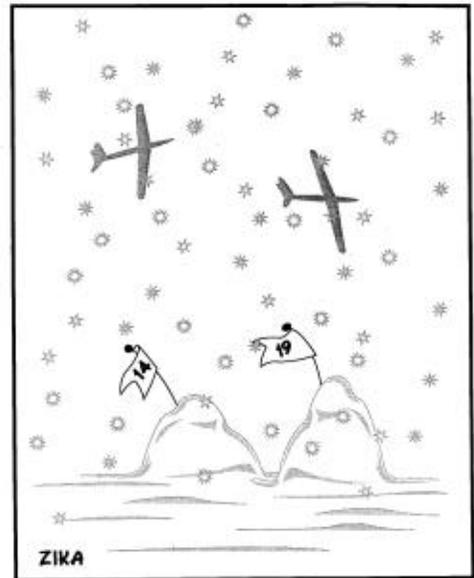


Thermals

Newsletter of the Rocky Mountain Soaring Association



January 1999

AMA Chartered Club 1245

Volume XXIII Number 1

VICE PRESIDENT'S MESSAGE

Happy New Year everyone! Hope everyone's holiday season was pleasant and relaxing.

We had the annual club year-end banquet on December 6th at the Old Country Restaurant. There were thirty people in attendance enjoying a generous choice of food and the good company of their fellow pilots. Club prizes were awarded to the top eight pilots in the three classifications. First through fifth place prizes were also awarded to this year's competitors in the Hand Launch arena. Congratulations to Skip Miller who captured the club championship trophy, Jim Monaco, this year's top Sportsman, and to Marc Monaco, this year's top Novice.

About eight different prizes were raffled off. Thanks go out to Bob Rice, Lincoln MacArthur, Mark Howard and Phil DeLong for generously donating to the raffle prize pool. Skip Miller awarded his \$100 prize check to Jack Zika for sponsoring the most new club members last year. The look on Jack's face was pure surprise. Skip also extended his offer of \$100 to this year. Additionally, recognizing the need to generate youth interest in the hobby, Skip also challenged the club to recruit junior members to not only join the club but also to participate in club contests. Towards that end, Skip is offering \$100 to be awarded to that club member who can recruit the most junior pilots (15 years and younger) to join RMSA and participate in at least two club contests. Thanks for the challenge Skip.

As of this writing, two of the winch motors have been rebuilt thanks to the efforts of Bob Rice. The remaining two motors will be rebuilt shortly. We will utilize the current batteries during January and February to determine which ones require replacement. New 250# swivels have been ordered, winch and retriever line should be ordered shortly. All the winches will be replenished with new line by the end of February. Launch line replenishment will also be performed in June and again in September. The intent is to minimize line breaks during contests due to wear and fraying. The benefits are more rounds flown and diminished chances of damage to sailplanes.

Included in this issue are the 1999 contest program rules and contest schedule. The contest rules were reviewed, discussed and modified as a collaborative effort of the competition rules committee in late November. Please read through the rules and comment on them should you have a concern or disagreement. Comments can be received via phone message, regular mail or e-mail to myself or any of the other board members. Rules and any comments will be discussed at the February club meeting whereupon the rules will be finalized. As for the contest schedule, note that the two RES and Fun Fly type contests are Saturday events.

Can't wait for Spring - **Mike O'Hearn**

Next Meeting:

Date/Time: January 5, 1999 7:00 PM

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

Program: Review of 1999 contest guidelines

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

Editor's Notes

Here we are at the start of another year. The club board is working hard to make the club better for all of us. You will see in this issue the 1999 club calendar. Much discussion went into the creation of this calendar, trying to balance the needs of all the members. In particular we understand that a number of sport flyers are only able to get out to the field on Sundays, so we have scheduled a number of our club activities for Saturdays to free up some more Sundays for sport flying.

Also in this issue are the CD guidelines for running our contests and a description of the contest program for our club. We actively encourage all flyers to participate in the contest program. It's not a lot different from sport flying, except we are more disciplined in how we fly. Trying hard to make your time and scratch out that last few seconds can greatly help your sport flying too... We have some of the best flyers in the world in our club and it is fantastic to be able to fly with them and learn some of the techniques to fly - as the old buzzard said: "until we want to come down".

