

May 1994

# TOSS - UP

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## NEWSLETTER

**EDITOR / PUBLISHER:** Bob Swet, 2600 E. Ponderosa Drive #15, Camarillo, CA 93010 -4737, (805) 388 - 9619

### UPCOMING EVENTS

**MONTHLY MEETING:** May 26th, 7:30 PM, Cameron Center, Thousand Oaks, CA

**MONTHLY CONTEST:** June 12th, 9:00 AM, Redwood School, Thousand Oaks, CA  
**THEME:** PRO-AMATEUR (see advertisement inside)  
**CONTEST DIRECTOR:** Larry Jimenez

**SC<sup>2</sup> CONTEST:** June 29, 9:00 AM. Hosted by Torrey Pine Gulls

### APRIL MEETING NOTES:

#### OLD BUSINESS:

1) None

#### NEW BUSINESS:

1) Everyone is to be congratulated on the best SC<sup>2</sup> contest put on by TOSS. A much appreciated Thank You was expressed to all members and volunteers who helped in this successful event.. Allot of comments were made concerning how well all our equipment worked.

With the strong winds, Several planes were caught landing downwind of the field. Regrettably, two planes have yet to be recovered. Witnesses claim that one of the gliders was packed up by someone with a white vehicle, but the sailplane was never brought back to

field for return to its proper owner. Both planes (a MAKO and a SHADOW) are still missing to date. Please, everyone keep the eyes and ears open. If you find any information - contact Mike Reagan or Bob Swet. Faxes sent to hobby stores. See copy in this newsletter.

2) Edgar Weisman had a meeting with T.O. School District concerning use of Redwood School. Many thanks should be given to Edgar for diligent negotiations to retain some sense of priority for TOSS on Sundays and to reduce the annual fees to those which we could afford. Attending members approved spending \$50 to cover the new annual usage fees. An interesting point was that they did not receive a single point during the past couple of years. Keep up the good work.

3) The April Raffle yielded a 3021 Two Meter wing kit donated by RA Cores to Edgar Weisman. Charley Babcock and Edgar W. also won Five dollar gift certificates from Marty's Hobbies.

5) Bob Swet brought and showed plans from RCM for the Swing-wing Hang Glider, R/C Parachutist, and the One Meter STYLUS HLG.

6) Special note was made on how well SWSA retriever worked in the wind during the SC<sup>2</sup> contest. More information to follow concerning cost , etc.

7) The May raffle will \$20 and \$25 dollar gift certificates from Marty's. So come on out and support your club and buy a few tickets. The more money we collect, the larger the prizes will grow.

Maybe someday we can have a "Super Raffle" similar to Torrey Pine Gulls. They are offering a Tekoa 2M Shadow, AIRTRONICS Vision radio, L/U Saturn 2.9 sailplane, R&R \$150 gift certificate, AIRTRONICS Peregrine Sailplane, C.R. Contender Glider and a Futaba Super-7S radio. But in order to have a raffle like that, we need your support.

#### TREASURER'S REPORT:

TOSS has \$485 to its name along with approximately \$250 plus in debts.

#### NOTES FROM THE EDITOR

My apologies to all those devoted readers who were confused by the wrong month identified on the front page of the April newsletter. In my haste to meet publishing deadlines, I overlooked the incorrect issue labeling.

As part of the my personal goal to increase the information in this newsletter while reducing the amount of paper i.e., cost to reproduce it, I will be trying different formats. If you have any comments (good or bad) please let me know. *Bob*

#### MAY CLUB CONTEST

It was just another one of those Ho-Hum contests. That is unless you were there. Yours truly started the day off with an exciting extremely high speed landing pre-contest trim flight. Notice I did not say crash. After having done some last minute rebuilding of the servos, I decided to have a trim flight to check things out. The only problem was that too much down was dialed in. So after launch the plane made a large quarter of a loop starting in the vertical (straight down) attitude. My only problem was that terra firma was about four inches too soon. So after tearing up the ground for about thirty feet with the shark's teeth, the plane came to a rest after a half role and half loop. Normally, I wouldn't mention anything about poorly executed acrobatics except that there was a lesson to learn here. That is, when using flying a plane with

a "flying stab", always mark on the vertical stab your neutral point for the horizontal stab once it has been determined. This will ensure proper (trimmed) location after any adjustment to the radio.

The rest of the contest was pretty normal. Good thermals and plenty of fun. As usual the normal people turned out and did their normal flights. Where are all those new faces that we created the Sportsman class ?? We did have one new entry. Bill Karp brought an old Pantera with spoilers and put in some very respectable flights.

One notable point was the new trophies made by Jonathan Spoer. They were engraved Plexiglas (including the TOSS logo, month, position and class) with an oak base and looked really sharp. Remember, a club contest is like LOTTO, if you don't participate, you will NEVER win. *Bob*

#### APRIL'S SC<sup>2</sup> CONTEST

Windy, windier and too much for some. For some, it brought back memories of last year's Two Meter "Top Gun" Contest. I am afraid that we are earning the reputation of the distant Club with a nice field but lots of wind.

