THE MAX-OUT

Newsletter of the Magnificent Mountain Men

AMA CHARTERED CLUB #177

Issue 2025-02
(March-April)

Carrion, my wayward son! From CO Parks & Wildlife: "Golden eagles forage primarily on a wide variety of small- and medium-sized mammals, including rabbits, hares, prairie dogs, ground squirrels, and marmots. They have occasionally been observed killing pronghorn antelope and deer. When available, golden eagles will readily feed on carrion." And lost models?
Photo: Bill and Karren Groman.

In this Issue

Upcoming Events

Indoor at Beth Eden	6 June Friday	John Christensen
June Scramble #1	8 June Sunday	Jerry Murphy Sean McEntee
Casino Cup	14-15 Jun Sat-Sun	Jack Murphy
Indoor at Beth Eden	20 June Friday	John Christensen
June Scramble #2	29 June Sunday	Sean McEntee Don DeLoach
14-Rounder	12-13 July Sat-Sun	Pete McQuade John McGrath
Indoor at Beth Eden	25 July Friday	John Christensen
Outdoor Scramble (Late Day)	3 August Sunday	Frank Menanno Jerry Murphy
Indoor at Beth Eden	15 Aug Friday	John Christensen
Indoor at Beth Eden	29 Aug Friday	John Christensen

MMM Club Officers and Contact List

President
Chuck Etherington **720-201-6218**

Vice President:
Bernie Olson **682-333-4802**

Sec'y / Treasurer and Flying Site Coordinator:
Chuck Etherington **720-201-6218**

PR:
Don DeLoach **719-964-7117**

Newsletter:
John McGrath **719-963-9227**

Indoor Coordinator:
Sean McEntee **314-910-2097**

Club Records Monitor:
Don DeLoach **719-964-7117**

Safety Officer
Jeff Pakiz **303-337-9188**

Club Points Monitor:
Jace Pivonka **720-202-2936**
Pete McQuade (backup)

The President's Corner
Tornado Edition
By Chuck Etherington

History in the making! The MMM is undoubtedly the only club in the world to have had the privilege of watching four tornadoes at their flying site during a contest. I say "privilege" because although not uncommon in Eastern Colorado and Kansas, the chances of seeing four in rapid succession has to be very rare. It occurred at the 18 May scramble and according to the National Weather Service (NWS), from the beginning of the first one to the beginning of the last was 33 minutes.

The only alarming part was that one from the SW was on the Lowry Ranch heading toward us. We were sitting in a circle BS'ing and Sean McEntee's dad, Dan noticed the approaching twister. It was later reported to be an EF-2 with an estimated wind speed of 125 MPH. Even Frank wouldn't launch into that. Fortunately for us, it dissipated at the Crosswinds RC flying site. If memory serves, I took command of the situation and directed emergency procedures. Well... the reality looked more like me trying to figure out how to use Frank's body as a shield.

It started in the Elkhorn (funny name since Elk have antlers) Ranch housing development on the far side of County Line Rd and did considerable damage. It then crossed over to our side and hit Crosswinds RC causing more damage. Through the binoculars, literally tons of airborne debris could be seen. Nick Trainor, the rancher, said there was debris all over the south pastures. We also had debris raining down around our flying area but it was all light materials like insulation. I expect to be finding pieces of people's houses and barns for many years.

Following the tornadoes, the weather became beautiful for flying and I was surprised to see people driving off the field with three hours of beautiful weather ahead.

Below is one of the further away twisters to the NE. (Cass Pangell photo)

The NWS was kind enough to provide the starting and ending geographic coordinates for each tornado. It's interesting that their paths were in a line, but alarming that the line came right over our flying area. See the paths (in red) in the graphic below.

In other news, our VP, Bernie Olson and I attended the State Land Board's Lowry lessee meeting on 30 May. Field Operations Supervisor Resource Specialist, William Woolston is retiring and North Central District Manager (covering Lowry) Rachel Turner will be stepping into his vacated position. Consequently, applicants for Rachel's job are being interviewed. Ideally the candidate chosen would be as reasonable and level headed as William and Rachel.

Among other things, the meeting provided valuable updates and an excellent opportunity to interact with the lessees with which we coordinate. Among others: Nick Trainor – Rancher, Marvin Beeman – Hunt Club, and Abe Medina - State Land Board Recreational Lease Manager. Abe suggested that he meet with us and the manager of Norris Ranch and Front Range Outfitters at our south field to get better acquainted and coordinate our activities. I will set up that meeting. The lessee meeting report will be forthcoming when we receive the meeting minutes from Rachel.

