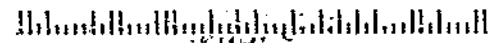


Harbor Soaring Society
P.O. Box 1673
Costa Mesa, CA 92626



FIRST CLASS MAIL

WILL CONRAD
9359 SHRIKE AVE
FOUNTAIN VALLEY , CA 92708



(The Soaring) Society Column

President:	George Joy	(714) 556-6385
Vice Pres:	Rich Garner	(714) 528-1757
Secretary:	John Lasater	(714) 645-2805
Treasurer:	Frank Chasteler	(714) 545-2185
Contest Coord:	Ross Thomas	(714) 638-0705
General Dir:	Jared Stalls	(714) 772-1846
News Letter Ed:	Bob Sliff	(714) 895-1203

"The Oldest Chartered Soaring Club In the AMA" Chapter # 128

January 1990

Volume 27 Number 1

January Club Meeting: The January club meeting will be held on Wednesday, January 3, 1990, 7:30 pm at the Consolidated Water District Office, 1965 Placentia Ave., Costa Mesa, Ca. The Monthly club contest will be on the 7th of January, field conditions permitting.

Larry Jolly is expected to be the guest speaker at the January club meeting.

February Club Meeting: The February club meeting will be held on Wednesday, February 7th, 1990 at 7:30 pm at the Water District Office.

HSS MINUTES DEC 89 MEETING

- a) The meeting was called to order at 7:35 p.m. by Jared Stalls
- b) November minutes were approved as published.
- c) Frank Chastler reported on the club treasury. It was approved by members present.
- d) New Faces: Glen Shaw
- e) Frank Chastler brought up the election rule about a person having to be present to be nominated--quoting from the club by-laws.
- f) A report was given by Newsletter Editor Bob Sliff.

Old Business:

1. Frank Chastler gave a report on field status. We will be staying where we are for at least one year.
2. Frank C. gave Dick Pantzar a check for the retriever he built.
3. Frank brought up the subject of new batteries. Will Conrad made a motion to buy new batteries--motion was accepted.
4. George Joy has a retriever that needs a new motor. A motion was made about buying a new motor--motion was accepted. Roger Lowery will try to get the old motor rebuilt.
5. Frank discussed the use of trainer models to teach other fliers. Frank is the only instructor insured by AMA to use a club model with non-insured beginners. Additional instructors will be discussed at the next board meeting.

New Business:

1. George Joy pointed out changes in the December contest.
2. Dick Pantzar told about a storage container (he has located) for our field equipment. Frank C. made a motion to check with the city about having the storage on the field (Frank will do it). The motion was accepted.
3. Norm Kutch wanted recognition shown to Frank C. concerning his helping new fliers and always bringing out club equipment, etc.
4. Bob Sliff brought EAA newsletters for anyone interested.
5. George Joy showed a flyer for the El Dorado Silent Fliers fun fly scheduled for Dec. 17.
6. John Lupperger brought slides of the AMA Nationals and Torrey Pines Scale fun fly.

Ross Thomas

CONTEST DEPARTMENT

1989 IS NOW COMPLETE.

I wish to thank all of you who helped with the contests throughout the last year, both C.D.'s and helpers. A hearty congratulations to all of those who upgraded this year. I hope this list is complete, if not please see me at the meeting.

TO EXPERT: Larry White

TO ADVANCED: Steve Bell
Dan Danrich
Steve Fink
Steve Hendry
Norm Kutch
Hugo Sandroni
Don Zink

