

T O S S " U P



NEWSLETTER

NOVEMBER 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: Dec 7th 1991

C/D: RICH HARTMAN

Place: PARASAIL RANCH

Next Meeting: Nov 27th 1991

Place: CAMERON HOUSE

Map in this issue

Time: 7:30 p.m.



**MINUTES FROM
OCTOBER 21, 1991
MEETING**

OLD BUSINESS:

1) Flying field at Paramount Ranch has been cut. Usable area includes paved road (race track) starting at the bridge and is approximately 200 ft by 800 ft. Field is now a permanent site.

2) Delta Cub Contest to be held November 23 at Paramount Ranch. Club seeking members to assist in instructing the kids. Contest starts at 9:00 AM. Gift certificates to be awarded as prizes.

NEW BUSINESS:

1) November is election month. Officer nominations include; Mike Leal for president, Thomas Akers for Vice President, Larry Jiminez for Secretary, Bob Swet for Editor and Treasurer.

2) Christmas Party/BBQ to be held at 1:00 PM, December 15 at the Akers' household. Club will pay for hotdogs, hamburgers, buns and soda. Members are to bring salads, chips, and deserts (pot luck).

3) Myles Moran will file the clubs tax return.

4) Possibilities of a Night Fly was brought up by Larry Jiminez. Sites are being considered.

5) Need to buy trophies for next year.

6) The Malibu club has a contest every second Saturday of the month.

7) Edgar Weisman has unfinished plaques. Anyone who wants one, see him. They are free of charge.

WHAT'S NEW

1) TOSS welcomes aboard new members Peter Stairs and Dan LeMasurier.

2) Yours truly has created flyers for those interested in joining the club. They are currently being distributed to the local hobby stores. Any member who desires copies, please contact Bob Swet.

3) Just a reminder that November is election month. If you aren't at the meeting you could be elected to a position !

4) Thomas Akers kicks butt at October SCC contest. Thomas placed fourth in expert (ahead of all other TOSS members) and now advances to Expert. Congratulations!

RESULTS OF THE NOVEMBER CONTEST

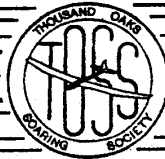
TYPE: 3 or 5 or 7 minute Pilot's Choice. 700/300, 800/200, 900/100CD: Art McNamee

OPEN CLASS:

Ben Matsumoto	2958
Myles Moran	2915
Mike Reagan	2872
Don Northern	2814
Art McNamee	2799

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 (Sun)	Art McNamee
Oct (Sat)	Mike Reagan
Nov (Sun)	Eric Hendrickson
Dec (Sat)	Rich Hartman



Mike Ratner 2773
 Edgar Weisman 2737
 Scott MacKenzie 2369
 Larry Jiminez 2366
 Peter Stairs 2334
 Lowell Norenberg 2295
 Bob Bukshpan 2218
 Jim Markle 2208
 Bob Goldsmith 2135
 Mike Leal 2113
 Ed Devlin 2047
 Bob Swet 1936
 John Rodgers 1870
 David Butkovich DNF

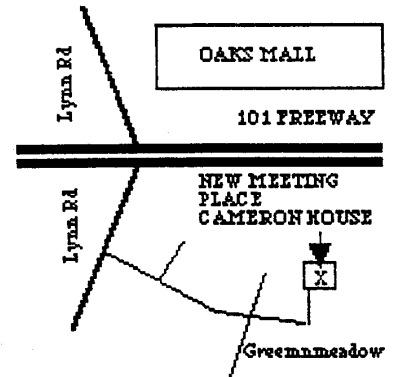
TWO METER:

Mike Ratner 2865
 Ben Matsumoto 2826
 Don McNamee 2821
 Edgar Weisman 2729
 Bob Swet 2564
 B.J. Weisman 2532
 Sean Rodgers 2349
 Ed Devlin 2244
 David Butkovich DNF

SPORTSMAN:

Larry Jiminez 2228

This is the new 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.



League of Silent Flight

10173 Saint Joe Rd.
 Ft Wayne, IN 46835

League of Silent Flight
 10173 Saint Joe Rd.
 Ft Wayne, IN 46835

I, _____ (please print), will support the philosophies,
 concepts and criteria set forth in the Bylaws of THE LEAGUE OF SILENT FLIGHT and give
 notice herewith of intention to attain Level 1 of the Accomplishments Program, and by so doing
 earn full recognition and privilege of membership.