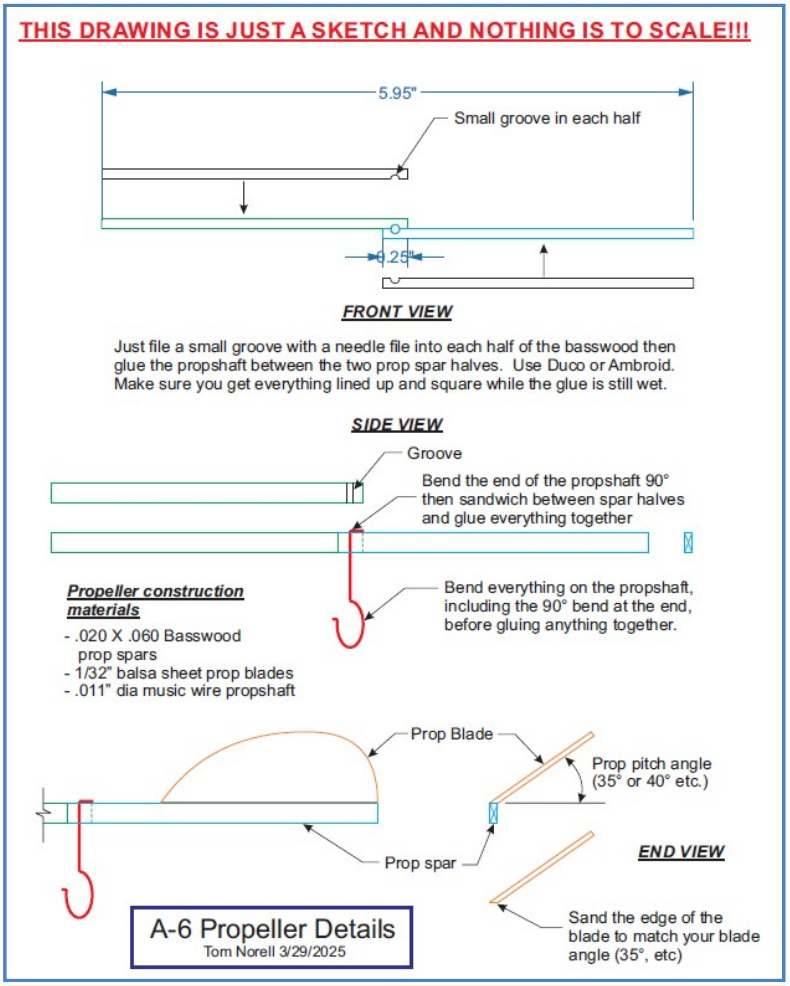
From Tom Norell

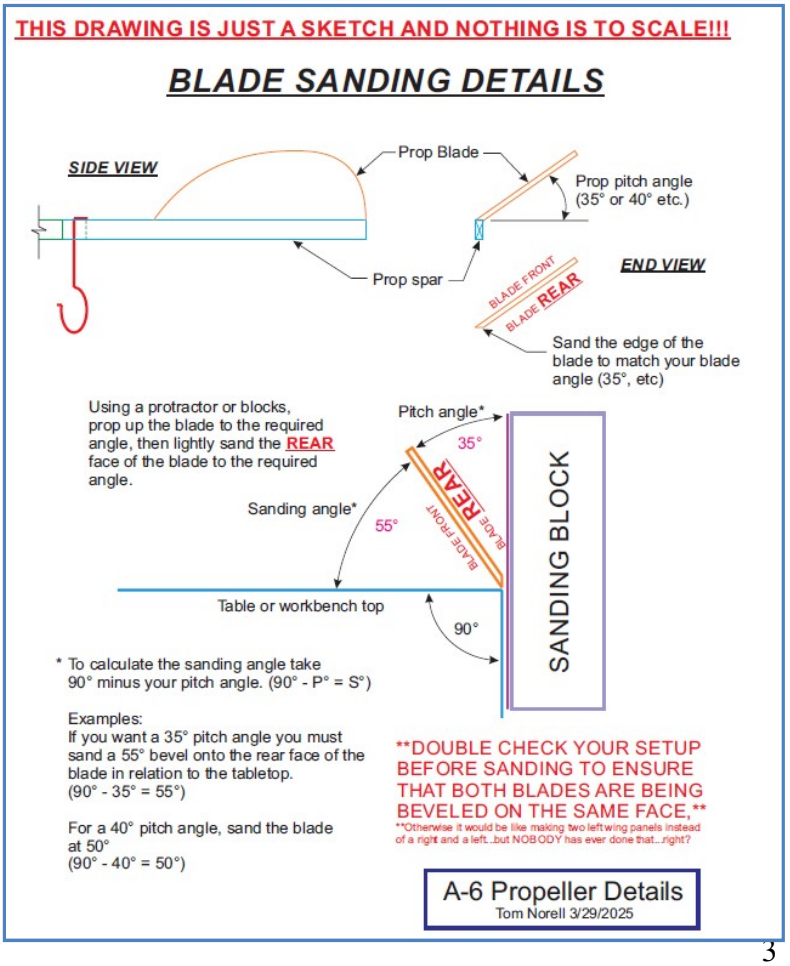
Gents,

Today I was asked a question about my A-6 prop construction details so I thought it would be useful to make up a quick tutorial and pass it along to others. The items in the drawing are not to scale, and some bits are actually emphasized so keep that in mind. I hope it makes sense and helps make your builds a bit easier. Feel free to ask if I missed something.

Cheers!
Tom

Thanks, Tom. More! More!





Sci Oly 2025

Ed.

Okay! Another Science Olympiad season is in the books, and once again, the MMM club put its best foot forward at the Southern Region tournament at UC Pueblo and at the State Championship tournament in Colorado Springs at UCCS's Gallogly Event Center.

The twist this year is that the event was Helicopter, which is always good for a few challenges along the way. The first challenge has to do with venue. It's understood that model helicopters are capable of rocketing up to the ceiling and spending some time up there. What passes for the cruise phase for a well-behaved model is where the helicopter pegs itself against the ceiling and stays there while the rotors spin and the disc-topped post presses nicely against the (hopefully) flat ceiling. At the end of the flight the helicopter runs out of steam and descends back to the floor. That's a nominal, perfect flight with a perfect ceiling. An imperfect flight has the potential to cause all kinds of hate & discontent, beginning with the possibility of getting hung up in the architecture.

Knowing that the character of the ceiling is a big factor, I took a self-guided tour of the UC Pueblo campus, hoping to find a venue more suitable than one of the gymnasiums. The big field house was unavailable for the tournament, so that was off the list. I went by all kinds of places--stairwells, atriums (atria?), the ballrooms, and finally the racquetball courts. Only the racquetball courts had a flat, smooth ceiling, so we settled on that for the venue and got permission to use two of them to run the event.

On game day the event went very well. Our friend Patrick, who flies with us in Manitou, showed the results of his long practice and excellent building skills, and won the C event convincingly. B Div was <u>also</u> won by Home School Science. Incredible. Most other fliers (less skilled, admittedly), could not get a clean flight because of the narrowness of the racquetball court. The sidewalls were too constraining and collisions with them were very common.

Remember these guys? Ping-pong ball with wings?

The situation at UCCS for the state tournament was worse! After scouring the campus looking for a room both flat-ceilinged and wide enough and tall enough to permit clean flights, no such room was available, so we fell back on the Gallogly Event Center, which is actually a pretty nice free flight venue, but has the evil open-girder ceiling construction with corrugated ceiling panels to boot. UCCS doesn't have racquetball courts, and the only other possible large room had a "kind-of" flat ceiling, but with large gaps between flat sections of the ceiling—each of which was at a different height!

Horizontal motor stick—this helo's in trouble!

At the tournament, every single helicopter that was a plausible contender ended up getting bashed around up

in the girders, many with multiple hang-ups. David Aronstein's pole was in constant use, mostly in the afternoon, when most of the high-performing models were flying. To the disappointment of many fliers, flight performance was simply not predictable, and strategies that hinged on having a flat ceiling could not be effectively employed. The winners at the State tournament were Fossil Ridge HS (C Div) and Preston MS (B Div).

Great student assistants running the tech inspection

The Helicopter rule is a curiosity. Each model is required to have a stand-off stick with a disc at the top to facilitate pressing against a flat ceiling, but (fortunately) the rule acknowledges that such a venue may not be available, so doesn't mandate such a ceiling. This misleads contestants into thinking they're guaranteed to have a nice, flat ceiling, when that may very well not be the case.

The fellas: Rick, Frank, Chuck, Don, Darold, Murph. Pete's around somewhere as well. Who did I forget?

Another awful feature of the rule is the timing rule. It says that timing is to stop when the weight of the model is no longer borne by the lifting surfaces. This is a well-intended idea. However, one of the ways flights sometimes come to an end is where one rotor is stopped by something, but the other continues to spin, very plausibly still holding the helicopter up. The issue arises when that rotor starts slowing…and slows down further…and then stops. But wait—the model didn't come down! The upper rotor was somehow caught—not just stopped. Exactly when did that lower rotor cease to support the model? Arggh! That rule is horribly imprecise.

