

TOSS -- UP



NEWSLETTER

JUNE 1992

844 CHARLES STREET,

MOORPARK, CA. 93021

A.M.A. CHARTERED CLUB # 1943

EDITOR: BOB SWET 2600 PONDEROSA DRIVE, #15 CAMARILLO, CA. 93010

PRESIDENT:

Mike Leal
844 Charles Street
Moorpark, CA 93021
(805) 529 - 7535

VICE PRESIDENT:

Thomas Akers
1583 Wakefield Ave.
Thousand Oaks, CA 91360
(805) 496 - 6655

SECRETARY:

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Ventura, CA 93001
(805) 652 - 1937

TREASURER:

Bob Swet
2600 Ponderosa Dr., #15
Camarillo, CA 93010
(805) 388 - 9619

CLUB WINCHES:

Thomas Akers	(805) 496 - 6655
Mike Leal	(805) 529 - 7535
Edgar Weisman	(805) 496 - 0611

NEXT CLUB CONTEST:

Date	Saturday, JULY 12, 1992
Place	Redwood School. T.O.
Time	9:00 a.m.
C/D	Myles Moran

NEXT CLUB MEETING:

Date	JUNE 30th, 1992
Day	TUESDAY
Place	Cameron House
Time	7:30 p.m.

TOSS MEETING NOTES FOR MAY

There are no meeting notes for the May 26th meeting. It seems that Larry J. lost them. Since I can't remember anything either, we can assume that nothing earth shattering was discussed.

TREASURER'S REPORT

We have \$730.17 in our account. Please turn in all score cards and contests funds to me after each contest.

THANKS ---Bob---

DELTA CUB CONTEST

Well, we pulled it off again. On May 30th, we had another successful Delta Cub contest thanks to our sponsors and participants. Mother nature even cooperated and provided us with one of those nearly perfect California days of bright sun, nice temperature and a gentle breeze.

Armed with our glue, knives, building boards, planes and prizes, we stormed into the western town at Paramount Ranch and set up shop at the Pavilion. The early morning groups turned out small and allowed us to prepare without much pressure. It also provided us with a chance to teach a few new instructors. This proved to be quite helpful. Little did we know, there was to be soon to be about 30 young Girl Scouts to try their hand at building the balsa and tissue, rubber band powered planes.

We taught the girls how to build and fly the planes while they taught us that girls could enjoy the activity as much as boys. At times, it was difficult to identify who was having the most fun, the little kids or the grown up ones. Thanks to some new techniques and tools, the construction went quick and easy.

Finally, it was time for the fly off, a time to test all our endeavors. At this contest, it was decided to give one prize per round based on whose plane stayed in the air the longest. This worked out easier for the judges and gave everyone a better chance to win. With almost everyone flying every round, seven prizes were distributed among six winning contestants. No one really loses in this contest, for everyone takes home the plane that they had built and the memories of the morning.

Many thanks go to the contest sponsors, instructors and contestants. Without them, this enjoyable event would not be possible. A special thanks goes to John Van Hamersveld for designing, building and bringing wing dihedral jigs. They certainly made a difficult task into child's play.

I hope everyone is looking forward to the next one scheduled in November as much as I am. - Bob -

DELTA CUB SPONSORS

The Red Baron, Camarillo
Radiowave Hobbies, Ventura
Marty's Hobbies, Thousand Oaks
Blue Max Hobby Distributor, Oxnard
National Park System, Agoura

WELCOME ABOARD

We would like to welcome aboard our newest member - Gary Rake. He claims to be just starting, but Just remember, TOSS is out there to help you, so if you have a question, grab your phone and give a member a call.

IMPORTANT DATES TO REMEMBER

For the months of July, August, and September - we will be meeting the last THURSDAY of the month. July 30th, August 27, and September 30th.

UPCOMING EVENTS

July 12 - CVRC New Field Grand Opening - Picnic and Friendship Fun Fly

July 28 - SWASA "Giant Swap Meet" - 7:30 PM at the Pomona First Federal Savings & Loan, Glendora

August 29 - Chino Nightfly

Sept 20 - TPG Handlaunch, Poway

October 3 & 4 - Visalia Fall Soaring Festival

CONVERSION FACTORS

For all those that have Casio watches that give you Standard Altitude and atmospheric pressure or those using vacuum

pumps, here are some conversion factors (at 0 degrees centigrade) for you.

