

T O S S ' n U P



NEWSLETTER

APRIL 1991

T.O.S.S. P.O. BOX 1955

THOUSAND OAKS, CA. 91360

A.M.A. CHARTERED CLUB # 1493

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Next Contest:	June 9th 1991
C/D:	Chuck Griswold
Place	Redwood School

Next Meeting:	June 26th 1991
Place:	CAMERON HOUSE
	Map in this issue
Time	7:30 p.m.



LSF DAY

We held our first LSF Day on May 5th. The weather was fair, the lift was good, the turnout was poor. The idea was to get all those striving for LSF 1 and 2 ratings out to the field with their paperwork and to nail some of those requirements. Well, some of you missed your chance. There was 15 minute air, there was landing tape, and there were witnesses with pens. All you had to do was to show up and fly. The end results were:

Thomas Akers - still needs a landing or two for LSF 1.

Mike Leal - completed two five minute flights (however, only one was legal) and most of the landing requirements for LSF 1.

Bob Swet - completes his remaining requirements for LSF 1.

WHAT'S NEW ?

Where were you all when we had the last meeting. Did you forget about it? Do we have to send you invitations ??? Don't forget this month meeting on the 29th at the Cameron House.

Just to entice you all in coming out to the May meeting, the NEW T.O.S.S . ID CARDS will be available for all those who attend.

We still have some XL and Medium T-Shirts available for \$10.

For all those who participated in the May TOSS contest at Paramount Ranch and are still picking those Foxtails out of their sneakers and socks, we have some good news. Edgar will reserve the Parking Lot for our next (JULY) contest. That should save each of us at least two hours in post-contest efforts and some tree climbing for those people who can't seem to find the landing approach.

Don't forget that some of our local dealer's offer club members a discount. Some will offer "Mail Order Prices + shipping" deals. So the next time you want to buy something, try Marty's or Blue Max. As a personal note, the last time I bought some S-133 servos down at Blue Max, he was the same price as Tower's 3 for sale, the best part was that you didn't have to buy three to get the sale price. P.S. Don't forget the Red Baron, they offer most items at

discounted prices.

Bob Swet

Hi sport fans, this is your old editor and chief bottle washer. Just thought I'd put in a word.

First, thanks Bob, you're doing a great job.

It's good to see that Ed Oldenburg is back flying. Better practice Ed, while you've been away everyone has improved a little.

The word is out; Fifty dollars worth of plastic PVC will not support it's own weight. Ask Mike Leal how you get a Wanderer out of a Big "O" Tree.

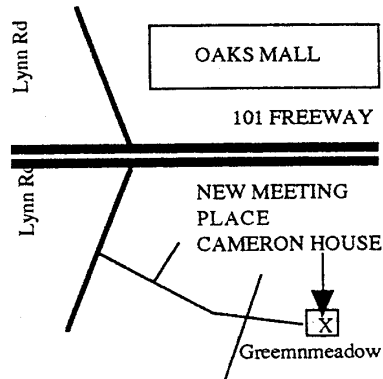
While trying to do a weight and balance on my Discus, the wheel rolled off of the scale and I put a hole in the bottom of my wing. I'll guarantee that Monokote is easier to repair than fiberglass over foam. The only reason I wanted a Weight and Balance done was to move the C/G back a little. They say about 20 % of MAC is a good place to start. Let's see, — you move it back until it starts to tuck then back off a little — right?



I flew my first X/C on May Third. Guess where. Of all places— Taft. We flew a 105 mile out and back task in 193 minutes. Joe Wurts where are you? Spent all day looking down trying to find dust devils. Makes little difference wither it's a 1200 pound bird or an 11 pound model. When you hit it, the wing comes up and you get a boot in the pants. Quite an experience.

Later Chuck

This is the new meeting place. It's right across the freeway from the old meeting place. From Lynn Rd. turn left on Greenmeadow go to the end. You can't go any farther. Look for signs indicating the Cameron House.






C/D's For the Year.



