

Thermals

Newsletter of the Rocky Mountain Soaring Association

February 1998

AMA Chartered Club 1245

Volume XXIII Number 2

PRESIDENT'S MESSAGE

Greetings for 1998!

Well, I have finally come up out of my "cave" to see the light off day after spending considerable time building a "Quasar" for the upcoming RES contests this year. I certainly want to encourage the membership to get out and support this new addition to the flight format. Bob Douglas and John Pearson will be the CD's. So, start resurrecting your old equipment or get an inexpensive RES to join in the fun! March 8th is not very far away!

I would like to encourage those glider guiders who have not re-uped their dues for '98 to put the check in the mail. For those who have taken a little respite from flying and RMSA - listen to that inner urge to get back in the air with RMSA! We are trying to provide the best for you this year. Come on back and give us a try. We're trying. Join us!

If you have an article for the "Thermals" just burning in your craw - get out the pen and paper and put your thoughts out for public consumption. Jim Monaco (editor) and John Pearson (publisher) would appreciate your efforts.

Mike O'hearn (V.P.) is going to sponsor the annual swap/sell meet at the February 3 RMSA Club Meeting. Get it gathered up - your stuff may be someones treasures. Phil DeLong has volunteered to be the raffle coordinator for our club meetings. Something will be raffled off each meeting. Get your tickets and get lucky!

Renewal Reminder

It's time to renew your memberships. If you do not renew by February 20, this will be your LAST newsletter!

As in the past, please follow the instructions of the sod farm foreman, who under the direction of Mr. Don Schlup is trying to get the construction project done as fast as possible - we need to refrain from hindering their efforts by becoming a problem.

All the materials for the winches and their retrievers are ready for the new season. I would

Next Meeting

Date/Time: February 3, 1998 7:00 PM

Location: Newgate Apts.
10400 W. 44th Ave.
Wheatridge, Co.

*Steps to meeting room are behind
the building near the pool.*

Program: Swap What ya Brung – swap or sell that old stuff



like to schedule a meeting of all who possess club winches/retrievers to meet at the sod farm on Jan. 31st at 10:00 AM for the set up of that equipment! We should be able to get it all done and start getting used to using the equipment. The following weekends of February will be devoted to having at least one winch/retriever out for those who will be entering the contest schedule this year to become versed in the usage of that equipment.

Well there, I've got to get back to the "cave" as Phil Weigle and I are due to lay-up some wings for our Climmax HLG birds. Got to prepare for our new season. It's going to be a very good one!!

See you.
Jack Zika

Spirit In The Sky

Greetings from a can't wait for Spring, tired of building, ready for flying aspiring thermal aviator. Hi, I'm Mike O'Hearn, RMSA's vice president for 1998. Thought I'd take a shot at contributing to the club newsletter for this issue and hopefully for many more through the year.

I became interested in the sport of flying RC sailplanes after a business trip to Los Angeles where I sat next to a fellow engineer named Ron. He and I got to shooting the breeze and meandered into the RC sailplane domain. Turns out Ron used to build and fly both power and sailplanes and related several amusing stories of teenage pilot antics. Within a month after returning home I had ordered and received many catalogs advertised in RC Modeler Magazine and ordered my first sailplane - the Spirit 2 meter. Not having a work bench at my home, I constructed a building board consisting of 5/8" particle board with a piece of Celotex glued to it. Construction of the plane began in the master bedroom, the board on the floor together with all the tools, glues, sandpaper, etc. involved in open bay type planes. Well, after several nights of balsa wood debris, sawdust and generally making the room look rather messy, I received word from the wife that other building accommodations must be made. Fortunately this coincided with some vacation time I took around the Christmas - New Year's holiday season. Several days later, voila, a very functional bench was built in the basement. Here

is where the Spirit was completed and where all future planes will be built.

