



Thermals

Newsletter of the Rocky Mountain Soaring Association

August 2002

AMA Chartered Club 1245

Volume XXVI Number 8

President's Message

Well August is here already and you need to get your Visalia entry forms in if you are going. I know I am going but I do not have any idea how many others are going so lets get together and find some RMSA teams to work together there. I am driving out – if anyone wants to share the ride, let me know. I am also considering renting a trailer. If you are going and need to get your stuff out there, just kick in a couple bucks toward the trailer and I'll haul the stuff out there.

Also as you read this Skip Miller will be heading to Finland for the worlds F3J event and may I say that I wish him the best...Now if just does what he does to all of us at each contest to all at the worlds he will do rather well... We all should wish Skip our best as he is representing the USA and the RMSA he has been the back bone of our competition for many years and we owe him a lot for that...

There was a problem at the last contest at the Sod Farm they think that someone from our club turned off the sprinklers for our contest...This is a big problem as it could get us kicked off the field. I for one sat by the controls and saw no one touching the controls. If anyone did see anyone playing with the controls other than the people in the little white Chevy truck please contact me at once as we will have to deal with this rather swiftly if anyone in the club did in fact shut off the sprinklers which I do not believe anyone did, as I was sitting right there by the controls.

There will be no program this month as I got no volunteers for the meeting...but maybe we can get Skip to come to the next months meeting to tell about his time at the worlds....(hint hint are you reading this Skip???) I will not commit him to this as he is rather busy with his work. But I do need some ideas for September's meeting...help...lol

See you at the field *Dr. Dan Williams*

Winchmaster Found!

Phil Jones has graciously volunteered to take one of the current club winches and be a winchmaster. Thanks very much to Phil. In addition, Mike Verzuh has volunteered the use of his personal winch for club contests. This will give us 6 winches and should speed things along very much. I encourage you all to help with the winch setup and teardown on contest days. A bit of help is important to keeping our current winchmaster volunteers doing the thankless job.

Thanks - Jim

Next Meeting:

Date/Time: August 6, 2002 – 7:00 PM

Location: Broomfield Advanced Chiropractic
26 Garden Ctr
Broomfield CO 80020-7012

Program: None

Dog Days Thermals – August Open Contest
Sunday August 11, 2002
CD Bob Lewan with Co-CD Bob Johnston

Registration: 8:30-9:00AM
Pilot's Meeting: 9:00AM
First Round: 9:30AM
Entry Fee: \$5.00 (\$3.00 Jrs)

Please be registered and have planes assembled by Pilot's Meeting

Winchmasters: Please be at the field by 8:30AM. Please notify the CD if you are unable to attend. We will be restringing the winches – please strip your line prior to the contest.

Tasks: AMA T1 International Duration with short times and lots of rounds
If we get 7 rounds in we will drop one round.

Landing: Spot Landing with AMA tapes.

Rescheduled June HLG Contest
Sunday August 18, 2002 CD Shannon Bingham

Registration: 8:30 – 9:15AM
Pilot's Meeting: 9:15AM
First Round: 9:30AM
Entry Fee: \$5.00 (\$3.00 Jrs)

Again, I'll run day one of the International Hand Launch Glider Festival tasks without the launch penalties. Entry fee will be five dollars and we will divvy the entry fees up as prize money. I'll have my recorded timing system. Usual AMA and Handlaunch protocols will apply. I will have a highest javelin launch award for anyone who exclusively avoids discus launching. Meet at 9:00. Pilots meeting at 9:15. First round at 9:30 or so. I encourage pilots to bring a friend to help time. We won't reschedule this one

August HLG Contest
Sunday August 25, 2002 CD John Kappus

Registration: 8:30 – 9:15AM
Pilot's Meeting: 9:15AM
First Round: 9:30AM
Entry Fee: \$5.00 (\$3.00 Jrs)

Please attend a Hand Launch contest with plenty of air time! We will be flying a minimum of 6 rounds. Some of these tasks will be from this years' IHLGF. Some rounds include 10 second penalties for additional throws beyond those specified. To make things more interesting for javelin launch fliers, there will be NO penalties for pilots who JAVELIN launch the whole contest.