- 1 Atmosphere = 29.92 inches of mercury
- 1 Atmosphere = 14.7 pounds/square inch
- 1 Atmosphere = 1013.1 millibars
- 1 inch of mercury = 33.86 millibars
- 1 inch of mercury = 0.4912 pounds/square inch
- 1 inch of mercury = 70.73 pounds/square foot
- 1 pound/square inch = 144 pounds/square foot



FOR SALE

Bob Martin Talon slope plane, new in box, will trade for used S-133 servo or best offer call James Cowley (805)-568-0077.

06/16/92

1992 THOUSAND OAKS SOARING SOCIETY FREQUENCIES

LAST	FIRST	FREQUENCIES
AZERS	THOMAS	40, 44, 12
ARNOLD	DENNIS	22, 44
BENNETT	JIM	46 6 METER: 56.
BOYNTON	JIM	49
BUZOLICH	NICK	22, 42, 16, 17, 30
DEVLIN	ED	18, 19
ELLIAS	JOHN	20
GEHAGAN	JIM	40 6 METER: 53.2
GRISWOLD	CHUCK	22
HARTMAN	RICHARD	44, 46, 48, 52, 54, 56
HINMAN	STAN & BILL	28
JIMENEZ	LARRY	18, 34, 56
KIM	SONNY	56
KIRBY	FRANK & KYLE	22, 52
KOPLAN	TERRY	37 6 METER:
LEAL	MICHAEL	20, 24, 28
LURRA	FRANK	30, 24, 42
MICHTSCH	ROBERT	40, 44, 38, 48
MORAN	MYLES	
MORGAN	RALPH	32, 38, 34, 42, 46, 50, 56, 11
MCNAMEE	ART	40 6 METER: 56.
MCNAMEE	DON	54
NORTHERN	DON	40, 48, 52, 42, 54
OLDENBURG	ED	6 METER: 53.3
PERSON	DAVID	34
RAKE	GABY	26
RATNER	MICHAEL	16, 17, 30
REAGAN	MIKE	40
ST. LAWRENCE	DON	28, 48
STERN	MICHAEL	
SUTTON	ROBERT & BOB JB.	38, 40, 44
SWBT	BOB	16, 31, 34, 42, 54
VAN HANESVELD	JOHN	28, 32, 40, 46, 50
VANNETT	DANE	14, 19, 50, 54
WALANCE	BOB	16, 46, 50, 52
WARREN	JIM	40
WEISMAN	EDGAR and B.J.	32, 12, 48
WILLIS	BEN	22

Slope Race

SPONSORED BY: HARBOR SOARING SOCIETY

DATE: SATURDAY, AUGUST 24, 1991 (MAKE-UP AUGUST 25)

LOCATION: FAIRVIEW PARK BLUFFS WEST OF H.S.S. FIELD

ENTRY FEE: \$5.00

CONTEST DIRECTOR: KEITH McLELLAN (714) 832-9257

REGISTRATION: 11:00 A.M.

The race will be flown on Saturday, allowing a continuation on Sunday if weather or other factors do not cooperate.

Pilots may compete in only one of two divisions. Division 1 is for the more experienced pilots or competitive planes while Division 2 is aimed at those who want to experience a slope race without the burden or expense of special models or equipment.

Division 1: OPEN CLASS (Any model type or size)
 No wing-loading limit
 8 Laps, around 3 pylons

Division 2: Rudder/Elevator only (spoilers ok)
 No size limit
 No wing-loading limit
 6 laps, around 2 pylons

The following rules apply to both divisions:

3 Rounds of competition, plus fly-offs for ties
 4 planes per heat maximum
 1st. place finisher in each heat is timed
 In the event of a frequency conflict in a fly-off, each pilot may be required to fly for time if no other solution exists
 All pilots must be current A.M.A. members
 All models must display pilot's A.M.A. number (minimum 1 inch high)
 All radios must be 1991 Gold-stickered

For further information, contact Keith McLellan or Ed Resetar at (714) 832-9257

A NEW WING ROD MATERIAL

By: Bob Bayard

Recently some of the SBSS builders have discovered a new wing rod material, a series of fiberglass rods available at TAP Plastics in sizes of 1/8", 1/4", 3/8", 1/2", 3/4" and 1". You can get a six foot length of any of them for a few dollars. (Six feet of 1/2" costs only \$6.) So I decided to get a few sizes and see how they stand up to the steel and carbon fiber rods that Dave Squires and I measured recently (Silent Flyer, June 1991).