I received advice from several sources to seek out and join a club to ease the learning process. Sal at NorthEast Sailplane Products helped by posting to the RC Soaring Exchange about this Denver area guy looking for a local soaring club. It was through this venue that I 'met' Bob Rice via his response to the post and e-mail to me. Bob and I arranged to meet at the field on a late February Sunday. When I arrived at the field, Bob had not gotten there yet but Mark Howard was there trimming his new plane. After inspecting my plane for workmanship and C. G., Mark gave it a hand toss. What do you know, it flew! Something I had built really flew! Next, Mark winched it up, flew it briefly and handed my transmitter over to me. With nervous hands I took the radio and managed to somewhat guide the plane around, briefly. I had Mark land it and within a few minutes he had it airborne again and I was bulldozing through the available lift that was present. Bob had shown up by now and was also helping me survive my first flights. Because the Spirit was conservatively balanced, I soon experienced the "porpoising" phenomena where the plane would stall, dive and increase speed, pull up, stall again and so on. I handed the transmitter back to Bob and he recovered by pulling an inside loop, cool! On my last flight that day with Mark talking me down, I landed my plane, on the field! That Tuesday, I attended the March club meeting of RMSA and the following Sunday was participating in the first club contest of the year. From then on I became hooked and eager to improve. Its true what they say about meeting many fine and helpful people at soaring clubs, I felt welcome immediately.

Recently, I sent for my first voucher from the League of Silent Flight and have also gotten the AMA rule book so I won't have to ask how T3 Precision Duration differs from T1 International Duration any more.

After last Fall's club elections, Jack Zika gave me a call and informed me that it was up to the vice president to conduct the monthly club programs during the meetings. Well, Jack is a hard act to follow but I'll see what I can do. I have some ideas for upcoming programs but want to solicit ideas from the membership as to what they would like to see and hear. Let's hear from you at the February meeting, all ideas will receive



this is the season for building that new gee wiz Thermal Master, I thought we would enjoy a small scale swap meet where folks would show up ready to sell or swap old planes, radio related equipment, gizmos, etc.

See you there, *Mike O'Hearn*

In this Issue

In this issue I have included a building article for a cheap funfly delta wing foam sloper. The plane is called the PIBROS (don't ask me what it means) and was designed by a french slope flier by the name of Marcel Guwang. It's easy to build, and the foam it's built out of is quite reasonable. You don't need a foam-cutter – just a knife. In France the machine is built out of a foam insulation board called Depron. Here in the US the closest we can come is the foamboard that is used to mount pictures. You can get it at any craft or photo-mounting store, the drawback is that the stuff here comes with a cardboard backer that you need to remove. Be sure to get the 1/8" stuff – any thicker and it will not bend into the "airfoil" shape. Cut the pieces out per the drawings and sink them in the tub (the kids tub) overnight. Peel off the backer the next day and... voila – kinda depron... The main drawback to the design is that it is an elevon ship and will require a radio with elevon mixing – or an external electronic mixer. A mechanical design would be too heavy.

It's a blast from a short bungee, it goes pretty fast, rolls fast and is very hard to kill with fat fingers... It is good on the slope – I saw about 10 of them flying at once in very strong winds in France, but have not put mine on the slope here yet. The instructions are a bit of an eye test in order to get it to fit in the limits of this fine publication's page count, but I hope you enjoy it anyway.

The Editor's Thoughts...

The contest board and the CDs have been busy bees, and have set up the contest schedule for 1998 and have established the rules and guidelines to be followed for the contests. You may have noted that one of the changes affected

how the flight groups are allocated in a round. Last year, since I was usually the scorekeeper, scheduled most of the flight groups such that each of the classes was schedule together – meaning no-one flew out of their class. This year the contest board decided to schedule all fliers together, meaning the flight groups are mixed classes. The rationale for this, as explained to me, was that it was thought that scheduling by class caused more flight groups to be scheduled, and thus less rounds were flown. Clearly to most everyone, more flights equals more fun, so this was intended as a means to fly more rounds. Another concern was that scheduling this way implied that we were running 3 separate contests contiguously. It is thought that scheduling this way only allows the contestants in your class to be counted as a contest flier towards LSF win points. Since the higher levels of LSF require a good number of fliers for the win to qualify for LSF advancement points, the chances of attaining the requisite number of fliers is higher if we all fly together. Another interesting observation is that, as scorekeeper, I am frequently asked by novice and sportsman class fliers how they would have done if the rankings had been done across all the classes. Unfortunately, this is not really possible, since the classes are flown completely separately. Under the new method, all fliers are ranked equally, and the class winners are selected as the top N fliers in the class. You can definitely see how you are doing against the higher classes.

A down side to this is that with mixed classes, a bad draw could destroy a novice fliers score by having to fly against the top fliers in the club and getting buried. In theory, flying enough rounds equalizes the odds of everyone flying equally against the others, but with our sample size and the feasible number of rounds, I expect that there is a statistical probability of some unfairness. Between the Sportsman and Masters the difference between the high and low scores of a round should not be too bad. But the delta scores between a Master and a Novice can cause a huge penalty to an unlucky flier.