Jan (Sat)	Ralph Morgan
Feb (Sun)	Edgar Weisman
Mar (Sat)	Mike Leal
Apr (Sun)	Myles Moran
May (Sat)	Bob Goldsmith
Jun (Sun)	Chuck Griswold
Jul (Sat)	Terry Koplan
Aug (Sun)	Bob Swet
Sept.	TOSS X COUNTRY
Oct (Sat)	Mike Regan
Nov (Sun)	Eric Hendrickson
Dec (Sat)	Rich Hartman



June 1991

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
Fun fly day 	2	3	4	5	6	7
TOSS CONTEST RED- WOOD SCHOOL 	9	10	11	12	13	14
F3B Fundraiser Beat the F3B team Pasadena. Money will be donated to the F3B team.	16	17	18	19	20	21
23	24	25	26	27	28	29
SULA SC squared 	30					

July 1991

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
Fun Fly 	7	8	9	10	11	12
						13
						14
						15
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						20
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						26
						27
Orth County Hills/ San Marcos 	28	29	30	31		

T.O.S.S. Calendar of events. Please contact officers for car pool information



F3B FUNDRAISER
PASADENA SOARING SOCIETY--BROOKSIDE PARK

JUNE 16TH 1991

COME OUT AND BEAT THE TEAM

ALL THREE F3B TEAM MEMBERS WILL BE FLYING THIS CONTEST
SO COME OUT--SUPPORT THE TEAM AND TRY TO BEST THEIR SCORES

OPEN TO EXPERT AND SPORTSMEN CLASSES

100% OF THE ENTRY FEES WILL BE DONATED TO THE TEAM

AMA SANCTIONED EVENT

ALL AMA 1991 RADIO RULES APPLY-- NOTE NO CH 12

TASKS: 4 ROUNDS THERMAL DURATION 7 MINUTES EACH ROUND
STANDARD TAPE LANDINGS (25FT)

CLASSES: UNLIMITED AND 2-METER

TROPHIES: 1ST THRU 3RD UNLIMITED
1ST AND 2ND SPORTSMAN
1ST THRU 3RD 2-METER

ENTRY FEE: \$5.00 PER ENTRY

SIGNUP 8:00AM

FIRST FLIGHT 9:00AM

RAFFLE: AIRTRONICS LEDGEND AND MORE--ALL PRIZES ARE
DONATED AND ALL THE MONEY RAISED WILL ALSO
BE DONATED TO THE TEAM.

F3B GOODIES- HATS, SHIRTS, PINS, ETC WILL BE AVAILABLE
ON THE FIELD

FOOD: THE BOY SCOUTS WILL BE SERVING HOT DOGS -
HAMBURGERS, ETC. ALL DAY.

SUPPORT THE BEST US TEAM EVER

SOARING UNION OF LOS ANGELES



ANNOUNCES IT'S SC/2 R/C SOARING

DATE: SUNDAY, JUNE 30, 1991, 9:00 A.M. PILOTS MEETING
 C/D: JIM BARNHART (213) 421-3583
 SULA PRESS: DAVE RICHARDS (213) 634-7775

LOCATION: CALIFORNIA STATE UNIVERSITY DOMINGUEZ HILLS,
 CARSON, CA.

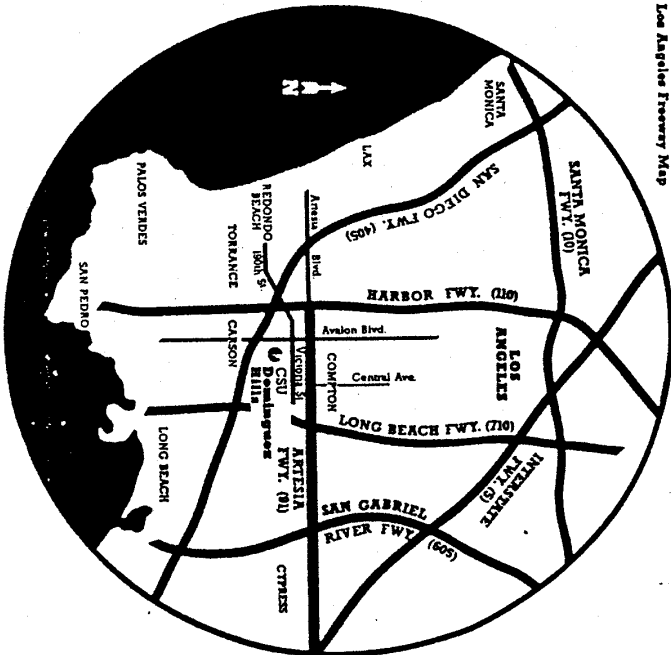
EVENTS: THREE ROUNDS PRECISION DURATION. MUST FLY ONE OF EACH
 TYPE.