*See You Next Year !
George Joy*

Harbor Soaring Society

December Monthly Contest Results Open Division

Name	Actual Score	Normal Score	Class	Trophy
1 SLIFF,B	987.5	1,000.0	E	E-1
2 ATWELL,B	985.7	998.2	E	E-2
3 MARTIN,T	977.9	990.3	E	E-3
4 RICHARDSON,P	971.5	983.8	E	
5 THOMAS,R	970.4	982.7	E	
6 WHITE,L	969.8	982.1	E	
7 PANTZAR,D	969.6	981.9	E	
8 VICKERS,D	969.2	981.5	G	
9 FINK,D	966.5	978.7	L	
10 JOY,G	965.7	977.9	E	
11 ZINK,D	964.4	976.6	A	A-1
12 LOWERY,R	962.0	974.2	A	A-2
13 NEMECK,D	960.6	972.8	A	
14 LONG,D	959.9	972.1	G	
15 RITSCHKE,G	953.7	965.8	E	
16 KUTCH,N	926.1	937.8	A	
17 DUNCAN,B	915.5	927.1	G	
18 PARSONS,J	915.4	927.0	S	S-1
19 STOKER,P	911.6	923.1	G	
20 FINKS	901.0	912.4	A	
21 STOVALL,W	897.7	909.1	S	S-2
22 CHASTELER,F	897.7	909.1	E	
23 RENAUD,T	895.8	907.1	E	
24 CONRAD,W	878.1	889.2	A	
25 FEDELLECK,J	860.3	871.2	G	
26 RICHARDSON,D	854.8	865.6	G	
27 BUTKOVICH,D	852.8	863.6	G	
28 BARNHART,J	814.4	824.7	G	
29 THACKER,B	794.8	804.9	G	
30 MAHER,M	791.6	801.6	S	
31 BUZOLICH,N	765.9	775.6	S	
32 AKER,I	762.2	771.8	G	
33 CRONA	759.2	768.8	A	
34 DANRICH,D	657.7	666.0	A	
35 GARNER,R	625.9	633.8	E	
36 STOVALL,L	490.4	496.6	S	
37 SANDRONI,H	482.0	488.1	A	
38 STOVALL,D	470.1	476.1	S	
39 ADDISS	246.0	249.1	G	
40 HARRIS,P	234.7	237.7	E	
41 POULSEN,G	226.7	229.6	E	
42 EGOLF,D	0.0	0.0	S	

Yearly Standings - Open Division Through December

Name	Score	Average	Contests
1 HARRIS,P	7,946.6	993.3	8
2 MARTIN,T	7,916.9	989.6	8
3 CHASTELER,F	7,781.1	972.6	8
4 GARNER,R	7,695.7	962.0	8
5 WHITE,L	7,644.5	955.6	8
6 SLIFF,B	7,556.7	944.6	8
7 LOWERY,R	7,552.2	944.0	8
8 RICHARDSON,P	7,528.8	941.1	8
9 PANTZAR,D	7,230.5	903.8	8
10 HURLEY,C	7,230.3	903.8	8
11 RITSCHKE,G	7,219.0	902.4	8
12 NEMECK,D	7,218.6	902.3	8
13 JOY,G	7,046.4	880.8	8
14 THOMAS,R	6,906.4	863.3	8
15 STALLS,J	6,850.7	856.3	8
16 DANRICH,D	6,497.9	812.2	8
17 POULSEN,G	6,317.4	789.7	8
18 FINKS	6,125.8	875.1	7
19 ZINK,D	5,923.7	846.2	7
20 CRONA	5,854.6	731.8	8
21 SANDRONI,H	5,686.0	710.8	8
22 BELLS	5,613.1	801.9	7
23 CONRAD,W	5,546.9	792.4	7
24 HENDRY,S	5,207.5	650.9	8
25 KUTCH,N	4,915.0	702.1	7
26 LAMPRECHT,D	4,862.1	810.4	6
27 STOVALL,W	4,824.1	804.0	6
28 LUPPERGER,J	4,691.0	938.2	5
29 BUZOLICH,N	3,119.0	623.8	5
30 RANDOLPH,W	2,526.4	842.1	3
31 PARSONS,J	2,407.6	802.5	3
32 SMITH,M	2,327.5	775.8	3
33 GIBBS,D	1,885.7	942.9	2
34 LASATER,J	1,807.8	903.9	2
35 CHASTELER,T	1,537.4	768.7	2
36 ENGERL	1,528.3	764.2	2
37 STOVALL,L	1,094.8	364.9	3
38 DEEM	943.8	943.8	1
39 HALL,H	909.5	909.5	1
40 RENAUD,T	907.1	907.1	1
41 LEE,T	818.6	818.6	1
42 MAHER,M	801.6	801.6	1
43 BRIDGEMAN,J	796.8	796.8	1
44 QUISENBERRY,J	689.2	689.2	1
45 EGOLF,D	686.9	343.5	2
46 WEBSTER,D	599.2	599.2	1
46 WENTWORTH,C	552.4	552.4	1

