



# THE MAX-OUT

Newsletter of the Magnificent Mountain Men

AMA CHARTERED CLUB #177



The "Max-Out" is the Official Publication of the Magnificent Mountain Men, a Colorado not for profit corporation, and is published approximately 10 times per year. Material may be reproduced on an unlimited basis by other publications, but proper credit is requested.

Editor: Rick Pangell  
6994 So. Prescott St.  
Littleton, CO 80120  
Ph: 303-798-2188

Visit our website at:  
[www.themmmclub.com](http://www.themmmclub.com)  
or E-mail us at:  
[themaxout@aol.com](mailto:themaxout@aol.com)

Or, join the web group at:  
<http://groups.yahoo.com/group/MMMFreeFlight/>

2012-03 (May-June)



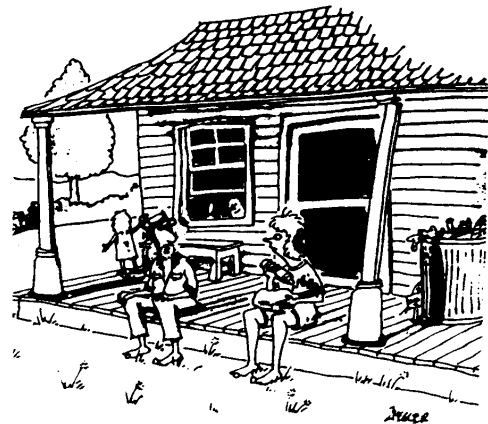
## PONDERINGS DEP'T

### 10 MORE YEARS

Last month we said we had negotiated a lease extension of 10 years. Like all good negotiations, there are some little pieces of fine print.

But, like the commercial says in this age of rapid information...that is so 3 million seconds ago seconds ago.

The speed of government...Information reported, a flurry of activity and a long stretch to the next reporting of it. My excuse for putting out the Max-Out when it comes is I wait on items, or maybe a contest or maybe an article to be here. But, it does have good news for the club and club information. I don't even try to keep up with the yahoo group...I'm too slow...



"Ma ...

Thermals!, or heat from the lights, or whatever...

Rick

*"The MAX-OUT"* newsletter is printed about the second or third (?) week of the month. Submissions should be not later than the end of the prior month.

**TO JOIN THE CLUB OR SUBSCRIBE**

- Full membership is offered to any current AMA member: \$40
- SAM-1 Crossover membership: \$20
- Newsletter Subscription Only: \$15
- Send \$ to:  
**Chuck Etherington**  
 33946 Goldfinch Dr.  
 Elizabeth, CO 80107-7419

**MMM Club Officers and Contact List**

**President:**

Marc Sisk 719-433-2115

**Vice President:**

Mel Gray 720-851-9498

**Vice President At Large:**

Dave Wineland 303-499-8566

**Treasurer:**

Chuck Etherington 303-646-3705

**PR & Indoor Coordinator:**

Don DeLoach 719-578-1197

**Website Coordinator:**

Rick Pangell 303-798-2188

**Club Records Monitor:**

Dave Wineland 303-499-8566

**Flying Site Oversight:**

Pete McQuade 719-522-1239

**Newsletter & Other Stuff:**

Rick Pangell 303-798-2188

**Flying Field Weather Line:**

303-766-0020

**NEAR TERM EVENTS:**

<b>MMM MTG!</b>	<b>Every Third Tuesday at 7:00 PM, Dinner at the Castle Cafe in Castle Rock.</b>
<b>Wings Over the Rockies Indoor</b> 7711 E. Academy Blvd. in the former Lowry AFB Denver	Various Sundays of every month from 1-5pm. Admission Required. See: "www.indoorcolo.org" for complete info
<b>Jun 10<sup>th</sup></b>	<b>Scramble</b>
<b>July 13-15</b>	<b>FAI 14 Rounder!</b>

**HEADS UP: !!!!**

*Going to the field Monday-Friday! Don't forget to call the Corps of Engineers trailer on Quincy Rd, The number is (303) 690-3816*

**Motorcycle Use on the Field Policy:**

*Follow the roads wherever possible and not to follow the planes cross-country. Take the shortest path possible to the plane in order to retrieve it. Avoid riding through noxious weeds.*

