



Thermals

Newsletter of the Rocky Mountain Soaring Association

August 1998

AMA Chartered Club 1245

Volume XXII Number 8

PRESIDENT'S MESSAGE

Well, I finally had to retreat to Winter Park for some R & R and escape the ominous specter of Bob Douglas's AVRO Vulcan -where his mighty launching system can't reach me at 9300 feet - eat your heart out AVRO ! Adios, Vulcanator! !

Looking ahead to our August events calendar, we have an open class and a 2-meter contest plus an LSF Task - fun fly. I hope everyone will use these events to hone his skills for the upcoming Colorado Challenge Cup on Sept. 13. We now have the cup. Let's start planning now to keep it for yet another year. Practice! Practice!

Phil DeLong has located a metal sign deal for us: \$117 for a 3' x 4' and a 2'x3' metal sign with our logo and a message as contained on our temporary sign: logo in blue; "No Trespassing" in red; message in black. As to field usage, it seems to be going well. Please continue to follow field instructions as published last month. I have a number of name badges people haven't claimed or picked up from last month's order. You need them for field identification!! I have them so please make arrangements to get yours. We still have some official club polo/golf shirts. Please wear them at the upcoming Challenge Cup event as the "uniform of the day." In the near future we will need to solve the current club winch/retriever problem by possibly purchasing a new or used, covered utility trailer to keep and transport them and related club equipment to our events. If you have info or ideas as to how this problem can be solved for the future, please contact me or a board member.

Thanks - Jack Zika

Next Meeting

Date/Time: August 4, 1998 7:00 PM

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

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



Dog Days Thermals - F3J Intro– August 9, 1998

CD Jim Monaco (303) 464-9895

Registration: 8:00 AM to 8:30 AM
Pilot's Meeting: 8:30 AM
First Round: 9:00 AM
General Entry Fee: \$5.00
Junior Entry Fee: \$3.00

Current (1998) AMA membership is required and must be shown.

Tasks: F3J Intro - this contest will be an introduction to the F3J contest format with the main exception that we will run the contest with winches instead of hand towing. See the included article for basic F3J rules. This will be a bit different from the run of the mill contests... I hope you enjoy it!!!

Landing: Spot Landing FAI rule tapes

Scoring: Flight scores are normalize within flight group (man-on-man). Flight groups are assigned randomly.

Flight Qualification: Sailplane must land within 75 meters of the designated landing spot for the flight points to count.

- **NO** flying prior to the setup of winches and retrievers
- Novices limited to RES sailplanes



August 16, 1998 LSF Tasks Day and Funfly – CD Bob Douglas

9:00 to ?

No entry fee

All LSF members and aspirants are invited to come out and work on their required tasks for their next level.

Qualified witnesses will be on site as well as (hopefully) a open pickup truck or two for goal and return work.

Frequency control will be strictly enforced for the safety of flyers on goal and return courses.

Club winches will be available and (if I understand the latest from the LSF board correctly) Hand Launch is a legal means of launching for thermal tasks.

LSF letters of intent and Level I vouchers will be available for aspirants (\$2.00 fee required).

August 23, 1998 2-Meter Contest – CD Mark Howard

Entry Fee: \$5.00

Registration: 8:30

Pilot's Meeting: 9:00

Current (1998) AMA membership is required and must be shown.

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

Tasks to be announced at the pilot's meeting.

Runway Landing



Firecracker Thermals Report

Well, the contest lived up to its name. IT WAS HOT!!! (96 degrees). First, and foremost, I would like to thank the 18 pilots who braved the broiler to fly. We got in the full six rounds with air that seemed to be either very good (everyone making their time) or very very sinky (on the ground in 90 seconds). I would like to thank everyone for honoring the 3 minute window between flight groups (no penalties were called). This moved the contest along very nicely. The brake adjustment suggested by Mark Howard seems to have eliminated the retriever problems.

The hot contest was between Lenny Keer and Bob Rice for third place in Masters with Bob coming out on top by 1 point. It was great to see so as many Novices (7) at the contest as Masters (also 7). The Novices are the future life blood of RMSA. Congrats to the class winners: Shannon Bingham-Novice, Jim Monaco-Sportsman, and Skip Miller-Masters.

Phil Weigle filed a protest to the method used to determined the flight grouping. A review of both the AMA rules and the RMSA contest format rules resulted in a denial of the protest.

The award plaques will be available at the next club meeting and contests. Again, thanks for coming and hope to see you next month at Jim's contest.