It was a day to separate the men from the boys with expensive toys. The experts did really well while others struggled to stay alive. Launches were nearly vertical, however, so where some of our landings. The contest opened with winds of 15 MPH or so and closed with 25 plus MPH. Handling these conditions were trying at best.

Lift was good (if you could get to it). The equipment worked very well considering. The staffers worked their tails off.

Under the terms of Very Unusual, we would file the lost of two sailplanes (one of which might have been stolen). Never before have we ever lost planes landing outside of the school field. TOSS regrets having such a new precedence set during a major event. Please keep your eyes and ears open for

the missing MAKO and SHADOW at all local fields, slopes and hobby shops.

#### RUMOR HAS IT

AIRTRONICS may be introducing a new radio at the Fall Soaring Festival in Visalia and it may be called the Infinity 800. It will include the following features:

- More free mixing than a Vision
- Capability for synthesized frequencies
- A slip -in memory card for additional models
- Memory for 8 models built in
- Programmable delay in mixing between channels.
- Lower price than a Vision
- And many more features WOW!

from the May 1994  
Newsletter by ISS

#### *For Sale*

#### Toss Key Chains.

They have the 1994 TOSS logo and can have a message if specified. They are made on CAMM (computer-aided-milling-machine) and drawn on a Autocad based program (Versacad). They measure 1 3/4" x 3". The price is \$2.25 per key chain with key ring. Also for a extra \$0.75 you can get a oak stand stained and all. As a bonus you will be donating a percentage of the cost toward TOSS. If you want to see one come to the next club meeting and you'll also see the new trophies to (basically the same but say first place in such and such and mounted on a oak stand). For info. or orders call (818) 889-2788 and ask for Jonathan Spoer. Please Call weekdays 4pm. to 9pm. and weekend 10am. to 9pm. (all times are pst.). So buy one now and be one of the first to have one like the new TOSS trophies.

#### SAIL PLANES for Sale:

Contact Art McNamee (805) 526 - 6292 if you are interested in any of the sail planes listed below.

**2 Meter SHADOW** - Fully Assembled and painted ... \$250

**BANSHEE** - Fully Assembled and painted ... \$200

**3 Channel 2 Meter** - Fully Assembled and painted ... \$100

**PARAGON** - Fully Assembled and painted ... \$150

**SAIL PLANES for Sale:**

Contact James Cowley (805) 568 - 0077 if you are interested in any of the sail planes listed below.

Combat Models - **F16 FALCON Slope Soarer** - Fully Assembled and painted - Ready to Fly, 48 inch Wing Span - 60 ounces, Futaba 5UAP - 5 Channel PCM radio (Channel 34), Two S148 Servos with L&M ball bearing conversions Battery and Charger ... \$300

Scorpio - **FALCO 180 Slope Soarer** - Ready to Cover, 70 inch Wing Span - Eppler 374 Airfoil, Futaba 5UAF - 5 Channel FM radio (Channel 28), Three S148 Servos, Battery and Charger ... \$275

Culpepper Models - **CHUPEROSA Sailplane** - Fully Assembled - Ready to Fly, 60 inch Wing Span - 20 ounces - SD7037 Airfoil, Two RCD Apollo 20 Servos, Tekin 2 Channel AM Receiver, 270 mAH Barrery pack ... \$150

Douglas Aircraft - **QUICKSILVER Slope Soarer**- \$50  
52 inch Wing Span - SD6060 Airfoil, New KIT

**JR - 347 FM Transmitter (only)** - \$200

**SAIL PLANES for Sale:**

Contact Rich Warrick (805) 640-0589 if you are interested in the sail planes listed below.

**COYOTE Slope Plane** - Built up wing, Partial completion of fuselage, one roll of simon color monokote ... \$50

3 Channel Futaba radio, Model FPT3S transmitter (Pre - 1991) on 72.240 MHz ... Best Offer

5/8/94	OPEN CLASS STANDINGS			HIGH SCORE - 2931.1				
pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	DON NORTHERN	TOSS	4424	703	914	994	840	973
2	DANE VANNETT	TOSS	4342	610	801	955	980	996
3	EDGAR WEISMAN	TOSS	4120	702	611	982	1000	825
4	BILL KARP	TOSS	3283	653	0	919	878	833
5	BOB SWET	TOSS	3209	901	602	978	728	0
6	MIKE REAGAN	TOSS	2998	1000	0	998	0	1000
7	B.J. WEISMAN	TOSS	2739	739	0	1000	0	1000
8	ART McNAMEE	TOSS	2586	716	0	0	902	968
9	LARRY JIMENEZ	TOSS	2305	632	0	948	0	725
10	DON McNAMEE	TOSS	2183	638	0	568	0	977
11	PAUL TRIST	TOSS	1988	988	1000	0	0	0
12	MIKE LEAL	TOSS	1819	0	0	0	919	900
13	MIKE RATNER	PSS	1774	896	878	0	0	0
14	BEN MATSUMOTO	PSS	1433	464	969	0	0	0
15	GREG JOHNS	PSS	866	0	866	0	0	0
16	J. RODGERS	PSS	799	799	0	0	0	0
17	ED DEVLIN	PSS	656	656	0	0	0	0
18	FRANK LEPLA	PSS	615	615	0	0	0	0
19	PHILIP HALLFORD	PSS	610	0	610	0	0	0

