

2019 NATIONAL AEROMODELING CHAMPIONSHIPS Muncie IN · Blytheville AR ·Springerville AZ

INDOOR FREE FLIGHT

May 29



By Rob Romash (rob@eclipsetoys.com)

Once you are either off the airplane in Albuquerque or exit Interstate 25, there are only two ways to drive get to Springerville, Arizona—home of the Springerdome, affectionately called "The Enormodome," and the site of this year's Indoor Nats. Either route takes you more than 100 miles into the desert, heading west.

If you like geology, then route number one is for you—with hundreds of miles of ancient lava flows on one side and 300-foot cliffs on the other. It's a nice curving road with plenty of possible elk/car collisions and one of the US's few natural stone arch bridges. A quick hike gets you right up inside of it from the roadside rest area. There are spectacular views.

The other way is for the tech and sci-fi nerds. A bit more south from the above is route two, where will you come across another cool spot. If any of you are Carl Sagan fans and have read his book Contact (Jodie Foster starring in the movie version of the same name), you hit the Very Large Array (VLA) in Socorro, New Mexico. The VLA consists of 27 radio telescopes, each 25 meters in diameter, arranged in a Y-shape configuration. All 27 telescopes are used simultaneously to observe a target. Adding them up makes one of the largest radio telescopes ever made and an interesting sightseeing stop as the expanse of flat white sentinels quietly await the next discovery. Springerville proper, and Eagar, only separated by a road, are a small oasis in the vast landscape. As the saying goes, if this isn't the middle of nowhere, you can sure see it from here. It's a two-police car town with a Safeway, a few hotels and bars, plus a smattering of small houses, and of course, the dome. The dome is one of the only, if not the only, high school football fields covered by a roofed structure. And a very cool structure it is. It features a laminated wooden, arched geodesic dome that is the highest category 3 site on the planet at just 6 inches under max height.

The dome sounds great on paper, but has some pros and cons. On the positive side, it's almost impossible to get a rubber model hung up in the ceiling because there is nothing to get hung upon—you just bounce. The con side is that this is one of the only indoor high ceiling sites with consistent lift and sink to be taken advantage of or it can knock you out of the air. At a 7,000-foot altitude, you have 1/4 less air density to fly with.

During the coming days, we will see how the first-ever Nats here goes and who comes out on top. Day one is scheduled for registration until 4 p.m., with both FAC and AMA glider events kicking off the competition. Day two will have the same glider events in the morning and the first round of the lightweight AMA events in the afternoon. Stay tuned ...

INDOOR FREE FLIGHT

May 30



The flightline with 42 entries. The most populated Indoor Nats in the last few years.

By Rob Romash (rob@eclipsetoys.com)

Contestants descend on the Dome today from all points as can be seen by the variety of license plates in the parking lot.

The Day 1 tradition of starting out with glider events holds true here in Arizona. All through the building, you could hear the "buzz" of high-speed gliders ballistically shooting at the ceiling and the occasional crunch as something went terribly wrong.

Most of the usual suspects are here—Tim "Erratic" Batiuk, Rob "No Neck" Romash, Don "Flip Flops" Deloach, Stan "The Man" Buddenbhom, Kurt "The Killer" Krempetz, and a few new faces. Youngster Logan Alves is shown contemplating the infinite art of the glider.

So far, everyone here is flying Discuss Launch Gliders (DLG) in the Hand-Launch event. The last few years have seen a shift from overhand Javelin launches to the new hotness of DLG in all Hand-Launch Glider categories in both Free Flight and RC.

In the past, the Indoor Nats glider events usually happened early in the morning, but Wednesday it started at 4 p.m. and, as I wrote this article around 7 p.m., the sun began to set giving the field inside an odd yellow glow. There are no lights here for night flying, so it was time to head out an hour later.

We did have some experimentation with high output LED lights and, perhaps in the future, we can have night flying at this venue. That being said, many entries are bidding their time for the morning sun where the expectation of some favorable air could come into play ... this isn't a bad strategy here.

Beside the glider fliers were entrants doing some testing for events later in the schedule. These were heavier weight events like Peanut Scale, Coconut Scale, and some FAC models. Combining these with gliders are usually not an issue although a glider going at 50 mph does take the lead in any collision.

When the sun rises on Thursday morning, we will see the final flights of the gliders, Discuss Launch, Catapult Launch (Standard and Unlimited), plus Jet Cat. Then we move into the lighter weight models where the best in the country are here to fight to the death!



Dick Wood staying focused.



Kurt Krempetz's head is about to explode.



Henry Towes letting it all hang out during a Catapult Glider launch.



Kurt Krempetz trims his performance model.



Don "Flip Flops" Deloach showing great form.



Logan "The Beast" Alves shows good form.



Rob "No Neck" Romash.



Tim "Eractic" Batiuk with his finger accidentally glued to the model.



A Discuss Launch Glider at the ceiling.



A pretty Blohm und Voss Jet Cat.





A Discuss Launch Glider.



George Nuniez participating in Coconut Scale.



Left and above: Tom Norell Ambroid high during a late-night build.



Results: May 29

Data

Current Standings for F1N

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	ted) [tie-	-breaking I	ogic per A	MA J	Non
High	3 of 9 plus flyoffs	Flight >	1	2	3							Flight
1st Place	Krempetz, Kurt	143.0	50	48	45							

Data

Current Standings for Indoor Hand Launch Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	ted) [tie	-breaking l	ogic per A	MA]	 Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2								Flight
1st Place	Krempetz, Kurt	107.8	53.7	54.1								
2nd Place	Batiuk, Tim A	99.6	47.4	52.1	42.1	47.5						

Data

Current Standings for Indoor Std Catapult Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA]	 Non
High	2 of 9 plus flyoffs	Flight >	1	2	3	4						Flight
1st Place	Buddenbohm, Stan	139.0	66.0	68.2	66.1	70.8						
2nd Place	Furutani, Norman	127.6	32.4	64.1	63.5							
3rd Place	Krempetz, Kurt	104.1	63.1	41								

Data

Current Standings for Indoor Unlimited Catapult Glider

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	logic per A	MA]		Non Flight
High	2 of 9 plus flyoffs	Flight >	1	1 2 3 4								Fiight	
1st Place	Buddenbohm, Stan	167.7	63.0	69.2	85.5	82.2							
2nd Place	Krempetz, Kurt	101.5	48.6	52.9									

INDOOR FREE FLIGHT May 31



Logan "The Beast" Alves puts his all into a DLG launch and is having a blast doing it! He won the Junior HLG title.

By Rob Romash (rob@eclipsetoys.com)

Thursday saw the final battles in the main glider events. It also saw something noted earlier: You have to pick your air carefully at this site! As the sun came up and started to warm the floor, it was evident that to really win, picking your air is key. Considering many of these pilots also fly outdoor Free Flight, they are akin to watching the signs for lift. For instance, when a cloud would come over the site it grew visibly dark and you could actually feel a slight drop in temperature. When the sun would pop out, you had to position yourself so that the top rollout of your model put you squarely in the "sunny" spot on the floor. In the morning here, it was across the site near the bleachers, and moved slightly as the day progressed.

Gliders that usually average 1 minute could gain an extra 30 seconds if you played your cards right. This happened to your humble narrator giving me a personal best flight at 90 seconds (also pushing me into second place, besting Kurt Krempetz for the first time in my life!). Some may argue that this isn't true indoor flying, but we are all flying in the same air at the same time, so everything goes!

The only problem is that the pilots whose models average high times anyway in normal indoor air, still pull away out front. Again Stan "The Man" Buddenbohm dominated with epic flights right to the ceiling nearly every time. He is like a glider machine and although he flies discus, his style is to stand in one spot with no full-body turn like the others. Instead, he looks like a major league pitcher—cocking his leg up high and wailing his machine skyward.