December Monthly Contest Results 2 Meter Division

Name	Actual Score	Normal Score
1 RICHARDSON,D	990.4	1,000.0
2 ATWELL,B	989.2	998.8
3 THOMAS,R	978.3	987.8
4 MARTIN,T	976.6	986.1
5 BARNHART,J	974.3	983.7
6 SLIFF,B	963.6	972.9
7 JOY,G	963.6	972.9
8 KUTCH,N	925.7	934.7
9 STOKER,P	910.3	919.1
10 CONRAD,W	874.7	883.2
11 DUNCAN,B	855.4	863.7
12 RICHARDSON,P	849.3	857.5
13 STOVALL,L	842.7	850.9
14 LONG,D	825.6	833.6
15 BUZOLICH,N	824.9	832.9
16 VICKERS,D	821.0	829.0
17 PARSONS,J	814.2	822.1
18 FINKS	783.4	791.0
19 WHITE,L	746.9	754.1
20 STOVALL,D	609.2	615.1
21 ADDISS	22.7	22.9
22 POULSEN,G	0.0	0.0

Yearly Standings - 2 Meter Division Through December

Name	Score	Avg	Contests
1 SLIFF,B	7,571.1	946.4	8
2 WHITE,L	7,546.6	943.3	8
3 THOMAS,R	7,525.7	940.7	8
4 JOY,G	7,213.1	901.6	8
5 HURLEY,C	7,180.0	897.5	8
6 BELLS	6,072.5	867.5	7
7 CONRAD,W	6,032.9	861.8	7
8 POULSEN,G	5,852.8	731.6	8
9 LAMPRECHT,D	5,720.0	953.3	6
10 STALLS,J	5,308.6	884.8	6
11 LUPPERGER,J	4,522.2	904.4	5
12 KUTCH,N	4,126.3	687.7	6
13 FINKS	4,077.4	815.5	5
14 HALL,H	3,503.5	875.9	4
15 RICHARDSON,P	3,269.0	817.3	4
16 BUZOLICH,N	2,656.5	664.1	4
17 LASATER,J	1,944.9	648.3	3
18 LOWERY,R	1,672.3	836.2	2
19 HENDRY,S	1,576.2	525.4	3
20 PARSONS,J	1,378.2	689.1	2
21 CRONA	1,270.2	635.1	2
22 STOVALL,L	1,190.7	595.4	2
23 MARTIN,T	998.3	998.3	1
24 QUISENBERRY,J	868.7	868.7	1
25 ZINK,D	814.1	814.1	1
26 ENGERL	702.8	702.8	1
27 STOVALL,D	622.7	622.7	1
28 SANDRONI,H	410.3	410.3	1

HSS 1990 CONTEST SCHEDULE

JAN 7 HSS CLUB CONTEST
JAN 7 SULA MONTHLY (CD: STEVE ADDIS)
JAN 13 SULA 2-METER (CD: RANDY SPENCER)
FEB 11 HSS CLUB CONTEST
FEB 17 F3E ELECTRIC CONTEST
FEB 17 SULA MONTHLY
MAR 3 SULA 2-METER
MAR 11 HSS CLUB CONTEST
MAR 11 SULA MONTHLY
APR 8 HSS CLUB CONTEST
MAY 6 HSS CLUB CONTEST
MAY 19-20 ASTRO FLIGHT ELEC. CHAMPS
JUNE 1-3 F3E TEAM SELECTION
JUNE 10 HSS CLUB CONTEST
JULY 8 HSS CLUB CONTEST
AUG 5 HSS CLUB CONTEST
SEP 9 HSS CLUB CONTEST
OCT 14 HSS CLUB CONTEST
NOV 11 HSS CLUB CONTEST
DEC 9 HSS CLUB CONTEST

*****ATTENTION!!!!****

We will need CDs for our contests--Sign up ASAP!!