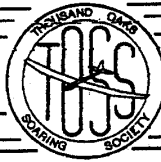
 (Signature)

Mailing Address: _____

AMA (or other FAI Affiliate) Licence or Membership No. _____

Note: ALL CORRESPONDENCE TO THE LSF MUST INCLUDE AT LEAST \$1.00 IN US STAMPS OR
 CHECK / M.O. FOR POSTAGE

Newsletter



Newsletter

NORMALIZED

Max score Nov **3000**
 Highest T.O.S.S. score Oct **2915**
 UNLIMITED CLASS NORMALIZED TO 1000

#	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	OCT	NOV
1	REGAN	TOSS	9194	1000	853	980	1000	738	995	997	999	661	971
2	WEISMAN	TOSS	7712	487	946	830	995	1000	0	821	708	1000	925
3	NORTHERN	TOSS	7245	0	876	1000	708	0	994	1000	999	718	951
4	SWET	TOSS	6068	0	726	741	696	657	947	969	0	678	654
5	GOLDSMITH	TOSS	5911	934	669	570	541	493	515	691	776	0	722
6	McNAMEE A.	TOSS	5387	0	0	0	841	0	994	975	963	667	946
7	MORAN	TOSS	5188	0	1000	0	999	0	994	0	963	246	985
8	MATSUMOTO B.	PSS	4639	0	959	0	0	0	1000	0	961	719	1000
9	RATNER	PSS	4027	0	461	0	0	0	945	0	1000	684	937
10	HARTMAN	TOSS	2740	923	0	932	0	0	0	884	0	0	0
11	AKERS	TOSS	2363	0	483	724	271	0	0	0	0	885	0
12	RODGERS	PSS	2088	0	0	0	0	0	833	0	0	623	632
13	MORGAN	TOSS	1980	741	0	926	0	313	0	0	0	0	0
14	STAIRS	TOSS	1710	0	0	0	0	0	0	0	921	0	789
15	JIMENEZ	TOSS	1668	0	0	0	0	68.2	800	0	0	0	800
16	McNAMEE D.	TOSS	1593	0	0	0	0	0	0	882	0	711	0
17	BURNS	PSS	1424	0	721	0	0	0	0	0	0	703	0
18	KOPLAN	TOSS	1188	573	0	0	0	0	0	0	0	615	0
19	OLDENBURG	TOSS	1158	0	546	0	0	612	0	0	0	0	0
20	LEAL M.	TOSS	1107	0	185	0	208	0	0	0	0	0	714
21	BUTKOVICK	PSS	995	0	0	0	0	0	995	0	0	0	0
22	GRISWOLD	TOSS	928	0	0	0	0	0	928	0	0	0	0
23	NIBLEY	TOSS	776	0	0	0	0	0	0	0	0	0	776
24	WICHERT	TOSS	750	0	0	0	0	0	0	0	0	0	750
25	MORTON	TOSS	746	0	0	0	0	0	0	0	0	0	746
26	DEVLIN	MPCS	692	0	0	0	0	0	0	0	0	0	692
27	BROOKS	PSS	649	0	649	0	0	0	0	0	0	0	0
28	SUTTON	TOSS	603	0	0	0	0	0	0	0	0	603	0
29	SHERMAN	SVSF	349	0	0	0	0	0	0	349	0	0	0