I measured the strengths of 1/4", 3/8" and 1/2" rods of this material using the same sort of setup that Dave and I used on the other kinds of wing rod material. The moments at failure for these three rod sizes are given in Table 1. Each of the samples failed in both tension and compression, i.e. buckling of the upper or compression fibers and breaking of the lower or tension fibers. However, and this could be very important, none of them snapped in two the way the carbon fiber samples did. Instead, the center fibers did not break, leaving a much weaker but still unbroken rod. Also shown in the table are the bending angles for these samples just before breaking. The unsupported length of rod in each case was 1/4". These bending angles are quite large enough to be easily noticed on launch by even the most carefree gorillas.

Surprisingly, these samples are not a lot weaker than the carbon fiber rods. The data for carbon fiber rods are given in Table 2. In fact, the 1/2" fiberglass rod was actually stronger than the same sized carbon fiber rod. Also, the relation of bending moment at failure to the cube of the diameter is much more consistent for the fiberglass rods than it was for carbon fiber, as can be seen in the tables. (The moment divided by diameter cubed should theoretically be the same for all sizes of a given rod material.)

How can it be that the failures in these rods are so close to those for the carbon fiber when everyone knows that carbon fiber is so much stronger than anything else? The carbon fiber rods failed in compression only, with the tension fibers undamaged. The fiberglass failed in both tension and compression, evidently essentially simultaneously. So maybe

fiberglass is relatively better in compression compared to tension than is carbon fiber. This is consistent with what Reinhard Lahde and I discovered in our study of spar strength, where we found that it takes about three times as much carbon fiber in compression as in tension to make a balanced design.

The weight of these fiberglass rods is only about 22% that of steel rods. The 1/2" fiberglass rod failure moment of 142.5 ft.lbs. is about three times the elastic limit of the 11/32" case hardened rods used by many of our members in their Falcons and other "hot" models. Before such a fiberglass rod failed, your straight-winged bird would become a dihedral model in front of your very eyes. Yet the 1/2" fiberglass rod is only half as heavy as the 11/32" steel and about one tenth the cost. Seems like a good deal to me.

TABLE #1
FIBERGLASS RODS

Dia. (inch)	Moment at Failure (ft.lbs.)	Moment/ Dia. cubed	Bending Angle (Degrees)
1/4	17.5	1120	18
3/8	67.0	1270	19
1/2	142.5	1140	24

TABLE #2
CARBON FIBER RODS

Dia. (inch)	Moment at Failure (ft.lbs.)	Moment/ Dia. cubed
1/4	24	1536
3/8	90	1707
1/2	123	984