Don "Flip Flops" DeLoach also showed perfect form with a slightly different style of steel-cold focus right before launch, reaching his hand out to start his wristwatch stopwatch and doing a power half wind to nail nearly every flight with ease.

It has to be said that we were missing one of the very elite top pilots, Jimmy Buxton, who holds the national record of flights of more than 90 seconds. He would have been right in there. We missed you man!

One notable absence was Tim "Erratic" Batiuk, who showed up for qualifying, looked promising, but didn't show up for the race.

Jet Cat glider also made a big splash here with a multitude of creative designs derived from—you guessed it—jets. Extra points are given for details as in other scale events. With the right batch of extra engines or canards, you can pick up as much as 11 seconds bonus time! I believe this was also the first time that Jet Cat was flown at the Indoor Nats and looks to be a staple event. Jet Cat was the most popular glider event this year. It is clear to see that the variety tricks that were learned resulted in plenty of smiles all around.

You could see the results after the morning dust settled. As we moved into the afternoon and early evening, the first of the lightweight models made their way out of the custom storage boxes. For me, the boxes are not as important as the models themselves. Some competitors show up with Tupperware and carboard, and others with elaborate high-end cabinetry worthy of a high-end home. In the end, it isn't the boxes, but the flying that matters.

At the end of the day, as the light faded and the LED lights came into play, the last flights were being put up by the die-hard nerds—I being one of them.

Friday we will see where folks stand in the long duration events. As these are broken up over a few days, the standings are sure to change. Stay tuned.



Stan "The Man" Buddenbohm's DLG models. It's truly cool to watch him fly.



Dmytro Silin's winder, complete with torque meter that measures the quantum molecular real-time rubber density time as it relates the altitude, air density, and the alignment of the planets, which contributes to gravity dispersal. It also can make a great cappuccino!



Kurt Krempetz's classy DLG with composite wing panels.



Having a cool model box is where it's at when showing up at an indoor event.



Three happy Jet Cat fliers and their unique models.



Jake Palmer processes his F1D model.

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Tom Norell is truly all about his German Arado Jet Cat. He placed second.



Don "Flip Flops" DeLoach struggled early on in standard Catapult Glider, only to overcome his early setbacks and put up a strong finish.



Kurt Krempetz delicately grabbing his F1D model before it lands on a test flight.



Rick Pangell and Chuck Etherington doing what they do best.



Deep discussion on the zen art of scale rubber models.



A rare supportive wife at an indoor meet!



Winding an FAC scale model, with focus.



Jerry Murphy's Cutlass Jet Cat. Jerry is a true gentleman competitor from my hometown of Colorado Springs who takes part in a multitude of indoor and outdoor Free Flight events.



Leo Pilachowski's F1L model.



Logan tweaks his P-18.



Henry Towes' cool suicide Japanese Jet Cat model.



Don DeLoach's full Pennyplane. It is a tandem-wing model that is becoming more rare.



An F1D model climbs to the ceiling.



Results: May 30

Data

Current Standings for Indoor Std Catapult Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	ogic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		riigin
1st Place	Buddenbohm, Stan	147.6	66.0	68.2	66.1	70.8	74.6	72.7	73	71.7		
2nd Place	Romash, Robert	133.9	53.6	52.2	52.9	55.7	50.9	60.1	61	72.9	55.2	
3rd Place	Krempetz, Kurt	133.6	63.1	41.0		58.1	60.4	64.7	67.1	64.0	66.5	
4th Place	Furutani, Norman	130.0	32.4	64.1	63.5	51.8	64.0	60.0	27.8	40.0	65.9	
5th Place	Deloach, Don A	129.0	12.5	5.6	63.5	62.3	59.3	59.0	55.1	65.5	48.7	
6th Place	Murphy, Jerry	123.8	52.3	61.7	26.9	26.2	62.1					
7th Place	Southard, Andrew	98.1	48.2	48.5	49.6							
8th Place	Layne, James L	78.0	25.0	30.0	39	39						
9th Place	Pangell, Rick	58.5	12.4	4.1	8.4	19.7	29.2	28.6	29.3	3.7	27.4	

Data

Current Standings for Indoor Std Catapult Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	ted) [tie	-breaking l	logic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4						Fight
1st Place	Alves (J), Logan	35.0	22	9.0	13	13.0						

Data

Current Standings for Indoor Unlimited Catapult Glider

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	ogic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		riigiit
1st Place	Buddenbohm, Stan	191.5	63.0	69.2	85.5	82.2	86.3	94.8	86.3	96.7		
2nd Place	Romash, Robert	165.8	44.8	55.6	75	90.8	67.2	69.2	58.1	47.5	8.3	
3rd Place	Krempetz, Kurt	135.9	48.6	52.9	59.6	67.5	61.7	68.4	50.0	60.0		
4th Place	Murphy, Jerry	106.2	51.7	52.7	53.5							
5th Place	Pangell, Rick	91.4	41.3	39.0	44.1	39.7	47.3					

Data

Current Standings for F1N

Standing	Flyer	Flight Score		Flight ti	imes (oi	nly green s	cores coun	ted) [tie	-breaking I	ogic per A	MA]	Non Flight
High	3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9	riigin
1st Place	Buddenbohm, Stan	215.0	61.0	61.0	59.0	64.0	59.0	67.0	71	76	68	
2nd Place	Deloach, Don A	207.0	44.0	67	68	66.0	15.0	72	63.0	67.0	61.0	
3rd Place	Krempetz, Kurt	170.0	50.0	48.0	45.0	62	47.0	53	51.0	55	51.0	

Data

Current Standings for Indoor Hand Launch Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	ogic per A	MA]		Non Flight
High	2 of 9 plus flyoffs	Flight >	1 2 3 4 5 6 7 8 9									Fiight	
1st Place	Deloach, Don A	144.6	62.4	51.4	52.4	53.7	73.6	63.5	69.0	71	69.2		
2nd Place	Buddenbohm, Stan	142.1	65.9	58.9	70.7	71.4	70.5	49.6	67.8	38.3	31.8		
3rd Place	Krempetz, Kurt	132.9	53.7	54.1	66.4	60.7	66.5	60.4	54.2	57.5	64.1		
4th Place	Batiuk, Tim A	99.6	47.4	52.1	42.1	47.5	46.7						

Data

Current Standings for Indoor Hand Launch Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (o	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2								Flight
1st Place	Alves (J), Logan	17.0	8	9								

Data Current Standings for Helicopter

Standing	Flyer	Flight Score			Fli	ight times	6 (only g	reen scores	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												Fight
1st Place	Silin, Dmytro	3:23	1:04	3:23												
2nd Place	Brocks, K Peter	2:28	1:30	2:28	1:38											

Data Current Standings for F1L

Standing	Flyer	Flight Score			FI	ght times	s (onlyg	reen score	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	2 of 6 plus flyoffs	Flight >	1	2	3	4										riigiit
1st Place	Pilachowski, Leo B	26:17	12:21	11:40	13:37	12:40										
2nd Place	Landrum, Billie E	12:49	7:01	5:48												

Results: May 30

Data

Current Standings for Ministick

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	breaking I	ogic per A	MA]	Non Flight
High	1 of 5 plus flyoffs	Flight >	1									Fight
1st Place	Romash, Robert	502.0	502									
2nd Place	Deloach, Don A	437.0	420.0	437								
3rd Place	Brocks, K Peter	395.0	395	346.0								
4th Place	Wood, Richard L	263.0	226.0	263								
5th Place	Pilachowski, Leo B	228.0	228									

