August 1994

TOSS - UP

PRESIDENT:
Edgar Weisman
752 Camino Valles
Thousand Oaks, CA 91360
(805) 498 - 8878

VICE - PRESIDENT:
Mike Reagan
14705 Loyola Street
Moorpark, CA 93021
(805) 529 - 5513

TREASURER:
Larry Jimenez
1943 Channel Drive
Ventura, CA 93001
(805) 652 - 1937

SECRETARY:
Dane Vannett
4365 Amberwick
Moorpark, CA 93021
(805) 532 - 2473

FIELD MANAGER:
Edgar Weisman
752 Camino Valles
Thousand Oaks, CA 91360
(805) 498 - 8878

MEMBERSHIP DRIVE:
Larry Jimenez
1943 Channel Drive
Ventura, CA 93001
(805) 652 - 1937

NEWSLETTER

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

UPCOMING EVENTS

MONTHLY MEETING: Wednesday, August 24th, 7:30 PM, Cameron Center, Thousand Oaks, CA

MONTHLY CONTEST: September 11th, 9:00 AM, Redwood School, Thousand Oaks, CA
CONTEST DIRECTOR: Jonathan Spoer

SC^2 CONTEST: August 28th, 9:00 AM. Hosted by Silent Wings Soaring Association at Covina,CA

JULY MEETING NOTES:

OLD BUSINESS

1) None to report.

NEW BUSINESS

1) Larry Jimenez brought out his $3 all foam glider which he converted to R/C for slopes. Receiver, battery pack and servos were installed into hollowed sections of the fuselage. Scrap pieces of aileron stock were used for its new ailerons and some balsa sheet for a 1/2 horizontal stab length elevator. Only other materials used was some reinforced tape and some clear packing tape. Larry claims it flies very gentle similar to a trainer and needs only mild lift conditions.

2) Mike Reagan brought in his new home designed Catapult Launched Aileron & Elevator Glider. Originating from a bet with some friendly catapult launched free flighters, this 9 ounce (yes, I said nine ounce) 36 inch wing span speed demon puts on some remarkable flight demonstrations. Plane features solid balsa construction. Wing (Selig 2055 airfoil) and fuselage are carved from 1/2 inch balsa whereas the horizontal and vertical surface are machined from 1/8 inch balsa.

Launching is accomplished using 3 five foot long strands of small Hi Start rubber, a couple feet of rope and a tow hook ring. The rope secures the rubber strands to an non movable object and the ring on the other end of the rubber attaches to the tow hook on the plane. To get this rocket airborne, just attach it to ring, pull back about twenty feet and let go. Instant acceleration to about 100 mph demands "hands off" the control sticks launching. In about one second, a good launch will put this plane at approximately 150 feet in altitude. Flight characteristics include some amazing acrobatics as well as being known to catch an occasional thermal.

Everyone who has flown it has claimed it is "funtastic" and has expressed interest in getting a set of plans which Mike says will be available in the near future. Several magazines have already expressed desires of doing articles on it. Another job well done.

3) We need at least four fliers to compete at Visalia for the team category. Perspective pilots are Art and Don McNamee, Edgar and B.J. Weisman, Mike Reagan, Jonathan Spoer and Bob Swet.

RAFFLE WINNER

The lucky winner of the June raffle was given his choice of three sailplane kits. Mike Reagan was the winner of the COMMONER HLG kit. Larry Jimenez won the second prize of a Kwick Bond Trial Pack. Bob Swet rapped it up a bottle of Top Flite Trim Solvent.

More glider kits to be raffled next month. Remember, the bigger the kitty, the bigger the prizes. So please come on out and participate.

TREASURER'S REPORT

As of 8/17, TOSS has $280 to its name along with approximately $260 plus in debts. For the next couple of months, the clubs only income is through its monthly contests. So please, pretty please, come on and participate.

MIKE LEAL MOVES ON

With a quiet ride into the sunset, Mike has left this area to continue his employment at Hughes in Tucson, AZ. We will certainly miss his wide variety of custom molded sailplanes and that old,

trustworthy Wanderer. Over the years, Mike has progressed from a novice pilot into a, we'll just call him an expert. I am sure that we all will miss his extremely outgoing personality just as much as the fields will miss slam dancing with his planes.

Mike, the club wishes and Kim the best of luck in your new home and location. Stay cool and keep in touch !!

AUGUST MONTHLY CONTEST

Mike Reagan held a 20 minute Add-em up with no flight over 8 minutes. Landings worth 1/4 of the landing tape score with 25 minutes maximum. This forced most flyers to concentrate on thermalling rather than precision landing.

Mother Nature saw to making the contest a challenge by providing large quantities of weak thermals. Very flew flyers were able to sky-out during the morning. In fact, most contestants were not able to get their full twenty minutes. Light winds from almost every direction made landings a bit challenging.