Do I know the right answer – I sure don't – and I hate to play second guesser to the contest board members who sacrifice their valuable time to hash out these issues. The main point of this editorializing is to encourage the Novices to continue attending the contests, and give the new



system a chance to work. If it does not work, then we the members can work to change the rules to the fairest means. Please do NOT simply stop coming to the contests because this may turn out to be an unfair circumstance occasionally. We have a great group of Novices who contribute to the club in many ways. If you think this is unfair, then don't run away, if you are too shy to attend the meetings, please call ME, and I will certainly carry forward your feelings – anonymously if you prefer.

I'm certainly looking forward to a great year. Also this issue I have included a building article for a cheap funfly delta wing foam sloper. The plane is called the PIBROS (don't ask me what it means) and was designed by a french slope flier by the name of Marcel Guwang. It's easy to build, and the foam it's built out of is quite reasonable. You don't need a foam-cutter – just a knife. In France the machine is built out of a foam insulation board called Depron. Here in the US the closest we can come is the foamboard that is used to mount pictures. You can get it at any craft or photo-mounting store, the drawback is that the stuff here comes with a cardboard backer that you need to remove. Be sure to get the 1/8" stuff – any thicker and it will not bend into the "airfoil" shape. Cut the pieces out per the drawings and sink them in the tub (the kids tub) overnight. Peel off the backer the next day and... voila – kinda depron... The main drawback to the design is that it is an elevon ship and will require a radio with elevon mixing – or an external electronic mixer. A mechanical design would be too heavy.

It's a blast from a short bungee, it goes pretty fast, rolls fast and is very hard to kill with fat fingers... It is good on the slope – I saw about 10 of them flying at once in very strong winds in France, but have not put mine on the slope here yet. Hope you enjoy it!!

Keep looking up – *Jim Monaco*

Treasurer's Report

Following is the status of the RMSA accounts as of January 1998:

Savings ----- \$252.86
Checking ----- \$852.09
Cash \$43.00

John Pearson

For Sale

3 Meter Shadow Plus -A competitive thermal duration ship that is also very easy to fly (960 sq. in wing area) with S7037 Airfoil. It comes ready to fly with:

4-141 metal geared ball bearing servo's in wings.

1-102 for rudder and

1-454 coreless double ball bearing for elevator.

Includes 1400 mAh battery pack and Airtronics 8 channel Rx.

Excellent Condition.

Price: \$ 450

Call Jon Padilla at 932-2504

Hand Launch and Slope Kits/Planes

1. Epsilon poly kit - Epsilon flaperon kit with single piece wing and carrying box. Both kits built by Fred Mallet himself. \$150 each. Retail is \$200 plus shipping

2. Carbon D Lite ARF HLG - new design, see my column in Sailplane and electric Modeler \$150. Retail is \$200 plus shipping

3. Simply the Best - AFT HLG, awesome kevlar, carbon fiber, open bay wing with prepainted fuse. Top ten finisher at '97 IHLGF. \$290 Retail is \$330 plus shipping

4. 2 HLG/slope Western Flyers. Built by master builder Jeff Burg. With servos - ready to fly. \$150 each

5. OBSESSION HLG/slope - glass single piece wing ready for servos, pre painted fuse with carbon fiber canopy. \$100 Retail is \$200 plus shipping

6. Corndogger Kits \$75 each - great light wind slopers. Numerous other kits - built up and composite

Tom Gressman Day phone 744-3535 ext 3105
Night 979-8073



Minutes of Jan 6 1998

Bob Rice

Meeting was called to order at 7:05PM by President Jack Zika. Officers present: Jack Zika, Bob Rice.

No Treasurer's report.

Old Business:

RMSA shirts and stickers are still available.

New Business:

There will be a swap meet at the February club meeting.

Jeffco auction will be Jan. 29, 30, 31 at the Jeffco Fairgrounds 6th & Indiana

Mark Howard & Bob Rice will mail letters to various sailplane stuff suppliers looking for donations for monthly and year end raffles. Raffle tickets will be available at all club meetings with a \$1 cost. Donations from members for the raffle will be greatly appreciated.

It was proposed that a 2M contest be held concurrent with the club open contests. After much discussion, the issue was tabled. Bob Douglas and Mark Howard may try running a concurrent 2M contest at the March contests.