Contact--Ross Thomas

HSS CLUB CONTEST--JAN 7

Task will be Standard 3-5-7

Standard and 2-Meter classes will be scheduled.

ALL FLYERS MUST SHOW 1990 AMA CARD TO FLY! NO EXCEPTIONS!

GRP MATERIALS AND THEIR USE

by Edward S. Popko (NY) & John G. Smith (MA)
Extracted from Soar Tech No.5
January 1986

Appendix A

FIBERGLASS:

Fiberglass cloth: is a generic term for a number of glass fiber technologies. E-Glass is the most commonly used today. Made from molten glass, it is spun into tiny individual fibers with good strength and relatively low cost. S-Glass is an aircraft quality, high-performance fiber that is more expensive than E-Glass, but it is significantly stronger too.

Cloths are woven fabrics made of continuous strands of glass. They come with twisted "yarns" in weights varying from 3/4 ounces to 12 ounces per square yard and with untwisted yarns called "rovings" in heavier weights of 18, 24, and 36 ounces per square yard.

Tap: is woven cloth in narrow widths but with selvaged edges. It is particularly useful when you are working in small confined places and will be "working" the cloth a lot.

Chopped strands: are short lengths of continuous filament yarn to which a resin of compatible sizing has been applied. Standard stock lengths are 1/4" and 1/2".

Milled fibers: are short lengths of continuous filament yarn which have been hammermilled into small, soft pellets of filamentized glass. They are used as a fibrous filler and their shorter fibers provide smooth mixtures.

Mat: reinforcement consists of chopped glass strands arranged in random pattern and bonded with a soluble resin binder. The mat is designed for hand lay-up modeling and has fast wet through. In general, mat absorbs more resin than is suitable for model work and for this reason, woven cloth is the preferred media.

NON-GLASS REINFORCEMENTS:

Carbon fibers: are made from Poly-Acrylic-Vitrile (PAN) fibers that are heated under tension several times to dry and crystallize them. The final material has high tensile strength and excellent stiffness. Carbon fibers have the highest tensile strength of the common fibers but its compressive strength is only about 72% of compression. Carbon fibers carry electricity which may cause short-circuits and damage electrical equipment. Protect all electrical equipment, switches, and terminal boxes in or near areas where carbon fibers are handled, cut or sanded.

Carbon fibers conduct electricity and there is the potential for radio interference. In effect, the fibers act like an antenna and interfere with your receiver. Jim Gray, editor of *B/C Soaring Digest*, offers the following advice:

"The tow shouldn't be a quarter-wavelength electrically at your transmitter frequency. To find out what this length is, divide the number 234 by the frequency of your transmitter in Megacycles (Megahertz). For example, if your transmitter is on 72.160 MHz, the result you get will be 3.24 feet or 39 inches. Carbon tow at that length would resonate at the transmitter frequency, and would probably cause reception and control problems. Lengths close to that might also be bad. Make sure your tow length is not resonant, and don't use too much of it.

The other solution is to run the antenna at right angles to the tow. This will minimize signal interference between the antenna and the carbon. For example, make the antenna plug into the wing. You could run it in the leading edge or inside the structure, no problem...and then use a small jack to plug it into the pigtail from the receiver. Works great!

Antennas should not be parallel to control rods or carbon fibers. Here lies another problem too. If you use carbon spars, it is likely that the antenna which is parallel to the spar will be

affected.

Half-wavelengths, quarter-wavelengths, and full-wavelengths are dangerous ones. To get the dimensions of the half or full wavelength, just multiply the number you got for the quarter wavelength by 2 or 4 to get the half or full. All of these will be resonant, so avoid them."

Kevlar: (a DuPont trademark) is made from a synthetic fiber called Aramid and has extremely good tensile strength with little elongation. Kevlar is more expensive than S-Glass and has noticeably less compressive strength, only about 32% of its tensile strength.

