IAC
INTERNATIONAL AEROBATIC CLUB
EAA

SPORT AEROBATICS

JANUARY/FEBRUARY 2024

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB

TIME TO START AEROBATIC TRAINING

Remember, things don't always go according to plan!

At Para-Phernalia we are very proud that Softie parachutes were instrumental in saving four lives in 1999.

SOFTIE
EMERGENCY PARACHUTES
THE PROFESSIONALS CHOICE
from Para-Phernalia, Inc.

Toll Free: 800-877-9584
Intl: 360-435-7220
Fax: 360-435-7272
www.softieparachutes.com

Vol. 52 No. 1 **JANUARY/FEBRUARY 2024** *A PUBLICATION OF THE INTERNATIONAL AEROBATIC CLUB*

SPORT AEROBATICS
OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB

CONTENTS

FEATURES

DEPARTMENTS

COVER

ON THE COVER:
Bottom to top; Greg Koontz N99GK, Mel Williams N719MW, Jeff Granger N189PC, and Mike Lents N318JR fly formation over Oshkosh, Wisconsin during EAA AirVenture 2023.
Photo by Ed Hicks

ABOVE:
2023 U.S. Nationals was headquartered at hangar 509, Salina, Kansas.
Photo by Lorrie Penner

Publisher: Jim Bourke, president@iac.org
Executive Director: Stephen Kurtzahn, execdir@iac.org, 920-426-6574
Editor: Lorrie Penner, editor@iac.org
Contributing Authors: Jim Bourke, Shad Coulson, Keith Doyne, Doug Jenkins, Andrea McGilvray, Lorrie Penner, David Valaer
Senior Copy Editor: Colleen Walsh
Copy Editors: Jennifer Knaack, Bryant Shiu
Proofreader: Tara Bann
Print Production Team Lead: Marie Rayome-Gill

IAC CORRESPONDENCE
International Aerobatic Club, P.O. Box 3086
Oshkosh, WI 54903-3086
Tel: 920-426-6574 • Fax: 920-426-6579
Email: execdir@iac.org

ADVERTISING
Advertising Manager: Sue Anderson, sanderson@eaa.org

MAILING
Change of address, lost or damaged magazines, back issues.
EAA-IAC Membership Services
Tel: 800-843-3612 • Fax: 920-426-6761
Email: membership@eaa.org

The International Aerobatic Club, Inc. is a division of EAA and of the NAA.

SPORT AEROBATICS (USPS 953-560), copyright © 2024 by the International Aerobatic Club, Inc., is published bimonthly and owned exclusively by the International Aerobatic Club, Inc., EAA Editorial Department, 3000 Poberezny Road, Oshkosh, WI, 54902. Periodicals postage is paid at Oshkosh, WI, 54901, and additional mailing offices. U.S. membership rate for International Aerobatic Club, Inc., is $45 per 12-month period, of which $18.00 is for the subscription to *Sport Aerobatics*.
POSTMASTER: Send address changes to EAA MEMBERSHIP SERVICES, P.O. Box 3086, Oshkosh, WI 54903-3086. CPC 40612608

IAC STATEMENT OF POLICY: The International Aerobatic Club, Inc. cannot assume responsibility for the accuracy of the material presented by the authors of the articles in the magazine. The pages of *Sport Aerobatics* are offered as a clearing house of information and a forum for the exchange of opinions and ideas. The individual reader must evaluate this material for himself and use it as he sees fit. Every effort is made to present materials of wide interest that will be of help to the majority. Likewise we cannot guarantee nor endorse any product offered through our advertising. We invite constructive criticism and welcome any report of inferior merchandise obtained through our advertising so that corrective measures can be taken.
EDITORIAL POLICY: Manuscripts submitted for publication become the property of the International Aerobatic Club, Inc. Photographs will be returned upon request of the author. High-resolution images are requested to assure the best quality reproduction.

Thoughts on Aerobatic Judging

BY JIM BOURKE, IAC 434151

THIS MONTH I HAVE a few thoughts on aerobatic judging to share.

Judging Is Hard

I sometimes hear grumbling about the imperfection of judges. It's true that sometimes judges make mistakes. But let's have a bit of compassion. Judging is hard!

Easy Errors

Some errors in competition flights are easy to spot. For example, I think pretty much everyone can see mistakes in the angle of a line. If a competitor is supposed to fly a vertical line and flies it at 85 degrees from the horizontal instead, that is a visible error. Someone off the street could probably do it as well as any of us.

It's also usually easy for judges to spot when people are flying in entirely the wrong direction. I think all of the pass/fail criteria are pretty easy for judges. In the same category are hard zero criteria about tail slides and the direction of rollers. These criteria don't pass the "man on the street" test because they involve an awareness of jargon and details particular to our sport, but they aren't exactly hard for people to see once the details are explained.

Judges may not exactly agree what the score should be for a particular effort at a round loop, but they pretty much all agree on whether it is a perfect circle. Perfect circles are easy to visualize.

The Not-So-Easy

But! The thing that most dominates the scoring (and therefore is most important in determining the final rankings) is the *rotations*. Errors in rotation are the most common errors made by competitors. These errors are not just common; they are also highly penalized by our system. A 15-degree error is almost unheard of on a vertical line, but a 3-point deduction on a roll element is quite easy to earn. Only the worst pilot misses a vertical by 15 degrees, but even the very best pilots in the world sometimes miss a roll stop by that amount.

Unfortunately, while the "1 point per every 5 degrees" rule is the most easily memorized criteria in the rulebook, it is surely the hardest to apply. I know this because when I teach judge school, I put the "*Judge Roll Trainer*" from JimBourke.com on the projector and test each student's ability to assess roll errors. What I've found is that judges dramatically understate errors in roll. If a roll error is anywhere under about 30 degrees, judges want to give a 1- or 2-point deduction. Once the roll error is over about 45 degrees, they want to give a hard zero. In between they want to give about 3 points. They almost never want to give a specific point deduction bigger than that.

It's not that judges are not trying. They really are. But it takes a lot of experience to see roll errors in actual 5-degree increments, and even with experience human beings just can't do it perfectly within the pace of an upper category flight. Judges who do not feel confident tend to under-penalize, and few people feel confident that they can assess these errors accurately.

By the way, this is why it is so important for competitors to *never fix a rotation error*. If you fix it, you give judges a second chance to see how big the error is.

What to Do?

What are the solutions? One thought is to change the scoring to reflect what judges are *actually* able to do. Work with their strengths instead of trying to get them to do impossible things. If we went this route, we would drop the "1 point per 5 degrees" rule and go with something like "small error in rotation is 1 point, medium error is 2 points, big error is 3 points, more than 45 degrees is a zero." That might seem too simple. Maybe it is. But maybe it will start a conversation that helps us out in the future.

In the meantime, what I've learned is that when competitors fly with high rotation rates and athletic stops, judges give high scores. Judges respond to this style of flying more than they respond to precision. Competitors, use that to your advantage if you aren't already.

Another reason that judging is hard is because there is so much to know. Our rulebook has a couple dozen instances of language like "if the criteria is not met, deduct at least 1 point." But the effect of this language is not worth the cost. The minimum deduction is half a point. Therefore, the only effect this language has is to keep judges from giving a half-point deduction. They must give at least 1 point instead. That doesn't seem so hard. But how many of our judges remember all these criteria? Do they remember these criteria as well on a contest day as they do when taking an open book test? Doesn't it seem likely that most judges forget all about this and give a half point when they feel like it? Probably. And does it really hurt anything when they do? Probably not.

I think it would help judges a lot if we could find a way to get rid of some of the memorization and give them more time building the practical skills that they need. I've been raising this subject with the rules committee this year, and I'd love to hear your thoughts.

Contact Me

Remember that you can always reach me at president@iac.org, and I love getting your emails, so please keep sending them! *IAC*

It's All About You!

BY LORRIE PENNER, IAC 431036

HAPPY NEW YEAR! IT'S a time to stop and look back at the past year and identify successes, how your ambitions played out, and maybe even what plan went off the rails.

When we look through last year's articles in the magazine, in our e-newsletter *In the Loop*, and on social media posts and at the news items on our website, we see a lot of success stories. Someone got started in aerobatics, someone became an aerobatic judge, a chapter put together a great play day, someone reached out at their local airport through a forum or static display or threw a good old-fashioned community barbecue. Others sent in photos and articles about tech tips for aircraft maintenance or an article about how to fly a figure. Many celebrated their successes in competition, of earning an achievement award, or finishing up that homebuilt project.

In this issue of *Sport Aerobatics*, we celebrate the many successes seen at the 2023 U.S. National Aerobatic Championships. Congratulations to Contest Director Shad Coulson on a well-run and enjoyable championship. Many hands make the work lighter, and Shad had a slew of volunteers who had the operation running like a well-oiled machine. "We truly cannot give enough credit and appreciation to our contest volunteers," Shad said in the U.S. Nationals Recap article.

And what about our pilots? Most of you probably have a good idea of what it takes to get ready for a contest; these pilots put in countless hours of practice and are determined to fly their best miles from home and family. It takes a lot to keep at it, in many cases year after year until you realize your own personal goals. Whether it is to win, finish in the top 10, or simply not finish last.

Let's join forces and spread our love of aerobatics to encourage someone on their aerobatic path in this new year!

There are many approaches to this sport, and I enjoyed Rob Holland's article about "Heading Into the Off-Season." Once you read it you will see, there really isn't an "off-season" for him. "Let there be no mistake that everything that goes into making each year a success is ... well, hard work," Rob said.

My favorite part of the article is near the end when he answers the question, "How have you stayed dedicated so long (31 years)? His answer is one I wish I could emulate, but I'm not that brave and like to have a fallback position.

"I decided early on in life to only have a Plan A and no Plan B. It seems that everyone defaults to Plan B in their lives because it is easier. I refused to have a Plan B, which forces me to make Plan A work. It took a lot of time, and it was a lot of sacrifice to get here, and I feel like I am still working on it," Rob said. Congratulations to Rob on his 12th U.S. National Aerobatic Championships title!

The magazine is all about you (our members), so no matter what level of aerobatics you find yourself in, take a minute to encourage your fellow IAC members. Send in your story or a tech tip, tell us about your project, or share an aerobatic experience. Let's join forces and spread our love of aerobatics to encourage someone on their aerobatic path in this new year! IAC

SUBMISSIONS:
Photos, articles, news, and letters to the editor intended for publication should be emailed to editor@iac.org. Please include your IAC number, city, and state/country. Emails should be concise, polite, and to the point. All letters are subject to editing for clarity and length.

2024 IAC CONTEST SEASON CALENDAR

MAC 80 Aerobatic Championship

NorCal Aerobatic Contest

IAC.org/Contests

DATES	HOST CHAPTER	NAME	REGION	LOCATION	AIRPORT
March 21, 2024	62	Estrella Glider Classic	Southwest	Maricopa, AZ	E68
March 21, 2024	62	U.S. National Unlimited/Advanced Glider Aerobatic Championships	Southwest	Maricopa, AZ	E68
March 21, 2024	89	Snowbird Classic in Memory of Nikolay Timofeev	Southeast	FL	42J
May 10, 2024	24	Lone Star Aerobatic Championships	South Central	Graham, TX	KRPH
May 17, 2024	3	Mark Fullerton Memorial Bear Creek Bash	Southeast	GA	KRMG
May 31, 2024	15	Harold Neumann Barnstormer	South Central	Ottawa, KS	KOWI
May 31, 2024	38	NorCal Aerobatic Contest	Southwest	Tracy, CA	KTCY
June 7, 2024	61	Giles Henderson Memorial Challenge	Mid-America	Salem, IL	KSLO
June 7, 2024	80	MAC 80 Aerobatic Championship	South Central	Seward, NE	KSWT

2023 Collegiate Program Winners

THE IAC COLLEGIATE PROGRAM aims to increase the flying safety and interest level of collegiate pilots in aerobatics, aerobatic competition, and the International Aerobatic Club. Two awards exist, the Collegiate National Championship Team Award and the Individual Collegiate National Champion Award.

IAC Collegiate Program Chair Nina Stewart offers her congratulations to the winners of the 2023 IAC Collegiate Championships. The collegiate eagle trophies will be presented to the recipients at the IAC Member Gathering and dinner in Oshkosh, Wisconsin, at EAA AirVenture Oshkosh on Friday, July 26, 2024.

The results of the championships have been verified and are as follows:

TEAM CHAMPIONSHIPS:

1st – University of North Dakota, scoring 8,438.16 out of 9,690.00 points / 87.08%

2nd – United States Air Force Academy, scoring 10,513.66 out of 12,570.00 points / 83.64%

3rd – Metropolitan State University of Denver, scoring 5,377.33 out of 6,460.00 points / 83.24%

INDIVIDUAL CHAMPIONSHIPS:

1st – Andrew Coughlin, University of North Dakota, scoring 9,913.30 out of 11,700.00 points / 84.73%

2nd – Shawn Higgins, University of North Dakota, scoring 9,802.33 out of 11,700.00 points / 83.78%

3rd – Andrew Fisher, Metropolitan State University of Denver, scoring 8,242.69 out of 10,400.00 points / 79.26%.

TEAM CHAMPIONSHIPS – 1ST – UNIVERSITY OF NORTH DAKOTA

PHOTOGRAPHY BY **UNIVERSITY OF NORTH DAKOTA**

TEAM CHAMPIONSHIPS – 2ND – UNITED STATES AIR FORCE ACADEMY

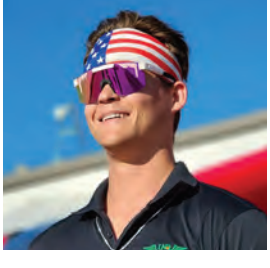
PHOTOGRAPHY BY **US AIR FORCE ACADEMY**

TEAM CHAMPIONSHIPS – 3RD – METROPOLITAN STATE UNIVERSITY OF DENVER

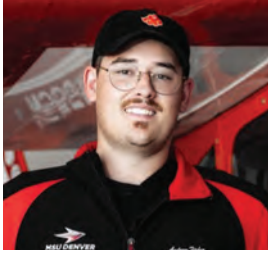
PHOTOGRAPHY BY **METROPOLITAN STATE UNIVERSITY DENVER**

INDIVIDUAL CHAMPIONSHIPS 1ST – ANDREW COUGHLIN

INDIVIDUAL CHAMPIONSHIPS 2ND – SHAWN HIGGINS



INDIVIDUAL CHAMPIONSHIPS 3RD – ANDREW FISHER



Regional Series Winners

THE FINAL SCORES HAVE been tabulated for the 2023 Regional Series Competition. Seventy-seven (77) pilots successfully competed at the three or more contests needed to qualify for in their respective region.

The IAC awards first-, second-, and third-place titles in all categories in each of six regions. Each pilot flies a three-contest minimum with the Nationals as a wild card. The average of the three best contests flown in a region are used to arrive at a total percentage.