5/8/94	2 METER CLASS STANDINGS			HIGH SCORE - 2919.8				
pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	EDGAR WEISMAN	TOSS	3553	683	0	963	1000	907
2	DON McNAMEE	TOSS	2958	1000	0	976	0	980
3	B.J. WEISMAN	TOSS	2855	870	0	1000	0	985
4	MIKE REAGAN	TOSS	2705	722	0	987	0	996
5	ART McNAMEE	TOSS	1911	0	0	0	911	1000
6	LARRY JIMENEZ	TOSS	1571	0	889	0	682	0
7	PHILIP HALLFORD	PSS	1000	0	1000	0	0	0
8	GREG JOHNS	PSS	985	0	985	0	0	0
9	ED DEVLIN	PSS	893	893	0	0	0	0
10	JONATHAN SPOER	TOSS	813	0	0	813	0	0
11	PAUL TRIST	TOSS	547	547	0	0	0	0

5/8/94	SPORT CLASS STANDINGS			HIGH SCORE - 2839.1				
pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY
1	DON NORTHERN	TOSS	4926	997	991	1000	938	1000
2	LARRY JIMENEZ	TOSS	4507	910	1000	946	996	655
3	BOB SWET	TOSS	3322	648	687	987	1000	0
4	PAUL TRIST	TOSS	1723	1000	723	0	0	0
5	JONATHAN SPOER	TOSS	990	0	0	990	0	0
6	MIKE LEAL	TOSS	985	0	0	0	0	985
7	MIKE REAGAN	TOSS	985	985	0	0	0	0
8	SONNY KIM	TOSS	931	648	283	0	0	0
9	BILL KARP	TOSS	866	0	0	0	0	866

**CONGRATULATIONS !!**

**B.J. Weisman  
WINS  
Pasadena 2-Day  
Unlimited Class**

**VIEWING 3-D ART HINT:**

Those of you who could not see the 3 dimensions of the drawing last month, here is a helpful hint.

Hold the page at about 12 to 18 inches away from your face at an angle of about 30 degrees to the floor. Focus on the floor below the bottom of the page and then slip the page in the way of your view slowly while continuing to focus on the floor. The image will slowly pop into perspective and you will see that the planes are flying between or behind the trees.

Bob

## How to Kill a Club (in 12 easy steps)

1. Stay away from all meetings. If you do come...only find fault; never say anything constructive.
2. Decline office or appointment to serve your club.
3. Get sore if you aren't nominated or appointed.
4. After you are elected, don't attend any of the officer or club meetings.
5. If you get to a meeting, despite your better judgement, clam up until its all over. Then sound off afterward on how things should have been done.
6. Don't work for your club if you can help it. And when the "Old Reliables" pitch in, accuse them of being a clique. (Remember, you volunteered for something a year ago, that lets you off the hook for any more work for at least two more years.)
7. Oppose all banquet, club events, or needs as a waste of the member's money.
8. If everything at the club meeting is strictly business, complain that the meetings are dull, and the officers are a bunch of bores.
9. Never volunteer to help with any club project if you are not personally asked to. Then threaten to resign because you feel you are not appreciated.
10. Don't rush to pay your dues. Make the officers sweat; after all, what can it hurt if just one guy misses his dues?
11. Read the club newsletter for news of what has been happening; that way you only have to attend the meetings **once** in a while.
12. Read your club newsletter, but never write an article yourself; you can always think up some excuse for **not** writing an article.