Data

Current Standings for F1D

Standing	Flyer	Flight Score		Flight t	imes (o	nly green s	cores cour	nted) [tie	-breaking l	logic per A	MA]	Non Flight
High	1 2 of 6 plus flyoffs	Flight >	1	2								Fiight
1st Place	Palmer, Jake A	2297.0	1077	1220								

Data

Current Standings for Ornithopter

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	logic per A	МА]	Non Flight
High	1 of 5 plus flyoffs	Max >	120	120								Fight
1st Place	Silin, Dmytro	240.0	120	120								
2nd Place	Murphy, Jerry	9.0	3.0	9	4.0							

Data

Current Standings for Ministick MI

Standing	Flyer	Flight Score		Flight times (only green scores counted) [tie-breaking logic per AMA]									Non Flight
MI	2 of 3 plus flyoffs	Flight >	1										Flight
1st Place	Romash, Robert	548.0	548										
2nd Place	Deloach, Don A	438.0	438										
3rd Place	Khanagov, Karen	535.0	535										
4th Place	Maisc, Will	393.0	393										
5th Place	Guerrero, Eduardo	240.0	240										
6th Place	Lindley, David H	167.0	167										
7th Place	Brocks, K Peter	50.0	50										

Data

Current Standings for A-ROG

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	breaking l	ogic per A	MA]	Non Flight
High	1 of 5 plus flyoffs	Flight >	1									Fight
1st Place	Pangell, Rick	186.0	186									



Rob "No Neck" Romash and Stan "The Man," proud of their first and second-place finishes in Standard Catapult Glider.



Logan is loving life with his first-place finish in Junior HLG.

INDOOR FREE FLIGHT

June 1



F1D and F1L sharing airspace. Both of these models are not just used in AMA events, but also international FAI events. F1D is considered the "Formula One" of Indoor, and those who take up the insane challenge are truly focused. The only real reason to fly F1D is to get on the US team and win the world championships.

By Rob Romash (rob@eclipsetoys.com)

First up Friday were most of the scale events and the judging that comes along with them. With Indoor Scale, you compete not just for time in the air but how true to scale your model is. I have been to just about every Indoor Nats the last few years, and I haven't seen so many scale models in a long time. Not just more models, but quality was on a level. Some of these models look like they were a plastic model kit but, instead of sitting on a shelf, they weigh mere grams and fly for several minutes. The scale events and the skills needed are truly an artform.

There were several Mass Launches, meaning everyone launches at the same moment and the last guy down wins. Many of these are done in rounds where the first few guys down get bumped and the rest go on to another flight to figure the top flier. I am not a true FAC guy, but I know, for instance, in many of these events you are not allowed to make motor changes between flights or repairs. If you screw up, its like in real life—you don't get a chance to go back. If your model breaks you fly it as is. Your motor breaks, and you're out. Just like car racing, blow a motor and your day is done.

I am always amazed at how well these models fly. It is one thing to make a glider or duration model fly well, but when you miniaturize a real full-scale aircraft with all the details and have slow graceful flights, it's truly mesmerizing.

As the afternoon rolled in, we were back to the light duration models. As in the glider events, you can take advantage of the time getting lift in the building or get knocked out of the sky in bad down currents. It really isn't that bad, and this site is really starting to grow on people. We have, in fact, picked up several more entries and the "pit" stretched uninterrupted the entire length of a football field—the more the merrier.

A few indoor folks stray away from here because of the unpredictable conditions, but I will say after flying here four times for multiple days, I really like and the fact you can take advantage of it. Lots of folks here agree—this is a cool site demanding skillset from all of Free Flight, not just indoor.

Another cool aspect is as the sun goes down, we are still flying. Last flight is at 8 p.m., well after sunset, and watching the light change is pretty cool.

Saturday morning, we change up and the lightweight events are in the morning with the heavier events in the evening. It looks like another busy day—stay tuned.



Jerry Murphy on the megaphone and Chuck trying to ignore it.



Light changes through the day, here is the sunset evening glow.





F1D positioned over the dome logo.



Tom Norell and Chuck Etherington are seen trading blows over who's P-24 looks better. It was overheard as Chuck delivered a gut check to Tom "who has pink wingtips!" Tom retorted with a swift uppercut and "what's with the monochromatic color scheme?" Later they were seen napping and spooning together on a gym mat in a quiet corner of the dome.



Tom Norell's exquisite Peanut Scale B.A.T. Monoplane.



A very nice handmade toolbox.



Tom and Chuck stretching rubber and winding for the P-24 ultimate throwdown deathmatch Mass Launch.



An F1D box.



A complex ornithopter—flapping wings and fixed wing combo.



A beautiful Peanut with a "legit" aluminum cowl.



A little heated discussion about scale judging.



Peanut Scale requires not just building skills, but documentation for the judges.



A unique Rubber Scale model. These models allow for more creativity over most duration events where the models are so well refined from 30 feet, they are hard to tell apart.



Total skill goes into these models.

Results: May 31

Data

Current Standings for Indoor Std Catapult Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (oi	nly green s	cores coun	ted) [tie	breaking l	logic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Fight
1st Place	Buddenbohm, Stan	147.6	66.0	68.2	66.1	70.8	74.6	72.7	73	71.7		
2nd Place	Romash, Robert	133.9	53.6	52.2	52.9	55.7	50.9	60.1	61	72.9	55.2	
3rd Place	Krempetz, Kurt	133.6	63.1	41.0		58.1	60.4	64.7	67.1	64.0	66.5	
4th Place	Furutani, Norman	130.0	32.4	64.1	63.5	51.8	64.0	60.0	27.8	40.0	65.9	
5th Place	Deloach, Don A	129.0	12.5	5.6	63.5	62.3	59.3	59.0	55.1	65.5	48.7	
6th Place	Murphy, Jerry	123.8	52.3	61.7	26.9	26.2	62.1					
7th Place	Southard, Andrew	98.1	48.2	48.5	49.6							
8th Place	Layne, James L	78.0	25.0	30.0	39	39						
9th Place	Pangell, Rick	58.5	12.4	4.1	8.4	19.7	29.2	28.6	29.3	3.7	27.4	



Current Standings for Indoor Std Catapult Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	logic per A	MA]	Non
High	2 of 9 plus flyoffs	Flight >	1	2	3	4						Flight
1st Place	Alves (J), Logan	35.0	22	9.0	13	13.0						

Data

Current Standings for Indoor Unlimited Catapult Glider

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	logic per A	MA]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Figin
1st Place	Buddenbohm, Stan	191.5	63.0	69.2	85.5	82.2	86.3	94.8	86.3	96.7		
2nd Place	Romash, Robert	165.8	44.8	55.6	75	90.8	67.2	69.2	58.1	47.5	8.3	
3rd Place	Krempetz, Kurt	135.9	48.6	52.9	59.6	67.5	61.7	68.4	50.0	60.0		
4th Place	Murphy, Jerry	106.2	51.7	52.7	53.5							
5th Place	Pangell, Rick	91.4	41.3	39.0	44.1	39.7	47.3					



Current Standings for F1N

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	breaking l	ogic per A	MA J	Non Flight
High	3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9	Flight
1st Place	Buddenbohm, Stan	215.0	61.0	61.0	59.0	64.0	59.0	67.0	71	76	68	
2nd Place	Deloach, Don A	207.0	44.0	67	68	66.0	15.0	72	63.0	67.0	61.0	
3rd Place	Krempetz, Kurt	170.0	50.0	48.0	45.0	62	47.0	53	51.0	55	51.0	

Data

Current Standings for Indoor Hand Launch Glider (A)