MID-AMERICA

Primary:
1st - Justin Miller

Sportsman:
1st - Tim Taylor
2nd - Kelly Fawcett
3rd – Dick Swanson

Intermediate:
1st - Justin Hickson
2nd - Leigh Hubner
3rd - Nathan Ruedy

Advanced: 1st - Luke Penner
2nd - Ryan Chapman

NORTHEAST

Intermediate:
1st - Jerry Esquenazi
2nd - James Spaller
3rd - John Shavinsky

Advanced:
1st - David Taylor
2nd - Ron Mann

NORTHWEST

Primary:
1st - Steven Litsky

Advanced:
1st - Neil Harris
2nd - Jerzy Strzyz
3rd - Miles Crane

Unlimited:
1st - Peter Gelinas

SOUTH CENTRAL

Primary:
1st - Olivia Yeiser
2nd - Scott Beadle
3rd - Benjamin Buell

Sportsman:
1st - Wayne Forbes
2nd - Andrea McGilvray 3rd - Jaret Burgess

Intermediate:
1st - Doug Jenkins
2nd - Jamie Treat
3rd - John Farrington

Advanced:
1st - Craig Fitzgerald
2nd - Darren Behm

SOUTH CENTRAL GLIDER

Intermediate:
1st - Gretchen Knox
2nd - Kelly Murphy
3rd - Ethan Smith

SOUTHEAST

Primary:
1st - Adro Begrow

Sportman:
1st - Mark Haven
2nd - Matthew Dunkel

Intermediate:
1st - Nathan Zieman
2nd - Jerry Esquenazi
3rd - Peter Nassar

Advanced:
1st - Kyle Collins
2nd - Stan Moye
3rd - Marty Flournoy

Unlimited:
1st - Craig Gifford

SOUTHWEST:

Primary:
1st - Steven Fraiser
2nd - Jessica Hackler

Sportsman:
1st - Phillip Gragg
2nd - Jennifer Watson
3rd - Chris Harrison

Intermediate:
1st - Brooks Mershon
2nd - Pawel Miko
3rd - Bret Davenport

Advanced:
1st - Yuichi Takagi
2nd - Hiroyasu Endo
3rd - Tom Myers

Unlimited:
1st - AJ Wilder
2nd - Dave Watson

SOUTHWEST GLIDER:

Sportsman:
1st - Robin Simmons
2nd - Greg Borovykh

JUSTIN MILLER

TIM TAYLOR

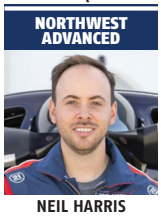
JUSTIN HICKSON

LUKE PENNER

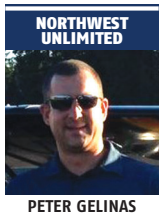
JERRY ESQUENAZI

DAVID TAYLOR

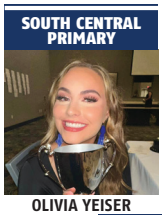
STEVEN LITSKY



NEIL HARRIS



PETER GELINAS



OLIVIA YEISER

WAYNE FORBES

DOUG JENKINS

CRAIG FITZGERALD

GRETCHEN KNOX

ADRO BEGROW

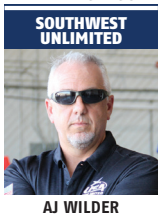
CRAIG GIFFORD

STEVEN FRAISER

PHILLIP GRAGG

BROOKS MERSHON

YUICHI TAKAGI



AJ WILDER

ROBIN SIMMONS

PHOTOGRAPHY BY **ED HICKS**

THE DECATHLON

THE WORKHORSE OF AEROBATIC TRAINING

BY LORRIE PENNER, IAC 431036

INTRODUCTION TO THE DECATHLON

"THE DECATHLON STORY had its genesis prior to 1970. We can thank Champion Aircraft Company of Osceola, Wisconsin, for that!" wrote Doug McConnell in the ***July 2020 issue of Sport Aerobatics.*** "Before the Citabria, aerobatics were performed in a variety of aging military trainers, a few sport aircraft from the '30s, and an occasional homebuilt. Competition aerobatics were primarily among air show performers, since they were the few who had access to the modified trainers featured during their shows around the country.

"Lack of access to aerobatic-capable aircraft and the nonexistence of aerobatic flight schools left sport pilots out in the cold. But the introduction of the Citabria changed all that — both aerobatic trainers and flight schools were now becoming widely available for the first time. Also, because aerobatics was something new in civil aviation, all the magazines were highlighting it and drawing thousands of interested pilots to new aerobatic flight schools dotted all across the country.

"By 1970, these many thousands of Citabria-trained pilots were ripe for an advanced airplane that was still easy to fly, but primarily a better performer in aerobatics. So, the factory focused on a new 'step-up' higher-performance trainer and sport plane that would appeal to the masses, and thus the Decathlon was born."

Review any flight school directory or ask most aerobatic flight instructors what aircraft you should get started with to begin aerobatic training, and most will automatically reply "a Decathlon."

Relating their experiences with the Decathlon and what makes it the aerobatic trainer of choice, in their own words, are Greg Koontz, CFI since 1972 and the 2010 FAA Regional Instructor of the Year; Michael Lents, University of North Dakota aerobatic team coach; Jeff Granger, Advanced competitor and CFI; and Mel Williams, Sportsman competitor and CFI.

Greg Koontz Airshows
Aerobatic Instructor Scholarship in Memory of Bobby Younkin

Greg aims to improve the quality of aerobatic instruction by offering a scholarship to any CFI as an aerobatic instructor course. The aerobatic instructor course is tailored to a CFI who has some aerobatic experience and is on the path to becoming an aerobatic instructor. In the event that a CFI with no aerobatic experience applies, the scholarship will revert to a basic aerobatic course.

A current flight instructor certificate and tailwheel endorsement are strictly required. The training takes place at Greg's Sky Country Lodge in Alabama for two days. There are four lessons in the Super Decathlon, including extensive ground instruction.

Two nights of lodging and meals are included. Transportation to the lodge is not covered. The application deadline is June 30, 2024.

PHOTOGRAPHY BY **ED HICKS**

GREG KOONTZ
IAC 20242

Super Decathlon | N99GK
CFI and Air Show Pilot
FAA Master Pilot award

Teaching in the Decathlon has many good points. It's an excellent trainer for a lot of reasons. It's readily available, and it's comfortable and less expensive than other aerobatic aircraft. And for a new aerobatic student, the tempo of the airplane with roll and pitch inputs is manageable. With the Decathlon, the student doesn't have to be so precise to make it work. The airplane isn't what pilots call "twitchy." Students can overcontrol some and still do a decent maneuver.

My approach to training aerobatics is probably a bit different. I try not to say it's better. Although I think if a flight instructor is worth his merit, he thinks he's teaching the best. My approach to teaching people is what I've summarized as "three-dimensional thinking."

I have found most people, when they're trying to learn, at first have a tendency to line it up in a step-by-step system and be mechanical about it. That's the way most of us learn anything really. We first want to know what actions it will take to do the task. I understand that, but I don't think that in the end that's the right way to think of things like aerobatics. It requires understanding it, not just performing steps.

Students don't need procedures; they need understanding. An understanding of how it works and all the little places you're going to have to make adjustments for the many nuances of the aircraft. If you end up at the top of an Immelmann, where are you going to put the stick? And the rudder? How much speed are you going to need when you start that roll? A student may get the idea of how the maneuver is going to be laid out, but in the end, they have to be fluid.

As a flight instructor, I move the student away from the two-dimensional life of being on the ground. When learning rolls or unusual-attitude situations, they first have a hard time dealing with the fact that they're upside down. So, my approach is getting them to think three-dimensionally and be aware that when the airplane goes past knife-edge, there's an issue to be dealt with: pointing the lift in a certain direction to accomplish the desired flight path.

The lift goes wherever you point it.

In the learning process, you see different personalities in the students and what issues they have with aerobatics. For some, it is simply being apprehensive. Even though they understand that we are going to do something like a loop, when the time comes and they are upside down, they might freak out over the *g*-forces or feel a certain amount of fear in doing something so far out of their previous aviation experience. Since student reactions vary, I start looking for the student's triggers early.

The most difficult basic maneuver for students is usually slow rolls, because it is the most complex. I like Bobby Younkin's statement. He said about aerobatics, "If you understand how to do a good slow roll, you understand aerobatics." The rest of basic aerobatics is going to be simple. Immelmanns, Cuban-eights, reverse Cubans — all these maneuvers have an element of what you have to do with the flight controls while performing the slow roll.

The one thing, the most important thing, I'd like my students to take away from their first lesson often depends on the individual student and their understanding of aerodynamic principles. Generally speaking, my most important concept for them is this: The lift goes wherever you point it. If the student gets flipped upside down, they need to realize they have to do something about lift and what that something is.

PHOTOGRAPHY BY **ED HICKS**

MICHAEL LENTS
IAC 434331

Super Decathlon | N318JR
University of North Dakota (UND)
Aerobatic Team Coach

I started instructing in Decathlons in 2006, so dual-wise I have a couple thousand hours. The Decathlon is primarily used for spin and aerobatic training at UND, with a little bit of tailwheel thrown in.

The Decathlon is the best trainer, because it'll do everything. It is one of the few aircraft that can be comfortable enough to fly cross-country, take people for rides, do sightseeing. There's a decent baggage compartment, and it is roomy as far as an aerobatic airplane goes. The Decathlon can carry plenty of fuel. It isn't a one-trick pony.

It may not be the fastest airplane, but it is one of the best aircraft in emergencies. Anyone can be confident of putting it down in a field or road. In fact, there is an old crop-duster strip where I like to take my pilots for a tailwheel checkout. The field consists of a concrete strip of about 20 feet wide by 2,400 feet long, with an extra 40 feet of grass next to it. It works well for simulated emergency landings, because it is slightly narrower than the road next to it. The student can see what it would feel like to land on a narrow road, and the airplane is comfortable landing just about anywhere.

From an aerobatic standpoint, the Decathlon is super honest, with a big rectangular planform. If anything's wrong, the judges will know. And if everything's right, it will get highly rewarded, because you can see everything. It does make you work for it.

If a pilot learns in a higher-performance aircraft, they can't always step back, but if they learn in a Decathlon, they can step up as far as they want. I've had students transition into Extras, GameBirds, and other airplanes, and it's not particularly difficult for them. A lot of students are extremely successful flying the Decathlon, because it just gets the basics down really well.

I agree with Greg — we have to separate the students' thinking from their ground-based world and get them thinking about the three-dimensional world of flight. If the average student who plays video games, where the stick is pulled back and the icon goes up, well that's not true in aerobatic flight. We have to explain that the flight controls operate in relation to the pilot, not necessarily to the ground anymore. And then just getting pilots to have more situational awareness, and understanding what the aircraft is doing, since they're not used to unusual attitudes.

The one thing I usually want my students to get from their first lesson is confidence — not overconfidence, but rather, knowing that they can maneuver the airplane. They're not an air show pilot yet, but they've seen a spin, they can recover from it, they're comfortable enough in the airplane that they have no problem taking control, and it's not as bad as they thought. They are comfortable and ready for the next lesson. This gives them confidence in their instructor as well. They know they're going to get the training they need.

The one thing I usually want my students to get from their first lesson is confidence – not overconfidence, but rather, knowing that they can maneuver the airplane.

JEFF GRANGER
IAC 19907

Super Decathlon | N189PC
CFI, Pilot Makers Advanced Flight Academy, Provo, Utah

After I retired from my day job a couple of years ago, I earned my CFI and have given a couple hundred hours of instruction in the Decathlon so far. Some of the training I give is for tailwheel, some of it upset recovery, and the rest Primary- and Sportsman-level aerobatics.

I had flown the Citabria back in the early '90s to get my tailwheel endorsement, but really pretty much forgot about the American Champion series for the next two decades. However, when I earned my flight instructor certificate and started seriously teaching, I found it interesting and challenging to transition into the Citabria after having been a 20-year monoplane guy. There was less power, and both the Citabria and Decathlon are less twitchy than a monoplane.

The Decathlon has higher stick forces, much more rudder coordination needed than my Extra. The Decathlon really made an honest pilot out of me again. I would echo what Greg said in terms of availability and affordability. It's been a continuous production for half a century. There are a lot of

PHOTOGRAPHY BY **ED HICKS**

The Decathlon has higher stick forces, much more rudder coordination needed than my Extra. The Decathlon really made an honest pilot out of me again.

them out there. They are standard category, and there's a steady market for them. The Decathlon is much more comfortable to get in and out of than a high-performance monoplane. I'm finding that as my shoulders age and I have rotator-cuff tendonitis, dropping down into a deep cockpit and trying to get out again is uncomfortable.

An additional benefit is that my wife, who used to fly to contests with me in the Extra and stopped because she was too uncomfortable, will actually go places with me. In the Extra, she didn't like the fact that she was seated in front of me and there was so little luggage space. She wasn't really enamored of the Extra's quick maneuverability either. Now that we have the Super Decathlon, she enjoys flying with me again.

The more docile Super D is a great way to take somebody for a sightseeing flight. The passenger can see the pilot seated in front of them; they can feel them, touch them. They're not separated by a big instrument panel. Passengers can look down and see the ground, which is especially helpful for tail-wheel training, to be able to see the ground coming up. The Super D has really good control harmony; the stick forces aren't too light or too heavy.

Initially, the Super D was challenging. I found it difficult to do a good, smooth slow roll. The airplane really makes you concentrate on your stick forces; you can't just flick your wrist, like the Extra, which someone said is "like stirring your coffee." That's too easy. We've considered adding a second Decathlon to our training flight in the next year or two.

The one thing I would like a student to get out of their first aerobatic lesson is a variation of Greg's answer. I would say, "This control [stick] is an angle-of-attack adjuster." You are controlling the maneuvers because you generate a lift vector, by angle of attack and airspeed. And then you point that lift vector where you want to go.

MEL WILLIAMS
IAC 440849

Bellanca Decathlon | N719MW
CFI, Private Instruction

When I was getting my CFI, I needed the spin. And I found a gentleman who had a 150-hp fixed-pitch Decathlon, just like my airplane. I went up with him, we did the spin stuff, did the tailwheel endorsement, and after that, I was hooked.

I've been in a Pitts Special before. It's just not my thing, just too squirrely, too twitchy. But the Decathlon checks all the boxes; it's super comfortable to fly and roomy. You can take it on a cross-country, and do some acro with it. Once I fell in love with it, I was a man on a mission to find that airplane [150-hp Decathlon]. Not too much later, I found my airplane on Trade-A-Plane.

An Extra and Pitts are okay, but I don't like those aircraft as much. I feel right at home in the Decathlon. I like aerobatics in it and don't see myself getting anything else.

I'd like to train students in aerobatics eventually. Right now, I do basic instruction and tailwheel. I'm taking it one step at a time. I don't want to rush. I don't want to teach anybody any bad habits. I have

PHOTOGRAPHY BY **ED HICKS**

An Extra and Pitts are okay, but I don't like those aircraft as much. I feel right at home in the Decathlon. I like aerobatics in it and don't see myself getting anything else.

a lot of work to do — learn some from Greg and Mike, people around me, using my resources, and asking a lot of questions. That's one thing about me — I'm always going to be safe. So, when that time comes, I'll be ready for it.

My main aerobatic training took place in the Super D with Greg Koontz. I remember him screaming at me about something. And I was like, "Oh man, I'm screwing up." I can't remember what it was, but I could hear him behind me: "What you doing that for?"

I talked to Greg constantly and sent him videos. One time I asked him about slow rolls. "Hey, I'm dishing out to the right. What's the issue here?" And he'll say the nose is not high enough or something else. Right before my Rome, Georgia, contest, I stopped at Greg's on my way to the contest and let him know I've got to get slow rolls.

So, I head over to his place and practice those slow rolls in front of him. And I started feeling good after doing two consecutive slow rolls. I was feeling pretty good and headed off to the contest.

Greg was there and others I know at the contest. They are all waiting to watch the slow roll. I did a 180-degree turn; oh, my goodness, I forgot the slow roll! I was so focused on it, because I knew it was the moment and I was thinking I'm going to nail that thing, then forgot to do it. It was my first flight, and I hard-zeroed it.