**MMM Now accepts "PAYPAL" for Dues, Contest Entry Fees, Etc !!**

- Simply Log in to paypal.com (or create your own 'PAYPAL' account if you want)
- Click on "Send Money" in the upper menu bar
- In the "To" block, type in [mmmffclub@gmail.com](mailto:mmmffclub@gmail.com), the amount, and click the button "Services"
- In the next form where you confirm payment, in the Lower "Subject" and "Message" boxes state what the money is for... annual dues, entry fees and such

## PRESIDENT'S PONDERINGS

*Marc Sisk*



### **From the Bench....**

Even though we haven't had a whole lot of flying so far this year, we have been busy nonetheless. Over the past couple months, we have followed up on our presentation to the Colorado State Land Board by completing the new lease forms, developing a Standard Operating Procedure (SOP) for flying at Lowry, and completing training on the Identification and Avoidance of Grassland Birds.

On May 5<sup>th</sup>, MMM and SAM-1 participated in a training event at the Aurora Fire Station #11. There were approximately 25 members in attendance. Ms. Mindy Gottsegen from the Colorado State Land Board was also in attendance.

Purpose of this training was twofold: First, Identification and Avoidance of Grassland Birds was presented by Ms. Erin Youngberg from the Rocky Mountain Bird Observatory. Erin provided a slide show of typical grassland birds that we would likely encounter on the Lowry Range, their nesting habits and characteristics. Bottom line to this presentation for us is if you flush a bird from the ground, it is very likely a nesting site and that we should alter our path to avoid disturbing it. Erin also provided several handouts for further reference. Erin's briefing

has been posted to our MMM site so that those not in attendance can review this information.

Second, Pete McQuade provided an overview of our new Flying Field SOP. This SOP describes where we can and cannot travel on our bikes when retrieving airplanes and the procedure required when we do enter (on foot) a "no motor scooter" zone. It also includes a detailed map and describes the conditions of our new lease. Understanding this SOP and complying with its contents are mandatory for everyone flying on the Lowry Range. This SOP is posted on our MMM site.

As Contest Directors, you are responsible to ensure that anyone flying on the Lowry Range has read the SOP and signed the acknowledgement roster. This is very important. The SOP and acknowledgement roster are in a binder in the CD's briefcase. For our two large events, the CD will brief the contestants at the Flyer's Meeting prior to the start of the contest.

Thanks for your attendance and very thoughtful questions. Special thanks to Chuck and Don for bringing equipment for the presentation, to Pete for his continued outstanding liaison to the State Land Board and to Mindy Gottsegen and Erin Youngberg for taking time out on a Saturday to educate us on very important topics related to our operations on the Lowry Range.

According to Mindy Gottsegen, it appears that the seismic testing on the field will be done after October 1st. This is good for us as it is after the Rocky Mountain Champs (RMCs) over the Labor Day weekend. We will have to see how it impacts our remaining two Scramble events for the year. I am still looking for a fourth volunteer to join the MMM Education Outreach Committee. So far, Pete, Don and Rick have volunteered. I would ask that you support this committee and volunteer when asked to help in one of these efforts. Speaking of this, we are planning a Kids Day at Lowry in the August timeframe. This will be a half day on a Saturday devoted to helping kids fly airplanes. Stay tuned for more details.

Along the volunteer lines, I brought the topic of a Raffle Coordinator for the RMCs up at the Annual Meeting. There was some discussion about the merits of a raffle vice the length that it adds to the

awards ceremony. If we intend to have one and if we intend to have raffle prizes, I would like someone to step up and take on the responsibility to organize it and possibly go out to the Free Flight industry and ask for donations. This activity needs to begin soon in order to have prizes in hand well before the contest. So if you are inclined, please let me know.

The Annual Coupe Contest was held at the Edwards Free Flight Base this year. Don DeLoach coordinated this effort. Results are in this edition of the MaxOut. Our April Scramble event was cancelled due to bad weather. MMM provided a display at the Wiesbrod Museum located at the Pueblo Airport on May 19<sup>th</sup>. This is our second year participating in this event as part of their Armed Forces Day celebration. Please see the article and picture in this edition of the MaxOut.

