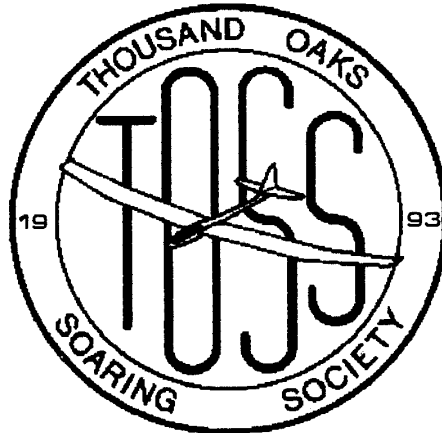


TOSS-UP



NEWSLETTER

AUGUST 1993 14705 LOYOLA STREET MOORPARK, CA 93021

A.M.A. CHARTERED CLUB #1493

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NEXT CLUB CONTEST:

DATE:	Sept. 12th. 1993
PLACE:	Redwood School
TIME:	9:00 a.m.
C/D:	Dane Vannett

NEXT CLUB MEETNG:

DATE:	August 25th. 1993
DAY:	Wednesday
PLACE:	Cameron Center
TIME:	7:30p.m.

TOSS TALK

F.Y.I.

No notes from last months meeting, we didn't have much to say cause we only had 5 members present.

Welcome to new members:
H.Duane Busby, Ken and Hans Kegler,
Ken Lankard, Jim Simpson and
Jonathan Spoer.

Bob Swet wanted to remind everyone that we have a DELTA DART contest coming up (Oct. 9th.)!!!!

I would like to remind everyone that the only way TOSS generates any money is via our club contests and dues. So please show up at the monthly contests. They are lots of fun (and we could use the money). Let's try to get as many fliers as possible out to the contests for the last few months of the year.

1993 (SC)² CONTEST CALENDAR

DATE	HOST
February 28	HSS (Riverside)
March 21	PSS (Pasadena)
April 25	NCC (San Marcos)
May 23	HSS (Costa Mesa)
June 27	SULA (Dominguez Hills)
July 25	TOSS (Thousand Oaks)
August 29	TPG (Torrey Pines)
September 26	SWSA (Covina)
October 24	EDSF (Long Beach)
November 21	DUST (Palm Springs)

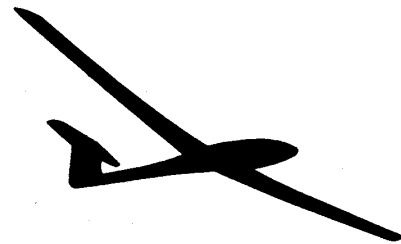
I have had several people ask me where to get skids for their gliders. Here are two sources:

ZIEGELMEYER ENTERPRISES
P.O. BOX 3554 Torrance, CA 90510
(213) 321-3097 or (213) 751-6777
Landing Skid(Vinyl).....\$3.00 plus
tax and handling.

SOARING STUFF

9140 Guadalupe Trail N.W., Albuquerque
New Mexico 87114, (505) 898-1129
FAX (505) 898-8281.

These come in two sizes 1/2" and 1/4" tooth and sell for \$3.50 (postage paid)
VISA, M/C and American Express accepted. (RCM January 1992).



FOR SALE

* SPIRIT 100 kit new in box. \$60.00
* U-2 all foam slope plane, 70" wing span
needs radio. \$10.00
* STIK-10 gas powered plane, 80% comp.
\$20.00

CALL LARRY- 652-1937

Contest Director, Edgar R. Weisman at Taft Ca. comments on

THE 1993 TOSS GREAT RACE

On June 12 and 13, 1993 I was the contest director for the TOSS 13th annual Cross Country Race.

We had 8 teams at the contest and the results are as follows:

<u>PLACE</u>	<u>NAME</u>	<u>SCORE</u>
FIRST	Joe Wurts	2,000
SECOND	Gordon Jennings	1,887.2
THIRD	Dayrl Perkins	1,868
FOURTH	Rick Spicer	1,782.6
FIFTH	K. Cooper	945
SIXTH	B.J. Weisman	728
SEVENTH	Mike Regan	490 (only flew Saturday)

Cross country glider racing is one of the most exciting types of glider competition.

