



SPORT

MAY/JUNE 2024

AEROBATICS

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB



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IT'S AN AEROBATIC
CELEBRATION

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ON THE COVER:

Jennifer Watson's Laser 200, affectionately known as *Lulu the Laser*. Art Craft Paint recently gave *Lulu* her new look with this brilliant paint scheme.

ABOVE:

Francis Barros from Brazil celebrates International Aerobatics Day with an inverted pass in his Extra 330SC.

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Welcome, Tim Dahnke, and Thoughts After Advanced and Unlimited Glider Nationals

BY JIM BOURKE, IAC 434151



New IAC Executive Director

TIM DAHNKE, OUR NEW EXECUTIVE DIRECTOR, is passionate about aviation and looking forward to getting to know all of you. The IAC's executive director is probably most widely known as the person who our contest directors interface with, but Tim is also responsible for our EAA AirVenture Oshkosh operations, our insurance, our trophies, the IAC National Aerobatic Championships, merchandising, marketing, and honestly pretty much everything else we do except for publications. Previously, Tim worked for the EAA in its chapters division, and I'm really excited about what he can do for the IAC. Please help me in welcoming him by emailing him at execdir@iac.org.

IAC Tech Inspections

You may have already heard the news, but IAC tech forms must once again be signed by a member of the tech committee instead of simply any "witness." My thanks to IAC board member Phillip Gragg for spearheading this effort.

Thoughts after the Advanced and Unlimited Glider Nationals

As I type this, I just got home from the Estrella Classic, aka the U.S. Advanced and Unlimited Glider National Aerobatics Championships in Maricopa, Arizona. I say "just got home" as if I made a long trip, but the

reality is that this contest is just a little over an hour away from my home in Scottsdale, which allowed me the pleasure of my own home and bed each night. That's a real treat for a guy like me who is used to being on the road attending one aviation event after another each year.

In recent years, the IAC has strategically divided its national championship, with Primary, Sportsman, and Intermediate glider national champions determined in Salina in September, but Advanced and Unlimited determined in March in Arizona concurrent with the Estrella Classic, which offers a regional contest for the lower categories. This strategy lightens the load a bit at our contest in Salina and also helps take advantage of the large soaring community in the American Southwest. Prior to this arrangement, it had been years since we had enough attendees to name a national champion in Unlimited.

A notable and unmistakable presence at the championship is the U.S. Air Force Academy's glider aerobatic team. The Air Force cadets show up as a large group and bring amazing enthusiasm and curiosity to the contest. It's invigorating to be



The Estrella Glider Classic hosted the U.S. Advanced and Unlimited Glider National Aerobatic Championships in Maricopa, Arizona.

surrounded by young aviators brimming with passion for aviation. Their insatiable curiosity often leads to engaging discussions about flying and the nuances of aerobatics. Most of them have only experienced aerobatics in gliders, so they naturally want to know what it is like to fly a modern high-horsepower aerobatic airplane. Each year I meet a few new cadets and say goodbye to a few who are completing their program. I'm old enough at this point to know that sometimes when we meet young people, our paths are destined to cross again, so when I say "goodbye" what I really mean is "see you down the road." I'm sure for many of them, their enthusiasm for aerobatics will continue throughout their aviation journey.

An exciting development for the Air Force Academy is the imminent upgrade of its aircraft from the "DG" that it currently flies to the MDM-1 Fox sailplane. This is like going from a 1970s sedan with no power steering to a modern sports car. The Fox rolls like a proper aerobatic airplane and holds on to energy a lot better. It's going to do a much better job of training the cadets in how to fly aerobatics, and that is going to pay off when they get to their proper flight training and ultimate job assignments with the

Air Force. It's also going to make the cadets a lot more competitive. I look forward to seeing what they can do with their new hardware.

As I departed Maricopa, I felt a renewed sense of admiration for the soaring community's zeal, capacity, and commitment to the art of aerobatics.

Super-Slow Rolls

Speaking of gliders, this year at the Estrella Classic some of the competitors used "super-slow rolls" in their Free programs. These Aresti Family 9.13 figures should not be confused with what the IAC calls "slow rolls" and the Aresti catalog calls "aileron rolls," which are Aresti Family 9.1. Apparently, no one has tried using these super-slow roll figures in a sequence for many years, so no one noticed that the IAC dropped the rules for them back in 2018! We need to get this clarified in the next rulebook, obviously, but for now if you see these figures, they must be timed by the chief judge. Super-slow rolls will be given a hard zero by the chief judge if they are performed too quickly, with the minimum time requirement being at least five seconds for each half-roll portion. Therefore, for a full super-slow roll, the chief judge will start the timer when the roll begins and stop the timer when it ends, and will hard zero the figure if it takes less than 10 seconds. For grading judges, you can treat these super-slow rolls like an aileron roll. The criteria are identical from your perspective.

Contact me! Comments? Questions? Concerns? Looking for a good chili recipe? Email me at president@iac.org. **IAC+**

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Celebrate Aerobatics!

BY LORRIE PENNER, IAC 431036

KOOL & THE GANG had it right, “Yahoo! This is your celebration. Everyone around the world, come on. Yahoo! It’s a celebration!” June 22 is rapidly approaching, and our IAC members and chapters are gearing up once again to make International Aerobatics Day special.

The essence of the day is to celebrate aerobatics, limitless pure flight, and a community coming together. Adults and children alike are able to speak with aerobatic pilots and get close to their magnificent machines. For the last three years International Aerobatics Day has given IAC chapters a platform to engage their airport communities, the public, and general aviation pilots with a barbecue, a practice session, or videos and presentations. Aviation businesses and other organizations around the world have greeted the holiday with enthusiasm.

June 22 isn’t the only day we celebrate. In this issue you will read about IAC chapters 38 and 89 and their successful and productive practice days. “... motivated pilots ... braved the frigid temperature (by Florida standards) for several sessions in Williston airport’s aerobatic box on January 20,” said Hector Ramirez of IAC 89. “... a productive day practicing Sportsman and Advanced sequences. Overall, a great flying day.”

“I appreciate everyone who contributed to the success of the March 16 practice and critique event,” said Joe McMurray, of IAC 38. “We had a big turnout — I think at one point we had 20 people! We successfully completed 17 flights, all safely.”

In his article about the Robin R-2160, Leith Stevens celebrates aerobatics every time he goes out for a flight. He enjoys the tremendous visibility the airplane provides and the gentle flight characteristics. “I’m also able to perform effective aerobatics! It is simple and fun when you want it to be,” he said.

How could you not celebrate aerobatics when your dream job is realized? In the “Dream Job” article, Ryan Tierney described how he came to be working for Mike Gouliau Aviation after college. “It’s funny having two opportunities show up within the same two hours,” he said. “I think I knew which one was the more attractive one.” He had a choice to work for a charter company in Alaska or Mike Gouliau. He signed on as an Extra 330SC ferry pilot and is an instructor when not attending air shows.

Let’s celebrate aerobatics, whether you enjoy the beauty of a flight as a first-time passenger, sharing a great lunchtime visit with your aerobatic friends, or practicing in an aerobatic box. Commemorate June 22 with an aerobatic-related activity! Yahoo!



LETTER TO THE EDITOR

Enjoyed the “Training Inverted Spins” article in the March/April issue of *Sport Aerobatics*.

Letter from Rich Stowell, IAC 10841

I enjoyed Jared Sebesta’s article about his approach to inverted spin training. Most discussions about spins assume they’re upright. In that case, it’s “Elevator – forward” in the PARE sequence.

Yet the broad form of PARE describes the elevator action as “through neutral.” “Neutral” identifies the direction of stick movement, not its final position. This covers upright and inverted spins. I noted the following on page 263 in my book, *Stall/Spin Awareness*:

“The only difference between inverted spin recovery and upright spin recovery actions is the direction in which the elevator control moves after the application of full opposite rudder. In a normalized upright spin, the elevator moves from its full aft position forward; in a normalized inverted spin, the elevator moves from its full forward position aft. The exact position of the elevator for recovery can vary...”

Jared makes an excellent point about vocabulary. His use of “unload” reveals the direction the pilot needs to move the stick, whether it’s an upright or inverted spin. That works for me!

His article also highlights the importance of clearly stating the assumptions. When talking about spins, start with the broad form of PARE and refine it from there. **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

► [IAC.org/Contests](https://www.iac.org/Contests)



IAC CHAPTER 78



IAC CHAPTER 12



IAC CHAPTER 88

DATES	HOST CHAPTER	NAME	REGION	LOCATION	AIRPORT
June 7, 2024	61	Giles Henderson Memorial Challenge	Mid-America	Salem, IL	KSLO
June 7, 2024	67	Apple Cup	Northwest	Ephrata, WA	KEPH
June 14, 2024	80	MAC 80 Aerobatic Championship	South Central	Seward, NE	KSWT
June 28, 2024	78	Midwest Attitude Adjustment	Mid-America	Spencer, IA	KSPW
June 29, 2024	11	James K. Polk Open Invitational	Northeast	Warrenton, VA	KHWY
July 6, 2024	88	Michigan Aerobatic Open	Mid-America	Bay City, MI	K3CM
July 12, 2024	35	Green Mountain Aerobatic Contest	Northeast	Springfield, VT	KVSF
July 13, 2024	12	High Planes Hotpoxia Fest	South Central	Fort Morgan, CO	KFMM
July 19, 2024	77	Corvallis Corkscrew	Northwest	Corvallis, OR	KCVO



IAC CHAPTER 77



IAC CHAPTER 11



IAC CHAPTER 35

We're Celebrating International Aerobatics Day!