SOUTHERN CALIFORNIA SOARING CLUBS
RESULTS OF NCC (SC) 2 CONTEST OF 05/31/92
CONTEST DIRECTOR - KEITH FINKENBINER

PLACE	NAME	CLUB	CLASS	SCORE	NORMAL	TROPHY
1	CLERK, BEN	HSS	EXPERT	2987.0	1000.0	E - 1
2	MARTIN, TONY	HSS	EXPERT	2985.0	999.3	E - 2
3	MEIENBERG, KEN	NCC	EXPERT	2974.0	995.6	E - 3
4	SMITH, MICHAEL	NCC	EXPERT	2970.0	994.3	E - 4
5	EDBERG, DON	HSS	EXPERT	2952.0	988.3	E - 5
6	LACKEY, ROGER	HSS	EXPERT	2945.0	985.9	
7	MORAN, MYLES	TOSS	EXPERT	2944.0	985.6	
8	REAGAN, MIKE	TOSS	EXPERT	2940.0	984.3	
9	LEUKEN, JIM	NCC	EXPERT	2932.0	981.6	
10	ANDERSON, GARY	TPG	EXPERT	2916.0	976.2	
11	LEVOE, MARK	PSS	EXPERT	2913.0	975.2	
12	BLEDSELOE, RICHARD	TPG	EXPERT	2911.0	974.6	
13	WEISMAN, EDGAR	TOSS	EXPERT	2898.0	970.2	
14	JOY, GEORGE	TPG	EXPERT	2889.0	967.2	
15	CHASTELER, FRANK	HSS	EXPERT	2885.0	965.9	
16	ANDERSON, ROBERT	TPG	EXPERT	2884.0	965.5	
17	ATWELL, BLAIR	SULA	EXPERT	2883.0	965.2	
18	BILLMAN, TODD	ISS	EXPERT	2866.0	959.5	
19	RAYMOND, KEN	NCC	EXPERT	2858.0	956.8	
* 20	SPITZER, GEORGE XX	PSS	SPORTSMAN	2853.0	955.1	S - 1
* 21	SADOFF, STAN XX	ISS	SPORTSMAN	2847.0	953.1	S - 2
21	ZINK, DON	HSS	EXPERT	2847.0	953.1	
23	FINKENBINER, KEITH	NCC	EXPERT	2844.0	952.1	
24	WARNER, GARTH	NCC	EXPERT	2789.0	933.7	
25	CONDON, STEPHEN	TPG	SPORTSMAN	2771.0	927.7	S - 3
26	HENDRY, STEVE	HSS	EXPERT	2748.0	920.0	
27	NEHRING, CURT	HSS	SPORTSMAN	2721.0	910.9	
28	BATES, JEFF	NCC	SPORTSMAN	2705.0	905.6	
29	THACKER, BOB	NONE	EXPERT	2607.0	872.8	
30	BRISTER, KEVIN	TPG	SPORTSMAN	2602.0	871.1	
31	SMITH, STEVE	DUST	SPORTSMAN	2599.0	870.1	
32	SAGE, FRED	NCC	EXPERT	2578.0	863.1	
33	OLSEN, PETER	SWSA	EXPERT	2571.0	860.7	
34	GATTI, MARK	PSS	SPORTSMAN	2569.0	860.1	
35	VALDES, AARON	TPG	EXPERT	2557.0	856.0	
36	RODRIGUEZ, JOE	ISS	EXPERT	2549.0	853.4	
37	FAULKENHAM, RON	XX	ISS	SPORTSMAN	2472.0	827.6
38	DUNCAN, BILL	EDSF	SPORTSMAN	2464.0	824.9	
39	STROBEL, RICH	TPG	EXPERT	2442.0	817.5	
40	WIDMAN, DAVID	NONE	EXPERT	2426.0	812.2	
41	DEAN, THOMAS	NCC	SPORTSMAN	2415.0	808.5	
42	SLIFF, BOB	HSS	EXPERT	2410.0	806.8	
43	WILSON, DAN	XX	EDSF	SPORTSMAN	2386.0	798.8
44	VAN GUNDY, SUE	TPG	SPORTSMAN	2371.0	793.8	
45	GUSTIN, RON	DUST	EXPERT	2364.0	791.4	
46	MARKLE, JIM	SULA	EXPERT	2346.0	785.4	
47	DOUGLAS, IAN	SWSA	EXPERT	2340.0	783.4	
48	KEIL, DAVID	NCC	SPORTSMAN	2302.0	770.7	
49	YOUNG, BRETT	HSS	SPORTSMAN	2297.0	769.0	
50	LEE, MICHAEL	TPG	SPORTSMAN	2274.0	761.3	
51	PUCHALSKI, MARK	SULA	EXPERT	2251.0	753.6	
52	VAN GUNDY, DON	TPG	EXPERT	2241.0	750.3	
53	HALL, DAVID	DUST	SPORTSMAN	2238.0	749.2	
54	KUTCH, NORM	HSS	EXPERT	2226.0	745.2	
55	CONDON, SCOTT	TPG	SPORTSMAN	2222.0	743.9	