Although Kevlar's strength is high, it is not the best for modeling. It is very difficult to wet out using more resin than strictly necessary. Kevlar costs about five times its comparable area in fiberglass and requires special scissors to cut it.

RESINS:

Polyester resin: is a fundamental binder in GRP technology and there are a great number on the market today. Non-pigmented polyesters look like pink honey. The slight tint comes from cobalt naphenate, a pre-accelerator that is mixed at the supplier to shorten curing times. When you are ready to use the resin, you add in a small amount of methyl ethyl ketone peroxide (MEK catalyst). The MEK reacts with the cobalt causing the resin to heat up and cure.

Polyester has a short shelf-life (about 6 to 12 months) and should be "fresh" if you are to get consistent results. Although resin suppliers often used terms like "sanding resin", "general laminating resin", "molding resin", or "surfacing resins", there are really only three types that are useful to modelers: finishing resins, laminating resins, and Gel-coat. Their main differences are whether they contain wax or not and whether they are pigmented or not.

Finishing resins: are air-cure resins and contain wax. When you add catalysts, the resin begins to generate heat and the wax within percolates to the surface forming a very thin coating. This coating prevents the air from contacting the resin while it is curing. Once the resin is hard, you can either leave the wax coat on or remove it (by sanding or dissolving it) if you plan to paint, glue, or laminate further layers.

Laminating resins: are designed for applications where you anticipate adding subsequent layers of cloth-resin, paint, or pigmented resins. Unlike finishing resins, laminating resins do not contain wax. This kind of resin is called "air inhibited" because the surface exposed to air will not fully cure. It is formulated to remain tacky for a long time thus making it easier to bond subsequent layers.

Gel-coat: is a pigmented laminating resin and is used to copy fine detail when making a mold or to color the outer surface of a fiberglass piece. Gel-coat make a very good molding surface because it cures to an extremely hard and durable surface that can be polished to a high gloss. It is thicker than polyester resin and usually requires more catalyst to achieve the same curing time.

Methyl Ethyl Ketone Peroxide: (MEK) is the catalyst that causes polyester resin to cure. MEK is a clear, slightly oily solution that contains peroxide (9% active oxygen) in a plasticizer solution. Within a 70 - 80 degree Fahrenheit working temperature, about 4 drops will catalyze one fluid ounce of resin. Use less MEK at higher temperature and more at lower. Always add the MEK to the resin - NEVER resin to MEK. MEK is a very powerful organic oxidizer and should be handled with great care. **IT WILL INEVITABLY CAUSE BLINDNESS IF YOU GET IT IN YOUR EYES.** Prolonged storage in warm places will decrease the MEK's oxygen content. Store MEK in a safe, cool (not necessarily refrigerated) place. MEK is flammable and cor-

rosive. Federal regulations do not permit shipment by mail or parcel post service. This may affect you if you are mail-ordering fiberglass supplies.

Styrene monomer: is used to thin polyester and to improve wetting-out properties. Polyester's strong smell comes from evaporating styrene, thus, you must work in a well ventilated area. Styrene also highly toxic and flammable -- DO NOT smoke or use a heat gun near it.

Epoxy: resins are two-part, a basic resin and a hardener. Unlike polyester where only a few drops of catalyst are needed to initiate the curing process, epoxy requires equal parts to form the polymer. For this reason, mixing must be accurate. Extra quantities of one part do not accelerate hardening. In fact, inaccurate mixing weakens the cured resin. Epoxy hardeners contain Amines which can be absorbed into the body through the skin. Hardeners are skin irritants and sensitizing agents. Many people become allergic and even minimal contact will cause a rash resembling poison ivy. Once you are sensitized, you can never work with it again.

MISCELLANEOUS:

Cab-O-Sil: is a fine particle silicate (silicon dioxide) which can be incorporated in polyester and epoxy resins in relatively small proportions to reduce drain-off from inclined and vertical surfaces. In heavier proportions, it is used as a trowelable filler.

