGS	952.5	1
30	STROBEL RICH	SPORTSMAN	TPG	3918.6	5	112	BAUDER KEVIN	SPORTSMAN	ISS	939.0	1
31	AKERS THOMAS	SPORTSMAN	TOGS	3885.0	5	113	STOKER PAT	EXPERT	SULA	936.6	1
32	LONG DICK	SPORTSMAN	DUST	3773.4	5	114	HARRIS PHIL	EXPERT	HSS	935.8	1
33	SAGE FRED	EXPERT	NCC	3744.6	4	115	LABARRE RICHARD	SPORTSMAN	NCC	932.0	1
34	RODRIGUEZ JOE	SPORTSMAN	ISS	3743.6	4	116	WILKENS DAVE	SPORTSMAN	ISS	926.7	1
35	CHASTAIN BLAYNE	EXPERT	PSS	3698.3	4	117	ADDS STEVE	EXPERT	SULA	925.7	1
36	GERBIN JR ROBERT	EXPERT	HSS	3692.0	4	118	MAZUR FRANK	SPORTSMAN	NCC	918.6	1
37	HENDRY STEVE	EXPERT	HSS	3645.8	4	119	HUNTER JOHN	EXPERT	NCC	918.2	1
38	RATNER MIKE	EXPERT	PSS	3625.9	4	120	BUKSHPAN ROBERT	SPORTSMAN	PSS	901.6	1
39	MILLS ARCHIE	SPORTSMAN	SULA	3600.7	5	121	MORENO MARC	SPORTSMAN	ISS	889.1	1
40	RAYMOND KEN	EXPERT	NCC	3594.7	4	122	OTHON MIKE	SPORTSMAN	ISS	860.4	1
41	GERMAINE BRIAN	SPORTSMAN	HSS	3540.4	4	123	ADOCK KEN	SPORTSMAN	ISS	871.0	1
42	SANDRONI HUGO	EXPERT	DUST	3526.1	5	124	SNEDDEN JERRY	SPORTSMAN	ISS	869.4	1
43	DOG AL	EXPERT	NCC	3483.5	4	125	KOPLAN TERRY	EXPERT	TOGS	868.3	1
44	CHILD MARK	SPORTSMAN	EDSF	3476.8	4	126	VALDES AL	SPORTSMAN	TPG	859.0	1
45	ZINK DON	EXPERT	HSS	3385.6	5	127	NEMECEK DAVE	EXPERT	HSS	857.0	1
46	GATES MATT	EXPERT	HSS	3378.3	4	128	STARK TONI	EXPERT	PSS	849.2	1
47	CHASTELER TOM	EXPERT	HSS	3291.0	4	129	TROUT CRAIG	SPORTSMAN	NONE	840.2	1
48	FINK DAN	EXPERT	SULA	3194.3	4	130	ANDERSON BOB	SPORTSMAN	TPG	832.1	1
49	CONWAY PATRICK	SPORTSMAN	TPG	3147.7	4	131	MEININGER	SPORTSMAN	PSS	823.3	1
50	NEHRING CURT	SPORTSMAN	HSS	3099.7	5	132	ABATO GARY	SPORTSMAN	BFVF	816.2	1
51	WURTS JOE	EXPERT	PSS	2963.4	3	133	SILVA MANNY	SPORTSMAN	ISS	817.9	1
52	MATSUMOTO BEN	EXPERT	PSS	2920.1	3	134	SHORT	EXPERT	SULA	806.6	1
53	PERKINS DARYL	EXPERT	PSS	2910.9	3	135	DEVLIN	SPORTSMAN	PSS	806.2	1
54	LIFF BOB	EXPERT	HSS	2878.2	3	136	RAGANS	SPORTSMAN	EDSF	803.7	1
55	PULSEN GORDON	EXPERT	HSS	2804.1	4	137	GLASS ROBERT	SPORTSMAN	PSS	797.5	1
56	SPENCER RANDY	EXPERT	SULA	2781.3	3	138	SLOBOD ED	SPORTSMAN	BFVF	792.4	1
57	MEINBERG KEN	EXPERT	NCC	2747.0	3	139	MERRIFIELD HAP	SPORTSMAN	TPG	783.4	1
58	JOLLY LARRY	EXPERT	SULA	2725.8	3	140	BARNHART JIM	SPORTSMAN	EDSF	781.2	1
59	BONANNO TONY	EXPERT	SULA	2678.8	3	141	ROHOLT CHRIS	SPORTSMAN	ISS	772.3	1
60	RITTER CHRIS	SPORTSMAN	DUST	2651.5	3	142	GABRIEL PINA	SPORTSMAN	PSS	768.0	1
61	FINNENBNER KEITH	EXPERT	NCC	2647.8	3	143	AVESON BRUCE	SPORTSMAN	BWSA	760.0	1
62	CONDON STEVE	SPORTSMAN	TPG	2646.0	3	144	KLATSKIN	SPORTSMAN	SULA	744.0	1