ON THE FOURTH SATURDAY each June, aerobatic enthusiasts from around the world take time off for International Aerobatics Day — a day to celebrate, promote, experience, and share the joys of aerobatic flight.

This special day came about during a moment of introspection by IAC president Jim Bourke after finishing a busy aerobatic contest and air show season. He sat exhausted, finally home after months of crisscrossing the country in his airshow airplane. He mused about why he put so much time into such a humbling, financially draining, and physically demanding activity. In that quiet moment, he started to remember. Jim thought of all the people he has met and how exciting it has been to develop as a pilot along with them. He reflected on how much fear he felt when he started out. Jim relived the intense passionate feelings of freedom he felt the first time he soloed an aerobatic airplane, and the first time he flew as an air show performer.

It occurred to Jim that aerobatics had become about 90 percent work and 10 percent fun. When he started, all of it was fun, even the work. But eventually as he took on more responsibilities, a lot of time became dedicated to repacking parachutes, scheduling annual inspections, filling out FAA waiver forms, maintaining his event calendar, and doing other administrative tasks. Jim realized that other people were in the same place he was in. He thought he should set aside time for some fun, for Pete's sake, and he should make sure others do the same thing.

It also happened that the International Aerobatic Club needed some advertising but had no money in the budget for it. Jim was hopeful to find a cheap way to get the IAC message across. By coincidence, he had met the progenitors of *Talk Like a Pirate Day* a few years earlier. Yes, this is a real day (celebrated in September). There are a couple of funny guys who take it seriously, making TV, internet, and radio appearances in support of their special day, complete with

lots of arrs and catchphrases based on pirate stereotypes such as walking the plank or drinking rum. Jim thought, if there can be a *Talk Like a Pirate Day*, there can be a day for aerobatics. He prepared a press release in 2021, and IAC staff sent it out.

The first International Aerobatics Day was a profound success, far better than Jim's dreams. He had deliberately kept the day unstructured — the only rule was that people should have fun and take photos or videos and post them. People took this lack of definition as an opportunity to get creative: They gave people rides, they did some formation flying, they choreographed flights to music, they had contests, they held practice sessions, and they had lots of fun doing all of it. The IAC got a lot of great content out of it, and we hope that each year can be even bigger than the year before.

Introducing our IAC aviation friends, families, and work friends to aerobatics via International Aerobatics Day give IAC members many opportunities to introduce important aviation topics, such as the importance of understanding (and working within) aircraft limitations, mission prep and debrief, risk management, and aeronautical decision-making.

Giving our general aviation and nonaviation friends experience with aerobatics firsthand will help them avoid getting caught up in stereotypes about "hero" airshow pilots. It will teach them about how much discipline it takes to handle an aircraft near its margins. Aerobatic pilots aren't macho daredevils out of control; they are conscientious athletes with high standards and robust safety culture.





In addition to local activities, those interested in hearing more about aerobatics can tune in to the EAA online webinars. Join us on Tuesday, June 18, through Saturday, June 22, for an educational online event, IAC Virtual International Aerobatic Days. Subject matter experts of the aerobatic community will present webinars on a wide variety of topics including how to get started in aerobatics. All the webinars are free of charge with a combination of on-demand recordings and live sessions.

This year's celebration will be on June 22. We hope you will participate. If you don't know how to do that, get in touch with your local IAC chapter and ask for someone who can point you in the right direction. You can also access a calendar of events at IAC.org.

If you've never flown upside down in an airplane, International Aerobatics Day is a great opportunity for you to check that item off your bucket list. **IAC+**

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IAC Chapter Camping

Making new friends and having a blast!

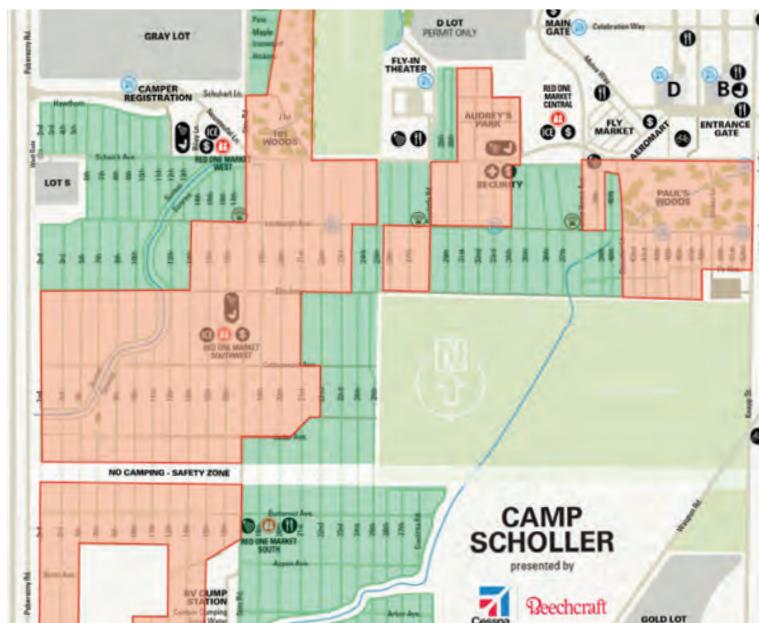
FOR THE THIRD YEAR IAC MEMBERS from various IAC chapters are headed back to Oshkosh for their new favorite tradition – IAC chapter camping!

“Sign me up!” “What a blast!” “Chapter camping has improved my AirVenture experience.” “Can’t wait to hear what Jeff’s cooking this year!” and “Thank you so much for including us!” are the comments of happy campers from IAC Chapters 139, 12, 34, and 88.

AirVenture is fun no matter where you stay; however, the fun is doubled with old and newfound aerobatic friends sharing space together in Camp Scholler.

Here’s the way it works: Chapters are able to purchase in advance two to six campsites at a flat rate in order to establish a chapter base of operations. This year the fee is \$324 for each space within the chapter campsite. There are some big benefits to this arrangement: 1) All of your chapter members’ spaces are staked out in advance by EAA volunteers so you don’t have to find someone to go to Oshkosh ahead for you or hope you luck out and get a good spot, and 2) You can occupy the IAC chapter spaces (2-6 campsites) as early as July 13 (which gives you seven days of free camping!).

Things to know before booking your space: A chapter officer fills out an online registration form. The form requires input of each camper’s EAA number. Online application must be submitted by June 14 before registration closes. The chapter that fills out the registration for their campers collects payment from their campers, and the chapter pays EAA for all the sites it registered.



Chapter camping is in the green-shaded areas of the map, which excludes improved sites (water and electric), sites in Paul's Woods and 101 Woods, as well as handicapped and generator areas.



It is not mandatory that all your campers are in the chapter that registers. As an example, last year IAC 34 and IAC 139 each registered four to six sites and had a variety of members from their own and IAC 12 and IAC 88, as well as friends from Aura Aero who are EAA members from France, and the first year we had an EAA member from China who is a friend of one of the IAC 139 guys.

We are planning a fun cookout on Tuesday evening, July 23, and would like you to be a part of the chapter camping experience! For more details on the cookout and information on registering for chapter camping, contact Lorrie Penner at editor@iac.org. **IAC!**

CELEBRATE INTERNATIONAL AEROBATICS DAY

*Saturday
June 22, 2024*



*Check for Events in your area at
www.IAC.org/international-aerobatics-day*



Flying



the Rabin

BY LEITH STEVENS, IAC 442715, WITH EDITOR LORRIE PENNER, IAC 431036

Flying *the* Robin

"MOST OF THE TIME when I visit an airport, people look at the plane and scratch their heads," Leith Stevens said about his Robin R-2160. "They have a hard time guessing what it is." Leith lives in Boulder, Colorado, and has owned the Robin for the past two years. The 1981 black-and-blue aircraft is a tricycle gear side-by-side aerobatic trainer produced in Quebec and imported to the United States. Its Lycoming O-320 turns a Sensenich two-bladed prop and is rated for +6g/-3g.

The airplane has tremendous visibility with its large bubble canopy. It reminds one of an RV-6, RV-7, or RV-14 with the canopy giving you an excellent view in almost any direction except down, unless you are inverted. The low-wing, fully aerobatic

two-seat trainer features dual controls. "The airplane has very gentle flight characteristics, [in] which I'm also able to perform effective aerobatics," Leith said. "It is simple to fly and fun when you want it to be."

Leith is no stranger to the Robin. His father, Lewis Stevens, owns a newer model of the Robin R-2160, the Alpha Sport. Lewis' airplane is a Mark 2 (aka MK.2), which was the first one off the assembly line in New Zealand, tail number VH-NZT. Alpha Aviation of New Zealand bought engineering jigs and equipment and worldwide production rights to both the Robin HR-200 and Robin R-2000 series. Production began in 2006 through the end of 2007.

The airplane has very gentle flight characteristics, [in] which I'm also able to perform effective aerobatics. It is simple to fly and fun when you want it to be.

— Leith Stevens



The Robin is an unusual-looking airplane but has common components. “I haven’t found it hard to get parts at all,” Leith said. “The powerplant is familiar to any A&P. For the airframe parts, the factory, Alpha Aviation, in New Zealand has spares. You call them, pay by card, and they mail the parts to you.” Maintenance has been easy with little else but the typical annual inspection. Leith has upgraded the avionics with a new transponder ADS-B Out to comply with local-controlled airspace regulations.