These rules were written almost 20 years ago by Mr. Bill Chapo, one of the original Commanders of the Flying Tigers Model RC Club in Toledo, Ohio.

from Tiger Talk  
George Wallace, Editor  
Toledo, OH

**AMA**  
**NATIONAL NEWSLETTER**

5/94

## Southern California Soaring Clubs

Results of TOSS SC<sup>2</sup> Contest of 4/24/94

Contest Director - Mike Reagan

Place	Name	Club	Class	Score	Normal	Trophy			
1	KEITH KINDRICK	PSS	EXPERT	2905.8	1000.	E1	31	WYATT SADLER	SPORTSMAN
2	MARK GATTI	PSS	EXPERT	2905.3	999.8	E2	32	PHILIP HALLFORD	PSS EXPERT
3	ROGER LACKEY	HSS	EXPERT	2840.6	977.6	E3	33	MIKE AGUIRRE	HSS EXPERT
4	DON McNAMEE	TOSS	EXPERT	2769.2	953.0	E4	34	RON SCHARCK	TPG EXPERT
5	BEN CLERX	HSS	EXPERT	2745.8	944.9	E5	35	JIM WILLIAMS	SWSA SPORTSMAN
6	B J WEISMAN	TOSS	EXPERT	2696.6	928.0		36	ROBERT MORFORD	SWSA SPORTSMAN
7	GREG BAGGERLY	ISS	EXPERT	2652.5	912.8		37	TOM VINCENT xx	HSS SPORTSMAN
8	JIM MARKLE	EDSF	EXPERT	2606.0	896.8		38	JOE NAVE	SFVF SPORTSMAN
9	FRED SAGE	TPG	EXPERT	2571.6	885.0		39	DAVID BUTKOVICH	PSS SPORTSMAN
10	BILL DUNCAN	EDSF	EXPERT	2553.8	878.9		40	RICHARD BURNS	PSS EXPERT
11	RICK SHELBY xx	NCC	SPORTSMAN	2508.6	863.3	S1	41	MIKE LEAL xx	TOSS SPORTSMAN
12	LOWELL NOREBERG	SFVF	EXPERT	2504.5	861.9		42	DON VAN GUNDY	TPG EXPERT
13	JIM PARSONS	HSS	EXPERT	2459.2	846.3		43	TONI STARK	PSS EXPERT
14	ARTHUR MARKIEWICZ	TPG	EXPERT	2453.7	844.4		44	BRUCE AVESON	SWSA SPORTSMAN
15	GREG JOHNS	PSS	SPORTSMAN	2443.9	841.0	S2	45	DON RICHMOND	TPG SPORTSMAN
16	JOHN YEE xx	SWSA	SPORTSMAN	2425.3	834.6	S3	46	JOHN RODGERS	PSS EXPERT
17	DANE VANNETT	TOSS	SPORTSMAN	2385.3	820.9		47	BOB SWET	TOSS EXPERT
18	MIKE CARRICO	HSS	SPORTSMAN	2379.8	819.0		48	ART McNAMEE	TOSS EXPERT
19	MARK LEVOE	PSS	EXPERT	2375.0	817.3		49	PAUL TRIST	SWSA SPORTSMAN
20	MIKE REAGAN	TOSS	EXPERT	2363.1	813.2		50	NORM. KUTCH	HSS EXPERT
21	GEORGE SPITZER	PSS	EXPERT	2275.1	783.0		51	ED DEVLIN xx	PSS SPORTSMAN
22	BEN MATSUMOTO	PSS	EXPERT	2274.1	782.6		52	JONATHAN SPEER	TOSS SPORTSMAN
23	FRANK CHASTELER	AMTS	EXPERT 60+	2246.8	773.2	60+	53	JOHN BIKLE	EDSF EXPERT
24	BILL KLATSKIN xx	EDSF	SPORTSMAN	2245.8	772.9		54	MYLES MORAN	TOSS EXPERT
25	NICK BUZOLICH	HSS	SPRTSMN 60+	2233.3	768.6		55	STEVEN STRICKLETT	NCC SPORTSMAN
26	RICH STROBEL	TPG	EXPERT	2199.4	756.9				
27	EDGAR WEISMAN	TOSS	EXPERT	2164.1	744.8				
28	RICK LACY	SWSA	SPORTSMAN	2152.5	740.8				
29	RON FAULKENHAM	ISS	EXPERT	2062.9	709.9				
30	DON NORTHERN	TOSS	EXPERT	2029.8	698.5				

## COMPOSITE MOLDING TECHNIQUES FOR SAILPLANE FUSELAGES AND CONTROL SURFACE ACCESSORIES

by E.S. Popko & J.G. Smith

Extracted from Soar Tech No. 5, Jan 1986

### Part 6

#### \*\*ATTACHING CONTROL AND R/C FIXTURES\*\*

##### Servo Mounts

Servo mounts can be simple wooden beams spanning across the body or more elaborate plastic plywood trays. The exact position and type will depend on your airborne equipment sizes and linkages. We tend to use plywood trays because they are easy to make and change and they greatly stiffen the fuselage by increasing torsional resistance.

The simplest way to make a snug fitting plywood tray is to make a template from stiff cardboard. Use the cardboard template to cut out an 1/8" air-ply copy. Press fit the tray to insure that it fits snugly but doesn't overly stress the body. Sand or file the tray edges if there are high spots. Apply 5 minute epoxy to the joint and use a heat gun to flow the epoxy down into the joint and through to the underside. As before, roughen up the surface of the lay up to insure a good bond to the epoxy.