The biggest thing I hope my students take away from their first lesson is a personal thing: "If you're not feeling it, don't fly it." And it is really that simple. Mistakes happen when you are not focused. I've gone up and tried practicing when I wasn't feeling like it, and it just reinforced negative learning.

So, I tell my friends who come to fly with me the same thing. They know how they are feeling, and so that is question number one, because if you aren't feeling good (health-wise), the flight probably isn't going to work out for you. ***IAC***

2023 U.S. NATIONAL AEROBATIC CHAMPIONSHIPS RECAP

BY LORRIE PENNER, IAC 431036, WITH U.S. NATIONALS CD **SHAD COULSON,** IAC 440759

PHOTOGRAPHY BY **LEIGH HUBNER**

CONTEST OVERVIEW

BY MOST ANY MEASURE, the 2023 Nationals in September was a huge success, and there is only one factor that made it so: the key volunteers! Having only limited experience as the contest director (CD) for small regional contests, Shad Coulson knew from the outset that he would need to rely on a select group of experienced volunteers to manage the details. Most of these amazing volunteers return year after year, and he was grateful for their experience, knowledge, and guidance throughout the planning phase and execution of the contest. We truly cannot give enough credit and appreciation to our contest volunteers.

COMPETITORS

If we include the competitors who attended the U.S. National Advanced and Unlimited Glider Championships held in Maricopa, Arizona, earlier in the year, the U.S. Nationals had a total attendance of 93 pilots. Of those, 63 were powered and 30 were glider. If we exclude those competitors who attended the Advanced and Unlimited Glider Nationals, the U.S. Nationals in Salina, Kansas, had a total of 81 competitors, of which 63 were powered and 18 were glider. Attendance this year was impacted slightly by the World Advanced Aerobatic Championships (WAAC), which were being held a few weeks later in Jean, Nevada. There were multiple volunteers and competitors who were unable to attend the U.S. Nationals due to their participation or support of WAAC.

Serving as the CD of the U.S. Nationals afforded Shad the opportunity to inspire some new ideas, provide fresh perspectives, and renew the interest and participation at the national contest. From the onset, Shad had a customer service mentality while conducting planning activities. He aimed to ensure that volunteers and participants felt valued and that they were receiving an event worthy of the time away from family, friends, and their professions, and worthy of the entry fee. One of Shad's priorities for the 2023 U.S. Nationals was to celebrate the lower three categories, which make up the largest body of the IAC's membership and contest participation. This prioritization of the lower three categories was evident in the contest artwork, T-shirt, and other celebratory elements of the event.

SAFETY AND MECHANICAL ISSUES

Safety is the bedrock of all activities conducted by the IAC. There were no significant safety concerns or events during the 2023 U.S. Nationals. However, we did have one Advanced competitor exit the aerobatic box and proceed east across Runway 17/35, which is a violation of the Letter of Agreement with the Salina Tower and Airport Authority. There was no conflict with arriving or departing traffic on 17/35, and the tower was not overly concerned by the incident. The championship organizers addressed this issue with the pilot. There were three other notable, though minor, mechanical issues during the contest. In two instances, separate aircraft landed with a flat tire. One was a main wheel, and the other was a tail wheel. In both instances, the pilots were able to safely stop on the runway without incursion or damage to aircraft or runway lighting. The other notable event was a broken seatback with an Advanced competitor. He was able to land safely, though was unable to repair or replace the seatback and ultimately withdrew from the contest.

WEATHER AND SCHEDULE CHANGES

Weather proved to be a challenge throughout the 2023 contest. Low ceilings impacted both unofficial practice days (Thursday and Friday) and the official practice day (Saturday). In all cases, an adequate ceiling for practice was not reached

Opening ceremonies and daily briefings were held upstairs in Hangar 509.

PHOTOGRAPHY BY **LORRIE PENNER**

until late in the morning or early afternoon, which impacted nearly all competitors who wished to practice. To ensure all competitors had an opportunity to practice and view the aerobatic box, we expanded the limited practice time on Sunday morning, originally scheduled from 8 to 10 a.m. for gliders only, and delayed the start of the first Unlimited program until later in the afternoon.

We had excessive winds on Tuesday afternoon, which precluded the U.S. Air Force Academy (USAFA) pilots from flying their DG Flugzeugbau DG-1000s, and many of the Primary competitors were uncomfortable with the wind velocities, primarily associated with safely taxiing to and from the runway. In support of their safety-minded decision, we opted to cancel the program in the afternoon and moved it to a prescheduled block of time later in the week held solely for the purpose of adjusting the schedule due to any weather issues. We saw significant winds on the final two days of the contest but were able to safely execute the aerobatic activity.

AIRCRAFT HOLDS

To improve the safety and efficiency of the contest, Shad coordinated with the tower manager to revamp the hold locations. Having four holds (two power and two glider) within such a confined space on the west side of the airport created several logistical and safety concerns. In 2023, we moved the two power holds to the east side of the aerobatic box. The glider holds remained on the west side of the aerobatic box, though closer to the box than in previous years. In all cases, the holds were above the Class D airspace. The support of the tower manager and the controllers in allowing us to reorganize the holds made a significant impact on the contest efficiency and safety. Their support and professionalism throughout the contest cannot go without notice or appreciation.

FACILITIES

For the first time in our tenure at Salina, the U.S. Nationals was headquartered in Hangar 509. This hangar, though slightly smaller, has other added benefits over our former headquarters (Hangar 606) that include a kitchen, offices, and more bathroom facilities. Hangar 509 proved to be of adequate size for this year's contest, and we were able to safely store all participating aircraft within the facility.

Gliders and towplanes were once again hangared in an alternate facility (Hangar 504). This hangar proved to be too small for the number of civilian gliders and towplanes needed to be stored within it. One towplane was moved to Hangar 703. The Salina Airport Authority personnel agreed to provide space in Hangar 600 for future use by the gliders and towplanes and as contest overflow.

THE FLYING

Nine Unlimited category competitors opened the flying at the U.S. Nationals with their Known sequence on Sunday, September 24. Rob Holland leapt out in front of the pack with a score of 81.74%. Jeff Boerboon (79.51%) and Goody Thomas (77.42%) kept it tight at second and third place. Because of the adjusted practice schedule and the velocity of the wind on Thursday and Friday, two-and-a-half hours were added to the Sunday morning practice, which pushed the schedule to a 4 p.m. start.

On Monday, the wind was not an issue, and the flying continued with the Advanced category flying

Vivian Pfleger lands the MDM Fox-1P with Shad Coulson riding as safety pilot. Photography by Nicole Gonzalez.

Jeff Boerboon gets an assist in pushing his Extra 330SC out of the hangar. Photography by Lorrie Penner.

The moon sets over this Extra 330SC flown by Peter Nassar. Photography by Lorrie Penner.

Canadian Steve Thorne's Vans RV14. Photography by Lorrie Penner.

its Known program. With 19 competitors in the category, the morning was filled with the beautiful sound of constant aircraft engines. When the scores were posted, Michael Lents, flying a Staudacher S-300D, emerged in first place with 84.36%, followed by Steve Johnson in his MX2 with 83.33% and Brittanee Lincoln flying an Extra 330SC with 82.77%, respectively.

After a change of judges and some lunch, everyone was back at it in the afternoon with the Sportsman power/glider and Primary power/glider competitors flying the Known sequences. The scores were exceptionally tight in the Sportsman power category. Dick Swanson flying a Decathlon (85.94%) came out on top, followed by Phillip Gragg in his Pitts S-2A (84.38%) and Chris Rudd (83.95%) in an Extra 200L. In the Sportsman glider Greg Borovykh finished first in the Arizona Soaring MDM Fox. Robin Simmons, flying the same aircraft, came in second, followed by U.S. Air Force Academy (USAFA) pilot Jack Kastens in the academy's DG Flugzeugbau.

In the Primary glider category, Vivian Pfleger finished on top with a score of 80.53%. Brandon Humphreys (USAFA) came in second, followed by Larry Ruggiero in third. The Primary power category contained a field of 12 pilots, of which, Adro Begrow (non-U.S. citizen) finished first, flying a Pitts S-2B, while Olivia Yeiser (Metropolitan State University [MSU] Denver) finished in second. Justin Miller rounded out the trio in third place, flying his beautiful brilliant-green and black Pitts S-1-11.

The Unlimited competitors closed the day of flying with their first Free Unknown. Rob Holland held on to first with Jeff Boerboon continuing to nip at his heels. Goody kept his third-place position. As with the Sportsman and Advanced power competitors, scoring was exceptionally tight; 82.66%, 80.45%, and 79.82%, respectively.

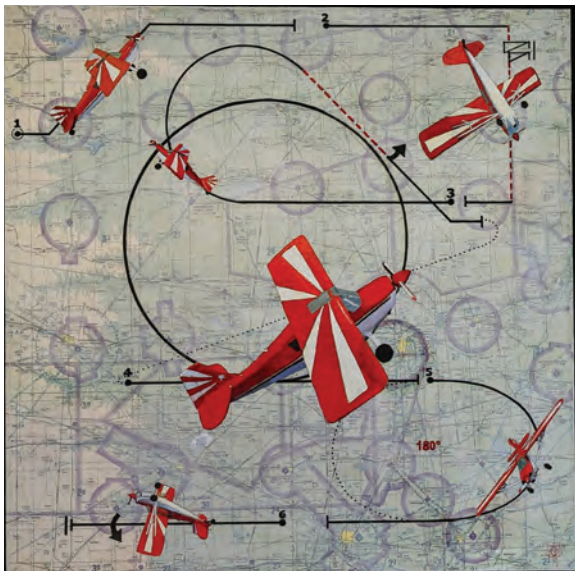
The US Air Force Academy sets up a great camp near their departure runway.

Forrest Fox spends all day every day taking video of every flight.

PHOTOGRAPHY BY **LORRIE PENNER**

Flight medals are given to the top three finishers in each category. In addition to the trophy, each champion is given a plaque with a photo of the permanent trophy, which is kept in Oshkosh, Wisconsin.

U.S. Nationals pins and stickers.



This multi-media painting by Carol Granger was auctioned off at the U.S. Nationals award banquet.

Tuesday through Thursday were good flying days and saw some categories with a shuffling of finishing scores in the Free and Unknown programs.

Primary Power: During the Free program, Adro Begrow continued his standing in first place, Brayden Berringer (MSU) made a surprise move from his previous 12th-place finish, clinching a second-place finish in the category. Justin Miller finished in third place.

Sportsman Power: Phillip Gragg finished first in the Free program, Wayne Forbes finished second, and Shawn Higgins (University of North Dakota) came up to a third-place score after previously finishing in 9th.

Sportsman Glider: Robin Simmons and Greg Borovykh swapped spots, with Greg clinching first and Robin in second in the Free program. Luke Lipetska (USAFA) came up with a great flight securing third place after his previous placement in 8th.

Intermediate Power: Jerry Esquenazi dominated first place in the Known and the Free programs in his Extra 300S. Archrival Leigh Hubner, also in an Extra 300S, kept pace with him and finished in second place in both sequences. Peter Nassar, flying an Extra 330SC, placed third in the Known, and Nathan Ruedy in his Decathlon came in third in the Free program. Finishing with the highest score in the Unknown program, Justin Hickson moved up from fourth place to clinch a Silver medal in the overall score.

Intermediate Glider: Andre Gerner, flying his MDM Fox, placed first in both the Known and the Free programs. Jacob Mohnancs (USAFA) shadowed him and stayed in second place for both flights. Third place in the Known was claimed by Gretchen Knox and by Kelly Murphy in the Free program.

Advanced Power: In the Free program, Brittanee Lincoln knocked it out of the park with a score of 85.46% (the highest single score of any other Advanced competitor in all three flights). She finished fourth in the Free Unknown. Once all the scores were consolidated, she came out on top as the Advanced Champion National with a combined score of 83.09%. The overall second-place finisher, Mario Mena, placed second in the Free and third in the Free Unknown. Michael Lents clinched the bronze overall with a first-place finish in the Free Unknown. Canadian Luke Penner was the winner of the Goodrich Trophy, presented to the highest-scoring non-U.S. citizen.

Unlimited Power: Rob Holland retains his U.S. National Aerobatic Champion title. It is his 12th time winning the Unlimited category. Jeff Boerboon continued to stay close and was presented the silver medal. Jim Bourke won the bronze when his score in the Free Unknown pushed him up out of fifth place.

The last day of the championships was exceptionally windy again. With the winds forecast to build throughout the day, Shad arranged the schedule to have the Primary Power, Intermediate Power, and Glider pilots fly their third flight. The final flight of the afternoon was the 4-Minute Free program. Five pilots flew the dynamic program, resulting in another win for Rob Holland, second place for Jim Bourke, and third place for Jeff Boerboon. All veteran pilots, they made it look as if the wind were no problem, presenting exquisite and exciting routines for all the volunteers and public to enjoy.

PHOTOGRAPHY BY **LORRIE PENNER**

The U.S. National Aerobatic Championships award banquet was held at the Hilton Garden Inn.

VIDEO

The IAC has a long-standing relationship with Forrest Fox, who has provided video services for the U.S. Nationals. Per the Policy & Procedures, videos are mandatory for the category conducting team selection flights and are to be used in support of protests and upon request by the chief judge or line judge for that category. These video services have been expanded in recent years to cover all categories, and the IAC began livestreaming the flights, which has been well received by competitors and the broader aerobatic community.

In the first year of testing the livestream with commentary, Lorrie Penner reported that there were over 10,000 views/hits on the IAC's Facebook page on the Unlimited Unknown I. Last year, with daily commentary, there were over 52,000 accumulative views/hits on Facebook. In 2023, a deeper dive revealed that over 70,000 views/clicks occurred on YouTube and a combination of two Instagram pages and three Facebook pages. Great exposure for aerobatics!

It is recommended we continue to invest in the quality of the livestream. Lorrie and Forrest applied considerable effort to improve the stream with graphics this year for each competitor, order of flight during breaks, and commentators throughout. There were a few technical issues associated with the expanded capabilities of the live feed, which were resolved, and most of the streaming activity went seamlessly. Expanding the live feed viewership provides interesting opportunities to attract larger sponsorships to the event as well as interest in competition aerobatics, which may help drive an increase in the IAC's membership.

LOOKING TO 2024

Planning for the 2024 Nationals began before the 2023 contest was even complete. Meetings were held with the Salina Airport Authority, Hilton, and Chamber of Commerce. Shad is looking forward to serving as contest director for the 2024 U.S. Nationals.

Before departing, IAC President Jim Bourke, Executive Director Steve Kurtzahn, and CD Shad Coulson met with the airport authority, who expressed interest in signing a long-term contract with the IAC. They also agreed to make some facility improvements within Hangar 509 to include updated bathrooms, an ice machine, and upgrades to the facility offices. They also indicated a willingness to make improvements to the ramp, such as painted grid numbers, a painted dead prop line, and painted sterile area. Finally, they expressed a willingness to survey and support a more enhanced aerobatic box (CIVA markings).

Salina continues to prove itself as a premier venue for the U.S. Nationals. The airport administration is supportive of the IAC and willing to invest in the facilities to improve the quality of our event. IAC

2023 U.S. NATIONAL AEROBATIC CHAMPIONSHIPS

DICK SWANSON
ACA DECATHLON MEDALLION

JUSTIN MILLER
POWER PRIMARY

PHILLIP GRAGG – POWER
SPORTSMAN + AVIAT MEDAL

JERRY ESQUENAZI
POWER INTERMEDIATE

BRITTANEE LINCOLN
POWER ADVANCED

2023 U.S. Nationals – Powered

Held in Salina, Kansas. Director: Shad Coulson. Chief Judge(s): Mark Matticola, Hector Ramirez, Peggy Riedinger.