Bob Rice

Firecracker Thermals Results

Contest Results for: **Firecracker Thermals**

Date: **July 12, 1998**

ID	Class	Name	RD 1	RD 2	RD 3	RD 4	RD 5	RD 6	Total	Norm by Contest	Norm by Class
N Novice											
17	N	Shannon Bingham	1,000.00	1,002.41	612.15	998.15	966.75	352.94	4,932.39	763.53	1,000.00
12	N	Greg Merkle	1,000.00	985.61	446.10	374.10	975.90	902.15	4,683.86	725.06	949.61
6	N	Robert Moffat	1,000.00	275.12	795.61	359.71	1,000.00	892.66	4,323.09	669.21	876.47
7	N	Buzz Butler	583.33	287.08	457.29	776.60	975.90	1,058.29	4,138.50	640.63	839.04
15	N	Mac Arthur	338.89	619.05	678.39	172.08	1,000.13	268.91	3,077.45	476.39	623.93
2	N	Marc Monaco	1,000.00	1,021.61	996.30				3,017.91	467.17	611.86
9	N	Jim Butler	1,000.00	193.78	208.18				1,401.96	217.02	284.23
S Sportsman											
1	S	Jim Monaco	1,093.00	1,055.29	1,000.00	992.81	1,045.00	1,051.00	6,237.10	965.50	1,000.00
8	S	Bob Lewan	1,081.00	1,049.33	998.15	345.45	995.25	1,026.43	5,495.61	850.71	881.12
18	S	Gary Lewan	1,045.00	997.61	1,064.00	1,058.00	240.96	384.18	4,789.76	741.45	767.95
13	S	Charlie Miller	777.78	1,068.47	687.90	1,000.00	400.00	357.14	4,291.29	664.29	688.03
M Masters											
3	M	Skip Miller	1,061.00	1,071.00	1,090.00	1,066.00	1,087.00	1,085.00	6,460.00	1,000.00	1,000.00
4	M	Mark Howard	1,083.00	1,088.00	1,085.44	1,051.00	1,057.61	1,045.68	6,410.73	992.37	992.37
10	M	Bob Rice	1,039.00	883.12	1,050.00	1,030.30	888.00	1,083.00	5,973.41	924.68	924.68
14	M	Lenny Keer	1,056.00	1,077.00	1,069.59	1,034.43	1,075.75	656.13	5,968.90	923.98	923.98
5	M	Jack Zika	1,073.00	1,000.00	1,000.00	1,000.00	930.79	824.86	5,828.65	902.27	902.27
16	M	Dusty Miller	1,054.00	1,092.00	583.56	996.28	1,084.00	953.58	5,763.41	892.17	892.17
11	M	Phil Weigle	1,084.00	763.16	975.93	959.03	688.00	1,083.00	5,553.12	859.62	859.62



HL Contest #4 - July 26

The contest was billed as the "July Sizzler" after many previous days of 90 and 100 degree heat; then rain, rain, and more rain: What a surprise awaited the 8 stalwart chuckers who looked up at overcast skies and came out anyway. The field acted like an evaporative cooler once the sun poked its head out for the usual 30 second look - see. Only about noon did anything serious start happening on a regular basis and the rest of the day was not too bad for those who were in the right place at the right time - the feast or famine syndrome! The tasks flown were (1). Ten launches to make 5 two-minute flights; best 5 count. (2). Ten launches to make 2 five minute flights; best 2 count. (3). Three launches within 10 min. window to make 10 min flight; last launch counts! My personal thanks go to Jack Tovani and Barb Keer for their timing and computing efforts! Six rounds were flown and 5 trophies awarded.

1st Nathan Evans: 5886 pts
2nd Lenny Keer: 5383 pts.
3rd Charlie Miller; 4698 pts.
4th Phil Weigle; 4695 pot
5th Buzz Butler; 3593 pts.
6th Jack Zika; 3520 pts.
7th Bob Moffet; 2817 pts.
8th Jim Barr; 2627 pts

Even though the weather was flakey at best, a good time was had by all in the last HLG contest of the season.

Jack Zika, CD

Minutes - July 7, 1998

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

Old Business: Discussed the new field rules. Retrievers are working fine.

New Business: Jim Monaco donated \$20 toward the BBQ. Phil DeLong donated \$5 to the raffle.

Handlaunch contest on 7/26. Jack Zika is CD. 6 rounds, tasks to be determined.