- 3 MIN. SCORED 700 / FLIGHT 300 LANDING POINTS
- 5 MIN. SCORED 800 / FLIGHT 200 LANDING POINTS
- 7 MIN. SCORED 900 / FLIGHT 100 LANDING POINTS

LANDINGS: 50 FOOT DIAMETER CIRCLES
 SURFACE - DIRT AND SCRUB GRASS
 WINCHES: 12 VOLT WINCHES WITH RETRIEVERS
 APPX. 900 FEET TO TURN AROUND

A.M.A. SANCTIONED \$ 6.00 ENTRY FEE 1991 RADIO RULES APPLY
 JUNE 30, 1991 SULA FIELD
 HOT DOGS & BODAS AVAILABLE ON THE FIELD.
 MAP ON PAGE 11

Los Angeles Freeway Map



1000 East Victoria Street, Carson, CA 90747 • (213) 516-3300

California State University
 Dominguez Hills

FROM LOS ANGELES CITY CENTER: 10 SOUTH-Hollow the Harbor Freeway (110) to the Anaheim Freeway (5) east to Avalon Blvd. Turn left on Avalon Blvd. south to Victoria Street, turn left. The entrance to campus is a right turn at Thandell Avenue.

FROM SAN FERNANDO VALLEY: 105 SOUTH or 101 EAST: Follow the San Diego Freeway (5) south toward Long Beach. Exit on the Vermont Avenue off-ramp. Turn left (east) at the end of the off-ramp onto 180th Street. Follow 180th Street east for approximately two miles to the campus (180th Street becomes Victoria Street). The campus entrance is a right turn at Thandell Avenue, the first traffic signal past Avalon Blvd.

FROM SANTA MONICA: 10 EAST: Follow the Santa Monica Freeway (10) east to the San Diego Freeway (5) south toward Long Beach. Exit at the Vermont Avenue off-ramp. Turn left (east) at the end of the off-ramp onto 180th Street. Follow 180th Street east for approximately two miles to the campus (180th Street becomes Victoria Street). The campus entrance is a right turn at Thandell Avenue, the first traffic signal past Avalon Blvd.

FROM ABERNETHY & NORTH: Follow the Santa Ana Freeway (5) north to the Artesia Freeway (61) west toward Redondo Beach. Exit on Central Avenue and turn right onto Victoria Street. The campus entrance is a left turn at Thandell Avenue, a traffic signal.

FROM SAN PEDRO: 404 NORTH: Follow the San Diego Freeway (5) north to the Los Angeles Freeway (10) east toward Long Beach. Exit on Central Avenue and turn right onto Victoria Street. The campus entrance is a left turn at Thandell Avenue, a traffic signal.

NORMALIZED

Max score MAY 3000

Highest T.Q.S.S. score MAY 2507

UNLIMITED CLASS NORMALIZED TO 1000

#	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	REGAN	TOSS	4572	1000	853	980	1000	738
2	WEISMAN	TOSS	4257	487	948	830	996	1000
3	GOLDSMITH	TOSS	3207	934	669	570	541	493
4	SWET	TOSS	2820	0	726	741	696	657
5	NORTHERN	TOSS	2584	0	876	1000	708	0
6	MORAN	TOSS	1999	0	1000	0	999	0
7	MORGAN	TOSS	1980	741	0	926	0	313
8	HARTMAN	TOSS	1855	923	0	932	0	0
9	OLDENBURG	TOSS	1158	0	546	0	0	612
10	BEN M.	PSS	959	0	959	0	0	0
11	McNAMEE A.	TOSS	841	0	0	0	841	0
12	BURNS	PSS	721	0	721	0	0	0
13	BROOKS	PSS	649	0	649	0	0	0
14	KOPLAN	TOSS	573	573	0	0	0	0
15	RATNER	PSS	461	0	461	0	0	0
16	LEAL M.	TOSS	393	0	185	0	208	0
17	JIMENEZ	TOSS	68	0	0	0	0	68.2
18	GRISWOLD	TOSS	0	0	0	0	0	0
19	HENDRICKSON	TOSS	0	0	0	0	0	0
20	WURTS	TOSS	0	0	0	0	0	0
21	VICKERS	TOSS	0	0	0	0	0	0
22	McNAMEE	TOSS	0	0	0	0	0	0
23	NIBLEY	TOSS	0	0	0	0	0	0
24	KRAINOCK	SVSF	0	0	0	0	0	0
25	WICHERT	TOSS	0	0	0	0	0	0
26	MORTON	TOSS	0	0	0	0	0	0
27	BUTKOVICK	PSS	0	0	0	0	0	0
28	BUCKSPAN	MFCS	0	0	0	0	0	0
29	DEVLIN	MFCS	0	0	0	0	0	0
30	TURNER	?	0	0	0	0	0	0
31	GRISANTI	TOSS	0	0	0	0	0	0



