

THE VINTAGE SAILPLANE ASSOCIATION

VSA is a very dedicated group of soaring enthusiasts who are keeping our gliding history and heritage alive by building, restoring and flying military and civilian gliders from the past, some more than fifty years old. Several vintage glider meets are held each year. Members include modellers, pilot veterans, aviation historians and other aviation enthusiasts from all continents of the world. VSA publishes the quarterly magazine BUNGEY CORD. Sample issue \$ 1.-. Membership \$ 10.- per year.

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Vol. 4 No. 11

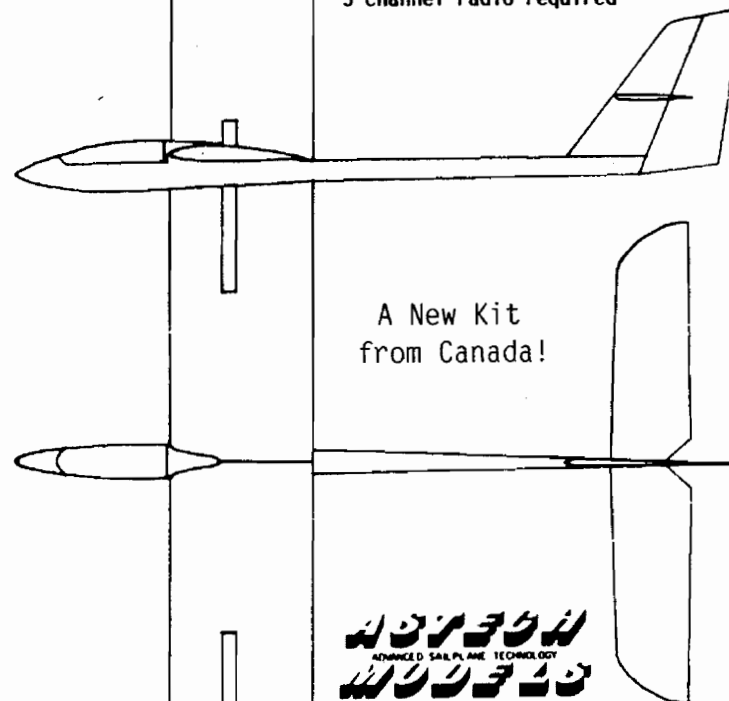
NOVEMBER 1987

MISTRAL

Specs.

Airfoil	Eppler-392
Wingspan	120 inches
Wing Area	1,105 sq. in.
Aspect Ratio	13:1
Empty Weight	56 oz.
Empty Wing Loading	7.3 ounce per sq. ft.

3 channel radio required



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HI START

This will be the first issue put together in Payson, Arizona. By that I mean, edited and typed. However, as always, our Graphics Manager, Bob Rondeau, continues to serve RCSD. We have decided to continue to have the magazine printed in New England, as well, because we have not been able to find a local printer capable or willing to do it at a competitive price. Believe it or not, we can have the printed copy sent here by UPS and still be cheaper than a local printer! Because of the distance and time involved shuttling things back and forth across the USA, your monthly copy will now arrive later in the month by about one week than you have come to expect. I apologize for this slight inconvenience, but it will be to your advantage in maintaining editorial consistency.

Since coming out here, I have met with members of the Central Arizona Soaring League at their new soaring site on the campus of Scottsdale Community College in Scottsdale, Arizona -- almost contiguous with Phoenix. It is a beautiful site, and one Sunday two weeks ago we had a grand soaring day. I was able to fly the 2M Algebra for about 15 minutes (whereas Don Sciegal, CASL President put in a forty-minute flight). Conditions here are what one might expect of a hot, dry desert-like climate. Suffice to say that there is year-round soaring here.

Bob Boomer, western distributor for Multiplex, is located here and trotted out some of the newest "goodies" from that German firm for "show and tell". I might add that some of the sailplanes and radios are really something! I'll tell you more in the next few issues.

Club member Ernie Pritchard was conducting aero tows - "piggy-back" fashion, using a weed-engine powered monoplane of his own design. I had the privilege of "taking a launch" by this interesting and easy method, and found it to be the best launch I've ever made. Basically, the monoplane has a pylon saddle mounted above the wing center section about 6 inches or so. The pylon is doubled so that the fuselage of the sailplane fits between the sides, and the wings of the sailplane rest on foam-cushioned saddles. One or more strong, heavy-duty rubber bands pass over the wings of your sailplane and are retained by release hooks attached to a servo. The towplane pilot releases them at altitude. Take-off takes about 30 feet; there is no strain on the glider wings; you get to 500 or 1,000 feet very quickly and are released at the point you specify. Fast, neat, easy and safe. The towplane dives (or spins/spirals) quickly down and returns to the launch site for another tow.

I'll tell you more about the people, the sailplanes and the conditions here in the next issue. Meanwhile, keep in touch and keep those interesting reports and pictures coming in. We can't do without 'em -- or without YOU,

Happy soaring,



JIM

NAT'S SCALE REPORT.....JEFF TROY

Jeff was kind enough to submit this report about the SCALE Nat's at my request. The pix are also Jeff's, and I want to thank him for his work. Incidentally, there has been a great deal of input about what changes are to be made for future Nat's in the scale judging portion -- both flight and static judging. I will have the proposed new rules in the next issue. (JHG).

I WOULD LIKE TO INFORM THE RCSD READERS THAT TOM KOZEL RECEIVED THE CARL GOLDBERG VITAL PEOPLE AWARD AT THE NATS THIS YEAR, AND WAS PRESENTED THIS AWARD TO A STANDING OVATION BY JOHN WORTH, AMA PRESIDENT. (JHG)



Jim Thomas reaches flying speed while still holding on to his Minimoa. (Finished 3rd.)

To say that Lincoln, Nebraska was windy would be the understatement of the year. The winds blew at something like thirty piles per hour during the scale portion of the '87 NATS Soaring Events. This little piece will concern itself with ten very brave and determined fliers who flew their frail craft in conditions something less than ideal.

Fran Olix did a great job of running the events for soaring this year. He had a total of 309 entries to handle, and did so very well. The crew is professionally "tried and true" as this is their third year at proving how well they know their stuff. Calls were fair and consistent and no halo factor decisions were made, at all. Great job!

For the scale sailplane event, Fran traded places with Tom Kozel, who took on the job of Event Director. Tom ran scale sailplane by the book, yet gave the contestants every break he could until the time came to fly. At that point, Mr. nice guy had to disappear and a "tough" CD had to take his place. The rule book says that 40 mph winds give you the criteria to call a pilots meeting to take a vote on flying the event. No matter how you look at it, 30 is not yet 40 and Tom had no choice but to go ahead with the contest. It was a bit difficult for Tom to have to explain that to the entrants, but we're talking NATS, and not a local fun-fly. The rules are the rules and

a National Scale Sailplane Champion would have to be found. I would hesitate to term this call as a "decision". According to the rules, Tom Kozel had no decision to make. Only a job to do and a call to the flight line to make. My compliments to him for doing the job correctly, even if the contestants were somewhat puzzled.