Poly-Vinyl alcohol: (PVA) is a water soluble film-forming solution used to release polyester and epoxy laminated parts from their molds. Drying rate is rapid and the dried film is impervious to resins but can be readily removed from the cured part by washing with water. Most PVAs have a tinting agent to make them easier to see where they have been applied.

Mold release wax: is basically a high quality paste wax. It is applied directly to the lay-up surface of the mold, the alignment pin flange, and even to the backing rib and base to prevent resin from sticking. Apply wax in thin coats and allow each to completely dry before adding more coats. Buff each coat to a high luster with a soft cotton rag. (See Table 3 at the end of the article.)

Appendix C

GENERAL MODELING SUPPLIES:

Micro-Balloons Filler Material. SIG Mfg. Co. Inc. Montezuma, IA 50171

3M Brand Acryl-Blue Glazing putty blue (part #5964) or NAPA Glazing Putty "Nitro Stan" Red car body putty.

FISHER brand PVC Gloves (11-394-120C) Fisher Scientific Co. Pittsburg, PA 15219

R/C Glue. Wilhold Glues Inc. Santa Fe Springs, CA 90607

Butcher's Paste Wax.

3/4" wide camel hair modeling brushes

Dremel Moto-Tool

1 foot of 3/16" music wire

Electric drill with 5" sanding disks

Single edge razor blades

Automobile rubbing compound

paper towels

1/2" wide masking tape

320 & 400 wet-and-dry sandpaper

Course sanding disks for power drill

Plywood for Mold Backing (1/2" of 3/4" x 6" x length of fuselage)

Non-hardening modeling clay (2 Lb)

Sears Craftsman Kromedge 8" files (halfround, flat, and round)

Tuf-Grind 2" carbide disks for Moto-Tool hand tools. H.O.B. Hardware (Part # AC-4). 20134 State Road, Cerritos, Ca 90701

	TENSILE STRENGTH (PSI)	COMPRESSIVE STRENGTH (Approx PSI)	WEIGHT PER CUBIC FOOT (Lbs.)
FIBERS			
E-Glass	500,000	250,000	159.0
S-Glass	665,000	332,500	155.5
Kevlar	400,000	128,000	89.9
Carbon Fiber	470,000	338,400	108.9
RESINS			
Polyester	10,000	-	75.0
Epoxy	20,000	-	74.0 to 77.0

Table 3: Source - "Yacht Racing/Cruising", July/August 1982, p. 73.

EXTERNAL SWITCH/BATTERY CHECK/CHARGE PLUG

From the Central Arizona Soaring League
Extracted from the TOSS Dec. Newsletter

The idea isn't new but I will explain how I installed a phone jack in my plane which serves all the functions in the title. My first application was a 1.5 meter BODST (Bird of Daylight Savings Time) which I leave completely assembled and never remove anything, not even the hatch. The phone jack serves all my needs. The female portion, called the jack, is mounted in the side of the aircraft while the male portion, called the plug, has a flag attached and is externally installed to turn the plane on and off.

1. ON - OFF switch with plug installed and a red flag hanging from the plane when the switch is off. There is no way to accidentally bump this switch and turn off the plane just before launch. When in doubt you watch the bird as it flies away from you and if you see a red flag flapping out the side you know you're into free flight instead of R/C.

2. The battery checker plugs into the same jack which is especially handy on the small battery pack used in HLG.

3. And back home or at the field we plug the charger into the same jack.

So first the parts list:

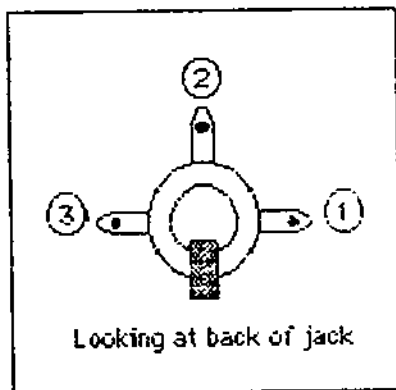
Phone Jack, Submini (2.5mm)

Radio Shack 274-292

Phone Plug, Submini (2.5mm)

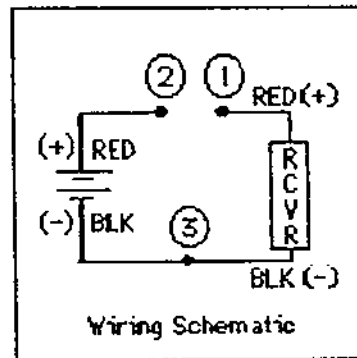
Radio Shack 274-290

They come 2 per pack so get extra plugs for your charger and battery checker. You can use other jack/plug combinations, but be sure it is a CLOSED CIRCUIT type jack.