Taking advantage of a loophole in the rule ("timing stops…or by other means at the dictation of the Event Supervisor…blah blah blah) I instituted a rule similar to the outdoor "out of sight" rule. If a model seems to have been caught up, timers began counting. If, after ten seconds, the model did not self-extract, the flight was considered to be over and ten seconds was subtracted. If it did come free of its own accord, the flight was timed to the ground. For better or worse, this adjustment made for a consistent approach to timing. Even with this, though, there was at least one team that had a model that got "engaged" with the ceiling somehow, was clearly hung up, and then much later (30 or 40 seconds), did disengage and come down. I had to explain the rule and its adjustments to a very disappointed pair of young men who felt they should have been give credit for all that time.

I wrote up a long piece with my thoughts and shared it with Dave Lindley, who passed it along to Tom Sanders for sharing at the meetings at the National tournament in May. I have no idea whether anything I wrote put a dent in the rules, but it appears that Helicopter will be the flight event for next year as well.

To all of us who took part either in Pueblo or Colorado Springs, you have my heartfelt thanks for persisting and helping to bring off both events. Students most certainly did have fun, and I spent much of the day receiving thanks from countless parents and students. It's always great to see some of the ideas they come up with!

As a coda, I received word from Cindy Puhek that Patrick took 9th at the National tournament! Go Patrick! She very kindly thanked the club for its support of him and the event.

Pikes Peak Ceiling Climb XIX

Don DeLoach and Sean McEntee, CDs

March 23, 2025
Galoogly Center, 33'-3" Cat, II, Colorado Springs
CDs: Don DeLoach and Sean McEntee

HLG
Sean McEntee 32.9+31.4 1:04.3
Don DeLoach 30.4+30.6 1:01.0

Standard Catapult Glider
Sean McEntee 32.0+27.5 0:59.5
Don DeLoach 24.8+23.3 0:58.1
Rick Pangell 11.5+12.1 0:23.6

Towline Glider
Don DeLoach 40.5+39.0 1:29.5
Rick Pangell 24.0+6.0 0:30.0

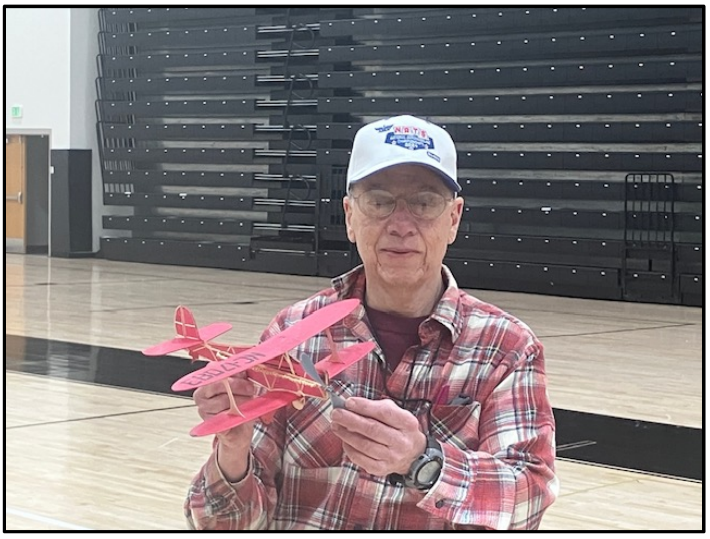
Unlimited Catapult Glider
Sean McEntee 37.6+34.4 1:12.0
Don DeLoach 25.1+24.0 0:49.1
Rick Pangell 12.3+12.4 0:24.7

Tiny Glider
John Christensen 3.19" 17.1+16.9 34.0/3.19 = 8.1 pts
Sean McEntee 11" 30.0+23.5 53.5/11 = 4.87 pts
John Christensen 5.44" 15.4+16.0 31.4/5.44 = 4.46 pts

Easy B
Chris Adams 7:07

Limited Pennyplane
Don DeLoach 4:34
John McGrath 2:35

A-6
Tom Norell 5:55
Mike Clem 4:33
John Christensen 3:07
John McGrath 0:52



FAC No-Cal Scale
Dave Aronstein Mr. Smoothie 4:55
Sean McEntee F4F 1:59
Rick Pangell Luscombe 0:46
J. Christensen Beech 0:43

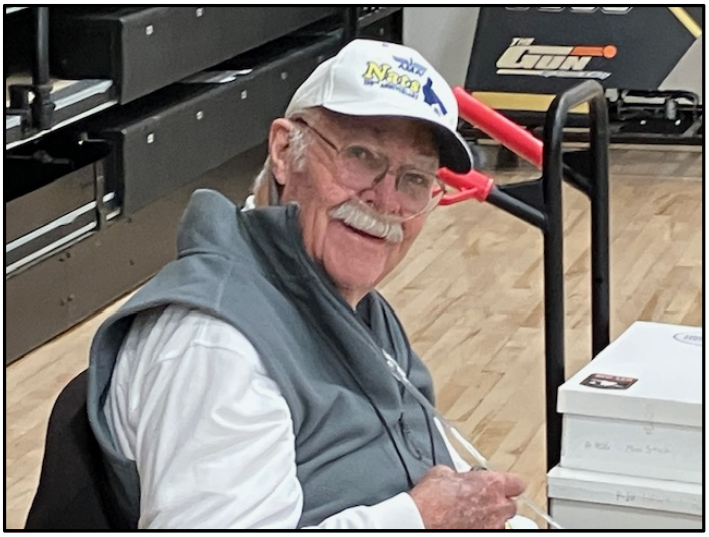
FAC Peanut
Tom Norell B.A.T. 139.0 pts

P-24 Mass Launch
Tom Norell 1st
Dan Brabec 2nd
Haley Brabec 3rd
Chuck Etherington 4th

WW2 No-Cal 6.2g
Tom Norell SBD 1st
Sean McEntee F4F 2nd
John McGrath Spitfire 3rd
Don DeLoach Spitfire XII 4th
Rick Pangell P-40 5th

Phantom Flash 5g
Don DeLoach 1st
Sean McEntee 2nd
Jerry Murphy 3rd

Chuck Etherington 4th
John Christensen 5th



P-18
John McGrath 1st
Dave Aronstein 2nd
Chuck Etherington 3rd
Haley Brabec 4th
Don DeLoach 5th
Sean McEntee 6th
Bob Radney 7th

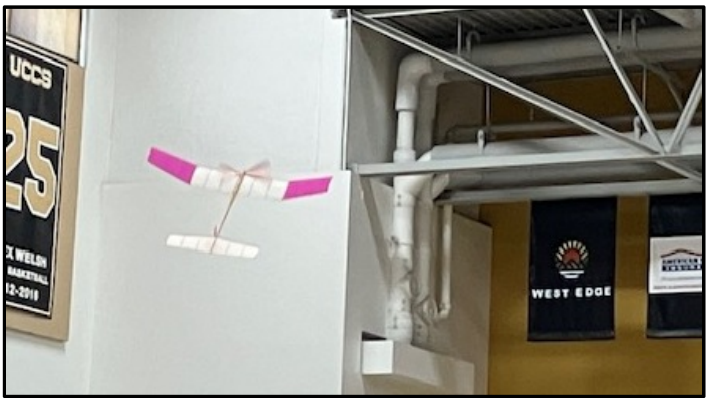
Greve/Thompson No-Cal Mass Launch 6.2g
Dave Aronstein Smoothie 1st
Don DeLoach Floyd Bean 2nd
Jerry Murphy Chambermaid 3rd