If the nose is large, flexing during landings can break the bond between the fuselage and the tray. Silicone sealing compound can be better than epoxy for designs with this problem.

##### Control Lead-outs

One of the best ways to run control surface lead-outs through the fuselage is to mold an exit sleeve right through the side of the fuselage. The sleeve maintains the clean lines of the body and provides a frictionless pushrod guide. Drill 1/8" holes at each position and cant the drill to approximate the lead-out angle if it's not perpendicular to the fuselage. Use a small round file to clean out the hole and to refine the lead-out angle. We tend to use 1/16" diameter steel pushrods or 10-speed bicycle derailer cable inside Ni-Rod housings. Cut a length of Ni-Rod a little longer than the minimum length needed to support your pushrod. Roughen the Ni-Rod and the fuselage surface (around the exit hole) with sandpaper. Insert a piece of stiff music wire through the Ni-Rod to keep it aligned with the axis of the servo pushrod. Shore up the Ni-Rod from inside the fuselage with balsa to maintain the correct angle.

Apply 5 minute epoxy and chopped strand to the area around the hole on the inside and outside of the fuselage. Use a heat gun to flow the epoxy through and around the entire lead out area. When the epoxy has set but not cured rock hard, remove the music wire from the Ni-Rod sleeve and trim the excess epoxy and Ni-Rod flush with the fuselage. When the epoxy is hard, file or sand away high spots. After painting, only a thin, elliptical opening will appear leaving a drag-free streamlined control opening.

##### Epenague Controls

Some fuselage designs have flying stabilizers and

require pivots, control/support rods, and interior control horns. Pivots and support rod ferrules are typically 1/8" brass tubing and are permanently bonded to the fuselage. To attach these pieces, drill slightly oversized holes at the required locations and cut the brass tubing ferrule about 1/8" longer than needed.

Roughen the outside of the ferrule with sandpaper and insert any required control horns or bellcranks at this time. Align the ferrules so that their axes are perpendicular to the vertical plane of the fuselage. One way to do this is to insert a length of music wire through the ferrule and use it as a leveling guide. The oversized holes permit the ferrules to move a bit while you are aligning them. When you have them correctly positioned, put a drop of thin CA at the holes to set the alignment. Re-check the alignment and, if it is ok, apply epoxy/strand from inside the fuselage. Flow it through the hole with a heat gun and then let it cure thoroughly. File the ferrule ends flush with the fuselage and you will have strong flutter-free pivots.

##### Molded Canopies

For some designs, we mold opaque canopies in the same way we make the fuselage. One would use a simple one-part mold for doing this. Two layers of six ounce cloth is sufficient and the final assembly can be painted and finished just like the fuselage. The mold may be made by simply copying an existing plastic canopy.

##### Miscellaneous Fixtures

Fixture requirements will vary a great deal from design to design, but the overall mounting techniques are similar to the ones already discussed. Towhook blocks can be attached and leveled properly by using a mixture of 5 minute epoxy and chopped strand. A rubber nose skid might be attached to the body with small screws at the extremes. They screw into small wooden blocks glued inside the fuselage with epoxy and chopped strand.

A nose weight ballast chamber for lead shot is made by epoxying an air-ply bulkhead near the nose. The shot can be poured in and out of the chamber through a small opening sealed with a machine set screw.

An interior antenna tube with external rear exit (for long antennas) is accomplished by spot epoxying a Ni-Rod to the inside bottom of the fuselage. The rod exit is made like a control lead-out. Be sure to roughen the Ni-Rod with sandpaper wherever you apply epoxy.

*To be continued next month!*

*\*\*\* (Next month—Painting and Finishing.) \*\*\**

From AMA NATIONAL NEWSLETTER 5/194

## Glue

by Leigh Jezork

West Jersey Radio Flyers

I was working on a model the other day and started to think about all of the different types of adhesives we now use and what it was like before the advent of the cyanoacrylate glues. Before I went into business for myself, I was a chemist, specifically a polymer chemist, for National Starch and Chemical.

During those years, prior to 1976, National was one of the foremost producers of polymers based on vinyl acetate. As it happens, the white and yellow glues we use are based on poly(vinyl) acetate emulsions. I thought I'd tell you a little about the chemistry of these adhesives for your newsletter. A polymer is a molecule made up of many individual units. The base unit is called a monomer. Monomers by definition are reactive molecules that have the ability to react with themselves or other types of monomers to form longer chains (polymers). These polymer chains can be prepared in an aqueous medium (hence the name water based) or in a solvent. Polymer adhesives made in a solvent are similar to Ambroid or Duco. While these two familiar modeling adhesives are in fact polymers, they were not polymerized in a solvent solution. They were prepared in a different way and then dissolved in a solvent. However, many familiar adhesives, such as contact adhesives, are true solution polymers.