For current contest flyers, we will be discussing the contest guidelines at the January meeting and will ratify them then. If you are interested in the outcome, please attend the meeting so you can vote. At the very least, let one of the officers know your opinion to carry forward to the meeting.

Jim Monaco

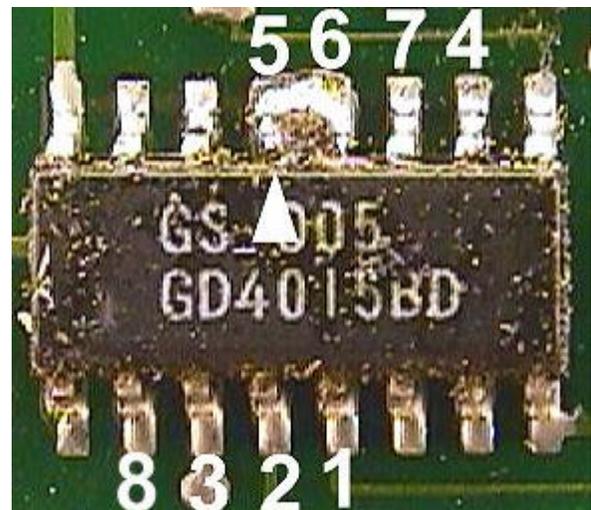
Hitec Receiver Modifications

Here is some information on how to bring more or different channels out of the 5-channel Hitec receiver. This is important for some transmitters that have hardcoded channels for ailerons. This information came from the internet - the first is an article with some good pictures courtesy of "Slickraft Models". The second is an article describing the procedure.

Here are a couple of quick photos that help determine which pins to tap into. They allow you to bring more channels out of the Hitec 535 and 555 receivers. (6, 7, &8) This is tricky soldering so be warned! This is not a tech topic with all the steps involved. I'm just showing where to find the signal outputs for the frequencies desired.



Rear view of 535 circuit board. 16 pin chip between the two notches in the board is the one you want to find.



This is as good a shot as I could get. This is a 535 that I have converted already. I wanted this receiver to have channel 6 on the pins where B/5 is on the existing RX. I use a Futaba flaperon program and wanted ailerons on ch1&6. I did not want 5 at all so it is gone. In this case I cut the lead on ch-5 right where it came out of the chip (at the point of the white triangle) with a sharp exacto knife. I then intentionally joined the solder pad of ch 5&6. I now have channel 6 where 5 used to be. 5 is gone for good. I could have left 5 alone and put in a pigtail for 6 but, I wanted to keep it simple. None of my slope planes have retract so I won't ever need 5. You can bring out all the additional channels if you add pigtails and pickup the positive and negative elsewhere on the board. Good luck! Also see this page for more technical info:
<http://www.withinc.com/~wwang/HitecMod.jpg>

PULLING OUT THE HIDDEN CHANNELS

By George Steiner

Editor's Note: Several years ago (April '93, page 180), an article by George Steiner was published in RCM on how to extract three additional channels from the Airtronics 4-channel microreceiver #92745/72 FM. There was considerable interest in this article, so George has again

shown how you can expand some receivers to take advantage of their real potential. However, take note of George's caution at the end of the article; if your soldering skills are not up to the task, you're better off to leave it to someone with the appropriate skills.

Most R/C receivers in the marketplace these days have the pin out for 6, 7, or 8 channels. Some small size lightweight receivers come with a restricted servo connector block.

channels were simply not brought out.