Scott Dukes' 1937 Reiher took 1st place in Sport Scale. Static judging and 30 MPH winds made for a tough competition.

Let's back up a bit. Around 11:30 am on the third day of soaring competition, the T-1/L-3 was just finishing off the fifth of eight rounds of flying and the staging area was being set for RC Sport Scale Sailplane. There were ten scale gliders right in the center of the ready box and plenty of opportunity for the other contestants to goggle over them. It made for a very nice atmosphere.

In a thirty mile per hour wind, a blow by blow account of the flying would be dissappointing, at the least. I'll just say that all ten pilots did a very respectable job under the conditions, and that only two gliders suffered minor damage during the event. In both cases pilot error, rather than wind, seemed to be the contributing factor in the mishaps. The wind didn't help, but neither was it the direct cause.

Never before have I hoped for a pilot to miss a landing, but during Ed Whyte's first flight, I did. During his final approach, the wind had blown Ed's Schweitzer crosswind of the circle. I knew Ed wanted (and needed) that landing score, but I was very happy to see him use good judgement and just land straight ahead safely. Turning at his attitude and airspeed in that wind for a paltry twenty points would surely have cost him many hours on the workbench as well as a missed second round of flying. In addition, the chances of landing upright from such a maneuver would have been nil, with no award of landing

points, anyway. Bottom line--My sincerest compliments on your judgement, Ed!

Well, the flying went on in spite of weather, and it was quite a show. Very surprisingly, the vintage subjects were performing right along with the glass slippers. Maxes were not common, but they were available if the pilot was good and the timing was right. The real contest was in the static judging which had been done three days previously.



Ed Whyte's Schweitzer TG-3 finished 4th overall, Finish is white with red and blue trim.

The static portion of this event needs quite a bit of comment. For the first time that I am aware of, scale sailplanes were judged by the same teams of judges that did the other scale events at the NATS. These same judges had also judged for the FAI C/L and R/C team selection finals the previous week. Now, these are REAL judges who give REAL scores, and unfortunately for the sailplane crowd, Santa Claus was not a part of the judging panel! Perhaps R/C Sport Scale Sailplane has finally arrived at it's time to grow up. In scale, you can't present a comment like "all white with blue lettering" and expect to score a ten in color and markings. There are too many shades of each color for a good judge to comfortably live with scoring such a presentation too high. Proper documentation BY WHICH A JUDGE CAN JUDGE is the name of the game in scale. You must provide the judge with the ammunition to shoot at your subject. No 3-view, no outline points may be awarded. No proof of color and markings, no points for same may be awarded. It's all in the book and VERY easy to understand. Why isn't it read carefully enough? At the '87 NATS, in sailplane, scores were lower than most contestants were used to. Deviations from scale outline were downgraded, craftsmanship points for ARF type glass slippers were appropriately low, and so were color and marking scores. The judges made no exception in their award of points just because the models didn't have engines! Instead, these highly



qualified judges judged the sailplanes like any of the other models--carefully, critically, and CORRECTLY. We cannot lower the standard of judging to meet the level of the airplanes entered in an event. Instead, we must raise the level of our aircraft to meet the requirement of the event.....It's the truth!

The NATS Scale Soaring contestants and I had several lengthy conversations during the meet concerning the flying end of the task. At a later time, I will be presenting a rules proposal to restructure the entire set of flight requirements, as a result of those talks. In a later issue of RCSD I will submit to YOU, the soaring enthusiast, these new ideas. If I can get your opinions on them, it will give me a better feel for the eventual shape of the final proposal. Look for this later, in these pages.

As for scale soaring at the NATS--very nicely done. My compliments to contestants, crew, organizers, and judges, one and all. I'll have to hesitate on kudos to the weather. Thanks for the writing space and good flying to all of you.

Jeff Troy
August 5, 1987

ACADEMY OF MODEL AERONAUTICS
1987 NATIONALS
OFFICIAL SCORES

RC517	SPORT SCALE SAILPLANE			J50
1 1565	O Scott Dukes	1937 Reiher	Longmont,CO	175.700
2 10000	O David Elias	Kestral 19	Jupiter,FL	168.850
3 39511	O Jim Thomas	Minimoa	Holland,MI	159.670
4 82806	O Ed Whyte	Schweitzer TG-3	Wvoming,MI	158.190
5 87590	O Richard M Burnoski	Cobra 15	Bolingbrook,IL	147.520
6 30969	O Robert A Sliff	Slingsby T53-B	Midway city,CA	135.250
7 L14	O Robert Elliott	Glasflugel 604	Bedford,TX	134.040
8 411	O Donald Mulligan	ASW 17	Sierra Vista,AZ	124.020
9 6067	O D.O. Darnell	LS-1	Tulsa,OK	120.990
10 8772	O Robert W Cartwright	Slingsby T53-B	Little Rock,AR	77.780

LETTERS TO THE EDITOR.....JIM GRAY

MIKE REED 'S FLYING WING APPEARED ON THE COVER OF THE OCTOBER RCSD. In a follow-up letter, Mike sends a couple of more pictures showing some of his other (and different) efforts, saying:

"In our 'phone conversation I mentioned my MIRAGE whose modifications include: graphite reinforced wing spar; 13" Multiplex dive brakes; full glass covering on balsda fuselage; weight 3 pounds. After ten years, it's still a good contest ship! Get a load of those hand-cut numbers in the 'photo.!

"The other 'photo shows a combat glider I designed using the SELIG 4233 airfoil. It flies great and absolutely will not tip stall....the wing is foam, covered with Flight - Coat. Very strong, too.

"I am now the president of the LA Sierra Slope Soarers, and it doesn't seem to give me any time to designs sailplanes as much as I'd like...but in the future I will have the following gliders completed:

SCHLEICHER Ka-8B 120" span
(almost completed)

BRAUNSCHWEIG SB-10 133" span
(half built)

SCHREDER HP-14T 150" span
(3-views)

LAISTER LP-49 (3-views)

BRIEGLEB BG-12 (3-views)

"Thanks for a great mag...till next time (signed) Mike Reed."

Editor's comments:

Holy cats, Mike! How do you manage to build even one of these, considering your schedule?

I plan to do another scale issue next year, so will be happy to receive pix and other details from you. The BG-12 has not been done frequently, nor have some of the others you mentioned. For one, I'd like to see 'em! (JHG).





