

Newsletter of the Harbor Soaring Society

July, 1994
VOL. 31 NO. 7



H.S.S. BOARD MEMBERS

President: Steven Fink	(714) 645-0459
Vice President: Sean Monahan	(714) 631-0719
Secretary: Eric Marcussen	(714) 730-7998
Treasurer: Del Marcussen	(714) 730-7998
Contest Coord: Mike Aguirre	(714) 645-6419
General Dir: Andy Sanders	(714) 751-9235
Ross Thomas	(714) 638-0705
Newsletter Ed: Pete Young	(714) 892-3473

NEWSLETTER SUBMISSIONS

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 Pete Young in person or by mail to: 6592 Belgrave Ave., Garden Grove, CA 92645.

MEETING LOCATION

Hobby Shack Retail Store, Bandilier Circle, Fountain Valley. The meeting will be held in the back storeroom of the store.

PRESIDENT'S MESSAGE

by Steven Fink

On Wednesday, 15 June, I attended the Planning Committee meeting for Fairview Park. David Alkema, Director of Parks, was instrumental in having HSS on the Committee's agenda. The five members of this body were all present and gave about twenty minutes of meeting time for my statements. Each member then had specific questions covering items like "Lake Estancia" and how it affects our activities; safety issues; and things we have observed in the park such as overly aggressive dogs.

The bottom line, by unanimous statement, is that the Harbor Soaring Society is considered an important and integral part of the park's activities. HSS is recognized as a user of the park seven days a week. The final comment by the committee members was that regardless of other improvements or developments in the park's future, we will always have a place to fly, with enough room for our winchlines, pit areas, and other equipment.

See me on the field for other details. And thanks to all those who wrote the city on our behalf.

Focus on Safety: A frequency conflict has caused another crash. Two longtime and experienced pilots tried

(continued, page 2)

PRESIDENT'S MESSAGE, cont.

the impossible again with disastrous results.

When analysed after the fact, this type of accident is, as usual, totally avoidable. Our HSS novice pilot info packet clearly states that individual pilots should be diligent in knowing who is on what frequency. The best strategy is to check which pilots on the field on any given day are on your frequency.

Please remember that on weekdays, frequency control is accomplished by placing one's own clothes pin on the frequency board near the handicapped parking slot. On weekends, a "standard" pin board is used. However in both cases, check with other pilots before turning on. It's the only sure way to prevent catastrophes with our expensive sailplanes.

HSS MONTHLY MEETING

- The June HSS monthly meeting called to order by Steve Fink. Thanks to Andy Sanders for filling in last month.
- Minutes and Treasurer's reports accepted as read.
- Ross Thomas discussed the North-South Challenge at Visalia and the San Marcos SC² contest.
- June 24-26 is the big ham radio weekend at the field. Flying is not recommended.
- Pete Young is getting ready to put a one-time 50% off Futaba servo sale together...stay tuned.

NEW BUSINESS

- One of the local grade schools asked if the club would like to perform a flying demonstration

for the students.

· A motion was made to use club funds to buy door prizes for meetings and contests to help promote member participation. Motion will be taken to the HSS board.

· Steve Fink reported on the status of the field. The club letter writing campaign was successful with the City. There are no plans to modify the field in the near future. The current plan is to level the northern mounds and fill "Lake Estancia" beginning in June and running through September. The City will not allow the soccer enthusiasts to privately fund any public park improvements. Steve will be representing the club before the Planning Commission to let them know what we are about.

· The Club Board met on May 28 and determined that all board members (indeed, all club members who are willing) shall be field safety monitors/managers. The motion to copyright the club logo was denied. New safety signs will be provided at the field. The idea of moving Open Contests to Saturdays was discussed.

· The Club SC² date is the last Saturday in July. 20 or so volunteers will be needed for a smooth contest. A free dinner will be raffled off to one of the volunteers. This contest will not count toward club standings.

· Jim Parsons showed off an immaculate Piper Cub power plane which has been beefed up for aero-towing sailplanes. The plane weighs in at 8 pounds, and has 8 servos with an O.S. 120 4-stroke motor for power. Awesome.

- Erik Marcussen, Secretary

... at the May SC2 hosted by North County Clouds under tough flying conditions, Mike Aguirre 5th; Ben Clerx 8th; Bob Sliff 13th; Norm Kutch 19th, and Steve Fink 20th ... HSS moves into the lead in season points standings, trailed closely by TOSS and TPG ... volunteers are needed to help our club host the July 31st SC2 at Fairview, contact Ross Thomas ... HSSers in the news: check out Larry Enger's kit review of Hobby Shack's 2M Easy Answer featured in last month's Model Builder ... Rest in Pieces: Dave Nemecek's Mako, victim of a frequency conflict ...

DATE: Sunday, July 17th
 CD: Ross Thomas
 FORMAT: 3 rounds precision duration.

1st round: 4 min flight, scored 800/200.

2nd and 3rd rounds: 4 or 8 min flight, pilot's choice. 8 min flight scored 900/100, 4 min scored as in first round.

