

MARCH 1994

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NEWSLETTER

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UPCOMING EVENTS

MONTHLY MEETING: April 28, 7:30 PM, Cameron Center, Thousand Oaks, CA
TOPICS: 1) April's SC² Contest 2) North / South Contest Results

MONTHLY CONTEST: May 8, 9:00 AM, Redwood School, Thousand Oaks, CA
CONTEST DIRECTOR: Don Northern

SC² CONTEST: May 29, 9:00 AM at NCC

MARCH MEETING NOTES:

OLD BUSINESS:

- 1) None was discussed or remembered.

NEW BUSINESS:

1) Mike Reagan brought in a sample of the sculpted trophies for the April SC² contest. These pieces of art are in the shape of a scale down T-Tail sail plane. It looked as if it could fly. There will certainly be some proud winners at the contest.

2) After some discussion, the club approved the purchase of four (4) new 12 Volt batteries to replace some of our duds. Dan Vannett volunteered to make the purchase (at a discount available to him). If they are as good as they are heavy, we are in for many great launches. Thanks Dane.

3) The April SC² contest was discussed. Getting volunteers to help and good equipment to field were primary points of discussion along with a reminder of that

this is the clubs primary source of income other than membership fees.

4) Dane is in the process of renewing our AMA insurance. Edgar will again handle negotiations with the National Park Service for the Paramount Ranch site.

NEW MEETING SCHEDULE

THURSDAY NIGHTS

APRIL 28 MAY 26 JUNE 30

5) Larry Jimenez brought in and distributed flyers on 3M transfer tapes, various hardware from Micro Fasteners and a catalog from Airtronics Specialty Division. If you didn't come, you lost out on some excellent

reference material.

6) Charles Babcock gave his Wanderer away to Devin Holzer. Devin is one of those new kids attempting to learn how to fly. When his used Gentle Lady had seen better days, Charles replaced it out of the true spirit of this hobby, with his only flying sail plane. We hope you can new Paragon in the air very soon Charles and may all of your thermals be as big as your heart..

7) After some hallway discussions among some members, it was decided that in hopes to increase the size of our monthly raffle and thusly the number of attending member, our raffle will now be held at a nominal fee. Larry has agreed to change the rules. It will no longer be free. One dollar will get you one ticket. Five dollars will get you seven tickets. Ten dollars will get you fifteen tickets. In return, they promise the prizes will be bigger and better. Their goal is still run a profitable raffle.

Many thanks are extended to Marty's Hobbies for his generous donation of \$45 worth of gift certificates.

8) Larry Jimenez brought in a 2 Meter foam wing kit with a 3021 airfoil for Gentle Lady / Spirit style sailplane. This wonderful kit, complete with all balsa wood sheeting, edges, glass tape, etc was donated by R. A. Cores, P.O Box 863, Southbridge, MA 01550 Phone: (508) 765-9998 and will be raffled off at a later date..

TREASURER'S REPORT:

TOSS has \$155.66 to its name along with approximately \$283 plus in debts.

MARCH CLUB CONTEST

Let the contest fit the weather was the theme. Mike Leal held a 3,5,7 minute (700/800/900 points), pilot's choice, declared in the air, with a modified circle landing (300/200/100 points) contest. This was great because the air was some of the worst we have seen in a long time. It might have been the clouds overhead, the damp ground, or even the turbulent air upstairs. But for whatever reason, most pilots has a difficult time making at least three minutes.

What was really nice was the landing scoring. If you were outside the circle, no points were given. For a distance of 1 to 33 on the tape, you received one third of the points, from 34 to 66 you received two thirds the value and for 67 to 100, you would receive full value. Sample, for a measured 49 on the circle and a three minute flight, you received 200 points. This tended to de-emphasize the landings.

It was fun yet difficult under the conditions.

NEWSLETTER DISTRIBUTION

As you all know, Larry Jimenez have worked hard over the past year to minimize the cost to the club of this newsletter. So what have we done? We searched high and low for the lowest price for publishing it. We have taken it from approximately \$40 per month to \$22. We even get more copies at no additional cost. By shopping around, it was found that Office Depot gives you 100 copies for less than we could purchase 75 (typical mailing month) copies elsewhere including Office Depot.