Dime Scale
Don DeLoach MO-1 0:45
Tom Norell MO-1 0:26
Jerry Murphy Chambermaid

P-18
Chuck Etherington 2:29
Dave Aronstein 2:28
John McGrath 2:24

Sean McEntee 1:48
Jerry Murphy 1:32
Rick Pangell 1:25

Phantom Flash 5g
Don DeLoach 2:06
Tom Norell 1:42
Jerry Murphy 1:10
Sean McEntee 0:46



P-24
Tom Norell 2:49
Chuck Etherington 1:26

Champions Tom and Don with Rob's wife Neda

PPCC Grand Champion – "The Dood" Cup –
In Memory of Rob Romash, Colorado's Greatest Indoor Flyer

Tom Norell* 16 pts.
Don DeLoach* 16
Sean McEntee 12
John McGrath 10
John Christensen 9
Rick Pangell 4

*co-champions

Projects and New Builds

Bill Ledden's Seagull Update

From Bill: "Seagull: now covered and has a test glide, ready for tow, winch, or hi-start." *Bill, can't wait to see this one go!*

Bill Ledden's Washboard

(As if we need more evidence that Bill's not a slave to convention) "Washboard: also from Aeromodeler. Unpleased with color scheme but too late now. Seems unable to test glide, or maybe it's me."
No, Bill, I'm sure you're able to test glide☺. But seriously, just how would you go about trimming it? Please report back after first flights for both!

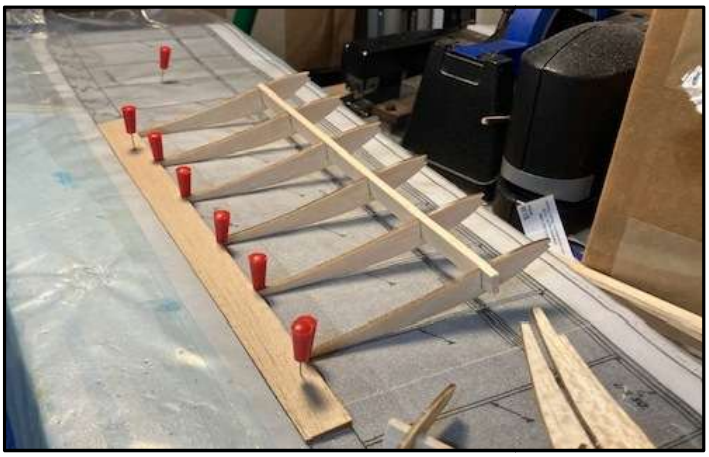
Bill Groman's P-80

This is Bill Groman's Lockheed P-80 Shooting Star JetCat model. I don't know about you, but I've never ever seen detail like this (Well, I lie: Sean's A-10s are in this league also). From his panel lines to his use of color, to the insignia/side numbers, squadron markings, all of it is just incredible.

I asked Bill how trimming was coming along: "As for the trim schedule, I was making some progress taming the loops but got tired of repairing fuselage breaks and will rebuild the model with a solid fuselage instead of the fragile built-up version seen here. Flight-wise it has promise but has perhaps too little dihedral (I was hoping for the most scale-like appearance possible) so when I add the wings and empennage to the new fuselage I will reglue the wings with more angle. If I ever get competent at regular CAT gliders I will revisit the P-80 later this summer."

Congratulations, Bill, on this tour de force!

John McGrath's Gollywock—In progress



I built the inner sections of the wing upside down to guarantee the upper surface of the TE came out tangent to the upper airfoil curve. It's a little awkward, being undercambered from the spar aft. After this I unpinned it to attach the 1/8" LE sticks.

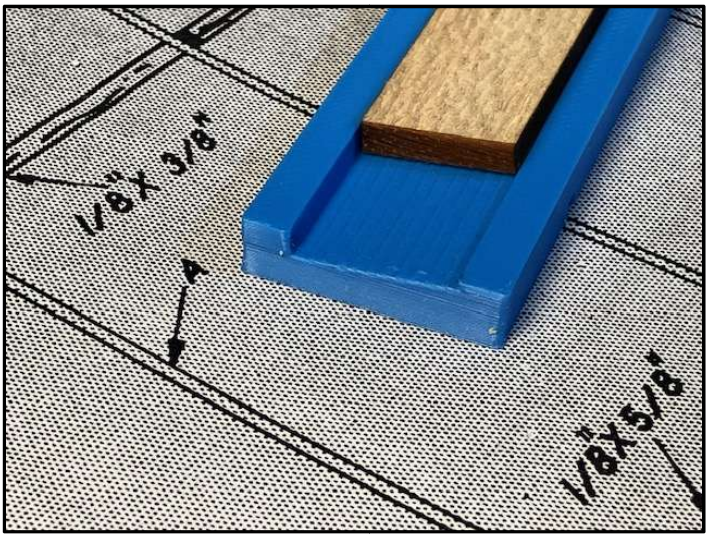
Darold gave me not only a short kit of ribs and profile parts, but also a copy of the Midwest plan annotated by Bill Gibbons of the Wally Simmers design. What a guy! I ordered another plan from NFFS so I could cut it up (as I like to do) and pin it to the board. I kept breaking Darold's ribs—they were so light and I'm a klutz--so I had to draft up and cut new ones. Time well spent, actually. I'm noticing some really interesting anomalies on the plan. One is that the port wing is more than an eighth of an inch longer than the starboard, and also that the top and side views don't show the stab spar in the same position. Strange!

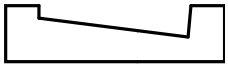
So far the wing outer panels have given me the most trouble. Very "character building," with a curved undercambered foil blending into a more or less flat outer perimeter—and a curved TE to boot. Lot going on there.

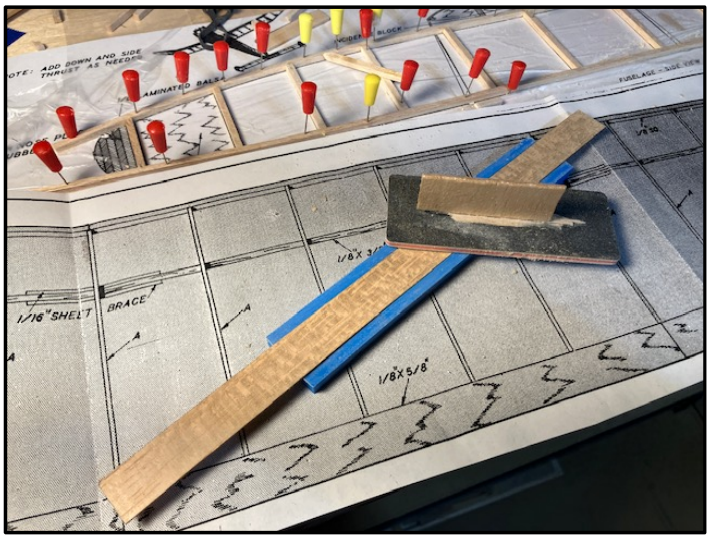
Family photo—all the major parts

Major construction is almost done. It actually goes pretty quickly. It's been fun. Next I've got to come to grips with the front end. Don has offered to help me with my first wood prop. I'm going to take him up on it!