There will be a special additional round if time allows! This will be for bragging rights and will not be scored with the rest of the contest. This round is javelin launch ONLY! Bring out those old HLGs and let's have some fun!

July Club Contest CD's Report – Jim Monaco

July 14th, 2002

As I arrived at the field, it was quite apparent that the sprinkler was in a bad position. No matter what we did, the sprinkler was going to interrupt our contest – and with the current drought there was no chance that the farmer was going to turn it off any time soon. So the hike began. We figured we could get the most uninterrupted flight time if we set up 180 degrees from the current position, that meant a loooong hike out to the NorthEast corner of the field. We set up to the Northeast and that direction held the whole day. It was very hot and water and shade were required to survive. It seemed that the water from the sprinkler killed most of the nearby thermal activity so folks had to range way out to get their times. It was not an easy day. Everyone seems to like the F3J format. It is exciting and requires a lot of strategy to do well. Having the chance to relaunch can help or hurt you depending on the circumstances.

We had several fliers overfly the slot and lose their landings and get a 30 point penalty. F3J is unforgiving of overflights. You really must be down before the horn. If you are landing exactly at the horn, it is the line judges call on whether you made it or not – and you don't want to be in that position.

We had some excitement when Mark Howard collapsed on the field. At that point no-one knew what was happening to him, so I called 911 and they responded immediately out of Brighton. While they were responding, Mark was unresponsive to us. Skip took care of Mark trying to get some water in him and cool him down while the paramedics were on the way. By the time they arrived Mark was back with us. It apparently was a back spasm and the pain caused him to faint. While in the Ambulance Mark had another spasm and they transported him to the hospital. We were all much relieved to see Mark in the car with his family coming back to get his stuff from the field. Mark is doing well and we all wish him a speedy recovery.

After the excitement we moved the winches back to the Southwest corner and continued flying. Thanks to Skip for coordinating that move and all the folks that helped get set back up. The rest of the contest was routine. Skip took top honors in Masters class, with Jon Padilla hot on his heels. Rich O'Connell did a great job taking 3rd place with John Kappus and Lenny Keer rounding out the top 5 with 4th and 5th place respectively.

Mike Verzuh won the Sportsman class, with Ali Ghaffari taking 2nd and Chuck Staset taking third.

In Novice class, Tony O'Hara won with Art Ries taking second place.

Congratulations to all the winners.

Jim Monaco

Final Scores

ID	Class	Name	Place by Class	RD 1	RD 2	RD 3	RD 4	Total	Norm by Class	Norm by Contest	Place by Contest
	M	Master									
14	M	Skip Miller	1	1000	1000	1000	991	3991	1000	1000	1
15	M	John Padilla	2	950	1000	997	1000	3947	989	989	2
2	M	Rich O'Connell	3	1000	1000	918	871	3790	950	950	3
12	M	John Kappus	4	1000	966	1000	727	3694	925	925	4
9	M	Lenny Keer	5	910	1000	968	777	3655	916	916	5
8	M	Bob Johnston	6	931	1000	504	990	3425	858	858	7
1	M	Jim Monaco	7	768	641	1000	1000	3410	854	854	8
4	M	Byron Blakeslee	8	1000	994	664	736	3394	850	850	9
19	M	Don Ingram	9	630	993	823	787	3233	810	810	10
10	M	Phil Jones	10	733	351	1000	1000	3084	773	773	11
3	M	Charles Miller	11	431	646	1000	1000	3077	771	771	12
18	M	Bob Moffett	12	600	822	439	742	2603	652	652	15
24	M	Dr Dan	13	602	622	186	991	2401	602	602	17
5	M	Garry Lewan	14	601	675	930	164	2370	594	594	18
23	M	Bob lewan	15	758	523		1,000	2,281	572	572	19
11	M	Mark Howard	16	1000	890			1890	473	473	21