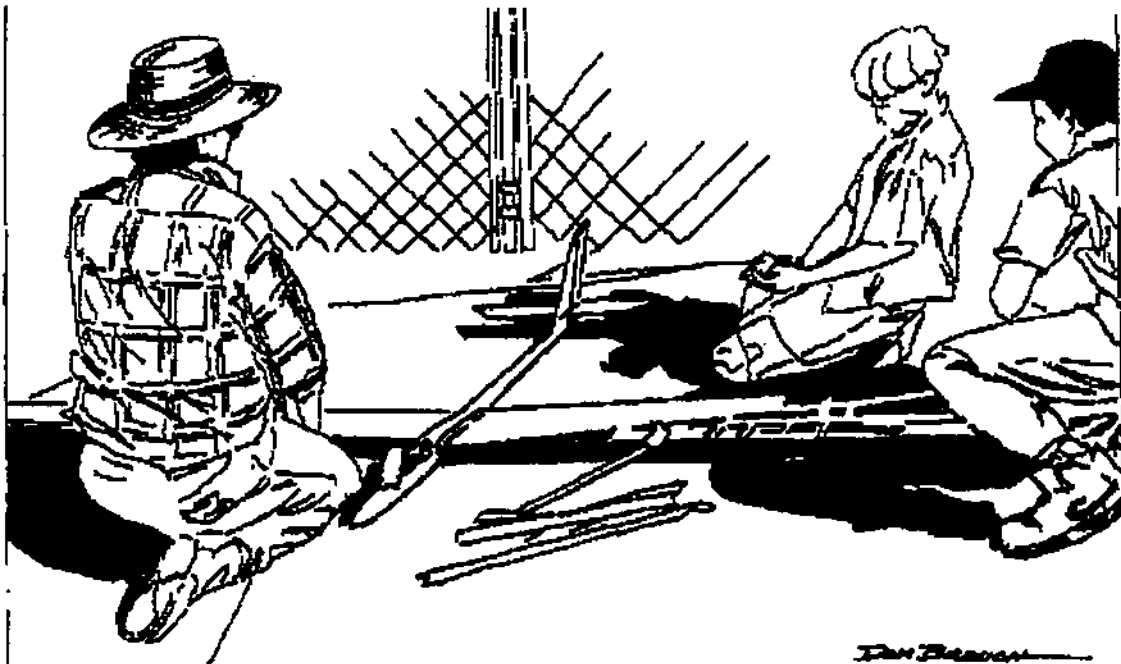
LANDING: 25' runway landing
 EVENTS: Classics, Unlimited, 2M; Classics fly first.

START TIME: Pilots' meeting 8:45AM

UPCOMING EVENTS CALENDAR

July 10	TOSS Two Meter "Top Gun", Thousand Oaks
July 17	HSS Monthly, Costa Mesa (Unlimited/2M/Classics)
July 24	SULA RC/HLG Contest, Carson
<u>July 31</u>	<u>SC2/Harbor Soaring Society, Costa Mesa</u>
July 31	"The Hawk Reunion," Torrey Pines
Aug 20-21	SULA 2nd Annual Summer Soaring Festival, Carson

future SC2: Aug/SWSA, Sept/EDSF, Oct/PSS, Nov/SULA
 For more information, call Mike Aguirre at (714) 645-6419 or Pete Young at (714) 892-3473



thanks to the newsletter
 of the North County Clouds

Subj: Rubber ducky radiation p
From: Manny Tau 73617,1731
To: All

Section: RC Soaring
216056, * No Replies *
Date: 23-Apr-94 09:16:12

Hiya Folks,

I've seen some information about rubber ducky antenna radiation patterns out here that I thought I'd clarify.

Neither telescopic (dipole) nor rubber ducky antennas DO NOT radiate the RF signal off of the antenna's tip. Only beam antennas do this, that is to say, the RF signal radiates in the direction the antenna is pointing. Actually, the direction of the boom on the beam antenna, since the elements are perpendicular.

Telescopic antennas (dipole) have lobes in which the RF radiated is greatest, depending on the frequency and the wavelength of the antenna. The rubber ducky, being a wound, shorter antenna, has more of a 3-dimensional doughnut radiation pattern around the antenna, and also has a null at the point.

There has been some rumours that RF from the rubber ducky gets back into the transmitter, thereby causing problems. This is not the case if the rubber ducky (or the telescopic antenna) is "cut" right...that is to say, utilizing the proper wavelength (1/4, 1/2, 5/8, etc.) for the frequency band, in our case 72MHz. This electronic efficiency issue of the antenna can be measured in Standing Wave Ratio (SWR) in which you ideally want 1:1, meaning all of the RF signal being transmitted is being reflected out, and none is being reflected back in as power...causing a "back up" or resistance in the circuit.

Our rubber ducky antennas are individually tuned for the 72MHz band, exactly at 72.500MHz, and encompass the whole 72MHz band...picture a steep bell curve between 72.000 and 72.950MHz with the peak at 72.500MHz, and the SWR is tuned to approximately 1.2-1.5:1 without sacrificing maximum RF output, via a signal strength meter.

If one were to use some sort of field strength meter to compare the two antennas, one must move it around the telescopic to find the lobes and nulls for an accurate measurement.

I'm addressing this to hopefully educate a few folks about antennas, since I've been reading/hearing about the rubber ducky antennas having some difficulties, or some are "gun" shy about them.