Open contest on 7/12. Bob Rice is CD. 6 rounds, simple duration (round 1), international duration (rounds 2-6), AMA spot landing tape. Flight scores normalized within flight group (man on man), landing scored added. Discussed placing 4' by 3' sign at field, Metal sign will cost \$117. Jack will check with Don Schlup about placing

a sign at the parking lot. Club will look into a home built wooden sign.

Raffle: Bob Douglas & Mac MacAther won \$10 gift certificates from Action Hobbies. (Glenn will be carrying the Whyte Wings i.e. Aitronics, planes and stuff)

Close at 7:35PM

Respectfully submitted,
Bob Rice - Secretary

Treasurer's Report

Current account balances are:

Cash:	\$8.00
Checking:	\$326.36
Savings:	\$658.43

John Pearson

Winchmaster Wanted

Do you wish you could afford a winch & retriever? Well the club is in need of another person to care for a winch. Little work and you always will have it available for your use.

Requirements:

1. Bring to all contests where required.
 2. Keep the batteries charged (charger included)
- Contact Jack Zika or Bob Rice if interested.

An F3J Primer

What the heck is an F3J (or F3B) anyway. F3J and F3B, and a bunch of other letters are the designations used by the international aerospports regulating body to designate specific classifications of aero competition. There are many classifications and categories for full-scale and modeling, parachuting and ballooning, but the ones we as glider-guiders are concerned with are F3J which is for thermal duration competitions and F3B which is for multi-task glider flying. Multi-task flying is where the contestants must fly 3 different flight tasks with the same airplane. A speed task where you fly 2 laps (4 legs) around a fixed distance course to attain the shortest time or fastest speed. A distance task where you attempt the most number of complete legs over the same distance course, and there is also a thermal duration task.

F3J is modeled after competitions widely held in Europe and is a thermal duration event. In F3J all launching is accomplished by hand tow where one or more runners pull the model to height. All flights are accomplished in a 10 minute window. At the horn flyers may launch, fly for their maximum time without overflying the window time



and land in the FAI circle. If you are still in the air when the window timer horn goes off you lose your landing points and the your time also stops at the horn. Timing begins when you are off the line just like AMA rules and ends when the model touches the ground or a ground based object. All flying is man on man with random flight groups. The flight groups can be quite large with many flyers launching at once.

The landing circle is quite generous compared to our normal AMA landing circle. You receive 100 points for landing within 1 meter of the spot. You receive 95 points within 2 meters and 90 points within 3 meters. This means you get landing points if you are within 20 meters of the spot! No skegs or landing devices are allowed. Note that since launches are typically very close together, the approach lanes can be quite congested.

Another, more onerous requirement is that you **MUST** land within 75 meters of your designated landing spot - if you do not - you lose ALL of your flight points.

You may relaunch as many times as you like - with only the points for your last launch counting. There are no special provisions for pop-offs - fly it or land and launch as quickly as you can.

Rules for this contest - The intent of this contest is to fly a facsimile of the actual F3J format for fun. To this extent the following changes to the rules will be in effect for the contest.

1. Towing will be by club winches instead of hand towing. This relieves us of the burden of having enough hand tow equipment and towers and also the physical challenge of towing for our more physically challenged members (like me...)
2. Skegs and landing devices will be allowed. This is so no-one has to muck with their plane for this contest.
3. A 75 meter string will be used to verify the landing in bounds.
4. Man on man with random flight groups - 4 people to a group.
5. Must be on the ground within 1 minute of the timing horn for flight point to count.
6. All other rules will be as described above.

Those are the basic mechanics for the rules - lets go on to basic strategy. Note that I have never flown the event either, so these tips/observations are culled from reading a number of articles. Your mileage may vary.

Launching - Note that the window time is 10 minutes, and timing begins when you come off the line, so you can never have a 10 minute flight. The experts typically plan 6 seconds on tow, with a landing 1 second before the horn. That makes for a 9:53 flight and is very good. Generally if there is lift out there, everyone launches simultaneously at the horn. If the air is bad you can choose to hold and see what happens. If everyone is on the way down it may be a good strategy. Also - remember that you can relight at any time, so if you are up and down in 3 minutes, you may want to launch again and try to get 6 minutes and minimize your losses.

Thermalling - What can I say? Get your time but if you blow it big time you may want to relaunch.