2 METER CLASS NORMALIZED TO 1000

NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	OCT	NOV	
1	SWET	TOSS	7901	0	688	1000	585	1000	949	1000	962	821	895
2	REGAN	TOSS	6324	0	0	934	1000	948	1000	916	959	567	0
3	MATSUMOTO B.	PSS	4700	0	1000	0	0	0	951	0	961	800	886
4	RATNER	TOSS	4373	0	734	0	0	0	1000	0	639	1000	1000
5	JIMENEZ	TOSS	2790	0	520	0	368	73.9	901	579	348	0	0
6	AKERS	TOSS	2733	0	0	0	0	419	939	926	450	0	0
7	MORAN	TOSS	1717	0	0	0	717	0	0	0	1000	0	0
8	LEAL	TOSS	1693	0	564	224	0	0	905	0	0	0	0
9	McNAMEE D.	TOSS	985	0	0	0	0	0	0	0	0	0	985
10	WEISMAN	TOSS	953	0	0	0	0	0	0	0	0	0	953
11	HENDRICKSON	TOSS	884	0	0	0	0	0	0	0	0	0	884
12	OLDENBURG	TOSS	820	0	0	0	0	0	0	0	0	0	820
13	MORGAN	TOSS	783	0	0	0	0	0	0	0	0	0	783
14	GOLDSMITH	TOSS	331	0	0	331	0	0	0	0	0	0	0
15	VAN HAMERSVELT	TOSS	165	0	0	165	0	0	0	0	0	0	0

SPORTSMAN CLASS NORMALIZED TO 1000

NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	OCT	NOV	
1	JIMENEZ	TOSS	4825	0	703	358	1000	0	764	0	1000	0	1000
2	BOCKWOLDT	TOSS	1524	0	0	0	0	524	1000	0	0	0	0
3	LEAL	TOSS	1000	1000	0	0	0	0	0	0	0	0	0
4	LEWIS	TOSS	1000	0	0	0	0	1000	0	0	0	0	0
5	BUTKOVIC	PSS	902	0	0	0	902	0	0	0	0	0	0
6	RODGERS J.	MPCS	645	0	0	0	0	0	0	0	645	0	0
7	VAN HAMERSVELT	TOSS	643	0	0	134	0	0	509	0	0	0	0
8	GOLDSMITH	TOSS	379	379	0	0	0	0	0	0	0	0	0
9	IMES	SCSA	368	368	0	0	0	0	0	0	0	0	0
10	PERSON D.	TOSS	352	0	0	0	0	0	0	0	352	0	0

**SOUTHERN CALIFORNIA BOATING CLUBS
YEAR-TO-DATE STANDINGS AS OF OCTOBER, 1991
BEST 6 OF 9 CONTESTS
TOP 25 PLACINGS**

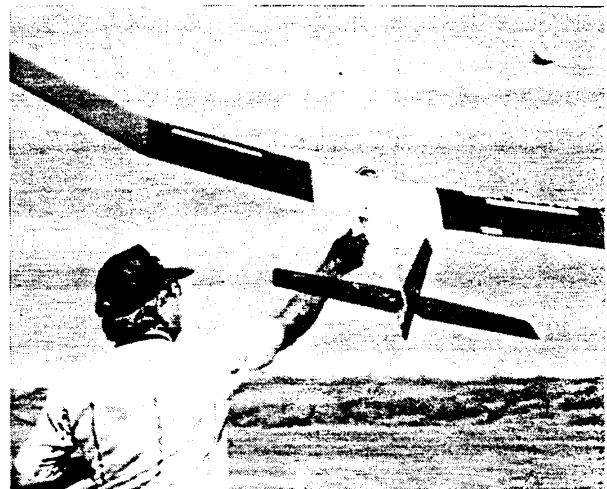
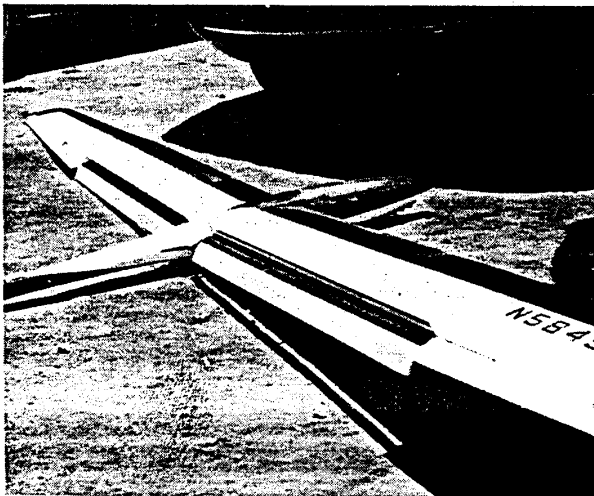
PLACE	NAME	STATUS	SCORE	CONTESTS	CLUB
1	ATWELL BLAIR	EXPERT	5876.5	6	DUST
2	CLERX BEN	EXPERT	5817.1	6	HSS
3	EDBERG DON	EXPERT	5803.9	6	HSS
4	REAGAN MIKE	EXPERT	5801.8	6	TOSS
5	SAGE FRED	EXPERT	5756.2	6	NCC
6	JOY GEORGE	EXPERT	5742.0	6	HSS
7	CHASTELER FRANK	EXPERT	5729.6	6	HSS
8	MORAN MYLES	EXPERT	5723.1	6	TOSS
9	BLEDSOE RICH	EXPERT	5688.1	6	TPG
10	LACKEY ROGER	EXPERT	5654.1	6	HSS
11	ANDERSON GARY	EXPERT	5616.2	6	TPG
12	RODRIGUEZ JOE XX	SPORTSMAN	5582.8	6	ISS
13	LEVOE MARK	EXPERT	5574.3	6	PSS
14	VAN GUNDY DON	EXPERT	5572.2	6	TPG
15	TILLMAN NORM	EXPERT	5568.9	6	NCC
16	VICKERS DON	EXPERT	5551.1	6	SULA
17	MARTIN TONY	EXPERT	5533.0	6	HSS
18	FINK STEVEN XX	SPORTSMAN	5487.0	6	DUST
19	WEISMAN EDGAR	EXPERT	5466.6	6	TOSS
20	MCMAMEE ART	EXPERT	5448.9	6	TOSS
21	HENDRY STEVE	EXPERT	5435.6	6	HSS
22	THOMAS ROSS	EXPERT	5412.8	6	HSS
23	SHELBY RICH	EXPERT	5398.1	6	ISS
24	JOY BRYAN XX	SPORTSMAN	5373.8	6	HSS
25	DOUGLAS IAN	EXPERT	5350.6	6	SWSA