Jack Zika reported on the winch and retriever status. New winch line (200#) and retriever line (80#) has been purchased, retriever hoops have been fabricated. Practice sessions with the winch/retriever will be set as soon as weather permits. Jack will check with Matt Sheldon concerning the costs of getting the winches overhauled.

FIELD NOTE: Park ONLY on the road.

Meeting adjourned at 8:15PM

Channel Interference Test Results

Bob Rice

As most of you are aware, serious interference problems occurred at the November contest resulting in the loss of two sailplanes and a third sailplane was barely recovered. The AMA frequency coordinator was contacted and the AMA Frequency Scanner obtained. The following charts shows the result of three weekends of watching the scanner at the Sod Farm.

Ch Freq.	Comments	Ch Freq.	Comments
12	72.030 Carrier @ 72.010	37	72.530
13	72.050	38	72.550
14	72.070	39	72.570
15	72.090 Pager @ 72.095	40	72.590 Pager @ 72.575
16	72.110	41	72.610 Pager on this Freq?
17	72.130	42	72.630
18	72.150 Pager @ 72.155	43	72.650
19	72.170	44	72.670
20	72.190	45	72.690
21	72.210	46	72.710
22	72.230 Voice Pager ?	47	72.730
23	72.250	48	72.750
24	72.270	49	72.770
25	72.290	50	72.790 Pager at 72.775
26	72.310	51	72.810 Pager at 72.785
27	72.330	52	72.830
28	72.350	53	72.850
29	72.370	54	72.870 Pager at 72.855
30	72.390	55	72.890
31	72.410	56	72.910
32	72.430	57	72.930
33	72.450 Voice/Music Very Strong signal		
34	72.470	58	72.950
35	72.490	59	72.970
36	72.510	60	72.990



PIBROS CONSTRUCTION INSTRUCTIONS

You have nothing to do for 2 hours ? Make an amazing fun-fly slope glider.

A good Fun-fly has to be small, agile, light [Image] and must be able to crash without damage. The delta wing has these criteria and does also allow the use of low cost wall isolation foam because of its mechanical characteristics.

But to get the best out of your Pibros you need a programmable radio.

You need :

Contact glue for foam in spray, a 3mm (1/8 ") thick foam sheet (size: 125cm x 80cm) and adhesive parcel tape

Cut out the parts from the sheet as shown in illustration #1 (Take care of the direction of the fibers). For the parts 5,6, the elevons and the fin you can use some 6mm (1/4") foam or glue together two 3mm (1/8") foam sheets.

Place parts 2 and 3 as shown in illustration #2 (Take care of the direction of the fibers) and tape them to part 1 (edge to edge).

Glue parts 5,6,7 and 4 on part 1 all at once with the contact glue on the untaped side (illustration #3).

Keep the part 1 on a flat surface while gluing in place the surrounding of parts 4 and 5.

Before gluing make a try fold of parts 2 and 3 over part 1 (you'll need to slightly cut the edge of part 3 to avoid overlap on part 2). The parcel tape will make the leading edge.

Put some glue on parts 2,3 and 5 and also on the trailing edge (1-2cm) of parts 2,3 and 1

Refold parts 2 and 3 like before while keeping part 1 on a flat surface (leading and trailing edges)

Make a straight cut on the trailing edge and tape the elevons in place

Cut a groove between parts 2 and 3 and glue the fin into place

Dig the foam to place the receiver, the servos and the batteries (illustration #4). Take care to place the batteries in order to obtain a center of gravity located at 210 mm of the nose without lead

Fix the servos, receiver and batteries with double sided tape

Make some 1 mm steel pushrods. They will be flexible enough to save the servos during crashes.

Last but not least make 3 launching holes with a soldering iron through the wing as shown in illustration #4 and tape the upper wing side to avoid loss of air pressure .

Flying

The position of the Center of Gravity is slightly more critical than usual. Too far from nose, Pibros will not fly at all. Too near from the nose the max speed will not be reached and the agility will be just good for your grandfather. A good criteria for the

Center of gravity is when inverted flight is obtained just by trimming down a bit.

There are 2 ways of flying Pibros depending of the elevons throw

Normal flight: +/- 20 deg at the ailerons and +/-10 deg at the elevators. Tued like this the delta is able to achieve up to 2 rolls per second and is flying pretty fast.