ID	Class	Name	Place by Class	RD 1	RD 2	RD 3	RD 4	Total	Norm by Class	Norm by Contest	Place by Contest
	S	Sportsman									
20	S	Mike Verzuh	1	679	969	890	911	3449	1000	864	6
13	S	Ali Ghaffari	2	663	888	483	818	2852	827	715	13
7	S	Chuck Stasek	3	902	536	271	915	2623	761	657	14
16	S	Bob Hatch	4	683	758	638	477	2555	741	640	16
22	S	Ryan O'Hara	5	860	417	466	501	2,244	651	562	20
25	S	Jim Asbury	6	274	368	746	278	1,666	483	417	22
6	S	Niel Schmoker	7	319		68	183	570	165	143	23
	N	Novice									
21	N	Tony O'Hara		240	166	128		534	1000	134	24
17	N	Art Reis	2	127	96	165	29	417	780	104	25

Handlaunch Contest Report

by John Kappus johnkappus@alum.mit.edu

Sunday July 21 marked the first completed handlaunch contest of the year. After a week of high pressure, hot, cloudless days, we were greeted by morning clouds, cooler temperatures, and the promise of some thermals, at least until the clouds burnt off. Unfortunately, we were not greeted with very many competitors! At the pilots meeting, we discussed different contest formats and tasks, and it was decided to try something different for two practice rounds. After practice, either more people might arrive, we could go back to a standard format, or we would try this approach. We unanimously decided on this new task format.

The new task featured 100% thermal flying with plenty of air time. No landing points, no plane handling skills, no complicated tasks. Everyone launched at the same time for a 3 minute task. You could even be in the air at the end of 3 minutes with no penalty. WE FLEW 36 ROUNDS with 6 throw outs !! Special thanks go to Mrs. Newcomb who, using one watch, timed for all pilots. It was definitely very interesting to fly a contest without a spotter or timer. In this man on man format, it was a challenge to keep an eye on others and still concentrate on flying! Even with a late start, we finished 36 rounds just after noon.

It was a hard fought contest with difficult conditions after the cloud cover burned off. Greg flew his own design completed just before the contest. Jack flew a javelin launch and managed to sneak out on us a few times! Joseph was the only competitor without any off field landings. He came on very strong at the end of the contest. If there have been a few more rounds, he might have won! Skip was consistent and seemed to always be sneaking off somewhere. You really had to keep track of him. Thanks to Skip as this format was his suggestion. I flew my old faithful with thick airfoil in the light conditions even after recently building some new, thin Drela airfoils. I just didn't have enough time on them yet.

The contest format was a success with everyone enjoying it and getting in plenty of flying. I'd like to extend an invitation to other to come out for the next contest and have some fun. We always get in lots of flying and handlaunch is a great way to improve your thermaling skills.

The Scores:

Last year I made an arithmetic mistake on Joseph's score. This year I did it again. I had entered a 1:05 time as 105 points instead of 65. Unfortunately, those 40 points made a difference. My apologies, Joseph probably won't let me CD any more contests!

	Round Wins or Ties	Total Score	Final Score with throw outs	Normalized Score
John	18	3223	3010	1000
Skip	12	2930	2736	909
Joseph	10	2982	2732	908
Jack	2	1842	1763	586
Greg	0	889	889	295

June F5J Contest report

Lenny Keer – CD

June 29th was the date of our third F5J contest. I guess a number of people had other plans that weekend, as we only had six pilots show up. Everybody entered the SP400 class, and three also flew in Open class.

Shannon Bingham showed that he was a master of improvisation. He was assembling the 3 piece wing of his Open class model, when he discovered that he had forgotten to bring the wing rods. He dug in his field bag for a few moments and pulled out a pair of small screwdrivers, which he pressed into service as surrogate wing rods. His plane flew all day without incident. Ali Ghaffari also needed to be resourceful. On one flight, his rudder blew off in a high speed dive. He was able to tape a couple of score cards onto the remaining stub to create a new rudder and continue flying.

Bryan Dannettell brought out a new SP400 model that looked very promising. It was a Pulsar from Starflight Models in Canada. It's beautifully built of high tech composites and covered in transparent film. It was amazingly light for the size.