PRIMARY

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★Adro Begrow*	(89)	Pitts Special S-2B N5349X	538.20 85.43% (1)	518.20 82.25% (1)	502.70 79.79% (2)	1559.10 82.49% (1)
★Justin Miller		Pitts Special S-1-11 N426CU	505.90 80.30% (3)	503.80 79.97% (3)	505.98 80.31% (1)	1515.68 80.19% (2)
★Sara Arnold	(78)	ACA Decathlon N85C	481.90 76.49% (5)	497.30 78.94% (4)	488.90 77.60% (5)	1468.10 77.68% (3)
★Olivia Yeiser	(12)	ACA Xtreme Decathlon N555XD	515.80 81.87% (2)	448.50 71.19% (9)	478.00 75.87% (7)	1442.30 6.31% (4)
★Devin Graves	(78)	ACA Decathlon N317JR	474.90 75.38% (6)	485.30 77.03% (5)	481.90 76.49% (6)	1442.10 76.30% (5)
★Holly Hunsaker	(12)	ACA Xtreme Decathlon N555XD	469.12 74.46% (8)	475.40 75.46% (6)	490.50 77.86% (4)	1435.02 75.93% (6)
★Tyler Sperry	(78)	ACA Decathlon N317JR	483.50 76.75% (4)	453.80 72.03% (8)	470.50 74.68% (9)	1407.80 74.49% (7)
★Ryan Peene	(78)	ACA Decathlon N317ND	436.60 69.30% (10)	468.60 74.38% (7)	494.60 78.51% (3)	1399.80 74.06% (8)
★Alex Trautmann	(12)	ACA Decathlon N555XD	472.40 74.98% (7)	446.28 70.84% (10)	474.40 75.30% (8)	1393.08 73.71% (9)
Benjamin Buell	(12)	ACA Xtreme Decathlon N555XD	468.40 74.35% (9)	427.28 67.82% (11)	386.90 61.41% (11)	1282.58 67.86% (10)
Mikaila Gillis	(78)	ACA Decathlon N318JR	435.90 69.19% (11)	371.70 59.00% (12)	424.10 67.32% (10)	1231.70 65.17% (11)
Brayden Berringer	(12)	ACA Xtreme Decathlon N555XD	188.80 29.97% (12)	504.80 80.13% (2)	0.00 0.00% (12)	693.60 36.70% (12)

SPORTSMAN

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★Phillip Gragg	(15)	Pitts Special S-2A N5FV	1096.98 84.38% (2)	1156.36 88.95% (1)	1142.10 87.85% (2)	3395.44 87.06% (1)
★Wayne Forbes	(12)	Panzl S-330 N767TC	1059.10 81.47% (4)	1098.30 84.48% (2)	1169.00 89.92% (1)	3326.40 85.29% (2)
★Christopher Rudd	(3)	Extra 200L N211EX	1091.40 83.95% (3)	1044.90 80.38% (7)	1136.60 87.43% (3)	3272.90 83.92% (3)
Dick Swanson	(78)	ACA 8KCAB Decathlon N8SC	1117.26 85.94% (1)	1007.90 77.53% (10)	1089.80 83.83% (7)	3214.96 82.43% (4)
★Andrew Coughlin	(78)	ACA 8KCAB Decathlon N317JR	1005.86 77.37% (11)	1054.16 81.09% (5)	1131.78 87.06% (4)	3191.80 81.84% (5)
★Jaret Burgess	(24)	ACA 8KCAB Decathlon N81SD	1042.20 80.17% (8)	1052.60 80.97% (6)	1095.32 84.26% (6)	3190.12 81.80% (6)
Jonathan De Lone	(78)	ACA 8KCAB Decathlon N317JR	1059.10 81.47% (4)	938.58 72.20% (13)	1120.00 86.15% (5)	3117.68 79.94% (7)
Shawn Higgins	(78)	ACA Decathlon N317JR	1013.46 77.96% (9)	1077.42 82.88% (3)	1024.78 78.83% (8)	3115.66 79.89% (8)
★Andrew Fisher	(12)	ACA Decathlon N555XD	1057.70 81.36% (6)	1018.80 78.37% (9)	989.00 76.08% (9)	3065.50 78.60% (9)
Kelly Fawcett	(3)	Staudacher S-300XR C-GVUA	1051.40 80.88% (7)	1068.18 82.17% (4)	866.50 66.65% (11)	2986.08 76.57% (10)
Tien Luu	(12)	ACA Xtreme Decathlon N555XD	1012.00 77.85% (10)	994.30 76.48% (11)	961.80 73.98% (10)	2968.10 76.11% (11)
Stephen Thorne	(137)	Van's Aircraft RV-14 C-FCGA	958.46 73.73% (12)	953.80 73.37% (12)	766.70 58.98% (14)	2678.96 68.69% (12)
Morgan Katnik	(12)	ACA Xtreme Decathlon N555XD	811.70 62.44% (13)	1030.38 79.26% (8)	808.20 62.17% (12)	2650.28 67.96% (13)
Ryan Sander	(12)	ACA Xtreme Decathlon N555XD	0.00 0.00% (14)	892.30 68.64% (14)	771.28 59.33% (13)	1663.58 42.66% (14)

INTERMEDIATE

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★Jerry Esquenazi	(3)	Extra 300S N911CG	1615.90 79.60% (1)	1808.20 86.10% (1)	1469.60 75.75% (3)	4893.70 80.62% (1)
★Justin Hickson	(78)	Pitts Special S-2B N540TK	1518.40 74.80% (4)	1692.62 80.60% (5)	1497.90 77.21% (1)	4708.92 77.58% (2)
★Nathan Ruedy	(78)	ACA Decathlon N40EM	1515.68 74.66% (5)	1698.70 80.89% (3)	1464.30 75.48% (4)	4678.68 77.08% (3)
Corey Gerulis	(3)	Extra 330SC N45CG	1513.52 74.56% (6)	1621.00 77.56% (6)	1446.20 74.55% (5)	4580.72 75.59% (4)
Leigh Hubner	(3)	Extra 300S N328PW	1599.90 78.81% (2)	1792.00 85.33% (2)	1155.80 59.58% (9)	4547.70 74.92% (5)
Peter Nassar	(89)	Extra 330SC N330SL	1530.18 75.38% (3)	1498.70 71.37% (8)	1473.80 75.97% (2)	4502.68 74.18% (6)
Jared Bachman	(1)	Pitts Special S-1E N88BS	1401.38 69.03% (8)	1696.40 80.78% (4)	1313.90 67.73% (6)	4411.68 72.68% (7)
James Spaller	(35)	Pitts Special S-2B N260JH	1421.10 70.00% (7)	1523.92 72.57% (7)	1304.50 67.24% (7)	4249.52 70.01% (8)
David Smith	(35)	Extra 300S N28EJ	1375.56 67.76% (9)	1336.78 63.66% (9)	1293.00 66.65% (8)	4005.34 65.99% (9)

ADVANCED

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★Brittanee Lincoln	(138)	Extra 330SC N330CZ	2565.90 82.77% (3)	2820.10 85.46% (1)	2690.80 81.05% (4)	8076.80 83.09% (1)
★Mario Mena Marqua		Extra 330SC N669AJ	2422.80 78.15% (12)	2814.80 85.30% (2)	2700.76 81.35% (3)	7938.36 81.67% (2)
★Luke Penner*	(78)	Extra 330SC C-FXLP	2526.10 81.49% (5)	2629.10 79.67% (8)	2729.50 82.21% (2)	7884.70 81.12% (3)
Michael Lents	(78)	Staudacher S-300D N540CG	2615.20 84.36% (1)	2499.40 75.74% (13)	2741.22 82.57% (1)	7855.82 80.82% (4)
Ryan Chapman	(78)	Staudacher S-300 C-GVUA	2526.80 81.51% (4)	2664.60 80.75% (5)	2638.62 79.48% (5)	7830.02 80.56% (5)
Adam Messenheimer	(138)	MX Aircraft MXS-RH N530RH	2506.70 80.86% (7)	2780.06 84.24% (3)	2490.12 75.00% (9)	7776.88 80.01% (6)
David Taylor	(11)	Giles 200 N1210Y	2466.20 79.55% (9)	2663.70 80.72% (6)	2524.10 76.03% (8)	7654.00 78.74% (7)
★Cong Yan		Sukhoi Su-26M N203SU	2370.40 76.46% (13)	2597.22 78.70% (10)	2606.66 78.51% (7)	7574.28 77.92% (8)
Steven Johnson	(27)	MX Aircraft MX2 N487MX	2583.30 83.33% (2)	2727.10 82.64% (4)	2139.90 64.45% (13)	7450.30 76.65% (9)
★Ekaterina Volkova		Extra 300S N330X	2445.80 78.90% (10)	2640.30 80.01% (7)	2342.80 70.57% (11)	7428.90 76.43% (10)
Michael Gallaway	(24)	Extra 300S N540BG	2357.26 76.04% (14)	2612.80 79.18% (9)	2455.80 73.97% (10)	7425.86 76.40% (11)
★Martin Flournoy	(3)	MX Aircraft MX2 N540RH	2436.10 78.58% (11)	2363.68 71.63% (15)	2621.50 78.96% (6)	7421.28 76.35% (12)
Stanley Moye	(3)	Extra 300S N919GM	2475.70 79.86% (8)	2497.30 75.68% (14)	2187.82 65.90% (12)	7160.82 73.67% (13)
Jerry Riedinger	(67)	Extra NG N305NG	1931.10 62.29% (17)	2537.50 76.89% (12)	2079.60 62.64% (14)	6548.20 67.37% (14)
Christopher Magon	(23)	Extra 330SC N330KM	2523.70 81.41% (6)	2325.32 70.46% (17)	815.36 24.56% (19)	5664.38 58.28% (15)
Darren Behm	(24)	Extra 300S N43DM	1996.00 64.39% (16)	1929.38 58.47% (19)	1723.46 51.91% (15)	5648.84 58.12% (16)
Tom Thomason	(89)	Giles 202 N202SF	1904.90 61.45% (18)	2556.26 77.46% (11)	1186.92 35.75% (17)	5648.08 58.11% (17)
Grant Nielsen	(138)	Extra 300SC N330XS	1610.60 51.95% (19)	2303.30 69.80% (18)	1597.02 48.10% (16)	5510.92 56.70% (18)
Barrett Hines	(49)	Extra 300 N410WB	2161.40 69.72% (15)	2358.90 71.48% (16)	903.60 27.22% (18)	5423.90 55.80% (19)

UNLIMITED

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★ Robert Holland	(35)	MX Aircraft MXS N530RH	3449.50 81.74% (1)	3841.23 83.51% (1)	4439.75 82.37% (1)	11730.48 82.55% (1)
★ Jeffrey Boerboon	(62)	Extra 330SC N73KG	3355.50 79.51% (2)	3740.08 81.31% (3)	4340.33 80.53% (2)	11435.91 80.48% (2)
★ Jim Bourke	(77)	MX Aircraft MXS N541FZ	3039.50 72.03% (5)	3624.83 78.80% (5)	4188.50 77.71% (3)	10852.83 76.37% (3)
★ Craig Gifford	(78)	Extra 330SC N330CG	3154.83 74.76% (4)	3518.58 76.49% (7)	4092.33 75.92% (4)	10765.74 75.76% (4)
Steven Grohsmeyer	(27)	MX Aircraft MXS N9614	2587.75 61.32% (9)	3579.17 77.81% (6)	3768.00 69.91% (5)	9934.92 69.91% (5)
A.J. Wilder	(49)	Extra 330SC N989AJ	2953.57 69.99% (6)	3626.67 78.84% (4)	3348.57 62.13% (6)	9928.81 69.87% (6)
Goodwin Thomas	(23)	Extra 330SC N580BG	3267.00 77.42% (3)	3773.42 82.03% (2)	2717.67 50.42% (9)	9758.09 68.67% (7)
Jeffrey Petrocelli	(52)	Extra 330SC N330MP	2910.87 68.98% (7)	3460.58 75.23% (9)	3250.78 60.31% (7)	9622.23 67.71% (8)
John Wacker	(3)	Extra 330SC N393WW	2796.75 66.27% (8)	3500.17 76.09% (8)	3078.25 57.11% (8)	9375.17 65.98% (9)

FOUR-MINUTE FREE

Pilot	Chapter	Airplane	Known	Total
Robert Holland	(35)	MX Aircraft MXS N530RH	3512.00 87.80% (1)	3512.00 87.80% (1)
Jim Bourke	(77)	MX Aircraft MXS N541FZ	3224.00 80.60% (2)	3224.00 80.60% (2)
Jeffrey Boerboon	(62)	Extra 330SC N73KG	3016.00 75.40% (3)	3016.00 75.40% (3)
Goodwin Thomas	(23)	Extra 330SC N580BG	2928.00 73.20% (4)	2928.00 73.20% (4)
Craig Gifford	(78)	Extra 330SC N330CG	2718.00 67.95% (5)	2718.00 67.95% (5)

2023 U.S. Nationals – Gliders

Held in Salina, Kansas. Director: Shad Coulson. Chief Judge(s): Mark Matticola, Hector Ramirez, Peggy Riedinger.

PRIMARY

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★ Vivian Pfleger	(62)	MDM Fox-1P N163VT	563.72 80.53% (1)	570.80 81.54% (1)	510.90 72.99% (2)	1645.42 78.35% (1)
★ Brandon Humphreys	(12)	DG Flugzeugbau DG-1000 USAF	518.58 74.08% (2)	536.70 76.67% (2)	536.50 76.64% (1)	1591.78 75.80% (2)
Larry Ruggiero		Allstar SZD-59 Acro N4416S	313.50 44.79% (3)	487.00 69.57% (3)	432.70 61.81% (3)	1233.20 58.72% (3)

SPORTSMAN

Pilot	Chapter	Airplane	Known	Free	Unknown	Total
★ Robin Simmons	(62)	MDM Fox-1P N163VT	926.40 77.85% (2)	940.70 79.05% (2)	966.90 81.25% (1)	2834.00 79.38% (1)
★ Greg Borovykh		MDM Fox-1P N163VT	937.60 78.79% (1)	984.80 82.76% (1)	906.90 76.21% (2)	2829.30 79.25% (2)
★ Joseph Tschetter	(12)	DG Flugzeugbau DG-1000 N500DG	863.60 72.57% (4)	851.30 78.10% (4)	858.10 78.72% (3)	2573.00 76.35% (3)
Samuel Ellenson	(12)	DG Flugzeugbau DG-1000 N500DG	797.40 67.01% (5)	844.90 77.51% (5)	746.40 68.48% (6)	2388.70 70.88% (4)
Jack Kastens	(12)	DG Flugzeugbau DG-1000 N500DG	886.60 74.50% (3)	735.70 67.50% (6)	743.30 68.19% (7)	2365.60 70.20% (5)
Luke Lipetska	(12)	DG Flugzeugbau DG-1000 N500DG	656.46 55.16% (8)	866.30 79.48% (3)	827.90 75.95% (4)	2350.66 69.75% (6)
David Petzold	(12)	DG Flugzeugbau DG-1000 N500DG	749.40 62.97% (6)	651.92 59.81% (7)	787.70 72.27% (5)	2189.02 64.96% (7)
Gabriela Castaneda	(12)	DG Flugzeugbau DG-1000 N500DG	685.70 57.62% (7)	613.32 56.27% (8)	678.20 62.22% (8)	1977.22 58.67% (8)

INTERMEDIATE

Pilot		Airplane	Known	Free	Unknown	Total
★ Andre Gerner	(5)	MDM Fox-1P N1499F	1278.12 79.39% (1)	1188.16 76.66% (1)	1048.38 72.30% (4)	3514.66 76.24% (1)
★ Jacob Mohnancs	(12)	DG Flugzeugbau DG-1000 N500DG	1182.70 73.46% (HC)	1152.10 74.33% (HC)	1075.63 74.18% (HC)	3410.43 73.98% (HC)
★ Gretchen Knox	(12)	DG Flugzeugbau DG-1000 N500DG	1180.40 73.32% (2)	1130.70 72.95% (3)	1090.83 75.23% (1)	3401.93 73.79% (2)
Ethan Smith	(12)	DG Flugzeugbau DG-1000 N500DG	1096.80 68.12% (3)	1102.00 71.10% (4)	1065.13 73.46% (2)	3263.93 70.80% (3)
★ Kelly Murphy	(12)	DG Flugzeugbau DG-1000 N500DG	1027.72 63.83% (4)	1180.60 76.17% (2)	1049.08 72.35% (3)	3257.40 70.66% (4)
Michael Laub	(12)	DG Flugzeugbau DG-1000 N500DG	803.90 49.93% (HC)	1121.50 72.35% (HC)	977.50 67.41% (HC)	2902.90 62.97% (HC)
Matthew Hamilton	(12)	DG Flugzeugbau DG-1001 N501DG	996.20 61.88% (HC)	946.70 61.08% (HC)	914.00 63.03% (HC)	2856.90 61.97% (HC)

2023 U.S. Nationals – Gliders

Held in Maricopa, Arizona. Director: Shad Coulson. Chief Judge(s): Mark Matticola, Peggy Riedinger.