Very few glider pilots fly this type of competition because of the limited places to practice and the large size of the planes that can not be used for other types of contests.

I thought that the reader might be interested in a few observations that I made that might give some insight into this unique type of contest.

Early in the morning on the day of the contest I laid out the 20 mile course as follows. I place one mile markers along the side of the road that the course follows, and I installed a turn around marker at the 10th mile that consists of a 2 foot diameter plastic ring mounted on a stand about 4 feet off of the ground. This same type of marker was used at the starting point of the race. At Taft the course follows a two lane country road through farmland.

The way the contest works is very simple. The pilot flies the glider down the road for a distance of 10 miles, turns it around and then flies it back to the starting point, without landing the plane until after 20 miles is completed. Any landing that is at a distance less than 20 miles receives a reduced score. The pilot that completes the 20 mile course and does so in the shortest time is the winner. If no one completes the course, then the pilot that goes the greatest distance wins, regardless of how long it takes.

Now that you know how the contest works I will describe a few of the highly technical problems that have to be overcome in order to win this contest.

To win the contest the glider must be flown as high as possible, say between 3,000 and 5,000 feet or higher AND when the glider is this high it is almost impossible to see. The wings appear to be about $\frac{1}{2}$ " long and you can not see the tail. We all know that is difficult to control what you can not see, and sometimes when you blink, the plane is gone, until it reappears in small parts, if you are lucky.

The planes can not weigh over 11 pounds, so the size is somewhat limited.

When you chase the glider around the course you are in the bed of a pick up truck giving directions to the driver who is driving down the

country road at speeds that can exceed 100 miles per hour. The speed and the coordination between the pilot and the driver does not necessarily make the pilots job any easier. The plane has to be kept in sight, controlled and with the air blowing the pilot around the back of the pick up truck and the truck bouncing at the same time the pilot gets a little up tight.

The pilot controls the speed of the pick up truck by yelling at the driver to speed up or slow down and the driver tries to look at the glider and does not always do what the pilot wants. This causes some excitement w/ four letter words.

You always start the course with as much altitude as possible. (If you could fly the glider to the height of 5,280 feet , and you had no "sink " on the course you could complete the race and land at exactly 20 miles, providing the glider had a L/D of 20:1) From that point you fly from thermal to thermal, through sink, wind etc. The starting thermal will quickly disappear as you fly away from it. Now you are in sink. You have to speed through the sink as fast as possible and then be high enough when you find the next thermal to be able to continue the race. The problem is knowing when you are in the next thermal, from the back of a pick up truck moving at speeds up to 100 mph+ and also bouncing.

An aid to finding a thermal used by the cross country glider pilot is a thermal senser. This device is a sonic device radio activated by a barameter sender located in the glider. The device does not always work, and if your thermal sniffer is having a bad day you will have to work much harder to finish the course.

Nothing in glider competition requires more skill and produces a larger adrenalin high than cross country.

You must fly at absolutely you highest sense of awareness for the entire course. If or when you loose sight of the plane because you blink or hit a massive thermal, mixed with dust, than all you can do is hope the glider comes back to view in one piece. If the glider is very stable, you have a better chance of getting it back on course, A very stable plane will probably not win the race.

At our race Wurts said that he thinks he can see further than some of the other pilots. When Joe launches I noted that we would usually retrieve the winch line before he would start the course. This would allow for a rapid re-launch.

Flight battery packs and transmitter battery packs have to be designed to work for a few hours without recharge. Although a good pilot will complete the course in less than an hour, it may take more than a hour or two to find the proper time to start the course, and the plane is usually kept in the air waiting for the right time after the thermals start to build up.

Perkins was flying a new plane designed by Mr Lavoe and he did very well considering that the plane was new and he had no thermal sniffer.

The R & R team's plane was beautiful and the only "kit" plane entered in the contest.

The reason more teams don't fly cross country are probably a function of the problems I have just discussed, and the expense of constructing a 21 pound 14 foot wingspan + /- glider.

I think many more teams would fly the cross country type race if they could practice in an environment with the type of contests and sport flying gliders already in hand.

I will try to see if we can get any interest in a two meter cross country of about 2 miles, held at ou Paramount Ranch site. This would give the largest number of glider pilots a little taste of the the cross country contest.