With the ever-increasing use of the computer programmed R/C transmitter and the use of multimixed servo functions, requests have been to expand the

that super sailplane. If the mods shown to the battery connector are not what you want, a female servo connector can be wired in place as a pigtail. This would require an access hole being drilled in the

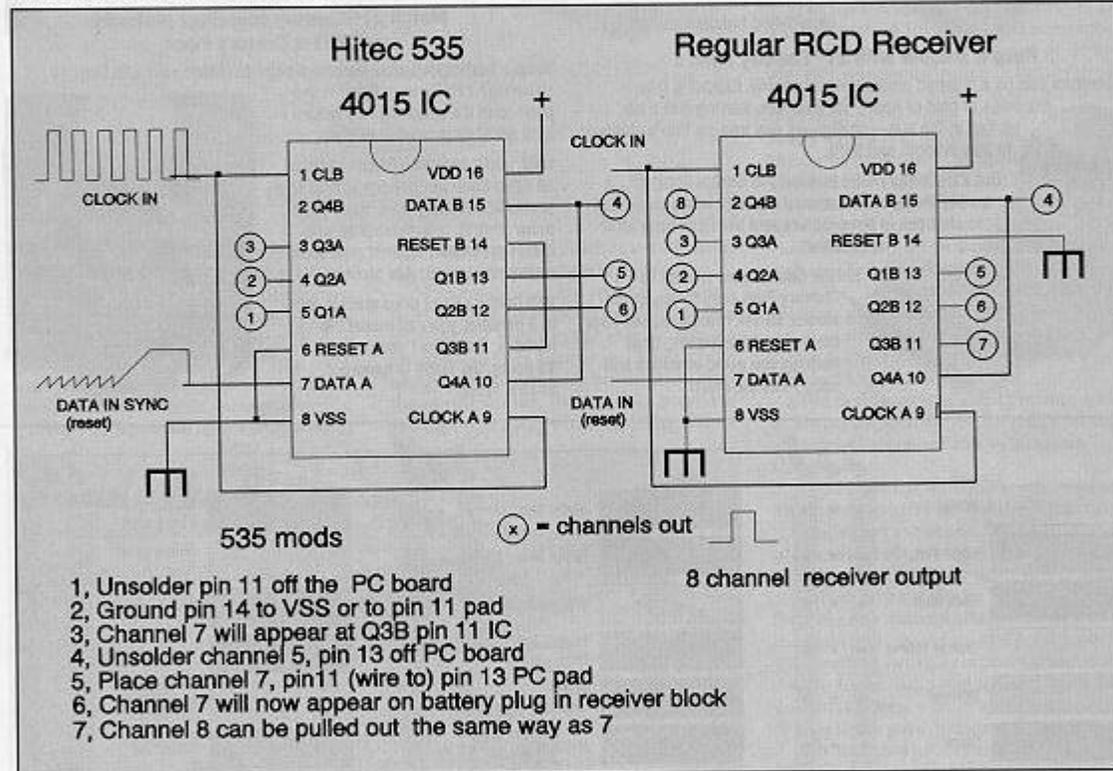


FIGURE 1:

Expanding a receiver with extra channels (Conversion to allow channels 7 and 8 to be used out of the 535 receiver).

One in particular is the small Hitec 535 receiver that ends the servo connection at channel 5, which is shared with the battery input. Note that it is not restricted to decode a 7 or 8-channel transmitter because it is using a dual 4-bit static register, but was designed to save space and weight for lightweight use, and the other

small restricted receivers for other servo channels to be exposed. The Hitec 535 is a good example of one that can be expanded for use with a high-powered multifunction transmitter. Figure 1 gives the required wiring changes that can be made to the Hitec 535 receiver to bring out whatever mix channel you need for

receiver case for the extra channel to be brought out as a pigtail. Warning! The wiring is extremely close, with no room for errors. Only those experienced in soldering techniques should attempt this modification.





Rocky Mountain Soaring Association

GENERAL INFORMATION

ROCKY MOUNTAIN SOARING ASSOCIATION has a general membership meeting on the first Tuesday of each month at 7:00PM in the meeting room of the Newgate Apartments, 10400W. 44th Ave., Wheat Ridge, Colorado. Our club meetings are open to the public and visitors are encouraged to attend.

The RMSA flying site is located at the Scienturfic Sod Farm, 128th Ave. and Tower Road (See map) Our monthly contest is held the Sunday after the first Tuesday of the month. The flying site is open during the week and you can generally find someone at the field and especially on the weekends. If you need help or a flying buddy during the week, please give one of the officers a call and arrangements will be made. Beginners and spectators are always welcome!