The 33rd Annual MMM 14 Rounder FAI contest will be here before you know it. This year, it is scheduled for 13-15 July. As you may recall, it has a World Cup designation. With this, we hope to attract new folks to the field. As always, we will have a duty roster to fill critical positions in support of this contest. Please be generous in your ability to volunteer some time to make this a typical MMM Contest – Outstanding!

I am proud of all of you and look forward to getting back to flying! See you on the field.

Marc...

## **STUMP CLUB DEP'T**

*This is the place where club members can share their most treasured learning experiences*

### **Brilliant Title – How I Got into Flying Free Flight...**

By Jace Pivonka

My experience as a free-flyer began when I built an AMA cub at my boy scout camp in Elbert County, Colorado. It flew really well and I was able to repair two others that my friends built and broke. It was really cool that something so easy to make could fly so well. I used to fly RC and then I saw the WestFAC II advertised on the District 9 Website, and then the link to the MMM web site.

That inspired me to join the AMA District IV MMM yahoo group and went to WestFAC

where I met Don DeLoach, Rick Pangell, and a lot of the scale FAC fliers. Thanks to my mom and dad for driving me out there. Rick gave me a beautiful SE5A biplane.

Saturday of the WESTFAC contest, A2Z had an open house. My family and I went to the open house at A2Z Corp. and met more people who had more advice on what to buy and build. One or two months later, two of the guys sent a ton of Guillow World War I series plans and two pounds of FAI rubber. I went to my first Scramble and got a P-30 from Al Yuhasz. I got help flying it the first time then brought it back to more scrambles and eventually got a 6 minute flight with it. Fortunately, Don retrieved it for me on his bike or I might still be walking!

As the outdoor season came to a close, I started to look into indoor models and went to the Manitou Springs High School competition. I then met Steve Smith and Al and Rob Romash. I got a lot of great advice from Steve, two A6s from Al, and two LPPs from Rob. Everyone has given me a lot of advice and help! Meanwhile, I have also been building on my own at home, an A-6, my own LPP, a helicopter, and two ministicks. I now fly indoor regularly and am looking forward to the new outdoor season with a new hand launch glider, another glider that was run over by a car and rebuilt (complete with tire-treads), a prairie bird, and two P-30s, a Jabberwock, and an FIG.



*Editors note: The MMM guys have really stepped up to the plate and given Jace a hand with flyable models to practice with and ground equipment so he didn't have to spend a ton of money on that. Interestingly, Jace is getting to the point where we might have to stop giving him advice if we want to win! He's really jumped on board of this free flight hobby. I mentioned to Jace that he could be a regular contributor to the Max-Out so we may be hearing from him more in the future!*

**MURPH HITS THE BIG TIME...AND  
DESERVIDLY SO.**

**Congratulations are in order for our  
newest Free Flight Hall of Fame  
Member - Mr. Jerry Murphy.**



Congratulations Jerry!!! What an honor and so well deserved.

I want to share with you all one of the nomination letters for this honor. This was written by a long time MMM member and leader:

Jerry's many achievements in Free Flight competition are paired with commitment and service to Free Flight matched by few. Jerry has served the Free Flight community from the grass-roots level all the way to our premier national contests. The Magnificent Mountain Men club has been fortunate to have Jerry as their president on many different occasions. Each time he has brought thoughtful and considered guidance to a very diverse group of modelers. The entire United States Free Flight community has been, and continues to be, a benefactor of Jerry's commitment to our activity. Jerry has been a member of the AMA Free Flight Contest Board for well more than 20 years. Not one to step back from responsibility, Jerry is the current Chairman of the AMA Free Flight Contest Board.

Jerry has bridged the gulf between AMA events and FAI events and has served both groups at the highest and most challenging level of service. Few have been willing to accept the challenges either

group presents, let alone both. In 1984 Jerry was the Contest Director for the FAI Free Flight Team Selection Finals at Seguin Texas. Years later in 2007 Jerry served as Contest Director of the AMA Outdoor Free Flight Nationals at the AMA site in Muncie, Indiana. Jerry has taken on these high profile tasks that show success not by recognition but by anonymity.

The Magnificent Mountain Men are fortunate to consider Jerry as one of their own. We are grateful for what he has done for our club and proud of his contribution to Free Flight across the entire United States.