Important point about any antenna, is that it is tuned to the frequency. Our rubber ducky antennas are much more fine tuned than the broad-band telescopic. Telescopic antennas are actually archaic, just very inexpensive...under \$1.00 a piece in bulk from Taiwan from one source. If you look around, you won't see telescopic antennas on the more higher performance transceivers/recievers/transmitter, i.e., cell phones, amateur radio hand held transceivers; just with the cheaper CB's that operate on AM.

I hope this helps, and I'd be more than happy to address any antenna questions...since there's a whole science dedicated to antennas and the general RC public is usually not up on this info...for example, why is it that when changing over to 50 or 53MHz ham band for aircraft RC, that the manufacturer doesn't have you change the antenna on your tx (theoretically it needs to be longer, or a heck of a lot shorter)? Answer for any who's interested.

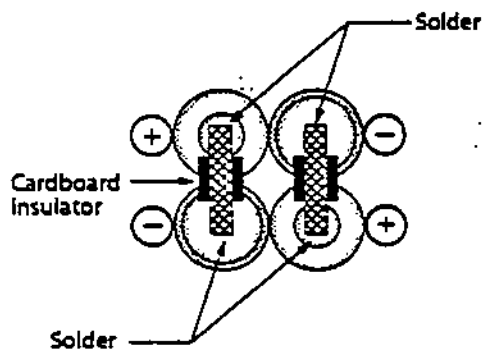
Thanx for your time, Manny (TauCom)

MAKE YOUR OWN BATTERY — Tom Hagney

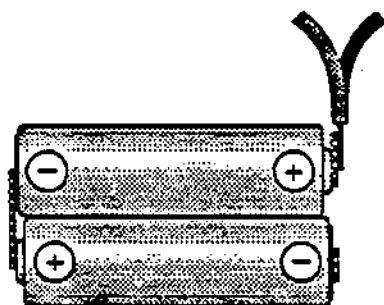
I was pulled up sharply the other day when I told one of our pilots to "make up your own battery." "How?" he asked. After a couple of false starts at an explanation, I realized that construction of a dependable battery pack requires some knowledge in a number of varied areas. What size cells should you choose? As mentioned last time in "The Flight Battery," flight of a carefully set up sailplane in the usual soaring mode demands very little from the flight battery. A 270 mAh battery should enable you to fly more than 1 hour 'IF' the battery is fully charged and the plane is set up properly. The smaller batteries can shave a little weight by using lead for balance instead of a larger battery. Regardless of choice of capacity, the flight battery never gets the high drain demand of the electric airplane. The elevated temperatures produced during over-charge with a 10% capacity charger is just enough to notice if you hold the pack in your hand for a few seconds. Your choice of battery is similar to choosing a puppy as a pet, you will only know after it has been around for a while and you get to know it. The cheapest 500 mAh cells will give good service if you cycle them before placing them in service and keep a close check during use. I don't recommend using a new battery without recycling. What of choice of wiring harness for your new battery? Never use the old plug or wires because the old plug will be worn and dirty and the wires may have the "black wire disease." This disease is caused by the Ni-cad (nickel cadmium) electrolyte (concentrated potassium hydroxide paste) leaking from the vent or seals and wicking up the wiring harness, usually the positive. This corrodes the copper wire to a black copper oxide, weakening the wire, decreasing its current carrying capacity and making it almost impossible to "tin" with solder. I like to have a supply of #26 gauge, 19 strand, R/C wire and a few 3/16 in Deans plugs and heat shrink to make new harnesses for battery packs.

Common wire from Radio Shack will not work. The #26 gauge is large enough to carry the load of even a "big bird" radio and servos but because of the amount of movement the harness may receive, we need all the flex resistance possible. It is not funny to have a battery harness wire break during flight. Therefore plan on having some sort of strain relief over the wires where the solder joint ends and the wire begins. This is the most likely place of failure. Any flexible plastic tubing that can be secured over the solder joint will do fine. I have used hot glue guns for strain relief over solder joints to switches, where the wires leave the battery wrapping and plugs, as a last