Reminder Membership in the Academy of Model Aeronautics (AMA) and Rocky Mountain Soaring Association is required for field usage. Membership in AMA is required for flying in any RMSA organized event or using any RMSA equipment If you are new to the area or new to the sport, please contact one of the members for information and beginning pilot instruction which is free of charge by our qualified instructor staff.

RMSA has been a charter member of AMA since 1976 and all members of RMA/RMSA are responsible for adhering to the rules and regulation of born organizations. All rules, regulations, instructions issued by Scienturfic personnel or officers of the Colorado State Division of Wildlife re to be followed by all RMSA members and guests. We have had the privilege of using of this facility since 1976. Please respect with gratitude the owner's generosity!

ROCKY MOUNTAIN SOARING ASSOCIATION FIELD RULES

1. If you are the first pilot on the flying site, you are obligated to drive the perimeter of the sod farm to see that there is no other flying going on before establishing the best flying site for all arriving pilots based on the conditions that prevail at the time. Flying should be from one site only!
2. Establish a frequency control pole and tag system! Frequency control is to be in effect at all times!! All members will post their frequency control tags on the pole and if there are conflicts, please exercise safety sense as well as share the flight time.
3. Parking and pit areas should be as condensed as possible for the safety of launch and landing.
4. Establish flight line areas for winch launch, high start launch, and hand launch that are separate for the sake of launch, flight & landing safety.
5. Flying over the parking/pit areas at less than 30 feet is prohibited. Doing so in competition WILL result in a zero flight score and during R/R flying a disciplinary action by the club.
6. No aerobatics or speed runs over the parking/pit/Launch/Landing zones.
7. Do not launch if a plane is circling in a launch zone: vacate the launch zone as soon as possible if someone is waling to launch.
8. When entering a thermal occupied by other aircraft, enter in the same direction as the first aircraft
9. Landing aircraft have the right of way!
10. In the event of no mechanical retriever, please shag your own chute/line for the flight
11. Please share the usage of club equipment so that all have equal flight time.
12. Please be courteous and helpful to your fellow flyers as well as informative to all guests/spectators. Enjoy yourself and others!!
13. Absolutely no debris or trash is to be left on the field! Please take it home with you for disposal.
14. Make sure that your plane and electronics are airworthy before each flight Exercise good safety sense in your flight
15. The aircraft will have an identification name/address or AMA number on or in the model in case of loss.
16. Please tag your winch/high start spikes or stakes with fluorescent tape so they are easily spotted on the field by all concerned.
17. Absolutely no alcoholic beverages will be consumed, prior to or during participation in any model event on the flying field.



Rocky Mountain Soaring Association

Contest Directors And Pilot Guidelines - 1999

The intent of the following rules and regulations is to enhance the enjoyment of sailplane Contesting for all participants.

1. For AMA/RMSA sanctioned contests, the Directors must be certified by the AMA. For non-sanctioned events; the directors may or may not be AMA certified.
2. In AMA/RMSA sanctioned contests, the CD is a certified agent of those organizations and charged with carrying out the rules and regulations in a fair and equitable manner. The CD is in charge of all operations and is the "final authority."
3. Each CD will establish a staff of personnel to adequately run the contest in a professional manner; CD, asst. CD, line officer, winch master, safety officer, scorer, etc. and those positions will be filled well in advance of the contest date. The CD will arrange for all necessary contest equipment to be at the field for his contest.
4. The announcement of the monthly contest will be published in the Thermals and should include all pertinent details as well as the names of the CD staff for that contest.

This paragraph is changed to delete the requirement to publish a "staff" in the Thermals and will read as follows:

The announcement of the monthly contest will be published in the Thermals and should include all pertinent details.

5. AMA/RMSA rules and regulations will be reviewed at the contest pilots' meeting and any deviation will be in published form.
6. The CD will give informational data to not only pilots, but also to the timers and the rest of his staff so all participants are aware of the areas of responsibility.