SP400 Class

Lenny Keer	3991
Ali Ghaffari	3607
Jim Barr	3259
Bryan Dannettell	3224
Bob Pederson	3107
Shannon Bingham	2880

Open Class

Lenny Keer	3700
Shannon Bingham	3185
Ali Ghaffari	2499

The next F5J contest will be on September 14th. The big F5J event in Phoenix will be held on October 25th-27th. This is a well run contest and highly recommended. Scores from this event can be used as an out-of-town score in the RMSA F5J series. For more information and registration see <http://www.f5jelectric.com>

For Sale

1. **Diversity Aircraft Butterfly** electric kit with battery, motor and speed control. \$125 including shipping.
2. **Hobby Lobby Pogo** with motor, speed control and battery. ARF kit sp. 400. \$125 including shipping.

Home 303-979-8073

Office 303-744-3535 X3101

tom@newhorizonsccu.org

1. **Eraser Xtreme**, Black/White. In excellent condition, never damaged. Contest ready plane is set up for Volz servos. \$500 airframe only, or \$850 with servos.
2. **Omega-E 1.5 Speed 400 F5J Sailplane** in excellent condition -- a great turn-key competition package. 60" span, open bay wing construction with carbon D tube, fiberglass fuselage and composite V tails. Has SP400 motor with planetary geardrive, Kontronik Rondo speed control, Graupner 13x7 prop with Lite spinner and custom 8 cell battery pack. 4 micro servos installed. \$250 for all, or \$175 for just airframe and servos.

Lenny Keer

Lenny970@AOL.com or (970) 352-1194

1. **North East Sailplanes Victory Molded wings**

Airfoil: SD7037 wingspan: 121"

Paid: \$325 Sale: \$150

John Pearson 303 306 6800

john@pearsonandpearson.com

E-Soaring

Battery Basics:

The battery that powers your electric motor can have a very big influence on the performance of your electric sailplane. Today, there is a wide variety of batteries available, in different cell sizes and types. Making a good battery choice is a key factor in extracting the most performance from your setup.

Electric sailplanes tend to have different battery requirements than electric sport planes. Fliers of electric sport planes are usually looking for a battery that will give them reasonable performance and maybe six to eight minutes of flight time. In contrast, an electric sailplane generally uses the motor only to climb to altitude and begin searching for thermals. The battery in this case is required to expend as much power as possible in a short time. F5J or LMR (limited motor run) contests usually allow climb times anywhere from 20 seconds to 45 seconds, depending on the class. Ideally, you would want to choose a battery pack that would be nearly exhausted after the climb. In the real world, however, batteries are limited in the amount of power they can supply. Larger cells can generally provide more current than smaller cells. The weight of the battery pack is significant, and you want to use the smallest, lightest pack that will provide the power needed.

Nicad cells are identified by the manufacturer by their capacity in mah. When choosing a motor battery for sailplane use however, the main factor to consider is the cell's ability to supply the required current, not it's capacity. Nickel Metal-Hydride cells are improving, but are still inferior to nicads at supplying high current. For this reason, they are not a good choice in a sailplane. In general, fatter cells are better able to supply high current than skinny cells.

600AE, 500A, 500AR

These cells all weigh about 2/3 of an ounce each, and are useful up to about 15 amps. These are the cells of choice for SP400 planes.

800AR, CP1300

These cells weigh just over an ounce each. The 800's are good up to about 30 amps, and the 1300's can pull up to about 40 amps for a short time.

1250SCR, CP1700

These are known as 4/5 sub C cells. They both weigh about 1 ½ ounces, and can provide up to about 80 amps for short periods. These are the cells of choice for F5B competition.

2400SCR, CP2400

These are the familiar sub C size cells used by the R/C car guys. They weigh about 2 ounces each, and are able to put out over 100 amps for a short time. These are the cells to use for maximum power if you can handle their weight.

Zapping is a process applied to individual cells that lowers their internal resistance. A pack of zapped cells will provide slightly higher voltage under load and run cooler. Zapping is not much use at low currents, but can be helpful above 40 amps or so. The difference between zapped cells and non-zapped becomes even greater at higher currents, and is highly recommended as current levels reach over about 60 amps.

As always, I'd be glad to offer any assistance I can in optimizing electric sailplanes.