We have also established a good mailing list / roster. This minimizes the cost for stamps. TOSS sends out approximately 70 copies each month. Forty to forty five to members, 14 to other SC² clubs (through a reciprocity agreement I am able to fill this tabloid with articles written by other enthusiasts), 5 to perspective members, 4 to other reciprocal clubs, 3 to local hobby shops, and 2 to national magazines. 10 to 20 copies are also normally distributed at various flying sites to interested parties.

THOUGHTS ON THE MONTHLY CLUB CONTESTS

by Jonathan Spoer

One day you go to the mail box looking through the mail saying to yourself, "bill, bill, bill, advertisements, model aviation news, TOSS newsletter." Gee lets back up there, time to open the newsletter. We'll its just the normal "stuff," the meetings, the news and the contests. They just keep urging you to go to these monthly club contest. You say that you'll go to one but you never do

One Friday night, you decide that you are going to go the Sunday contest. What do you do? Well, you go to your work space to see what you have. You see you have one of these and one of those (half of which are not even built) and decide to pull your old two meter trainer out of the trash (why not use it for something like the new trainer or sports plane class).

That Saturday, you look over the plane and patch over the holes where the MONOKOTE is missing, fix up the broken parts and finally it all comes together. Latter that evening, you put the plane on the charger and go to bed. That night you could hardly get to sleep and have you have a dream (or a nightmare). That night you dream of launching that plane, specking out and thermalling on up there. When it comes to landing, you dream of landing on the exact center. Well, this goes on through all the rounds and finally your dream comes to a close with you in first place being carried off the field on everyone shoulders.

Then suddenly "BEEP, BEEP, BEEP, BEEP, BEEP,..." the sound comes from your alarm clock. That morning you feel refreshed. You hop into the shower and then get dressed. You have your usual morning breakfast still dreaming of a perfect day. You take that last hour to pack all your last minute supplies (tape, glue and such for those occasional crashes, like you really need it, and of course don't forget the stopwatch) and pack the car up. Now you drive to the field. As your driving out to the field your probably wondering if you charged the batteries fully and wonder if you have your radio. Seeing you have arrived early, you decide to help out the contest director (CD) as much as you can. First though you put your pane together, get your frequency pin and check the glider's controls. "Hey" you say seeing your batteries are charged. You hear the CD call everyone over to pay their entry fee and whip out the cash. Finally the contest starts. Meanwhile, you

start to think what if the wings fold on launch, where is my timer, oh yea I don't have one. Being to scared to step up to the electric winch, you decide to time for the others. Finally you say to yourself your going to do it. You pick up you plane trembling and you heart is going a mile a minute. Before you launch you decide to plan out your flight thinking of the what ifs, like what if I get caught in massive sink. You put that all behind you, step up to the winch and check for traffic. Seeing that all is clear, you yell "launching!" and then you pulse your plane on up into the sky.

You fly to a area of the field and speck out to a high altitude. Meanwhile, you and you timer walk over to the landing tape keeping twenty-five feet away. Now your "timer" says "three minutes left," then again "two minutes left." Thinking to yourself this is the best day of thermal and you never want to come down, that is until the last minute. You zoom your plane down and do a few stunts to lose altitude. You timer says "thirty seconds left" while your not even half way to the landing area yet. Now you start to set up your landing approach and out of the blue "fifteen seconds left" comes from you timer.

Now your on final and your all lined up you try to pull flaps, finding out you don't have any. "Five, four, three, two, one, beep." you nose your plane in. You walk over and you timer says, "looks like you got five minutes and two seconds on your flight and a 77 on you landing. You pick up you plane and walk over to the CD's table. Now you fill out your card for that flight while being filled with pride and joy.

Well, the rest of the day goes on like this, with some flights good and some bad. Finally the morning contest comes to a close. Everyone goes over to the CD's table and the CD reads out the scores. This is where some of the thrill is. You keep saying to yourself you placed or lost big time. We'll things turn out for the best and you pace in the top five. Even though this is not the "Fall Soaring Fest" at Visalia, California, it is still a neat experience to have. Before the winches are packed up you might just think about launching a few more times and just have as much fun as you can. The point of this, is to try to encourage others to come out with that old beat up plane of yours and just for the fun of it. It is neat to fly your fist contest or have another contest under your belt. The point of these contests is to just have fun, not to add stress to your life. So Keep thermalling and have fun.