SOUTHERN CALIFORNIA SOARING CLUBS
RESULTS OF NCC (SC) 2 CONTEST OF 05/31/92
CONTEST DIRECTOR - KEITH FINKENBINER

PLACE	NAME	CLUB	CLASS	SCORE	NORMAL	TROPHY
56	STAFFORD, IRV	NCC	EXPERT	2219.0	742.9	
57	HALLFORD, PHILIP	PSS	SPORTSMAN	2217.0	742.2	
58	CONWAY, PATRICK	XX	TPG	SPORTSMAN	2212.0	740.5
59	JOY, BRYAN XX	TPG	SPORTSMAN	2199.0	736.2	
60	LUGO, BRENDAN	NCC	SPORTSMAN	2189.0	732.8	
61	DOIG, AL	NCC	EXPERT	2174.0	727.8	
62	FINK, STEVEN	SULA	EXPERT	2133.0	714.1	
63	AVESON, BRUCE	SWSA	SPORTSMAN	1973.0	660.5	
64	WAGER, MARVIN	TPG	SPORTSMAN	1962.0	656.8	
65	HUNTER, CLIFF	NCC	SPORTSMAN	1950.0	652.8	
66	CLARK, DEAN	NONE	EXPERT	1895.0	634.4	
67	AKERS, THOMAS	TOSS	EXPERT	1865.0	624.4	
68	JENKINS, HARVEY	ISS	EXPERT	1803.0	603.6	
69	KLATSKIN, BILL	SULA	SPORTSMAN	1762.0	589.9	
70	RICHMOND, DON	TPG	SPORTSMAN	1716.0	574.5	
71	FINK, DAN	SULA	EXPERT	1660.0	555.7	
72	THOMAS, ROSS	HSS	EXPERT	1656.0	554.4	
73	AGUIRRE, MIKE	HSS	SPORTSMAN	1642.0	549.7	
74	MONAHAN, SEAN	XX	SULA	SPORTSMAN	1641.0	549.4
75	SWANSON, NORM	NCC	SPORTSMAN	1575.0	527.3	
76	BUZOLICH, NICK	HSS	SPORTSMAN	1547.0	517.9	
77	YOUNG, PETER	HSS	SPORTSMAN	1310.0	438.6	
78	ANDREWS, ROBERT	ISS	SPORTSMAN	1297.0	434.2	
79	SHELBY, RICK	NCC	SPORTSMAN	1130.0	378.3	
80	SANDRONI, HUGO	DUST	EXPERT	652.0	218.3	
81	MERRIFIELD, HAROLD	TPG	SPORTSMAN	0.0	0.0	

* GEORGE SPITZER AND STAN SADOFF MOVE TO EXPERT

Southern California Soaring Clubs
RESULTS OF NCC (SC) 2 CONTEST OF 05/31/92
TEAM SCORES

HSS	15	NCC	16	TPG	17	ISS	6	TOSS	4	PSS	4	SWSA	3	EDSF	2	SFVP	0	MRC	0
	1000.0	995.6	994.3	981.6	956.8	976.2	959.5	985.6	975.2	955.1	984.3	860.7	824.9	870.1	798.8				
	999.3	994.3	981.6	956.8	976.2	959.5	985.6	975.2	955.1	984.3	860.7	824.9	870.1	798.8					
	988.3	981.6	956.8	976.2	959.5	985.6	975.2	955.1	984.3	860.7	824.9	870.1	798.8						
	985.9	956.8	976.2	959.5	985.6	975.2	955.1	984.3	860.7	824.9	870.1	798.8							
	3973.5	3928.3	3883.5	3593.6	3564.5	3532.6	3218.3	2629.0	2304.6	1623.7	0.0	0.0	0.0						