The Best Thing I Ever Did *(Ed.)*







I hate trailing edges. Too much art, not enough science. With the Gollywock, the wing called for 1/8" by 5/8" TE, and the stab called for 3/32" x ½". Those may be stock TE sizes, but I certainly didn't have any on hand.

I've yet to stumble on a really great, simple method for making TE, so I got out my mouse and drafted the end profile you see underneath the first photo, then extruded it to about 6 inches long in the software, which is about as long as my little 3-D printer can handle.

The TE's right angle is at the bottom of the trench, and I positioned the very rear of the TE down .04" for the trailing edge thickness. (.03" would be possible, I'm sure.) I cut a blank from 1/8" wood, set it in the trench, then got to work sanding using a small but gritty sanding block ("Sanding Squares" is the brand). In an amazingly short time (like, two swigs of coffee) a really nice, uniform, exactly-sized TE emerged, to my surprise!

It was so easy I made some extra Golly TE just for fun. You just stand over the trashcan and attack it until you hear the sanding block start scratching the plastic rails alongside the trench. Even though the tool is only 6" long, I found you can just slide the stick along, sand one area, then slide it again. At the start, a couple of passes with a razor plane helps cut down on sanding time even more. The 17-inch Gollywock stab TE, using a different tool, came out great as well. <u>So easy</u>.

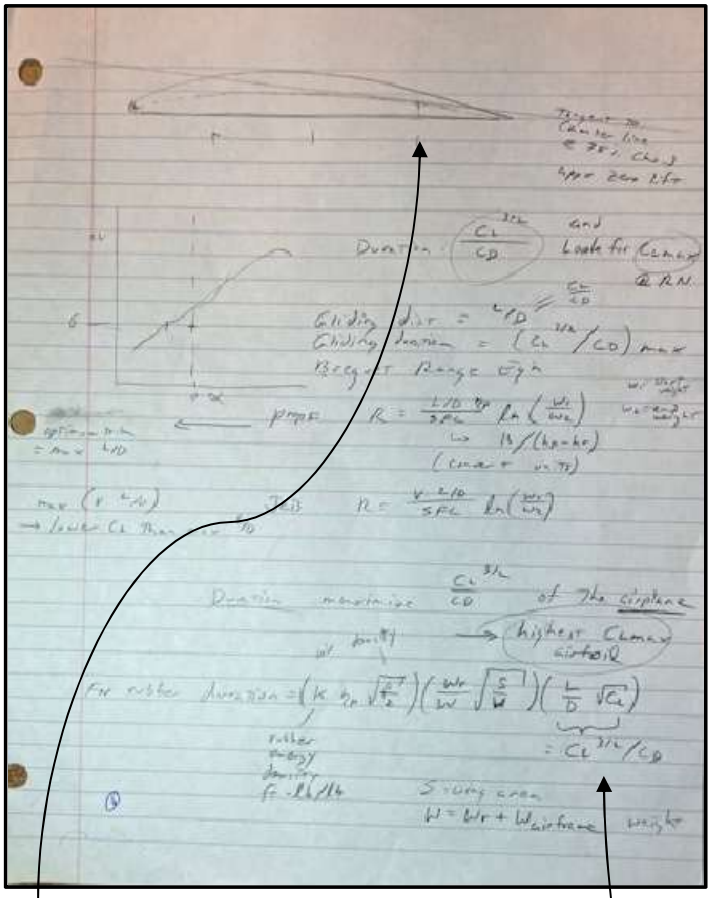
Since then I've also made these tools for a P-30 wing and stab I'm working on. They work great.

<u>Offer to the club</u>: The file is so stupidly easy to edit that if you've got an airfoil you'd like a trailing edge for, I can print you one of these tools, easy peasy. The dimensions need not be stock sizes, so it's easy to tailor the TE to match the airfoil exactly (what a delight). Just give me the numbers or a good drawing. (.08 x .55", for instance.)

Be Careful What You Ask For

(Ed.)

I'd been asked to come up with a flat-bottomed wing for my P-30 kit, but had no idea what foil to go with. I didn't feel like just doing a SWAG, but had no real clue. Spotting David Aronstein at the Ceiling Climb, I asked him about it, thinking he may just have a good foil in his back pocket. Well…



Instead, I got a very nice short course on reading polars, estimating the zero-lift line, and which quantity to maximize for a rubber model. As I was looking at polar plots while trolling through airfoil data, I was wondering whether angle of attack was measured relative to a chord line or a zero-lift line. Apparently the universe goes both ways on that question. David told me that if you draw a line tangent to the camber line (halfway between the skins) at the 75% station, the angle between that line and the chord line is a pretty good approximation of the zero-lift line. I.e., if you were to angle the foil down by that number of degrees, it would develop approximately no lift!

The other big takeaway (looking at that big nasty rubber duration equation that David just rattled off) is that the quantity to emphasize is $C_{l\ max}$—Max Lift Coefficient, <u>not</u> $C_l/C_{d\ max}$, the Lift to Drag ratio. That's because when you boil it down, C_l (in the numerator) carries an exponent of 3/2, while C_d (in the denominator) has an exponent of merely 1. ☺ C_l as a greater effect. It's a math thing.

"But David—what about the fact that outdoor models all turn into gliders eventually?" (I'll ask that next semester.)

April Scramble

Jeff Pakiz, CD

Len working his ½ A

Ah, springtime in the Rockies...you never know what you're going to get. The April Scramble was no exception. We had warm sun, but breezes to go with it. Bernie O. put up a respectable 77 seconds with his CLG (not a max). Butch B. also launched his CLG but only managed to get 13 seconds. John McGrath was putting several E-20 flights but didn't get on the scoreboard. He then switched over to his nice flying P-30. John scored 2 maxes and a 91 sec third flight (I owe you a Scramble sticker).

Bill, Karren and the P-80

On one of the long retrievals Chuck lost his phone and it was all hands on deck or I should say all butts on your bikes. After a long search, Bernie found said lost phone and saved Chuck a trip back to the field the next morn. Around 3pm the wind had gotten the best of us and I closed the contest.

I left the field around 4pm but said goodbye to the three hardy souls (Chuck, John and Butch) who were telling tall tales and drinking beer. Ah, another Scramble for the books.