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 slmon color monokote ... \$50

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

THE FLEDGLING - COVERING AND FINAL ASSEMBLY

Tom Dean

STEP 1. COVERING THE WING

Prepare the wing by taking one last look at all the glue joints and be sure that the sanding has been done right. Dust it off, or blow it off to remove all of the sanding powder and shake it around to make sure there aren't any bits of wood stuck in the nooks and crannies. Nothing is more aggravating than picking up a finished wing and hearing something rattling around inside.

Spread an old terrycloth towel or equiv. on your work surface. This will help prevent scratching the Monocote. (I call all facial tissue "Kleenex" so I'm going to call whatever covering material you've chosen "Monocote".) Note: dark colors on the bottom of the wing improve the visibility of the plane a great deal. The tools you'll need are a sharp pair of needle pointed scissors, Monocote iron, heat gun and a brand new exacto blade in your knife.

Cut the Monocote to size, allowing at least 2 inches all around so you have something to hold on to. On a flat bottomed polyhedral wing you can usually use one piece. You'll find that the top will need a seam at each root. (Reverse compound curves are tough). Set the iron on high, peel the backing paper off of the Monocote and iron onto the bottom of the wing around the outside edges only, leading edge, trailing edge, wing tips etc. Keep the iron moving. The Monocote will melt if you over heat it. Don't iron the tops of the

ribs yet. Pull it fairly tight while you are doing this. Trim around the outside and iron the edge down. Allow for about 1/4" overlap with the top covering.

Do the top of the wing in the same manner. After it's all covered and the edges are all sealed, start using the heat gun. Keep it at least 2" away or you may melt the covering. Keep checking the shape of the wing to be sure you are not causing warpage. After it's all nice and tight, iron along the tops and bottoms of the ribs and sheeting if any. This will strengthen the wing.

STEP 2. COVERING THE FUSE

The compound curves on the fuse are a pain to do. Take your time. Use the iron on the flatter areas and the heat gun for the curvy areas. When doing the nose of the plane, pull on the Monocote while heating with the heat gun. You can stretch it a lot with some practice. Don't over-heat the inside curves like the intersection of the rudder and fuse, as the material shrinks the radius will keep getting bigger and bigger. You will find that the areas of solid wood retain the heat from the iron. Take care not to melt the covering.

STEP 3. TRIM

When applying trim to the plane keep in mind that large pieces of Monocote on top of other Monocote shrink at different rates and degrees so wrinkles and bubbles are a problem. Adhesive backed vinyl trim can be used but it is quite heavy. For large areas it is better to cover the area with the trim color only. Try to overlap the darker color over the light color so it won't

show thru. Put your AMA number on the top of the right wing.

STEP 4. FINAL ASSEMBLY

Mount all of the equipment on the plane. If you want an external on/off switch don't mount it yet. Mount the wing onto the plane. Hold the plane in your throwing hand like you are going to launch it. Note where your fingers are. Don't mount the switch anywhere near your fingers. You might accidentally turn it off as you launch it. Trust me, you want your plane on when it takes off. Also mount the switch so that the "on" position is to the rear of the plane, this will prevent an accidental turn-off if you brush against a tree branch or something while in flight.

Adjust all of the linkages on the servos so that with the radio on and all of the trim settings on the radio in the neutral position the flight surfaces and the servo arms are also in the neutral position.

STEP 5. BALANCING

Locate the CG from the plans (approx. 1/4 cord). Mark the bottom of the wing on each side of the fuse with a grease pencil or pieces of tape to indicate where it should be. With the plane assembled in its flying configuration place one finger on each side on the CG marks and see if it is tail or nose heavy. (It's most likely tail heavy at this point). Don't add weight yet. Stick a pin in the center of the nose and the tail and see how it balances left to right. Temporarily tape lead shot at the outer end of the light wing tip until it balances. Glue the lead into a small hole or holes drilled into the wingtip block toward the leading edge of the wing if it was tail heavy, or toward the trailing edge if it was nose heavy.

Now balance the front to rear CG by adding weight as far forward (or rearward) as possible. Make sure it won't work its way loose.

Final note: Make sure you have your name and phone number somewhere in or on the plane in case it decides to be free.