Water based polymers differ from their solvent based counterparts in that they are not dissolved in the continuous medium (water) but rather suspended in the water. The polymer chains grow to a significant size as the reaction proceeds. During the course of the polymerization, materials are added to the reaction medium to coat the polymer particles to keep them from sticking to each other and keep them from settling out. These materials are called emulsifying agents and/or surfactants. The major emulsifying agent added to poly(vinyl) acetate emulsions is poly(vinyl) alcohol. Poly(vinyl) alcohol is itself a polymer which is completely water soluble. One other use for poly(vinyl) alcohol in our hobby is that of a release agent for fiberglass molding. A solution of poly(vinyl) alcohol painted on a master plug or mold leaves a smooth, transparent film with very low adhesion to fiberglass. When additional resin and cloth is applied to the mold and the resin hardens, a sharp rap or twist breaks the poly(vinyl) alcohol film free and the finished product can be stripped from the mold.

A finished, well prepared poly(vinyl) acetate emulsion consists of little (about 50-80 microns) spheres of polymer protected by a surrounding envelope of poly(vinyl) alcohol.

So now you ask, what happens when I try to glue something together and why should it make things stick together? Well, the first thing to happen when you squeeze out some glue, is that the water starts to evaporate. As the water evaporates, the little polymer spheres get closer and closer together. Eventu-

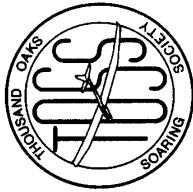
ally they begin to come into contact. When this happens they start to fuse together. When all of the water is gone, the particles are totally coalesced and a film is formed. Once film formation occurs, the polymer film is no longer water soluble. This is essentially the mechanism for film formation of all water based polymers including such things as latex house paints, tile adhesives, etc. This same mechanism accounts for some undesirable side effects. When a water based polymer emulsion freezes, the water is excluded from the polymer and the particles stick together never to be useful again. This is why a can of latex paint looks like a can of cottage cheese after it freezes.

Poly(vinyl) acetate based glues are good at sticking things like wood together primarily because the wood, chemically, looks a lot like poly(vinyl) acetate. We saw in the film formation and freezing example that when the water is gone, the polymer molecules coalesce and stick together. These are active sites on wood surfaces that attract and hold the polymer film. Since in the act of gluing we essentially make a wood-glue-wood sandwich, everything sticks together. The bond is quite strong. Stronger in fact than the bond holding the wood fibers together.

Glue joints are typically measured on a testing machine called an Instron Tester. This device has two sets of opposed jaws that can be moved apart at a controlled weight. Each pair of a glued up sample is gripped in the jaws and the machine starts to move the jaws apart. The rate of movement and the force applied are recorded. From this data, both shear and tensile strengths of the joints can be generated. In a properly glued joint, wood fiber joints will fail before the glue to wood joint fails.

Have you ever noticed that white glue doesn't sand well? This is because the poly(vinyl) acetate is soft and gummy. The amount of softness can be controlled by adding other types of monomers during the polymerization. Monomers like butyl or octyl acrylate can soften the film to the extent that they remain sticky all of the time. This is in fact what was done to create Southern Soureum which is a water based contact adhesive. Adding monomers to make the poly(vinyl) acetate harder and therefore more sandable is possible but reduces the bonding efficiency. A little talcum powder added to your white glue will make it sand well without sacrificing bond strength. A cheaper ingredient is dextrin. Dextrin is a yellowish powder which is made by heating certain types of starches to high temperatures. The trouble with adding dextrin to white glue is that it turns yellow. Now you have to call it yellow glue. Some people call it Tiebond. Since the dextrin causes the glue to thicken somewhat, and since the solids content goes up, Tiebond has good bridging and gap filling qualities. And since dextrin is harder than poly(vinyl) acetate, it sands better too.

National is the supplier of cyanoacrylate glues for Hot Stuff. I worked on these polymers before they were introduced into the hobby market. I may be the first modeler to have glued his fingers together!



THOUSAND OAKS SOARING SOCIETY

TO: All Local Hobby Shops

FROM: Bob Sweet  
HOME PHONE: 388-9619  
WORK PHONE: 389-2406

### SUBJECT: TWO MISSING SAILPLANES

On April 24, 1984 two(2) sailplanes went down (off-field landings) during a Southern California Soaring Clubs contest being held by the Thousand Oaks Soaring Society at Redwood School, Gainsborough Road, T.O. approximately between 10:00 AM and 11:30 AM. Both gliders landed on / near Hendrix Avenue between Gainsborough and Thames Street. Neither planes have been located.

Witnesses report one of sailplanes was picked up by a person, who disassembled the glider and put it in his vehicle while implying he was associated with the contest. Neither of the sailplanes was subsequently returned to the field.

If anyone attempting to locate the rightful owners or to sell a sailplane matching the description below, please contact: Bob Sweet - (805) 388-9619 or Mike Reagan - (805) 529-5513.