ADVANCED

Pilot		Airplane	Known	Free	Unknown	Total
★ Shad Coulson	(62)	Swift S-1 113TX	1652.16 79.05% (2)	1336.80 81.02% (1)	1358.80 80.40% (1)	4347.76 80.07% (1)
★ Joseph Gerner	(5)	MDM1 Fox N35ZZ	1696.96 81.19% (1)	1273.20 77.16% (2)	1334.50 78.96% (2)	4304.66 79.28% (2)
Mallory Lynch	(38)	MDM1 Fox N35ZZ	1389.20 66.47% (3)	1115.66 67.62% (3)	1250.20 73.98% (3)	3755.06 69.15% (3)
Dante Cyrus	(12)	DG Flugzeugbau DG-1000 N500DG	1240.50 59.35% (4)	1042.76 63.20% (4)	1148.86 67.98% (5)	3432.12 63.21% (4)
Jacob Mohnancs	(12)	DG Flugzeugbau DG-1000 N500DG	1081.88 51.76% (7)	973.80 59.02% (6)	1210.00 71.60% (4)	3265.68 60.14% (5)
Andrew Dever	(12)	DG Flugzeugbau DG-1000 N500DG	1114.60 53.33% (6)	1015.12 61.52% (5)	1098.10 64.98% (6)	3227.82 59.44% (6)
Jared Bachman	(12)	DG Flugzeugbau DG-1000 N500DG	1173.38 56.14% (5)	691.68 41.92% (10)	1077.50 63.76% (7)	2942.56 54.19% (7)
Carter Margolis	(12)	DG Flugzeugbau DG-1000 N500DG	1074.78 51.42% (9)	821.10 49.76% (8)	822.80 48.69% (12)	2718.68 50.07% (8)
Matthew Hamilton	(12)	DG Flugzeugbau DG-1000 N500DG	1006.78 48.17% (10)	753.04 45.64% (9)	913.20 54.04% (10)	2673.02 49.23% (9)
Patrick Koenig	(12)	DG Flugzeugbau DG-1000 N500DG	1077.28 51.54% (8)	620.80 37.62% (11)	908.72 53.77% (11)	2606.80 48.01% (10)
Isabella Gentile	(12)	DG Flugzeugbau DG-1000 N500DG	709.50 33.95% (11)	842.50 51.06% (7)	978.12 57.88% (8)	2530.12 46.60% (11)
Michael Laub	(12)	DG Flugzeugbau DG-1000 N500DG	619.70 29.65% (12)	574.68 34.83% (12)	957.00 56.63% (9)	2151.38 39.62% (12)

UNLIMITED

Pilot		Airplane	Known	Free	Unknown	Total
Jason Stephens	(62)	Swift S-1 N113TX	1831.18 78.93% (1)	1450.60 67.79% (2)	1779.42 82.76% (1)	5061.20 76.57% (1)
Jim Bourke	(77)	Swift S-1 N113TX	1359.47 58.60% (3)	1590.45 74.32% (1)	1582.93 73.62% (2)	4532.85 68.58% (2)
Sasa Marvin	(62)	Swift S-1 N113TX	1507.10 64.96% (2)	1365.10 63.79% (3)	1546.27 71.92% (3)	4418.47 66.85% (3)

★ indicate that their score earned them an IAC Achievement Award.

* Championship trophies are only presented to U.S. citizens.

ROB HOLLAND
UNLIMITED + FOUR-MIN

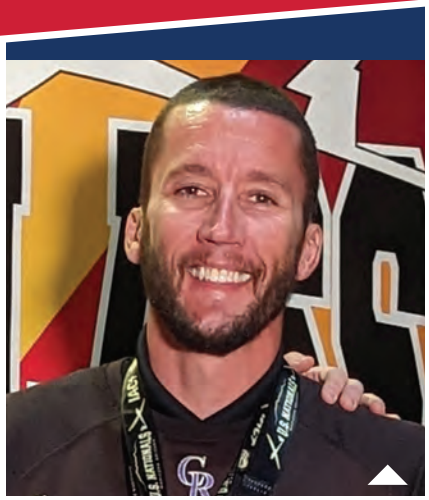
VIVIAN PFLEGER
GLIDER PRIMARY

ROBIN SIMMONS
GLIDER SPORTSMAN

ANDRE GERNER
GLIDER INTERMEDIATE

SHAD COULSON
GLIDER ADVANCED

JASON STEPHENS
GLIDER UNLMIITED



Key volunteer group and other officials

BY SHAD COULSON, IAC 440759, 2023 U.S. NATIONALS CONTEST DIRECTOR

THE DEDICATED VOLUNTEERS AND IAC OFFICIALS strive year after year to provide a well-organized and high-quality event worthy of the title U.S. Nationals. Each contest poses unique challenges, and this year is no different. For the first time since the IAC began hosting Nationals in Salina, the contest was headquartered in Hangar 509, which is located a few hangars to the south of our previous location. The contest staff worked hard to identify process changes, potential issues, and mitigation measures related to the hangar change.

It is hard to truly grasp the scope of effort for a contest of this size until one gets involved. As with any regional contest, the success of the contest depends solely on the volunteers and judges. It is never too early to begin thanking the many volunteers that support the U.S. Nationals. We look forward to having these volunteers again, who will return in 2024.

Left to right in the foreground: Summer Hayden acts as recorder for judge Brittanee Lincoln and assistant judge Kristina Hayden.

- Few roles are as demanding as the contest registrar. Mary Beth Rudd stepped up to fill the enormous shoes previously worn by Liza Weaver. Mary Beth did an excellent job of welcoming folks to the contest and preparing the clipboards.
- Alice Johnson once again served as the volunteer coordinator, working her magic to ensure we have the right people in the right place at the right times. She does a masterful job of balancing the various volunteer duties while also ensuring their ability to rest and prepare for their own competition programs.
- Monique Hartmann returned as the communications coordinator, ensuring we were all well informed. A contest of this size and complexity requires a dedicated person to ensure all facets of the contest as well as individual categories are communicated as timely as possible.
- Teri Branstitre returned as the scoring director, with Bob "Bwana" Buckley assisting with the scoring efforts. JaSPer was once again the official scoring program for the 2023 U.S. Nationals. Teri did a flawless job transcribing scores into JaSPer in an efficient and timely manner. Bwana has done an incredible job expanding the capabilities of JaSPer.
- Gary DeBaun and Jeff Granger once again served as the box masters for the contest practice days. They skillfully shepherd us through the practice slots each year. Gary was instrumental in ensuring the box markers were in place to support the unofficial practice days.
- Dale Byrkit and Doug Vayda were the contest starters, greeting and preparing each of the powered competitors before they departed for their contest flights. They did a wonderful job of ensuring the contest operations were conducted safely and efficiently. Dale has not committed to returning in 2024 yet, but Doug is confident he will return.
- Jim Branstitre spearheaded the coordination of drivers for the contest. He also set up the mandatory driver training for personnel operating a vehicle within the movement

PHOTOGRAPHY BY **LORRIE PENNER**

2023 U.S. Nationals judges review video on the judging line.

Volunteers Keith Doyne, Gary Debaun and Jeff Granger.


Chief Judge Peggy Riedinger, seated.

area. Additional duties included spearheading the setup, transition, and teardown of the judging positions throughout the contest.

- Barrett Hines served as the jury chair for the contest. Given that the sole purpose of the jury is to ensure the contest is safe and run in accordance with the IAC, he did an excellent job of recruiting a jury of mixed skills, competition levels, and regions to represent the entire IAC.

One of the highlights of the U.S. Nationals is seeing old friends and making new ones while spending time socializing with likeminded pilots. Sara Arnold and Lynn Bowes, who serve as the contest hospitality coordinators, work tirelessly for months in advance to organize the various social events being held during the contest. This year's contest had a full lineup of social events, such as a mixer on Sunday evening at the Hilton Garden Inn. Monday saw a new event: Burgers With the Board; the IAC board of directors was on-site to prepare and serve a meal to competitors and volunteers. On Tuesday, we gathered at The Garage, a venue that was well received last year. To reduce the duration of the banquet, we hosted a separate flight medals dinner on Thursday evening, and we conducted the contest auction, which offered a lot of great merchandise and was a huge success, raising $14,000. Finally, the week concluded with a wonderful awards banquet at the Hilton Garden Inn on Friday evening.

The judging lines were led by experienced and esteemed judges who have served in their respective roles for many years. Mark Matticola was the chief judge for Primary and Sportsman. Peggy Riedinger was the chief judge for Intermediate. DJ Molny was unable to act as chief judge for Advanced, so Peggy stepped in to cover. Hector Ramirez was the chief judge for Unlimited. Helping the chief judges to keep everyone safe and in order was John Smutny, who returned as the "air boss." He did an amazing job and was last on the judging line for every single flight!

Lastly, we need to thank Lorrie Penner and Steve Kurtzahn, who are the IAC workhorses. They work every day in support of all IAC activities, not just Nationals. The names above make up only a small portion of the many wonderful volunteers who help the U.S. Nationals become a success each year. If you see any of them in your travels or at a regional contest, please thank them!

There are few things I value in life more than my free time. I will be the first to acknowledge that a week away from the various personal and professional commitments we all juggle to attend the U.S. Nationals can be a difficult task to navigate. Thank you to all who chose to attend. We look forward to welcoming you to Salina again September 22-27, 2024! IAC

Rob Holland's MXS-RH aircraft is rated +/-16gs. Photography by Steve Serdikoff.

Heading Into the Off-Season

2023 U.S. National Aerobatic Champion

BY JENNIFER VUKOVIC

THE YEAR IS DRAWING TO A CLOSE, and for Rob Holland, it marks the culmination of his 21st year in the air show industry. This year he booked 27 shows; by the time this article is published, he'll have finished the last one and be thankful for a bit of downtime. Being a career air show performer and competitor is a thrilling path, but let there be no mistake that everything that goes into making each year a success is ... well, hard work.

In September, Rob won his 12th consecutive U.S. National Aerobatic Championship title along with the 4-Minute Freestyle, both of which wouldn't have been possible without his dedication to the sport and all of his experience — that's 31 years of flying and more than 15,100 hours. Rob flies an MXS-RH with an empty weight of approximately 1,200 pounds and 380 hp, which if you can imagine, allows for some creative freedom when developing new maneuvers. The *g*-force tolerance of the plane is +/-16. The *g*-force tolerance of Rob is around +12/-9 at his peak, leaving plenty of uncharted territory to explore, capability-wise.

As a child enamored with Star Wars, Rob began his aircraft fascination with the iconic Millennium Falcon. Aviation and planes struck a chord with him. Seeing the Blue Angels fly at an air show that his father took him to was the match that lit the flame. Rob has had a single goal ever since, which was to fly air shows. He did not plan on being a 12-time U.S. National Champion as a kid, but it has been a pretty neat adventure and path to getting there. He didn't imagine that he would be an honorary Blue Angel, either.

Jennifer: As a kid, you were inspired to be an air show pilot. What got you into the competition side of things?

Rob: Growing up, I didn't know about competition aerobatics. My whole goal was to become an air show performer. One of my early jobs in aviation was teaching aerobatics at Mike Goulian's flight school. They would take their students to regional competitions every year. Going to one of those regional competitions with my students was my first introduction to competition, and it just connected with me. From that point on, I had two goals: to be an air show performer and keep flying aerobatics.

Jennifer: How did your first competition go?

Rob: Horrible. But extremely fun! My first competition, I flew in Sportsman. I dove into the box in a Decathlon, did the first figure, forgot to do the second figure, and did the entire rest of the sequence in the wrong direction. My second flight went quite a bit better ... I didn't get any zeroes. But what it really accomplished for me was introducing me to competition aerobatics and showing me that there was a means that allowed me to assess my abilities and where I needed to improve.

Jennifer: Were there any other takeaways from that first competition?

Rob: I got really bit by the competition bug, and when the contest was over, I wrote down that I wanted to be the U.S. National Aerobatic Champion within 10 years. It was exactly 10 years and 4 months later that I won my first U.S. National (Unlimited) Championship.

Jennifer: What was the process like getting to your first national aerobatic championship?

Rob: My first competitions were in the Sportsman category in 2001. I did two competitions that year. The following year, I had started my own aerobatic flight school and started flying a Pitts S-2C that I was leasing for the school. I went straight into the Advanced category. I do not recommend skipping Intermediate. I did really well in Advanced, winning my first contest in Advanced that year (2002) and won a handful of other regional contests after that.

In 2003, I went to my first U.S. Nationals, flew in the Advanced category, and earned a spot on the U.S. Advanced Team. The 2004 Advanced World Aerobatic Championships (AWAC) were in Sweden where I came in 10th overall. I learned a lot about world competition at that championship. In 2006, I made the Advanced Team where I earned overall silver (second place), and the team also came in second. Then in 2008, I earned a spot on the team, and we traveled to Pendleton, Oregon, for the championship. The U.S. Team won gold, and I became the Advanced World Aerobatic Champion.

PHOTOGRAPHY BY **STEVE SERDIKOFF**

Rob flies an MXS-RH developed for him by MX Aircraft. Photography by Steve Serdikoff.

After the 2008 AWAC, I moved up to Unlimited and won the 4-Minute Freestyle that year. In 2010, I earned a spot on the Unlimited Team. The team members trained very hard that year with Sergey Rakhmanin as our coach, which was the first time I had truly worked with a coach. At the World Aerobatic Championships (WAC) in 2011, I placed seventh overall and also won the 4-Minute Freestyle. When we came back from WAC, I didn't stop training and applied everything that I learned so that by the time the U.S. Nationals came around, I was fresh and ready to go. And that was the year that I won my first U.S. Nationals Aerobatic Champion title.

Jennifer: How have you stayed so dedicated [to the sport] for so long?

Rob: I'm a pretty simple person. I only have so many interests, and I decided early on in life to only have a Plan A and no Plan B. It seems that everyone defaults to Plan B in their lives because it is easier. I refused to have a Plan B, which forces me to make Plan A work. It took a lot of time, and it was a lot of sacrifice to get here. And I feel like I am still working on it.