***Very well said!***

When Rex Hinson call to tell me that I had been elected to the NFFS Hall of Fame my reaction was shock and disbelief. When I think of the people who have received this honor I can't help but feel humble as the giants of this sport such as world champions, designers of the models we flew in competition, and those who were the voice of the community through their publications in the modeling press have been awarded this honor. I have tried to give back to the hobby-sport in many ways, but I must admit being suprised and humbled by this honor.

Thank you who contributed to this honor. I will do my best to wear it with pride.

As I told members of my Scout troop, being an Eagle is something you will carry as you go through life. Perhaps the NFFS Hall of Fame is also an honor to be carried forward as well.

Thank You,  
Jerry Murphy



**2nd Annual Armed Forces Day Celebration  
and Display at the Weisbrod Museum  
Marc Sisk**



On Saturday, May 19<sup>th</sup>, Jerry Murphy, Mel Gray and I gathered at the museum to set up a Free Flight display. We all wore the 14 Roundr T-shirt to promote the event. We had two large tables and a wide variety of planes to include my P-30, CLG, F1H, F1G and 1/4A Nos Gas; Mel provided his TLG, Min-Pearl and a Midi-Pearl wing built with no covering; Jerry provided his E-36.

It seemed that the crowd was down from last year but we still had significant interest. Jerry gave many demos of his E-36 and every time he ran the motor, a crowd developed. That was great! We provided our Free Flight Info Paper and NFFS brochures to many folks. I set up my laptop and ran NATs videos all day. This made it easier to explain the Free Flight concept to folks. They could see our airplanes, understand how they work and then see how they fly. So many folks remembered building Free Flight in their youth and had very fond memories.

One of the highlights of the day had nothing to do with airplanes. A young man and his mom (a single mother) came up to our table and handed us a card. Her son had a bad experience a few years ago. He was injured by a dog and no one came to his aid. Since then, this young man has been making and sending cards to our military deployed overseas, police and fire department personnel to tell them how much he appreciates what they do for this country. He didn't want others to feel like he did that day years ago. He has been recognized by many leaders in Pueblo

and Colorado to include the Governor. His mom had a very large binder with all his cards and letters of recognition. I asked him if he planned to join the military when he is old enough. He said that he was thinking about it. Just a great kid and a very proud mom!

Thanks to my fellow MMMers who came out and supported this event!

**THE STRANGEST PLACES DEP'T**

Funny thing happened... A colleague of mine, Terry, was walking past my desk and noticed my screensaver pic of Willard Smitz's F1A flying overhead. He told me about the neighbor he grew up next door to in Libertyville, Ill starting in 1949. His neighbor flew models "just like the one on my screen that he would tow up with a string." His folks and the next door neighbors were best friends and the two families spent a lot of time together. When Terry left for college in 1960, he lost track of the neighbors. Just for fun I asked him the neighbor's name and it was none other than the great Joe Konefes, SAM Hall of Fame member and designer of the Buzzard Bombshell, among others. Joe would have been proud, I'm sure, of little Terry growing up to become an airline captain among other things. Small world.



- Chuck

## The 4<sup>th</sup> MMM (Post) Winter Cup

...was flown under spectacular conditions at Edwards Ranch, from 0730 to 1230 on Saturday March 30. Winds were calm to 3 mph most of that time with a few gusts later in the morning. Air temperature was in the 50's warming to the 70s. It felt like June—wonderful. Air-picking was extremely difficult in the calm air, with several horrid downers fooling us on official flights. If the Lowry field is “difficult” Edwards is its crotchety drunk uncle.

There were six paid flyers at \$5 each. All the proceeds were donated back to the MMM treasury. A number of flyers could not attend due to illness and injury, but many more just did not attend for no apparent reason. Not sure what the problem is but we've got about three dozen Coupe, HLG, E-36 and 1/2A flyers in the club, and the weather was perfect. The most dedicated MMMer of all time (yes, I really believe this is true), Chuck Etherington, made the drive from Elizabeth with no airplanes. He then timed us all for four hours. Thank you Chuck! No one from Denver made the drive.