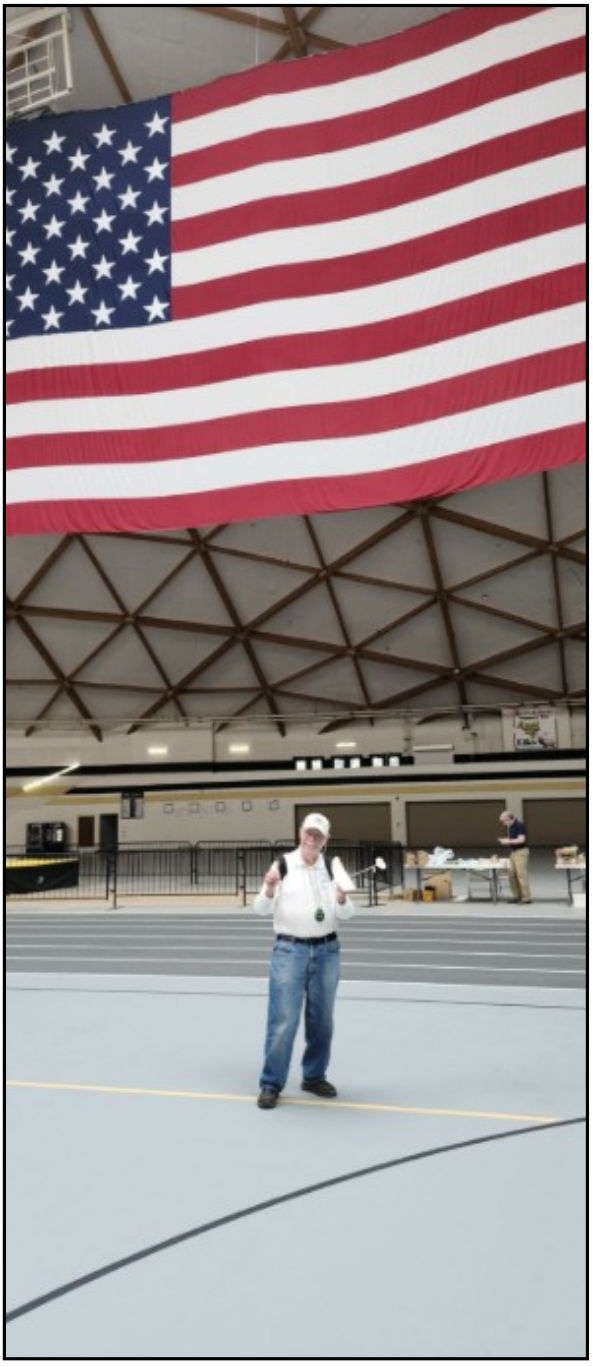
John works the nearly invisible E-20

Round Valley Dome Contest

Jerry Murphy

Rick and I got off to a late start on our road trip to the Round Valley. Us old fellows move slower these days. Our normal routine is for Rick to come to Manitou on Thursday, load the van with our models and assorted support equipment. Have some outstanding Mexican food and then take off early Friday am. However, Rick had some surprise family guests which set us back a little, so we left late Friday morning. The trusty old van (260,000 miles) managed to get us to Eagar with no problems.

Our usual trip is to stop for lunch in Albuquerque. As we were not on that schedule, we had lunch in Las Vegas at Charlie's Spick-in-Span. After a nice lunch, we filled the van's tank and it was off to the dome. We had a nice surprise when we arrived. It was a little after 5 pm and we were surprised to find the dome was still open. It turns out that Arizona doesn't believe in day light savings time and it was only 4 pm local time when we arrived. Wow, so we were able to get unloaded and set up for tomorrow's flying.



The man himself

Sidebar: I had seen special hand trucks with six wheels that work great on stairs. I have seen the one Chuck Etherington has. It sure would save a lot of trips up the stairs, but did not know where I could get one. Well, I was talking with Mike Fedor before this trip and he told me he purchased one of these special hand trucks on Amazon for something like $100. Armed with this info, I went shopping and found one. I ordered it and it arrived in time for this trip. It turns out that my purchase produced an industrial strength device that is designed to move heavy items such as refrigerators. It works, but it was more than I needed. Mike showed me his and it was a perfect fit for my needs. Well, our local fan there in Eagar, Rick Palmer, was looking at my device and was asking where he might obtain one. I told him he could have this one in exchange for a picture of president Grant! I sold it to him for $50. After we arrived home, I made a shopping trip to Costco (needed more Gin) and found they had a unit like Mike's for $20. Problem solved and everybody is happy. Looking forward to checking it out for next year's Round Valley contest.

Steve Brown, F1D

Here we are all moved into the dome thanks to the free hour the good folks in the Arizona government gave us. Our late start was not a problem and I managed to sell my industrial strength hand truck. Let's go flying!
The number of contestants was down a bit from previous years. I suspect the later time of the year might have had been somewhat of an issue. With Easter being so late it compressed the indoor and outdoor schedules together. This resulted in several competitors having to choose one of the choices, indoor or outdoor.

RVD contest results

Event [x] flyers	1st	2nd	3rd	4th	5th
A-6 [6]	Christie, Hamish -- 9:09	Bellenger, David -- 8:02	Brown, Steve -- 7:23	Norell, Thomas -- 7:11	Avery, Paul -- 6:33
A-ROG [4]	Bellenger, David -- 12:28	Avery, Paul -- 7:34	Fedor, Michael -- 5:14	Murphy, Jerry -- 4:49	
Easy B [1]	Fedor, Michael -- 10:07				
F1D (A) [3]	Brown, Steve -- 42:36	Christie, Hamish -- 37:55	Norell, Thomas -- 13:39		
F1L [3]	Bellenger, David -- 21:35	Fedor, Michael -- 21:10	Lueken, Jim -- 4:59		
F1N [2]	Murphy, Jerry -- 2:09.1	Pangell, Rick -- 1:42.3			
Intermediate Stick [1]	Rangel, Carlos -- 0:32				
Limited Pennyplane (A) [2]	Avery, Paul -- 9:12	Bellenger, David -- 9:05			
MiniStick [4]	Brown, Steve -- 513	Christie, Hamish -- 474	Fedor, Michael -- 419	Murphy, Jerry -- 258	
NFFS Towline [1]	Fedor, Michael -- 1:46.0				
P-18 [7]	Norell, Thomas -- 4:09	Bellenger, David -- 3:52	Avery, Paul -- 3:47	Christie, Hamish -- 3:43	Lueken, Jim -- 3:13
Open Pennyplane [2]	Fedor, Michael -- 7:29	Pangell, Rick -- 2:42			
Standard Catapult Glider (A) [3]	Murphy, Jerry -- 1:23.7	Pangell, Rick -- 1:12.3	Fedor, Michael -- 1:11.4		
Unlimited Catapult Glider (A) [3]	Murphy, Jerry -- 1:24.3	Fedor, Michael -- 1:15.7	Pangell, Rick -- 1:09.7		
FAC Phantom Flash [5]	Norell, Thomas -- 6:00.0	Fedor, Michael -- 5:49.0	Lueken, Jim -- 4:54.0	Keller, Dr Michael -- 4:14.0	Murphy, Jerry -- 2:52.0
ML FAC WW II Combat [4]	Fedor, Michael -- 2:23	Norell, Thomas -- 2:08	Keller, Dr Michael -- 1:08	Pangell, Rick -- 0:00	

A cold front rolled in Friday evening which gave us a cool dome for our enjoyment. As usual, the dome was set-up for the heavy weight models and gliders in the first 4 hours. I dug out my trusty Buddenbohm CAT gliders and set out to seeing if they survived a year of storage in my garage. Much to my surprise they were in good shape. Their duration was down a bit from previous years; but they were flying well. Well enough for three first places, Catapult, Unlimited Catapult, and the FAI event F1N.