Jennifer: It's midway through November, and you have one air show left. I know there's still more work to be done, so what's next?

Rob: My season starts the second my previous season ends. The beginning of December is really the start of the next year. Before I can start thinking too much about competition, I have to take care of my air show business so that I can have a livelihood that allows me to compete. The International Council of Air Shows has a convention every year in December that the entire industry goes to plan for the next season. Around the same time, my plane goes down for winter maintenance with Full Stop Aviation in Union City, Tennessee. I spend January and February working on the business side of things for the following season contracts, and planning out my schedule. In March, my plane comes out of winter maintenance, and I take it down south to spend a full month practicing three times a day every day.

Jennifer: Can you walk me through what a day or a month of training looks like?

Rob: I do a flight in the morning and two flights in the afternoon every day. The first week, I only concentrate on the fundamentals. Pulls, radiuses, rotations, lines, etc. ... If you don't have the fundamentals down, nothing else will look right. My first two flights are usually intense, and the third flight is a much lighter flight where I brush up on the things I need to work on from earlier flights that day. I am also working on *g*-tolerance during this time.

During practice sessions, I start off extremely light with the pushes and slowly increase over the course of a month to get to where I need to be. In the second week, I just fly competition aerobatics. I work on the Known and individual Unknown figures. Doing this gets my flying sharp and precise in preparation for the season. In the third week, I spend the first two flights working on air show figures to get back up to speed, and the third flight will either be competition figures or brushing up on a specific air show figure that I need to work at. Week four is focused on putting together and choreographing my air show sequence for the season. Once the sequence is set, that is how it will stay for the entire season.

Jennifer: How much of the season or off-season do you spend coaching others?

Rob: I enjoy coaching and am asked about it all the time. Although I get a lot out of it and hopefully am contributing a lot to others, I don't spend a lot of time coaching simply because I don't have the time. During COVID, I coached a lot, because quite frankly, I needed something to produce income when all the air shows canceled. Now that everything's back to normal, there is not a lot of time in my schedule to do coaching. However, I try and do a few camps annually, and I hope later in life to do a lot more coaching.

Jennifer: How many air shows are you typically doing in a year, and how are you finding the time to practice for competitions in between?

Rob: Let me start off by saying that competition aerobatics and air show aerobatics are two very different disciplines. I think competition really helps air show skills, and with the exception of situational awareness in the box, air show flying is detrimental to competition flying.

Rob with the Blue Angles. Photography by Glenn Watson.

Typically, I do between 20 to 24 air shows every season. I also try to schedule three to four weeklong dedicated camps for competition training. Most of these camps I try to bring Coco (Claude Bessiere, coach) over from France to work with me. I also dedicate the week before Nationals to competition training. In between air shows during the year, I will find time during the week to practice both air show flying and competition.

Jennifer: With your busy schedule, how do you find time to dedicate being the IAC vice president?

Rob: The IAC and the sport of aerobatics have contributed so much to my life; it only seems right to be able to give back to the sport in any way that I can. I am fortunate that the membership has trusted me to be vice president twice now, and I have also been on the board of directors for many years before that.

One of the things I would like to accomplish is to get rid of the perceived divide in the organization. I hear from many individuals that there are "the Unlimited guys" and "the grassroots guys." I think this is nonsense because the reality is that we're all aerobatic people. We all have the same fundamental love for the sport no matter what level you compete at or if you compete at all. You can't have the upper categories without the lower categories, and it's hard to have the lower categories without the inspiration of the upper categories.

Jennifer: What else do you like to do outside of flying your plane?

Rob: I like to play the guitar. It's a nice escape. I don't have a lot of other hobbies outside of aviation. I am lucky that my job is also my hobby.

Jennifer: How long do you want to stay in aerobatic competition and air shows?

Rob: As far as competition goes, the answer is twofold. I would like to keep doing it until it is not fun anymore. The second part of that is that to me, the fun is the self-improvement. I've never been in this to compete against any other individual except for myself. People have heard me say many times, "This is not a defensive sport"; the only thing I can do is try to fly better today than I flew yesterday. The pilot that I am now in 2023 would definitely beat the pilot that I was in 2011 when I won my first Nationals. I like to push myself to find out how good I can get, not in respect to anyone else.

Where is the tip of the mountain for me? When I find myself starting to come down the other side, that's when I know I have reached my ultimate goal and it's time to stop. For me, that's when the fun will have stopped. As far as air shows, the short, simple answer is, until I can't do it (safely) anymore. *IAC*

The joys of open-cockpit Pitts S-1 flying.

Tiny Dancer

A Pitts S-1SS aerobatic adventure

BY DAVID VALAER, IAC 439899

PHOTOGRAPHY COURTESY OF **DAVID VALAER**

***TINY DANCER*, A PITTS S-1C** restored with S-1S wings with Super Stinker ailerons (S-1 for this article), is undeniably one of the most exhilarating aircraft I've owned — or had the pleasure of flying. However, this joyous experience is counterbalanced by its demanding ground manners and a potential for a stinging bite if not handled with care. After flying everything from F-16s to A-7s to T-38s; spending 1,500 hours in taildraggers piloting bushplanes in the Alaskan wilderness; enjoying the nuances of T-6s and Stearmans; and flying over 300 hours in my Pitts S-2C, I eventually felt the urge to embark on a new adventure with a single-seat S-1 Pitts. What ensued was a mostly positive, eye-opening, and at times challenging journey. The primary objective of this article is to offer valuable insight into how the single-place Pitts flies from a pilot's perspective and to provide guidance for those thinking about transitioning to a single-seat Pitts aircraft.

My previous aerobatic companion was a 2000 Pitts S-2C, a remarkable aircraft that welcomed me into the enthralling world of aerobatics. While I treasured my time with the S-2C, I couldn't help but notice the relatively heavy pitch control it demanded. Unlike many other models in the S-1 and S-2 series, the S-2C lacked an elevator servo. This contributed to the heavy pitch characteristic. After a hard day of practice in the S-2C, my right arm would inevitably be sore. Additionally, the S-2C exhibited pitch and roll control forces that, while reasonable, weren't entirely linear. This meant the stick forces varied across different regions of stick motion — in both pitch and roll — and increased significantly toward the stick's extremes and at higher airspeeds. Nevertheless, it remained a highly enjoyable aircraft to operate.

The initial encounter with *Tiny Dancer* revealed stark contrasts. The stick pitch forces were notably lighter — approximately 60 percent less than those of the S-2C. Roll forces were also significantly reduced — by approximately 40 percent compared to its S-2C counterpart. The equal harmony of forces — between roll, pitch, and yaw — felt nearly perfect, and it was evident that Curtis Pitts had struck a fine balance, as reflected in the design's enduring popularity. The S-1 impressed with its linear control forces throughout the stick's entire range of motion across all axes. Notably, stick forces exhibited no significant increase at higher speeds, distinguishing the aircraft from the S-2C. The stick's behavior remained consistent through the entire range of stick motion on all axes, and there was no tendency to "roll off" at the extremes of stick roll movement — a trait encountered in some modern monoplanes. The ailerons are similar to those of the S-1-11B type, which don't use spades because they don't need help reducing breakout forces in roll. Their well-engineered hinge point placements and carefully controlled aileron/wing-gap dimensions are up to the job, providing precise control without excessive sensitivity or overshooting inputs. This helps create a delightful flying experience. The last time I recall such finely balanced stick forces and a similar ability to throw the stick around easily I was flying the T-38 for air-to-air combat maneuvers — and that aircraft had a weighted stick aided by hydraulics. As our instructors said, when flying below a maneuvering speed of 300 knots indicated airspeed, the T-38 was considered virtually unbendable, regardless of how vigorously the stick was manipulated. This made for great air-to-air defensive gun-jinks, yet it left me wondering why some of the AT-38Bs used in fighter lead-in training often taxied sideways like crabs!

The nuances of control forces, a delicate interplay between roll, pitch, and yaw, reveal the brilliance of Curtis Pitts' design.

The nuances of control forces, a delicate interplay between roll, pitch, and yaw, reveal the brilliance of Curtis' design. The S-1 stands as a testament to balanced engineering, where every input is met with a seamless response. Its stick forces, consistent and predictable, enable a level of control that harkens back to the precision of air-to-air combat maneuvers and makes pilots feel as if they should be in an open-cockpit World War I dogfight — but with the benefit of more power and reliability. The S-1 wings cut through the sky like razor blades. It will come right around as hard as you want to pull, but airspeed energy bleeds off quickly above about 4.5g. As with the A-7 Corsair and other older-generation fighters, you got one good, hard turn before you were out of airspeed and ideas! There are two throttle settings in the Pitts: idle for landing (or entering a spin) and wide open "Mach power," as John Morrissey calls it. The S-2C did have an advantage in that you could pull *g*'s longer with its six-cylinder engine.

In-flight cockpit view of the S-1.

In air-to-air combat with pilots of similar weight, it would be interesting to see who would prevail in a dogfight between the S-1S and the S-2C. The finesse and energy management of the S-1 would probably give it an advantage, and I would love to try it. I suspect it would be similar to a dogfight between an F-16 and F-18. If the F-16 keeps its energy up above 350 knots, it will usually win, but don't get down low and slow or the F-18's extra power and higher angle of attach capability will give it the edge.

Even with more than 300 hours of experience flying the S-2 and 30 hours in my S-1, it tended to bite during landing rollouts. The final approach, flare, and touchdown phases mirrored those of an S-2, which helped prepare me for piloting the S-1. However, with the tail settling at approximately 40 mph, it displayed noticeably more instability than I had encountered in any taildragger. Seeking advice from several of my IAC comrades, I implemented nearly all of their recommendations (apologies to Spencer for not adopting wheel landings!). These changes led to discernible enhancements in the S-1's ground handling.

Experimental Pitts aircraft tend to have unique characteristics, often exhibiting significant variations. My own *Tiny Dancer* commenced life as a 1971 Pitts S-1C, featuring the shorter C fuselage and a Lycoming O-290 engine. It flew for around 1,000 hours before Roger A. Smith undertook a meticulous restoration and reconstruction. Roger owned this aircraft for more than a quarter-century before passing it on to a close friend. Sadly, his friend later died, prompting Roger to make a heartfelt commitment to

PHOTOGRAPHY COURTESY OF **DAVID VALAER**

finish the restoration in honor of his pal — hence the distinctive purple hue, as he had named it *Plum Crazy*! Perhaps esteemed institutions like Louisiana State University, the Minnesota Vikings, or even the Los Angeles Lakers could be future sponsors!

This restoration introduced a host of enhancements, notably new S-1S wings featuring three-fourths span Super Stinker ailerons that extend beyond the wing's trailing edge with squared-off wings. The carbon fiber leading edges are securely fastened to the ribs with screws, unlike in factory Pitts, which use nails that can migrate out of the spars over many hours, as my S-2C had done. Further improvements include squared-off tail feathers, a spring gear, an overhauled Lycoming O-360 parallel-valve engine furnished with 9-to-1 pistons, and a Sensenich 76EM8-0-56 metal propeller. This restoration culminated in an aircraft weighing 820 pounds, whereas the empty weight for the S-2C is over 1,400 pounds. Readers interested in a more detailed account of the S-1, particularly from a builder's perspective, are encouraged to read the July 2023 edition of *EAA Sport Aviation*, specifically pages 41-46.

Tiny Dancer isn't just an aircraft; it's a testament to the art and science of aviation. Its wings have carried me through exhilarating maneuvers, its frame has weathered the elements, and its spirit has left an indelible mark on my journey as a pilot.

Equipped with the fixed-pitch Sensenich 76EM8-0-56 propeller, the static wide-open throttle (WOT) yields 2250 rpm, which increases to 3150 rpm at WOT when the airspeed reaches 180 mph. The critical question as to whether and how these high revolutions per minute may impact the engine's time between overhauls (TBO) is answered succinctly: yes, they will have an effect. The precise magnitude of this effect remains elusive, with some estimating a TBO as low as 600-1,000 hours. Clearly, higher revolutions per minute will shorten the engine's service life. Nevertheless, by maintaining the engine within temperature limits by monitoring the JPI EDM-350, employing CamGuard, treating the

The purple and gold *Tiny Dancer*.

engine with Microlon CL-100, using a 20-micron stainless steel full-flow oil filtration system via the Pure Power Oil Filter, and integrating an active Balance Masters propeller dynamic balancing ring between the propeller/crankshaft — along with doing frequent oil changes using AeroShell 100 with oil analysis — I remain optimistic that we could achieve a TBO of 1,000 hours or more. Perhaps the vibrant purple engine color might assist in that endeavor!

As for engine temperatures, it's worth noting that during a sweltering 105-degree day in Dallas, the aircraft's cylinder head temperatures (CHT) and oil temperatures were higher than desirable, even with an oil cooler positioned on the front side of the engine baffle. Curiously, on one occasion, while in the process of cooling down the engine at reduced power settings, I decided to do some inverted flight. To my surprise, I observed a significant reduction in CHT and oil temperatures, with both dropping by more than 15 degrees. Initially skeptical, I repeated this maneuver multiple times, consistently yielding the same outcome. It was clear that inverted flight substantially aided in engine cooling. Lucky Louque of Air Salvage of Dallas swiftly offered a plausible explanation: The increased suction of the lower cowl due to the negative angle of attack resulted in greater airflow through the engine cowling. So, we fashioned a 4-inch lower fixed cowl flap set at a 35-degree angle. This modification led to a reduction of more than 15 degrees in oil temperatures, with CHTs decreasing by more than 20 degrees. Remarkably, this transformation resulted in no measurable change in airspeed or aircraft performance.

Up-close view of the oversized S-1 ailerons.

Spencer Suderman's initial query pertained to the presence of Aero Products' stainless-steel rod for the tail wheel spring. He promptly recommended reverting to the factory Pitts leaf springs. The rod-type tail wheel spring, he explained, could exert a twisting force on the tail wheel bolt, potentially increasing lateral play in the tail wheel forks, whereas the flat leaf spring eliminated this possibility. Furthermore, the factory Pitts tail wheel spring served to augment the aft angle of the tail wheel forks from approximately 35 degrees from vertical to more than 45 degrees, thereby enhancing ground tracking. Bo Kalabus astutely pointed out that even tires with an ostensibly "new"

Wearing thin Vibram "five-toed shoes" heightens the sensitivity of one's foot on the rudder pedals.

PHOTOGRAPHY COURTESY OF **DAVID VALAER**

appearance could have sidewalls that had softened over the years, resulting in increased flex during ground handling. Consequently, new Goodyear Flight Custom II tires were installed. My A&P mechanic diligently inspected the gear, identifying a discrepancy of about 1.5 degrees on both wheels. Given the spring gear configuration, adjustments were readily made using shims on the axles. The brake rotors, slightly worn below acceptable limits, were also promptly replaced.

We also thought about ideal tire pressure, a subject of substantial discourse in various forums. Spencer's advice regarding the presence of about 2 inches of "flat" area on the lower portion of the tire, where it makes contact with the ground, was valuable. This condition corresponded to a tire pressure of 35 psi. Subsequently, I replaced the tail wheel compression springs and initially maintained the tail wheel control cables with one link of slack, a recommendation that was echoed by many. However, I eventually discovered that I preferred them fairly taut, with no slack. In making this adjustment, we had to be careful to avoid overcontrol, but the increased aft angle rear-facing forks on the tail wheel helped dampen this effect. The art of landing, the fine balance of pitch and roll, requires a nuanced touch. In the world of aviation, it's often the small details that make the biggest differences. From choosing tail wheel springs to calibrating the sensitivity of rudder pedals, the collaborative spirit of the aviation community's insights and experiences help elevate everyone's flying.