Standing	Flyer	Flight Score		Flight times (only green scores counted) [tie-breaking logic per AMA]									
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9		Flight
1st Place	Deloach, Don A	144.6	62.4	51.4	52.4	53.7	73.6	63.5	69.0	71	69.2		
2nd Place	Buddenbohm, Stan	142.1	65.9	58.9	70.7	71.4	70.5	49.6	67.8	38.3	31.8		
3rd Place	Krempetz, Kurt	132.9	53.7	54.1	66.4	60.7	66.5	60.4	54.2	57.5	64.1		
4th Place	Batiuk, Tim A	99.6	47.4	52.1	42.1	47.5	46.7						

Data

Current Standings for Indoor Hand Launch Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA]	Non Flight
High	n 2 of 9 plus flyoffs	Flight >	1	2								Flight
1st Place	Alves (J), Logan	17.0	8	9								

Results: May 31

Data

Current Standings for Helicopte	r
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Standing	Flyer	Flight Score			Fli	ight times	6 (only g	reen score:	s counted)	[tie-brea	king logic	per Al	NA J			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												Fiight
1st Place	Silin, Dmytro	3:23	1:04	3:23												
2nd Place	Brocks, K Peter	2:28	1:30	2:28	1:38											



Current Standings for F1L

Standing	Flyer	Flight Score			Fli	ight time:	s (onlyg	reen score:	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	2 of 6 plus flyoffs	Flight >	1	2	3	4										Fiight
1st Place	Pilachowski, Leo B	26:17	12:21	11:40	13:37	12:40										
2nd Place	Landrum, Billie E	12:49	7:01	5:48												

Data

Current Standings for Ministick

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	ted) [tie	breaking l	ogic per A	MA]	Non Flight
High	1 of 5 plus flyoffs	Flight >	1									Fiight
1st Place	Romash, Robert	502.0	502									
2nd Place	Deloach, Don A	437.0	420.0	437								
3rd Place	Brocks, K Peter	395.0	395	346.0								
4th Place	Wood, Richard L	263.0	226.0	263								
5th Place	Pilachowski, Leo B	228.0	228									



Current Standings for F1D

Standing	Flyer	Flight Score		Flight t	imes (o	nly green s	cores coun	nted) [tie-	breaking l	ogic per A	MA]	Non Flight
High	n 2 of 6 plus flyoffs	Flight >	1	2								Fiight
1st Place	Palmer, Jake A	2297.0	1077	1220								

Data

Current Standings for Ornithopter

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	breaking l	ogic per A	MA]	Non
High	1 of 5 plus flyoffs	Max >	120	120								Flight
1st Place	Silin, Dmytro	240.0	120	120								
2nd Place	Murphy, Jerry	9.0	3.0	9	4.0							



Current Standings for Ministick MI

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA]	Non Flight
MI	2 of 3 plus flyoffs	Flight >	1									Fiight
1st Place	Romash, Robert	548.0	548									
2nd Place	Deloach, Don A	438.0	438									
3rd Place	Khanagov, Karen	535.0	535									
4th Place	Maisc, Will	393.0	393									
5th Place	Guerrero, Eduardo	240.0	240									
6th Place	Lindley, David H	167.0	167									
7th Place	Brocks, K Peter	50.0	50									

Data

Current Standings for A-ROG

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	logic per A	MA]	Non Flight
High	1 of 5 plus flyoffs	Flight >	1									Fiight
1st Place	Pangell, Rick	186.0	186									

INDOOR FREE FLIGHT June 2



The Phantom Flash Mass Launch. Not enough tables to go around, so we did a hand launch!

By Rob Romash (rob@eclipsetoys.com)

Saturday started out with lightweight models. Not the lightest models, but pretty close. Limited Penny Plane (LPP) is one of the most popular events with a metric buttload of entries (about 14). This event is a stepping-stone category to lighter models. Many folks don't get past it as the only events beyond are both lighter weight and require a higher level of focus—EZB and F1D, among others. Without events like this though, it would be a challenge to gain the skill sets to achieve the other lighter models.

Another event very well populated is A6. This model is a design that has to fit on one piece of A4 paper (basically 8.5 x 11.) It allows for a multitude of creative designs. For me personally, I love events like this. This model challenges folks to make something new that isn't that difficult to achieve given that there are not many rules beyond the above.

The top competitor had a model that sported a Manta Ray style appendage out back—I have never seen anything like it. The foot-long thin stick's purpose was to shift the center of gravity out back while still retaining a design aspect that helps the model.

Once again, catching lift came into play Saturday morning. Launching your rubber model at the right place at the right time could garner you an extra few minutes. First place went to an LPP that was 20 feet from the ground, and then went back up to 80 feet in a rising air current. Of course, there is luck involved, but as we gain experience at this site, that luck is becoming less lucky and more skill oriented. That flight would have been around 11 minutes but ended up being well more than 14 minutes. Yours truly bided my time and watched, launching my model to the roof and judging where I would come down to the best possible low-level lift. I also floated around at 20 feet for more than three minutes extra. In the end, not enough as I missed first place by five seconds—all with picking air. Fun stuff here in the Enormo-dome.

The morning lightweights swapped out with heavier FAC scale models and other ships. Heavier means they weight more then a couple grams for those who think an ounce is light (28 grams in an ounce). One of the most competitive events was Phantom Flash—an odd model made as a five-cent kit in the 1940's and still making folks nuts as to how to gain the very last few seconds out of it. These models are now made with the finest contest balsa and can weigh as little as 2.8 grams. A few years back, a 5-gram model was considered amazing.

One of my favorite events is Coconut Scale. This is a model that has to have at least a 36-inch wingspan and has to be scale representing a full-size aircraft. The Nunez family is especially good at this as is Dave Aronstein who bought his huge 60-inch span Antonov transport model. This is an infamous model within the ranks of those lifelong indoor nerds as it never fails to absolutely stop everything in the room when it flies super slow like magic.

Saturday was also the day where we did the free-to-kids P-18 build. This was headed up by John McGrath of Laser-Cut Planes (www. lasercutplanes.com). John is a physics teacher in Colorado and volunteers tirelessly to help kids of any age with making a truly great flying model at every event he can get his hands on. We had more than 10 kids—good for a town of just 2,500 people! John helped them make the models, and then took time away from his own flying to make sure the models flew, and we all helped out. Kids and models just go together—there is no doubt.

Sunday, we come to the close of the event and the final tally. Who will be the Grand Champ? Stay tuned my few loyal readers!



Dave Aronstein sitting next to his legendary Antonov Coconut Scale model.





The wingspan is longer than Dave himself!



The Antonov in graceful flight.



Jonathan Nunez showing perfect launch form. He better as his pop, George, has been building scale models since he was in diapers. A family that flies together stays together! One of the best aspects of all of model aviation and common throughout all disciplines.



The best way to stay married forever: enjoy each other's interests and be supportive. In model aviation, marriages really seem to last much longer than the average. Seriously a guy focused on making models and supporting family has little time to piss his wife off! Happy wife—happy life!

.



Even though Dave Sacks has long left us for the great big gig in the sky, his friend (me) keeps his models flying. Here is his perfect flying No-Cal model climbing to the ceiling.



A Phantom Flash requires take off using its built-in wheels. Since there was AstroTurf down, we used a table to stand in as a runway.



A closeup of the late Dave Sacks No-Cal scale model.



Jonathan Nunez with dad's Pistachio Scale Hisso Tripe.



The Coconut Scale Mass Launch. If there is anything better than watching one of these models fly, it's watching all of them fly at the same time. Last one down wins.