Hank Schorz (SCSA), Greg Nikola (SCSA) and Lowell Norenberg (SFVS) came and competed with the home boys. They were at least able to learn what its like to fly without strong winds at Thousand Oaks. Regrettably, they did not learn about our booming thermals. It was great to see some new faces though.

Bob Swet

SOUTHERN CALIFORNIA SOARING CLUBS

JULY 31, 1994 RESULTS AT HSS

1	Ben Clerx	HSS
2	Mike Aguirre	HSS
3	Joe Wurts	PSS
4	Aaron Valdes	TPG
5	Don Edberg	TPG
9	Mike Reagan	TOSS
15	Art McNamee	TOSS
23	B.J. Weisman	TOSS
36	Edgar Weisman	TOSS
47	Bob Swet	TOSS

TEAM STANDINGS

1	HSS	18946.7
2	TPG	18900.6
3	TOSS	17772.2
4	SWSA	16315.5
5	PSS	15898.9
6	NCC	15716.6
7	ISS	14553.8
8	EDSF	12050.1
9	SULA	8895.3
10	AMTS	4403.2
11	SFVSF	1475.5

CURRENT ANNUAL STANDINGS

1	Fred Sage	4814.9	TPG
2	Mike Reagan	4768.7	**TOSS**
3	B.J. Weisman	4753.4	**TOSS**
4	Arthur Markiewicz	4717.5	TPG
5	Rich Stroeble	4612.5	TPG
6	Edgar Weisman	4558.8	**TOSS**
38	Bob Swet	2826.6	**TOSS**
52	Art McNamee	2172.9	**TOSS**
66	Dane Vannett	1730.3	**TOSS**

TOSS members should be proud of their representatives. We have three of the top six flyers as well as our team is in third place. Keep up the good work guys.

For Sale

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

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SAIL PLANES for Sale:

Contact Ed Oldenburg at (805) 499-6354 if you are interested in the sail planes listed below.

COMET Cross - Country Sailplane: Completed Larry Jolly Design. Set a couple of club records years ago at Taft. 14 foot wingspan. No Radio. Need the space. $300

FALCON Thermal Sailplane with graphite bagged wings. Weighs 80 ounces. Would make great slope ship..... $300

PIXIE by Dodgson $200

New Magazine Offered

by Steven Stricklett

FROM: Torrey Pines Gulls - July, 1994

Double Digit Publications has announced the start of a new monthly soaring magazine called Quiet Flight International (QFI). Double Digit is located in England and is represented in the United States by

Fulco Inc.
P O Box 3000
Denville, New Jersey 07834

210- 627- 5872
210 - 627 - 5872 (fax)

The target market for this new publication is the "soaring and electric enthusiast." It will feature international contributions, world news, quality articles and new ideas, materials, and models.
I understand that the editor is Dave Jones who is the same person who used to run the highly regarded English soaring magazine "Silent Flight." Since Dave is the editor, it may be very well worth your while to subscribe to it.

Their letter stated they will be sending a sample copy to me. If anyone is interested in seeing it when it arrives, please contact me and I'll be more than happy to route it around to you.

The subscription rate is $42 for 12 issues.

Model Sailplane Visibility Against Natural Backgrounds

by John A. McNeil

FROM: Torrey Pine Gulls - July, 1994

There are four features thatdetermine an aircraft's visibility size, shape, contrast, and color. For objects that are so distant that their shape can not be resolved, size and contrast become the only important f~ctors. Because we like to be able to control our planes, we usually fly close enough that we can resolve their shape If we can discern the shape, we can usually see the color as well. This means we must be concerned with all four parameters in order to maximize visibility. Let me discuss these parameters one at a time.
Increasing the plane's size is the most obvious, and most impractical, way to improve visibility. In classes like hand launch and two-meter, we simply do not have the choice to make the plane bigger. In open class the size is not limited. As a plane gets larger it flies more efficiently, but becomes harder to spot land. These tradeoffs are hotly debated by the top airplane designers, so I'll leave it to them.
The visual shape of an airplane is determined by both its physical shape and the color pattern on it. For example, if you make the bottom of your wing tips sky blue, you will reduce the visual span. Various visual tricks have been used by pilots to make their airplanes stand out. Kevin Brister's "invasion stripes" come to mind. Detemlining an optimal pattem to increase visibility must take into account the way human beings see, which is a complicated field in itself. Most of the research is accomplished by using many human subjects in real life tests.
Since we only care about making our own plane visible to us, we don't need a large number of test subjects, our own peepers will do the tnck. The easiest way to perform a visibility experiment is to make scale drawings of our models with different color schemes and compare them at a distance. To be realistic, the picture should be cut out and held up against the sky or other relevant backgrounds (like distant hillsides). Different schemes should be compared simultaneously, since our memories are so subjective.
Next month I will discuss contrast and color in detail and present the results of an experiment.