2 METER CLASS NORMALIZED TO 1000

	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	SWET	TOSS	3274	0	688	1000	585	1000
2	REGAN	TOSS	2882	0	0	934	1000	948
3	BEN M.	PSS	1000	0	1000	0	0	0
4	JIMENEZ	TOSS	962	0	520	0	368	73.9
5	LEAL	TOSS	788	0	564	224	0	0
6	RATNER	TOSS	734	0	734	0	0	0
7	MORAN	TOSS	717	0	0	0	717	0
8	AKERS	TOSS	419	0	0	0	0	419
9	GOLDSMITH	TOSS	331	0	0	331	0	0
10	VAN HAMERSVELT	TOSS	165	0	0	165	0	0
11	HENDRICKSON	TOSS	0	0	0	0	0	0
12	OLDENBURG	TOSS	0	0	0	0	0	0
13	WEISMAN	TOSS	0	0	0	0	0	0
14	MORGAN	TOSS	0	0	0	0	0	0
15	Mc NAMEE D.	TOSS	0	0	0	0	0	0

SPORTSMAN CLASS NORMALIZED TO 1000

	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	AKERS	TOSS	2584	0	1000	1000	584	0
2	JIMENEZ	TOSS	2061	0	703	358	1000	0
3	LEAL	TOSS	1000	1000	0	0	0	0
4	LEWIS	TOSS	1000	0	0	0	0	1000
5	BUTKOVIC	PSS	902	0	0	0	902	0
6	BOCKWOLDT	TOSS	524	0	0	0	0	524
7	GOLDSMITH	TOSS	379	379	0	0	0	0
8	IMES	SCSA	368	368	0	0	0	0
9	VAN HAMERSVELT	TOSS	134	0	0	134	0	0
10	De ANGELIA	MFCS	0	0	0	0	0	0
11	GRISANTI	TOSS	0	0	0	0	0	0
12	CANON	MFCS	0	0	0	0	0	0
13	JULIAN	MFCS	0	0	0	0	0	0
14	KAPP	MFCS	0	0	0	0	0	0

BALSA SURFACE HARDENING

Are you tired of your wing trailing edges being crushed when fastening with rubber bands? (That is, for you who still use 'em.) Try pricking the trailing edge (numerous times with a pin) in the fastening area. Now run thin Hot Stuff over the area. The balsa will soon become rock hard. Try the same method where you install control horns on balsa surfaces like elevator and rudder mounting points. It's a quick and easy way to harden up mounting surfaces. Thanks to Cliff Hanchett of Dothan, Alabama.

STATE OF CALIFORNIA
FRANCHISE TAX BOARD
P.O. BOX 1286
RANCHO CORDOVA, CA. 95741-1286



May 15, 1991

In reply refer to
340:G :RB

THOUSAND OAKS SOARING SOCIETY
EDGAR WEISMAN
P.O. BOX 3921
THOUSAND OAKS CA 91360

Purpose : SOCIAL & RECREATIONAL
Code Section : 23701g
Form of Organization : Association
Accounting Period Ending:
Organization Number : 9764812

You are exempt from state franchise or income tax under the section of the Revenue and Taxation Code indicated above.

This decision is based on information you submitted and assumes that your present operations continue unchanged or conform to those proposed in your application. Any change in operation, character, or purpose of the organization must be reported immediately to this office so that we may determine the effect on your exempt status. Any change of name or address must also be reported.