#### SAILPLANE #1:

MAKO with wing bottoms painted red. Airtronics receiver - channel 08 (Ham band). This plane has AMA number and may have owner's name - Tom Vincent.

#### SAILPLANE #2:

SHADOW with natural fuselage with fluorescent orange (watermelon) rudder. Wings are natural on top with fluorescent orange (watermelon) tips. Bottom of wing is black. Airtronics receiver - channel 14. Owner had not placed AMA or name inside plane. Unique construction can positively identify the glider.

Both pilots are offering a cash reward for the return of their aircraft!

On behalf of TOSS, I would sincerely thank you and all your employees for their cooperation.

Bob Sweet

# SWAP MEET

The San Diego County Association of Model Clubs and the Stadium  
Air Force invite you to

## 6th Annual Stadium Swap Meet

San Diego Jack Murphy Stadium  
Southwest Parking Lot  
Saturday, June 25, 1994  
8:00 am - 12:00 noon

No buying or selling fees are required

All types of R/C aircraft, car and boat equipment will be sold --  
collect your things and we'll see you there

Call Roger Jaffe at 463-4455 for more information

## The Red Baron

MODEL HOBBIES  
77 Daily Dr., Camarillo CA 93010

May 5, 1994

Dear Newsletter Editor,

We would like to invite interested people from all the local area clubs to participate in the TOSS/Red Baron Pro-Am Glider Contest, and would appreciate your publishing the information below in your next newsletter, if we aren't too late,

Many thanks,

Bill Hinman

### Glider Contest Planned

The Thousand Oaks Soaring Society (TOSS) and The Red Baron Model Hobbies are sponsoring a glider contest especially designed for novice glider pilots. The TOSS/Red Baron Pro-Am Glider Contest will be held on Sunday, June 12, 1994, at Redwood School in Thousand Oaks starting with test flying at 0800 and a pilots meeting at 0900.

Novice pilots will be paired with experienced TOSS pilots who will help them and explain the details of contest flying. Simple rudder/elevator sailplanes only are required. And, if you want to get a head start, a pre-contest checkout will be held the week before (June 5) to teach winch launching and other contest procedures.

Contest information and applications are available and may be filled out at The Red Baron, 77 Daily Dr., Camarillo, CA 93010 (805) 482-0250. Pre-registration isn't necessary, but it will help the Contest Director to plan for the event.

Come enjoy the excitement of low key glider contest flying.

## NOVICE GLIDER PILOTS

Here's your chance. Learn soaring competition with help from the experts.

Enter the

# PRO-AM GLIDER CONTEST

SPONSORED BY THE

## Thousand Oaks Soaring Society (TOSS) and Red Baron Model Hobbies

Sunday, June 12, 1994, 9:00 AM  
Redwood School, Thousand Oaks.

If you have never flown in a contest, this is it! New glider pilots will be randomly teamed with experienced TOSS experts for the competition. Unlimited coaching is encouraged. Simple sailplanes with rudder/elevator controls only.

Bring your own Gentle Lady, Wanderer, OLY 650 or other two channel glider and have fun with us. (Make sure it has a tow hook.)

## Prizes/Trophies for the winners

See other side for details

Spectators are always welcome, and, if you have never flown a sailplane, TOSS will have one available along with a qualified instructor to let you experience firsthand the thrill of soaring. (Not valid for contest flights)

Further info: Larry Jiminez 805-652-1937 or The Red Baron 805-482-0250

### PRO-AM GLIDER CONTEST GENERAL INFORMATION

1. An AMA License is required to fly in this event (because of insurance requirements. If you don't have one, you can sign up at the contest. All radios must be 1991 gold stickered. You must bring your own airplane for the contest. You will be paired with an experienced Toss pilot to assist you and fly as a contest team.
2. Tasks for novices will be 3 or 4 rounds of timed duration flights (each second in the air counts one point). Landing points will be awarded if you land within a marked circle. The contest director will explain fully at the pilots meeting before the contest starts. Prize winners will be determined by the combined scores of the Pro-Am partners.
3. If you want to practice or get experience in winch launching prior to the contest, there will be a pre-contest checkout for novices on Sunday, June 5, one week before the contest.
4. The contest starts with a 9:00 AM pilots meeting. Pilots may test fly aircraft starting at 8:00. Late arrivals may be accepted at the discretion of the Contest Director depending upon the number of contestants.
5. If you plan to enter, please complete the entry form below and mail it or leave it at The Red Baron, 77 Daily Dr. Camarillo, 93010 as soon as possible before the contest so we know approximately how many contestants to prepare for.