BEGINNER'S CORNER

by Dave Darling

FROM: Modesto R/C - July, 1994

We are fortunate enough to have a lot of new members in the Modesto R/C club, and many of these people don't have a lot of experience in selecting or building their first sailplane. The choices are not as easy any more, since Airtronics discontinued the Oly 650 and Oly II. If you can find one (there are still a few around) or an Airtronics "Eclipse" electric power plane, by all means, buy one and trace the parts before you build it! However, if you can't find one of the above mentioned plane kits, all is not lost. The Goldberg "Gentle Lady, the Dynaflite "Wanderer" or "Pussycat, or the Global "Easy Answer" are all potential choices. Of these four, I would recommend either the Pussycat or the Easy Answer. Why, you ask? Simple. These latter two have much stronger wing spar assemblies than the other two. This means the latter ones will be able to withstand a stronger launch or a harder landing than the first two. The Easy Answer is a little nicer kit, but the Pussycat has the advantage of having hardwood dowels as leading edges to the wing. I have built several of these, and have hit goal posts with the wing and suffered no damage! A common link of most two meter sailplanes (so called because their wing span is about two meters, or 78 inches) is the one piece wing. This is more difficult to store and transport, but is more rigid and less likely to develop warps, **IF BUILT AND STORED PROPERLY!** The weak point on these wings, having a flat center section and dihedral (upswept) tips, is in the center section. The Easy Answer is a small version of one of my favorite planes of all time, the Mirage. Unfortunately, I folded three of them on tow in contests. I could have lessened the chance of doing this by doing what I have done since. It is as follows: All of these planes come with two spruce spars in the center of the wing, one top and one bottom. Find this wood and look at the spar material. If the grain is nice and straight, it's all right. If it's wavy and goes off the edge, go to the hobby shop and replace it with some spruce spars that do have clear, straight grains. While there, pick up a roll of carbon fiber. It costs about five or eight bucks, and is in rolls of about 110-115 feet. It is black, about 1/8 inch wide, very thin, and looks like long frayed hair. I got mine from Model Research Laboratories, 24692 Nympha, Mission Viejo, CA 92691. You don't need the iron-on stuff, it costs too much and this works better. Also get some slow CA or fast epoxy. I think CA works better here. Get out your building board, you know, that nice, flat folding door stock that you glued a sheet of nice, soft Celotex to, so that you could stick pins into it easily. Put down a big piece of wax paper on it and then the spars. Get out some rubbing alcohol and a paper towel or Kleenex, wet it with the alcohol and wipe off the carbon fiber with it. That removes all oils from handling it, so it will adhere well. Get out a couple of push pins, poke one through the carbon fiber, then run it down the spar, on top of it, and push the other push pin through it at the other end. So, as you look at it, the carbon fiber is lying flat on top of the spar. If it's twisted, untwist it, using a baggie over your fingers. We don't want to get oil on it again, do we? Then, **CAREFULLY**, run the slow CA down the carbon fiber and the spar. Start a little before the spar on the carbon fiber and go a little past, an eighth inch is plenty. Put the baggie on your finger and rub it down the carbon fiber on the spar, moving right along. If you elect to use epoxy, you must set everything up, then remove the spar, carefully mix the epoxy and run a thin trail of it down the spar, then rub it in with the baggie-covered finger. That is why I prefer slow CA for this. **DON'T USE ANY KICKER WITH THIS!** the heat generated will damage the carbon fiber! Then, repeat this procedure with the other spar. I place the carbon fiber sides on the inside. I know, on the outside is stronger, but I have never had a spar failure using this method. Install shear webs that fit **GOOD** and **TIGHT** through the center section and a bay or two beyond the tip dihedral brace. Always install the webs with the grain vertical, not along the wing. What the webs do is to tie the spars together structurally. You can also use this method with the solid one-piece spar on the Gentle Lady or the Wanderer, just glue them to the top and bottom of the spar.

Now, if you are with me up to this point, you can go ahead and finish your wing, sanding it a lot when finished and ready to cover. Sand it very smooth, and wipe it with a tack rag, a sticky cloth available at hardware or paint stores, but be very careful, because an uncovered wing is very fragile!