Landing - Well, it's important to land within 75 meters of your landing spot to get your flight points, so you want to ensure you stay in range. A big fat zero for landing out really hurts the score. The landing points zone is quite generous, so shoot for the best landing you can. **Make SURE you touch the ground BEFORE the timing horn blares in order to get your landing points.** Remember that although timing must stop at the horn you can continue to fly to be able to reach the 75 meter mark for your flight to count as long as you do not exceed 1 minute over the window time - so you must be down by 11 minutes.

Have Fun - I hope this will be fun. We will likely have some confusions and foul-ups and I'm sure as CD I'll have to make up some rules for unusual circumstances, but if we all chill out I'm sure that it will all work out. Nothing ventured, nothing gained!!

Hope to see you there - Thermals...

Jim Monaco



Beginner Notes

Bob Douglas wrote to me recently and passed on this article from the internet soaring message board. The article discusses the dynamics of turning a polyhedral rudder/elevator sailplane and is focussed towards responding to a new flyer that was having some difficulty understanding what his plane was doing. This response was well written by Don Stackhouse of DJ AeroTech the manufacturer of the a number of excellent hand launch and 2 meter sailplanes. Enjoy!

Tobias Bond writes:

>...I did a turn, then low and behold, the 2 channel glider INVERTED on me. Not only this, but it continued to fly so, without budging. I was very low to the ground, and loosing ground fast, so I tried a very sharp turn with pull on the stick to see if it would un-invert, well it went straight down, BANG into the ground again... But I have never seen before where a wing angled up like mine actually flies inverted like that, the wings are shaped that way to prevent it, correct? <

The model didn't do anything you didn't specifically tell it to do, and no, the wings are NOT shaped that way to prevent it from rolling inverted. In fact (as any good instructor could explain to you, without crashing your model in the process, hint, hint,) they are shaped that way so that :

1. If the bank angle is disturbed by a gust, the model will tend to right itself, and...
2. If you TELL IT TO ROLL to a different bank angle by giving it rudder, the yawing of the model caused by the rudder will also cause it to roll (and keep rolling, as long as you hold the rudder input).

It's important to understand that the roll controls on a sailplane (rudder in this case, or aileron in the case of a "full-house" model) do NOT function in the same manner as the steering wheel of a car. This would explain exactly what happened here.

In a car, if you want to make a turn, you turn the controls in the desired direction and keep them there as long as you want to continue turning. When the car is pointed in the correct direction, you put the steering wheel back in the center, and the car goes straight again.

This is NOT how the rudder or ailerons work on an aircraft, ANY aircraft, full scale or model, including your Elite. This is a fundamental difference that MUST be understood if you are going to learn to successfully fly an aircraft of any type, with the possible exception of the Goodyear Blimp. If you try to steer an airplane the way you steer a car, you WILL lose control. Don't feel bad, this is a classic beginner mistake, it's cost many of us (including me) a model or two. Even full scale pilots unconsciously fall into this trap; I taught my full-scale aerobatics instructor to fly R/C. Despite his thousands of hours in full scale aircraft, and the ability to do all kinds of wierd, disorienting stuff like outside rolling circles in Pitts Specials, he still had trouble with this very problem the first time he flew an R/C model.

When you deflect the rudder, causing a yaw, on a model with dihedral (wings bent up in the middle) or polyhedral (wings bent up in more than one place), the skewed airflow catches one wingtip underneath and the other wingtip on top. This causes one wingtip to gain lift, and the other wingtip to lose lift. The model starts to roll towards the wingtip that lost lift. This works the same way, regardless of whether the aircraft is rightside up, upside down, or even in "knife-edge" flight (on its side). **IT WILL CONTINUE TO ROLL IN THAT DIRECTION AS LONG AS THE MODEL IS YAWED!** If you hold the rudder over long enough, the model will roll completely over up-side down and then right side up again.

Ailerons do the same thing, except more directly. By changing the effective twist of the wing, plus changing the camber of each wingtip in opposite directions, they cause the two tips to develop different amounts of lift directly, without causing a yaw first. In fact, because the "down" aileron is making more lift, and therefore more induced drag, the aircraft will tend to roll in one direction, but simultaneously yaw in the opposite direction. This is why most aileron-equipped aircraft also still need a rudder, to counteract this unwanted "adverse yaw".

To turn an aircraft, deflect the rudder (or ailerons) in the desired direction until the model rolls to the desired bank angle for the turn (typically anywhere from about 10 to 40 degrees for the sort of flying you're probably doing now). At this point, **PUT THE CONTROLS BACK IN NEUTRAL!** The model will stop rolling, but stay at about that same bank angle and continue to turn.