Data

Current Standings for Indoor Std Catapult Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	-breaking l	ogic per A	MA]	 Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Flight
1st Place	Buddenbohm, Stan	147.6	66.0	68.2	66.1	70.8	74.6	72.7	73	71.7		
2nd Place	Romash, Robert	133.9	53.6	52.2	52.9	55.7	50.9	60.1	61	72.9	55.2	
3rd Place	Krempetz, Kurt	133.6	63.1	41.0		58.1	60.4	64.7	67.1	64.0	66.5	
4th Place	Furutani, Norman	130.0	32.4	64.1	63.5	51.8	64.0	60.0	27.8	40.0	65.9	
5th Place	Deloach, Don A	129.0	12.5	5.6	63.5	62.3	59.3	59.0	55.1	65.5	48.7	
6th Place	Murphy, Jerry	123.8	52.3	61.7	26.9	26.2	62.1					
7th Place	Southard, Andrew	98.1	48.2	48.5	49.6							
8th Place	Layne, James L	78.0	25.0	30.0	39	39						
9th Place	Pangell, Rick	58.5	12.4	4.1	8.4	19.7	29.2	28.6	29.3	3.7	27.4	

Data

Current Standings for Indoor Std Catapult Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie-	breaking l	ogic per A	MA]	Non Flight
High	1 2 of 9 plus flyoffs	Flight >	1	2	3	4						Fight
1st Place	Alves (J), Logan	35.0	22	9.0	13	13.0						

Data

Current Standings for Indoor Unlimited Catapult Glider

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	nted) [tie-	breaking l	ogic per A	МА]	 Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Fight
1st Place	Buddenbohm, Stan	191.5	63.0	69.2	85.5	82.2	86.3	94.8	86.3	96.7		
2nd Place	Romash, Robert	165.8	44.8	55.6	75	90.8	67.2	69.2	58.1	47.5	8.3	
3rd Place	Krempetz, Kurt	135.9	48.6	52.9	59.6	67.5	61.7	68.4	50.0	60.0		
4th Place	Murphy, Jerry	106.2	51.7	52.7	53.5							
5th Place	Pangell, Rick	91.4	41.3	39.0	44.1	39.7	47.3					

Data

Current Standings for F1N

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie-	breaking I	ogic per A	MA]	Non Flight
High	3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9	Flight
1st Place	Buddenbohm, Stan	215.0	61.0	61.0	59.0	64.0	59.0	67.0	71	76	68	
2nd Place	Deloach, Don A	207.0	44.0	67	68	66.0	15.0	72	63.0	67.0	61.0	
3rd Place	Krempetz, Kurt	170.0	50.0	48.0	45.0	62	47.0	53	51.0	55	51.0	

Data

Current Standings for Indoor Hand Launch Glider (A)

Standing	Flyer	Flight Score		Flight ti	imes (or	nly green s	cores coun	ted) [tie	-breaking I	ogic per A	MA]	 Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9	Flight
1st Place	Deloach, Don A	144.6	62.4	51.4	52.4	53.7	73.6	63.5	69.0	71	69.2	
2nd Place	Buddenbohm, Stan	142.1	65.9	58.9	70.7	71.4	70.5	49.6	67.8	38.3	31.8	
3rd Place	Krempetz, Kurt	132.9	53.7	54.1	66.4	60.7	66.5	60.4	54.2	57.5	64.1	
4th Place	Batiuk, Tim A	99.6	47.4	52.1	42.1	47.5	46.7					

Data

Current Standings for Indoor Hand Launch Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	breaking l	ogic per A	MA J	Non
High	2 of 9 plus flyoffs	Flight >	1	2								Flight
1st Place	Alves (J), Logan	17.0	8	9								

Data

Current Standings for Helicopter

Standing	Flyer	Flight Score			Fli	ight times	6 (only g	reen scores	s counted)	[tie-brea	king logic	per Al	NA J			Non
High	1 of 5 plus flyoffs	Flight >	1	2	3	4										Flight
1st Place	Silin, Dmytro	5:53	1:04	3:23	0:23	5:53										
2nd Place	Brocks, K Peter	2:28	1:30	2:28	1:38											

Current Standings for F1L

Standing	Flyer	Flight Score			Fli	ight time:	s (only g	reen score	s counted)) [tie-brea	king logic	per Al	NA J			Non Flight
High	1 2 of 6 plus flyoffs	Flight >	1	2	3	4										Fiight
1st Place	Pilachowski, Leo B	26:17	12:21	11:40	13:37	12:40										
2nd Place	Landrum, Billie E	12:49	7:01	5:48												

Data

Data

Current Standings for Ministick

Standing	Flyer	Flight Score		Flight t	imes (o	nly green s	cores coun	nted) [tie	-breaking I	logic per A	MA J	Non Flight
High	1 of 5 plus flyoffs	Flight >	1									Fight
1st Place	Romash, Robert	502.0	502									
2nd Place	Deloach, Don A	437.0	420.0	437								
3rd Place	Brocks, K Peter	395.0	395	346.0								
4th Place	Wood, Richard L	263.0	226.0	263								
5th Place	Pilachowski, Leo B	228.0	228									

Data

Current Standings for F1D

Standing	Flyer	Flight Score		Flight t	imes (oi	nly green s	cores cour	nted) [tie	-breaking l	logic per A	MA]	Non Flight
High	n 2 of 6 plus flyoffs	Flight >	1	2								riigin
1st Place	Palmer, Jake A	2297.0	1077	1220								

Data Current Standings for Ornithopter

Standing	Flyer	Flight Score			Fli	ight time:	6 (only g	reen scores	s counted)	[tie-brea	nking logic	per Al	ИА Ј			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												riigiit
1st Place	Silin, Dmytro	7:51	3:51	7:51												
2nd Place	Murphy, Jerry	0:09	0:03	0:09	0:04											

Data

Current Standings for Ministick MI

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking	logic per A	MA J	Non Flight	
MI	2 of 3 plus flyoffs	Flight >	1									Flight	
1st Place	Romash, Robert	548.0	548										ŀ
2nd Place	Deloach, Don A	438.0	438										
3rd Place	Khanagov, Karen	535.0	535										
4th Place	Maisc, Will	393.0	393										
5th Place	Guerrero, Eduardo	240.0	240										
6th Place	Lindley, David H	167.0	167										
7th Place	Brocks, K Peter	50.0	50										

Data

Current Standings for A-ROG

Standing	Flyer	Flight Score			Fli	ght times	6 (onlyg	reen score:	s counted)	[tie-brea	nking logic	per Al	IA J			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												Fight
1st Place	Murphy, Jerry	4:31	2:40	4:31												
2nd Place	Pangell, Rick	3:06	3:06	1:10	1:33											

Data	Current Standings for ROG Cabin

Standing	Flyer	Flight Score			Fli	ight times	6 (only g	reen score	s counted)) [tie-brea	king logic	per Al	ИА Ј			Non Flight
High	n 1 of 5 plus flyoffs	Flight >	1	2												Flight
1st Place	Aronstein, David C	8:37	8:37	8:14												
2nd Place	Avery, Paul	5:31	5:31													

Data

Current Standings for Fac Flying Horde ML

Standing	Flyer	Flight Score		Fl	ight time:	s (onlyg	reen score	s counted)	[tie-brea	king logic	per Al	MA J			Non Flight
ML	3 of 3 plus flyoffs	Flight >	1												Fight
1st Place	Aronstein, David C	3:18	3:18												
2nd Place	Guerrero-Gajardo, Eduard	0:55	0:55												
3rd Place	Romash, Robert	1:38	1:38												
4th Place	Nunez, Johnathan	0:43	0:43												
5th Place	Etherington, Jr, Chuck	0:36	0:36												
6th Place	Madrid (J), Jonathan	0:32	0:32												
7th Place	Christie, Hamish	0:01	0:01												



Current Standings for Ltd Penny Plane (A)