**NEXT MONTH - THE FIRST
FLIGHT**

Another note of interest is the follow-up to last month's article on problems with Airtronics radios with the so-called "Rubber Ducky" antennas. George Steiner, our AMA District 10 electronics expert, stated that Airtronics programmable radios are set up so that the radiation pattern (power) of the transmitter increases the closer to the tip of the antenna. Therefore, if you put one of these flexible, short antennas on, say a Vision or an Infinity 600 or 660, the short antenna is radiating back into the transmitter and could cause loss of memory in the transmitter. Futaba and JR radios do not use such a wave pattern, and so are probably more likely to be immune to this problem.

From THERMAL TOPICS by MODESTO R/C CLUB, April 1994

Launching a Model Glider Using An Electric Winch

Dave Condon
Steven Stricklett

Introduction

There are four methods to launch a model glider: hand launch, hi start, hand tow, and electric winch. All of these methods are effective and useful. Your choice depends on the size and weight of your plane, the prevailing air conditions, and the flying task you are trying to accomplish. The good news is that a winch launch will usually give a higher launch than any other method, especially as the size and weight of the model increases. The bad news is that the winch and retriever take more time to set up and are complex electro-mechanical pieces of equipment subject to malfunction.

This article will discuss the operation, etiquette, and safety aspects of using a winch to launch a model.

Winches and retrievers are normally used for launching models at the TPG thermal contests, and at club sponsored contests in general. Many of us also use them for sport flying. The use of a retriever adds a bit to the set up time and increases the complexity of launching. However, compared to the alternative of walking to retrieve the launch line, a retriever does return the end of the line to the launch position quickly. Retrievers are used at our contests to help speed up the contest and provide for more launches in a shorter amount of time. Some retrievers can be operated by the pilot and some can't. The TPG retriever equipment does require a separate operator.

What is a winch?

A winch system is made up of several parts. An "electric motor", activated by either a "foot pedal" or "hand switch", drives the mechanism and gets its power from a six or twelve volt "battery". The motor turns a "take up spool" (drum) around which the "tow line" is wound up. The tow line stretches from the winch out about 900 feet through a "turn-around" and then back to the model. On the end of the tow line is an "O" ring which is slipped over the tow hook on the model.

Normal Operation

A winch is a complex, delicate, and potentially dangerous piece of equipment. However, if a pilot understands how to operate it properly and observes adequate safety precautions, there is nothing to be afraid of and a winch can be operated with complete confidence.

The first thing to do when you approach a winch is to inspect it, the retriever, the tow line, and the retriever line. If you see any electrical connections that are loose, line that is snagged around something, obstructions in the launch corridor, a loose pack of line on the retriever take up spool, or anything else that doesn't look right stop and investigate or fix any problem.

The foot pedal should be on solid ground where it will not slip or slide when you step on it. Make sure, as a safety precaution, to not set it directly behind the take up spool. More than one pilot has had his legs whipped past the point of bleeding when the line broke during a launch and then it proceeded to repeatedly whip around the drum before the pilot could get his foot off the pedal. Then make sure the winch and retriever are turned on.

The winch should be tested if there is any question as to whether the winch is properly hooked up, free of obstructions, and has adequate power from the battery. This can be done by firmly holding the tow ring in your hand (DO NOT EVER PUT YOUR FINGER THROUGH THE RING) and "tapping" the foot pedal once or twice. The line will tension up and you will be able to see if the winch is operating properly.

Before you launch, move the control surfaces of the airplane to assure the radio is on and everything is working OK. If appropriate, set the control surface configuration to launch mode. Check the air space in the launch zone for any possible conflict with other planes during launch.

When you are ready to launch, place the tow ring around the tow hook on the glider. Stand in a throwing posture ready to throw the glider. Step on the winch pedal to build up line tension. When the tension is appropriate for the model, throw the model straight ahead as if the winch line were "not"

pulling on the model. I have seen many cases where the line broke at the instant of release and if the model had not been thrown it would have fallen to the ground. Make sure the wings are level. The degree of nose up attitude will depend on the model, its tow hook location and the pilot. It is equally OK to throw it straight ahead and level or to use a javelin throw.