In 2020, Leith learned to fly. Even though he had been flying around with his father since the age of 7, he had not decided to get the training. “Leith suddenly had a lot of time on his hands because of the COVID-19 lockdown,” Lewis said. At the time, Lewis was running a flight school with a business partner in Queensland, Australia. So, father and son used their free time wisely with flight training.

“I convinced him, Leith, to get his aerobatic endorsement while also engaged in flight training for his private pilot license,” Lewis said. “I’m just pleased he was a good student. He has a lot of attention to detail, so there were no problems — everything clicked!”

For his part, Leith said, “If he told me to do something, he was telling me with the best intentions.” Contrary to the usual friction between family members when learning a skill such as driving a car or flying an



Leith and brother Lachlan looking over a Citabria in Camden, NSW, Australia. 1993.



Leith and his brother Lachlan in the back of a flight school Piper Warrior. 1993.



Leith crawling around the Warbirds during EAA Oshkosh 1993.



Posing for a picture with brother Lachlan during EAA Oshkosh 1993.

Flying *the* Robin



Leith flew his Robin to New Hampshire from Colorado to meet up with some college friends. The sunset was beautiful after a day of traveling and aerobatics. Parked here at Lebanon Municipal Airport, New Hampshire. (KLEB)



Leith with his father, Lewis, at EAA AirVenture Oshkosh 2023.

SPECIFICATIONS

Wingspan: 8.3 meters (27 feet, 3 inches)

Length: 7 meters (23 feet, 4 inches)

Height: 2.1 meters (7 feet)

Wing area: 13 meters² (140 square feet)

Max speed at sea level:

261 kilometers/hour (162 mph)

Cruising speed at 75 percent power:

246 kilometers/hour (153 mph)

Stalling speed full flaps:

85 kilometers/hour (53 mph)

Service ceiling: 3,810 meters (12,500 feet)

Range at 65 percent power:

806 kilometers (501 miles)

Empty weight: 549 kilograms (1,210 pounds)

Loaded weight (aerobatics category):

798 kilograms (1,764 pounds)

Loaded weight (utility category):

900 kilograms (1,984 pounds)

Service ceiling: 15,000 feet

Serial number: 183

Registration number: N216MT

Avionics

Bendix/King KLX 135

GPS/comm Bendix/King KA 134

Audio panel Narco MK 12D

Nav/comm Narco ID-825

VOR/LOC/glide slope indicator

GTX 335 ADS-B Out transponder

Garmin GPSMAP 496

Flightcom 403mc intercom

Accelerometer (g-meter)

Flying ^{the} Robin

airplane, the two worked well together. Leith not only completed his training with a private pilot's license in hand but also came away with an aerobatic endorsement, a spin endorsement, and constant-speed propeller and retractable-gear endorsements.

Within the first five to seven hours of instruction, Leith was learning aerobatic maneuvers. Today in the Robin, "My favorite is the Hammerhead," he said. Flying the figure is fairly straightforward. Leith said, "... get to 120 KIAS level, pull up to vertical, 4g's on the way up, once vertical look at the wings/horizon to ensure you are straight

vertical perpendicular to the horizon in both the lateral and vertical axis, not one wing down and not on your canopy or wheels. Let the speed decay, then full left rudder, and a small amount of right aileron and forward elevator so the longitudinal axis cuts through the horizon at 90 degrees, and let the plane fall through this axis until the nose is pointing straight down. Prepare by using right rudder to stop going past vertical. Let the speed build up to 80 KIAS and pull up back to level in the opposite direction. Don't snatch at the elevator controls but pull smoothly. Should be about 4g's pulling out, also."

Because the Robin has a carburetor, he found that doing a reverse Cuban-eight was one of the more enjoyable and challenging maneuvers. "[The airplane] usually loses fuel to the engine (due to the carburetor being inverted), and the engine splutters right before you pull through at the top," he said.

Leith and his dad flying the Robin on the way to Oshkosh, Wisconsin, 2023.



Lewis said the Robin is such a delight to fly in Graduate and Sportsman-level aerobatics as the aircraft is very predictable, controls are very responsive and relatively light, and if you get the line slightly wrong, it is not so precise as to show up too poorly.

Learning to fly aerobatics came naturally to Leith as his father Lewis had been competing from 2016 to 2020 in the Sportsman category in Queensland state competitions and even competed at the national level. He also had flown his Extra 300 up to the Intermediate maneuvers. Lewis said the Robin is such a delight to fly in Graduate and Sportsman-level aerobatics as the aircraft is very predictable, controls are very responsive and relatively light, and if you get the line slightly wrong, it is not so precise as to show up too poorly. Like all aerobatic pilots, you would like a bit more power, and that is the case with the Robin. But if you manage your energy well, you will score well in competition.

Since moving to Boulder, Leith has gotten used to the elevation and density altitude. He said, "I'm fine with the altitude in Colorado, but the Robin can struggle with the density altitude, especially in the



Lewis flies his Robin R-2160 VH-NZT in formation with his flight school Extra 300.

summer with two people. You have to adjust with faster entry speeds for certain maneuvers like loops."

Eventually Leith would like to follow in his father's footsteps and get into competition. He's been spending too much time at work to prepare adequately. However, he is getting to know other aerobatic enthusiasts in his area and rents a hangar from a member of IAC Chapter 12. **IAC**

Leith Stevens graduated from Boston University in 2005 with a Bachelor of Arts degree in computer science. He currently works as a product manager for a software company. Leith has had a private pilot certificate since 2020 and has flown aerobatics in his father's Extra 300.

Flying ^{the} Robin

Avions
Pierre



Pierre Robin & Jean Delemontez

Robin R-2160 History

COMPILED BY LORRIE PENNER, IAC 431036

THE AVIONS PIERRE ROBIN R-2160 Sport is a two-seat light touring and aerobatic monoplane. In 1957, Centre-Est Aéronautique and AirHistory.net was established in France by Pierre Robin with the goal of designing and manufacturing light aircraft for touring and training purposes. Pierre Robin partnered with Jean Delemontez to design the first DR (for Delemontez-Robin). The company later changed its name to Avions Pierre Robin in 1969.

Over the years, Avions Pierre Robin produced several aircraft designs, each varying in size and powerplant. Notable models include the Robin DR-400 series, the HR-100 Robin 1180 series, the Robin HR-200/R-2000 series, and the 3000 series. For the R-2160 Alpha Sport Pierre Robin collaborated on the metal two-seater design with Chris Heinz. In his spare time, Heinz designed his own aircraft and named it the Zenith. Later Heinz would go on to found Zenair and design a series of aircraft kits popular with homebuilders.

Robin Aircraft, the direct heir of former companies Centre-Est Aéronautique, *Avions Pierre Robin* and Apex Aircraft, continues to produce the DR401 in Darois, France. The DR401 series includes a trainer mounted with 120hp or 160hp Lycoming, the DR401 Long Range with wing tank totaling up to 239 liters (63 gallons) of fuel, a tow plane for gliding clubs, and an environmentally friendly aircraft with Continental engines declined to 135hp and 155hp mounted with turbo, adjustable pitch propeller and water colling system.

A subsidiary of Avions Pierre Robin was set up at Lachute Airport, Quebec, Canada, where they assembled and marketed various models from 1980-1984, including the R-1180 Aiglon, R-2112 Alpha, and the R-2160 Alpha Sport. Canadian production involved assembling French-built subassemblies and components, with American-built engines, propellers, tires, instruments, and radios added on the Canadian production line.

The R-2160 found its way to Australia and New Zealand; VH-SXY (c/n C196),

fitted with a 194-kilowatt (260-hp) Lycoming engine, arrived in Australia in 1981. Plans for local production were announced but not realized. Several R-2160s were registered in New Zealand and operated by clubs and schools in Australia. Examples include ZK-RBN (c/n 359), ZK-TZD (c/n 358), ZK-TZF (c/n 360), and ZK-TZM (c/n 372).

Alpha Aviation based in Hamilton, New Zealand, produced the Alpha 2000 series (formerly known as the Robin R-2160 and R-2120 training aircraft. The first aircraft manufactured (ZK-FXY) had its initial flight on April 12, 2006. The first production Alpha 160A aircraft (ZK-WKF and -WJH) entered service with Waikato Aero Club, based just across the road from Alpha at Hamilton Airport, in September/October 2006.

In June 2009, it was announced that Alpha Aviation was sold to Hong Kong-based company IXL Limited. According to pilotweb.aero, in a news article dated November 26, 2023, Centr-Est Avions Pierre Robin, a separate company providing spares and support, continues to serve all owners of Robin aircraft.

A February 2024 article published by AOPA aviation writer Dennis K. Johnson reported that two Alpha 160A's have been imported from Alpha Aviation in New Zealand to the United States. One located at Andover Flight Academy in northern New Jersey and the second located at CHI Aerospace in New Hampshire. Both are available for training.

The R-2160 (Alpha 160Ai) remains popular because of its ease of maintenance and lower total cost of ownership proposition. Of all-metal construction, the R-2160 was fitted with an oil recuperation system, allowing inverted flight for up to 20 seconds. With design limits of +6g and -3g, the aircraft is permitted to perform all basic aerobatic maneuvers, including loops, rolls, flick rolls, stall turns, Cuban-eights, and rolls off the top.

Operators have included the Sydney Aerobatic School in Australia and the Massey University School of Aviation in New Zealand. Both schools still advertise Robin R-2160 as one of their training aircraft.