MORE LETTERS.....Jim Gray

E.G. Currington of the Montreal Area Thermal Soarers Club sent in a couple of neat things for us to consider this month. The first has to do with increased sink speed in turns caused by increased wing loading of your glider. The second is a picture and brief comment about his very practical and "cheap" field boxes. (Cheap, that is, if you don't have to buy and drink the contents first...JHG).



Heeeeerrr'es Ernie...

"These are boxes I use to schlepp my stuff around the field. The top flaps are contact-cemented down inside 8 convenient slots cut for the wings and fuselage. A piece of cord makes the handle. Between these two boxes, I can carry:

- 2 airplanes (or gliders, or sailplanes)
- 2 transmitters
- 1 tool box
- 1 thermos bottle
- 1 camera
- landing tapes
- paperwork

It also makes loading and unloading the car much easier. By the way, I'm working on a simple minimum size of wing rods, and will send it off when complete."

Here's my Increased Sink Speed in Turning Flight as published in the Montreal Area Thermal Soarer newsletter issue of September 1987.

Increased Sink Speed in Turning Flight.

When an airplane enters a steady state turn it has to generate additional lift in order to counterbalance the centrifugal force generated. This then brings about increased sink speed. Typical (optimistic) values for the % increase in sink speed with turn radius (ft) and wing loading (oz/ft²) are:

Radius - Ft	100	200	300
Wing loading - 6 oz/Ft ²	4.4	2.3	1.6
10 oz/Ft ²	7.0	3.6	2.9
14 oz/Ft ²	10.0	5.0	3.6

Note that the above are optimistic in that they assume a steady-state, circular path turn with no control deflection.

We do not have these conditions in the real world, airplanes invariably "crab" (and so do editors) especially Rudder/elevator types. This significantly affects the drags of all components. Aileron ships are also affected as the control deflection changes the span-wise load distribution and hence the induced drag (50% of the total drag at max L/D).

I would suggest that the "real" values are twice those given in the table.

The moral here is not to turn tightly and never turn if the airplane is in sink - just straighten up and fly right.

More on New Frequencies by Benard K. Simpier (from Thermal Topics Newsletter)

Many club Members have asked me about the old and new frequencies and what is required by the F.C.C and A.M.A. after December 1987 so I sent a letter to Airtronics and Futaba. The correspondence I received is as follows...

AIRTRONICS INC.

The AMA guidelines for narrow-band operation of 72-75 MHz R/C frequencies were recently published starting on page 95 of the September issue of Model aviation. All of our FM radio transmitters meet the guidelines -55 db at ± 20 KHz from center frequency and +/- .002 % frequency

"FREQUENCY" ASKED QUESTIONS

Recently, the office scenario has become quite familiar.

PHONE RINGS: Technical Director answers, "Hello, Bob Underwood here."

VOICE ON OTHER END: "This is John Smith. I'm a new club president and I have some questions about RC frequencies."

From that point on there are few variations in the dialogue. The following information represents the most frequently asked questions.

- Q. "Many of our members have perfectly good, older equipment and they don't see why they need to have the frequencies changed to new channel numbered frequencies. Do they have to?"
- A. Yes—they do. To continue to operate models on 72.080, 72.160, 72.240, 72.320, 72.400, 72.960, 75.640 MHz violates Federal law (FCC Regulations, Part 95, Subpart C). Beyond this, there are several reasons why it is important not to continue to operate on the so-called "old" frequencies beyond December 20, 1987.

1. The potential for interference is extremely high since the new channel numbered frequencies to be phased in are only 10 KHz away from the old ones. (Channel 14—72.070 is 10 KHz away from 72.080). Considering the fact that older equipment was designed and manufactured for an 80 KHz spacing, attempting to operate it only 10 KHz away from newer equipment can be dangerous.
2. The "old" frequencies are shared and are used by industry. This use has escalated in recent years, for pagers, mobile cranes, etc. This situation is bound to get worse.

- Q. "Aren't our new channel numbered frequencies shared with other users?"

- A. They are not! Since that question has constantly surfaced, a check was recently made of FCC permits for industrial operation. No permits have been issued on our specific frequencies. In some areas, you may find operation on frequencies only 10 KHz away, which is legal. If those stations are high powered and close to the flying site, it may make operation on one or more of the channel numbered frequencies difficult. That is the primary reason the FCC granted 80 frequencies for model use—so we can find a group without interference problems.

- Q. "You've gone and changed the flag identification system! Why did you do that since there was nothing wrong with the old two-color system?"

- A. The decision to change the system from the two-colored flags was based on several reasons.

1. As new frequencies are phased in beginning January 1988, we reach a point where the same two colors would represent two different frequencies. For example, the new channel 24 would be indicated by red and yellow, while channel 42, already in use, is yellow and red. Can you imagine the confusion in trying to remember the order, especially when we reach 1991 and many such pairs would exist?

In addition, the two-color system has not been foolproof due to vast color variations that have developed in the dyes and manufacturing process. This is compounded by what happens to colors when they have been exposed to sunlight for even brief periods. The vision dysfunction referred to as "color blindness" also has posed problems for a number of persons.

- Q. "Are we going to have to throw away all our old equipment?"

- A. This issue must be addressed on more of a single case basis. If it is very old, the manufacturer

tolerance. All of our older AM transmitters meet the FCC's current requirement of -35 db at +/- 20 KHz. For 1988, Channels 34 and below are reserved for narrow band transmitters only! The FCC withdraws all of the old frequencies as of 20 December 1987 which makes room for the phase-in of more even channels in the lower 72 MHz band, i.e. Channels 34 through 14. Any AM transmitter that is now on channel 12 that doesn't meet the -55 db at +/- 20 KHz guideline will have to have its frequency changed to an upper band channel, I.E., Channel 38 through 56. If an FM unit is on Channel 12, it can remain there, since it is a narrow band transmitter. We do not convert AM transmitters to narrow band units! Conversion of AM to FM is not really cost effective for older units, since the charge would be \$119.50.

The standard frequency conversion charge for AM units is \$25. plus shipping charges. The basic charge assumes that no other repairs need be accomplished to bring the unit up to factory standards. Older XL unit receivers will not work at 40 KHz channel spacing, therefore must be replaced with a double balanced mixer receiver. The total charge for the new receiver, conversion of the Transmitter and alignment is \$47.50 plus shipping. Most of the SR and Championship series units will be able to be converted to an upper band channel (38-56), for \$25. since they come with double balanced mixer receivers.

FUTABA CORPORATION OF AMERICA

Any of the Futaba units on the old frequencies can be converted to frequencies to meet the 1988 ruling. Below is a frequency chart which covers the charges for the conversion. The frequency chart is a listing of frequencies that Futaba currently has available for your R/C pleasure. The pricing on crystals is located below each frequency band. Labor per set (one TX and one RX) is \$8., this labor charge is for tuning your system. Please be advised that the pricing you are quoted in this letter does not include shipping, nor any additional repair work your system may need.