**SOUTHERN CALIFORNIA BOATING CLUBS
YEAR-TO-DATE STANDINGS AS OF OCTOBER, 1991
BEST 6 OF 9 CONTESTS
H.S.S. MEMBER PLACINGS**

PLACE	NAME	STATUS	SCORE	CONTESTS	CLUB
2	CLERX BEN	EXPERT	5817.1	6	HSS
3	EDBERG DON	EXPERT	5803.9	6	HSS
6	JOY GEORGE	EXPERT	5742.0	6	HSS
7	CHASTELER FRANK	EXPERT	5729.6	6	HSS
10	LACKEY ROGER	EXPERT	5654.1	6	HSS
17	MARTIN TONY	EXPERT	5533.0	6	HSS
21	HENDRY STEVE	EXPERT	5435.6	6	HSS
22	THOMAS ROSS	EXPERT	5412.8	6	HSS
24	JOY BRYAN XX	SPORTSMAN	5373.8	6	HSS
31	GERMANE BRIAN	SPORTSMAN	5175.7	6	HSS
38	RICHARDSON PETE	EXPERT	4990.0	6	HSS
40	KUTCH NORM	EXPERT	4948.2	6	HSS
42	PARSONS JIM XX	SPORTSMAN	4934.9	6	HSS
43	CRON AL	EXPERT	4928.6	6	HSS
45	ZINK DON	EXPERT	4748.4	6	HSS
47	GARNER RICH	EXPERT	4481.9	6	HSS
52	NEHRING CURT	SPORTSMAN	4140.0	6	HSS
54	DANRICH DAN	SPORTSMAN	4019.0	5	HSS
60	SUFF BOB	EXPERT	3854.0	4	HSS
62	POULSEN GORDON	EXPERT	3731.9	5	HSS
64	GERBIN JR ROBERT	EXPERT	3682.0	4	HSS
72	GATES MATT	EXPERT	3379.3	4	HSS
74	CHASTELER TOM	EXPERT	3281.0	4	HSS
91	YOUNG BRETT	SPORTSMAN	2564.2	4	HSS
99	GERBIN ROBERT	EXPERT	2228.0	3	HSS
108	BRANDT DENNIS	EXPERT	1932.1	2	HSS
110	HARRIS PHIL	EXPERT	1888.2	2	HSS
118	NEMECEK DAVE	EXPERT	1608.0	2	HSS
139	BUZOLOCH NICK	SPORTSMAN	1078.3	3	HSS
145	BOESE JIM	SPORTSMAN	830.4	1	HSS
167	LAIR DAN	SPORTSMAN	838.4	1	HSS
169	WHITE LARRY XX	SPORTSMAN	822.6	1	HSS
173	RESEAR EDWARD	SPORTSMAN	788.3	1	HSS
183	PANTZAR DICK	EXPERT	686.5	1	HSS
196	RAMSAY DON	SPORTSMAN	575.6	1	HSS
199	TAU MANNY	SPORTSMAN	559.5	1	HSS
209	CHAMBERLIN RALPH	SPORTSMAN	0.0	1	HSS