In the event of a change in relevant statutory, administrative, judicial case law, a change in federal interpretation of federal law in cases where our opinion is based upon such an interpretation, or a change in the material facts or circumstances relating to your application upon which this opinion is based, this opinion may no longer be applicable. It is your responsibility to be aware of these changes should they occur. This paragraph constitutes written advice, other than a chief counsel ruling, within the meaning of Revenue and Taxation Code Section 21012(a)(2).

You may be required to file Form 199 (Exempt Organization Annual Information Return) on or before the 15th day of the 5th month (4 1/2 months) after the close of your accounting period. Please see annual instructions with forms for requirements.

You are not required to file state franchise or income tax returns

unless you have income subject to the unrelated business income tax under Section 23731 of the Code. In this event, you are required to file Form 109 (Exempt Organization Business Income Tax Return) by the 15th day of the 5th month (4 1/2 months) after the close of your annual accounting period.

Please note that an exemption from federal income or other taxes and other state taxes requires separate applications.

A SCOTT
EXEMPT ORGANIZATION UNIT
CORPORATION AUDIT SECTION
Telephone (916) 369-4171

EO :

Name	Class	Club	Score	Contests	Name	Class	Club	Score	Contes
1 ATWELL, B	EXPERT	DUST	3921.9	4	54 FERKINS, D	EXPERT	PSS	1710.9	2
2 EDEBERG, D	EXPERT	HSS	3950.0	4	55 SANDRONI, H	EXPERT	DUST	1857.3	3
3 REAGAN, M	EXPERT	TOSS	3861.0	4	56 OIG, A	EXPERT	NCC	1841.0	2
4 CLECK, B	EXPERT	HSS	3521.2	4	57 ROTKIN, V	SPORTSMAN	ISS	1840.4	2
5 LEVUE, M	EXPERT	PSS	3737.0	4	58 RITTER, G	EXPERT	DUST	1827.0	2
6 CHASTELER, F	EXPERT	HSS	3599.4	4	59 NORENBERG, L	SPORTSMAN	SFVF	1818.3	2
7 TILLMAN, N	EXPERT	NCC	3597.1	4	60 SAGE, F	SPORTSMAN	NCC	1817.4	2
8 GERBIN Jr, R	EXPERT	HSS	3592.0	4	61 SPENCER, R	EXPERT	SULA	1812.2	2
9 KLEDSUE, R	EXPERT	TPG	3590.8	4	62 JOLLY, L	EXPERT	SULA	1787.8	2
10 WEISMAN, E	EXPERT	TOSS	3684.8	4	63 CRANFORD, K	SPORTSMAN	DUST	1785.8	2
11 DOUGLAS, I	EXPERT	SWSA	3598.9	4	64 RITTER, C	SPORTSMAN	DUST	1779.2	2
12 JOY, G	EXPERT	HSS	3544.8	4	65 HALLFORD, P	SPORTSMAN	PSS	1775.3	2
13 JOY, B	SPORTSMAN	HSS	3450.5	4	66 NEHRING, C	SPORTSMAN	HSS	1773.2	4
14 THOMAS, R	EXPERT	HSS	3444.1	4	67 HOLLEY, M	EXPERT	SWSA	1771.2	4
15 KEIL, D	SPORTSMAN	NCC	3400.8	4	68 MCNAMEE, A	EXPERT	TOSS	1754.9	2
16 GATES, M	EXPERT	HSS	3379.3	4	69 LARSEN, O	EXPERT	DUST	1751.7	2
17 KUTCH, N	EXPERT	HSS	3373.1	4	70 CHASTELER, T	EXPERT	HSS	1724.5	2