The Futaba Service Department sends all packages, that are under \$30. in cost, COD. If your cost is over 30., we will send you a statement with charges itemized. We also accept Mastercard & Visa. Please include your card number and expiration date for prompt processing.

<u>AIRCRAFT ONLY</u>	<u>CAR AND BOAT ONLY</u>	<u>CLASS 2 53MHZ and 50MHZ</u>
72.030 CH 12	75.430 CH 62	53.100 BLK/BRN
72.550 CH 38	75.470 CH 64	53.200 BLK/RED
72.590 CH 40	75.510 CH 66	53.300 BLK/ORG
72.630 CH 42	75.550 CH 68	53.400 BLK/YEL
72.670 CH 44	75.590 CH 70	53.500 BLK/GRN
72.710 CH 46	75.670 CH 74	53.600 BLK/BLU
72.750 CH 48	75.710 CH 76	53.700 BLK/PUR
72.790 CH 50	75.750 CH 78	53.800 BLK/GRA
72.830 CH 52	75.790 CH 80	
72.870 CH 54	75.830 CH 82	53MHZ is available in
72.910 CH 56	75.870 CH 84	FM only. FM 53MHZ
AM 72MHZ cry. \$8.50	AM 75MHZ cry. \$8.50	crystals are 15.50 ea.
FM 72MHZ cry. \$14.75		
	26.995 - BROWN	50.800 CH 00 BLK/BLK
	27.045 - RED	50.840 CH 02 BLK/RED
27MHZ cry. \$6.00	27.095 - ORANGE	50.880 CH 04 BLK/YEL
	27.145 - YELLOW	50.920 CH 06 BLK/BLU
	27.195 - GREEN	50.960 CH 08 BLK/GRA
	27.255 - BLUE	
		FM 50MHZ cry. are 14.25 ea.

no longer exists, and you cannot locate a service facility to work on it, the answer is that it should be retired from service. If it can be serviced and the frequency changed to a new channel numbered frequency, 38 to 56, it can be operated at least through 1991.

There have been examples of 10-year old transmitters that have been brought within 1991 specifications with little cost and effort. Note that we said transmitters, not receivers. While the manufacturers and service facilities have changed frequencies and adjusted equipment for very reasonable fees, you will need to determine the value of the older equipment to you, individually. In light of declining equipment costs in recent years, it may not be practical to "fix up" older equipment.

Q. "What are these guidelines I have heard about?"

A. The Academy, through its Frequency Committee, developed a set of operational guidelines that would set the required specifications for radio equipment to function in a 1991 environment. These specifications are very comprehensive in nature and were the result of field work, committee studies, and research accomplished by an independent agency. The guidelines were provided to industry for their consideration. They have been given support in their implementation by the newly formed Radio Control Manufacturers' Association (RCMA).

Q. "In a nutshell, what are the specifications the AMA is looking for in the Gold Star transmitter checks at trade shows?"

A. In order for a transmitter to be classified "Narrowband" and acceptable for 1991 operation by the AMA, it must not be more than ± 1500 hertz off its stated frequency. In addition, the side bands must be at least 55 Db down at 20 KHz out from the stated frequency. Many of the newer transmitters checked meet this requirement.

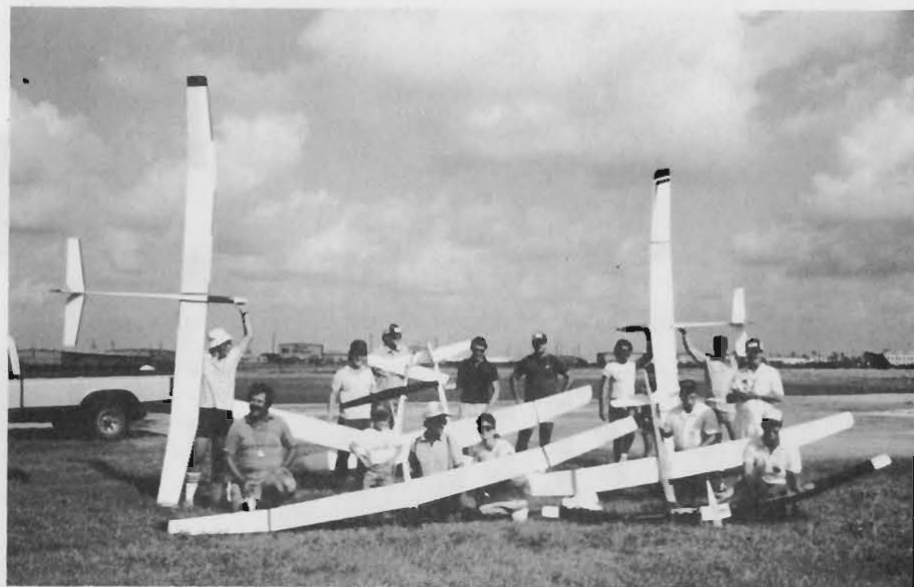
For the present, 40 KHz spacing, "Broadband" requirements are acceptable. For this, the transmitter must be within ± 1500 hertz and at least 35 Db down at 25KHz out. If your equipment is outside of these specifications, it should be serviced.

There are other questions that surface concerning radio frequency use. Those presented here represent the current items of interest. Hopefully, the answers will provide you with needed information. Additional information can be obtained by contacting Bob Underwood at AMA Headquarters.

Texas DashBen Trapnell

One of the reasons for the letter is to give you some of the results from the annual Cross-Country Soaring contest held on August 22-23. This year eight teams traveled from as far away as California to vie for the \$500.00 Chuck has been trying to give away for the last four. Usually blessed with the windiest conditions this glider-guider has had the "privilege" to endure (sorry, Chicago; even the weather men will confirm this one!), no one had even been able to complete the four-lap, 21 km event much less do it in 40 minutes or less. The combination of a monstrous sink-hole to windward and 18-25 knot winds (in previous years) have humbled the best.

Well, I guess the thought of "easy" money got the best of him, (not to mention the prodding of his Houston buddies), because Joe Wurts hopped a plane to Houston then drove the remaining 250 miles to "tame the Windy City" and show us South-Texans how it's done. Armed with a suit case full of "Wile E's Revenge" (that name might have something to do with Larry Jolly's Roadrunner), Joe put on a real clinic. Those glass wings and Eppler 374 were an incredible combination which seemed just as lethal as Newman's two-piece, custom-made pool cue. Though his first flight completed the course, his second attempt netted him a time of 38 minutes 50 seconds (a course record which he broke the following day with 37.30) and 500 Susan B's. Yes, folks, the C.D. arranged to have the money



The participants:(L to R) Cliff Oliver, Dick Roddy Jr., Spencer Pratt, Gary Ward, Jim Ferris & Family, Joe Wurts, Greg Baker, Julian Tamez, Ben Trapnell, Unknown guy holding tail of Julian's plane, Chuck Caldwell with the money and Ron Murtha. Lots of nice planes. How 'bout them "Streets"?

presented in silver dollars! Can you imagine Joe's trip home on the airplane? Going through the metal detector, I can just hear the security guard saying, "Please put your keys and loose change in this little cup...."