YEAR-TO-DATE TEAM SCORES

HSS	35164.5
PSS	32865.0
TPG	32685.7
TOSS	32360.6
NCC	29695.2
DUST	29498.7
SULA	28728.9
ISS	23959.9
SWSA	21007.2
EDSF	17555.7
SFVF	12367.5
MRCB	11943.2



WHAT KEEPS DUST DEVILS SPINNING?

By Marcia Barinaga
Special to the San Jose Mercury News

Q. What causes "dust devils" to develop over a flat field on a hot day? What keeps them going as they meander around?

- G.B. Herzog, San Jose

A. These small tornado-like whirlwinds are caused by currents that form from uneven heating of the ground. Once they get started, they can keep going for as long as an hour if they have a continuous source of warm, rotating air.

Over a flat patch of ground on a hot day, the air in different spots will be heated to slightly different temperatures, because of variation in the heat-absorbing properties of the ground. Those heating differences cause updrafts and downdrafts. Columns of warmer, less-dense air rise, and elsewhere, slightly cooler, more dense air descends. Hot air from the ground surface is drawn into the low-pressure zones under the updrafts.

A dust devil will form if the air drawn into the updraft is rotating a bit, according to John Carroll, a meteorologist at the University of California, Davis, who has studied dust devils. The rotation can be the result of a twisting effect produced when a mass of air is moving faster horizontally than the air next to it.

As the rotating air is sucked into the updraft, it spins faster, because of conservation of angular momentum - the same effect that makes figure skaters spin faster when they draw their arms in. It's that acceleration of the spinning, converging air that keeps the dust devil going.

Once formed, the whirlwind becomes the preferred place for hot air from the ground's surface to rise, Carroll said. The dust devil will meander around on the air currents for as long as it is fed with hot, rotating air.

(And I always thought it was the inverse coriolis effect, with lunar eclipse highlights, editor)

COMPUTER PREDICTED PERFORMANCE:

DON'T COUNT ON IT!

By Bob McGowan

Those who like to design sailplanes have some real neat toys available. These include sailplane design programs for computers. Using wind tunnel test data and aerodynamic principles, they can predict the performance of a given sailplane design. You simply punch in parameters such as airfoil, weight, and dimensions; the computer then spits out the predicted performance.

But, I'm not so sure about the accuracy of these predictions; they all seem a bit over-optimistic. We all know the Dodgeson Lovesong. Its theoretical lift to drag, or glide ratio, is more than 26 to 1, and the minimum sink rate is about one foot per second. That means from a typical 500-foot launch you could float for more than eight minutes in dead air or complete 26 laps on the FAI distance course. The Lovesong is a great ship, but I'm skeptical that it could do all that.

I recently read about the 138-inch Magic in Model Aviation. With its predicted L/D of 29 to 1, you could ride one good thermal up to 2200 feet and complete the 12-mile LSF level V distance task without any further lift. I'd have to see this to believe it!

These numbers are laughable, but I realize that they are useful for comparison purposes as long as we keep in mind that many sailplane features are not considered in the computer program. Also, some airfoils have a spectacular performance peak at a specific angle of attack so they look great on the computer. In actuality, there is no way we can constantly hold that precise angle of attack in the air, so we need an airfoil that performs well within a wide range of angles. The computer predictions are based upon perfects, but, we don't find perfection in reality. I guess that's why the predictions seem high from my "flying field" point of view; the real test of the best sailplane will always be in the air, not in a microchip.