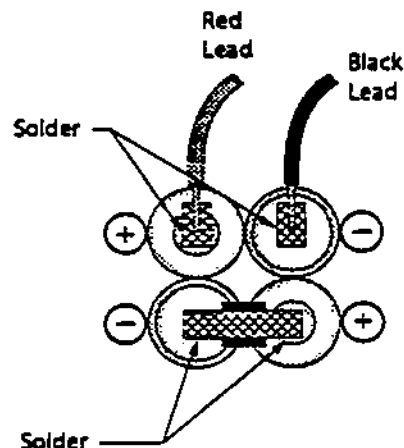
resort. Heat shrink tubing works best and Radio Shack has a good assortment for this purpose. Try to use a black wire for the anode (negative) end of the battery and a colored wire, red if possible, for the cathode (positive). It may be easier to use an aileron extension, cutting off the plug not needed, for the harness. Note that Airtronics persists in coding their plugs with the positive (red) on the outside and the black wire in the center, just the opposite of almost all other radios. Most builders cut the plug from the aileron servo and splice a long wire down to the receiver. It is a good idea to leave at least 1 inch of wire on the plug so that it can be used later for a flight battery. Figure 1 shows how to solder the tabs of the cells so that all are in series. Before soldering, I like to tape the cells together temporarily then use thick CA glue between each cell. (Note: Silicone works nicely). The proper size heat shrink tubing for the battery is difficult so just cover it with some clear shipping tape when finished. (Note: Heat shrink for helicopter blades will sometimes do the trick). The soldered contact is fairly simple to make with a 25 watt pencil tip iron and rosin core (NOT acid core) solder about the diameter of the #26 gauge wire. Practice until you get a nice glossy smooth surface. A frosty or dull surface indicated that you have moved the wire while the solder is wet and caused the solder to crystallize forming a weak "cold solder joint." I like to tin (wet) both parts of an intended joint with solder, then, with one part in a vice or damp, hold the other part very steady and touch the joint with the iron until I see the solder wick to the iron. A few seconds later, a nice joint is made. Finish by slipping the plastic strain relief over the joint securely. If you have no other way to cycle the battery, after full charge, turn on the radio and receiver and move two or more controls continually until you notice failure. This should occur in about 1 hour, just enough to watch a couple of 30 minute TV programs. (Note: This is not the recommended procedure for cycling — There are many inexpensive cyclers on the market — use one). Keep a check on the transmitter battery at the same time. If it fails first, you only know the capacity of the transmitter (approximately 200 mAh drain). Regular, continuous control movement will average about 250 mAh from the flight battery, so use this figure with the time to calculate the capacity of this battery. Multiply time in hours by 250 mAh to obtain capacity of the battery pack. This constant movement is approximately 2 1/2 times the movement you would normally use in flight. If you obtain an hour before failure using constant movement, then you should get at least 2 hours of flight from your new pack, depending on how you use your controls.



Left END VIEW

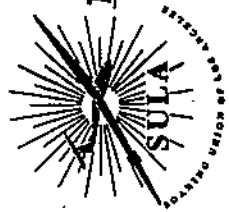


SIDE VIEW



Right END VIEW

**The Soaring Union of Los Angeles And
California State University Dominguez Hills
Host
The Second Annual Summer Soaring Festival**



AUGUST 20-21, 1994.

LOCATION: California State University Dominguez Hills, Carson, California.
CLASS: Unlimited
Entry Fee: \$25.00 (No entries after August 7, 1994.)
Awards: 1st through 10th and Top Team. (Top 4 also paying members of an AMA sanctioned club)
Raffle: Raffle tickets will be sold at the contest. Drawing will be held after the last round.
T-SHIRTS: Available with pre-registration only.
Pilots Check in: Friday noon to 7 p.m. and Saturday 7:30 a.m. to 8:45 a.m. (on the field)
Pilots Meeting: Saturday & Sunday, 8:45 a.m. First Flight, 9:00 a.m.

TASKS:
SATURDAY, AUGUST 20
 Round 1 - 4 minute P/D
 Round 2 - 6 minute P/D
 Round 3 - 8 minute P/D
 Round 4 - 3 minute P/D
 Round 5 - 5 minute P/D
 All rounds scored 3 pt's/sec. Carrier Type Landings, 40 pt's max. per landing.
 Rahn winches & Retrievers, @ 900 ft.
 On-Site Free RV Parking Available. (No hookups)
 More Information and map will be sent with confirmation.

Information: C.D. **Chairman** Kevin Andersen (310)372-2585
 Co-Chairman Ron Brown (310)328-8684
 Randy Spencer (310)318-1063

SULA SUMMER SOARING FESTIVAL ENTRY FORM
 (NO ENTRIES AFTER AUGUST 7, 1994.)

Frequency Choices: 1st: _____ 2nd: _____ 3rd: _____ Club/Team _____
 Name: _____ AMA #: _____ Phone No: () _____
 Address: _____
 City: _____ State: _____ Zip: _____ R/V Parking ? Yes _____ /NO _____
 T-shirts @ \$15.00/ea. M ___ L ___ XL ___ XXL ___ plus Entry Fee @ \$25.00 = TOTAL \$ _____
 Mail entry to: SULA
 c/o Ron Brown
 2933 Sonoma St.
 Torrance, CA 90503
 (Please make checks payable to: "SULA")

**HARBOR SOARING SOCIETY
SC2 CONTEST
JULY 31ST, 1994**

SIGN IN: 8:00 AM
PILOTS MEETING: 8:45 AM
FIRST FLIGHT: 9:00 AM
CONTEST DIRECTORS
 BEN CLERX (714)721-8848
 MIKE AGUIRRE (714)645-6419

ENTRY FEE: \$6.00

3 ROUNDS OF FLYING

1ST. ROUND: 4 MINUTE FLIGHT/SCORED 800 FLIGHT-200 LANDING POINTS
2ND.-3RD. ROUNDS: 4 OR 8 MINUTE FLIGHT-PILOTS CHOICE
 4 MINUTE FLIGHT /SCORED 800 FLIGHT-200 LANDING POINTS
 8 MINUTE FLIGHT/SCORED 900 FLIGHT -100 LANDING POINTS