18 SPITZER, G	SPORTSMAN	PSS	3347.0	4	71 FOLSEN, G	EXPERT	HSS	1723.6	2
19 BUTOVICH, D	SPORTSMAN	PSS	3295.2	4	72 HENDRY, S	EXPERT	HSS	1717.7	2
20 VAN GUNDY, D	SPORTSMAN	TPG	3280.3	4	73 MACKENZIE, S	EXPERT	SFVF	1697.1	2
21 MORAN, M	EXPERT	TOSS	3254.5	4	74 STAIRS, P	SPORTSMAN	SFVF	1658.3	2
22 PARSONS, J	SPORTSMAN	HSS	3158.7	4	75 MCCOLGAN, D	SPORTSMAN	SWSA	1634.3	2
23 MILLS, A	SPORTSMAN	SULA	2984.9	4	76 CHILL, M	SPORTSMAN	EDSF	1632.0	2
24 MARTIN, T	EXPERT	HSS	2941.8	3	77 HALL, D	SPORTSMAN	DUST	1629.7	2
25 MATSUMOTO, B	EXPERT	PSS	2929.1	3	78 HISSINGTHAM, M	EXPERT	ISS	1606.6	2
26 LONG, D	SPORTSMAN	DUST	2904.0	4	79 CHASTAIN, R	SPORTSMAN	PSS	1596.8	2
27 BLIFF, B	EXPERT	HSS	2879.2	3	80 FRAZEE, B	SPORTSMAN	EDSF	1588.9	2
28 RATNER, M	EXPERT	PSS	2842.9	3	81 SADORF, S	SPORTSMAN	ISS	1580.3	2
29 RODRIGUEZ, J	SPORTSMAN	ISS	2837.3	3	82 ZINK, D	EXPERT	HSS	1536.3	3
30 STROBEL, R	SPORTSMAN	TPG	2800.1	4	83 MELOA, J	SPORTSMAN	DUST	1533.5	2
31 AKERS, T	SPORTSMAN	TOSS	2795.7	4	84 FINK, D	EXPERT	SULA	1513.9	2
32 FINK, S	SPORTSMAN	DUST	2788.5	3	85 LAUGHLIN, S	SPORTSMAN	EDSF	1450.5	2
33 CHASTAIN, B	EXPERT	PSS	2770.4	3	86 ANDREWS, R	SPORTSMAN	ISS	1382.1	2
34 LACKEY, R	SPORTSMAN	HSS	2750.2	3	87 LEAL, M	SPORTSMAN	TOSS	1369.2	2
35 CUNDOON, S	SPORTSMAN	TPG	2646.0	3	88 CROOK, J	SPORTSMAN	ISS	1279.0	2
36 ANDERSON, G	EXPERT	TPG	2529.2	3	89 FOWELL, R	SPORTSMAN	DUST	1268.9	2
37 VICKERS, D	EXPERT	SULA	2528.9	3	90 VAN GUNDY, S	SPORTSMAN	TPG	1264.3	2
38 RAYMOND, K	EXPERT	NCC	2506.2	3	91 GOODWIN, B	SPORTSMAN	MRCs	1201.7	2
39 JENKINS, H	EXPERT	ISS	2402.5	3	92 FAULKENHAM, R	SPORTSMAN	ISS	1121.5	2
40 GERMANE, B	SPORTSMAN	HSS	2601.9	3	93 GARNER, R	EXPERT	HSS	1068.9	2
41 SHELBY, R	EXPERT	ISS	2579.2	3	94 LUEKEN, J	EXPERT	NCC	989.9	1
42 OLSEN, R	EXPERT	SWSA	2575.5	3	95 NIBLEY, B	EXPERT	TOSS	982.3	1
43 URUN, A	EXPERT	HSS	2491.4	3	96 BURNS, R	EXPERT	PSS	977.8	1
44 WAGER, M	SPORTSMAN	TPG	2432.8	3	97 TIMBS, N	EXPERT	NONE	970.6	1
45 SCHNEIDER, S	SPORTSMAN	TPG	2414.1	3	98 NORTHERN, D	EXPERT	TOSS	968.6	1
46 CUNWAY, P	SPORTSMAN	TPG	2392.2	3	99 VALDES, A	EXPERT	TPG	965.7	1
47 OLSEN, P	EXPERT	SWSA	2336.9	3	100 CLARK, D	EXPERT	NCC	958.0	1
48 FETTEN, M	SPORTSMAN	ISS	2315.5	3	101 SWET, B	SPORTSMAN	TOSS	952.5	1
49 GERBIN, R	EXPERT	HSS	2328.0	3	102 BAUDER, K	SPORTSMAN	ISS	939.0	1
50 YOUNG, B	SPORTSMAN	HSS	2002.9	3	103 BONANNO, T	EXPERT	SULA	938.6	1
51 WURTS, J	EXPERT	PSS	1963.4	3	104 STOKER, P	EXPERT	SULA	938.6	1
52 NIGG, D	EXPERT	SULA	1940.6	3	105 HARKIS, P	EXPERT	HSS	935.8	1
53 BROOKS, N	SPORTSMAN	PSS	1932.2	3	106 FARLESS, D	EXPERT	PSS	932.8	1

offer anything in this area, but there are a number of other people working around, this is a pretty intriguing construction technology."