### F1G Coupe

Don DeLoach	120	86	120	326
Jerry Murphy	28	0	0	28

### E-36

Don DeLoach	77	116	120	313
Bill Leppard	120	83	94	297
Todd Reynolds	DNF			
Jerry Murphy	DNF			

### HLG

Don DeLoach	85	60	120	265
Mark Covington	120	67	69	256
Todd Reynolds	DNF			

### Thermix

Don

## UNVERIFIABLE DEP'T

### **A Better Rubber Lube?**

Jerry Combs from Wyandotte, OK, tells us the Kansas City boys have turned him on to a hair care lotion available at Wal-Mart stores by Citre, called Shine Anti-Frizz, which gives an extra 100 turns in your rubber motor. Now, that is worth something!

## APRIL CONTEST REPORT

Sadly, it was a blowout...but as of this writing, that is so 33669600 seconds ago.

## MAY SCRAMBLE !

Roland Solomon CD (as of this writing, 345600 seconds ago):

I was thinking how our contests seem to take on a life of their own. Some are hotly contested events that go down to the wire. Some are too hot, too cold, too windy, too whatever. Our May scramble was just fun. One of our goals for this season was to get kids involved in building and flying. Our church has organized activities for grade school aged kids on Sunday evenings, so I volunteered to have the youngsters build Delta Darts and Catapult Gliders with the intention of flying them in a real contest in May. We had done this several years ago, and it was a success. I had over twenty participants in the building phase. The Delta Darts, although airworthy, did not stand up to the rigors of pre-teens, dogs and sibling rivalry. I saved the catapult gliders for the contest and they flew great! Participation was limited due to a conflict over use of the Church vans for Sunday services or airplane flying. We have resolved this by scheduling our next kids contest on a Saturday. We will have a van available to us then. We have tentively set the date at August the 18th The boys that did make it to the field were thrilled to see their gliders floating around for over a minute.

It was great to see fliers from 8 to 89 at the contest. Jack Warkin and Norm Frawley celebrated 89 years with birthday cakes and out of key singing.

It was good to see Mindy Gottsegen and her husband John in time for some Birthday cake.

The Colorado Springs contingent keeps winning the scramble, only this time with E36.

There were a lot of thermals Sunday We even had dust devils trying to destroy shelters, gliders , ect. The planes didn't drift far, but got plenty high.

All in all, it was a splendid day of flying. Lets do it again.

Results on next page...

Roland

## 2012 SCRAMBLE CONTESTS

For 2012, there is a "Scramble Within a Scramble" for E36. Monthly Scramble scores will be tabulated like they were since the onset.

E36 is up for a new E36 cup and everyone who flies E36 will be competing for that cup. The scores will be extracted from the monthly results and then recalculated by themselves...got it? So, this is the first time we get to do this and here are the results for the May 20<sup>th</sup> contest.

### The May Scramble Results:

<b>ENTER CONTEST DATE:</b> 5/20/12									
<b>ENTER CD NAME:</b> Solomon									
<b>MMM MONTHLY SCRAMBLE</b>									
						<b>ENTER</b>	<b>Best Factored Score</b>	<b>7.00</b>	
DATE	EVENT	ENTRANT	CLASS	MAXES	MAX TIME	TOTAL AMA	SCRAMBLE TIME	FACTORED SCORE	SCRAMBLE POINTS
5/20/12	2 Min	DeLoach, Don	A Elect	7	120	840	840	7.00	100
5/20/12	2 Min	Reynolds, Todd	E36	6	120	801	801	6.68	95
5/20/12	3 Min	Pivonka, Jace	Mulvi	2	180	421	421	2.34	33
5/20/12	3 Min	Boyd, Ray	!2A Gas	1	180	390	390	2.17	31
5/20/12	2 Min	Sisk, Marc	P-30	2	120	309	309	2.58	37
5/20/12	2 Min	Murphy, Jerry	E36	2	120	303	303	2.53	36
5/20/12	2 Min	Reynolds, Todd	A Elect	2	120	301	301	2.51	36
5/20/12	2 Min	Reynolds, Randy	E36	1	120	299	299	2.49	36
5/20/12	2 Min	Pivonka, Jace	P30	2	120	296	296	2.47	35
5/20/12	3 Min	McQuade, Pete	F1A	1	180	180	180	1.00	14
5/20/12	2 Min	Reynolds, Randy	A Elect	1	120	142	142	1.18	17
5/20/12	2 Min	DeLoach, Don	E36	1	120	141	141	1.18	17
5/20/12	2 Min	Reynolds, Todd	B Elect	1	120	120	120	1.00	14