Seriously, the weather was incredible! A little hot might be a bit too kind, but somehow the contest director appeased the Wind Gods and it never got much above 12-15. Jim Ferris and Julian Tamez of Houston placed second and third respectively, using the incredible 374 on their own designs as well. While Joe and Julian used glass wings, Jim uses Formica to sheet his! According to Jim, after sheeting the wings in the normal fashion, a quick coat of paint is all that's needed to get a really slick and strong structure.



The Course: Cabinis Field, 4 times around for a total of 21 Km.



Winning Team: Joe Wurts, Greg Baker, Gary Ward. Airplane is "Wile E's Revenge" with glass wings and fuse, Eppler 374.

Chuck Caldwell (CD) presents Joe Wurts with \$500 for breaking 40 minutes for 4 laps. Chuck looks at Joe... Joe looks at the money... "How the heck am I going to get this home?"



Cliff Oliver's entry - Bob Sealy Fuse, Eppler 205

Dick Roddy Jr., Jim Ferris & Family. Formica® over foam on an Eppler 374 with flaps



Julian Tamez holds his own design, Glass over foam-E-374



The enclosed pics should give you an idea of the type of crowd and the absolutely beautiful weather. Next year should be even better. There is some thought of, and work is progressing towards, a possible National Cross Country Championship. With a course which allows each team to see where the other guy is at nearly any point on the course, and possible **BIG BUCKS** to be given away, this should be a contest worth traveling to. (You California guys just ask Joe!) If the cost of accommodations is a problem, most out-of-town contestants have been able to find room in the homes of contestants from the local area.



Spencer Pratt with Dave Collings design. Scaled-up Talon Fuse. Unknown airfoil has symmetrical leading edge-undercambered aft. Extremely fast!

I'd like to mention the C. D., Chuck Caldwell, and the super efforts he's put into making this contest a real winner. For four years, his leadership has been outstanding which has really helped to eliminate all the normal, ever present problems. From securing the field from the Navy and arranging accommodations for out-of-town contestants to making sure the mid-contest dinner was on course, he couldn't have done it much better. The contestants all had a marvelous time again this year: a direct result of Chucks year-long preparation and dedication to this contest.



Chuck Caldwell's Merlyn, Sealy fuse, Selig 3021 airfoil- a real floater at 11 lbs., max area.

I believe that Cross Country soaring, be it the current F3H provisional rules or something different, should be the ultimate direction of model soaring in the U. S.. Eliminating the possible luck factors involved with the typical AMA events and the over-emphasis placed on landings, this facet of soaring seems to provide the closest thing to full-scale contests and really pits man-on-man, team-on-team. I'll be the first to admit that F3B has done a great deal to advance the technology of today's sailplane, but I can't help but feel that it remains a matter of how good your winch is as apposed to how good your pilot is. With the possible elimination of the speed event from F3B, what more do you have than a very small, closed course cross country event? Likewise, seems to me that racing the clock provides little to spark the interest of most folks compared to the gang-start, man-on-man format of most cross country events. I'd be interested in hearing what you and your readers feel.

As always, I'm enjoying the magazine and wish you all the success in the world. Keep me posted on the goings-on and good luck in the new home. Take care. I'll write again as soon as I get this vacuum-bagging stuff down.

Tangerine Soaring ChampionshipsTomas Scott

The Orlando Buzzards will hold the 13th Annual Tangerine Soaring Championships on November 27, 28 and 29, 1987(AMA Sanction No. 272) This contest has developed into one of the premier soaring events with an average of 60 entrants per day-including such names as Walt Good, Woody Blanchard, Leon Kincaid and Brian Agnew competing. Pre-registration is required with fee no later than November 20th or a late fee will be assessed. Events include; Scale, 2 Meter and Open Combined-Call or Write for Registration form; Orlando Buzzards 1481 Howell Branch Rd. Winter Park Fla. (305) 644-5454.

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Some few months ago I reported the results of the construction of the Accipiter CCT sailplane, and then just two issues ago, I ran an article by Ed Devlin about the flight testing of the "Li'l Buteo" as I now call my CCT. Having seen full-color photos, and - finally - the real thing, I decided that we absolutely had to know how Ed managed to get that superb (some would say perfect) finish. After a bit of arm twisting and a few rash promises, I managed to get Ed to agree to do a story for RCSD. So Heeeeeeeere's ED!(JHG)

"...Jim was pleased with the way his Accipiter CCT sailplane turned out. Since RCSD is a good reading magazine, and reader submitted materials are what keeps the issues coming, I'm glad to help out.

"There ARE NO SECRETS, really -- just a little forethought and planning; and once the plans are understood with regard to construction, look at the general shape and planform of the plane. If you are impressed with the ship, you'll probably decide to put on a color scheme that makes her look attractive. You'll want others to admire until that first rip in the Monokote™ or scratch in the paint.

"Using Jim's Accipiter as an example, you'll notice that the body has nice gentle curves, and the elevator and rudder form smooth curves. The wing, however, is rectangular, but the whole ship gives the impression of smooth, sweeping lines. To enhance these lines and curves, some kind of contrast is necessary; yet the shape and the color scheme must complement one another. To contrast with the curves, straight angular lines were used.

"When I asked Jim what color(s) he wanted, he said 'surprise me; but I do like red!' Just try to find a large choice of reds!!! Blues, maybe, but red? You've got a choice of two or three - with any luck - including transparents.

"The Accipiter has solid foam core, balsa-sheathed wings and a built-up tail section...so solid colors are needed. The Accipiter CCT is 'tipperon' controlled instead of aileron controlled, which means the entire wing tip rotates about a spanwise axis. Since the tipperon idea is novel, I figured it ought to be brought for all to see -- and decided that all the shades of red ought to be concentrated here. This much red lets everyone see those tips move in flight!

" Straight lines angled to the fuselage or wing give a nice contrast to the smooth flowing curves, so I chose lines angled at about 45 degrees. The basic background 'color' was, of course, white.

"The 'plane had been built up to the painting and covering stage, so the next step was to decide what the overall design might look like. I took a very SOFT, easily erasable lead pencil, and drew some of my ideas on the PLANS first (not on the plane). If I didn't like what I saw, I erased them, modified them, even started over - until I got what I wanted. On Jim's Accipiter, I knew what the finish and design would be from the start...and it never changed. Balsa USA AEROSPAN™ was used because three solid-red colors were available -- and they were less expensive than some other films.