The fuselage, or body of the plane, looks simple to you, right, because it's just a box, right? **WRONG!** it is not simple, and these low cost kits make it even more difficult, because most require a splice along the sides to join the two pieces of balsa, or light plywood, or whatever they use. To do it properly, get out the side view plans of the fuselage, put wax paper over it, and lay the two pieces of the fuselage on it. If they don't quite line up, (and they didn't on either Pussycat that I built) **CAREFULLY** sand it to fit. You want a tight fit with NO gaps at the joint. When satisfied, put pins around the edges, or, better still, put heavy weights on both parts so that the alignment won't slip. and glue it together. I usually use CA here, as I'm in a hurry to get beyond this point. If the fit isn't good, or the wood is crunched there, rub in a little baking soda when applying the CA. Epoxy, if you use it, will fill the voids. If you use epoxy, before it hardens, scrape off any excess, so that the joint is flush. If they say to install a doubler over the splice, **DON'T DO IT NOW**...wait a minute. If you have a bump there, lightly sand it off. Now, if you have removed the completed fuselage side from the board, put it back over the plans, put a small piece of waxed paper on top of the splice area, and build the other side **EXACTLY** on top of the first side. This will reduce your chance of putting a twist into the fuselage. Now, you have two straight sides that are identical to each other. Before adding the splice doubler, get out the carbon fiber tape again, and run a strip down the full length of the inside of the fuselage, just like you did to the wings. Put it about

mid-way between the top and bottom of the wood. If you want to be extra strong, run a second strip from the nose to about one to two inches behind the wing mount saddle. You will not believe how much you have just added to the durability of your plane by making these simple modifications. Finally, look at the plans and make sure that your servos will fit in the plane. If the fuselage is too narrow, make some wider ones out of light plywood, or two layers of balsa sheet glued cross-grain to each other. The nose of the Pussycat is too narrow for a standard battery pack or standard servos, so you will have to do this for that kit. Also, make a new nose block that is wider out of soft scrap pine. It is easy to sand and very strong. Once you have the ribs made to suit you and the plane, take an accurate ruler and draw a line down the center of each one, and the nose block. Now, when you start to glue the sides together, use a steel or aluminum yard stick(not wood) to sight down the fuselage from the tail tip to the nose block. If all the lines line up, your fuselage should be straight. Some of you will choose to use nylon bolts to hold your wings on, instead of dowels and rubber bands. If you do, be sure to use reinforcements of thin plywood where you drill the holes through the wing, and **DON'T CUT INTO THE SPAR!** Putting thin fiberglass cloth around the wing center section will make it stronger, and you can attach it with epoxy or CA, but I always make a mess doing this. If you do go to nylon bolts, two are much better than one to hold it secure. Don't use metal bolts, a nylon one may shear on impact, but a steel one will guarantee you a difficult wing rebuild. Rubber bands are best for beginners. they don't cost much and will pop off in a crash, **SO LONG AS YOU DON'T CROSS THEM!** If you run the rubber bands from the front dowel to the back dowel on each side, and the ends of your dowels are nicely sanded and rounded, then if you catch a tip while landing, the rubber bands will pop off and your wing won't be damaged (as much). However, if you do this, but cross the last two, your wing will not be able to pop off, and you will probably break a tip panel So, unless you like to splice spars and recover wings, do it my way. The rudder and stab are pretty easy to build, except for a couple of pointers.

First, if the hinge line on the rudder is not a straight vertical line, but has an offset, or counterbalance, redesign the fin so that there is no counterbalance. The longer non-moving portion of the fin will be stronger than a shorter one with more moving area attached to it, and counterbalancing it increases servo load. If you feel that that reduces your moving rudder area too much (it doesn't), add a little to the height of the rudder, or maybe a half inch to the trailing edge of the rudder. That will be plenty! Finally, you are almost ready to cover the tail surfaces. Instead of cutting a slot in the rudder pieces and the elevator pieces, then covering them and sticking them together with hinges, forget that nonsense and before covering, simply sand a 45° bevel on the surfaces where they meet. Then, after you cover them, either use a scrap of covering material ironed down both sides of the joint, or some of the Scotch brand clear tape that comes in a red and black plaid box. The tape is easier, especially if you leave a slight (1/16") gap between the two surfaces. If you choose to use your covering material, increase the gap to 1/8" to compensate for the shrinkage of the covering. Dave Layne uses this tape for flap and aileron hinges on his Saturn airplanes, and I used it on mine with no problems. And, if you need to make repairs, the tape will peel off easier.