This paragraph is changed to add the requirement to address any safety concerns and will read as follows:

The CD will give informational data to not only pilots, but also to the timers and the rest of his staff so all participants are aware of the areas of responsibility and to ensure any safety procedures are known and adhered to.

The next 2 paragraphs are deleted as providing little value as #7 cannot be enforced and #8 is always true and redundant.

7. All of the membership should be available for all activities of the contest board.
8. RMSA winches and retrievers will be used by all participants except for HLG and F3B & F3J.
9. There will be no time constraints put on the running of the contest. Spring1 summer, and fall starting times for contests should be adjusted to the season; as many rounds should be flown as possible! The CD will purpose to use 6 rounds as a minimum for the contest. Posted times as published in the newsletter, for registration, pilots meeting, 1st flight, etc. will be adhered to.

The above paragraph is amended to remove the sentence about time constraints as all contests are constrained by time whether by specifying a number of rounds or a last round begin time. The paragraph is changed to read:

Spring, summer, and fall starting times for contests should be adjusted to the season; as many rounds should be flown as possible! The CD will propose to use 6 rounds as a minimum for the contest. Posted times as published in the newsletter, for registration, pilots meeting, 1st flight, etc. will be adhered to. A contest completion criteria shall be announced at the pilots meeting specifying either a specific number of rounds, or a time after which another round will not be started.

Item 10 will be deleted as it is not needed.

10. Winch and retriever equipment will be used at all AMNRMSA sanctioned events and at the discretion of the CD at fun flies, etc. Hand launch and F3B/F3J events are responsible for their own needs. Club equipment, while not up to required F3B standards, will be available.
11. With the exception of HLG and F3B, the AMA/RMSA contest format will be "Man on Man" or "Designated Flight Order." When "Designated Flight Order" is used, a winch launch order will be initiated—the pilot will be expected to fly as called or opt to move to the end of the flight order and then must fly when called the second time. Man on man format will use a totally random draw, including Novice, Sportsman and Master. Man on man format will use 3 man groups and a 4th winch will be available to immediately relaunch a pop-off. (No relaunching of the entire group).

The above item will be changed to emphasize the preferred contest format and to also allow CD discretion for "Called Flight Order" and will read as follows:



Rocky Mountain Soaring Association

With the exception of HLG and F3B, the preferred AMA/RMSA contest format is “Man on Man”. The CD may also choose “Designated Flight Order” or “Open Winch” format at his discretion. When “Designated Flight Order” is used, a random winch launch order will be initiated—the pilot will be expected to fly as called or opt to move to the end of the flight order and then must fly when called the second time. Man on man format will use a totally random draw, including Novice, Sportsman and Master. In the event of an equipment failure or an allowable pop-off, the flyer must land immediately and relaunch on any available winch. The entire group will only be relaunched in the event of 2 or more launch failures.

12. The CD will not tolerate the evidence of poor sportsmanlike conduct and/or the interference of another’s flight. Any and all infractions of AMA/RMSA contest rules will be met with appropriate disciplinary action. AMA Contest Rules Book will be the guideline. All participants will be expected to cooperate fully with the CD.
13. The CD will write an overview of the contest to be published in Thermals and see that it is given to the editor in time for the next publication.

The following item will be deleted because the intent is embodied in item # 5.

14. The CD will instruct all contestants and helpers as to winch/retriever operation, retrieval signals, timer responsibilities and landing and low altitude safety rules, etc.
15. The CD shall establish and post the flight and shag order for each flight in the round.
16. Master and Sportsmen will be allowed one pop-off per contest. Novice will be allowed one pop-off per round.

The above item will be modified to better clarify the recommended pop-off rules and will read as follows:

Master and Sportsmen will be allowed one pop-off per contest. Novice will be allowed one pop-off per round. Pop-offs must be declared immediately (within 10 seconds), Equipment failures are not considered pop-offs and are not limited. For Man on Man competitions once declared the flyer must land immediately and relaunch on the next available winch. For Designated Flight Order the flyer goes to the end of the flight order.

ROCKY MOUNTAIN SOARING ASSOCIATION CONTEST PROGRAM

PURPOSE

1. To help members develop flying skills by competing against an equally skilled group.
2. To allow advancement to a higher level skill group.
3. To challenge all members to develop their design, building, and flying skills.