I transferred my final design ideas from the plans to thin sheets of cardboard. If you're a 'Pack Rat' like, me, you may have

some of those 'cake boxes made from 48" sheet material. I allowed

about 1/4" overlap beyond the design lines to take care of seam overlapping on the plastic film. Next, I took my cut-out patterns of cardboard and placed them on a doubled-over piece of covering and cut out the designs. DO NOT SEPARATE THE DOUBLED-OVER PIECE... you'll see why later. The fold is at the trailing edge of the wing.

"Now, I started at the trailing edge and ironed on the covering as usual. If you happen to have ailerons and/or flaps, cut one doubled-over piece to do the entire surface. On the tipperons of the Accipiter, the doubled-over covering leaves absolutely no trailing edge seams. The only seams I allowed are those where the overlapping colors or shades of red meet on the upper and lower wing surfaces.

"The spanwise red color consists of separate pieces cut and ironed on after the angled pieces are applied. In this type of covering, always start at the trailing edge of the wing FIRST working toward the leading edge. On the very tips, the bottom is ironed on, trimmed and sealed first. Work very slowly and carefully with the top surface piece of covering, avoiding wrinkles. If you wish, and have the patience, you can make a pattern for the leading edge wrap-around piece...but I did not, using the easy way out. I wanted to fly Jim's Accipiter in a hurry, so I was lazy.

"Dodgson-style laced hinges hold the flaps and ailerons to the wing, or just flaps - if you have tipperons! The elevator and rudder use doubled-over pieces ironed on without any trailing-edge overlap as before.

"One thing to remember: when doubling up the covering material, put the backing sides BACK TO BACK, then cut.

" As I said, there AREN'T ANY SECRETS. The big advantage to my system is a slick, clean 'cherry' finish with NO overlapping trailing edges to come unglued a couple of weeks later. Besides, the fewer spanwise seams you have, the better the airfoil performs. This is especially true of the Eppler, Quabeck, and Girsberger 'foils. My last bit of advice: DON'T use felt-tipped pens to mark on the balsa wood; it shows through white as plain as day. Good luck and good covering."

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SLOPE SCENE

Harry Finch,

SOME SLOPE HISTORY

While recently hanging around at the slope, and waiting for the wind to come up, several of us got to talking about the early days of slope soaring. Now please understand, that the history I have subsequently uncovered, may not be completely accurate, due to the fact that it was gathered on the west coast, from people who flew here and were maybe isolated from things which may have gone on in other places. I invite everyone to send in the history of your area.

I spoke to Frank Colver who was one of the original founders of the "Harbor Slope Soaring Society". These folks were flying the "Back Bay" at Newport Beach, California in 1960.

A state of the art slope soarer, at the time, was something like this. A Super Sinbad with the wing span extended to about 72 inches, a Bonner radio with a transistorized super regenerative receiver, single channel with an SN escapement. Rudder function only, the SN escapement was a servo of sorts, power was supplied by a wound up rubber band, a relay activated a ratchet. One pulse for left, the next pulse back to center, the next pulse was right. Left, center, right, center, etc. The cost for this basic one channel radio set up was maybe \$300.00 in the early 1960's.

Along about 1964, a gentleman named Dick Vader started flying at the same Newport California site. He had been a very successful indoor hand launch competitor and decided to try his hand at R.C. slope gliding.

Dick went through the normal process of building a couple of the the popular gliders being flown, and in 1965 he decided to apply his hard earned skill, learned in the hand launch gliders arena, to a slope plane of his own.

Mr. Vader built a 48 inch span solid balsa wing single dihedral, pod and boom design. It was an immediate success and he stuck with it. Boy did he stick with it.

Dick has built over 100 gliders of direct evolutionary lineage. Today's, Dick Vader "Sky Walker" really represents perfection in this type design. The specifications of a recent vintage Sky Walker read as follows: 32" span polyhedral, a center break and two tip breaks. A vacuum formed fuselage pod, a carbon fiber arrow shaft and solid balsa rudder and elevator.

You just can't believe the super fast roll rate due to the polyhedral wing, the 25% stab and equally large rudder. A total flying weight of 6.7 ounces. This plane flies so fast and does such crisp clean aerobatics that the flying style of being all over the sky at once has become known as Vading in these parts.

We will be seeing more of Mr. Vaders Sky Walker in the future issues and we will do some specific articles on this highly developed art of sculpting, extremely accurate, solid balsa wings. They are truly a tribute to craftsmanship.

WHERE TO FLY SLOPE

In the June 1986 issue of R.C.S.O. there is an excellent article by John Benson which tells of his Snark model which he flies on a small slope. Dick Vader has flown his 48 inch span glider along a 7 foot high wall with good success. Dale Lemons of Omaha Nebraska, flew slope off a landscape beam of similar height. Several other people have flown along large buildings. I contend that if you find any reasonable site, you can surely tailor a glider which will fly well there, you just have to give it a try.

THE RACES

Our good friend, and valued contributor, Mike Reed offers the following report on the La Sierra Slope Soarers. I'm reporting to you the outcome of the August slope race at LSSS.

A total of twenty-four entries were received in both classes combined. As usual the wind was blowing twenty-five to thirty miles per hour. The rudder class was unusually exiting because the pilots are learning to ballast their planes for all out speed.

It was refreshing to see many original designs being flown. Since there were so many sponsors for this race, prizes were awarded from first to fifth place. Below are the results:

RUDDER CLASS

- 1st. Place: Steve Barland--Cumic
- 2nd. Place: Walt Ferer--Wanderer
- 3rd. Place: Carl Lindou Jr.--Californian
- 4th. Place: Steve Martin--"The Bulb"
- 5th. Place: Bill Bennett--Gnome 2M

AELERON CLASS

- 1st. Place: Mike Reed--Terminator
- 2nd. Place: Steve Garland--Schwab
- 3rd. Place: Bill Bennett--Home Brew
- 4th. Place: Kary Keathly--Son of Sauage
- 5th. Place: Dale Widmer--Modified Kattie

Many of the prizes were furnished by the following manufacturers, Futaba, Airtronics, Satelite City, Hobby Shack & Webb R.C.

Well it looks like we put a halt on Bill Bennetts winning streak.....

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All in all we had fun and no midair collisions once again...We flew six heats of three flyers and it seemed to go very well.

I will inform you of our next slope race or fun fly....till then..."WIND IN THE FACE".

Mike Reed

President of the La Sierra Slope Soarers

CANADIAN CAPERS.....THE GULL*

This month, RCSD would like to feature some material from THE GULL.