### The May E36 Scramble Results:

<b>ENTER CONTEST DATE:</b> 5/20/12									
<b>ENTER CD NAME:</b> Solomon									
<b>MMM E36 MONTHLY SCRAMBLE</b>									
					<b>Best Factored Score</b>		<b>6.68</b>		
	DATE	EVENT	ENTRANT	CLASS	SCRAMBLE TIME	FACTORED SCORE	SCRAMBLE POINTS	REFERENCE	
1	5/20/12	2 Min	Reynolds, Todd	E36	801	6.68	100	Reynolds, Todd	
2	5/20/12	2 Min	Murphy, Jerry	E36	303	2.53	38	Murphy, Jerry	
3	5/20/12	2 Min	Reynolds, Randy	E36	299	2.49	37	Reynolds, Randy	
4	5/20/12	2 Min	DeLoach, Don	E36	141	1.18	18	DeLoach, Don	



## MORE FIELD INFO...from Pete

[Speaking] with Mindy, concerning the Riparian Keep-Out Zones. She said we only need to obey the 0.3 mile buffers around Coal Creek and Box Elder Creek, just as the wording in the lease says. The other "Tier 1 NSO" light-green areas on the map do NOT apply to us. Also, we ARE allowed to use the dirt road that runs N-S along Coal Creek (the one that goes by the aggregate-mining site) and we CAN also use the dirt roads that CROSS Coal Creek. This eases our burden tremendously. She's planning on putting up a few stakes with pink tape on the, to mark the 0.3 mile buffers. They'll be about 0.5 miles apart, and she hopes to have them up before the weekend of 15 April (the first MMM contest).

Also, she confirmed that the once-planned National Guard heli-pad that was someday to be built on our hill will NEVER be built, due to ground-water contamination issues there, from the Titan missile site decommissioning years ago. (It's not a health issue for us, but violates the National Guard's regulations--to our benefit.)

She reminded me that the SLB policy is still that we use existing roads to chase, whenever possible. Another issue we need to stress is that we are NEVER allowed inside the fenced-in Conoco/Phillips drilling facilities. If a model goes there, we need to contact someone at Conoco/Phillips to get it out. There should usually be someone from Conoco/Phillips somewhere on the field. This is another good reason for Mindy to get us a Point-of-Contact with Conoco/Phillips. Once the lease is signed, we can pursue that.

TEN MORE YEARS!!! Wow! Super Great!!!

...Hey!! that gives me a second reason to hang on until my 90th!! ( first reason was in looking forward to the pleasure of enjoying a second MMM birthday celebration)

Some catching up to do....

I want to thank those MMM'rs that made it possible for me to visit Lost Hills and to pick up where I left off some 35 years ago -- with my last plane trip being a flight back from the 77 W.C.! It was good to get a hug from old friend Thomas Koster...and to finally meet up with the fabulous

Eugene Verbitski (he didn't make it to the 77 champs as he stayed home recovering from a snake bite picked up during a plane chase into wilderness..) And I was dutifully impressed by Babenko..who, after watching his formidable launch technique, makes me suspect Artem was once a former world class champion shot-put and Javelin contender.

I want to give special thanks to Chuckers Etherington for playing the part of a dad...one who made sure I didn't get lost and who rescued me when I got into trouble...( like my causing turmoil in the airport checkpoint when I spilled a big glass jar full of pistachio seeds...when it hit the floor it sounded like a pistol shot! Lucky that I didn't end up with more holes than a plateful of Swiss cheese! Thanks for Chuck stepping up and putting his body into danger by sweeping up the offensive nuts...those on the ground, that is)

The only thing I regret is that there was so much to see that I barely scratched the surface...and I should have brought a bicycle 'cause every trip back and forth from the parking area to the flight line was like surmounting the Gobi desert. Furthermore, I should have brought a spare brain (or video camera)..I looked at all the plane gismos and clever design features....but memory fails to reconstruct them in my mind.

Special announcement/confession

I want to apologies for some of my over-the-top postings in the past...I honestly felt that my contentious remarks were so obviously outlandish that everyone would realize I was just joshing... merely pulling a few legs here and there. Merely classical examples of >>>>>>>>>>

" You always tease the ones you love!"