How much tension to allow before the model is thrown depends on the model and the pilot. Pilots using models with all glass wings are known to tension the line to the point the winch motor begins to stall. That amount of tension is not necessary for most models and will surely break a built up wing. If a model has not been launched on a winch before, it is a good idea to start out with light tension and build up to more as your experience dictates. A good procedure for starting off is to tap the winch pedal rapidly in a staccato rhythm.

During the launch, you have to fly the plane as you would during normal level flight. The plane will fly up at a rather steep angle until it reaches the "top" at which point it will fly over the "crest" and start flying level or even down slightly. Once a glider has made it over the crest you can fly the plane off the tow line by stepping off the winch pedal and giving the nose of the glider a little dip down followed by a little dip up. If appropriate, at the top of the launch, take the model out of launch configuration.

It is important to watch your plane carefully during the launch. It is a good idea to back off the winch pedal and fly off the tow line, if you see any abrupt or unusual flight characteristics. If the wings bow upward, there is too much tension on the line. Lighten up on the line tension immediately. It is also important to keep in mind that what is a normal amount of line tension during the "climb" will be way too much after the plane has "crested" at the top. More than a few sets of wings have been ripped off of planes by the pilot staying on the winch pedal way too long after the plane has crested.

As your skills progress and your confidence grows in operating a winch

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Winches Continued

and flying your plane, you may want to try a "zoom" launch. This is a technique to increase the model's velocity and allow you to convert that velocity to altitude. It is performed after the model has crested at the top of the launch. To accomplish this, you step on the pedal for short time and dip the nose of the glider down. The planes speed will increase very quickly. Then pull the glider up at about a 30 degree angle and step off of the pedal. This is a very quick maneuver and the "dip" is held for less than a second. A deep zoom is not needed and adds to the risk of breaking the wing or snagging the winch line. The goal of a zoom is to increase speed to convert to altitude. A little experimenting will help select an appropriate zoom profile.

After Coming Off The Line

After the model is free of the winch line move your foot away from the control pedal to prevent accidental operation of the winch. Make sure your model is under control. At a contest, step back away to allow the next pilot access to the winch while the retriever operator brings the end of the winch line back to the launch area. If sport flying without a retriever you may want to tap the foot switch to bring the line down if the wind is not straight down the winch line. If the wind is straight down the winch line there is no need to step on the pedal, just let the wind carry the tow line back toward the winch. If using an IPD or VMC retriever, operate it only until the end of the winch line is on the ground. After your flight you can retrieve the line all the way back to the launch position. At all times your priority should be the safety of the model and not the winch system.

The model may climb at an angle that is too steep or too shallow. This can be corrected by moving the tow hook forward to get a more shallow climb or rearward to get a steeper climb. Before going to the trouble of moving the tow hook, you might try experimenting with the position of the model's flaps or elevator during the launch.

It is very important to remember that the wind can have a major impact on the launch. If you are launching into a head wind the model will tend to climb at a steeper angle. In this situation you

don't need to step on the winch pedal as much as on a normal launch. The wind will help keep tension on the line. the opposite is true if you are launching down wind. You will need to keep more tension on the line.

A cross wind presents a different kind of problem. In this case you need to point the model into the wind (crab) and keep enough tension on the line to keep the model climbing at a normal angle. How much tension depends on how strong the wind is and what direction it is coming from.

Malfunctions

Malfunctions are, unfortunately, a fact of life in the R/C glider world. They may be scary to think about, but if precautions are properly taken and the pilot knows what to do in every case (AND HE KEEPS HIS HEAD), the negative effects can almost be minimized out of existence. A few of the more common malfunctions follow.

A **Pop Off** usually occurs early in the launch near the ground and is usually due to a combination of tow hook position and angle of attack. They are much more prevalent when launching into a head wind. A pilot just getting use to winch launching should keep this in mind and use less tension on the line when launching into a head wind. The model almost always comes off the line in a nose up attitude. The first priority is to maintain air speed and avoid a stall. Depending on the situation either a loop or down elevator is appropriate, the latter usually the safest. A loop may sound exotic to the novice pilot, but in fact, it is often the most instinctive and easiest way out of the problem. As soon as possible take the model out of launch configuration and fly to a safe landing.

A **Line Break** can occur from the moment of release until the model comes off the line. The attitude of the model will depend on where in the launch sequence the line broke. The response should be the same as for a pop off.