* THE GULL is the bulletin of the Central Ontario Glider Group, and is edited by Stan Shaw, 16 Aylesbury Road, Islington, Ontario, Canada M9A 2M5.

Very few of us have the privilege to read each month's issue with news and views from our Mighty Neighbor to the North - Canada. Fortunately, I receive their fine newsletter, have met and flown with some of their top pilots, and have enjoyed the incomparable Canadian hospitality. Thus, when I received their latest issue, I decided to "lift" (a glider term; ugh! JHG) some very interesting material. You'll find Bud Wallace's review of the MISTRAL, a brand-new Canadian designed and kitted Thermal Duration/Precision OPEN CLASS machine...a sailplane that just happens to grace our cover this month.

Besides all that, you'll find some information about ASTECH, the company formed to sell the MISTRAL. In case you wondered, ASTECH means Advanced Sailplane Technology, 6521 Betsworth Avenue, Winnipeg, Manitoba, Canada R3R 0K2.

I'd suggest you write to ASTECH and ask about American delivery and price structure...and also availability. This "home-grown" product ought to prove extremely popular on both sides of the border. Credit for the design goes to Alex Reinhardt and Bruce Taylor. HERE'S BUD FOR HIS IMPRESSIONS:
MISTRAL.....A PRODUCT REVIEW.....BUD WALLACE

- designed by Alex Reinhardt and Bruce Taylor -

The Mistral is an open-class thermal flyer with a 132" wingspan using rudder, elevator, spoilers and optional tow-release. There is enough room under the wing to install a "Thermal Sniffer" if you use a fitted tow hook and/or an extra battery or ballast. The only criticism of this outstanding kit is the fact that I had to use excess lead to balance the model due to the short nose moment. Perhaps a one and a half to two inch extension to the nose may cure this problem.

I scratch built mine from the plans. Please check your servos in position as the plans show Airtronics servos others may not fit properly.

The plane flies better than I can. It launches straight and smoothly. However, if you insist on F3B style of launching I would recommend you use aircraft plywood (5 ply) in the wing joiner centre section as a doubler. I also sheeted the top centre of wing with 1/16" balsa as well as making the wing spars 1/16" thicker by personal choice. I finished the model in monokote with a painted fuselage.

Another modification would be to extend the elevator bearing tubes into stabs or use small squares of circuitboard as bearings to reinforce the rudder.

In conclusion, my compliments to both Alex and Bruce for a job well done on designing the plane. The performance of the model using the Eppler 392 airfoil is excellent. It thermals very well yet can move quickly out of s I would seriously consider building an extra set of wings using the Eppler 374 airfoil as a windy weather flyer. Apparently Bruce Taylor has enjoyed great success with his model using the 374 as well. It is great to see a good Canadian kit on the market and I give it a five-star rating for anyone who has some building experience and is looking for a top performing thermal sail plane.

The Astech Models Press Release:

ASTECH's experience designing FIA F3B aircraft for international competitions has given us the background to design the MISTRAL. Specifically intended for thermal duration/precision contests, this all wood sailplane has already proven itself by winning the 1984 Canadian Nationals Open Class Sailplane event and many local contests.

Special consideration has been given to the stability and handling characteristics of the MISTRAL. This relieves the pilot of the need to constantly "fly" the aircraft, allowing him to observe signs of thermal activity. The MISTRAL'S stability and precise handling is a great asset during spot landings.

The kit contains machine cut parts, a comprehensive professionally drawn plan and all required hardware. The advanced building techniques used in the MISTRAL yealds a strong and weight efficient model.