Drawing from my previous experience balancing on hydrofoil boards, which demands precise control using only a few toes, I applied a similar principle to the rudder and brake pedals of the Pitts. The ground rudder

Getting ready for a fun flight in the Pitts S-1.

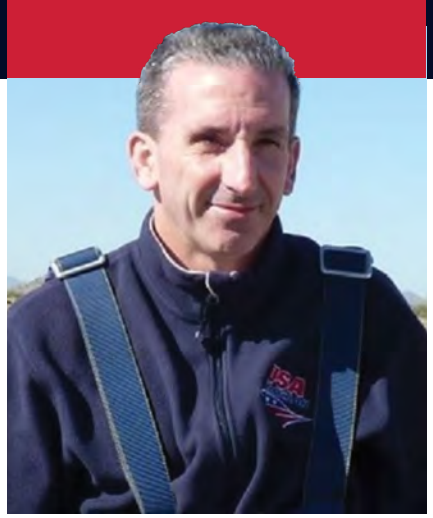
sensitivity, similar to that of Robinson R22 helicopters, responded favorably to this approach. By using only a single large toe on the toe brakes, I was able to avoid overcontrol while preserving the fine motor control touch necessary for a smooth, positive rollout. Additionally, wearing thin Vibram "five-toed shoes" heightens the sensitivity of one's foot on the rudder pedals, although one should be careful to avoid becoming the laughingstock of your fellow competitors!

As my journey with *Tiny Dancer* continues, I feel a profound sense of gratitude for the collective wisdom that has shaped this experience. From Bo Kalabus to Spencer Suderman, from mechanics in California to my trusted local mechanic, Bags, many have contributed to the story of *Tiny Dancer*. It isn't just an aircraft; it's a testament to the art and science of aviation. Its wings have carried me through exhilarating maneuvers, its frame has weathered the elements, and its spirit has left an indelible mark on my journey as a pilot.

For enthusiasts of open-cockpit flying, the S-1 presents a welcome departure from the S-2. With the S-1 cockpit positioned farther forward than the rear seat of the S-2, wind forces on the pilot are reduced dramatically, and this delivers a liberating experience, especially in the summer heat of Dallas. Aerobatics at speeds of up to 180 mph in an open cockpit prove to be remarkably comfortable. There's simply nothing like executing an inverted flight over a sea of clouds while hanging from the straps in an open cockpit; it's a truly magical experience. ***IAC+***

A former USAF F-16 fighter pilot, David Valaer holds airline transport pilot single- and multiengine land and sea, commercial helicopter, gyrocopter and glider, CFI instrument, multiengine, glider, and gyrocopter ratings.

SAFETY Series



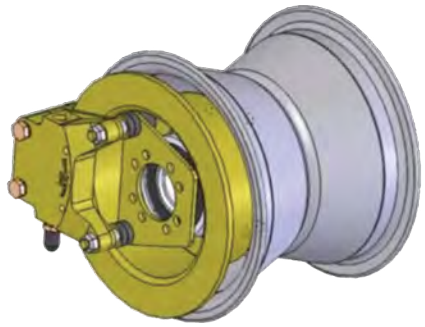
Aircraft Brakes

BY KEITH DOYNE, IAC 10545, IAC SAFETY CHAIRMAN

IT SEEMS THAT AT EVERY U.S. National Aerobatic Championships competition, at least one competitor has issues with their aircraft brakes. Usually, the problem is soft or "mushy" brakes. Even with a long runway – Salina Regional Airport's main runway is more than 11,000 feet long – the question is when will the "mushy" brakes fail and become no brakes. Most aerobatic aircraft have single-disc hydraulic brakes with toe brake pedals. Some exceptions to this are Sukhoi and Yakovlev aircraft with pneumatic brake systems. Also, Great Lakes biplanes use heel brake pedals. Overall, the hydraulic brake system on many aerobatic aircraft is not complicated. Typically, there are brake discs, brake cylinders, brake pads, master cylinders, brake lines/hoses, and a fluid reservoir. The brake fluid reservoir can be a separate item or integral to one of the master cylinders. The common brake fluid is MIL-H-5606, which is a mineral-based fluid that is colored red. As far as aircraft systems go, the brake system is quite simple and straightforward. When working on an aircraft brake system, a major challenge is accessing the components without a lot of disassembly. The last thing any competitor wants to do at a contest is dissemble the aircraft to fix the brakes.

When the pilot realizes the soft brake issue, the first step is to inspect the brake system, looking for leaks, wear on the brake disc, and thickness of the brake pads and discs. If everything looks good, the problem of soft or "mushy" brakes is most likely air in the brake system. The solution is bleeding the brake system. You can use a pressure pot to push brake fluid from the brake cylinder up to the fluid reservoir and remove the air bubble. You may have to remove wheelpants and/or fairings to access the brake cylinder and remove aircraft panels to access the brake fluid reservoir. Make sure you have plenty of rags or paper towels to clean up any brake fluid that overflows from the reservoir. The other way to bleed the brakes is to pour brake fluid into the reservoir as the pilot pumps the brakes. The drain plug on the brake cylinder must be opened and a bowl placed at the drain plug to collect the expelled brake fluid. With either method, there won't be any obvious indication the air has been removed. You may have to bleed the brakes several times until the brakes feel firm and you are confident the air has been removed from the system. Every repair or maintenance shop should have brake fluid and a brake bleeder.

When bleeding the brakes doesn't resolve the problem, now you are looking to repair or replace components. One culprit could be the seals or O-rings in the master cylinder or brake cylinder are going bad. In this case, a repair kit is needed to rebuild the component. It will take time to rebuild



The hydraulic brake system on many aerobatic aircraft is not complicated.

the bad cylinder. Another cause could be the brake hoses are too soft. When you push down on the brake pedal, the pressure created causes the brake hose to expand too much. Minimal, if any, hydraulic pressure reaches the brake

If everything looks good [after inspection], the problem of soft or "mushy" brakes is most likely air in the brake system.

PHOTOGRAPHY AND ILLUSTRATION COURTESY OF **EAA WEBINAR CHOOSING WHEELS & BRAKES)**

When the pilot realizes the soft brake issue, the first step is to inspect the brake system, looking for leaks, wear on the brake disc, and thickness of the brake pads and discs.

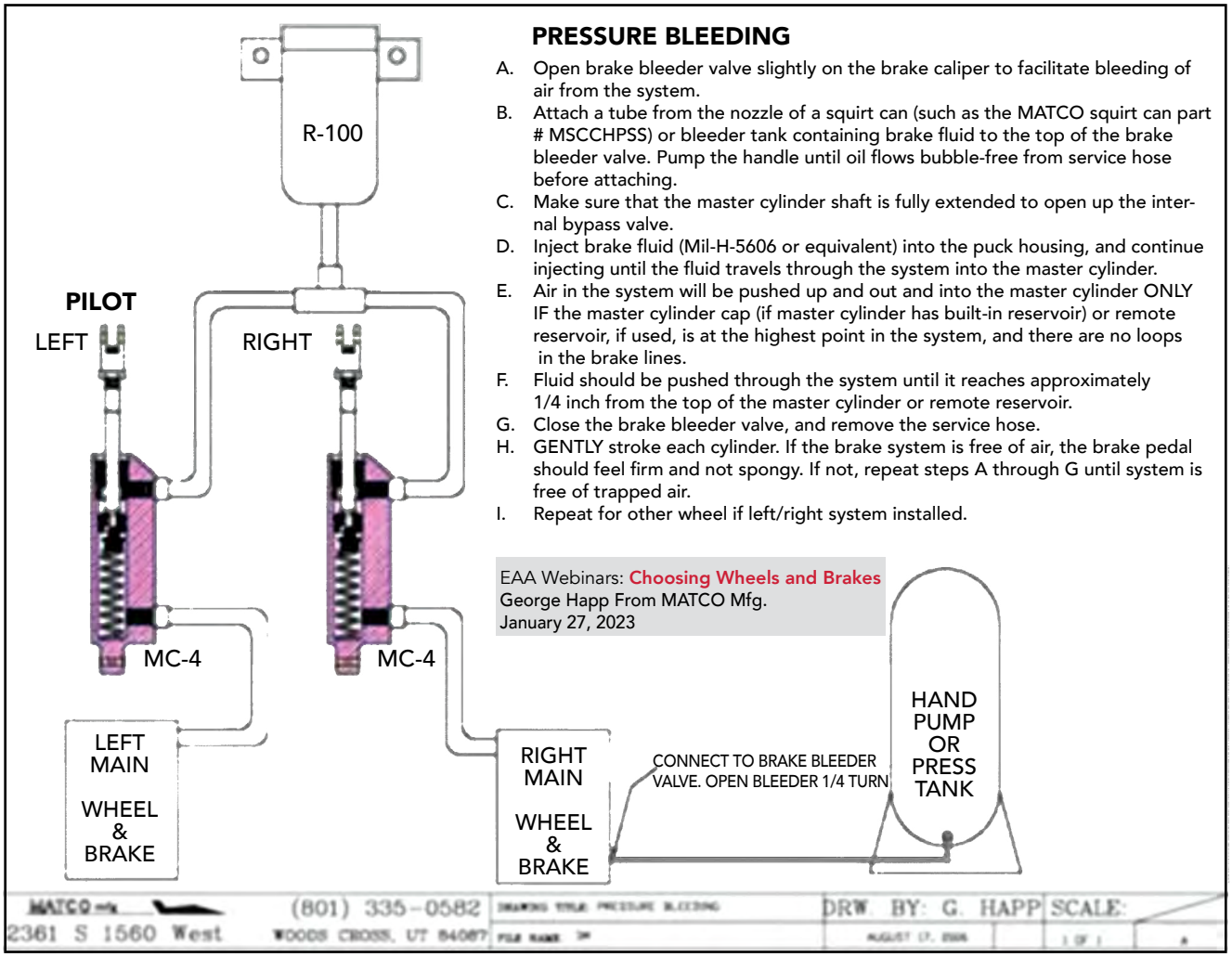
cylinder to actuate the brakes. In this case, the brake hose needs to be replaced. Repairing or replacing brake system components takes time. Not every FBO will have a brake repair kit or brake hose just sitting on the shelf.

Even with overnight shipping, fixing the aircraft brakes will take a couple of days. For regional contests, the airplane can't be down for a couple of days. At the U.S. Nationals, you have a chance to fix the issue and still fly in the contest.

Soft or "mushy" brakes don't just happen instantly. The issue develops over time. There are indications that it's time to take a good look at the brake system. One is noticing it takes more time on the landing rollout to get the airplane stopped, and another is needing to push harder on the brake pedal to slow the airplane down during taxiing. A third good indicator is during the magneto check done before you fly. If you notice you are pushing harder on the brake pedals to keep the airplane from moving, then it is time to inspect the brakes. It could be as obvious as needing to replace the brake pads or disc, or it could be a more involved effort. The best time to fix the issue is when you are at your home airport and not at a contest.

The aerobatic aircraft brake system is a simple system with a few key components. However, getting access to those components isn't always easy. The brake system should be checked yearly during the annual or conditional inspection. During the rest of the time, pilots need to take note of subtle changes with the brakes that can happen when landing, taxiing, or conducting the engine run-up. Fixing issues early is always better.

Have fun and fly safe. *IAC*



Hammers Over HONDO

Contest highlights

BY DOUG JENKINS, IAC 19869, AND ANDREA MCGILVRAY, IAC 440477

PHOTOGRAPHY BY **JOE FERNANDEZ AND BRIAN PAPKE**

HELLO, SPORTS FANS, and welcome to the wrap-up of the 2023 edition of the Hammers Over Hondo aerobatic contest. One-sentence summary: Despite the oven-like temperatures, a highly successful, safe, and fun contest was had. The longer version follows.

The first Texas contest of the year, hosted by Chapter 24 in Graham, set a high bar and inspired us to try some new things. And when I say "us," I mean the human dynamo named Andrea McGilvray. She took on the personal challenge of organizing sponsors for our contest, something that had not happened in about a decade. She used her powers of persuasion to line up some super quality sponsors and therefore some fantastic raffle prizes that pilots were able to take home with them.

This year's sponsors included Softie Parachutes ($300 check to support the event), Tempest Aero Group LLC (a set of massive electrode spark plugs), Icom Radio (A25C handheld radio), Mid-Continent Instruments and Avionics (a panel-mounted USB charger/timer/clock), AirGizmos (three sets of chocks and three flight control locks), Aircraft Spruce & Specialty (two $50 gift certificates), and Hooker Harness (a set of harnesses).

A hearty and sincere thanks to all our sponsors for helping us to have a successful event! And another hearty and sincere thanks to Andrea for taking the initiative and making this happen. Well done!

For Contest Director Doug Jenkins, this event is a year-round labor of love. The process starts in the spring when he convinces the chapter to hold the contest. From there, we have the usual exercises — IAC sanctioning paperwork, EAA insurance paperwork, IAC contest calendar page, coordinating with the airport, pushing a rope to get the waiver through the San Antonio FSDO, rounding up judges, publicizing the contest, printing paperwork, being the registrar, building clipboards, serving as chief cook and bottle washer during the contest, and being a grading judge. Oh, and flying. Is it all worth it? Yep. And he's looking forward to next year already!

The week before the contest, the logistics started in earnest when Doug, Andrea, and two women from the local Ninety-Nines chapter, Lori Hanson and Jamie Jones (friends of Andrea who volunteered even when told what the job entailed!), set up the box markers. The hard-working crew had the box marked in less than two hours!

Keith Gyger flew his Ultimate 10-200 in the Sportsman category.

Rene Dugas flew his GB1 Gamebird in the Sportsman category.


Todd Nelson flew his Steen Skybolt in the Intermediate category.

After a break in the air conditioning, Doug and Andrea both flew the box to give final approval and get some pre-contest practice. This flight revealed a magneto issue with Andrea's airplane that put her participation in the contest in question.

The rest of her week was spent trying to get *Lit'l Bit* running right again. It wasn't until the evening of practice day that Andrea and John Harlan were finally able to diagnose and repair the problem and make Andrea the 12th and final pilot to register to compete.

The Final Field of Competitors

Primary consisted of Scott Beadle driving his 7ECA Citabria.

Sportsman was made up of six top-notch pilots: Scott Card in a Super Decathlon, Rene Dugas in his GB1, Keith Gyger flying a beautiful Ultimate 10-200, Jeff Cain in a fantastic Bücker Jungmann, Jaret Burgess in another Super Decathlon, and Andrea in her Pitts S-1C.

Intermediate saw three pilots (two of whom flew open-cockpit biplanes!): John Farrington in a Super D, Todd Nelson in his Skybolt, and Doug Jenkins in his Pitts S-1E.

The Advanced field was two pilots strong: Darren Behm in his Extra 300S, and John Harlan in his Pitts S-1S.

Without volunteers where would we be? A huge thank you to all our local volunteers and our IAC members.

In addition to the dozen pilots, there were also several nonflying volunteers who participated. Without these people there would be no contest!

- Lynne Stoltenberg chief-judged every flight for every category.
- Jeff Stoltenberg judged every flight for every category.
- Jeff Poehlmann also judged every flight for every category.

Stephanie Vidrine drove six hours from her home in Louisiana, on her own initiative, just to provide scoring support and outstanding assistant judging.

Chrissy Jenkins assisted with scoring and was the cruise director who made sure everyone was fed and happy!