63	McNAMEE ART	EXPERT	TOGS	2644.1	3	145	CONDON SCOTT	SPORTSMAN	TPG	743.0	1
64	JENKINS HARVEY	EXPERT	ISS	2602.5	3	146	MORTON	SPORTSMAN	MRCS	739.0	1
65	LARSEN ORLA	EXPERT	DUST	2601.2	3	147	PEETERS BOB	SPORTSMAN	EDSF	731.6	1
66	OLSEN ROBIN	EXPERT	BWSA	2575.5	3	148	GRAHAM HUGH	SPORTSMAN	BWSA	725.4	1
67	YOUNG BRETT	SPORTSMAN	HSS	2564.2	4	149	STAFFORD IRV	EXPERT	NCC	724.4	1
68	HALL DAVID	SPORTSMAN	DUST	2539.7	3	150	HUSMANN CHRIS	SPORTSMAN	SULA	714.5	1
69	SCHNEIDER STEVE	SPORTSMAN	TPG	2414.1	3	151	CALLAHAN	SPORTSMAN	SULA	703.8	1
70	HIGGINBOTHAM MARC	EXPERT	ISS	2413.2	3	152	HATCH JOEY	EXPERT	DUST	698.7	1
71	RITTER GEORGE	EXPERT	DUST	2378.2	3	153	BAUDER JR KEVIN	SPORTSMAN	ISS	682.2	1
72	OLSEN PETE	EXPERT	BWSA	2336.8	3	154	BITZBERGER JOHN	EXPERT	BWSA	654.6	1
73	RICHARDSON PETE	EXPERT	HSS	2332.2	3	155	LANDERS AL	SPORTSMAN	DUST	654.4	1
74	PUCHALSKI MARK	EXPERT	SULA	2288.9	3	156	SNEDEN TOM	SPORTSMAN	TPG	635.1	1
75	FRAZEE BART	SPORTSMAN	EDSF	2262.9	3	157	SHERMAN MORT	SPORTSMAN	NCC	630.0	1
76	GERBIN ROBERT	EXPERT	HSS	2228.0	3	158	STEVENS	EXPERT	SULA	624.4	1
77	STAIRS PETER	SPORTSMAN	TOGS	2125.5	3	159	WALDEN WILLIAM	SPORTSMAN	PSS	620.3	1
78	MERENDA KEN	SPORTSMAN	DUST	2110.6	4	160	WILSON JEFF	SPORTSMAN	EDSF	617.0	1
79	LUKEN JIM	EXPERT	NCC	1983.8	2	161	NAVE JOACHIM	SPORTSMAN	BFVF	597.6	1
80	CLARK DEAN	EXPERT	NCC	1942.4	2	162	CONDON DAVID	SPORTSMAN	TPG	595.1	1
81	NIGG DON	EXPERT	SULA	1940.6	2	163	BUZOLICH NICK	SPORTSMAN	HSS	596.4	2
82	BROOKS NOEL	SPORTSMAN	PSS	1932.2	3	164	DAVISON PAUL	SPORTSMAN	DUST	574.8	1
83	WARNER GARTH	EXPERT	NCC	1911.8	2	165	SOWELL DEVON	SPORTSMAN	EDSF	563.7	1
84	VALDES AARON	SPORTSMAN	TPG	1896.7	2	166	QUAYLE JACK	SPORTSMAN	DUST	549.8	1
85	VAN GUNDY SUE	SPORTSMAN	TPG	1845.6	3	167	MORRIS MILTON	SPORTSMAN	BFVF	520.0	1
86	BOYKIN VINCENT	SPORTSMAN	ISS	1840.4	2	168	LOVELL CORY	SPORTSMAN	TPG	503.2	1
87	NOENBERG LOWELL	SPORTSMAN	BFVF	1818.5	2	169	SIMMER ROBERT	SPORTSMAN	TPG	501.5	1
88	GARNER RICH	EXPERT	HSS	1801.8	3	170	JOHNSON	SPORTSMAN	EDSF	452.3	1
89	FARLESS DAVID	EXPERT	PSS	1789.9	2	171	WILSON DENNIS	SPORTSMAN	EDSF	364.2	1
90	CRANFORD KARL	SPORTSMAN	DUST	1785.8	2	172	COLLINS TAYLOR	SPORTSMAN	SULA	291.8	1
91	HALLFORD PHILIP	SPORTSMAN	PSS	1778.3	2	173	CHAMBERLIN RALPH	SPORTSMAN	HSS	0.0	1
92	HOLLEY MARY	EXPERT	BWSA	1771.2	2	174	ORANGELIS	SPORTSMAN	MRCS	0.0	1

**TEAM STANDINGS**

PLACE	CLUB	POINTS	PLACE	CLUB	POINTS
1	HSS	23457.8	7	SULA	18841.7
2	TPG	21843.0	8	ISS	16290.0
3	PSS	21490.1	9	BWSA	14844.2
4	TOGS	21083.5	10	EDSF	11194.1
5	NCC	20413.0	11	BFVF	7903.5
6	DUST	19441.2	12	MRCS	5908.4