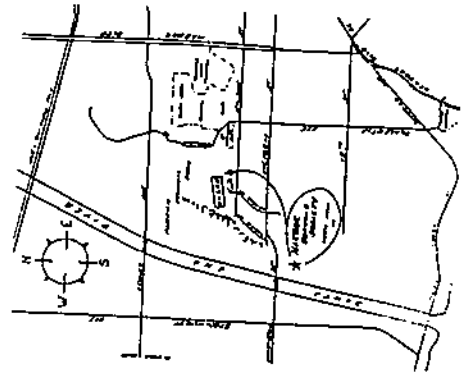
LANDINGS WILL BE STANDARD 25 FOOT CIRCLE

WINCHES ARE ALL 12 VOLT

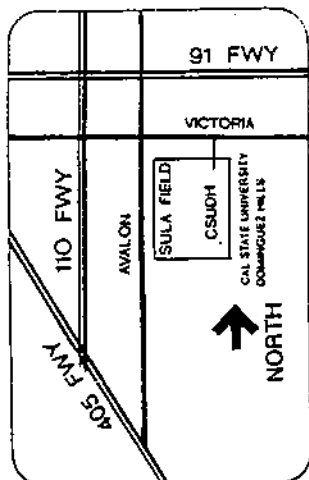
LINE LENGTH IS 650 FEET

LANDING SURFACE IS MOWED WEEDS

ALL SC2 RULES APPLY



SOARING UNION of LOS ANGELES



60" HAND-LAUNCH CONTEST

JULY 24, 1994

SULA invites you to participate in the RC HAND LAUNCH CONTEST on July 24 1994. This will be a AMA Sanctioned event. The contest will be at the SULA field on CAL State Dominguez campus at the corner of Avalon & Victoria. Registration is at 8:00 am, pilots meeting at 9:00, contest starts at 9:30. Open flying before 9:00, **NO FLYING AFTER 9:00!** There will be a radio impound. Trophies will be given to 5th place.

Round-1 is unlimited throws for your best single flight time in a 10 minute time slot.

Round-2 will be to achieve three flights, 2-min, 2-min and 5-min max. with unlimited throws in a ten minute time, man-on-man.

Round-3 is to fly 5, 2 minute flights with only 8 throws, man-on-man.

For more INFO contact the CD Merrill Farmer at 310-923-2414.

"THE HAWK REUNION" CELEBRATING 20 YEARS OF FUN

PRESENTED BY
ROSS MODELS

July 31, 1994

Event held in conjunction with

TORREY PINES GULLS

SPONSORED BY:

FULL MOON ENTERTAINMENT

FUTABA OF AMERICA

DUBRO PRODUCTS

AMA MEMBERSHIP IS REQUIRED

LOCATION: TORREY PINES GLIDER PORT

CLASSES: HAWK CONCOURSE DE ELEGANCE!
CONCOURSE DE ELEGANCE FOR PLANES DESIGNED 20 YEARS
AGO OR OLDER, HAWK RIDGE RACING, AEROBATIC
COMPETITION, HAWK LIMBO & EVENTS TO BE ANNOUNCED!

TIME: PILOTS MEETING AND CONCOURSE DE ELEGANCE 10:00AM
JULY 31, 1994

INFORMATION: KARLTON SPINDLE ROSS MODELS
(800) 864-6566 DAY (702) 358-7677
(800) 790-9908 NIGHT

ENTRY FEE: \$20.00 INCLUDES GOLF SHIRT, POSTER, GIVE AWAYS GALORE!
POST MARKED BEFORE JULY 1, 1994
AFTER JULY 1, 1994 NO SHIRT WILL BE INCLUDED.

EXTRA EVENTS: HAWK SWAP! BYOM BBQ! HAWKS WILL BE AVAILABLE FOR
CHARTER CONTACT ROSS MODELS (602) 358-7677 FOR CHARTER:

ENTRY FORM: PLEASE MAKE CHECKS PAYABLE TO "SHEER ENTERTAINMENT"

NAME: _____ ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: () _____ AMA NUMBER: _____ FREQUENCY CHOICE: _____
SHIRT SIZE: _____ EXTRA SHIRTS @ \$15.00 EACH: _____ SIZE: _____

MAIL ENTRY TO: SHEER ENTERTAINMENT
5399 HARTER LANE
LA CANADA, CALIFORNIA 91011

FOR SALE

- Harbor Soaring Society hats, shirts, and vinyl patches - Andy Sanders (714) 751-9235.
- ALL PRICES REDUCED. Falcon 880, almost new, 6 servos, \$275. AstroFlight AC/DC peak detection charger, \$75. ACP vacuum bagging system, complete, many extras, \$140. Falcon 600 DCU clone, 6 servos, \$150. Goblin NIB and NSP Sparrow (partially built), \$30 for both. Assorted FG and kevlar cloth, CF laminate, worth \$130, \$75. John Ostrowski, (714) 847-4871.
- Mako, RG-15 airfoil, \$375 OBO. Sealy Laser, S-3021 airfoil, glass fuse, balsa/foam wing, 124" span, slip-on nosecone, kit NIB, \$140. Mike Aguirre (714) 645-6419
- McLean "Vector" high performance sloper, 90" span, RG-15, wingerons, all composite, RTF with 7 ch Airtronics radio, \$400. Michael Morjoseph, (714) 960-2835.
- P-51 Penetrator high performance slope ship, NIB, \$65. Kyosho scale Zero, ARF electric with 05 motor, battery, props, etc, still in box, \$130. Pat Stoker, (310) 598-9029.
- "Tango 3," modified straight wing Falcon 880, SD3021 airfoil, 4 wing servos mounted in Ziegelmeyer servo mounts; flaps and ailerons use aluminum tubing full length Ziegelmeyer gapless hinges. Rudder and elevator servos are