06/13/92		OPEN CLASS STANDINGS			HIGH SCORE = 1912					
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	
1	MIKE REAGAN	TOSS	5852	1000	980	1000	1000	872	1000	
2	DON McNAMEE	TOSS	4574	920	0	958	736	1000	960	
3	BOBSWET	TOSS	4492	935	943	757	175	695	987	
4	EDGAR WEISMAN	TOSS	4371	955	882	982	0	604	948	
5	THOMAS AKERS	TOSS	3930	917	944	170	997	902	0	
6	DON NORTHERN	TOSS	3916	980	0	985	994	957	0	
7	ART McNAMEE	TOSS	3852	923	963	979	987	0	0	
8	MYLES MORAN	TOSS	2812	837	1000	975	0	0	0	
9	B.J. WEISMAN	TOSS	1984	0	994	990	0	0	0	
10	MIKE LEAL	TOSS	1861	0	953	908	0	0	0	
11	PETER STAIRS	????	940	0	0	940	0	0	0	
12	JOHN ELLIAS	TOSS	881	0	0	881	0	0	0	
13	HERB JULIEN	MRCSS	809	0	809	0	0	0	0	
14	LARRY JIMENEZ	TOSS	602	602	0	0	0	0	0	
15	BILL KARP	????	566	0	0	0	0	0	566	
16	HERB JULIAN	????	0	0	0	0	0	0	0	

06/13/92		2 METER CLASS STANDINGS			HIGH SCORE = 1762					
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	
1	MIKE REAGAN	TOSS	3912	0	1000	1000	1000	0	912	
2	BOBSWET	TOSS	3593	1000	860	724	188	331	490	
3	DON McNAMEE	TOSS	2976	0	0	977	999	0	1000	
4	EDGAR WEISMAN	TOSS	2843	841	485	0	0	575	942	
5	THOMAS AKERS	TOSS	2273	0	343	696	712	0	522	
6	ART McNAMEE	TOSS	1840	841	898	942	0	0	0	
7	LARRY JIMENEZ	TOSS	1835	0	741	563	0	0	531	
8	B.J. WEISMAN	TOSS	1802	877	925	0	0	0	0	
9	MIKE LEAL	TOSS	1010	0	0	0	0	1000	10	
10	ED DEVLIN	MRCSS	866	0	703	0	163	0	0	
11	DANE VANNETT	TOSS	756	0	0	0	0	0	756	
12	MIKE PUCKETT		629	0	0	629	0	0	0	

06/13/92		SPORTSMAN CLASS STANDINGS				HIGH SCORE = 660				
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	
1	LARRY JIMENEZ	TOSS	3720	703	752	886	1000	0	379	
2	PETER STAIRS	????	1891	1000	891	0	0	0	0	
3	JOHN ELLIAS	TOSS	1770	824	0	946	0	0	0	
4	ED DEVLIN	TOSS	1000	0	1000	0	0	0	0	
5	JIM GEOHAGAN	TOSS	1000	0	0	0	0	1000	0	
6	DANE VANNETT	TOSS	1000	0	0	1000	0	0	0	
7	BEN WILLIS	TOSS	1000	0	0	0	0	0	1000	
8	B.J. WEISMAN	TOSS	807	807	0	0	0	0	0	
9	DON ST. LAWRENCE	TOSS	0	0	0	0	0	0	0	
10	JOHN VAN HAMERSVELD	TOSS	0	0	0	0	0	0	0	