### TOSS/Red Baron Pro-Am Glider Contest

Sunday, June 12, 9:00 AM

Entry Form

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ AMA # \_\_\_\_\_

Experience:

Yes No

Have you launched on a winch or hi-start? ..... \_\_\_\_\_

Have you done spot landings? ..... \_\_\_\_\_

Do you have slope flying experience? ..... \_\_\_\_\_

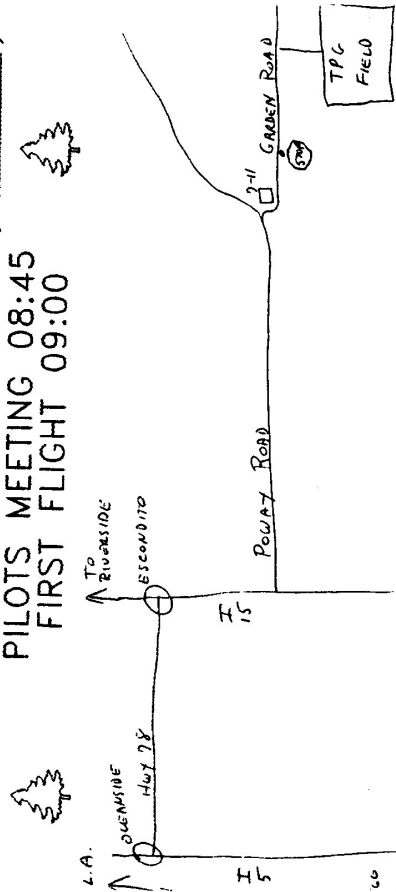
Are you under 18 years of age? ..... \_\_\_\_\_





# TORREY PINES GULLS

SC2 JUNE 26, 1994  
 CD GEORGE JOY 619-748-2167  
 PRESIDENT JOHN McNEIL 619-697-3830  
 AT POWAY FLIGHT CENTER  
 3 ROUNDS OF 3/5/7 PILOTS CHOICE  
 CALLED FLIGHT ORDER  
 12 VOLT WINCHES W/RETRIEVERS  
 APPROX. 900 FT LINE LENGHT  
 LANDINGS WILL BE 25 FT. TAPE (REVERSED)



11 Airtr, Irvine California 92718 Tel: (714) 830-8709 Fax: (714) 830-4140

April 1994

This is an open letter to the R/C soaring community to update Airtronics friends and customers on the status of our company as a whole and our kit line in particular. There have been some changes here at Airtronics over the past six months, and these changes have led to rumors and speculation which stray far from the actual truth. Several well intentioned articles which have appeared in club newsletters recently have only added to the confusion. Sending out this letter directly from the source should clear the air and dispel the rumors.

First of all, Airtronics is not being sold, and we are not on the verge of closing the doors. This is our 23rd year in the industry and we intend to continue doing business for a long time to come. Barbara Renaud did retire from the presidency of the company last year, following through on her desire to serve as president for ten years and then step down and direct her energies into other areas. Bob Renaud is the new president of Airtronics, taking over in April of last year. Bob's age and experience in the R/C industry ensure that a member of the Renaud family will continue to head up Airtronics for many years to come.

Airtronics has discontinued the production of all the machine cut balsa and plywood kits due to the extremely high cost of producing them. These kits include the Olympic II and Olympic 650, Sagitta 600 and 900, Eclipse Standard and Deluxe kits, the Whisper 2 Meter and Whisper 95, the Legend and the Q-Tree. Production was actually stopped in October of 1993, and at this point we have no stock of parts or completed kits left in our warehouse. There may still be some kits available through retailers who received shipments as we sold the stock on hand when production ceased, but Airtronics has no information on which retailers might have product left. At this time we are looking into alternate methods of manufacturing which would allow the built up wood kits to be profitably reintroduced at a later date. One of the options being explored is laser cutting, and if a way can be found to deliver Airtronics quality at competitive prices we'll bring the kits back, but for now they are out of production.

Airtronics will continue to sell a line of composite kits featuring fiberglass fuselages and pre-skinned bobeht covered foam wings. In October of 1993 we were forced to find a new manufacturing source for these planes, and it has taken six months to bring the new production on line. The lack of product availability has been taken by some to mean that Airtronics has dropped these kits as well, but that is not the case. Airtronics will still market the Flite Lite Composite Kits and move forward with the development of new designs in this product line. The Falcon 800 and Falcon 880E are no longer in production, and there are no plans to bring them back. The Falcon 880 with the 3021 airfoil is scheduled to be phased out unless market demand is strong enough to merit additional production. The Thermal Eagle, Falcon 600 and Falcon 550E will all continue to be available. The Swift, Peregrine and Legend SC will all be introduced and available in June of this year.

We hope that this letter has answered any questions or concerns that you may have had. Please call us at (714) 830-8769, Extension 13 for Bob Renaud or Extension 15 for Tim Renaud and we will be glad to answer your questions or provide any assistance.

Sincerely,

Bob Renaud  
 Bob Renaud  
 President

Tim Renaud  
 Tim Renaud  
 Operations Manager