RMSA CONTESTS

RMSA usually schedules at least one contest per month, March through November. Tasks are chosen to provide variety and challenge for all skill levels. At the beginning of each year, the Board of Directors normally obtains AMA sanctions for nine regular monthly contests to be counted toward season points. The Board or individual contest directors may from time to time also request or schedule additional specialty contests. All AMA/RMSA sanctioned contests will count toward season point totals and awards. Specialty contests, fun flies, etc. are non-sanctioned and thus non-point events.

NON-RMSA CONTESTS

The Colorado Challenge Cup is normally held in August or September and sanctioned by the club holding the cup for the year and is a counting event regardless of the club holding the event.

To encourage AMA members to participate in national level competitions, any national contest spanning two or more days with 30 or more contestants may be counted towards season total points.

To encourage reciprocity with the Pikes Peak Soaring Society (PPSS) ONE PPSS contest may also be used for season points.

Contests must be of a class compatible with the RMSA class they will be counted against, e.g. Open Thermal Duration (including F3J and F3B) for the RMSA Open class, or HLG for the RMSA HLG title.



Rocky Mountain Soaring Association

NO MORE THAN TWO NON-RMSA CONTESTS CAN BE COUNTED TOWARDS SEASON POINTS TOTALS!! This is a total for BOTH HLG and Open class.

CLASSES

- Novice** New members with limited flying experience. Novice pilots are limited to Rudder-Elevator-Spoiler sailplanes. Pilots flying full-house sailplanes are automatically promoted to Sportsman.
- Sportsman** Members with contest experience and have advanced by contest points.
- Master** Member having advanced through contest achievement from other classes.

New Member Classification

At AMA/RMSA contests, all members are expected to identify themselves as novice, sportsman or masters pilots based on the above guidelines. New members should elect to place themselves in the Sportsman class if they are accomplished RC pilots (power or glider) or have had significant prior contest experience. The Novice class is intended to encourage new flyers to enter the club contests. New members with vast contest experience may petition the Board to be placed directly into the Master class.

Reclassification

Members may petition the board for consideration of changing classification either up or down based on extenuating circumstances. The board will examine the merits of the petition and make a recommendation based on fairness to the member and other competitors.

ADVANCEMENT

Class points are given as follows;

1st place in class = 3 points

2nd place in class = 2 points

3rd place in class = 1 point

Advancement to the next class requires the following:

1. Novice to Sportsman = 12 points and 1 class win or 3 class wins.
2. Sportsman to Master = 21 points and 2 class wins or 4 class wins.

In all cases there must be at least three competitors in your class to be counted towards advancement points. No class points are carried forward at advancement, however class points are carried forward to the next contest year.

STANDINGS

Normalized scores from each contest will be used to develop advancement points and annual awards. Annual awards shall be given through third place in each class. Only the six best Open contests are counted towards annual Open points. For Handlaunch only the best 3 contests are counted. In addition only two of the special noted contests may be counted toward the six best (including one contest hosted by the Pikes Peak Soaring Society).

The RMSA club champion shall be recognized as a true champion pilot, showing both skills as a pilot and the willingness to compete against his peers inside and outside of RMSA. Points for the club champion trophy shall be computed from the total of the normalized, documented scores from all AMA sanctioned contests entered during the year by that competitor. Normalized points from outside contests must be documented, signed by the contest director, and submitted to the club scorekeeper prior to November 15 for that contest year. Annual awards shall be given in the class where the pilot spent most of the year. Example: If the pilot advances from Sportsman to Master by virtue of contest points during mid-year, he/she will be eligible for an award only in the class where he/she spent the majority of that year's club contests. In the event of a tie for any standings, co-champions will be declared.



Rocky Mountain Soaring Association

Rocky Mountain Soaring Association Application

RENEWAL _____ NEW MEMBER _____ SPONSOR _____

Please complete the following information for our records:

Family Memberships - Please make and complete a copy for EACH flying family member!