If the **Retriever Line Jams** in the retriever system or the turn-around, it may cause the winch line to be pulled from the model's tow hook. This can occur anywhere in the launch sequence. The response should again be the same as for a pop off.

A **Run Away Winch** is a very serious but uncommon failure mode. At a contest, the retriever operator should immediately be alerted by the pilot of the problem so that he may turn off the safety switch. this removes all power to the motor. The pilot's priority is to get off the winch line, for built up wings of small wing spans, the sooner the better. For the big glass wing models this is less important. The appropriate maneuver at this point will depend on the model, but to prevent wing breakage it is suggested to keep the nose down and gently, but firmly, turn left or right 180 degrees.

A **Dead Winch** may happen toward the end of a contest when the battery approaches the end of its charge or an electrical connection has come loose. If this happens early in the launch, hopefully the pilot remembered to throw the plane hard enough and there is enough energy to fly the plane to a safe landing. If it happens later in the launch, just fly the plane off the tow line and continue to a safe landing.

Etiquette

There are several points of protocol and etiquette that should be observed by every pilot. This makes our hobby safer and more enjoyable for everyone.

When you are ready to fly and there is not an available winch, set your plane on the ground in line behind the winch you wish to use. Please leave room for the launching pilot to move away from the winch. When you have your plane hooked to the tow line and are all set to launch, check the other winches and defer to any other pilot who has been waiting in turn to launch. Wait to launch until all other tow lines are on the ground. Just before you throw your plane call out "launching" so all other pilots waiting to launch, fixing lines in the launch corridor, and flying planes in the air can all hear you and be alerted that a launch will take place in a matter of seconds. Call out "line break" or "cross lines" if your tow line or retriever line breaks or falls across other winch lines. Step away from the winch quickly to allow the next pilot access. Fly your plane away from the launch corridor. And last but certainly not least, say a big "thank you" to the retriever operator.

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4/10/94 **OPEN CLASS STANDINGS** HIGH SCORE = 2922.0

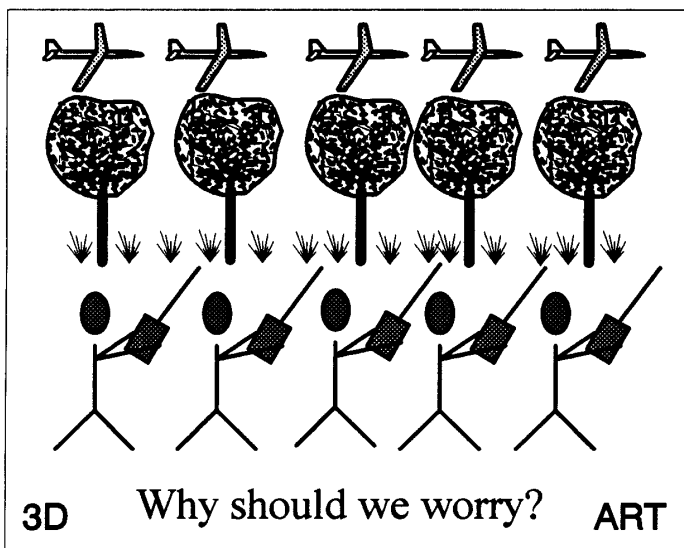
pos	NAME	CLUB	TOTAL	JAN	FEB	MA	APR
1	DON NORTHERN	TOSS	3451	703	914	994	840
2	DANE VANNETT	TOSS	3346	610	801	955	980
3	EDGAR WEISMAN	TOSS	3295	702	611	982	1000
4	BOB SWET	TOSS	3209	901	602	978	728
5	BILL KARP	TOSS	2450	653	0	919	878
6	MIKE REAGAN	TOSS	1998	1000	0	998	0
7	PAUL TRIST	TOSS	1988	988	1000	0	0
8	MIKE RATNER	PSS	1774	896	878	0	0
9	B.J. WEISMAN	TOSS	1739	739	0	1000	0
10	ART McNAMEE	TOSS	1618	716	0	0	902
11	LARRY JIMENEZ	TOSS	1580	632	0	948	0
12	BEN MATSUMOTO	PSS	1433	464	969	0	0
13	DON McNAMEE	TOSS	1206	638	0	568	0
14	MIKE LEAL	TOSS	919	0	0	0	919
15	GREG JOHNS	PSS	866	0	866	0	0
16	J. RODGERS	PSS	799	799	0	0	0
17	ED DEVLIN	PSS	656	656	0	0	0
18	FRANK LEPPLA	PSS	615	615	0	0	0
19	PHILIP HALLFORD	PSS	610	0	610	0	0