Standing	Flyer	Flight Score			FI	ight time	6 (only g	reen score:	s counted ,) [tie-brea	king logic	per A	MA J			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2	3	4										Fight
1st Place	Massey, James D	14:31	9:50	9:05	8:46	14:31										
2nd Place	Romash, Robert	14:26	6:40	11:14	1:46	14:26	10:58									
3rd Place	Layne, James L	10:30	9:13	10:02	5:24	6:51	10:30									
4th Place	Lindley, David H	9:39	9:39	9:14												
5th Place	Nunez, George A	9:19	7:50	9:19												
6th Place	Mcgrath, John	9:15	9:15	1:51												
7th Place	Jester, Michael H	9:09	6:25	9:09	7:45	7:57	8:20									
8th Place	Pangell, Rick	7:59	4:39	4:39	7:59	5:50	5:45									
9th Place	Landrum, Billie E	7:49	7:49	7:15												
10th Place	Brocks, K Peter	7:42	6:35	6:52	7:42											
11th Place	Murphy, Jerry	7:27	7:27													

Home	NFFS Towline	F1N	Indoor Hand Launch Glider (A)	Indoor Hand Launch Glider (J)	Indoor Jet Catapult	Indoor Std Catapult Glider (A)	Indoor Std Catapult Glider (J)	Indoor Std Catapult Glider ML	Indoor Unlimited Catapult Glider
1st place	Deloach, Don A 3 :56	Buddenbohm, Stan 3:35	Deloach, Don A 2 :24.6	Alves (J), Logan 0 :17	Nunez-2, Johnathan 2:01	Buddenbohm, Stan 2:27.6	Alves (J), Logan 0 :35	Furutani, Norman 1 :05.59	Buddenbohm, Stan 3:11.5
2nd place		Deloach, Don A 3 :27	Buddenbohm, Stan 2:22.1		Norell, Thomas E 1 :47	Romash, Robert 2 :13.9		z	Romash, Robert 2 :45.8
3rd place		Krempetz, Kurt 2 :50	Krempetz, Kurt 2 :12.9		Towes, Henry 1 :33	Krempetz, Kurt 2 :13.6		Deloach, Don A 0 :50.6	Krempetz, Kurt 2 :15.9
4th place			Batiuk, Tim A 1 :39.6		Romash, Robert 0 :45	Furutani, Norman 2 :10		Southard, Andrew 0 :49.6	Murphy, Jerry 1 :46.2
5th place					Murphy, Jerry 0 :45	Deloach, Don A 2 :09		Romash, Robert 0 :04	Pangell, Rick 1 :31.4
6th place					Rives, Bob 0:40	Murphy, Jerry 2 :03.8		Alves (J), Logan 0 :00	
7th place					Deloach, Don A 0 :22	Southard, Andrew 1:38.1			
8th place					Nunez, Johnathan 0:22	Layne, James L 1 :18			
9th place					Towes-2, Henry 0 :18	Pangell, Rick 0 :58.5			
10th place					Crawford, Dohrman G 0 :18				

INDOOR FREE FLIGHT

June 3



The P-18 Mass Launch.

By Rob Romash (rob@eclipsetoys.com)

Sunday is the last day of the meet. The morning events were both well attended and hard fought. One event is P-18. With more than 15 people flying Open, and at least six in Junior, the air was filled with colorful models. Most of the junior P-18s were built on site during several educational build sessions John McGrath oversaw.

One Junior, Logan "The Beast" Alves caught some lucky air to set a new site record of 3:53, which is a huge time. It should be noted that Logan trumped every adult competitor. The P-18 Mass Launch was a real spectacle with John Mcgrath coming out on top by nearly a minute more than the next best time.

Another mass launch flyoff was Coconut Scale. These are the big scale ships with at least a 36-inch span. Dave Aronstein came out on top here with his 60-inch-wingspan Tupolev, besting the others by more than two minutes.

The afternoon came back around to lighter models with full Pennyplane, A-6, F1M, Limited Pennyplane (LPP), Manhattan Cabin, and Towline Glider. Indoor Towline Glider is one of the most fun. This event has the basic layout and size as an LPP, but of course you take a quick walk and tow it as close to the ceiling as possible. As it was a cloudy sky, there wasn't any help from lift as in previous time slots. This resulted in some close times as skill to get high was key. Don "Flip Flops" Deloach came out on top.

There are a few special things about flying for 10 hours a day for five days! The first is the level of competitors a format like this attracts. Second if flying with the best our sport has to offer. It truly either

humbles you when you get your butt kicked or delights you when you win or even place. It isn't just the competition—it's the people themselves. In all my years going to the Indoor Nats, I can't think of a single rude person or uncomfortable situation. Everyone at this meet, including the local folks who stopped by, are just cool to be around. Considering the final tally of more than 55 entrants and all the smiles, it's a smart bet we will be back. A big thank you need to go out to the Eager/Springerville folks for their hospitality and welcoming us to their corner of this great country.



Indoor Free Flight Nats mascots.



Local cool dude RickPalmer launches his Pennyplane skyward. Rick is newbie whose modeling skills are razor sharp.



If flying indoor isn't fun enough, how about winning \$1,500 cash in the district competition? Here benefactors put up \$1,500 for first, \$1,000 for second, and \$500 for third. Contestants from each AMA District in attendance combine their skills to gain points. Here we see District IX, gloating over their loot!



Our dedicated organizers who tirelessly made this event happen top to bottom.



George Nunez's beautiful Coconut Scale model. I cajoled George into to put a few more winds in and he got his personal best. Sometimes you just need a pushy guy from Jersey to get the best out of you!



The Grieve Thompson Mass Launch contestants.



The Arizona flag is the backdrop for a gaggle of P-18s.

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Blue Max recipients not only get the award, but they get hazed a bit and have to stand at attention while the show is in full swing.



Dave Aronstein and Tom Norell were awarded the Blue Max from the FAC crew. This rare award takes into consideration your lifetime FAC first place wins—get 16 and you're in.



Tom Norell is being bequeathed with his Blue Max pendant by Don Deloach.



A happy kid and his Embryo model takes off rise-offground from the table airport.



Dave Aronstein and his No-Cal model flew nearly as long as a Pennyplane—8 minutes!



George Nunez's Coconut climbs near the ceiling.



Tom Norell gets some help winding his Peanut Scale in the darkening space at around 8 p.m.





Rick Palmer focuses on his rubber motor.



Jonathan Nunez drove his 996 from California. It was overheard he had to outrun a police helicopter to avoid a hefty speeding ticket.



AMA District IX with the Tony Italiano Cup. Tony was a mainstay in all aspects of model aviation and ran the Indoor Nats for many years. His contributions are endless, and we will remember him through this new event.

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6/2/2019

Data

Current Standings for Indoor Std Catapult Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	nted) [tie	-breaking l	ogic per A	MA]	Non
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Flight
1st Place	Buddenbohm, Stan	147.6	66.0	68.2	66.1	70.8	74.6	72.7	73	71.7		
2nd Place	Romash, Robert	133.9	53.6	52.2	52.9	55.7	50.9	60.1	61	72.9	55.2	
3rd Place	Krempetz, Kurt	133.6	63.1	41.0		58.1	60.4	64.7	67.1	64.0	66.5	
4th Place	Furutani, Norman	130.0	32.4	64.1	63.5	51.8	64.0	60.0	27.8	40.0	65.9	
5th Place	Deloach, Don A	129.0	12.5	5.6	63.5	62.3	59.3	59.0	55.1	65.5	48.7	
6th Place	Murphy, Jerry	123.8	52.3	61.7	26.9	26.2	62.1					
7th Place	Southard, Andrew	98.1	48.2	48.5	49.6							
8th Place	Layne, James L	78.0	25.0	30.0	39	39						
9th Place	Pangell, Rick	58.5	12.4	4.1	8.4	19.7	29.2	28.6	29.3	3.7	27.4	



Current Standings for Indoor Std Catapult Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	nted) [tie	-breaking l	logic per A	MA]		Non Flight
High	n 2 of 9 plus flyoffs	Flight >									Fight		
1st Place	Alves (J), Logan	35.0	22	9.0	13	13.0							