Controlled stall flight: +/- 45 deg at the ailerons and +80 deg and -60 deg at the elevator with 90 % exponential. There you get a new flight dimension and quite a few unknown aerobatics are possible. Especially the instant air brake (pulling the stick at once) is amazing and very useful for landing at your feet in very strong winds. There is no inertia at all and you can start a left roll, change your mind and finish it on the right instantly.

Pibros has been tested in very strong winds (70km/h) and is still flying well despite of its low wing loading. The fast reacting rudders are a good weapon against strong turbulence

PIBROS Specifications

wing span: 800 mm

length: 460 mm

Airfoil: 4,5 % thickness, autostable with slightly trimmed elevons

Surface: 20 dm²

weight: 250 g

Wing load :12,5 g/dm²

Radio:

- 2 micros servos
- electronically mixed elevators and ailerons
- Exponential et Dual-Rate
- Batteries 4x270 mAh

Tunings:

C. of G. 210 mm

from the nose

Throws: see text

Weights

- 2 micro-servos: 40 g
- 1 batterie 270 mAh: 70 g
- 1 receiver: 30 g
- Misc. (horns, pushrods, cables): 10 g
- dépron: 100 g
- Total: 250g

Important

For the first flight it is strongly recommended to use the small throws. A Pibros with a wrong center of gravity and or too much throw may be completely uncontrollable. Use dual-rates to test the new flight dimension. Despite it's simplicity the pibros is definitely not a beginners model and demands fast reactions from its pilot.