Name : _____ Need name badge? No Novice Sportsman Master

Address (if new member or incorrect on label) _____ Year Joined RMSA: _____

_____ Home Phone: _____

_____ Work Phone: _____

AMA #: _____ AMA Contest Director? Yes No

AMA Class Open Youth Family Birth Date: ___/___/___

LSF #: _____ LSF LEVEL: ___ NSS #: _____ E-Mail: _____

RMSA Membership Class Senior Only Senior W/Family Associate Family
(Note - Senior W/Family receive THERMALS - other Family members check Family Box)

Non-Flying Family members: _____

RMSA Competition Class Novice Sportsman Master

RMSA Offices Held _____

----- MODELS OWNED -----				
PLANE	SPAN	COLOR (Top,Bott.,Fuse)	CLASS (Open,HLG,Std..)	FREQUENCY

Interests: Sports Flying T/D contests HLG Contests NSS Soar-ins F3J
 F3B X-C contests Slope contests Other _____

Past Achievements: _____

- Dues: \$ 5.00 New Member Initiation Fee
 \$ 5.00 Junior - under 17
 \$ 25.00 Senior - individual 17 and over
 \$ 30.00 Family - any number (same address)
 \$ 8.00 Associate (newsletter only)
 Make checks payable to RMSA

Comments and suggestions are ENCOURAGED! Please include these with your form!

Please send to: RMSA
c/o Bob Rice
1123 S. Oakland St.
Aurora, CO 80012



Rocky Mountain Soaring Association

1998 Contest/Event Calendar

Date	Event	CD	Notes
Jan. 5	RMSA Meeting		Newgate Apts
Feb. 2	RMSA Meeting		Newgate Apts
Mar. 2	RMSA Meeting		Newgate Apts
Mar. 7	Pro-Am	Jim Monaco	Second annual Pro-Am
Mar. 14	Open*	Mark Howard	
Apr. 6	RMSA Meeting		Newgate Apts
Apr. 11	Open*	Jim Barr	
Apr. 24	RES	Bob Lewan†	Restricted to Rudder/Elevator/Spoiler controls only. Saturday event
May 4	RMSA Meeting		Newgate Apts
May 16	Open*	Lenny Keer	
May 23	HLG**	Phil Weigle	
June 1	RMSA Meeting		Newgate Apts
June 5	Fun Fly	Bob Douglas	Saturday event
June 13	Open*	Bob Rice	
June 27	HLG**	Jeff Burg†	
July 6	RMSA Meeting		Newgate Apts
July 11	Open*	Phil Weigle	
July 25	HLG**	Jack Zika†	
Aug. 3	RMSA Meeting		Newgate Apts
Aug. 8	Open*	Jim Monaco	
Aug. 15	HLG**	Lenny Keer	
Aug. 22	2 Meter*	Mark Howard	Restricted to 2 meter models
Sept. 7	RMSA Meeting		Newgate Apts
Sept. 12	Open*	Matt Sheldon †/M. O'Hearn	AKA: Colorado Challenge Cup
Sept. 25	LSF & Fun Fly	Bob Douglas	Saturday event
Oct. 5	RMSA Meeting		Newgate Apts
Oct. 10	Open*	Bob Lewan†	
Nov. 2	RMSA Meeting		Newgate Apts
Nov. 6	RES	Michael O'Hearn	Restricted to Rudder/Elevator/Spoiler controls only. Saturday event
Dec. 5	Awards Banquet		



1998 Board Members

President:
Vice President: Mike O'Hearn (303) 693-6925 mjohearn@ccgate.hac.com
Secretary: Bob Rice (303) 745-5269 bobr@tobindatag.com
Treasurer: John Pearson (303) 306-6800 jp7120@aol.com
Past President: Jack Zika (303) 279-1549 (303) 505-9488(Pager)

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 jimmonaco@us.ibm.com

Winch Masters

Bob Rice (303) 745-5629 bobr@tobindatag.com
Mike O'Hearn (303) 693-6925 mjohearn@ccgate.hac.com
Shannon Bingham binghams@boulder.earth.net.com
Gary Lewan (303) 277-1375



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 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

First Class Mail

Forwarding Address Requested