Lenny Keer lenny970@AOL.com

Stylus Tip

From the RC Soaring Exchange: This undocumented "fee-chur" answers a long standing question. How can I reset the stopwatch timer on my Stylus without turning the transmitter off, then back on? The answer is simple, hit the plus and minus keys at the same time. The bigger question how can I set a switch to do this? The answer is: CAN'T...

Launch Setup

by John Kappus

The following was a soaring exchange posting by Joe Wurts.

“A short note on launch optimization. Full span camber is typically the best solution. If the planform is very safe (my emphasis), sometimes it is wise to use a little bit more flap than aileron, but most often the best solution is to use equal flap and aileron deflection. Check for the spring stiffness of the respective surfaces so that they will have equal deflection under the expected launch loads. Also, it is typical that the towhook should be back about as far as you can tolerate. If you can pull any up-elevator during the tow, the towhook might be too forward. The Icon is the first plane that I've had that violates this rule. Right now, my towhook is about 1/4" forward of the most rearward comfortable position, which is in line with the numerical predictions.”

This caused me some confusion. I have always been under the impression that a ‘safer’ launch setup would have LESS aileron camber than flap. In fact, I'm sure we've seen people launch with flap ONLY in the interest of safety. After all, aren't we putting in washout this way?

Below is Joe's response.

“This is something that took me a while to understand the physics of. Initially, I thought that using more flap than aileron in the launch set-up would yield just what you are referring to below (washout, and better handling qualities on tow). Once I went to an even launch set-up, the results showed much improved handling, and better launch efficiency.”

“Full span camber gets the entire wing working at or near the trim Cl. Using more flap than aileron gets you in trouble on most wings in a few ways. One is that adding flap deflection adds to the Cl capability, but not as fast as it changes the zero lift angle. That is, adding flap deflection typically reduces the stall angle of attack. Great, you say. This should make the center of the wing stall first. But, due to 3-d circulation effects, there is a relative upwash on the outboard part of the wing which can make the inboard part of the aileron stall before the flaps will. This is bad. This effect is magnified on planforms that get closer to an elliptical lift distribution (the less safe planforms). There is a second disadvantage in that the poor spanwise lift distribution will add to the induced drag.

On a very safe wing planform, the inboard part of the wing will stall well before the outboard wing. Also, the spanwise lift distribution will have too much lift outboard, and not enough inboard. To get the best spanwise lift efficiency, adding a little bit more inboard flap, and a little less outboard aileron will aid in tailoring the spanwise lift, and also increase the inboard maximum lift coefficient. This increase in lift efficiency will come at a price though, primarily in reduced "safety". It only takes a little delta between ailerons and flaps to get the right answer typically.”

I guess the answer really is equal full span chamber in most cases. Happy and high launching!