Source: <https://aeropedia.com.au/>, <https://alphaaviation.co.nz>, and <https://www.robin-aircraft.com/en/story/>



The Dream Job

**Beyond
the collegiate
program**

BY LORRIE PENNER, IAC 431036



PHOTOGRAPHY BY: MIKE GOULIAN AVIATION

TWO INTERESTING OPPORTUNITIES, WITHIN TWO HOURS. At the end of 2022, Ryan Tierney found himself talking with a charter company in Alaska, and immediately after the call looking at a text message from Michael “Mike” Goulian.

“By the time I graduated from Metropolitan State University of Denver (MSU), I had about 1,100 hours flight time and had been instructing for a year and a half,” Ryan said. “Most of the instruction was aerobatic, and at this point, with the handicap of low flight time, I was past wanting to be an airline pilot. I started to explore my opportunities.” Ironically, the charter company called to say it wanted to fly him up to Alaska for an interview. Immediately after he got off the phone with the company, he heard his phone beep and saw the text from Mike.

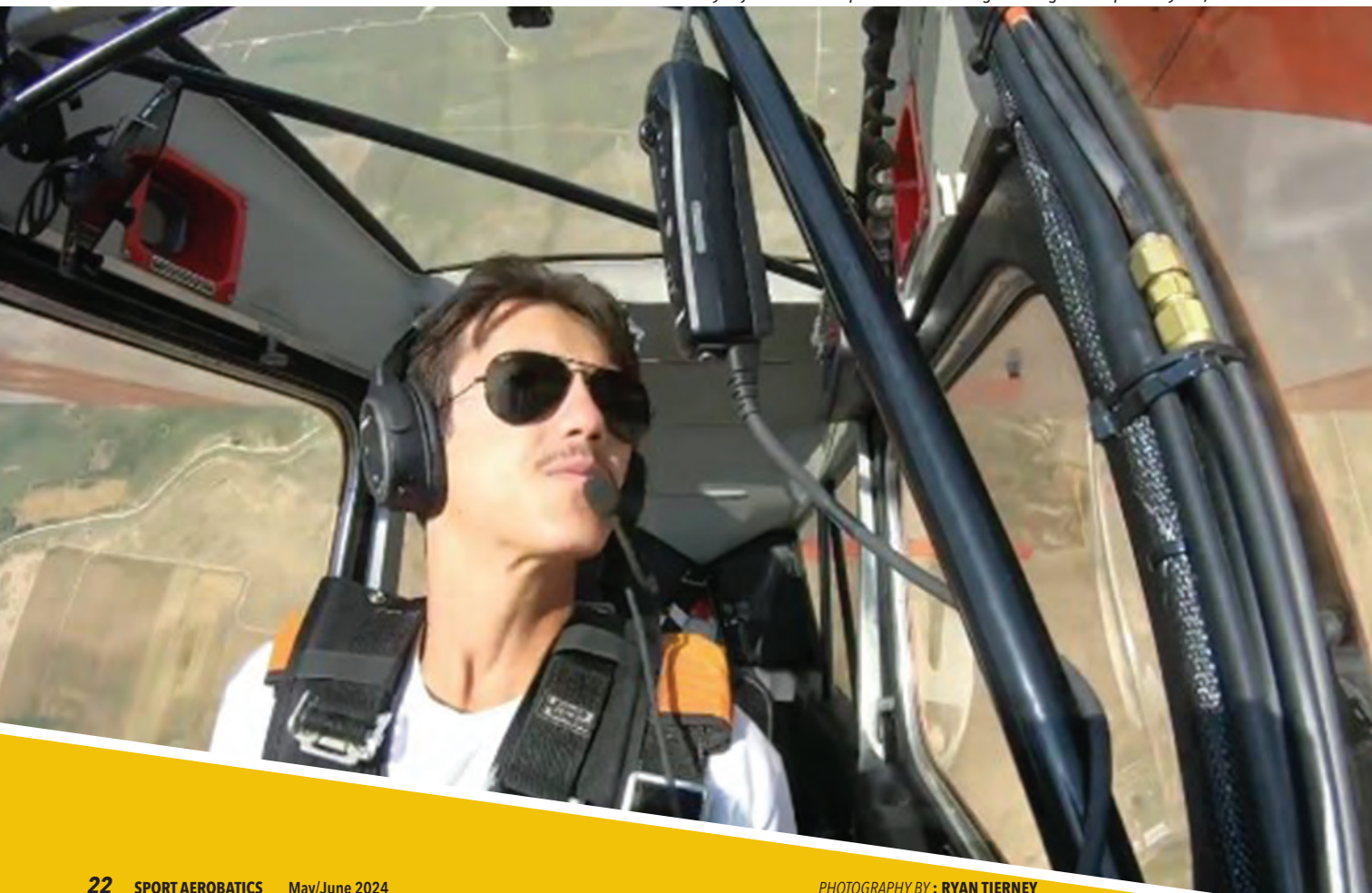
The text from Mike indicated that he had reached out to Dagmar Kress, MSU aerobatic coach and instructor, to see if she had any

graduates who were looking to come work for Mike Goulian Aviation during the next air show season. Dagmar had recommended Ryan.

“It’s funny having two opportunities show up within the same two hours,” Ryan said. “I think I knew which one was the more attractive one. But you know what? I’d love to go to Alaska, and I’d love to do some bush flying, for sure. However, all the signs were pointing toward going with the Goulian job. What better person is there to help you in the aviation industry? And Mike is based out of Plymouth, Massachusetts, which is 10 minutes away from Kingston, Massachusetts, where I grew up!” Now Ryan is back near his old hometown when not traveling the country on the air show circuit.

Ryan signed on as an Extra 330SC ferry pilot, which is about 10 percent of the job. The job description as presented by Mike was to fly the airplane from air show to air show. When not

Ryan flew the MSU Super Decathlon during his collegiate competition years, 2020–2022.



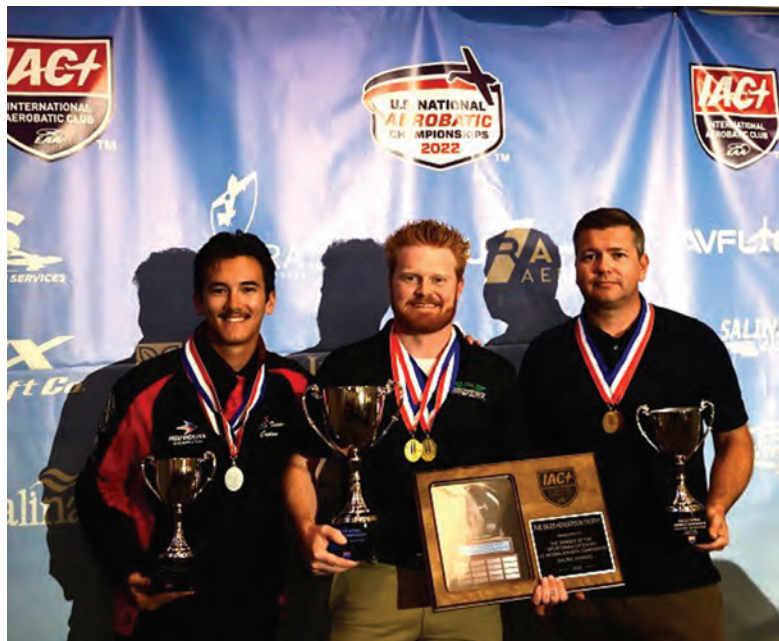
flying, initially he helped out the team around the booth with setup, teardown, and ensuring the air show ran smoothly. In his second year, he has become the team coordinator for the airshow team managing logistics for the airshows. When not at an air show, he taught at Mike Goulian Aviation as an upset prevention and recovery training (UPRT) instructor. Most recently he has also become a Cirrus training center instructor. Mike Goulian Aviation is a Platinum partner in the Cirrus Network.

“I grew up wanting to be an airline pilot, and then all this aerobatic stuff came up in college,” Ryan said. “It helped me realize I don’t have to fly ‘heavies’ across the ocean or fight an autopilot for flight time. Now I’ve got the dream job of flying Extras all across the country and getting to hang out with some of my best friends at the air show.”

Going back in time before these two opportunities, Ryan was inspired by all the cool places his parents went worldwide as flight attendants for a major airline. Ryan Tierney began his aviation journey when he started flight training as a junior in high school. “Listening to both their stories, I remember telling my dad once, ‘I want to grow up and be a flight attendant like you.’ And he said, ‘Don’t do it. They [flight attendants] don’t make enough money.’ So, I decided to be a pilot instead.

All through high school, Ryan’s plans began to solidify. “I had this goal, all right. I’m going to be an airline pilot.” Once he started flight training, he started looking around at different colleges. Even though friends and acquaintances told him he shouldn’t study aviation in college, he didn’t really want to do anything else so he went full force into becoming a pilot.

“Options. Where to go to college?” Ryan said. The top four were Embry-Riddle Aeronautical University (ERAU); Bridgewater State University (Bridgewater), Massachusetts; University of North Dakota (UND); and Metropolitan State University of Denver (MSU). He said, “I had briefly seen both MSU and UND and knew they had aerobatic teams, but before starting flight training, I hadn’t paid much attention. I did think that aerobatics were a cool thing and I’d be interested in it at some point. In the end, I chose MSU.”



Ryan placed third in Sportsman at the 2022 U.S. Nationals behind Palmer Timmons in first and Phillip Gragg in second.

Ryan at EAA AirVenture Oshkosh 2023 during his first year working for Mike Goulian Aviation.





Three collegiate teams, MSU, UND and USAFA, share excellent comradery in regional contests and the U.S. National Aerobic Championships.