RADIOS FOR THE BEGINNER

by Dave Darling

FROM: Modesto R/C - July, 1994

I have been asked by a lot of newcomers to the hobby about what kind of radio to buy. I believe that all of the new FM radios: whether they are made by Airtronics, Hitec, Futaba or JR, are all a good first choice. I would not recommend buying an AM radio. As I wrote this, I received a note from George Steiner, the AMA District X Frequency Coordinator, who just came back from the 1994 AMA Nats in Lubbock, Texas. He reported that nearly all of the Futaba "Attack" series AM radios experienced major problems atthe soaring portion of the contest. I would avoid the Cox and Futaba AM radios, not because they would necessarily give you problems at our flying site, but in case you decided to go to a larger contest out of town when your skills increase. A basic four channel radio with three servos will last you a long time. Extra servos (if you need them) are cheap in the standard size. Don't buy a PCM (so-called "failsafe") radio. If you have interference with a PCM radio, it will only give you an extra couple of seconds before you crash, and replacement receivers are much more expensive. A basic four channel radio will see you through at least your first year with a minimum investment. Don't buy used gear unless you have to. If it's a good unit, it will cost almost as much as a new one. If it's bad, it will cost you a lot of planes or spare parts, like new batteries, servos or receivers. Some guys say "Well, Dave, that's OK for the guy who really doesn't know if he wants to keep this as a sport/hobby, but I know that I do. How about getting a programmable radio, and not having to upgrade?" Well, there are three things against buying a programmable radio for your first one. First, they are a lot more difficult to set up in a simple, rudder-elevator ship than a basic radio, The extra programming capability won't do you any good, and might cause a crash if you are on the wrong program, or flip the wrong switch. Second, when you crash, and if you are a beginner, you **WILL** crash, replacement parts, especially receivers, will cost a LOT more! And finally, in the year or so that you will be flying your first, second and maybe third planes, a lot of new technology and design will hit the market. For example, the new JR 622, the least expensive programmable radio, is taking the market by storm because of its features and low price, and demand has far outstripped supply for the time being. This message won't be lost on Futaba and Airtronics, and they will be coming out with competitive units at lower prices. So, you have decided to ignore my advice and buy a computer radio. Which one do I recommend? I'd have to go with the JR 622. It is the lowest priced unit currently available, and has much better transmitter battery life than the Airtronics radios.

Maximum Lift to Drag vs. Minimum Sink For The Everyday Pilot

Steven Stricklett

I started flying sail planes about a year and a half ago. I was probably like most of you. I got a simple floater, put it together and went to the park and started throwing it around. It was awhile before I knew there were local clubs and other pilots around who would help you learn how to fly. During that time, I'm sure I made just about every mistake a new pilot can make. I know I hit just about every land based object there was to hit.

The good news is that I made it through that period and I now have a reasonably good chance of bringing the plane safely to the ground when I launch. Most of the time, anyway, as long as there aren't any trees near the landing pattern.

I read a lot of articles when I first started flying and they helped a lot to know what I was supposed to be doing. However, there was one concept that I just couldn't understand for the longest time. That was the difference between Maximum Lift to Drag Ratio and Minimum Sink.

I thought for the longest time that they had to be the same thing. Surely if your plane is flying at its most efficient speed (maximum lift to drag) it had to be coming down at its slowest rate (minimum sink). I was convinced that all these sail plane guys had foam for brains and had been sniffing too much epoxy and staring directly into the sun for a bit too long. They obviously didn't know what they were talking about.

Most of the articles I was reading about flying referenced one or the other of these terms relative to some particular flying task the author was talking about, so I knew the understanding of these terms must be important to the sport. I finally swallowed humble pie and started asking some of the old hands at the field what the difference was. Guess what, I didn't understand a thing they said. None of it made any sense. I was convinced now more than ever that indeed they did all have foam for brains.

Well, to my advantage, I finally came to understand not only the difference between the two terms, but the benefits of both. I must admit that this understanding was a major factor to improving my flying. Maybe the foam in these guys brains wasn't so soft after all.

I am not an aerodynamisist. This is good because I think I can put these two concepts into terms that the everyday flyer like myself can understand and relate to.

Definitions for the layman are now in order. **Maximum lift to drag** refers to the speed at which your plane should fly for the wing to produce the highest ratio of lift to drag. Said differently, this is the speed where your plane's glide ratio is the greatest. Simply said, the plane will travel the farthest before it hits the ground.

Minimum sink on the other hand refers to the speed at which your plane should fly to drop out of the sky at the slowest rate. Said differently, this is the speed where your plane's rate of descent is the slowest. Simply said, the plane will stay in the air the longest before it hits the ground.

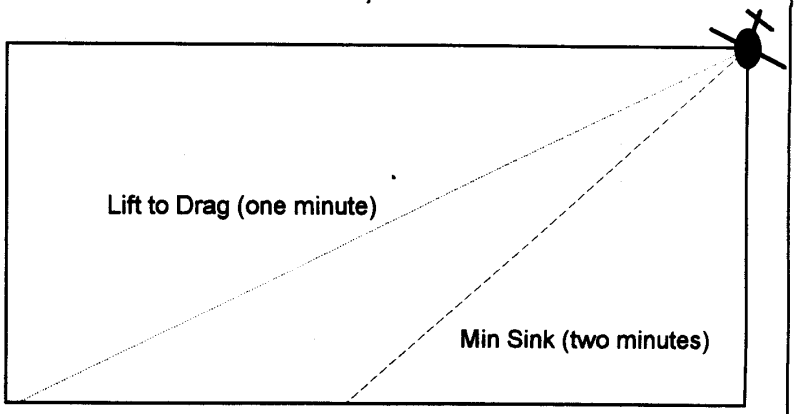
Did you catch the difference? It's subtle, but it's there, and oh so important. Here it is. They don't measure the same thing. One has to do with the distance your plane will travel. The other has to do with the length of time your plane will fly. That's it. That's the difference. One deals with time and one deals with distance. Go ahead and go back and reread those definitions again. I'll wait for you.