08/14/93		OPEN CLASS STANDINGS						HIGH SCORE = 2919			
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	MIKE REAGAN	TOSS	5830	941	1000	994	981	914	0	1000	0
2	DON McNAMEE	TOSS	5458	655	880	1000	944	1000	0	979	0
3	EDGAR WEISMAN	TOSS	5379	888	979	633	938	982	0	959	0
4	BOB SWET	TOSS	4990	624	816	645	947	0	0	958	1000
5	B.J. WEISMAN	TOSS	4963	1000	986	997	1000	0	0	980	0
6	DON NORTHERN	TOSS	4561	799	876	0	0	943	0	958	985
7	LARRY JIMENEZ	TOSS	2948	0	742	371	0	0	0	882	953
8	ART McNAMEE	TOSS	2920	0	959	514	935	512	0	0	0
9	JOHN ELLIAS	TOSS	2112	722	951	439	0	0	0	0	0
10	PAUL TRIST	TOSS	1844	0	0	0	942	902	0	0	0
11	MIKE LEAL	TOSS	1562	0	0	0	0	0	0	957	605
12	BILL KARP	TOSS	1534	532	0	0	0	0	0	685	317
13	MYLES MORAN	TOSS	1338	448	890	0	0	0	0	0	0
14	MIKE RATNER	PSS	947	0	0	0	0	947	0	0	0
15	RICHARD BURNS	PSS	897	0	0	0	0	897	0	0	0
16	BEN M	PSS	833	0	0	0	0	833	0	0	0

08/15/93		2 METER CLASS STANDINGS						HIGH SCORE = 2811			
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	MIKE REAGAN	TOSS	6903	1000	1000	952	957	994	0	1000	1000
2	DON McNAMEE	TOSS	5705	873	930	989	955	980	0	978	0
3	MIKE LEAL	TOSS	2891	0	0	1000	0	129	0	869	893
4	EDGAR WEISMAN	TOSS	2783	848	0	0	0	1000	0	935	0
5	ART McNAMEE	TOSS	2764	0	880	0	968	916	0	0	0
6	B.J. WEISMAN	TOSS	1512	0	0	0	0	534	0	978	0
7	PAUL TRIST	TOSS	1374	0	0	0	1000	374	0	0	0
8	BEN M	PSS	991	0	0	0	0	991	0	0	0
9	THOMAS AKERS	TOSS	930	0	0	0	930	0	0	0	0
10	MYLES MORAN	TOSS	917	0	917	0	0	0	0	0	0
11	RICHARD BURNS	PSS	907	0	0	0	0	907	0	0	0
12	LARRY JIMENEZ	TOSS	617	0	617	0	0	0	0	0	0

08/15/93		SPORTSMAN CLASS STANDINGS						HIGH SCORE = 2312			
P	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	DANE VANNETT	TOSS	1721	0	983	738	0	0	0	0	0
2	JIM GEOHAGAN	TOSS	1447	0	881	566	0	0	0	0	0
3	SONNY KIM	TOSS	1000	0	0	0	0	0	0	0	1000
4	DON St. LAWRENCE	TOSS	543	0	0	543	0	0	0	0	0

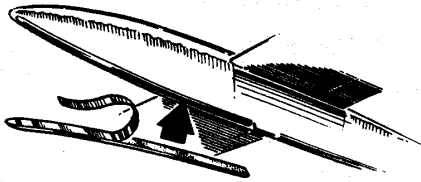
1993 THOUSAND OAKS SOARING SOCIETY ROSTER