Current Standings for Indoor Unlimited Catapult Glider

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	МА]	Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8		Flight
1st Place	Buddenbohm, Stan	191.5	63.0	69.2	85.5	82.2	86.3	94.8	86.3	96.7		
2nd Place	Romash, Robert	165.8	44.8	55.6	75	90.8	67.2	69.2	58.1	47.5	8.3	
3rd Place	Krempetz, Kurt	135.9	48.6	52.9	59.6	67.5	61.7	68.4	50.0	60.0		
4th Place	Murphy, Jerry	106.2	51.7	52.7	53.5							
5th Place	Pangell, Rick	91.4	41.3	39.0	44.1	39.7	47.3					



Current Standings for F1N

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie-	breaking l	ogic per A	MA]	Non Flight
High	3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9	Fight
1st Place	Buddenbohm, Stan	215.0	61.0	61.0	59.0	64.0	59.0	67.0	71	76	68	
2nd Place	Deloach, Don A	207.0	44.0	67	68	66.0	15.0	72	63.0	67.0	61.0	
3rd Place	Krempetz, Kurt	170.0	50.0	48.0	45.0	62	47.0	53	51.0	55	51.0	

Data

Current Standings for Indoor Hand Launch Glider (A)

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores coun	ted) [tie	breaking I	ogic per A	MA]		Non Flight
High	2 of 9 plus flyoffs	Flight >	1	1 2 3 4 5 6 7 8 9									
1st Place	Deloach, Don A	144.6	62.4	51.4	52.4	53.7	73.6	63.5	69.0	71	69.2		
2nd Place	Buddenbohm, Stan	142.1	65.9	58.9	70.7	71.4	70.5	49.6	67.8	38.3	31.8		
3rd Place	Krempetz, Kurt	132.9	53.7	54.1	66.4	60.7	66.5	60.4	54.2	57.5	64.1		
4th Place	Batiuk, Tim A	99.6	47.4	52.1	42.1	47.5	46.7						

Data

Current Standings for Indoor Hand Launch Glider (J)

Standing	Flyer	Flight Score		Flight t	imes (o	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA]		Non Flight
High	2 of 9 plus flyoffs	Flight >	1 2							Fiight			
1st Place	Alves (J), Logan	17.0	8	9									





Current Standings for Helicopter

Standing	Flyer	Flight Score			Fli	ight time:	s (onlyg	reen score:	counted)	[tie-brea	king logic	per Al	NA J			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2	3	4										Fiight
1st Place	Silin, Dmytro	5:53	1:04	3:23	0:23	5:53										
2nd Place	Brocks, K Peter	2:28	1:30	2:28	1:38											

Data

Current Standings for Ornithopter

Standing	Flyer	Flight Score			Fli	ght time:	s (onlyg	reen score:	s counted)	[tie-brea	nking logic	per Al	ИА Ј			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												Fiight
1st Place	Silin, Dmytro	7:51	3:51	7:51												
2nd Place	Murphy, Jerry	0:09	0:03	0:09	0:04											

Data

Current Standings for Ministick

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	logic per A	MA J	Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2								Fiight
1st Place	Romash, Robert	547.0	502.0	547								
2nd Place	Southard, Andrew	457.0	457									
3rd Place	Khanagov, Karen	444.0	440.0	107.0	444	346.0						
4th Place	Massey, James D	438.0	438	416.0								
5th Place	Deloach, Don A	437.0	420.0	437								
6th Place	Layne, James L	401.0	341.0	401								
7th Place	Brocks, K Peter	395.0	395	346.0								
8th Place	Guerrero, Eduardo	321.0	305.0	290.0	321							
9th Place	Richardson, Michael R	273.0	228.0	243.0	236.0	273						
10th Place	Wood, Richard L	263.0	226.0	263								
11th Place	Lindley, David H	101.0	101	5.0								

Data

Current Standings for F1D

Standing	Flyer	Flight Score			Fli	ght time	s (onlyg	reen score	s counted)) [tie-brea	nking logic	per Al	ИА Ј			Non Flight
High	2 of 6 plus flyoffs	Flight >	1	2	3											Fiight
1st Place	Palmer, Jake A	41:09	17:57	20:20	20:49											
2nd Place	Pilachowski, Leo B	36:44	7:11	7:10	17:54	18:50										
3rd Place	Khanagov, Karen	36:08	13:32	3:35	16:28	17:18	18:50									
4th Place	Silin, Dmytro	35:42	14:36	15:48	17:23	17:24	18:18	16:22								

Data

Current Standings for Ministick MI

Standing	Flyer	Flight Score		Flight t	imes (or	nly green s	cores cour	nted) [tie	-breaking l	ogic per A	MA J	Non Flight
MI	2 of 3 plus flyoffs	Flight >	1									Fiight
1st Place	Romash, Robert	548.0	548									
2nd Place	Deloach, Don A	438.0	438									
3rd Place	Khanagov, Karen	535.0	535									
4th Place	Maisc, Will	393.0	393									
5th Place	Guerrero, Eduardo	240.0	240									
6th Place	Lindley, David H	167.0	167									
7th Place	Brocks, K Peter	50.0	50									

Data Current Standings for A-ROG

Standing	Flyer	Flight Score			Fli	ight times	6 (only g	reen score:	s counted)	[tie-brea	king logic	per Al	NA]			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2												Fiight
1st Place	Murphy, Jerry	4:31	2:40	4:31												
2nd Place	Pangell, Rick	3:06	3:06	1:10	1:33											





Data

Current Standings for Fac Flying Horde ML

Standing	Flyer	Flight Score		Fli	ght time	s (onlyg	reen scores	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
ML	. 3 of 3 plus flyoffs	Flight >	1												Flight
1st Place	Aronstein, David C	3:18	3:18												
2nd Place	Guerrero-Gajardo, Eduard	0:55	0:55												
3rd Place	Romash, Robert	1:38	1:38												
4th Place	Nunez, Johnathan	0:43	0:43												
5th Place	Etherington, Jr, Chuck	0:36	0:36												
6th Place	Madrid (J), Jonathan	0:32	0:32												
7th Place	Christie, Hamish	0:01	0:01												



Current Standings for AMA Bostonian

Standing	Flyer	Flight Score			Fli	ght time	s (onlyg	reen score	s counted)	[tie-brea	king logic	per Al	IA J			Non Flight
High	1 2 of 5 plus flyoffs	Flight >	1	2	3											Flight
1st Place	Nunez, Johnathan	6:09	3:06	3:03	2:44											1.18
2nd Place	Deloach, Don A	5:26	2:54	2:32	2:12											1.2
3rd Place	Furutani, Norman	3:51	1:47	2:04												1.17
4th Place	Avery, Paul	3:30	1:52	1:38												1.19



Current Standings for Coconut Scale

Standing	Flyer	Flight Score			FI	ight time	S (only g	reen score	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	1 of 3 plus flyoffs	Flight >	1	2												Fiight
1st Place	Aronstein-2, David	3:35	2:32	3:35												
2nd Place	Aronstein, David C	2:00	2:00													
3rd Place	Nunez, George A	1:52	1:36	1:52												



Current Standings for Easy B

Standing	Flyer	Flight Score			Fli	ight times	s (onlyg	reen score	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2	3	4	5									Fight
1st Place	Romash, Robert	14:55	3:37	13:08	9:02	10:18	14:55									
2nd Place	Khanagov, Karen	12:30	9:33	9:13	5:17	8:57	12:30									
3rd Place	Landrum, Billie E	8:30	6:45	8:30	2:39											
4th Place	Hodes-2, Robert	0:00														88.5