My very best to all my good buds! -- here, there, and everywhere scattered around the globe

Bill (the older elder) "Billious" Gieskieng



## **RUBBER MOTOR TURNS**

Michael Woodhouse

Can I clarify a few points made about rubber and turns? Below are my thoughts and suggestions and are only about turns and nothing else. It's very, very brief!

We know that there are differences in rubber from batch to batch. These differences are in both the quality and nominal size from batch to batch and even within in each batch.

We need to somehow get a handle on the numbers of turns that the rubber we are using will take. There are formulae around, I tend to avoid these and work out my own needs.

How do I avoid formulae? There are too many variables that will make a formulae use not the way to go. Just think about the variables there are:

Cross section of the rubber - there are differences between actual and nominal size, the size will often vary within a box!

Type/make of rubber

Number of strands - The relationship to the cross section of the rubber.

Lubricant - Silicon, Soft soap etc

Braided or not.

Temperature

However there are basics out there which can be done that will help sort things out. Make motors up by weight not length. Do this even when weight is not part of the required specification. Always fly the model on the same weight of rubber and length of motor each time. This will help give a consistent performance. Weigh the rubber and strand to give a motor of the required length. My motors vary in strandage to get the same length. My motors in 1/8" vary from 26-28 strands with the odd 30 or 24! 1/16" gives a pattern of 52-54 with the odd 56. This shows if nothing else that the 1/16" is more consistent in either width or thickness. Even doing this with a box that has variations one can only ponder on what happens within each motor.

It is a fact that the thicker the overall cross section of the motor the less turns per unit of length can be applied regardless of how long the motor is. That is to say a thicker motor of a given length will take less turns than its thinner counterpart. The rubber when wound twists within each strand as well as the total bundle. How well or badly this winding is done will effect the total turns that the motor will take. Over a cross section of greater than 16 strands 1/4" equivalent the number of turns per length of motor that can be applied falls off badly. So the rubber is less well used.

The move towards more thinner strands helps both the tuning of and exact length and getting a better wind. The thinner rubber strands will flow around each other more easily than the thicker plus the effect of the twist within each rubber strand is less of an issue.

Regarding more or less turns on a motor made up of thinner rubber if it is of the same weight and length. My answer is still just a maybe a few more turns, well certainly not less. The reason being the twist effect within each strand creates less stress, the bundle will also be more smoothly wound and this has to help on the positive side. Now that said that I'm working at the upper end of the overall cross section that can be used. Going down to thinner motors I would concede that more turns may be available, but again only a minimal number.

Before any testing run in the motor.

What can then be done is to simply wind and test a motor from a batch you are going to use for the turns that it will take. Experience, record keeping and a torque meter etc are applied to the mix. Prior preparation and practice will prevent piss poor performance so I reckon that I can get it right quite readily. I only use a motor once for a contest flight, after a push to 99.9% consistency in the motor is out of the window. The next big wind will see strands going. How do I know if I've got my best turns? Well, when I remove a motor after a flight and I find a couple of strands have let go I reckon I was close to maximum. Plus a second go will always blow strands on the wind up.

Yes, despite this I do break motors. Last one that I broke was in the fly off for an F1B team place for next year's European Champs. I pushed it, risked it and bang! The next motor held with a few less turns and I made the team, the model finished in a tall tree and took into the dark to get down and is now in for repair.

*Michael Woodhouse*

[mike@freeflightsupplies.co.uk](mailto:mike@freeflightsupplies.co.uk)

<http://www.freeflightsupplies.co.uk>





**FREE FLIGHT WITH AN ALTITUDE!  
UPCOMING EVENTS**

<i>DATE</i>	<i>EVENT</i>	<i>FEATURE EVENT</i>
June Scramble	10-Jun	MMM "Scramble" Format
<b>FAI Annual 14 Rounder</b>	13-15 Jul	<i>America's Cup Event!!</i>
July Scramble	29-Jul	Late Contest: 0900 - Sunset.

**FIRST CLASS**



IF THIS BOX IS CHECKED, THIS IS YOUR  
LAST ISSUE UNTIL YOU PAY YOUR DUES!



6994 So. Prescott St.  
Littleton, Colorado  
80120

**The Magnificent  
Mountain Men**