LAST	FIRST	PHONE NO	STREET	CITY	ST	ZIP	AMA #
AKERS	THOMAS	(805) 496-6655	1583 WAKEFIELD AVE	THOUSAND OAKS	CA	91360	385783
BUSBY	H. DUANE	(805) 497-1014	1212 ENCINO VISTA CT.	THOUSAND OAKS	CA	91362	305216
BUTKOVICH	DAVID		4848 TOCA LOMA LN.	LA CANADA	CA	91011	
BUZOLICH	NICK	(714) 854-3689	19366 SIERRA BELLO ROAD	IRVINE	CA	92715	147697
CONNETT	DICK	(805) 523-0083	12415 CRYSTAL RANCH RD.	MOORPARK	CA	93021	466748
COSGROVE	ROBERT	(818) 341-8459	10709 OKLAHOMA AVE.	CHATSWORTH	CA	91311	169026
COUNCIL	BILL		3837 CORONADO CIRCLE	NEWBURY PARK	CA	91320	466415
ELLIAS	JOHN	(805) 388-5674	1961 VIA MONTECITO	CAMARILLO	CA	93012	304647
GEOHAGAN	JIM	(805) 388-1130	5643 E. WILLOW VIEW DRIVE	CAMARILLO	CA	93012	143567
HARLAND	JAY	(805) 527-5685	662 WELLES COURT	SIMI VALLEY	CA	93065	
HARTMAN	RICHARD	(805) 488-6136	1852 SANFORD ST	OXNARD	CA	93033	111039
HINMAN	BILL	(805) -	1195 N. MODESTO AVENUE	CAMARILLO	CA	93010	15233
HOPPLE	TIM	(805) 498-9448	163 NORTH CASTILIAN AVENUE	THOUSAND OAKS	CA	91320	333336
HSIEH	ROBERT	(805) 987-6586	694 LANTANA #10	CAMARILLO	CA	93010	474171
JIMENEZ	LARRY	(805) 652-1937	1943 CHANNEL DR.	VENTURA	CA	93001	378742
KARP	BILL	(818) 876-0602	4532 PARK MONACO	CALABASAS	CA	91362	122971
KEGLER	KEN	(805) 492-0757	2991 TEAL CT.	THOUSAND OAKS	CA	91360	482474
KEGLER	HANS	(805) 492-0757	2991 TEAL CT.	THOUSAND OAKS	CA	91360	482475
KEIGHTY	W.	(805) 987-6443	542 SAN CLEMENTE WY.	CAMARILLO	CA	93010	
KIM	SONNY	(805) 523-346	15266 #A CAMPUS PARK DRIVE	MOORPARK	CA	93021	6
KLUSS	BILL	(805) 497-2120	1368 MORROW CIRCLE	THOUSAND OAKS	CA	91362	15036
LANKARD	KEN	(805) 485-7217	P.O. BOX 24606	VENTURA	CA	93002	
LEAL	MICHAEL	(805) 529-7535	844 CHARLES STREET	MOORPARK	CA	93021	334482
MARX	BILL		174 KNOLLWOOD	NEWBURY PARK	CA	91320	
MICHITSCH	ROBERT	(818) 991-0666	6012 COLODNY DR.	AGOURA HILLS	CA	91301	222852
MIEROP	LEX	(805) 499-2256	1351 ALESSANDRO	NEWBURY PARK	CA	91320	
MORAN	MYLES	(818) 882-4687	10428 OSO AVE.	CHATSWORTH	CA	91311	18426
MORGAN	RALPH	(805) 484-7728	2120 GORMAN STREET	CAMARILLO	CA	93010	11074
McNAMEE	ART	(805) 526-6292	2645 PLACERVILLE CT.	SIMI VALLEY	CA	93063	7417
McNAMEE	DON	(805) 526-3145	2291 NORTH HIETTER	SIMI VALLEY	CA	93063	48996
NORTHERN	DON	(805) 523-1018	3977 WILLOW CREEK LANE	MOORPARK	CA	93021	28279
OLDENBURG	ED	(805) 497-7463	261 EL GALLARDO	NEWBURY PARK	CA	91320	106776
ONSTAD	BOB	(501) 389-6203	P.O. BOX 287	HATFIELD	AR	71947	na
RAKE	GARY	(805) 498-2613	947 DRIFTWOOD CIRCLE	NEWBURY PARK	CA	91320	437635
REAGAN	MIKE	(805) 529-5513	14705 LOYOLA ST.	MOORPARK	CA	93021	93756
ROUSHAR	NORM	(818) 982-1771	6747 AGNES AVE. #8	NORTH HOLLYWOOD	CA	91606	431725
SIMPSON	JIM	(805) 492-3391	1925 MEADOW BROOK CT.	THOUSAND OAKS	CA	91362	
SPOER	JONATHAN	(805) 889-2788	30811 MAIN MAST	AGOURA HILLS	CA	91301	393152
ST. LAWRENCE	DON	(805) 497-9681	207 SOMERSET CIRCLE	THOUSAND OAKS	CA	91360	409441
STERN	MICHAEL	(805) 492-8452	745 LYNNMERE DR.	THOUSAND OAKS	CA	91360	131478
SUTTON	ROBERT	(805) 498-4342	3415 CRESTWOOD CT.	NEWBURY PARK	CA	91320	81773
SWET	BOB	(805) 388-9619	2600 PONDEROSA DR. APT.15	CAMARILLO	CA	93010	83283
TRIST	PAUL JR.	(818) 545-7551	1101 MELROSE #1	GLENDALE	CA	91202	28643
VANNETT	DANE	(805) 532-2473	4365 AMBERWICK	MOORPARK	CA	92021	433610
WALDEN	SCOTT	(818) 889-1394	5850 E. SUNNY VISTA	AGOURA	CA	91301	481783
WEISMAN	EDGAR and B.J.	(805) 496-0611	752 CAMINO VALLES	THOUSAND OAKS	CA	91360	67651