Pete continues in another letter:

"I just recalled that I promised you some more discussion on glues, so here it is.

"CYANO-ACRYLATES: there are C/A's and there are C/A's. You may hear that all C/A's are alike, just buy on the basis of price. Don't believe that. If you do, then build your next airplane with the superglue available at the K-Mart checkout line and see what happens.

"I ran across an article once in Chemical Engineering News (wished I had saved it) which pointed out that C/A's are particularly easy to synthesize for specialized applications, i.e. any competent industry source can tailor the viscosity, range of activation parameters, and other characteristics to suit the particular requirements at hand. So I have to believe that the C/A's available today have been developed to fit our specialized bonding applications, and also that there may well be differences between brand names.

"I find that for my personal uses I tend to use thin and gap-filling Hot Stuff predominantly, with the extra-thick Hot Stuff running a distant third. Since my usage runs at quite high levels, use 2 oz. bottles rather than the smaller sizes. I have used and like Jet and Super Jet, but have come back to Hot Stuff due to, mainly, its consistent bonds.

"I also use quite a bit of accelerator to precondition wide areas, such as lamination of doublers etc. As I mentioned earlier, I maintain that aliphatics are the best choice for making up built up tail surfaces where there is a lot of capillary action on the strip wood--C/A's joints tend to have brittle fractures at the LE and TE of the joint, whereas an aliphatic glue provides a good combination of penetration and flexibility.

"I find that Hot Stuff has a habit of piling up and drying, glassy hard, on the bottle tip. After a while, the encrusted C/A is so thick and hard that it becomes impossible to seal the bottle to clear out the clogged aperture.

"Here is my solution which works for me: I keep a bottle of Vaseline on the workbench and periodically dab Vaseline on the bottle. This allows me to easily scrape off dried C/A before it builds up to intolerable levels. And this also provides a vapor seal to prevent moisture from getting into the bottle. Otherwise, the adhesive may go hard in the bottle which is a real aggravation. The other C/A's that I have used don't pile up on the bottle tip, or at least not quite as hard, as Hot Stuff, but I don't consider this a serious drawback to using Hot Stuff, on a minor annoyance--it becomes a major annoyance if nothing is done and the entire bottle goes hard on you.

"As far as using C/A vs any other glue, I tend to use aliphatic for any end grain application (ribs, truss ribs, polyhedral joints) where previously mentioned capillary action may be a problem. Aliphatic is also good for putting in turbulator spars since it fills slight gaps and gives you time to adjust the spar alignment. For most other joints, thin or gap-filling Hot Stuff does everything else.

"C/A is particularly handy for doing cap strips. I line up the cap strips on the rib (top or bottom) and hit it with accelerator, and it's done (make sure that it's straight). This is superior to pinning each cap strip in place and using aliphatic! C/A is also handy for attaching the top cap strip where it joins the trailing edge--tolerances are usually critical here if the forward edge dimension of the TE stock is slightly greater than the sum of the rib height and thickness of the cap. I hold the cap strip so that it makes a smooth transition to the rib, and some thin C/A into the joint, and hit it with accelerator. If done right, the C/A reacts with the accelerator and the resulting white byproduct fills the little gap instantly.

"As we may have discussed earlier, I don't try to use C/A for doing wing sheeting, preferring iron on the sheeting after precoating (and allowing to dry) aliphatic glue on the rib-sheet contact areas. If the sheeting butt joints to a spar or LE, I use aliphatic or C/A in the conventional way. Try this sometime, it has always worked well for me. That's it for now..."

THANKS - CAPITOL AREA SOARING ASSOCIATION

SPORTSMAN TALK - ADHESIVES

George Frechette (courtesy of CASA COMMENTS)

I once asked about adhesives and received some advise. Pete Young has written with his ideas and I have extracted from two of his letters, the first also containing a bit of interesting history and the second being specific recommendations. Pete writes in his first letter:

"In one of your recent columns, you asked for some feedback on recommended usages for adhesives I would like to offer up some of my thoughts for your review. Ready or not, here it comes...