4/10/94 **2 METER CLASS STANDINGS** HIGH SCORE = 2539.0

pos	NAME	CLUB	TOTAL	JAN	FEB	MA	APR
1	EDGAR WEISMAN	TOSS	2646	683	0	963	1000
2	DON McNAMEE	TOSS	1976	1000	0	976	0
3	B.J. WEISMAN	TOSS	1870	870	0	1000	0
4	MIKE REAGAN	TOSS	1709	722	0	987	0
5	LARRY JIMENEZ	TOSS	1571	0	889	0	682
6	PHILIP HALLFORD	PSS	1000	0	1000	0	0
7	GREG JOHNS	PSS	985	0	985	0	0
8	ART McNAMEE	TOSS	911	0	0	0	911
9	ED DEVLIN	PSS	893	893	0	0	0
10	JONATHAN SPOER	TOSS	813	0	0	813	0
11	PAUL TRIST	TOSS	547	547	0	0	0

4/10/94 **SPORT CLASS STANDINGS** HIGH SCORE = 2562.0

pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR
1	DON NORTHERN	TOSS	3926	997	991	1000	938
2	LARRY JIMENEZ	TOSS	3852	910	1000	946	996
3	BOB SWET	TOSS	3322	648	687	987	1000
4	PAUL TRIST	TOSS	1723	1000	723	0	0
5	JONATHAN SPOER	TOSS	990	0	0	990	0
6	MIKE REAGAN	TOSS	985	985	0	0	0
7	SONNY KIM	TOSS	931	648	283	0	0



Winches continued

Safety

There are several safety considerations to remember and practice at all times. Always check that the winch and retriever lines are clear of all objects. This should include the launch corridor and equipment. Lines have a way of tangling around the winch, retriever, retriever line guide, weeds, pilot's feet, etc. If the winch is too hot let it cool off. Check for frayed tow line or retriever line. Make sure the electrical connections are not loose or frayed. Make sure that no planes are flying through the launch corridor before you launch. Step carefully through the pits. No one likes to have their plane stepped on. Turn the winch off when not in use. this prevents someone from accidently stepping on the pedal and causing the winch to tension the line. This can be disastrous to any one who might be holding on to the winch line.

**WHEN IN DOUBT ,
DON'T LAUNCH!!**

Summary

The use of a winch to launch a model glider is another skill to add to the many others required to fly thermal type models. Safe and trouble free launches are typical. Problems usually arise when the operator(s) gets careless or casual about pre launch check of equipment or the equipment is not carefully maintained. I have had a winch for about fifteen years and my experience is that a winch is essentially trouble free. My own IPD retriever can be trouble free but only with great care.

For those of you who would like to consider thermal duration contests as a part of the hobby but are intimidated by the prospect of using a winch, I invite you to come out to the Poway field at the next contest and give it a try. There are many experienced pilots that will help you, including launch the model for you. If you don't want to compete but wish to try a winch, come out around noon and try it out after the contest. You might also try any Saturday morning.