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

CH.	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
QTY	1	4		1	3	1	4	3	3		3		3	2	2		4	1	1	1	4	1	4	1	1
CH.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
QTY	1		3	1	7	1	3		6		3	2	4		4	1	3		4		4				

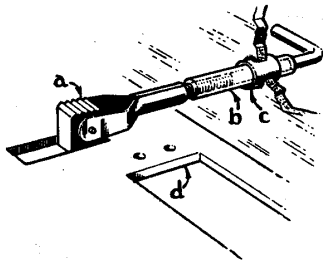
TIPS



HARD-WEARING GLIDER SKID

Buy a roll of self-adhesive body side-trim molding from an auto-parts store. Applied to the bottom of a glider, it forms a hard-wearing, attractive belly skid.

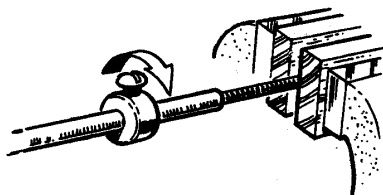
Sonny Paffini, Bayville, NJ



QUICK-DETACH SWITCH ACTUATOR

Drill a hole in the switch knob (a) so that you can attach a steel clevis that has been bent to fit around it. Screw on a threaded stud and an inner Nyrod (b) that fits in an outer Nyrod bushing (c). To remove the complete servo tray and switch (d), just unscrew the threaded rod from the clevis and lift out the tray, leaving the clevis attached to the switch knob.

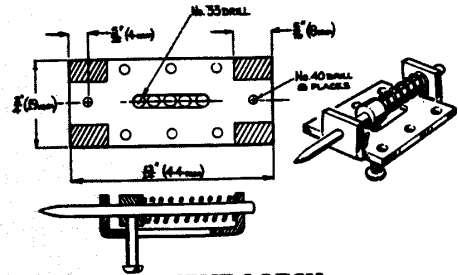
Jim Ryan, Manhattan, KS



EASY-TURN NYRODS

Grip a threaded stud between wooden blocks in a vise. Lightly clamp a wheel collar onto the inner Nyrod so that you can twist the Nyrod easily onto the threaded stud.

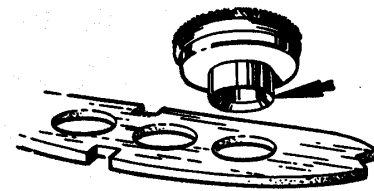
Gilles A. Graton, Montmagny, Quebec, Canada



50-CENT LATCH

You'll need a $\frac{1}{4} \times \frac{1}{4}$ -inch piece of $\frac{1}{8}$ -inch (1.5mm) aluminum, a $\frac{3}{32}$ -inch (2mm) wire pin, a matching wheel collar and a no. 20 spring from a hardware store. Cut out the shaded areas with a saw, drill holes where shown and bend up the two end tabs. Use epoxy or screws to mount the latch on the hatch or canopy. You could also use a piece of U-shaped channel aluminum to avoid having to bend the sheet aluminum.

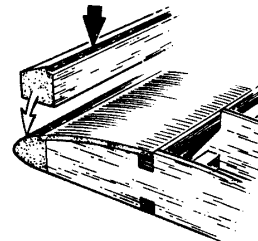
Bob Branch, Houston, TX



HOLE PUNCHES

Pound-in feet for chair legs make useful, inexpensive hole punches. Giltsa-brand feet work perfectly for this and are available in three sizes, ranging from $\frac{3}{16}$ inch (5mm) diameter to $\frac{3}{8}$ inch (9mm) diameter. The feet also have a felt pad on the bottom, so they're easy to turn with your thumb.