Airtronic 102 servos in a glassed-in tray. Rudder is tube hinged, not taped. Fuse recently refinished with automotive lacquer, highly visible at altitude. Includes battery pack and switch harness. Includes custom carrying box and spare stabs, REDUCED to \$600. Steve Fink @ (h) 714 645-0459, (w) 714 261-2825, ext 229
- LJMP Meteor, NIB, glass fuse, 120" span, \$140. Airtronics Legend, NIB, \$180. Ridge Rat, glass fuse, RTF, \$75. Midwest Silent Squire, foam wing, NIB, \$30. Dave Nemecek (714) 775-7196.
- 2M Whisper, RTF less radio, \$125. Bill Duncan, (714) 892-8665.
- Airtronics Vanguard TX & RX (CH 28), make offer. Curt Nehring (909) 592-2105.
- Uplifter 2M glider (prototype), R/E, \$60. 2M Gnome-electric for direct drive, \$100. Astro Challenger, \$30 bare, \$100 with Astro 05 geared motor and prop. 2M Gnome with two wings (poly and flat), \$100. Sensoar 2M glider, \$40. Sensoar electric, \$40. Slope Squire (electric or slope), \$40. Das Slupen Thing glider, \$25. 3 Electric Playboy fuselages (no wings included), \$50. Bob Sliff (714) 893-8311
- Spirit 100 kit NIB \$50. Pete Young (714) 892-3473

NEW! **DIAMANT**

IMMACULATE finish (the best you'll EVER see!),
ready-to-fly imported molded hollow core wing model



Wing span: 96 in • Area: 691 sq. in.

Airfoil: Eppler 193

Weight empty: 47 oz

Flying weight: 67 oz (with R/C
system, nose weight)

Loading: 14 oz/ft² (but you can't tell!)

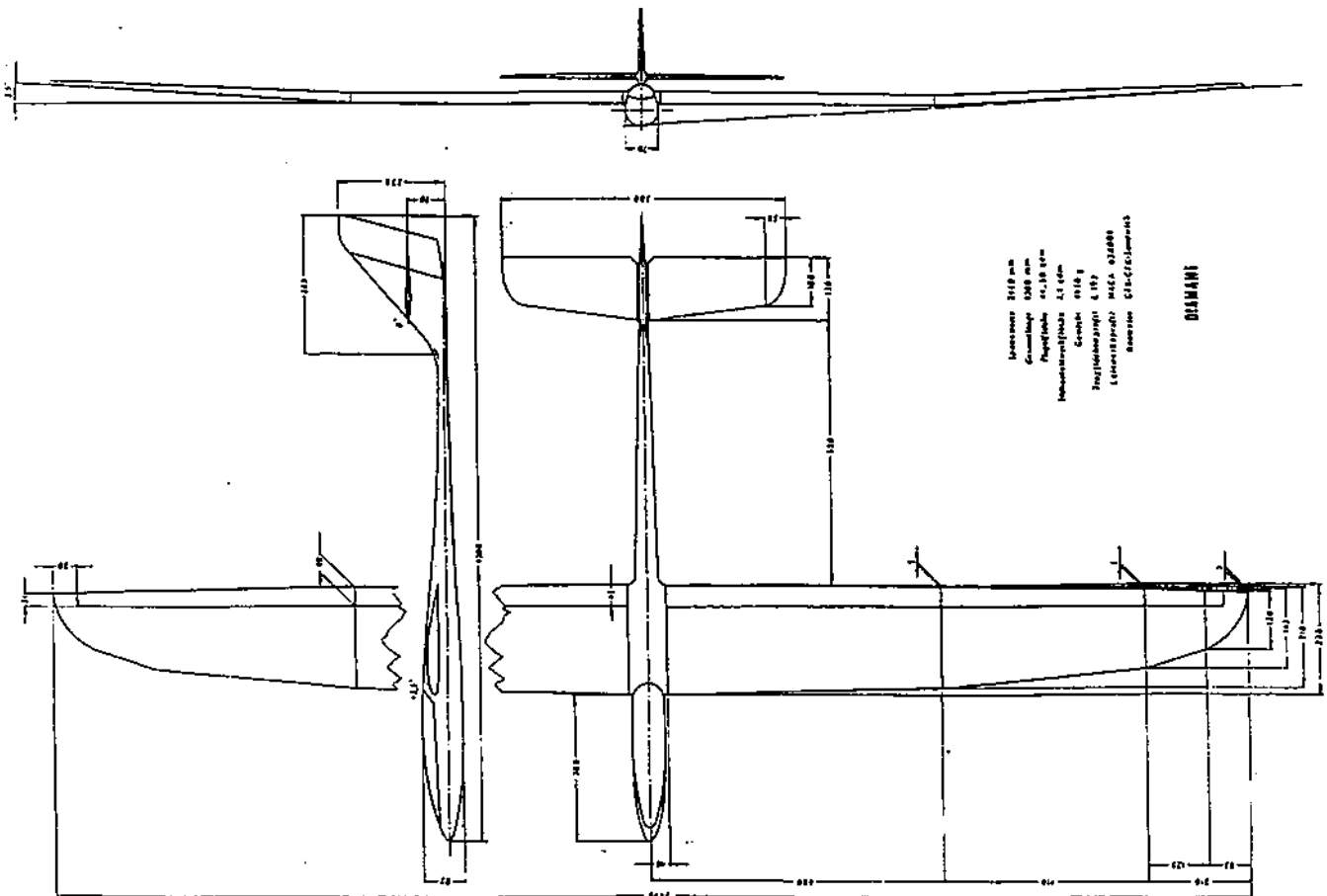
Features: All controls hinged and ready to
go, all pushrods installed, Carbon joiner,
servo covers, fitted canopy