For thermaling, everyone wants the ultimate ground-covering machine to search for lift. My impression is

that many of today's designers think this will be the sailplane with the highest predicted L/D. Why don't they take launch height into consideration? The way I look at it, that's a big factor in ground covering capability. Let's say computer predictions are correct and a Falcon 880 has an L/D of 22/1. Its small size, moderate weight, low drag, and strong wings allow it to zoom launch to an altitude of, let's say, 600 feet. The larger, higher aspect ratio Lovesong, with its slightly poorer high speed performance, may only zoom launch to 500 feet. With its predicted L/D of 26/1, the Lovesong would cover 13,000 feet searching for lift. The poorer L/D Falcon would cover 13,200 feet.

Imagine that!

(Editors Note: Bob is a well known thermal pilot from Silverado Soaring Society who knows what he's talking about when it comes to hot air, err, I mean thermals. As far as covering distance is concerned, I have flown FAI distance hundreds of times in practice, in three US team selections and once at the World Championships and I have only seen 25+ laps flown five times and they were all done with SD2048 airfoils at 16 - 20 oz /ft2 wingloading and BIG lift. The launches for these flights were in excess of 500' and were probably closer to 700'.)

BLESS ME AND MY AIRPLANE

By Marion Richter

Now I lay me down to sleep
My airplane at my side
There is no room for my wife
The bed is not that wide

I pray that when I'm sound asleep
I'll dream about my plane
I hope that God is good to me
And will cancel any rain

Tomorrow is the contest
To miss it is a sin
A chance for me to show-off
In hopes that I will win

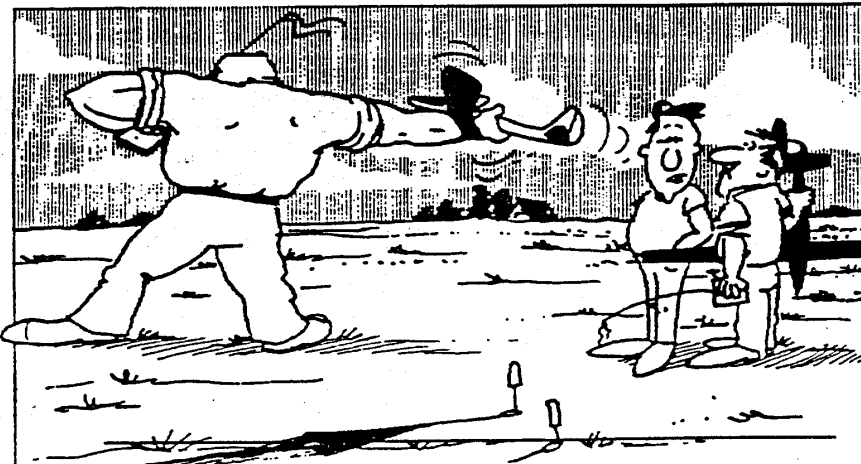
It doesn't matter that next month
I'll be sixty four
Because tomorrow I'll be feeling
Like a kid once more

God forbid my plane to crash
What an awful dread
However, if it has to be
Let it be Steve's instead.

AMEN

MY R/C CLUB

By Bob Herke



".... If he don't feel like using the winch,
he "don't have" to use the winch!!..."

**LEE RENAUD MEMORIAL
SC² CONTEST
NOVEMBER 24, 1991**

Sponsored by:



100 % of Proceeds go to the A.M.A. Library Fund in Lee's name.
Contest Directors:

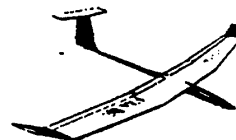
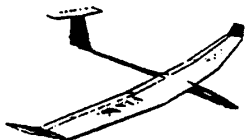
Frank Chasteler (714) 545-2185

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
PILOTS OPTION:**

A: 4 Minute flight at 700 pts. 3 pts./sec. off time. Landing at 300 pts.

B: 7 Minute flight at 900 pts. 2 pts./sec. off time. Landing at 100 pts.

LANDINGS WILL BE RUNWAY CENTERLINE AT 100 PTS.

PENALTY OF 1 POINT PER INCH OFF CENTERLINE

AWARDS:

**OLYMPIC MEDALLIONS 1ST. - 3RD. PLACE IN EACH OF 3 CLASSES:
EXPERT, SPORTSMAN, AND JUNIOR (per A.M.A.)**

INFORMATION:

Winches are all 12 volt. Line length is 650 feet.

Landing surface is dirt and mowed weeds.