Lee Hulteng, Grand Forks, ND



BETTER LEADING-EDGE SHEETING JOINT

Run your leading-edge stock through a table saw to make a groove like the one shown by the arrow. This provides a ledge for the leading-edge sheeting that allows more precise alignment and a superior joint. It's also easier to sand. If you don't have a table saw, you can glue a strip to the rear of the leading edge. To compensate for the added strip, though, trim a little off the rib front.

Dennis Bryant, Burgess Hill, Sussex, England

TIPS REPRINTED FROM MODEL AIRPLANE NEWS

GLOSSARY

of common modeling terms

AMA: the national organization for people who build and fly model airplanes, open to everyone.
ARF: Almost Ready to Fly.

AILERON: the control surface on the wing that rolls the plane.

AIRFOIL: the shape of the wing as seen from the end.

ANGLE OF ATTACK: the angle at which the wing meets the air flow.

BEVEL: to sand to an angle shape.

BURR: the rough edges on a piece of wood or metal after it is cut.

CAP STRIP: a thin strip glued to the edges of the ribs to shape the wing.

CONTROL HORN: a device attached to each control surface to provide an attachment point for the pushrod.

COWL (COWLING): the nose section of the fuselage that encloses the engine.

DECALAGE: the difference between the incidence of wing and stabilizer.

DIHEDRAL: the upward angle of the wings as seen from the front.

ELEVATOR: the movable part of the horizontal tail which controls pitch.

EMPENNAGE: the tail of the plane.

FIN: the fixed vertical part of the tail.

FIREWALL: the hard wooden former at the front of the fuselage to which the engine is mounted.

FORMER: a piece which shapes the fuselage; the sides are attached to them.

FUSELAGE: the body of the airplane that contains the fuel tank and radio.

GUSSET: a small triangular piece glued into a corner to strengthen it.

INCIDENCE: the angle of the wing or the tail in relation to the thrustline.

LAMINATE: to glue two thin sheets of material together to form a thick sheet.

LEADING EDGE (L.E.): the edge of the wing that first meets the airflow.

LONGERON: a stringer that runs the length of the fuselage.

OUTPUT ARM: the piece that attaches to the servo and connects it to the pushrod.

PITCH: an up-and-down movement of the nose of the plane; controlled by the elevator.

PROTOTYPE: the full-scale airplane from which the model design was taken.

PUSHROD: the long, stiff dowel or plastic piece that connects the servo with the control horn.

RTF: Ready to Fly.

RIB: the airfoil-shaped piece that connects the leading edge, spars and trailing edge of the wing together and holds them in shape.

RETRACTS: devices for extending and retracting the wheels on command.

ROLL: tilting the plane as viewed from the front; controlled by the ailerons.

RUDDER: the movable vertical tail of the plane, which controls yaw.

SERVO: the part of the airborne radio system that moves the control surfaces.

SHEAR WEB: wood sheeting that connects the top and bottom spars to stiffen the wing.

SHIM: a thin piece inserted between two pieces to improve their fit.

SPAR: a wooden stick running lengthwise through the wing that serves as its backbone.

SPINNER: the rounded cone that fits over the propeller hub.

STABILIZER (STAB): the fixed horizontal part of the tail.

STALL: a situation where the plane is flying too slowly to move sufficient air across the wing to produce lift.

STRINGER: a long piece of wood attached to the formers to shape the fuselage.

THRUSTLINE: a line drawn from the center of the propeller hub straight through the airplane.

TORQUE: a rolling tendency caused by the spinning propeller.

TRAILING EDGE (T.E.): the edge of the wing that faces the rear of the plane.

TRIM: small adjustments made to the control surfaces to cause the plane to fly straight and level by itself.

WASHIN: a twist in the wing that makes the trailing edge lower than normal.

WASHOUT: a twist in the wing that makes the trailing edge higher than normal.

WING SADDLE: the shaped part of the fuselage in which the wing rests.