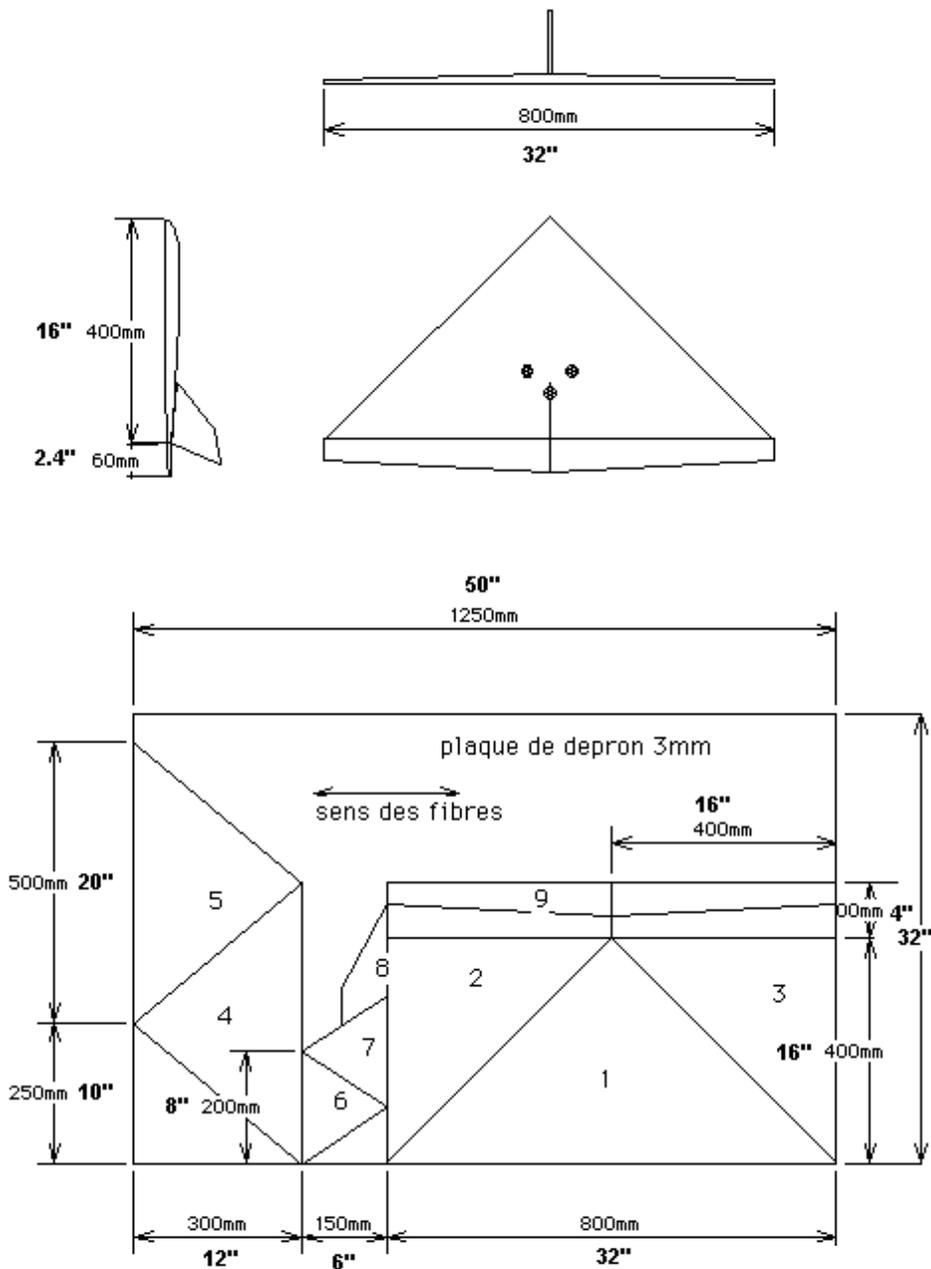


Figure 1 - Cutting Templates

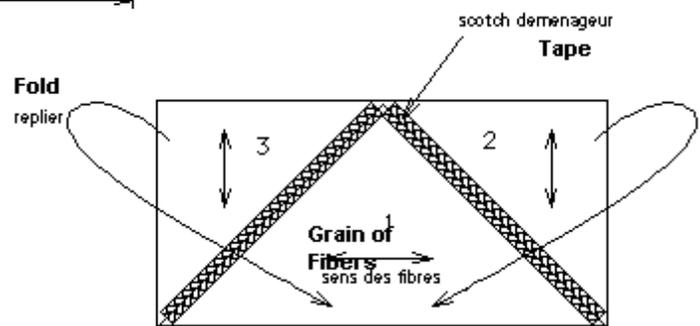


Figure 2

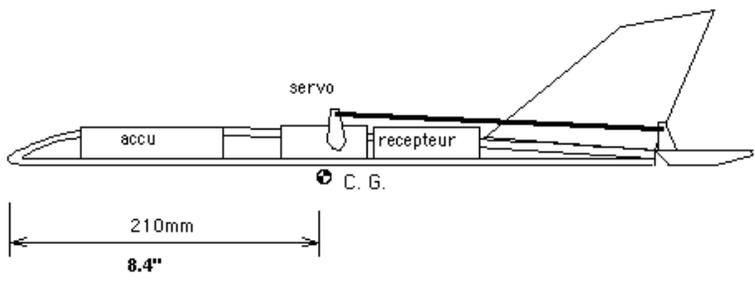
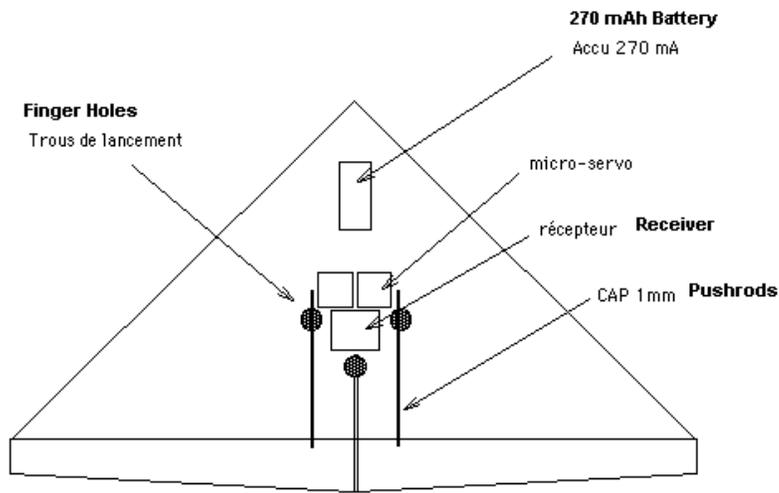