2002 Open Standings

	Mar	PI	Apr	PI	May	PI	F3J	PI	June	PI	July	PI	Nat. Lvl.	PI	Best 6	Place	Prev Pts	Prev Wins	02 Pts	02 Wins	Tot Pts	Total Wins	Promo
Masters																							
Miller Skip	1000	1	1000	1	984	2	1000	1	888	6	1000	1	1000		5984	1							
Howard Mark	996	2	976	3	882	9	980	3	988	2	473	16	940		5762	2							
Miller Charlie	886	11	954	4	934	7	966	4	971	3	771	11	968		5679	3							
Keer Lenny	940	8			834	11	982	2	960	4	916	5	940		5572	4							
Don Ingram	956	6	884	8	966	3			914	5	810	9	904		5434	5							
Phil Jones	993	3	918	6	887	8	871	9	790	13	773	10	901		5360	6							
Dr. Dan Williams	946	7	895	7	798	12	854	10	888	6	602	13	950		5331	7							
Lewan Bob	976	5	989	2	946	4	939	6	847	10	572	15			5269	8							
Bob Moffett	991	4	773	14	940	5	959	5	859	9	652	12			5174	9							
Blakeslee Byron	860	12	798	12	936	6	926	7	769	14	850	8			5139	10							
Monaco Jim	738	14	852	9	736	16	772	12	867	8	854	7	935		5018	11							
Rich O'Connell			626	15	779	13	848	11	749	15	950	3	828		4780	12							
Bob Vixie	917	10	949	5	769	14			1000	1			738		4373	13							
Bob Johnston	938		785	13					793		858		846		4220	14							
Gary Lewan	593	17	810	11	534	18			733	16	594	14	757		4021	15							
Zika Jack	824	13			754	15			832	11					2410	16							
John Kappus					1000	1					925	4			1925	17							
Padilla John							884	8			989	2			1873	18							
Gressman Tom	599	15											887		1486	19							
Pederson Bob	596	16	837	10											1433	20							
Shannon Bingham					851	10									851	21							
Miller Dusty					540	17									540	22							
Rice Bob	76	18													76	23							
Sportsman																							
Mike Verzuh	979		1000	1	1000	1			896	2	1000	1	826		5701	1	3		11	3	14	3	
Ali Ghaffari	1000		907	2	764	3	925		1000	1	827	2			5423	2	5	1	8	1	13	2	
Chuck Stasek			862	5	724	4			802	4	761	3			3149	3			1		1		
Joseph Newcomb			881	3	840	2			872	3					2593	4	2		4		6		
Ryan O'Hara							635				651	5			1286	5							
Wayne Hollenbeck			863	4											863	6							
Bob Hatch											741	4			741	7	6	1			6	1	
Jeff Hainline			519	6											519	8							
Steve Bygren			489	7											489	9							
Jim Asbury											483	6			483	10							
Neil Schmoker											165	7			165	11							
John Kappus																12	18	3			18	3	
Kevin Moffett																12	14	1			14	1	
Monaco Marc																12	4				4		
Peter Baur																12	1				1		
NOVICE																							
Neil Schmoker			1000		1000								595		2595	1							
Art Ries					344						780				1124	2							
Danny Dermer	1000														1000	3							
Tony O'Hara											1000				1000	3							
Chuck Stasek	881														881	5							
																6							

2002 RMSA Contest/Event Calendar

Date	Event	CD	Notes
Jan 8	RMSA Meeting		
<i>Jan 19</i>	<i>PPSS</i>	<i>Barry Welch</i>	<i>PPSS - Fun Fly</i>
Feb 5	RMSA Meeting		
<i>Feb 2-3</i>	<i>Southwest Classic</i>		<i>CASL Southwest Classic - Phoenix AZ</i>
<i>Feb 24</i>	<i>Snow Fly</i>	<i>Mike Fritz</i>	<i>PPSS - RES only</i>
Mar 3	Pro-Am	Jim Monaco	Fifth annual Pro-Am
Mar 5	RMSA Meeting		
Mar 10	Open*	Bob Pederson	
<i>Mar 23</i>	<i>March Madness</i>	<i>Joel Zellmer</i>	<i>PPSS - RES Only</i>
Mar 24	Elec. F5J	Lenny Keer	
Apr 2	RMSA Meeting		
Apr 7	Open*	Jim Barr	
Apr 14	Pro-Am	Jim Monaco	Fifth annual Pro-Am (new rescheduled date)
<i>Apr 21</i>	<i>Humps 'N Bumps</i>	<i>Dave Kurth</i>	<i>PPSS - Open</i>
May 5	Open*	Don Ingram	NOTE THIS IS BEFORE THE MEETING DUE TO MOTHERS DAY
May 7	RMSA Meeting		
<i>May 18</i>	<i>Mayfly</i>	<i>Austin Cleis</i>	<i>PPSS - Open</i>
May 19	Elec. F5J	Lenny Keer	
May 25, 26	F3J in the Rockies*	Mark Howard	Special National Event
<i>June 1-2</i>	<i>IHLG</i>		<i>International HL Contest Torrey Pines CA</i>
<i>June 1</i>	<i>Dech-Elec</i>	<i>Jack Dech</i>	<i>Electric Fun-Fly</i>
June 4	RMSA Meeting		
June 9	Open*	Bob Moffett	
June 15	HLG**	Shannon Bingham	Saturday event
June 23	BBQ/Fun Fly	Dr. Dan Williams	Family Event
<i>June 23</i>	<i>Summer Solstice</i>	<i>Chris Keller</i>	<i>PPSS - RES Only</i>
June 29-30	Elec. F5J	Lenny Keer	Two Day Event
July 2	RMSA Meeting		
<i>July 13</i>	<i>Memorial 2M</i>	<i>Dave Meyers</i>	<i>PPSS - 2 Meter RE Only</i>
July 14	Open*	Jim Monaco	
<i>July 20</i>	<i>Height O'the Season</i>	<i>John Read</i>	<i>PPSS - RES Only</i>
July 21	HLG**	John Kappus	
Aug 6	RMSA Meeting		
<i>Aug 10</i>	<i>Howling Coyote</i>	<i>Rich O'Connell</i>	<i>PPSS - Night Fly</i>
Aug 11	Open*	Bob Lewan	
Aug 18	HLG**	Shannon Bingham	
Aug 25	HLG**	John Kappus	
<i>Aug 25</i>	<i>Dog Daze</i>	<i>Greg Tarcza</i>	<i>PPSS - Open</i>
Sept 3	RMSA Meeting		
Sept 8	Open*	Bob Rice	AKA: Colorado Challenge Cup
Sept 14	Elec. F5J	Lenny Keer	Saturday event
Sept 21	HLG**	Shannon Bingham	
<i>Sept 21</i>	<i>Soar Bash</i>	<i>Bob Avery</i>	<i>PPSS - Open</i>
Sept. 29	LSF Day	Dr. Dan Williams	Work on LSF Tasks (Saturday)
Oct 1	RMSA Meeting		
<i>Oct 5&6</i>	<i>Visalia</i>		<i>Visalia California</i>
<i>Oct 5</i>	<i>Up-Chuck HLG</i>	<i>Bob Vixie</i>	<i>PPSS - HLG</i>
Oct 13	Open*	Mark Howard	
<i>Oct 20</i>	<i>Witches Brew</i>	<i>Larry Laughlin</i>	<i>PPSS - RES Only</i>
Nov 5	RMSA Meeting		
Nov 10	Open*	Shannon Bingham	
<i>Nov 17</i>	<i>Turkey Shoot</i>	<i>Chris Keller</i>	<i>PPSS - Open</i>
Dec 8	Awards Banquet		