In addition to sponsors, Andrea also rounded up several local area volunteers, without whom we would have had no recorders. Shout-out to Michelle Drake, Matt Spencer, Leo Green (from the Hondo airport board), and Russ Klawitter and his crew from LeTourneau University. They were all super enthusiastic and extremely valuable. The LeTourneau folks could prove to be a huge contribution, as they are considering offering aerobatic instruction and forming a collegiate series team moving forward. We hope to see lots more from them in the future.

Ryan Elder, the airport manager, and his staff were also a cut above. They accommodated every request we had — mowing the grass in the judges' area, free hangar space, fuel truck at the hangar, NOTAMs galore, and they even dropped the price of 100LL by 50 cents per gallon for us. Well done! In addition to supporting the contest, the airport has welcomed us for fly days and is allowing us to install permanent box markers on the field. They are even donating the tools and supplies to make that happen. Unbelievable support!

Practice day on Thursday saw temperatures well above the 100 degrees Fahrenheit mark. Sweaty practice flights were followed by a pizza dinner in the air conditioning.

Friday saw nary a cloud in the sky and temps of 105. To take advantage of this, we had a 7 a.m. briefing to avoid the worst of the heat. It kind of worked, and all categories flew their Known prior to 11 a.m. After a catered lunch in the air conditioning, we flew the Free/second flight as temperatures rose to oven-like levels again. Wrapping up at around 3 p.m., we handed out Unknowns and enjoyed some fine barbecue! The dinner was also time to hold the raffle, and grateful pilots claimed their fantastic prizes.

Sunday morning produced a short-lived low cloud deck that delayed flying until around 10 a.m. This fortunately gave us time to raffle off the late-arriving Hooker harness. Each pilot got one ticket, and Scott Card was the lucky winner!

Once the clouds vaporized, the Unknown/third flight commenced, and we wrapped up before noon and handed out trophies. Speaking of trophies, our awards are little works of art lovingly crafted each year by John Harlan.

The Contest Results

Scott Beadle claimed first place in Primary with 77.16 percent.

Sportsman was incredibly close from first to third place, with only 19 points (out of 3,250!) separating them.

- First place: Andrea McGilvray with 83.21 percent
- Second place: Jaret Burgess with 82.88 percent
- Third place: Jeff Cain with 82.74 percent

Intermediate results:

- First place: Doug Jenkins at 86.98 percent
- Second place: Todd Nelson at 80.47 percent
- Third place: John Farrington at 69.53 percent

Advanced results:

- First place: John Harlan with 76.47 percent
- Second place: Darren Behm with 72.40 percent

Congratulations to all the pilots who participated. You all worked super hard. If you weren't flying, you were on the line, and if you weren't on the line, you were flying. Hondo is the land of no slack!

There was a small group of folks who came to watch our flying, mostly people who knew the pilots. A few photographers showed up and dazzled with the amazing photos they captured. Thank you to all of them, but especially Joe Fernandez and Brian Papke, whose fantastic photos accompany this article.

Before the contest ended, Andrea was already lining up additional sponsors for next year. Please stay tuned for raffle prizes that will be featured at next year's contest.

If reading this made you realize you missed out on a great contest, just watch for next year's dates for Hammers Over Hondo and join us in the Heart of Texas in 2024! IAC

Jeff Cain flew his Bücker Bu-131 Jungmann in the Sportsman category.

Joseph Card flew this beautiful American Champion Super Decathlon in Sportsman, and John Farrington flew it in Intermediate.

Darren Beam flew his Extra 300S in the Advanced category.

The IAC – A Look Back

HIGHLIGHTS FROM HISTORY 10, 25, AND 50 YEARS AGO

BY LORRIE PENNER, IAC 431036

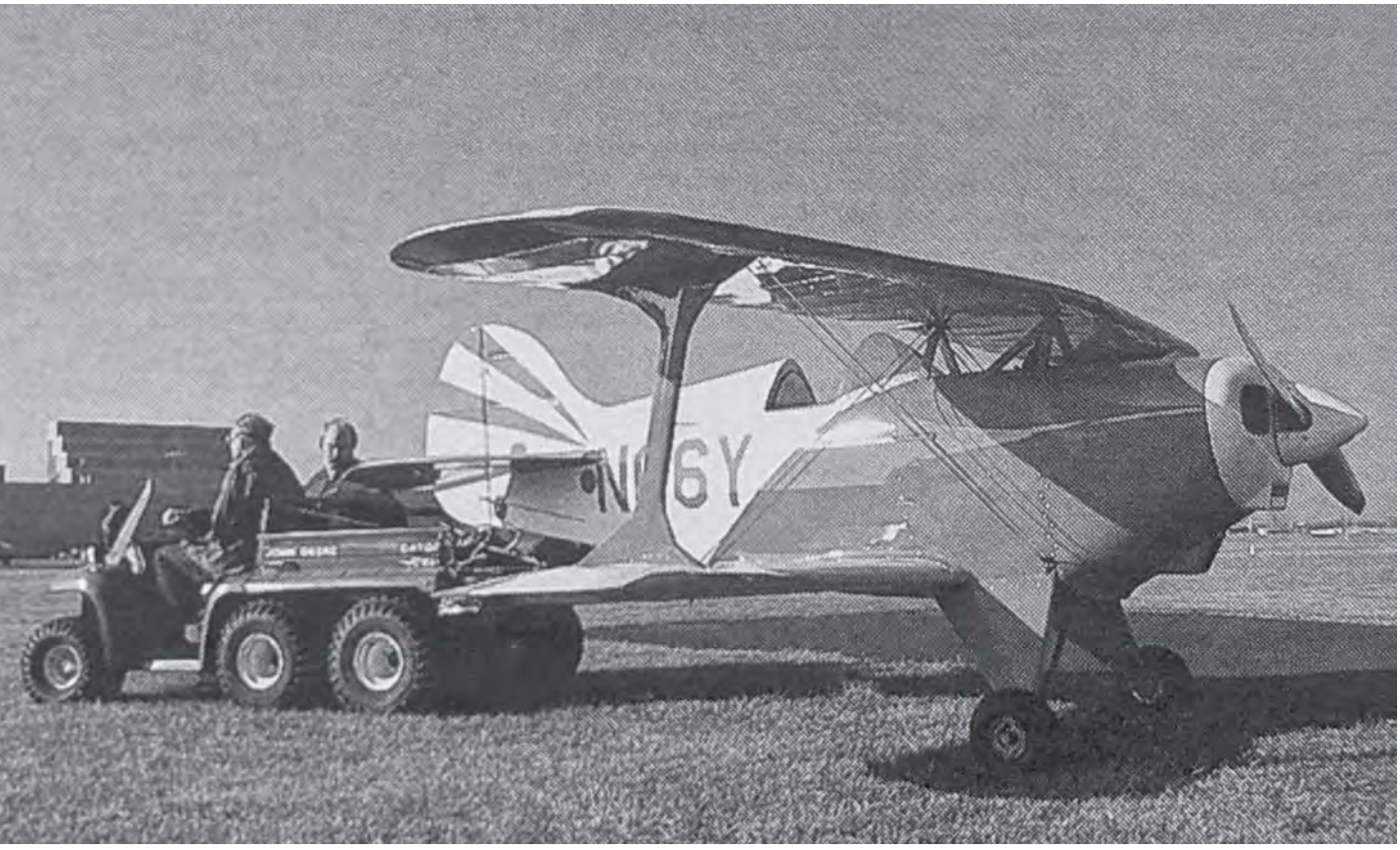
10 YEARS: *Sport Aerobatics*, February 2014. **Bill Adams Inducted Into the IAC Hall of Fame**

By Reggie Paulk with Bill Adams Jr.

At the time of his death, Bill was one of the best-known acts in the air show business. His fame was garnered at the helm of an airplane that earned a reputation as such a difficult trainer during World War II that it was dubbed the *Yellow Peril*. Anyone with experience flying a Stearman would be awed by Bill's dazzling low-level performances in his big white and red biplane.

Bill's flying was so popular that he was invited to join the 1964 World Aerobatic Team in Bilbao, Spain, as the team's chief mechanic — and to fly his air show routine for all in attendance.

https://www.iac.org/sites/default/files/magazines/SA-2014-02.pdf



25 YEARS: *Sport Aerobatics*, January 1999.
Bob Herendeen's Famous Pitts N66Y

Bob's famous little Pitts, the first stock S-1C, was transported from storage into the EAA Aviation Museum. The airplane has been placed in the aerobatic gallery of the museum. N66Y was given to the EAA/IAC several years ago for restoration and display. Former IAC Board Member John Gardner guided the fundraising drive for restoration of the aircraft. The airplane was subsequently restored at the Pitts factory in Afton, Wyoming, through the generosity of Aviat Aircraft.

Today, N66Y is still owned by the Experimental Airplane Association (EAA) and is currently displayed at Aircraft Spruce and Specialties Peachtree City Airport location in Atlanta, GA.

https://www.aircraftspruce.com/catalog/graphics/east_store-1.jpg

1974 Fond du Lac, Wisconsin, Judge Bob Herendeen (center).

50 YEARS: *Sport Aerobatics*, January 1974. **The IAC Judges Continuing Education Program**

By Mike Heuer, IAC Vice President

The IAC has seen much growth in aerobatic competition, both in the size of contests and the quality of the flying. The proficiency of the competitors has undergone phenomenal improvements, and it has become increasingly difficult to judge fairly and consistently because of the great number of contest flights and the quality of the maneuvers flown.

It is evident that higher standards of judging will be required and desirable to meet this challenge. Thus, the IAC board of directors recently established the IAC Judge's Continuing Education Program to help assist the judges in meeting this challenge.

The program consists of a Judge's Home Study Program, a test-type course with three parts: 1. comprehensive review of the IAC Official Contest Rules; 2. procedures for checking Intermediate and Advanced Free Programs; 3. Unlimited rules as they apply to Free Programs as published by the Aerobatic Club of America.

Historical articles can be found online at: *www.iac.org/articles*

Joe Haycraft

JOE HAYCRAFT, AGE 93, flew west on Wednesday, April 26, 2023. Born January 13, 1930, in Owensboro, Kentucky, he died suddenly in Fernandina Beach, Florida, where he had recently moved with his wife of 69 years, Sue Keller Haycraft.

Joe was a pilot extraordinaire. He began his flying career immediately upon graduating from the University of Kentucky in 1953 when he entered the United States Air Force as a second lieutenant, flying a Sabre jet in South Korea shortly after the Armistice. After his military career, he flew as an airline captain, beginning as pilot of a Vickers Viscount with Capital Airlines and retiring at the mandatory age of 60-1/2 as a US Airways B-737 captain.

Once retired, he flew private aircraft, from a Cessna 182RG to a Pitts Special. He won the National Aerobatic Championships Sportsman Class in 2004 at age 74, and again in 2007 at age 77. In addition to winning the Sportsman Nationals titles twice, Joe was the L. Paul Soucy Trophy winner in 2004, 2007, and 2008. The Soucy Trophy's purpose is to recognize the IAC competition pilot who achieves the highest percentage of points possible during a calendar year and who also competes in three or more contests, one of which is the U.S. National Aerobatic Championships.

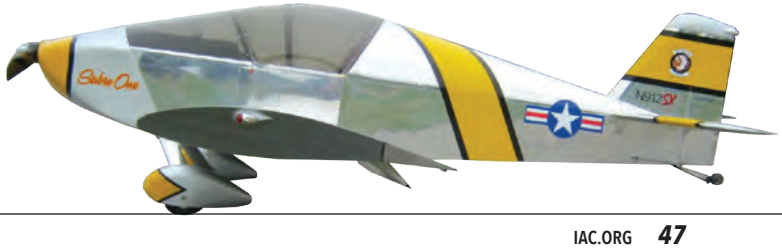
Joe was a regular around the Mid-America and Southeast regions, quite regularly flying in six to nine contests each season (2006-2008) between the two regions.

In 2014, at the age of 84, he flew his latest aircraft, the Sonex, in the Primary category at the Salem regional contest. The finish was a close second place against Giles Henderson, who scored 87.92 percent, with Joe finishing at 87.45 percent.

During the years Joe flew his Pitts S-1 in the Mid-America region, the secret of his winning ways was discovered. He flew a Freestyle, which was unusual at that time, and still can be for many Sportsman to come armed with a sequence specifically designed to highlight their own skill and the flying characteristics of their airplane. His Freestyle was packed with individual figures carrying the least amount of K-factor, resulting in a 14-figure sequence made up of simple lines and angles.

Joe was also a sailor, first on Chesapeake Bay where he raced *Dove*, a Morgan 27, and then on Kentucky Lake, where he won races in his J-24, *Sally Forth*. He also sailed in the Virgin Islands and the Bahamas, providing his family and friends with many stories of adventure.

In addition to his private pursuits, Joe was a member of the Alpha Gamma Rho fraternity and the University of Kentucky Fellows Society. He also served on the first World Affairs Council board, the Owensboro airport board, and the Naples, Florida, airport noise abatement board. IAC



Hammers Over Hondo – Pitts S1 Doug Jenkins. photography by **JOE FERNANDEZ IMAGING**

DIRECTORY

IAC INTERNATIONAL AEROBATIC CLUB EAA

OFFICERS

PRESIDENT
Jim Bourke

TREASURER
Jordan Ashley

VICE PRESIDENT
Rob Holland

SECRETARY
Sara Arnold

EXECUTIVE DIRECTOR
Stephen Kurtzahn

BOARD OF DIRECTORS

NORTHWEST
Doug Bartlett

SOUTHWEST
Phillip Gragg

MID-AMERICA
Nathan Ruedy

EAA REP/NORTHEAST
Michael Goulian

SOUTHEAST
Marty Flournoy

SOUTH CENTRAL
Doug Jenkins

INTERNATIONAL
Mike Gallaway

DIRECTOR
John Ostmeyer

DIRECTOR
Bob Hart

DIRECTOR
Robert Armstrong

NAA REPRESENTATIVE
Amy Spowart

ACHIEVEMENT AWARDS
Dave Watson

ANNUAL AWARDS
Patty Anderson

CIVA RELATIONS
Mike Gallaway

COLLEGIATE PROGRAM
Nina Stewart

CONTEST SANCTIONING
Jim Bourke

EXECUTIVE COMMITTEE
Jim Bourke

FINANCE COMMITTEE
Jordan Ashley

GLIDER AEROBATICS
Shad Coulson

GOVERNMENT RELATIONS
John Smutny

HALL OF FAME COMMITTEE
David Martin

IAC HISTORIAN
Mike Heuer

JUDGES PROGRAM
DJ Molny

SEQUENCE COMMITTEE
Rob Holland

NOMINATIONS COMMITTEE
Doug Sowder

RULES COMMITTEE
Barrett Hines

SAFETY COMMITTEE
Keith Doyne

TECHNICAL COMMITTEE
Tom Myers

COZY UP TO WINTER

IAC
INTERNATIONAL AEROBATIC CLUB
EAA
TM

Visit the IAC Unlimited Collection at iac.org/shop

IAC Members receive a 10% Discount!

A WHOLE NEW WAY TO ROLL

The EAA and International Aerobatic Club Aircraft Insurance Plan has all the special coverage options IAC Members require for recreational aerobatics, aerobatic competition and practice, airshow performances, and aerobatic flight schools.

Visit **EAA.org/Insurance** today for the right coverage at the best price for you.

Aircraft | Personal Non-Owned | Powered Parachute & WSC Trike | Accidental Death & Dismemberment | Flight Instructor | Hangar | Airport

EAA Insurance Solutions

Administered by Falcon Insurance Agency, Inc.

EAA.org/Insurance | 866-647-4322

When you insure with the EAA Aircraft Insurance Plan you are helping IAC promote and enhance the safety and enjoyment of aerobatics.