Figure 4 - Radio Layout

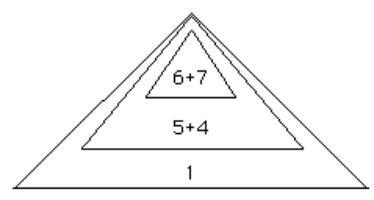
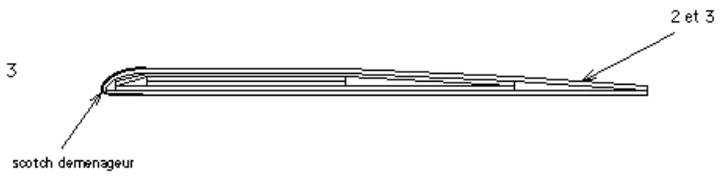
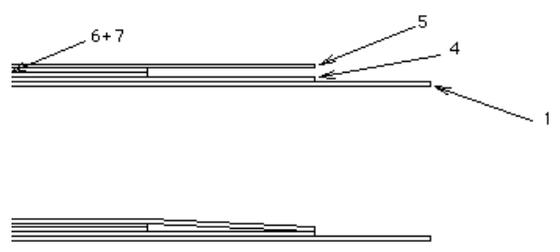


Figure 3



1998 Contest/Event Calendar

Date	Type	CD	Notes
Jan 6	RMSA Meeting		Newgate Apts – See Cover
Feb 3	RMSA Meeting		Newgate Apts – See Cover
March 3	RMSA Meeting		Newgate Apts – See Cover
March 8	RES	Bob Douglas	Restricted to Rudder/Elevator/Spoiler controls only
March 15	Open*	Mark Howard	
April 7	RMSA Meeting		Newgate Apts – See Cover
April 19	Open*	Jim Barr	
April 26	HL**	Phil Weigle	Points towards club HL championship
May 5	RMSA Meeting		Newgate Apts – See Cover
May 17	Open*	Jim Monaco	
May 31	HL**	?	Points towards club HL championship
June 2	RMSA Meeting		Newgate Apts – See Cover
June 7	Open*	Phil Weigle	
June 21	FunFly	Bob Douglas	Fathers Day Family BBQ and Fun Fly
June 28	HL**	Lenny Keer	Points towards club HL championship
July 7	RMSA Meeting		Newgate Apts – See Cover
July 12	Open*	Bob Rice	
July 26	HL**	Jack Zika	Points towards club HL championship
August 4	RMSA Meeting		Newgate Apts – See Cover
August 9	Open*	Jim Monaco	
August 16	LSF Tasks	Bob Douglas	LSF Tasks and Fun Fly
August 23	2 Meter *	Mark Howard	Restricted to 2 meter models
Sept 1	RMSA Meeting		Newgate Apts – See Cover
Sept 13	Colorado Challenge Cup*	Matt Sheldon	Restricted to RMSA/PPSS members – open class A/C
October 6	RMSA Meeting		Newgate Apts – See Cover
October 11	Open	Bob Rice	
October 25	Fun Fly	Bob Douglas	
November 3	RMSA Meeting		Newgate Apts – See Cover
November 8	RES	John Pearson	Restricted to Rudder/Elevator/Spoiler controls only.
December 1	RMSA Meeting		Newgate Apts – See Cover
December 6	Awards Banquet		Annual RMSA Family Banquet with Awards – location TBD

* Indicates contest included in club Open Championship points

** Indicates contest included in club HLG Championship points

Shaded events are historical



1998 Board Members

President:	Jack Zika	(303) 279-1549	(303) 505-9488 (Pager)
VicePresident:	Mike O'Hearn	(303) 693-6925	
Treasurer:	John Pearson	(303) 770-0797	Jpearso1@ix.netcom.com
Secretary:	Bob Rice	(303) 745-5269	bobr@tobindatag.com
Past President:	Phil Weigle	(303) 341-9256	

Member Support

Chief
 Instructor: Jack Zika (303) 279-1549 (303) 505-9488 (Pager)
 Instructor: Mark Howard (303) 278-7519 markho@tobindatag.com
 F3B/F3J: Mark Howard (303) 278-7519 Markho@tobindatag.com
 Librarian: Tracy Cochran (303) 934-8838
 Newsletter: Jim Monaco (303) 924-3393 Jmmonaco@us.ibm.com

Winch Keepers

Matt Sheldon (303) 421-6532
 Mark Howard (303) 278-7519 markho@tobindatag.com
 Phil Weigle (303) 341-9256
 Bob Rice (303) 745-5629



Directions to Field

Take I-76 to exit 17. Take 120th East to Tower Rd. Left on Tower Rd to sharp right curve onto 128th. Directly on the right is a dirt road thru the sod farm. We generally fly from the dirt road in the center of the farm.



Rocky Mountain Soaring Association
19015 W 62nd Ave.
Golden, Colorado 80403

First Class Mail

Forwarding Address Requested