Two Collegiate Program awards exist, with the Collegiate aerobatic competitor: the "Collegiate" and the "Individual Collegiate National Champion".



Above: The 2023 University of North Dakota aerobatic team won the team collegiate program first place Eagle Trophy. Below: Ryan (left) with the first place winning MSU Team in 2022.



Above: Ryan, left, with the MSU aerobatic team PG.

Below: The MSU aerobatic team came in third in the colligate program. Only .40%





which serve to recognize skill and proficiency for the "Legiate National Championship Team Award" and "Champion Award."



Ryan, left center, next to Austin, wearing bucket hat, with the 2021 MSU aerobatic team at a regional contest.



points behind second place.



The 2023 U.S. Air Force Academy aerobatic team came in second in the collegiate program.

Coming from Kingston, a small town of 13,700, Ryan liked the idea of living in a city as large as Denver, Colorado (population 723,000). His dad was a United flight attendant, and Denver is a large hub for United. During freshman year, Ryan started on the track to become an airline pilot. He got halfway through that first year and became dissatisfied with the program. During spring break, he became bored and started looking around for an activity to get involved in. He was introduced to Jenna Coffman Gregg, a member of the MSU aerobatic team,

when he was doing a stage check for a flight instructor.

Jenna introduced him to Roger “Austin” Belleau, the MSU aerobatic team captain at the time, who took Ryan for an introductory aerobatic flight. The bug bit! “This was in 2020, and the team was small with only six members,” Ryan said. “The team was being formed early in everyone’s aerobatic training. So, ‘making’ the team wasn’t a thing back then; it was going for a flight, showing your enthusiasm, and then you were pretty much in.

Ryan's official work photo.



“Now one thing that the college teams do that I find extremely valuable is that we prioritize coaching from the ground,” Ryan said. “Very early in the training process, we have somebody with a radio talking as the pilots fly the figures. Looking for details and nitpicking each figure helps to get them through the sequence, so they are able to do it on their own the next time.” Another aspect of team training that Ryan appreciated was the practice they were able to get in.

“Prior to a contest we would get in three or four days of solid practices with our coaches,” he said. “We tried to do that at least twice a month leading up to the contest season.”

Practice paid off, and in 2021, Ryan placed second in the Individual Collegiate Program Championships. In his senior year (2022) at MSU, he ended up becoming the Individual Collegiate Program Champion as well as landing in third place in the Sportsman category at the U.S. National Aerobatic Championships.

When considering what aerobatics has done for him, Ryan said, “It’s [aerobatics that’s] given me comfort. When you are in an aerobatic contest, it is a relatively high-stress environment. You are doing a lot of stuff in an airplane that not a lot of other people are doing, but when you get some practice and experience, you are better at taking in information. Mike puts it this way: ‘You improve your perceptive awareness.’ Aerobatics forces you to pay attention to small details; it makes a big difference in situational awareness. It’s made a big difference in the way I think about my flying, in general.”

When asked about giving advice to pilots who want to get into aerobatics, Ryan answered, “I would recommend to them if they want to get into this is first become a member of the IAC. Reach out to some of the IAC members and chapter leaders at a chapter nearby.

“Local IAC chapters are a good place to ask about aerobatic instructors. And if you don’t have an aerobatic-capable aircraft, they recommend members or other people at the airport that are familiar with the aerobatic aircraft and can help you out. First and foremost, join the IAC.

“If they are a college student that’s going through their ratings, definitely check and see if

your school has an aerobatic program or is interested in starting one. The IAC Collegiate Program is a big family. The kids that compete against each other is my favorite part of competition. Even though we are always trying to beat each other, we all are the best friends. We offer each other critique; everyone is here to help. It’s a really great environment.” **IAC**

Ryan Tierney has been flying since he was 17 years old. He is from Kingston, Massachusetts, and attended the Metropolitan State University of Denver to study aviation and aerospace science. There, he was the captain of the MSU Denver aerobatic flight team. Ryan was able to lead the MSU aerobatic team to win two collegiate team national championships and was the collegiate individual national champion in 2022. Ryan has 1,350 hours and has flown 20 aircraft types. With his job he is primarily flying the Extra 330SC, 330LX, NG, Super Decathlon, Cirrus SR20, SR22, and SR22T.



GB1 GameBird
Fly Without Compromise

FAA Certified
200 knot cruise
1000nm range
+/- 10g
Made in the USA


GameComposites.com
Info@GameComposites.com



Photo 1



Photo 2



Photo 3

Falling Out of Your Parachute Harness Is Not an Option

And survival is not an accident

BY ALLEN SILVER, IAC 431160

YOUR SURVIVAL IS NOT AN ACCIDENT. It begins with you.

Over the years, as an FAA master parachute rigger, I've written numerous articles on topics such as how to store your parachute, keeping it out of the sun's UV rays, and how to properly ship your expensive cushion for needed maintenance. But there is one topic that keeps rearing its ugly head over and over again. It's survival! Being well informed on how to adjust your harness begins with you. It is critical to your survival. You need to know how to recognize your harness is out of adjustment and how to properly adjust it. You cannot afford to say I'll get to it later or the next time my parachute rigger sees it. There may be no next time. Having to make an emergency bailout is stressful enough. Falling out of your harness is another sign of a bad day. Remember, don't leave home (I mean your aircraft) without it.

Accidents happen at the worst time, and there are no excuses for not being proactive and taking charge of your survival. There have been several accidents over the years where people have fallen out of their improperly adjusted harnesses. This issue also includes harnesses that were adjusted properly, but people forgot to fasten the leg or chest straps. I can recall one accident when the pilot forgot to fasten his leg straps. I was told this individual flew this way because the leg straps were uncomfortable when fastened, and he would fasten them in case of an emergency. If you are not sure how to adjust your parachute



Photo 4

harness or it's uncomfortable, don't wait until its next repack is due to ask your rigger. I guarantee you there are no second chances here. To emphasize my point many years ago, there was an article in the February 2012 *Sport Aerobatics* titled "Mid-Air Collision." The pilot safely made it out of his aircraft but was seriously injured by a harness that was out of adjustment. Improperly adjusted harnesses can cause serious injury or death. Don't wait to find out.

Many pilots have never visited their parachute rigger. They just box their parachute up and send it off, and like magic, it reappears with a new inspection date on it. Your rigger needs to know at minimum how tall you are and how much you weigh so they can adjust your parachute harness to fit you properly. Don't assume it's ready to put on and go flying when it's returned. I've mentioned this before, but it's worth repeating. Most parachute riggers are familiar with skydiving parachutes that have few or no adjustments on them. They are custom built to fit that person like a new suit, with the measurements provided to the manufacturer. Now, here you come with your generic (one size fits all) parachute with as many as seven adjustments. They certainly may be qualified to pack your expensive cushion; however, they need some information. I address the need for this information further on. Unless it has been properly adjusted beforehand, there's a good chance it will be returned to you with a current repack out of adjustment.

If you are the only one wearing your parachute and it's properly adjusted, I recommend telling your rigger to hand tack your risers in place, just above the three-bar adjuster (if you have them) to help prevent slippage during normal usage. (See Photo 1). Just putting on and taking off your parachute during normal handling can cause the webbing to slip. (See Photo 2 where I'm pointing.) Note how far the webbing is out of adjustment from the three-bar adjuster to the chest strap. Now, look at the other side above the rip cord pocket. (See Photo 3.) If you have the three-bar adjusters on your parachute and your parachute is adjusted correctly, that will place the adjusters in the small of your shoulder below your collarbone. (See Photo 4.) The part of the harness webbing that runs from your waist vertically through the three-bar adjuster, if you have them, and over your shoulder where they enter your parachute container is called the main lift webbing/risers. The suspension lines on your parachute are attached to the end of them. Most parachutes have four. It also is where your steering handles are located. Not all parachutes have steering handles, so ask your parachute rigger, "Do I have steering handles? If I do, what color are they?" You can still steer your parachute without steering handles by using the rear risers only. Your rigger will be able to show you how to do it. Remember, over time and through handling, your parachute webbing may slip through the adjusters.

Do not forget your chest and leg straps. To help prevent them from loosening while wearing your parachute, make sure you have elastic keepers on them. If they are missing or have lost their

If you are the only one wearing your parachute and it's properly adjusted, I recommend telling your rigger to hand tack your risers in place, just above the three-bar adjuster (if you have them) to help prevent slippage during normal usage.

elasticity, your parachute rigger should be able to replace them.

This issue leads to another situation should you have to bail out. While you may have managed to stay in your improperly adjusted harness, now you have another problem. Your parachute probably has steering handles, but they are out of reach and you're heading straight toward the power lines and a shocking experience. Why did it end up this way? Was your parachute harness out of adjustment as described above, or maybe it was adjusted properly. Did you forget to tighten your leg straps after you donned your parachute? What I consider the proper way to do this is to bend at the waist about 30-45 degrees and cinch them down. When you straighten up, they should feel pretty snug, but when you sit down in your aircraft, you'll feel comfortable. If you have a chest strap, make sure it's also snug enough to keep the parachute harness from falling off your shoulders. Now, you are ready to fly.

If you do not personally take your parachute to your rigger, call them to make sure they know, at minimum, your height and weight and any other measurements they may ask for. Sending them a photo with your parachute can be a huge help. They may be able to talk you through how to adjust it over the phone, even if you do not need a repack. A Zoom or WhatsApp call works, too. Your fellow pilots may also be a source of help. Be observant, and if you see other pilots' parachutes out of adjustment, you have a duty to speak up. Don't wait! The life you save may be your own or another pilot's.