Current Standings for F1L

Standing	Flyer	Flight Score			FI	ight time:	S (onlyg	reen score	s counted)) [tie-brea	king logic	per Al	IA J			Non Flight
High	n 2 of 6 plus flyoffs	Flight >	1	2	3	4	5	6								Fiight
1st Place	Pilachowski, Leo B	28:17	12:21	11:40	13:37	12:40	14:40	11:05								
2nd Place	Romash, Robert	27:00	12:49	13:34	1:28	13:26	7:39	11:53								
3rd Place	Norell, Thomas E	25:01	9:03	12:22	11:56	12:39										
4th Place	Lindley, David H	15:04	6:39	2:33	7:04	8:00	3:38	2:55								
5th Place	Landrum, Billie E	12:49	7:01	5:48												
6th Place	Massey, James D	6:58	6:58													
7th Place	Southard, Andrew	3:35	3:35													

Data

Current Standings for F1M

Standing	Flyer	Flight Score			Fli	ght times	6 (only g	reen score	s counted)) [tie-brea	king logic	per Al	ИА Ј			Non Flight
High	1 2 of 6 plus flyoffs	Flight >	1	2	3											Fiight
1st Place	Mcgrath, John	17:08	7:39	8:15	8:53											
2nd Place	Brocks, K Peter	16:07	5:11	7:26	4:13	5:39	7:16	8:41								
3rd Place	Murphy, Jerry	10:59	4:24	5:20	5:39											
4th Place	Pangell, Rick	10:11	6:12	3:59												

Data

Current Standings for F1N

Standing	Flyer	Flight Score			Fli	ight time:	s (onlyg	reen score:	s counted)	[tie-brea	aking logic	per A	MA J			Non Flight
High	1 3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9					Flight
1st Place	Buddenbohm, Stan	3:35	1:01	1:01	0:59	1:04	0:59	1:07	1:11	1:16	1:08					
2nd Place	Deloach, Don A	3:27	0:44	1:07	1:08	1:06	0:15	1:12	1:03	1:07	1:01					
3rd Place	Krempetz, Kurt	2:50	0:50	0:48	0:45	1:02	0:47	0:53	0:51	0:55	0:51					

Data

Current Standings for A-6 (A)

Standing	Flyer	Flight Score			Fli	ght time:	s (onlyg	reen score	s counted) [tie-brea	aking logid	per A	MA]			Non Flight
High	1 of 5 plus flyoffs	Flight >	1	2	3	4										Filgin
1st Place	Christie, Hamish	8:13	6:59	8:13	6:58	7:17										
2nd Place	Norell, Thomas E	8:04	8:04	4:22												
3rd Place	Guerrero, Eduardo	6:54	6:54	4:14	5:06	5:04										
4th Place	Deloach, Don A	6:53	6:53	5:41	6:40											
5th Place	Silin, Dmytro	6:25	4:30	6:25	4:35	4:26										
6th Place	Mcgrath, John	6:02	3:07	5:22	5:20	6:02	4:30									
7th Place	Jester, Michael H	4:25	3:08	3:31	3:53	3:51	4:25									
8th Place	Avery, Paul	4:24	4:24													
9th Place	Furutani, Norman	4:10	4:10	3:04												
10th Place	Richardson, Michael R	4:03	3:14	3:33	3:22	4:03	3:42									
11th Place	Pangell, Rick	3:59	3:23	3:59												
12th Place	loerger, Thomas S	3:53	3:12	1:38	2:54	3:53										

Data

Current Standings for F1N

Standing	Flyer	Flight Score			Fli	ght times	6 (onlyg	reen score:	s counted)	[tie-brea	king logic	per Al	MA J			Non Flight
High	3 of 9 plus flyoffs	Flight >	1	2	3	4	5	6	7	8	9					Flight
1st Place	Buddenbohm, Stan	3:35	1:01	1:01	0:59	1:04	0:59	1:07	1:11	1:16	1:08					
2nd Place	Deloach, Don A	3:27	0:44	1:07	1:08	1:06	0:15	1:12	1:03	1:07	1:01					
3rd Place	Krempetz, Kurt	2:50	0:50	0:48	0:45	1:02	0:47	0:53	0:51	0:55	0:51					



Current Standings for F1R

Standing	Flyer	Flight Score		Fli	ight times	s (onlyg	reen scores	s counted)) [tie-brea	king logic	per Al	IA]			Non Flight
High	2 of 6 plus flyoffs	Flight >	1												Fiight
1st Place	Silin, Dmytro	7:17	7:17												



Current Standings for Fac Phantom Flash

Standing	Flyer	Flight Score			Fli	ght times	6 (only g	reen scores	s counted)	[tie-brea	king logic	per Al	ИА Ј			Non Flight
High	3 of 6 plus flyoffs	Max >	120	120	120	120	120									Fiight
1st Place	Christie, Hamish	9:24	2:00	2:00	2:00	2:00	1:24									
2nd Place	Etherington, Jr, Chuck	8:41	2:00	2:00	2:00	2:00	0:41									
3rd Place	Norell, Thomas E	6:00	2:00	2:00	2:00											
4th Place	Deloach, Don A	5:51	2:00	2:00	1:51											
5th Place	Wagner, David	5:24	1:49	1:51	1:44											
6th Place	Guerrero-Gajardo, Eduard	3:40	0:30	0:43	0:47	1:15	1:16	1:09								
7th Place	Schrader, Carlos	2:29	0:50	1:04	0:35											
8th Place	Murphy, Jerry	1:16	0:40	0:36												

Current Standings for NFFS Towline

Standing	Flyer	Flight Score		Flight times (only green scores counted) [tie-breaking logic per AMA]														Non Flight
High	2 of 9 plus flyoffs	Flight >	1	2	3	4	5											riigin
1st Place	Deloach, Don A	3:56	1:44	2:09	1:39	1:47	1:36											
2nd Place	Romash, Robert	3:23	0:12	1:37	1:40	1:24	1:41	1:42										
3rd Place	Mcgrath, John	3:20	1:45	1:35	0:45	1:01	1:12	1:22										

Data

Data

Current Standings for Ltd Penny Plane (A)

Standing	Flyer	Flight Score	Flight times (only green scores counted) [tie-breaking logic per AMA]														Non Flight	
High	1 of 5 plus flyoffs	Flight >	1	2	3	4												Fiight
1st Place	Massey, James D	14:31	9:50	9:05	8:46	14:31												
2nd Place	Romash, Robert	14:26	6:40	11:14	1:46	14:26	10:58											
3rd Place	Layne, James L	10:30	9:13	10:02	5:24	6:51	10:30											
4th Place	Lindley, David H	9:39	9:39	9:14														
5th Place	Richardson, Michael R	9:27	6:23	7:50	9:27	5:33												
6th Place	Nunez, George A	9:19	7:50	9:19														
7th Place	Mcgrath, John	9:15	9:15	1:51														
8th Place	Jester, Michael H	9:09	6:25	9:09	7:45	7:57	8:20											
9th Place	Pangell, Rick	7:59	4:39	4:39	7:59	5:50	5:45											
10th Place	Landrum, Billie E	7:49	7:49	7:15														
11th Place	Brocks, K Peter	7:42	6:35	6:52	7:42	4:48	7:12											
12th Place	Murphy, Jerry	7:27	7:27															
13th Place	loerger, Thomas S	7:05	5:25	7:05														

Data

Current Standings for Penny Plane

Standing	Flyer	Flight Score		Flight times (only green scores counted) [tie-breaking logic per AMA]														
High	1 of 5 plus flyoffs	Flight >	1	2	3	4												Flight
1st Place	Romash, Robert	11:38	11:38	10:13	10:52	8:56												
2nd Place	Murphy, Jerry	7:02	7:02	4:30														
3rd Place	Palmer, Jake A	2:49	2:49															