WHEEL COLLAR: a metal ring that holds the wheel on the axle.

YAW: a right-to-left movement of the nose, controlled by the rudder.

Membership Information

Insurance coverage is effective on the date of receipt at AMA Headquarters of a properly completed application and correct dues payment. Membership ends each year on December 31, regardless of the date a membership application is received. If a magazine is included with the membership, it begins with the first issue available for the year after a correct current application and payment are received; it expires with the issue printed in December (which is dated February of the following year). Membership rates and insurance limits are those in effect at time of printing. Actual cost of dues and amount of insurance coverage is subject to change. Any such changes will be noted at the time of membership processing so that they may be accepted or not.

1993 OFFICIAL AMA NATIONAL MODEL AIRCRAFT SAFETY CODE — Effective January 1, 1992

Model flying MUST be in accordance with this Code in order for AMA Liability Protection to apply.

GENERAL

- 1) I will not fly my model aircraft in competition or in the presence of spectators until it has been proven to be airworthy by having been previously, successfully flight tested.
- 2) I will not fly my model higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.
- 3) Where established, I will abide by the safety rules for the flying site I use, and I will not willfully and deliberately fly my models in a careless, reckless and/or dangerous manner.
- 4) If my model weighs over 20 pounds, I will only fly it in accordance with paragraph 5 of this section of the AMA Safety Code.
- 5) At air shows or model flying demonstrations a single straight line must be established, one side of which is for flying, with the other side for spectators. Only those persons essential to the flight operations are to be permitted on the flying side of the line; all others must be on the spectator side. Flying over the spectator side of the line is prohibited, unless beyond the control of the pilot(s). The only exceptions which may be permitted to the single straight line requirement, under special circumstances involving consideration of site conditions and model size, weight, speed and power, must be jointly approved by the AMA President and the Executive Director. In any case, the maximum permissible takeoff weight of models is 55 pounds.
- 6) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. Note: This does not apply to models flown indoors.
- 7) I will not operate models with metal-bladed propellers or with gaseous boosts, in which gases other than air enter their internal combustion engine(s); nor will I operate models with extremely hazardous fuels such as those containing tetrinitromethane or hydrazine.
- 8) I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind) including, but not limited to, rockets, explosive bombs dropped from models, smoke bombs, all explosive gases (such as hydrogen-filled balloons), ground mounted devices launching a projectile. The only exceptions permitted are rockets flown in accordance with the National Model Rocketry Safety Code or those permanently attached (as per JATO use); also those items authorized for Air Show Team use as defined by AST Advisory Committee (document available from AMA HQ). In any case, models using rocket motors as a primary means of propulsion are limited to a maximum weight of 3.3 pounds and a G series motor. Note: A model aircraft is defined as an aircraft with or without engine, not able to carry a human being.
- 9) I will not fly any model using turbojet power (axial or centrifugal flow) unless I have obtained a special waiver for such specific flights from the AMA President and Executive Director and I will abide by any restrictions imposed on such flights by them. (Note: this does not apply to ducted fan models using piston engines or electric motors.)

RADIO CONTROL

- 1) I will have completed a successful radio equipment ground range check before the first flight of a new or repaired model.
- 2) I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.
- 3) I will perform my initial turn after takeoff away from the pit or spectator areas, and I will not thereafter fly over pit or spectator areas, unless beyond my control.
- 4) I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band frequencies.) Further, any transmitters that I use at a sanctioned event must have a certified R/CMA-AMA gold sticker affixed indicating that it was manufactured or modified for operation at 20 kHz frequency separation (except 27 MHz and 53 MHz).

FREE FLIGHT

- 1) I will not launch my model aircraft unless at least 100 feet downwind of spectators and automobile parking.
- 2) I will not fly my model unless the launch area is clear of all persons except my mechanic and officials.
- 3) I will employ the use of an adequate device in flight to extinguish any fuses on the model after it has completed its function.

CONTROL LINE

- 1) I will subject my complete control system (including safety thong, where applicable) to an inspection and pull test prior to flying.
- 2) I will assure that my flying area is safely clear of all utility wires or poles.
- 3) I will assure that my flying area is safely clear of all non-essential participants and spectators before permitting my engine to be started.

Separate Code(s) available from AMA Headquarters for boats, cars, and rockets.