Radio functions: Aileron, Elevator, Rudder, Flap (5 servos — 2 aileron servos needed, but
computer radio not required!)

Introductory price: \$550 (shipping & CA tax extra)

(This price good through Sept. '94, although variations in exchange rates make price subject to change without notice.)

→ To order, contact Dynamic Modelling • 4922 Rochelle Ave • Irvine • CA
• 92714-2941 • 1-714-552-1812 (3-view / technical data available upon request.)



Southern California Soaring Clubs

Results of NCC SC² Contest of 5/29/94

Contest Director - Keith Finkenbiner

			SCORE	NORM			SCORE	NORM		
1 MIKE REAGAN	TOSS	EXPERT	2981.7	1000.0	1E	56 BOB SWET	TOSS	EXPERT	2164.7	726.0
2 AARON VALDES	TPG	EXPERT	2958.0	992.1	2E	57 JIM WILLIAMS	SWSA	SPORTSMAN	2144.8	719.3
3 B J WEISMAN	TOSS	EXPERT	2939.3	985.8	3E	58 MORT SHERMAN	NCC	SPORTSMAN	2064.1	692.3
4 FRED SAGE	TPG	EXPERT	2935.0	984.3	4E	59 DON RICHMOND	TPG	SPORTSMAN	2046.7	686.4
5 MIKE AGUIRRE	HSS	EXPERT	2929.9	982.6	5E	60 NICK BUZOLICH	HSS	SPRTSMN 60+	1926.1	646.0
6 DON EDBERG	TPG	EXPERT	2926.9	981.6		61 ALI KHANI	SULA	SPORTSMAN	1821.0	610.7
7 EDGAR WEISMAN	TOSS	EXPERT 60+	2889.6	969.1	SR	62 STEVEN STRICKLETT	NCC	SPORTSMAN	1778.6	596.5
8 BEN CLERX	HSS	EXPERT	2877.6	965.1		63 HUGH GRAHAM	SWSA	SPORTSMAN	1709.3	573.3
9 GEORGE JOY	TPG	EXPERT	2858.9	958.8		64 JOHN YEE	SWSA	EXPERT	976.0	327.3
10 RICH STROBEL	TPG	EXPERT	2856.7	958.1		65 PETER OLSEN	SWSA	EXPERT	902.0	302.5
11 ED WHYTE	NCC	EXPERT	2853.4	957.0		66 PAUL STUBB	NCC	SPORTSMAN	765.0	256.6
12 ARTHUR MARKIEWICZ	TPG	EXPERT	2853.1	956.9						
13 BOB SLIFF	HSS	EXPERT	2850.9	956.1						
14 CLIFF HUNTER xx	NCC	SPORTSMAN	2821.3	946.2	IS					
15 FRANK CHASTELER	AMTS	EXPERT 60+	2810.3	942.5						
16 IRV STAFFORD	NCC	EXPERT	2780.9	932.7						
17 MIKE ZIASKAS	TPG	EXPERT	2767.3	928.1						
18 RON FAULKENHAM	ISS	EXPERT	2756.9	924.6						
19 NORM KUTCH	HSS	EXPERT	2754.0	923.6						
20 STEVEN FINK	HSS	EXPERT	2742.7	919.8						
21 DAVID CONDON	TPG	SPRTSMN 60+	2738.9	918.6	2S					
22 GEORGE SPITZER	PSS	EXPERT	2736.3	917.7						
23 ROSS THOMAS	HSS	EXPERT	2735.0	917.3						
24 MIKE CARRICO	HSS	SPORTSMAN	2723.0	913.2	3S					
25 MIKE SKUBE	TPG	SPORTSMAN	2713.7	910.1						
26 DANE VANNETT	TOSS	SPORTSMAN	2711.6	909.4						
27 CURT NEHRING	SWSA	EXPERT	2702.8	906.5						
28 MIKE LEE	ISS	SPORTSMAN	2676.0	897.5						
29 MIKE DECKMAN	SWSA	SPORTSMAN	2673.3	896.6						
30 GREG BAGGERLY	ISS	EXPERT	2663.2	893.2						
31 DON VAN GUNDY	TPG	EXPERT	2656.0	890.8						
32 KEN RAYMOND	NCC	EXPERT	2643.7	886.6						
33 ANDY SANDERS	HSS	SPORTSMAN	2619.1	878.4						
34 RICK SHELBY	NCC	EXPERT	2605.2	873.7						
35 MANNY TAU	HSS	EXPERT	2589.3	868.4						
36 BILL KLATSKIN xx	EDSF	SPORTSMAN	2573.7	863.2						
37 ROBERT BROWN	NCC	SPRTSMN 60+	2563.1	859.6						
38 JOHN McNEIL	TPG	SPORTSMAN	2543.2	852.9						
39 NORM SWANSON	TPG	SPORTSMAN	2515.6	843.7						
40 IAN DOUGLAS	SWSA	EXPERT 60+	2495.0	836.8						
41 RANDY BRATRUD	HSS	EXPERT	2494.0	836.4						
42 JIM PARSONS	HSS	EXPERT	2476.7	830.6						
43 NORM TILLMAN	NCC	EXPERT	2435.0	816.6						
44 RICK BRIGGS	HSS	SPORTSMAN	2321.0	778.4						
45 RICK LACY	SWSA	SPORTSMAN	2313.7	776.0						
46 AL DOIG	NCC	EXPERT 60+	2304.7	772.9						
47 ROGER FRASER	TPG	EXPERT	2294.0	769.4						
48 AL CRON	HSS	EXPERT	2284.9	766.3						
49 PHIL MERRICK	TPG	SPORTSMAN	2268.1	760.7						
50 DAVID BUTKOVICH	PSS	SPORTSMAN	2243.7	752.5						
51 WILLIAM MALVEY	-	SPORTSMAN	2225.0	746.2						
52 BRENDAN LUGO	NCC	SPORTSMAN	2218.7	744.1						
53 SUE VAN GUNDY	TPG	SPORTSMAN	2207.2	740.2						
54 JIM MARKLE	EDSF	EXPERT	2203.0	738.8						
55 KEITH FINKENBINER	NCC	EXPERT 60+	2190.3	734.6						