Now use rudder (or ailerons) to hold the bank angle constant, it might require a TINY AMOUNT in either direction, it depends on the turn and that particular model. Since the inside wingtip (the one closest to the center of the turn) is now flying slower than the outside wingtip, on many models you have to hold a little bit of



"top rudder" (rudder in the direction OPPOSITE from the turn) to keep the bank angle from getting steeper.

Once the model is in a turn, it has no idea the wings aren't level. This is exactly why you can't safely fly a full-scale aircraft inside clouds without the use of gyro instruments. Weight is pulling down towards the center of the earth, but the centrifugal force (or centripetal force, for all you purists out there) caused by the turn is pulling to the side. Combined they make a force that in a properly "coordinated turn" is perpendicular to the wings. Except for the difference in airspeed between the inside and outside wingtips, the aircraft has no idea it's in a turn. It will continue to turn until you tell it to stop.

One other problem shows up about now. Since the lift of the wings is now being used for both weight AND centrifugal force, you need more lift. If you leave the elevator alone, the model will start to descend a little faster, causing an increase in airspeed that provides the needed extra lift. If you want to hold airspeed constant, then you have to add a small amount of "up" elevator.

Be careful with that, though. Because your wing is making extra lift, it now has a higher stall speed. If you enter a steep turn at a low speed (not unusual in thermalling), it's possible to cause a stall. Because the inside wingtip is moving slower than the rest of the wing, it's very possible for it to stall first, causing the model to snap roll towards the center of the turn. This is a classic description of the phenomenon we call "tip stall". Avoiding tip stall is a matter of practice and getting to know your model. Your model has limits, and if you push it beyond those it will tell you. Don't blame the model, it's not fair for you to demand that it violate the laws of physics. Keep your airspeed up and your bank angles shallow near the ground, and explore the slow speed and steep turn capabilities of your model when you have lots of altitude for safe recoveries. The rule of thumb with an instructor is "two mistakes high". If you don't have an instructor, better make it five mistakes high, and keep a good supply of glue in stock.

OK, you're done turning, the model is now almost pointed in the direction you want it to go. Apply some rudder (or aileron) in the opposite direction, causing the wings to roll the other way until they are level again. Center the controls.

That's it, just hold rudder in the direction of the turn till you get the right bank angle, center the controls and then use small amounts of whatever direction of rudder you need to hold the bank angle steady, plus hold a SMALL touch of up elevator to keep the model from picking up too much speed. When you're done turning, use opposite

rudder to roll the wings level again. If you didn't get that touch of up elevator during the turn just right, you might have to give a brief push of a little down elevator to keep the model from "ballooning" as it comes out of the turn. That's all there is to it, all very simple once you get the hang of it.

Now, let's see if we can figure out what happened in your crash. For whatever reason (my guess is you continued to hold rudder and rolled past the desired bank angle), you ended up in a very steep or vertical bank. You added full rudder and up elevator. At this point your model fell victim to the major quirk of using rudder and polyhedral to control roll. Remember that the first thing the rudder does is yaw the model in the direction of the turn? As the model increases its bank angle to vertical, the rudder tilts with it till the rudder is nearly horizontal to the ground. In this condition, the rudder is now yawing the nose of the model downward toward the ground, putting the model into a dive, just like an elevator would do in level flight. As the model starts into the dive, the airspeed increases, the yaw increases, and pretty soon if you don't do something to stop it, the model is headed straight for the ground in a classic "graveyard spiral". Pulling lots of up elevator at this point without first centering the rudder and leveling the wings will usually just make the spiral tighter and steeper.

This is the typical end of many pilots of full scale aircraft who blunder into clouds without the proper training and instruments. They gradually work their way into a graveyard spiral, try to stop the wild increase of airspeed by pulling more up elevator, which only tightens the spiral and adds more "G" load to the wings until the wings come off or they run out of altitude. In full scale aircraft, it's usually the wings or tail that go first, and a shower of shredded airplane parts falls out of the bottom of the cloud.

One of the first things they teach you in aerobatics training in full-scale aircraft is to NEVER try to "pull through" with up elevator when you lose control and find yourself inverted. Even if you have plenty of altitude, it's very easy to reach scary-high airspeeds and pull the wings off.