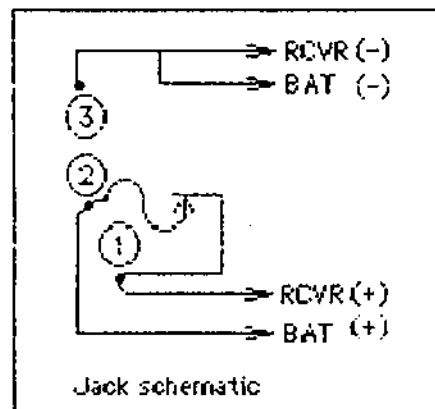
The trick is to wire the switch portion of the jack on series with the positive wire (red) from the battery to the receiver. This switch is normally closed which means no plug installed = power off. If we stop here we would have an ON-OFF switch but no way to measure or charge the battery. What we need to do is tap into the negative (black) wire from the battery to the receiver, i.e. leave the wire as is but attach an additional wire and connect it to terminal 3. The easiest way to do this is to cut the negative (black) wire and splice the ends with the third wire which runs to terminal 3. Be sure all splices are well insulated.

The plug for the charger or battery checker is wired with its tip positive (+ or red) and its body negative (- or black).



To save changing all your regular male plugs (Futaba, Airtronics, etc.) on your chargers or battery checkers, you can make one jumper cable with one end being the new phone plug and the other end your regular female plug.

Ed Parrish



THERMAL TRIVIA

by Rich Garner

The contest season is over with. Now we can kick-back, relax, & dream of that perfect top secret sailplane which we want to build and fly; the one which will put us in the winner's circle every time.

I find it amusing that every time a new design of sailplane appears on the market & does well in a few big contests, everyone runs out to buy one -- including me! -- hoping to become a "Top Gun" pilot overnight. Why not just select one good, proven design, build it, & learn how to fly it well? Doesn't that sound like a better way to be a consistent winner?

Here are 10 good reasons not to fly contests:

1. Your pulse and heart rates may rise; the adrenaline pumps; a high degree of stress develops -- all bad for your physical and emotional health.
2. Just before launch your hands may become sweaty; your knees begin to knock; and you may feel light headed & dizzy...as this increases, it leads to blackouts during launch, causing the sailplane to crash. Then, the winchline backlashes -- or, even worse, -- fouls over fences & houses.
3. You might have a "mid-air", ruining your whole day.
4. Your transmitter or flight-pack may malfunction, which spells disaster. (Note: this article was written before my Cheeta augered in.)
5. You might come in last...no one likes a loser!
6. You might get "into sink" and have to land off-field.
7. You might miss your landing...you might even land upside down!
8. You might fold your wings on a zoom launch.
9. You might become a better pilot.
10. You might have fun!



Harbor Soaring Society

P.O. Box 1673
Costa Mesa, CA 92628

A.M.A. Club # 128

"The Oldest A.M.A. Chartered
Soaring Club In The World"

APPLICATION FOR MEMBERSHIP IN THE HARBOR SOARING SOCIETY FOR 19____
JANUARY to DECEMBER

I understand that by applying for membership in the Harbor Soaring Society, I must be a current member of the A.M.A.

NAME _____ HOME PH. (____) _____
ADDRESS _____ WORK PH. (____) _____
CITY _____ STATE _____ ZIP _____
A.M.A. NUMBER _____ (PROOF OF STATUS REQUIRED)

SENIOR MEMBER - (17 years or older) - Renewals prior to January meeting = \$12.00.