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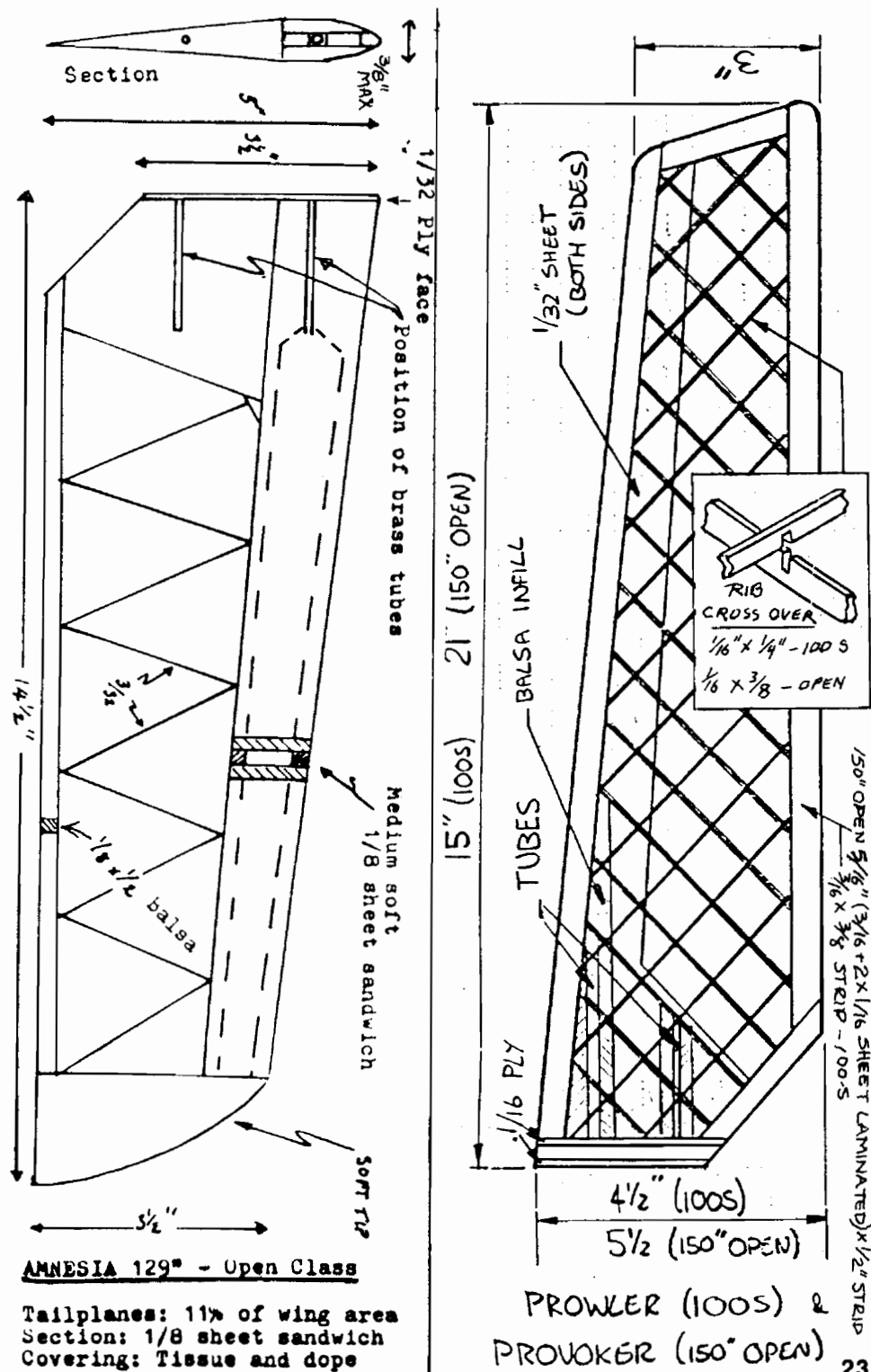
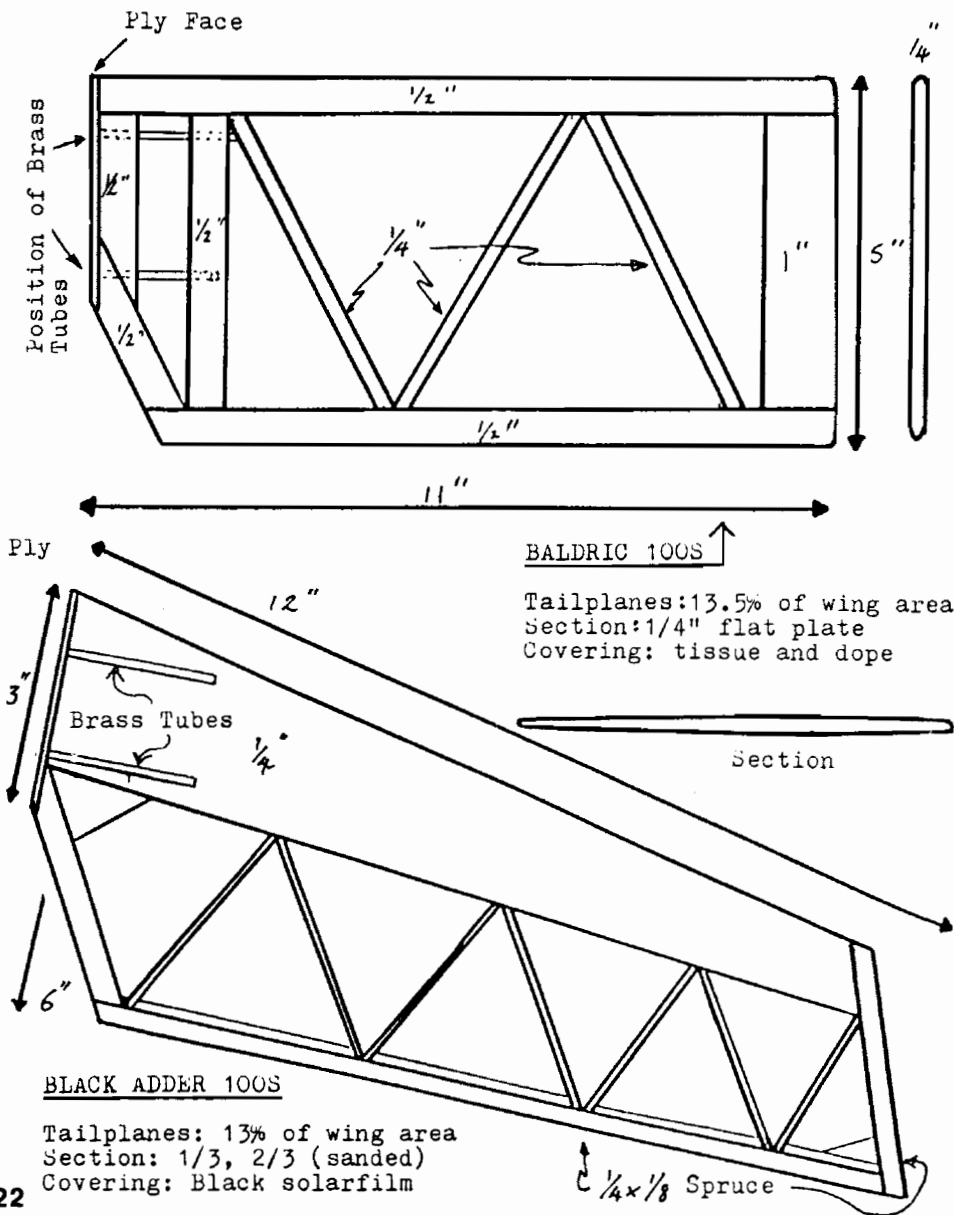
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" I have brought together 4 tailplane designs produced by SVS members. They cover quite a selection ranging from the flat plate of Sarah Lucas' "Baldric", the 1/3,2/3 design of the editor's "Black Adder", a sandwich method used by Pete Galloway on his "Amnesia" and finally the geodetic design of Eric Morrey's "Prowler and Provoker".

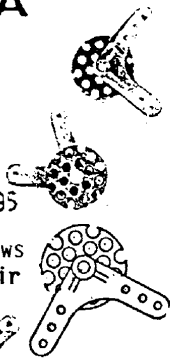
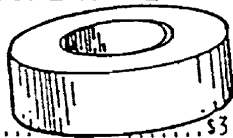
All have proven themselves to be extremely strong, perhaps worthy examples to base your next design upon."



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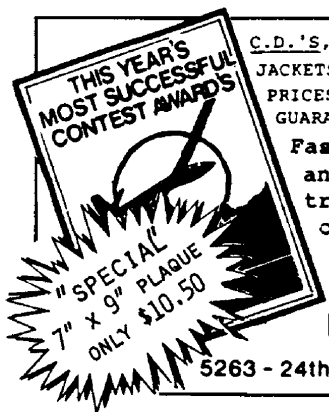


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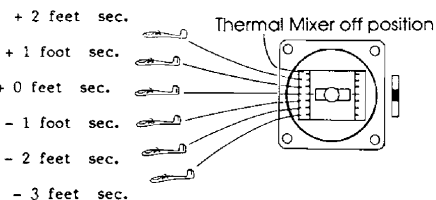
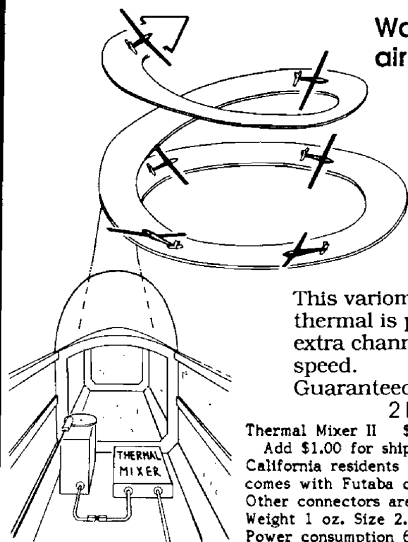
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