Photo 5

Properly adjusted parachutes and good friends save lives.

Consider inviting a parachute rigger to your next club or group meeting. Make sure you bring your parachute(s) and any club parachutes so they can be adjusted (if needed) while you have your parachute rigger there. Many flying groups have safety officers. This person should be trained on how to spot a parachute harness that is out of adjustment and how to properly adjust it. I'm often invited to make my PowerPoint presentation titled "Emergency Bailout Procedures & Survival Equipment for Pilots." My presentations are free except for travel expenses.

If you have multiple users of the same parachute, there is a way to size it down for smaller pilots. I call this method (Photo 5) a camel's hump. It works best when the risers are hand tacked in place as I described above but is not necessary.

Many of you collect past issues of *Sport Aerobatics*. I have several articles in them on

Do not forget your chest and leg straps. To help prevent them from loosening while wearing your parachute, make sure you have elastic keepers on them.

adjusting your parachute. My articles that have information on this subject are in the September 2013, March 2014, August 2015, and December 2015 issues. You can also go to IAC.org/magazines and follow the prompts to rediscover past issues.

Many years ago, I wrote an article about the "Normalization of Deviance." A quick explanation is "I've always done it this way, and it's worked before for me." Why change? People can generally easily spot complacency in others but find it hard to spot it in themselves.

My whole point of this article is to emphasize the importance of working as a team to help deviated practices from becoming the new norm. And you are part of that team. Putting on your parachute without making sure it's properly adjusted is not normal. Of course, you wouldn't go flying without checking to make sure you have enough fuel, right? Deviating from what is accepted practices has and will continue to cost lives until we take another look at how we conduct our preflight inspections, maintenance, and yes, parachute procedures. Safety begins with you.

You can always contact me if you have questions or would like to schedule a seminar. Fly safe; have fun.

Blue skies. **IAC+**

A Cuboid Has Six Sides

Confessions of a *g* junkie

BY TOM MYERS, IAC 16830



THE BOX IS ACTUALLY A POLYHEDRON, or cuboid. “Tom Myers, the cuboid is yours.” “Thank you, chief judge. The cuboid is mine.” “Remember, Tom, the cuboid has six sides.” “I will remember, sir.”

This conversation really happened. Well, maybe not quite verbatim. There may have been just a little less solid geometry humor. Allow me to explain.

I started out in a Super Decathlon. One season in Sportsman, and then one season in Intermediate. Then I spent 25 seasons in Advanced in a Stephens Akro. Serial no. 3. Four cylinders. Wood wing.

When I started in Advanced, the Akro was competitive, and six-cylinder carbon fiber monoplanes had just started showing up. The Advanced and Unlimited sequences were quickly “adjusted” accordingly.

Thus, I spent my first 27 seasons in the sport learning to conserve every bit of energy possible. This very much included not wasting altitude. That sort of behavior practiced for that long a time became completely embedded in my flying. Finishing a sequence at the top of the box was a rare treat. I vividly remember a contest in Delano, California, one year when the terminal building thermometer was reading 125 degrees Fahrenheit. I pushed out of the last figure of the Advanced Unknown sequence at 600 feet AGL. Yeah, everything on the ground looked especially big that day.

Eight seasons ago, I bought an Edge 540. For the first time in my competitive career, I had the luxury of choosing my altitudes. However, 27 years of ingrained behavior does not just go away. If I was now consistently out high, then so be it. In other words, I routinely disrespected the top of the box. I made little serious effort to change my behavior. There were as yet no implications of my behavior. As you can imagine, that attitude and behavior came back to bite me squarely in the derriere.

The first wake-up call occurred at a Corvallis, Oregon, contest. The chief judge, Jim Bourke, asked me on the radio what my altitude was as I finished my Free



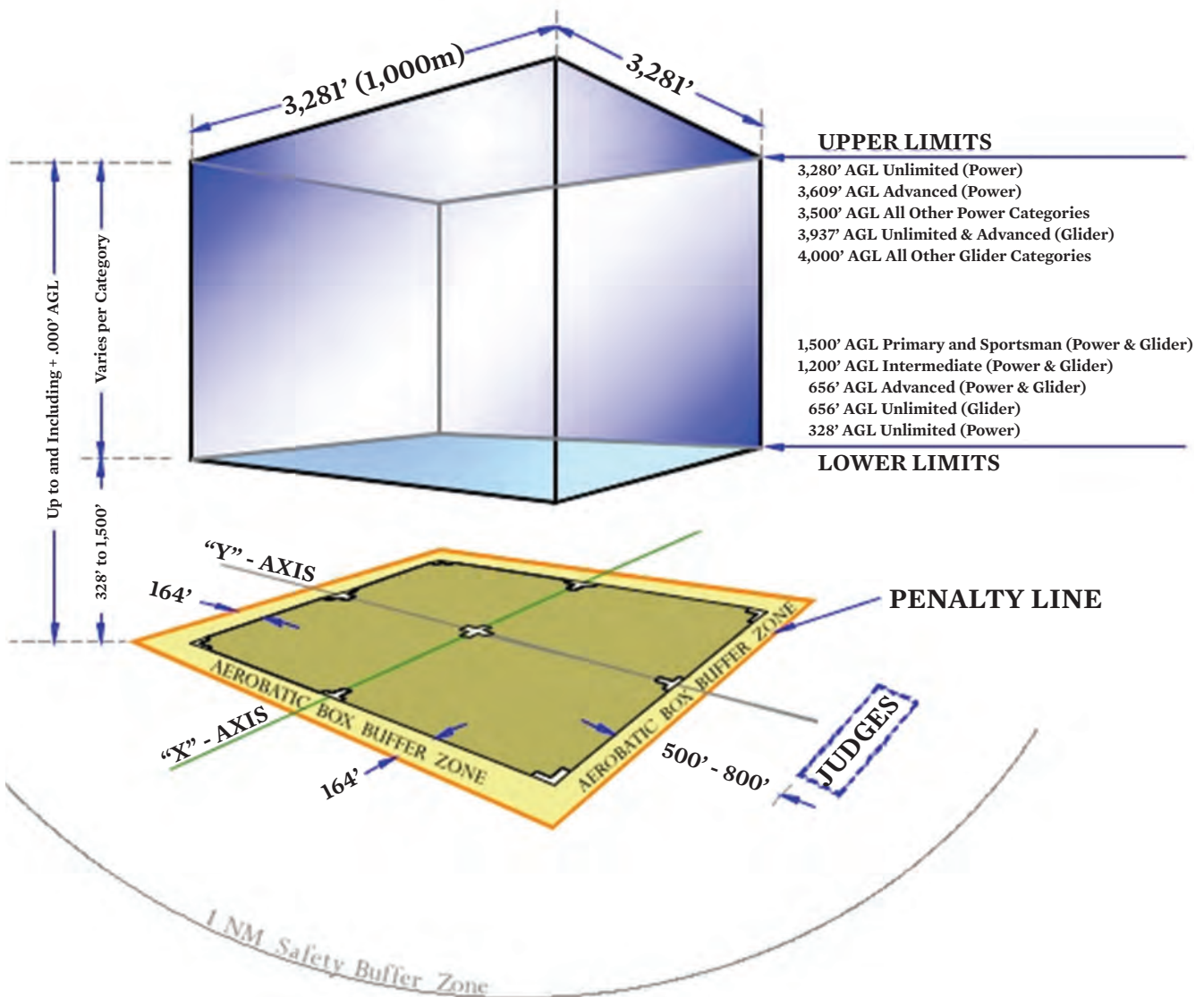
Spectators and contest volunteers watch the flights at the 2023 Redlands Aerobatic Cup.

Eight seasons ago, I bought an Edge 540. For the first time in my competitive career, I had the luxury of choosing my altitudes.

sequence. I replied that I would tell him after I landed. I met Jim when they brought in the judges line volunteers. “Hi Jim, 4,200 feet AGL.” “I thought so, Tom.”

I was the first Advanced pilot up for the Unknown sequence, so I flew the low lines. Jim then requested that I fly the high lines. I was so blasé about the top of the box that I actually had to ask Jim to confirm that it is 3,600 feet AGL. Jim was quite correctly sending me an unambiguous message. However, 33 years of ingrained behavior is not instantaneously changed, and while I did do better than I did with my Free, I still punched out high a few times during the sequence.

Then came the Redlands contest a week and a half later. Please see the photo on page 35. Those are the ceilings that we had to deal with at the contest. The ceilings on practice day were so low that my practice flight was limited to a few rolls and outside turns and rolling turns. The ceiling on contest day one was so low that



AEROBATIC CONTEST BOX

no contests flights took place. The ceilings on contest day two were just barely good enough to allow contest flights to take place. There would be enough time for everyone to get two flights in.

First up was the Known sequence. As you can imagine, I was not even remotely prepared to succeed competitively under the circumstances. The quality of the flight suffered greatly. I was not proud of my flying after I landed. I did not have fun. It was a nerve-wracking experience. And it was all self-inflicted.

Heading into the contest, I was practiced, but I was not prepared. That first flight forced me to prepare, and prepare fast. Nothing like a little motivation to precipitate a little attitude change.



It is not easy to
undo a 33-year habit,
especially when there
is nothing above
you but endless
blue sky.

Next up was the Unknown sequence. I am happy to report that that flight went much better than the Known. There were still a few rough spots, but the sequence was solid. I had fun. I was not worn out after I landed.