As the weekend progressed, we saw flight times were a bit lower than in previous years. Could it be related to the cooler air in the dome?

Here is an interesting tidbit. There were no competitors flying HLG, but we had three flying F1D. The most hotly contested events were P-18 with 7, followed by A6 with 6, Phantom Flash with 5 and a tie with WWII Combat and A ROG with 4 each. Over on the FAC tables there were five events with 5 competitors each.

Tom Norell and Elliot Christie

We might have a new Jace entering the arena. Working under the careful guidance of Tom Norell was Hamish's son Elliott. Look out, world! With coaching like that from Tom and Hamish, Elliot will be a force to be reckoned with in the near future.

The most traveled award goes to Mike Clem of Texas. He flew to Colorado Springs for the Ceiling Climb and then flew to Albuquerque where Tom Norell met him for the drive to the dome. Just in case you can't recall, his father is the legendary speed and free flighter from Dallas, Jim Clem.

Rick, Tom, Mike Fedor, Mike Keller—WWII Mass Launch

Here is something to think about. Sunday we were greeted with 40+ MPH winds. I was thinking the contest was being blown out, but I couldn't have been more wrong. With the wind howling and the dome making lots of noise I looked up to see world champion Steve Brown flying his F1D. Once the model climbed up to head high, the air was as smooth as silk. Steve won the event with a two-flight total of 42:36. Hamish was close on his heels with 37:55. Mike Clem was also flying an F1D but did not record any officials.

83rd Midway Anniversary, anyone? (June 4-7, 1942)
Tom's Dauntless up high against a perfect background

I got a kick out of watching Hamish's A6 floating overhead. It reminded me of the sharks in aquariums that seem to be floating by waiting for something to fall into the water. His shark did well, winning the event with a score of 9:09. I should build one for next year's indoor season.

The day was filled with lots of people making lots of flights. The highlight of the day was the WWII Combat. We had four fighters ready to go. We didn't have any mid-airs so it was a clean fight. Mike Fedor won it with an 8 second advantage over Tom Norell.

If there was a Grand Champion award it would go to Mike Fedor. He put up 8 first places plus 3 second and 3 third. Tom Norell finished with 5 first place finishes plus 1 second place. Dave Bellenger posted 2 first places and 3 seconds. Steve Brown won 2 events. I was the only other flyer to win three events.

As we closed shop it was obvious that Tom Gaylor did a first-class job as the CD. This contest should be on everybody's 2026 schedule. Under Tom Gaylor's leadership, this event was run well run and everybody was happy. There was talk about trying to bring the NATS back again.

Mike, Rick and I adjourned to Molly Butler's lodge in Greer for a wonderful steak dinner. We have made a tradition out of finishing the contest with a wonderful steak in this historic lodge. Tomorrow we will have our hands full with seventeen students for the build and fly event. We use John's Mountain Lion and as usual it proved again to be a good choice. One of the students told me he remembered me from last year's event.

We managed to get all the 17 students, and their teacher, Ms. Susan Willis, successfully flying their models in about an hour. After everybody learned how to use the Romash winders, everybody lined up for the mass launch. The mass launch is always a big hit with the air being filled with models. We had the usual mid-airs, crashes and models flying up to the top of the dome.

After the dust settled from the mass launch, Tom handed out the awards. Everybody received a Romash winder as well as another model kit. (A Bluenose P-18)

In closing, we all had a good time and are looking forward to next year's event. It would be great to have the NATS back again in the near future.

Murph—Thank you for this superb reporting!
Photo and graphic credits: Murph, Tom, PMAC club of Phoenix

CLG Launch Analysis

Bill Groman

John, here are pics I took from video captures of a cat glider launch.

First is the glider still being pulled by the rubber, showing a launch time (per video timer) of 1:40:02

Next, the glider is at a point approximately 12 feet from the first point showing a time of 1:40:08

The elapsed time is 6/100 of a second. Please check my math, but I believe that time for a 12 foot distance works out to **136mph**. By the way, I arrived at the 12 foot distance approximation using the unit of One Bill (my own height being 6'3, reduced to and even 6' because I'm slightly hunched down.

Math confirmed, Bill. That thing's smokin'!

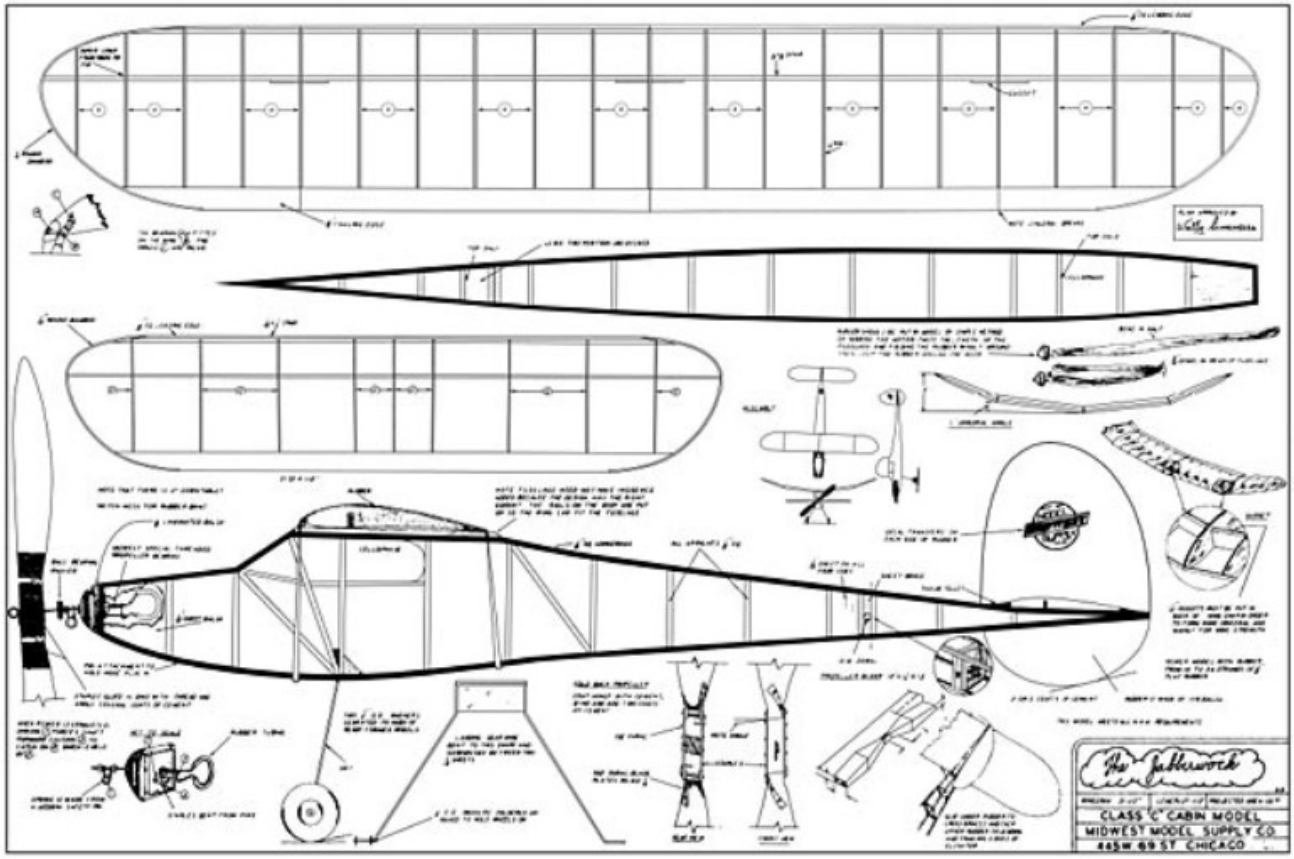
That's 33.3 Bills per Second!