Maximum lift to drag refers to the speed at which your plane will cover the most distance, not necessarily stay in the air the longest. Minimum sink refers to the speed at which your plane will stay in the air the longest, not necessarily cover the most ground.

Let's take a hypothetical situation for an illustration. In the drawing below the relationships between the times and distances are not necessarily correct, these numbers are merely used to illustrate the point. If the plane flys at Maximum lift to drag speed it will cover one hundred yards in one minute. If the plane flys at Minimum sink speed it will cover fifty yards, but it will take longer to do it, in this case two minutes.

What's the practical side of this? Let's keep it simple, since this is for everyday pilots like me. The speed of the airplane at Maximum lift to drag is faster than the speed at Minimum sink. This means you have to fly at a faster speed if you want to get somewhere quickly. This could be

(Continued on page 8)



The Fledgling

Tom Dean

THE FIRST THERMAL CONTEST

Thermal contests are different things to different people. Some regard them as highly competitive, intense tests of skill, where the final score is of major importance. At the other end of the spectrum are those who regard them as a social gathering where the outcome of the scores is rather incidental. Most people are grouped somewhere in the middle. I have yet to see a major loss of temper. Good solid fun is the norm. As a newcomer, expect to receive a warm welcome, with lots of offers of help and advice from the other contestants.

The Gulls offer 4 different levels of competition, Novice, Sportsman, Advanced and Expert. Expect to compete as a novice in your first contest. You will be competing against others with your basic skill level. Generally the tasks will be somewhat simplified from the other levels.

ENTERING:

Plan to arrive at the contest site at least one hour early, Allow yourself plenty of time to set up your plane and possibly help with the winch & retriever setup. You will need to check in when the CD (Contest Director) calls for sign-ups. You will need to sign a couple of forms, indicate your frequency, show your AMA card, & pay your entry fee. (Your first contest is free). You will also fill out your contestant card for your appropriate skill level, and plane class.

THE TASKS:

The tasks are determined by the whims of the CD, (There's a different one each contest). In general there are usually four different flights (rounds.) required per contest. They are predetermined to be of a specific time duration. You will lose points for every second early or late that you touch down from the target time, In addition, you will be attempting to land either within a target area, or as close to a runway centerline as possible, Points are lost for every inch away from the target center, or the runway centerline measured to the nose of the aircraft. Expert pilots are disappointed if they miss the flight time by more than a second or so, and the spot landing by more than 3 or 4 inches.

THE PILOTS' MEETING:

The CD will call for a pilots' meeting prior to the beginning of the contest, He will go over all of the field rules, boundaries, contest tasks, etc. and he will answer any questions. If you don't understand something, ask him or another pilot. The CD will announce at what time the first, and subsequent rounds will open and close. You may fly at any time within the round time frame.

PRE~FLIGHT:

Walk around the launch area and landing area. Get familiar with the surrounding terrain. You should have an experienced pilot time for you. Get your contestant card from the CD table. (Help yourself). Get your frequency pin from the board. YOU MUST HAVE YOUR FREQUENCY PIN CLIPPED ON YOUR TRANSMITTER BEFORE YOU TURN IT ON. Re-check your plane's flight controls and trim settings. Discuss with your timer your flight plan and how you want him to advise you of your time. (More about this next month). Find out from experienced pilots which winch is best suited to launch your type of plane. (Winches vary in power.)

THE FLIGHT:

It is an excellent idea to have an experienced pilot launch your plane for you. You work the transmitter, he throws and operates the winch. Do it this way until feel comfortable with handling your plane during launch. Gradually work up to the point where he throws it and you operate the winch, then you can solo launch. Expect many launches before you are ready to go it alone.

I won't attempt to discuss strategy here. There are books written on the subject. Just watch what the big guys do, and learn from your mistakes. Fly safely, concentrate, and listen to your timer. He should keep you advised of other planes in your area, where lift may be, and offer any suggestions that might help your flight.

POST-FLIGHT:

After landing and taking the proper measurements, pick up your plane, and immediately move out of the landing area. See that your timer correctly fills out your contestant card and that he turns it in to the CD. Upon returning to the pits, re-check your flight surface controls and trims. Turn off your receiver and transmitter, and return the frequency pin the board. Discuss with your timer how the launch and flight went. Plan how to correct any problems that were encountered. Start breathing normally again. Check your plane for any damage that may have occurred during launch or landing and fix it. Discuss your next flight with your timer and with other pilots, Watch the other planes. See where the prevailing lift or sink is occurring. Relax and think about your next flight. To kill time, offer to help where needed.