TEAM STANDINGS

	ISS	TOSS	TOSS	
	MARCH	APRIL	MAY	TOTAL
HSS	3814.7	3587.8	3827.5	11230.0
TOSS	3721.0	3515.1	3864.3	11100.4
TPG	3953.6	3128.4	3916.8	10998.8
SWSA	3671.6	3063.9	3415.8	10151.3
PSS	3965.4	3658.2	1670.2	9293.8
NCC	3621.3	863.3	3722.5	8207.1
EDSF	3781.2	2780.1	1602.0	8163.3
ISS	3644.5	1622.8	2715.3	7982.6
SULA	3593.6	0.0	610.7	4204.3
AMTS	801.2	773.2	942.5	2516.9
SFVSF	0.0	1475.5	0.0	1475.5

HSS Monthly Results - June

OPEN

NAME	CLASS	SCORE	NORMALIZED	PLACE
MIKE REAGAN	GUEST	2949	1000	1ST.EXP
ROGER LACKEY	EXPERT	2910	987	2ND.EXP
DON EDBERG	EXPERT	2907	986	3RD.EXP
BOB SLIFF	EXPERT	2833	961	
B.J. WEISMAN	GUEST	2832	960	
JERRY BRIDGEMAN	ADV.	2827	959	1ST.ADV.
NORM KUTCH	EXPERT	2752	933	
ROSS THOMAS	EXPERT	2747	932	
TOM VINCENT	EXPERT	2740	929	
JIM SKINNER	GUEST	2722	923	
DAN WILSON	EXPERT	2658	901	
PAUL TRIST	GUEST	2646	897	
MIKE AGUIRRE	EXPERT	2556	867	
EDGAR WEISMAN	GUEST	2552	865	
PAT STOKER	EXPERT	2522	855	
AL CRON	EXPERT	2502	848	
MIKE CARRICO	EXPERT	2500	848	
RANDY BRATRUD	EXPERT	2484	842	
HUGH BROESAMILE	SPTS.	2253	764	1ST.SPTS.
RICK BRIGGS	SPTS.	2243	761	2ND.SPTS.
ANDY SANDERS	EXPERT	2205	748	
BEN CLERX	EXPERT	2067	701	
JERRY BRIDGEMAN MOVES TO EXPERT				

CLASSIC

NAME	CLASS	SCORE	NORMALIZED	PLACE
RANDY BRATRUD		2843	1000	1ST.
AL CRON		2762	972	
WILL CONRAD		2679	942	
ROSS THOMAS		2424	853	
BOB SLIFF		2384	839	
DICK PANTZAR		2286	804	
RON CHEROSKE		1854	652	
HUGH BROESAMILE		1652	581	

2 METER

NAME	SCORE	NORMALIZED	PLACE
MIKE AGUIRRE	2907	1000	1ST.
ROSS THOMAS	2834	975	2ND.
BOB SLIFF	2813	968	3RD.
PAUL TRIST	2495	858	
GORDON POULSEN	2476	852	
MIKE REAGAN	2224	765	
ROGER LACKEY	1952	671	



The Oldest Chartered
Soaring Club
in the
A.M.A.



Charter # 128

JULY HSS MEETING

DATE: Wednesday 6 July,
7:30 PM

MEETING LOCATION:
Hobby Shack Retail
Store, Fountain Valley



P.O. Box 1673
Costa Mesa, CA 92628



FIRST CLASS MAIL

WILL CONRAD
3959 SHRIKE AVE.
FOUNTAIN VALLEY, CA. 92708