New applicants or renewals after January meeting = \$15.00.

JUNIOR MEMBER - (16 years or younger) - At time of application = \$6.00.

FAMILY MEMBER - \$4.00 for each additional member at same address.

Attach a separate application and proof of A.M.A. membership for each name.

New applicants making application for senior membership between July 1st and October 31st, pay reduced dues of \$10.00.

New applicants making application between November 1st and December 31st will pay the annual rate as indicated above. Such dues will make the new member paid in full for the following year.

SIGNATURE _____ DATE _____

TOTAL DUES OWED AND ATTACHED \$ _____

SIGNATURE OF CLUB OFFICER RECEIVING APPLICATION _____

Please check the areas listed below in which you are interested or willing to help:

- _____ Contest Director
- _____ Contests (Scoring, Winches, Radio Impound, etc.)
- _____ Field Maintenance
- _____ Public Relations
- _____ News Letter Contributor
- _____ Assist New Filers
- _____ Other _____

**** ELECTRIC FLIGHT ****

FAI
F3E

CONTEST

FOR 7 CELL AND OPEN CLASS MODELS

FLOWN TO CURRENT 1989-90 FAI RULES

SATURDAY, FEBRUARY 17, 1990

ON THE 17TH OF FEBRUARY, THE HARBOR SOARING SOCIETY WILL HOST AN F3E CONTEST FOR 7 CELL AND OPEN CLASS MODELS. RULES FOR BOTH CLASSES WILL BE THE CURRENT FAI RULES, EXCEPT THAT A JURY WILL NOT BE APPOINTED AND THE BUILDER OF THE MODEL RULE WILL BE WAIVED. ALSO, FLYER CALL UP SEQUENCE WILL BE POSTED, AND THE FLYER WILL BE RESPONSIBLE TO BE READY WHEN HIS TURN COMES UP.

BOTH CLASSES WILL BE FLOWN, BUT FLYERS MAY ENTER ONLY ONE CLASS. (THAT IS, EITHER 7 CELL OR OPEN, BUT NOT BOTH.)

THE PURPOSE IS TO STIMULATE MORE INTEREST IN F3E AND TO OFFER INTERESTED CLUB MEMBERS AND OTHER FLYERS THE OPPORTUNITY TO COMPETE IN THE EVENT. (FOR THOSE WHO BUILT AND FLEW AT THE 7 CELL EVENT IN AUGUST, NOW YOU CAN ENGAGE IN SOME ADDED ACTIVITY.)

DUE TO THE NUMBER OF OFFICIALS REQUIRED, FLYERS WILL HAVE TO HELP DURING SOME ROUNDS. (WE EXPECT TO SPLIT FLYERS UP INTO GROUPS, WHERE ON AT LEAST ONE ROUND FLYERS WILL TIME OR SIGNAL TURNS RATHER THAN FLY. BUT, ALL FLYERS WILL HAVE FLOWN THE SAME NUMBER OF ROUNDS BY THE END OF THE CONTEST.)

THE CONTEST DIRECTOR WILL BE FRANK CHASTELER.

THE CONTEST WILL BE AMA SANCTIONED

AWARDS WILL BE TROPHIES TO THIRD PLACE IN EACH CLASS

ENTRY FEES FOR THE EVENT WILL BE \$5.00 PER ENTRANT. [PRE-ENTRIES SUGGESTED TO ASSURE R/C FREQUENCY AVAILABILITY.] SENT TO HSS P.O. BOX 1673, COSTA MESA, CA 92626.

PLACE: HSS (MAC FREED MEMORIAL) FIELD, FAIRVIEW CITY PARK, COSTA MESA, CA, NEAR ESTANCIA HIGH SCHOOL

DATE: SATURDAY, FEB 17 1990

TIME: PILOTS MEETING 0830, FIRST FLIGHT 0900

RULES: HSS CLUB SAFETY RULES, AMA SAFETY RULES, FAI SAFETY AND F3E RULES.

CONTACT EITHER:

FRANK CHASTLER --(714) 545-2185

OR

BOB SLIFF --(714) 895-1203