From TORREY PINES GULLS, April 1994

1994 THERMAL and SLOPE CONTEST SCHEDULE

4/21/94

April	3	Monthly Contest - SWSA	August	8	LSF NATS at Muncie (STARTS)
	9	CSR Unlimited & 60" Slope Race @ Torrey Pines-TPG		6	Hand Launch - TPG
	10	TOSS Monthly Contest - 9:00 AM Redwood School		7	Monthly Contest - SWSA
	17	2 METER Contest - CVRC		7	Monthly Contest - NCC
	23	1st ANNUAL D.U.S.T. SCALE SOARING FIESTA		7	2 METER Contest - CVRC
	24	SC2 at TOSS - Thousand Oaks		13	LSF NATS at Mincie (ENDS)
	24	1st ANNUAL D.U.S.T. SCALE SOARING FIESTA		13	60" Slope Race at Torrey Pines - TPG
	24	Monthly Contest - PSS		14	TOSS Monthly Contest - 9:00 AM Redwood School
	30	ROSE BOWL 2 DAY Contest - PSS		14	Thermal Contest - TPG
May	1	Monthly Contest - SWSA		14	Modesto R/C F3J Soaring Contest
	1	ROSE BOWL 2 DAY Contest - PSS		21	Monthly Contest - PSS
	8	TOSS Monthly Contest - 9:00 AM Redwood School		28	SC2 at SWSA - W. Covina
	14	MASTER'S CONTEST at SWSA (2 days)	September	3	F3B Team Selection Contest (STARTS)
	14	60" Slope Race at Torrey Pines - TPG		4	Monthly Contest - SWSA
	15	MASTER'S CONTEST at SWSA (2 days)		5	F3B Team Selection Contest (ENDS)
	15	Thermal Contest - TPG		10	60" Slope Race - TPG Poway Slope
	15	OPEN Contest - CVRC		11	TOSS Monthly Contest - 9:00 AM Redwood School
	21	NORTH / SOUTH CHALLENGE at Visalia		11	Monthly Contest - NCC
	22	NORTH / SOUTH CHALLENGE at Visalia		11	OPEN Contest - CVRC
	22	Monthly Contest - PSS		18	Monthly Contest - PSS
	28	WORLD SOARING JAMBOREE at Richland WA (STARTS)		18	Thermal Contest - TPG
	29	SC2 at NCC - San Marcos		25	SC2 at EDSF - El Dorado
June	4	Hand Launch - TPG	October	1 A	VISALIA FALL SOARING FESTIVAL
	5	Monthly Contest - SWSA		2 A	VISALIA FALL SOARING FESTIVAL
	5	Monthly Contest - NCC		2	Monthly Contest - SWSA
	5	WORLD SOARING JAMBOREE at Richland WA (ENDS)		8	FALL SPEED FESTIVAL: CSR Unlimited @ Torrey Pines
	5	2 METER Contest - CVRC		9	TOSS Monthly Contest - 9:00 AM Redwood School
	11	60" Slope Race at Torrey Pines - TPG		9	FALL SPEED FESTIVAL: TPG 60" at Torrey Pines
	11	SCSA California Double-Cross at California Valley		9	Monthly Contest - NCC
	12	TOSS Monthly Contest - 9:00 AM Redwood School		16	SC2 at PSS - Pasadena
	12	Thermal Contest / Fund Raiser - TPG		18	Thermal Contest - TPG
	12	SCSA California Double Cross at California Valley		30	Monthly Contest - PSS
	19	Monthly Contest - PSS	November	6	Monthly Contest - SWSA
	23	MASS/NASF MIDSOUTH SOARING CHAMPS		6	Monthly Contest - NCC
	24	MASS/NASF MIDSOUTH SOARING CHAMPS		12	60" Slope Race at Torrey Pines - TPG
	25	MASS/NASF MIDSOUTH SOARING CHAMPS		13	TOSS Monthly Contest - 9:00 AM Redwood School
	26	SC2 at TPG - Poway		13	Thermal Contest - TPG
	26	MASS/NASF MIDSOUTH SOARING CHAMPS		13	OPEN Contest - CVRC
July	3	Monthly Contest - SWSA		20	Monthly Contest - PSS
	9	CSR Unlimited & 60" Slope Race @ Torrey Pines-TPG		20	SC2 at SULA - Carson
	10	Monthly Contest - NCC	December	3	Hand Launch - TPG
	10	TOSS 2M TOP GUN" Contest - Redwood School T.O."		4	Monthly Contest - SWSA
	10	OPEN Contest - CVRC		4	TOYS for TOTS at EDSF
	16	AMA NATS at Lubbock (STARTS)		4	2 METER Contest - CVRC
	16	F3B Qualifying Contest		10	60" Special Event Slope Race at Torrey Pines - TPG
	17	Thermal Contest - TPG		11	TOSS Monthly Contest - 9:00 AM Redwood School
	24	AMA NATS at Lubbock (ENDS)		18	Monthly Contest - PSS
	24	Monthly Contest (Fun Fly / BBQ) - PSS		18	Thermal Contest - TPG
	30	CROSS COUNTRY by Sacramento Valley Soaring Society			
	31	CROSS COUNTRY by Sacramento Valley Soaring Society			
	31	SC2 at HSS - Costa Mesa			