"BACKGROUND: When I was modelling as a youngster, Ambroid cement was the only adhesive used. I went to college during the mid-60's, I met some people who liked to use Elmer's white glue, but it was difficult to sand (still is) and two-part epoxies were not very common or well suited for our uses. When I was flying free flight in the early 1970's at Taft, California, I first met Bob and Bill Hunter who were flying AMA free flight with a vengeance, fielding Satellites of every size from .049 to .65. One year they came out with Satellites built entirely with a new glue called cyanoacrylate. Aside from the fact that no one new how to spell it or knew what it was made of this adhesive created an immediate sensation in the free flight community. Although Lee Hines has experimented with Eastman 910 a few years prior for fixing tailbooms on hand launch gliders, the Hunters were the first to build entire airframes with A/A. The weight savings on elaborate AM gas free flights were spectacular. 1/2A Satellites were weighing in at 4 1/2 to 5 ounces, several ounces less than when built with conventional adhesives. Part of the weight savings came from use of extremely thin mylar coverings that the Hunters were also marketing, 1/4 mil on up to 2 mil (Super Monokote is about 2 mils, I believe).

"The Hunters created the corporation "Satellite City" to market "this" Hot Stuff, mylar and their Satellite kits and were quite a successful cottage industry in the SoCal area. Then about 1977 Radio Control Modeler Magazine introduced Hot Stuff to the general modelling public and the hobby adhesive industry hasn't been the same since. Developments followed in quick succession: medium and thick viscosity C/A's, accelerators, special purpose C/A's, debonder, etc. Does this imply that I think C/A's are the best adhesive for every gluing chore that I have? Nope, I try to use the best adhesive for the particular task, regardless of type. So, with that lengthy preamble here are some of my thoughts/opinions on the general subject of adhesives:

"CELLULOSE ADHESIVES (Ambroid, Testor's, Duco, et al): As mentioned earlier, these glues were used a lot (once upon a time) but not too much these days. The primary disadvantages are its shrinkage odor, a requirement for air drying, and incompatibility with some finishing materials. There are some specialized uses: indoor modelers use Ambroid thinned 50:1 for building their indoor aircraft but that is probably not of interest to you. I believe that green Testor's is excellent for lightweight, sandable joints when edge-joining sheets of balsa sheet (watch the shrinkage factor use minimum amounts of glue and carefully wipe glue oozing from the seam). There is one application that I do save cellulose cement for: a light coat smeared into balsa makes an excellent base for attaching servo tape--that's about all that I use cellulose glue for these days.

"TWO-PART EPOXIES: In general, the "faster" the epoxy, the "glassier" the finished bond. I like to use Hobby epoxy II for sheeting foam cores. On this subject, Al Doig devoted several columns in RCM about some comparisons of epoxy vs tape for sheeting Windsongs--his final verdict was that epoxy was just as light as transfer adhesive tape, when properly applied, and was definitely more "user friendly." In my experience, the big plus for Hobby epoxy II for sheeting is that there is no time to adjust the sheeting on the cores--something that you don't get with contact cement, tape or UFO C/A. Ben Cierx happened to mention the benefits of spraying a thin coat of clear dope or lacquer on the balsa sheet before applying epoxy--seals the wood and inhibits the epoxy from soaking into the wood--sounds like a good idea and definitely worth trying.

"Frankly, the best glider construction applications for two-part epoxies are filling the cavities around wing joiner tubes and in mixing the epoxy with micro-balloons for added hardness. Other than that (except for sheeting foam cores) I find that my use of two-part epoxies has dropped dramatically. Epoxy is touted as being good for joining wing polyhedral joints, but I find that aliphatics are perfectly satisfactory when the wing joints are properly fitted--epoxies should not be used to compensate for improperly fitted poly joints. Just in case I forget to mention it later on, it is definitely helpful to "perforate" the wing LE, TE and spar end grain with a pin to increase the capillary action into these vital junctions. An interesting technical area to explore is the use of epoxies for building up glass coated foam cores, a la Frank Weston's Magic. I can