So how can you intentionally do a roll in a non-aileron model without ending up in a spiral dive? Simple. First dive to get some speed, then pull the nose up enough (maybe 10-20 degrees) so that as it rolls inverted, the nose-down effect of the rudder will bring the model back to level. As it approaches inverted flight halfway through the roll, feed in a little forward stick ("down" elevator). because the model is upside down, the "down" elevator deflection will help hold the nose up. Regardless of



whether you're holding up, down or neutral elevator, the model will continue rolling in the same direction as the rudder deflection. As the model continues to roll past inverted and back towards upright flight, center the elevators again. On this second half of the roll, the rudder deflection will be tending to hold the nose up. At this point, since the wing is pulling sideways, the model will still tend to slump into a shallow dive, but not a graveyard spiral. As you come out of the roll with wings level, center the controls and use a bit of up elevator to pull out of the shallow dive.

Things happen fairly quickly the first time you try this. It obviously takes some coordination and practice to get it right. Make sure you have good skills in level flight and normal turns before trying this, and make sure you have tons of altitude and preferably a good instructor with you before you start working on aerobatics.

Don Stackhouse @ DJ Aerotech djarotec@bright.net
<http://www.bright.net/~djwerks/>



1998 RMSA Club Standings

-- MASTERS --	Mar	Apr	May	June	July	Best 6	Place	97 Points	97 Wins	98 Points	98 Wins	Total Points	Total Wins	
Keer Lenny	1000	637	984	906	924	4451	1							
Miller Skip		1000	996	1000	1000	3996	2							
Howard Mark	801	991	988		992	3772	3							
Miller Dusty		850	1000	927	892	3669	4							
Zika Jack	637	975		796	902	3310	5							
Weigle Phil	759			831	860	2450	6							
Pederson Bob	654	801	655			2110	7							
Sheldon Matt	777	926		353		2056	8							
Barr Jim	567	766	262			1595	9							
Rice Bob				630	925	1555	10							
Evans Nathan				934		934	11							
Padilla John	899					899	12							
Dech Jack				886		886	13							
Cleis Austin				881		881	14							
Pearson John				544		544	15							
---- SPORTSMAN --														

Monaco Jim	1000	809	810	929	1000	4548	1	7	0	8	2	15	2	
Douglas Bob	977	1000	792	1000		3769	2	11	1	8	2	19	3	
Lewan Bob			846	973	881	2700	3			5		5		
Rice Bob	428	878	961			2267	4	18	3	4		22	3	PROMOTED
Miller Charlie			1000		688	1688	5			3	1	3	1	
Port Don	917					917	6	10	3	1		11	3	
Burt Evans				891		891	7							
Lewan Gary					768	768	8			1		1		

NOVICE ----														
Monaco Marc	700	748	1000	917	612	3977	1			6	1	6	1	
Lewan Gary	615	860	899	1000		3374	2	6	1	6	1	12	2	PROMOTED
Mac Arthur	327	495		754	624	2200	3	9	1			9	1	
Bingham Shannon			931		1000	1931	4			5	1	5	1	
Merkle Greg				976	950	1926	5	5	0	4		9		
Miller Charles	866	1000				1866	6			5	1	5	1	
Lewan Robert	482	695				1177	7	6	2			6	2	
O'Hearn Mike	1000					1000	8	4	1	3	1	7	2	
Moffat Robert					876	876	9			1		1		
Butler Buzz					839	839	10							
Butler Jim					284	284	11							
Beggs Bill	246					246	12							
Lichstein Gib		207				207	13							
West David							14	3	1			3	1	
Curtis Matt							14							
Kentner Matt							14							
Delponte Gino							14							



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**	Phil Weigle	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	Open Class
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	bobr@tobindatag.com
Secretary:	Bob Rice	(303) 745-5269	mjohearn@ccgate.hac.com
Treasurer:	John Pearson	(303) 306-6800	jpearso1@ix.netcom.com
Past President:	Phil Weigle	(303) 341-9256	philip.weigle@mcione.com

Member Support

www.tobindatag.com/rmsa

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	Tcochran@idcomm.com
Newsletter:	Jim Monaco	(303) 464-9895	jmmonaco@us.ibm.com

Winch Masters

Bob Rice	(303) 745-5629	bobr@tobindatag.com
Gary Lewan	(303) 277-1375	
Shannon Bingham		



Directions to Field

Take I-76 to exit 17. Take 120th East to Tower Rd. Continue straight through traffic light and look for the sod sprinkler on the left. We are on the northwest corner of that part of the sod farm.



Forwarding Address Requested