AWARDS:

Accept your blue ribbon with grace and humility. Help put stuff away.

NEXT MONTH; CONTEST TIMING

(Continued from page 7)

getting to some lift that's out away from the field, or getting back to the field when you are at a dangerously low altitude, or just getting around the sky when you want to go for a fun fly. This also means you have to fly at a slower speed if you want to float out those early morning flights when the lift isn't strong yet, or make your time in a contest when your out of lift and need some extra seconds, or your in a thermal and you don't want to go anywhere.

The speed for Maximum lift to drag is different for each airfoil, as is the speed for Minimum sink, so you will have to experiment with your plane and try different settings. Personally I am now flying my plane faster than I did before I understood the difference in these two terms.

The Fledgling - Contest Timing

Tom Dean

CONTEST TIMING

Thermal contests are team efforts. The team consists of a pilot and his timer. You may be timed by anyone, and you may time for anyone. You can change timers during the contest if you wish. Sometimes during the course of a contest your favorite timer may be unable to time for you because be must fix his plane or is busy with other matters. Likewise you may be asked to time for someone for the first time. No problem, as long as you are prepared.

PREPARATION

It is a very good idea to come the contest with your own stopwatch, There are many types of stop watches available, The old standby analog (big hand, little hand) type, and a variety of digital watches with lots of features such as count up, count down, alarms, etc. Some wrist watches feature stop watch settings, but the buttons are really small as are the displays. It is very important that you are completely familiar with the operation of your watch and its' features. If you get confused or accidentally switch off the watch or otherwise screw up the timing, the pilot that you are timing for is authorized to kill you.

Spend some time at home practicing with the watch. If you are using the type that counts up only, (that is it starts at 0 and goes up) you will especially want to practice counting down. Most pilots prefer the time remaining to be called out. You must he able, in an instant, to convert the elapsed time, to time remaining. It sounds hard, but it just takes practice. If you have the type of watch that counts down you will still need to do some mental calisthenics when you have preset the watch for a seven minute flight, and your pilot decides he can only make a five minute flight. You will have to subtract the appropriate time from what the watch says.

PREFLIGHT RESPONSIBILITIES

As Timer you are responsible for making sure that you understand the task that the pilot has. What duration he is attempting, and the type of landing that must be made. You should understand how he wants the landing tape preset for a circle landing. Some pilots want the 0 end of the tape at their feet, some want it away from them, and some want it to one side or the other. Discuss with him how he wants the time called out. Most pilots prefer 1 minute updates until 3 minutes remain in the flight. Then 15 second updates until 2 minutes remain. 10 second updates until I minute to go, 5 second updates until 30 seconds remain, then count down every second until landing, Some pilots want you to stop talking with 10 seconds to go so that they can concentrate on their landing.

LAUNCHING RESPONSIBILITIES

Verify that the pilot has his frequency clip, and his score card. After you and the pilot have planned the flight by watching other planes or birds to determine where there may be lift, go to the next available winch. Check with the winch master to verify that the winch is ready and ask him what condition the battery is in. Will it give a killer or mushy launch. Retrieve the winch line and hook it to the plane. Ask the pilot to wiggle the controls to verify that all control surfaces move properly. Visually verify that the control surfaces are in the proper orientation. Make sure that no planes are in, or approaching the launch corridor, verify that the winch and retriever lines are clear. Make sure no on else is launching, give the pilot the all clear. The pilot should ask the retriever operator if he is ready, he should ask you if you are ready, (check your watch for the proper setting) announce "timer ready." Pilot says "LAUNCHING". We're off.

Start the watch the instant that the plane comes off of the winch. Advise the pilot "you're on the clock", Assist the pilot in walking at his own pace away from the launch area and to the landing area, Don't rush him. Let him get comfortable with the control of his plane. Watch the ground for holes or rocks or wingtips, land lead him safely through them.

During the whole flight your eyes should be very busy. Watch for obvious lift, such as other planes or birds circling. Keep him advised of the time remaining, Stand behind the pilot, Don't babble or talk to other people. He needs to concentrate, and he needs your input. If the plane is getting very high, it is very important that you keep your eyes steadily focused on it. (If he is that high he is not looking for more lift). It is not unheard of for a pilot to loose sight of his plane. If you can still see it you should he able to help him regain control.

During his landing approach watch for other planes that might also be landing. Advise others in the landing area that you are coming in for your landing. Make sure that everyone is clear of your landing zone. Stop the watch the instant any part of the plane hits anything on the ground. This includes tree tops or weeds outside of the landing area. After the plane has come to a rest take the appropriate measurement and enter the flight time and landing measurement on the pilots score card.