*Club Open points contest ** Club HLG points contest

Italics indicates major national level contests available for points and PPSS events



2002 Board Members

President:	Dr. Danny Williams	(303) 903-2291	drdandc@juno.com
Vice President:	Bob Johnston	(303) 678-5597	
Secretary:	Bob Rice	(303) 745-5269	bob.rice@tobin.com
Treasurer:	John Pearson	(303) 306-6800	JTP1006@earthlink.net
Past President:	Shannon Bingham	(303) 877-7557	binghams@boulder.earthnet.net

Member Support

<http://rmsa.homestead.com>

Chief

Instructor:	Jack Zika	(303) 279-1549	(303) 505-9488 (Pager)
Instructor:	Mark Howard	(303) 278-7519	Mhoward@spaceimaging.com
F3B/F3J:	Mark Howard	(303) 278-7519	Mhoward@spaceimaging.com
Librarian:	Tracy Cochran	(303) 934-8838	Tcochran@idcomm.com
Newsletter:	Jim Monaco	(303) 464-9895	JimMonaco@earthlink.net

Winch Masters

Chuck Stasek	(303) 530-9373	RCSoarer2002@earthlink.net
Bob Johnston	(303) 678-5597	
Mike Verzuh	(970) 532-0638	mike.e.verzuh@seagate.com
Gary Lewan	(303) 277-1375	
Dr. Dan Williams	(303) 439-7777	drdandc@juno.com
Phil Jones	(720) 488-2854	philip.jones@galileo.com



Directions to Field

Take I-76 to exit 16. Turn left and follow the frontage road to the stoplight and turn east onto 120th eastbound towards the airport. Take 120th East to Tower Rd. Continue straight through traffic light and look for the sod sprinkler on the left. We are on the southwest corner of that part of the sod farm.

Flying for RMSA members and accompanied guests only.



Rocky Mountain Soaring Association
1123 S. Oakland St
Aurora CO 80012

Forwarding Address Requested

First Class Mail