It is now several weeks after the Redlands contest as I type this. I have been working diligently on respecting the top of the box ever since the Redlands contest. It has not been easy. It is not easy to undo a 33-year habit, especially when there is nothing above you but endless blue sky. I am working on learning what my throttle is for. I am working on learning to manage my positioning in the box with respect to the top of the box as well as the bottom of the box.

With every passing week I can see definite signs of progress. Most of my vertical figures are now topping out at the top of the box instead of the base of the flight levels. I am no longer getting traffic alerts about satellites and space stations. My stress level has fallen as I have become more and more accustomed to the new approach, the new sight pictures, the new perspectives, the new attitude. Amazing what a person can do when genuinely motivated by a desire to improve.

Move up? No thanks. Actually, I'm trying very hard right now to move down.

Fly safe. **IAC+**



Tom walks through his sequence before entering the cuboid.



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AEROBATICS AROUND THE WORLD



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A Teacher's Shadow

BY ROB MIXON, EAA 110647

THE PRESCHOOL GRADUATION CEREMONY BEGAN. A young man strolled up wearing his tiny eyeglasses, looking much more educated than his preschool age. He took his diploma, handed to him by his principal, and immediately turned it into a “spyglass,” looking through it and into the audience. Then he sat down next to his classmates on the stage, and the diploma became a laser sword from Star Wars, an instrument to conduct music, a hatchet to be used on the kid nearby, a musical instrument to play by holding it up to his lips as a horn, and finally back to a spyglass, and then simply a diploma once again.

So, what does any of that have to do with flying?

It was late on a Friday afternoon at Richards Field Airport in Homestead, Florida. Shadows of tied-down airplanes were stretched out on the grass around them. The western sun was slowly sinking, turning the horizon a bright orange.

“Hi, Rob,” said a voice. “My name is Steve Bachmeir. I am a teacher at Felix Varela High School.” His voice startled me at first until I turned around. He was a tall, middle-aged man wearing khaki trousers and a long-sleeve white shirt with the sleeves rolled up. He had a serious look on his face, as if he had a mission to accomplish.

“We have an aviation program at our school with 30 students. Would you be interested in flying with them?”

“Mr. Bachmeir, good to meet you.”

“Rob, please call me Steve.”

“Steve, what kind of flight training do they need?”

“Well, none of them have ever flown so they will need to start with the basics to get soloed.”

“When they go up, I want them to master one aerobatic maneuver each time they fly, starting within their first hour.” — Steve Bachmeir

“No problem. We can do that.”

“Oh Rob, one more thing. When they go up, I want them to master one aerobatic maneuver each time they fly, starting within their first hour.”

“Steve! No! That’s not a good idea! I don’t want to frighten them away from learning to fly. Usually we start with climbs, turns, glides, S-turns along a road, and rectangular patterns around a field.”

“Great! Climbs, turns, glides, and one aerobatic maneuver.”

“Steve, I can see you are determined. The first aerobatic maneuver is a spin. The spin can be very disorienting to most pilots, especially a new student’s first hour!”

“Rob, they can do it!”

“Okay, how about if I explain the spin to them, then demonstrate one if they are inclined, and then they will do one if they want to?”

“Fair enough! They are all excited to fly with you!”

The next day, the early morning sunlight to the east illuminated the tied-down airplanes at Richards Field as they sat next to the grass runway.



Rob's Decathlon that was used for the Felix Varela High School students' training.

My washed and polished yellow and white Decathlon sat waiting for the first student. As I drove the dirt road into the airport, teenage drivers were lined up standing outside their cars as if they had been waiting all night! Steve walked up handing me a list of students.

“Steve, are you still sure about the spin training in the first hour?”

“Absolutely!” Came his enthusiastic reply.

Before flying, I noticed each student used the words “Yes, sir!” as if they were functioning in a military command. Later I learned each student earned a military rank depending on their classroom grades. Steve stood by watching as each student did a preflight for the airplane. With each checklist completed, the student yelled, “Clear prop!” bringing a thumbs-up by Steve showing his approval.

Once in the air, after completing all of the maneuvers, it was time. “I really don’t know if this is a good idea. Mr. Bachmeir wants each student to accomplish one aerobatic maneuver each time they fly. The first aerobatic maneuver will be a spin.”

I stopped talking long enough to notice a smile on the face of the student as he listened.

“Are you willing to try one after I demonstrate a one-turn spin?”

“Yes, sir! Absolutely, sir!” came his enthusiastic, militaristic reply in his own authoritative manner, still holding on to his infectious grin!

The airplane broke into a spin to the left with the earth rotating below. The nose of the airplane pointed down as the brown and green fields below filled the windshield! Three-quarters of the way around the student used opposite rudder, relaxed back-pressure on the control stick slightly forward of neutral. The airplane froze back into straight and level flight.

Before I could congratulate him on his success, his own words filled the cockpit: “Awesome, sir! Can we do another one?” Steve Bachmeir’s directive for one aerobatic maneuver each time they flew was proven to be spot on! Each student pilot demonstrated and explained a precision one-turn spin for a logbook entry for the certificated flight instructor spin requirement! Before solo, each student mastered a loop, roll, Cuban-eight (with its 45-degree inverted

a Teacher's Shadow



by Rob Mixon

Before solo, each student mastered a loop, roll, Cuban-eight (with its 45-degree inverted downline) and then combined those maneuvers into an aerobatic sequence.

downline), and then combined those maneuvers into an aerobatic sequence.

It was during the 4th of July that President Donald Trump had a military flyover in Washington, D.C. A stealth bomber's dark military-colored airframe filled the sky. The bomber had two military jet fighters flying in formation, one to each side of

the huge airplane. The jet fighter off the bomber's right wing was one of Steve Bachmeir's students who had accomplished all of the aerobatic maneuvers in the Decathlon, soloing in six hours, and also achieved the precision spin endorsement for certificated flight instructor!

There is a lot to be learned from a preschool kid. The small child wearing tiny glasses holding his diploma taught everyone watching that it is not of real importance to hold a diploma. It is what you do with that diploma that counts. In the case of Felix Varela High School and a teacher by the name of Steve Bachmeir, it was not just to fly an airplane but also to master what that airplane and pilot could achieve beyond the basics!

Rob Mixon has a total of 20,000 hours of flight time having specialized in tailwheel and aerobatic flight training. *A Teacher's Shadow* by Rob Mixon, Jupiter, Florida, is an excerpt from the book by the same name on Amazon books.



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IAC 38 practice and critique.

IAC 38's Chapter Practice and Critique

BY JOE MCMURRAY, IAC 441329

OUR FIRST PRACTICE/CRITIQUE EVENT of the year. A safety briefing was conducted, especially for those who were unfamiliar with the aerobatic box. We had great refreshments in the lounge at the Tracy Municipal Airport (KTCY), Tracy California. We invited everyone and anyone to drop by and say hi! I appreciate everyone who contributed to the success of the March 16 practice and critique event! We had a big turnout — I think at one point we had 20-plus people!

We successfully completed 17 flights, all safely. Severe clear weather and 75 degrees — gorgeous. During practice, two of our chapter members, Jennifer Watson and Phillip Sabbah, earned IAC Achievement Awards (Smooth patches earned in a recreational environment).

We had visitors from the community, and even the FAA was present and impressed with our organization. Special thanks to Tracy Airport Manager Paula Jessup for the fuel discounts provided.

See a cool video of the event by Shane Short on YouTube or Instagram at @icantfly55.



The IAC Achievement Awards Program

BY JOE MCMURRAY, IAC 441329

AEROBATICS IS A SPORT driven by passion, skill, and hard work. Many members love the sport even if they don't compete. The IAC has set up ways to celebrate everyone's achievements in aerobatics, not just those who compete.

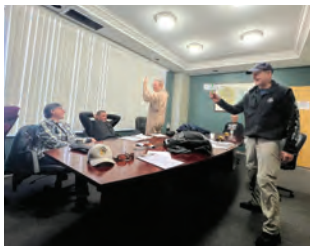
A big part involves the IAC Achievement Awards: Smooth and Stars awards. These awards are for pilots who demonstrate the skill, challenge, and dedication to aerobatics, whether in competition or just for the love of flying.

The awards started in 1970, led by then IAC President Verne Jobst, and they got a big update in 2006. They now include special pins and decals in different colors to show off the pilots' achievements. The Smooth and Stars awards recognize different skills in aerobatics. For a Smooth award, a pilot needs to perform a certain prescribed set of figures in front of an IAC judge or receive a qualifying grade from a CFI. This can be accomplished at any time and on your schedule. Stars awards are earned by those who do well at competition events.

Winning a Smooth or Star award is a big deal. It shows you've worked hard and embraced what precision aerobatics is all about. The IAC loves to recognize these achievements because it shows that being excellent at aerobatics isn't just for those who compete. Anyone who puts in the effort can master aerobatic flying.

Beyond the awards, these practice days are all about camaraderie and fun because, at its core, aerobatics should be enjoyable. Personally, it is my hope to create an environment where pilots can share their experiences, learn from one another, and have a great time. By fostering a culture that values both achievement and enjoyment in aerobatics, we can aim to build a dynamic community where every member, regardless of their experience or competitive aspirations, feels supported in their aerobatic endeavors.

Fly often and fly safe!



Planning out practice in the conference room.



Left to right: Hector Ramirez, Mark Buckner, Laurie Ramirez, Tom Thomason, and Matt Dunkel.



Tom Thomason with his Giles G-202.