06/11/92

1992 THOUSAND OAKS SOARING SOCIETY ROSTER

LAST	FIRST	PHONE NO	STREET	CITY	ST	ZIP	AMA #
AKERS	THOMAS	(805) 496-6655	1583 WAKEFIELD AVE	THOUSAND OAKS	CA	91360	385783
ARNOLD	DENNIS	(818) 988-4354	6535 HASKELL AVENUE	VAN NUYS	CA	91406	249690
BENNETT	JIM	(805) 373-1480	1478 OBERLIN AVE.	THOUSAND OAKS	CA	91360	72810
BOYNTON	JIM	(818) 347-0982	6953 MINSTREL AVE.	WEST HILLS	CA	91307	411517
BUZOLICH	NICK	(714) 854-3689	19366 SIERRA BELLO RD.	IRVINE	CA	92715	147697
DEVLIN	ED	(818) 848-9520	839 E VERDUGO AVE.	BURBANK	CA	91501	14094
ELLIAS	JOHN	(805) 388-5674	1961 VIA MONTECITO	CAMARILLO	CA	93012	304647
GEOHAGAN	JIM	(805) 388-1130	5643 E. WILLOW VIEW DRIVE	CAMARILLO	CA	93012	143567
GRISWOLD	CHUCK	(805) 495-1409	1646 LA JOLLA DR.	THOUSAND OAKS	CA	91362	12108
HARTMAN	RICHARD	(805) 488-6136	1852 SANFORD ST	OXNARD	CA	93033	1119039
HINMAN	STAN & BILL	(805) 484-1149	5260 HIDALGO ST.	CAMARILLO	CA	93010	15233
JIMENEZ	LARRY	(805) 652-1937	1943 CHANNEL DR.	VENTURA	CA	93013	378742
KIM	SONNY	(805) 523-3436	15266 #A CAMPUS PARK DRIVE	MOORPARK	CA	93021	437956
KIRBY	FRANK & KYLE	(805) 495-1997	1967 CAMPBELL AVE	THOUSAND OAKS	CA	91360	419022
KOPLAN	TERRY	(818) 889-6984	30434 W. RAINBOW CREST DR.	AGOURA HILLS	CA	91301	71615
LEAL	MICHAEL	(805) 529-7535	844 CHARLES ST.	MOORPARK	CA	93021	334482
LUERA	FRANK	(805) 684-1384	5956 VIA REAL #2	CARPINTERIA	CA	93013	392617
MICHITSCH	ROBERT	(818) 991-0666	6012 COLODNY DR.	AGOURA HILLS	CA	91301	222852
MORAN	MYLES	(818) 882-4687	10428 OSO AVE.	CHATSWORTH	CA	91311	18426
MORGAN	RALPH	(805) 484-7728	2120 GORMAN STREET	CAMARILLO	CA	93010	11074
McNAMEE	ART	(805) 526-6292	2645 PLACERVILLE CT.	SIMI VALLEY	CA	93063	7417
McNAMEE	DON	(805) 526-3145	2291 NORTH HIETTER	SIMI VALLEY	CA	93063	48996
NORTHERN	DON	(805) 523-1018	3977 WILLOWCREEK Ln.	MOORPARK	CA	93021	28279
OLDENBURG	ED	(805) 497-7463	951 WARWICK AVE. #A2	THOUSAND OAKS	CA	91360	106776
PERSON	DAVID	(805) 498-7607	606 VALLEY OAK LANE	THOUSAND OAKS	CA	91320	398962
RAKE	GARY	(805) 498-2613	947 DRIFTWOOD CIRCLE	NEWBURY PARK	CA	91320	437635
RATNER	MICHAEL	(818) 760-2770	4332 COLDWATER CYN.	STUDIO CITY	CA	91604	1227
REAGAN	MIKE	(805) 529-5513	14705 LOYOLA ST.	MOORPARK	CA	90321	93756
ST. LAWRENCE	DON	(805) 497-9681	207 SOMERSET CIRCLE	THOUSAND OAKS	CA	91360	409441
STERN	MICHAEL	(805) 492-8452	745 LYNNMERE DR.	THOUSAND OAKS	CA	91360	131478
SUTTON	ROBERT & BOB JR.	(805) 498-4342	3415 CRESTWOOD CT.	NEWBURY PARK	CA	91320	81773
SWET	BOB	(805) 388-9619	2600 PONDEROSA DR. APT.15	CAMARILLO	CA	93010	83283
VAN HAMERSVELD	JOHN	(805) 492-5904	2826 N MARIETTA CIRCLE	THOUSAND OAKS	CA	91360	136313
VANNETT	DANE	(805) 494-4520	689 MC CLOUD AVENUE APT #202	THOUSAND OAKS	CA	91360	433610
WALANCE	BOB	(805) 499-4635	142 DEWEY AVE.	NEWBURY PARK	CA	91320	359661
WARREN	JIM	(805) 494-3031	1694 EL DORADO	THOUSAND OAKS	CA	91362	404518
WEISMAN	EDGAR and B.J.	(805) 496-0611	752 CAMINO VALLES	THOUSAND OAKS	CA	91360	67651
WILLIS	BEN	(805) 496-7404	196 QUAILS TRAIL	THOUSAND OAKS	CA	91361	317876

T.O.S.S. R/C CHANNEL USAGE

CH.	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
QTY		2		1		4	2	3	2	2		5		2		1		4		3	1	3		4	
CH.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
QTY		1	3		9		5		5		5		5	1	4		4		5		4				