Best Newsletter photo ever: "Man launches himself; catches up to glider"

More fun: If you assume a 2 meter catapult stroke (probably too high a figure), and constant acceleration (also a lie, because the catapult's force isn't constant), you could use some simple kinematics ($v_f^2 = v_i^2 + 2a\Delta x$), and find a rough—very rough—estimated <u>average</u> acceleration to be around 924 m/sec^2, or 94 g's!!. If the force provided by the catapult were a linear function of stretch (also a lie, but probably conservative), that would mean the peak acceleration—at the start of the cat stroke—is in the neighborhood of <u>200 g's</u>. Amazing—and explains why CLGs need to be so tough. Bill, you are going to be so famous next year with my Physics kiddos.

--John

Speaking of Wally Simmers—Here's the Jabberwock. 32" span. Surfaces similar to Gollywock.



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Note: ***MMM also accepts PAYPAL for Dues, Contest Entry Fees, Etc (mmmffclub@gmail.com)***

Paypal does charge a fee, so maybe add an extra buck to help us out.

Seventh Annual Casino Cup
West Wendover NV

Saturday and Sunday June 14-15 2025

FAI-AMA-NFFS

AMERICAS CUP NATIONAL CUP

- SATURDAY
- FAI a-b-c-q
- AMA/NFFS - Power, Rubber, Glider(s)- fly either day, must finish same day
- MMM Club Scramble format for singleton class entries (maxes handicapped to 3 minutes). Two entrants + constitute a separate event.
- Field is approx. 9 miles south of the Wendover Strip, west from HWY 93A. Head west on dirt road just south of 9Mile Hill.
- Area adjacent to the flight line for camping, trailers and motorhomes.
- Abundant casino hotels and motels available nearby in West Wendover/Wendover

SUNDAY

FAI g-h-j-p-s

AMA/NFFS- Power, Rubber, Glider(s)- fly either day, must finish same day

$30 Entry includes one event, $60 unlimited events. Cash only.

Brought to you by the MMM Club AMA#177 Current AMA Membership required of participants.

Contest Director

Jack Murphy 801-550-9128

jack.murphy@cbrealty.com

Monday- reserve day for in case of inclement weather

46th MMM 14-Rounder

July 12-13, 2025

Come fly with us at the largest and most beautiful flying site in North America. Within the 14-R are the Centennial and Columbine Cups, separate 7-round FAI competitions. Traditional MMM perpetual silver trophies for F1A-B-C/P-Q and perpetual silver cups for F1G-H-J-S will be awarded based on combined performance over the regular rounds in both competitions. (Ties will be broken with flyoffs.) Only eight MMM Master Sportsmen have earned **Blue Jackets** since 1980. Earn one by flying a perfect fourteen 180-second maxes over the two days in F1A-B-C/P-Q.

July 12 (Sat.) - 7 rounds of Centennial Cup: F1A, B, C/P, Q; 5 rounds of F1G, H, J, S

July 13 (Sun.) - 7 rounds of Columbine Cup: F1A, B, C/P, Q; 5 rounds of F1G, H, J, S

AMA/NFFS/SAM events: 8 a.m. to 5:30 p.m.
No rounds. In combined events, fly any/all events you wish; we will use your best single event score for awards purposes. HLG/CLG will use a launch pen.

Saturday, July 12: Catapult Glider, P-30, Fast Gas Combo*, Andrade Rubber, SAM OT Rubber Combo, E-36, E-Nos. Combo.

Sunday, July 13: HLG, Classic Towline, Slow Gas Combo**, Sm./Lg. Nos. Rub. Combo, Mulvihill/Moffett, A/B Electric Combo.

** AMA Gas: 1/2A, 1/2A Classic, A, B, AB Classic, C, D and/or CD Classic.*
*** Nostalgia: 1/4A, Early 1/2A, 1/2A, A, B, C and/or MMM SLOP.*

Flying Site: Lowry Ranch, Arapahoe County, CO. Near intersection of Watkins Rd. and Quincy Ave. Email for map and gate lock combination.
Contest Hours: Saturday and Sunday, 8 a.m.–5:30 p.m., weather dependent. Flyoffs TBD.
Tentative Rounds schedule: 8:00 a.m. start; first 5 rounds Saturday and Sunday are 90 minutes; final 2 rounds each day are 60 minutes.
Accommodations: Check the MMM website for hotel details. Primitive RV and tent camping is allowed on the site for no fee. No hookups are provided. No dumping is allowed. There is a porta-potty on site.
CDs: Pete McQuade, <petemcqA2@aol.com>, 719-433-5356 & John McGrath, <johnmcgrath2@comcast.net>, 719-963-9227.

ELITE *BLUE JACKETS*...14-ROUND MAXOUTS SINCE 1980

Detach, fill out, and mail or email to: Pete McQuade, 2610 Kenton Green Ct. Colorado Springs, CO 80920

Name _____ **Country** _____ **AMA #** _____ **Entry Fees enclosed $**_____

Entry fees: $20 for first event, $10 per each additional event. $50 maximum ($10 for Jr./Sr.) for unlimited events, or ***$40 if postmarked by 6/30/25.***
Check payable to MMM, or PayPal to <mmmffclub@gmail.com>. If using PayPal we still need an entry form mailed or emailed. Past World Champions shall pay no entry fees. ***Circle events entered.*** **Centennial & Columbine Cups (14-Rounder):** F1A F1B F1C F1G F1H F1J F1P F1Q F1S **AMA/NFFS/SAM:** HLG CLG Classic Towline P-30 SAM OT Rubber Sm./Lg. Combo Andrade Rubber Nos. Rubber Sm. / Lg. Combo. Mulvihill/Moffett E-36 Electric A/B Combo Slow Gas Combo: Nos. 1/4A, Early 1/2A, 1/2A , A , B , C, and/or MMM SLOP E-Nos. Combo: 1/2A, ABC Fast Gas Combo: 1/2A Classic, AB Classic, CD Classic, 1/2A, A, B, C, D