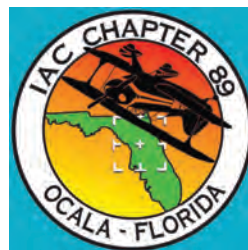
IAC 89 practice day Giles G-202, Extra 300, Christen Eagle II.



Left to right: Stan Moye, Matt Dunkel, Hector Ramirez, and Tom Thomason

IAC 89's Chapter Practice Days

BY HECTOR RAMIREZ, IAC 18975



THE FIRST CHAPTER PRACTICE DAY of the 2024 contest season was met by an arctic blast that had early morning temperatures in the 30s. Four hardy, highly motivated pilots — Mark Buckner, Matt Dunkel, Stan Moye, and Tom Thomason — braved the frigid temperature (by Florida standards) for several sessions in Williston Municipal Airport's (X60) aerobatic box.

As the morning warmed up, the clear, blue skies, light wind, and improved aircraft performance more than made up for the cold weather start. Hector and Laurie Ramirez provided ground critique and communication. We had a productive day practicing Sportsman and Advanced sequences.

Overall, a great flying day.

International Aerobatic Club Chapter 89 is based in Ocala, Florida, and promotes competition aerobatics and aviation safety in Central Florida. **IAC+**



Latest IAC Achievement Award Recipients

CONGRATULATIONS TO THOSE IAC MEMBERS

who earned an achievement award in the last half of 2023 (July 2023 through December 2023)!

Smooth awards are earned by flying a designated set of figures in front of a judge or by flying with a qualified CFI who gives the figures a qualifying grade.

Stars awards must be earned while flying competition aerobatics at an IAC-sanctioned contest. Awards are available for powered aircraft and gliders.

Learn more or apply at:
IAC.org/legacy/achievement-awards

PRIMARY

Smooth:

- #1286 – Justin Miller
- #1287 – Greg Savidge
- #1288 – Harold Schaefer
- #1289 – Franklin D. Ramirez
- #1290 – Tom Hogan
- #1291 – James Powell
- #1292 – Phillippe Sabbagh
- #1293 – Matthew Sparks

PRIMARY

Stars:

- #799 – Justin Miller
- #800 – Morgan Katnik
- #801 – (John) Calvin Owens
- #802 – Ruben Alconero

PRIMARY GLIDER

Smooth:

- #19 – A.J. Wilder
- #20 – Mark King

SPORTSMAN – GLIDER

Smooth:

- #42 – A.J. Wilder
- #43 – Mark King

SPORTSMAN

Smooth:

- #974 – Tim Taylor
- #975 – Don W. Hendrickson
- #976 – Tom Hogan
- #977 – James Powell
- #978 – Matthew Sparks
- #979 – Daniel Vasquez-Velez
- #980 – Greg Savidge

SPORTSMAN

Stars:

- #1613 – Timothy Taylor
- #1614 – Morgan Katnik

INTERMEDIATE

Smooth:

- #534 – James Powell
- #535 – Matthew Sparks

ADVANCED

Stars:

- #349 – Ron Mann

The IAC – A Look Back

HIGHLIGHTS FROM HISTORY 10, 25, AND 50 YEARS AGO

COMPILED BY LORRIE PENNER, IAC 431036

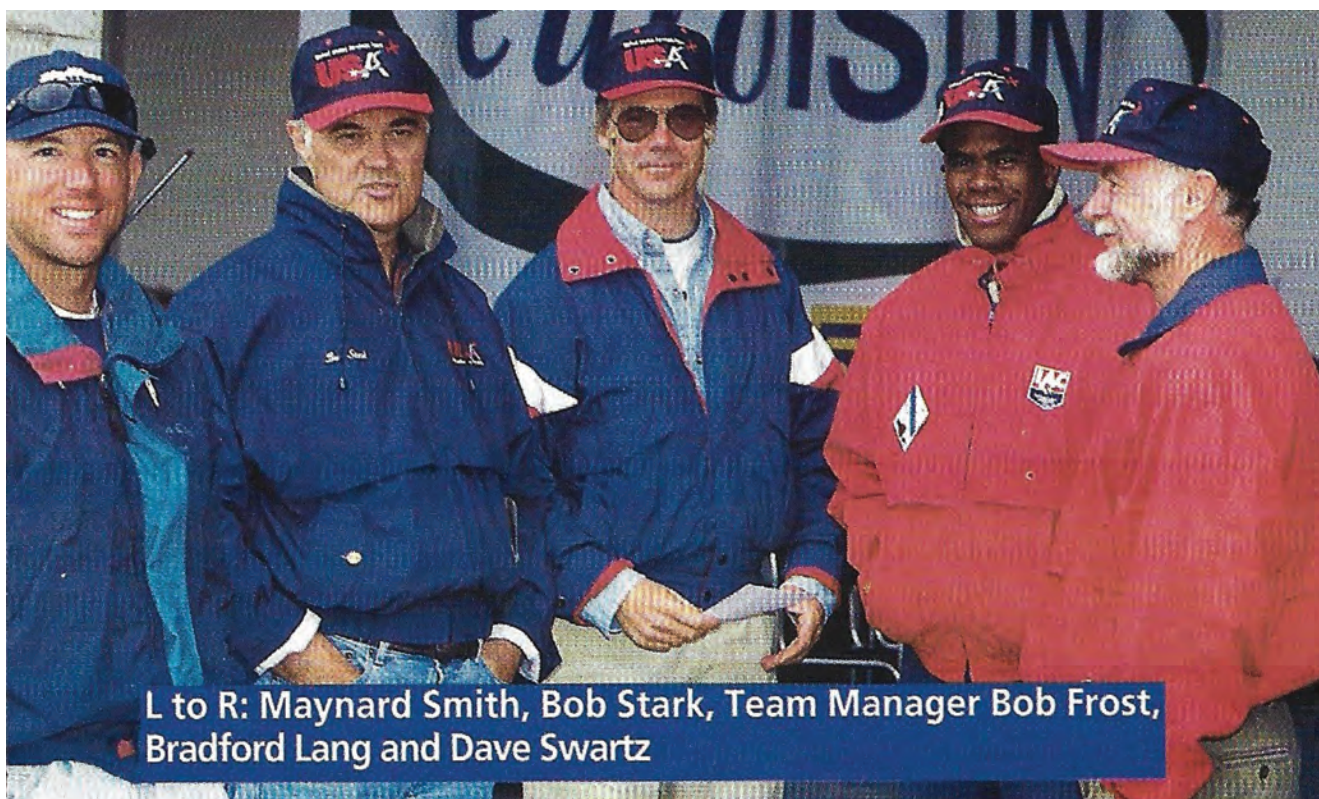


10 YEARS: *Sport Aerobatics* May 2014.
INVERTED FLAT SPIN WORLD RECORD
BY SPENCER SUDERMAN



On March 13, 2014, at 11:39 a.m. Pacific daylight time, a new world record for most inverted flat spins performed in one attempt was set when 81 full turns were completed in a Pitts S-2B. The old record of 78 turns was anything but easy to beat, and it took three attempts over the California desert to do it. This spin was entered at 23,000 feet and the recovery initiated at 2,000 feet, 3 minutes and 15 seconds later, after which the airplane returned to straight-and-level flight at 950 feet. This flight and all of its preparations were a data-driven exercise in the research and development of aircraft configuration, pilot performance, problem-solving, and most important, flight safety.

The online PDF of the May 2014 issue may be read here:
<https://www.iac.org/magazine/may-2014>



25 YEARS: *Sport Aerobatics* May 1999.
BEATING A PATH TO AWAC
 BY KAREN DIAMOND



On Saturday, July 3, some 60 pilots representing up to 15 nations began flying the 3rd Advanced World Aerobatic Championships at Mnichovo Hradiste Airfield near Prague, Czech Republic. The U.S. Advanced Team members were Paul Donner, Glenn Frick, Gary Henry, Bradford Lang, Bill Marcellus, Maynard Smith, Bob Stark, and Dave Swartz.

The team faced their challenges, one of which was paperwork problems in shipping a Pitts S-1T from Great Britain they had arranged to fly in the championships. Unfortunately, while a mad scramble to unravel the paperwork issues seemed near success, the Pitts owner backed out of renting his Pitts. Donner, Frick, and Henry were left with no airplane to fly. The highest-scoring American pilot at AWAC was Bob Stark in 16th place followed by Bradford Lang in 19th.



**50 YEARS: *Sport Aerobatics* May 1974.
IAC BOARD OF DIRECTOR'S MEETING –
A REPORT**

BY MIKE HEUER



The highlights from the May 4, 1974, IAC board meeting include a couple of issues that may sound familiar to our board and members as they relate to topics that often come up: 1) ... “the 1973 audit shows the club is in excellent financial shape, but in view of rapidly increasing costs in administrative support, the monthly publication of *Sport Aerobatics*, and other rising costs, [it is] recommended that the Board consider a dues increase. It is generally agreed that advertising will have to be increased. 2) “Several rules’ changes were discussed... possible changes to the Sportsman category to make it more attractive to more pilots was discussed.” 3) Verne Jobst reported on his extensive dealings with the FAA in efforts to obtain aerobatic airspace waivers for various areas. He pointed out the need to establish aerobatic areas near airports for pilots to practice in addition to the expeditious handling of request for waivers for contests, judges schools, and practice sessions.

Full historical articles can be found online at: www.iac.org/articles.

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IAC chapter 58. International Aerobatics Day 2022.

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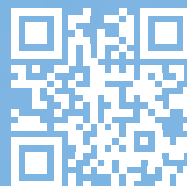
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- And many more!

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