All SC² rules apply.

THERE WILL BE A RAFFLE FOR CONTESTANTS

NOTE:

SC² YEAR END AWARDS WILL BE PRESENTED.

A RAFFLE OF AN INFINITY RADIO AND LEGEND KIT WILL BE HELD

BASED ON ATTENDANCE IN SC² CONTESTS (MUST BE PRESENT TO WIN)

SEE MAP AND DIRECTIONS ON BACK



AIRTRONICS
SPECIALTY DIVISION
11 AUTRY, IRVINE, CA 92718

SOARING
EXCHANGE
FOUNDED 1991
YOU CAN'T FIND IT ANYWHERE ELSE

AIRTRONICS ANNOUNCES THE CREATION OF SPECIALTY DIVISION

After 20 years of providing the finest in sailplane kits and accessories to the R/C Soaring community, Airtronics is proud to announce the establishment of the AIRTRONICS SPECIALTY DIVISION (ASD). The purpose of this division is to directly service the needs of the sailplane market, with an emphasis on products specifically engineered to satisfy the discriminating sailplaner.

ASD will market kit designs and accessory products which are vital to our specialty sailplane market but which don't attract enough attention in the hobby industry to interest the mass marketing establishments. We here at Airtronics are very excited about ASD because it gives us an opportunity to return to the roots of

our company and reaffirm our reputation as the technological and quality leader in soaring.

By establishing a separate division, Airtronics will be able to offer the responsiveness and innovation of a small cottage industry type operation backed by the resources and reputation for service of an industry leader. The big winner in this reorganization will be the individual modeler, who will be able to purchase state of the art products without worry, confident that ASD will be there to ensure his satisfaction.

ASD products will be available directly from Airtronics or through your local hobby shop. The kits will not replace the existing Airtronics kit line, but be offered in addition to those products already in the marketplace.

WHAT IS SOARING EXCHANGE?

One of the most important things for ASD to establish is communication with modelers on a one on one basis. This gives us the opportunity to get input from you the sailplaner as we design new products, and gives you an opportunity to stay current with the products available from ASD.

SOARING EXCHANGE is a quarterly newsletter which will be published by the Specialty Division. R/C Soaring is going through a very exciting growth period, and the amount of information that comes through our office regarding sailplanes and how to improve them has been increasing monthly. SOARING EXCHANGE will be a way to get that information, along with ASD product reports, out to our supporters and customers.

The idea behind SOARING EXCHANGE is two way communication, so if there are any questions or contributions you have, we encourage you to get in touch with ASD at the address on the masthead. Obviously our content will center mostly on Airtronics or Airtronics ASD products, but we will welcome any information about soaring in general.

The first mailing of the SOARING EXCHANGE will be made to soaring clubs and individuals who have dealt with Airtronics before and expressed an interest in soaring. If you wish to be added to the subscription list for the newsletter all you need to do is to send us your name and address and we will be happy to start sending you your own copies of SOARING EXCHANGE.

STABS: FLYING VS. ARTICULATED

During the development of the Whisper, we ran into an interesting problem regarding flying stabs and flap/elevator compensation on landing approach.

Originally the Whisper employed a full flying stab actuated by a bellcrank. In flying the first two prototypes, we noticed that there was a tendency for the nose to balloon up when the flaps were first deployed. Once the plane had slowed down, the Whisper would settle into the groove and land easily, but you had to be ready with the down elevator when first lowering the flaps. If enough elevator compensation was dialled into the plane to eliminate the initial ballooning, once the speed bled off the nose would point to the earth and you were forced to hold up elevator. The surprising part was that the Legend did not show this tendency, even though

the airfoil, tail moment and percentage of stab area were all similar to the Whisper.

A decision was made to build a third Whisper with an separate stab and elevator, since this was the setup used on the Legend. Sure enough, this plane showed none of the pitch up tendency of the first two when first deploying the flaps. In talking this episode over with pilots flying flapped airplanes with flying stabs, we received numerous comments that the planes did have a tendency to pitch up slightly if the flaps were lowered quickly.

This is being presented simply as food for thought, and perhaps to generate some explanations as to the reasons that the switch from a flying to an articulated stab would cure the problem. If you can explain it, let us know and we'll get the explanation in the next issue!

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