POST FLIGHT

Verify that all entries on the card are correct, and turn it in to the scoring table. Talk over the flight with the pilot, find out if any changes should be made in the timing or strategy for the next flight. Assume full credit when he receives his blue ribbon.

NEXT MONTH: CONTEST STRATEGY

THOUSAND OAKS SOARING SOCIETY

MONTHLY CONTEST RESULTS

08/14/94 **OPEN CLASS STANDINGS** HIGH SCORE = 2985.4

pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	DON NORTHERN	TOSS	6242	703	914	994	840	973	961	0	857
2	EDGAR WEISMAN	TOSS	5404	702	611	982	1000	825	292	0	992
3	MIKE REAGAN	TOSS	4987	1000	0	998	0	1000	989	0	1000
4	BOB SWET	TOSS	4883	901	602	978	728	0	785	0	889
5	ART McNAMEE	TOSS	4397	716	0	0	902	968	967	0	844
6	DANE VANNETT	TOSS	4342	610	801	955	980	996	0	0	0
7	DON McNAMEE	TOSS	4083	638	0	568	0	977	904	0	996
8	BILL KARP	TOSS	3283	653	0	919	878	833	0	0	0
9	LARRY JIMENEZ	TOSS	3050	632	0	948	0	725	217	0	528
10	PAUL TRIST	TOSS	2988	988	1000	0	0	0	1000	0	0
11	B.J. WEISMAN	TOSS	2739	739	0	1000	0	1000	0	0	0
12	MIKE LEAL	TOSS	1819	0	0	0	919	900	0	0	0
13	MIKE RATNER	PSS	1774	896	878	0	0	0	0	0	0
14	BEN MATSUMOTO	PSS	1433	464	969	0	0	0	0	0	0
15	GREG JOHNS	PSS	866	0	866	0	0	0	0	0	0
16	HANK SCHORZ	SCSA	839	0	0	0	0	0	0	0	839
17	J. RODGERS	PSS	799	799	0	0	0	0	0	0	0
18	LOWELL NORENBERG	SFVS	764	0	0	0	0	0	0	0	764
19	ED DEVLIN	PSS	656	656	0	0	0	0	0	0	0
20	GREG NIKOLA	SCSA	633	0	0	0	0	0	0	0	633
21	FRANK LEPPLA	PSS	615	615	0	0	0	0	0	0	0
22	PHILIP HALLFORD	PSS	610	0	610	0	0	0	0	0	0
23	MYLES MORAN	TOSS	350	0	0	0	0	0	0	0	350

08/14/94 **2 METER CLASS STANDINGS** HIGH SCORE = 2786.1

pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	EDGAR WEISMAN	TOSS	5450	683	0	963	1000	907	897	0	1000
2	DON McNAMEE	TOSS	4927	1000	0	976	0	980	991	0	980
3	MIKE REAGAN	TOSS	3705	722	0	987	0	996	1000	0	0
4	B.J. WEISMAN	TOSS	2855	870	0	1000	0	985	0	0	0
5	ART McNAMEE	TOSS	2798	0	0	0	911	1000	0	0	887
6	LARRY JIMENEZ	TOSS	1571	0	889	0	682	0	0	0	0
7	PHILIP HALLFORD	PSS	1000	0	1000	0	0	0	0	0	0
8	GREG JOHNS	PSS	985	0	985	0	0	0	0	0	0
9	ED DEVLIN	PSS	893	893	0	0	0	0	0	0	0
10	JONATHAN SPOER	TOSS	813	0	0	813	0	0	0	0	0
11	PAUL TRIST	TOSS	547	547	0	0	0	0	0	0	0

08/14/94 **SPORT CLASS STANDINGS** HIGH SCORE = 2958.2

pos	NAME	CLUB	TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	DON NORTHERN	TOSS	6809	997	991	1000	938	1000	883	0	1000
2	LARRY JIMENEZ	TOSS	6286	910	1000	946	996	655	1000	0	779
3	BOB SWET	TOSS	4843	648	687	987	1000	0	851	0	670
4	PAUL TRIST	TOSS	2621	1000	723	0	0	0	898	0	0
5	SONNY KIM	TOSS	1619	648	283	0	0	0	688	0	0
6	JONATHAN SPOER	TOSS	990	0	0	990	0	0	0	0	0
7	MIKE LEAL	TOSS	985	0	0	0	0	985	0	0	0
8	MIKE REAGAN	TOSS	985	985	0	0	0	0	0	0	0
9	BILL KARP	TOSS	866	0	0	0	0	866	0	0	0
10	WYATT SADLER	AV	328	0	0	0	0	0	0	0	328