

SPORT

APRIL 2020

# Aerobatics

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB



▶ OPPORTUNITY SOARS

▶ CZECH OUT PART II

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▶ HOW THE COLLEGIATE TEAMS TRAIN



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**ON THE COVER:** The belly of the late Mark Fullerton's Panzl S-330 at the Farmville, Virginia contest in 2016. Photo by Michael Marra.

**ABOVE:** Ground crew, tow pilot and glider pilot coordinate prior to launch at the Williams Glider Center's November 2019 inaugural training camp and contest. Photo by Colusa Sun Herald.

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# Forward to the Good Old Days

BY ROBERT ARMSTRONG, IAC 6712

**WELCOME, INTERNATIONAL AEROBATIC CLUB** members and aerobatic enthusiasts! With the spring rains in the South giving way to blue skies, the season of fun flying begins.

In my earlier columns, I stated that I believe the IAC is an organization that promotes fun. Within IAC is an intense culture that has created one of the best safety records of any motorsport. This culture is also the basis of what I refer to as grassroots. With the opening of our celebration of 50 years, some of the content of *Sport Aerobatics* may be a trip down memory lane for some and the opening of a history book for others. I have had conversations in recent weeks with several members who all have different views of what grassroots means to them. After some study myself, I see some of our past as a window to our future. In an address to a gathering in Texas some years ago, Paul Poberezny made an observation that all people's good old days are different from one another. This view may be a bit of help in the future.

So, what are my good old days? I hope they are yet to come! Next question: What is grassroots? My view is

that all of IAC is grassroots! Some only see the new members and new competition pilots as grassroots. In my view, even the Unlimited pilots are grassroots. When you look at aerobatics as a sport, then it is rather clear that only a small portion of pilots involved have any goal of being more than good, safe aerobatic pilots.

So, what are we doing that keeps the IAC from growing? I feel that we are focusing on the wrong "bright light." Do we need to send members/pilots to compete in world events? Yes. Do we need to run our club with the idea that this is our only mission? I hope not, but that is how some see it. So, this topic is where last month's mention of regression comes in. We, the IAC leadership, followed a program that has been producing negative results for a few too many years. When you push a lawn mower too fast in tall grass, it gets slowed down; if you do not stop and back up for a moment to get it back up to speed, it will die. We need to back up or at least get back up to speed.

When I became president, I came in with some ideas that lost momentum with the board of directors. Not to blame anyone — I just wanted to get the club moving a bit better. Sometimes corrections can be troubling. With the many new volunteers heading up many programs, now I feel it is time to move on to some of my original goals.

Yes, all of the IAC is grassroots, even Advanced and Unlimited. When IAC aligned with CIVA for some of our own rules, and followed CIVA actions, we changed the place many of our members called home. There are some who say that Unlimited must stay Unlimited. Great thought, but we have no definition of Unlimited. What we do have are five categories of competition with the top named Unlimited. We have a new direction for the Knowns and the Unknowns, thanks to the new sequence chairman.

Now, what we have that needs correcting is the number of figures in a Free program in the Advanced and Unlimited categories. The majority of pilots who flew regional contests in these categories did not fly in the U.S. Nationals and had no aspirations of competition beyond regional contests. For them, it was an activity that was a hobby. We lost many competitors when the requirement to create and then fly a Free program with fewer maneuvers arrived. It then appeared to me that we were losing competitors and experiencing competitor frustration as the rule flip-flopped back and forth with the number of figures that were or were not allowed. I will be proposing a rule change to reverse some of this instability. I proposed a change to the rule regarding the number of figures in a Free two years ago that did not get support from the membership; however, I think it is time to try again.

Now let me ask, does the membership have interest in regrouping and trying to revive local activity? If you do, please follow the 2021 rule proposals that will be posted on the IAC website for member comments later this year and let all of the directors know your feelings.

As always, fly safe. **IAC+**

► Please send your comments, questions, or suggestions to [president@iac.org](mailto:president@iac.org).



# Transitional Aerobatics

BY LORRIE PENNER, IAC 431036

**AS I READ THROUGH THE ARTICLES** for this month's issue, I was struck by the theme of the transitional phases of the aviation journey we all take. Tom Myers' article, "The Yard," brought me back to my initial training years. I was just excited to be *flying*, not thinking about any repercussion of my actions in the cockpit. My outlook on most things is usually quite practical, but in those early days, I never imagined that I would ever make any stupid decisions with an airplane. It just never occurred to me. Perhaps the pilots of many of those mangled aircraft parts in the junkyard had the same naïve attitude.

Moving from the naïve attitude to the training and safety conscious attitude, the collegiate coaches highlighted in the "Whirlwind Aerobatics for MSU Denver" article describe how they train and prepare their students for aerobatics. Some flight training focuses on what not to do as much as what to do. "We have started training our new team members in the art

of flying the perfect loop and a roll without losing 1,000 feet," Dagmar Kress wrote.

Michael Lents wrote that the flight training course at the University of North Dakota begins with an introduction to spins and upset prevention and recovery. As students grow confident in their new skill set, they become free to explore the full envelope of the aircraft.

As freshmen, members of the 94th Flying Training Squadron from the U.S. Air Force Academy initially fly four glider flights with the fourth flight being aerobatic, according to Mark Matticola's article. Between their freshman and sophomore year, the cadets get the opportunity to fly up to 14 glider flights in an attempt to solo. That number stuck out to me. Only 14 flights before solo? I looked back through my glider logbook and saw it took me 21 flights before solo. I felt a bit better when I read further and realized that only 35 percent of them actually solo at 14 flights.

The collegiate coaches are instilling a safety culture along with giving instruction and giving the students an opportunity to think through the repercussions of actions taken in the cockpit. The students are the big winners with the ability to use the tools they've been given to make wise choices while they are flying.

In the article about the glider aerobatic training camp and "pseudo-competition," I was very interested to see that the contestants spent a significant amount of constructive time pre- and post-briefing

each flight. Dave Watson and Mallory Lynch put on a great camp at the Williams Soaring Center in California and interjected fun along with learning during their in-depth briefings, which were interactive for all. The participants found ways to combine their varied experiences and backgrounds into supportive and constructive input.

In the last phase of our aviation experience, we become mature and knowledgeable. We've led a full aviation life, but as one ages, eyesight and maybe hearing diminish or reaction time slows. And here's the rub: We still feel competitive or want to keep flying competitively for the thrill of it even if we don't end up with a trophy. Are we struggling a bit in Advanced or Unlimited but not wanting to go backward to Intermediate? It's all fun and games when people tell you to move up!

Good news! The Legacy category is returning for the 2020 season. This category allows participants to fly down to 656 feet AGL as the Advanced category competitor is used to doing. Although the Intermediate Known is used, there is plenty of room to make your Free really interesting, and of course, you still fly an Intermediate Unknown.

Tony and Julia Wood flew the Legacy last year. Julia said, "It was easy and fun for us ... the other competitors accepted the new category and were pleased that we weren't competing against them in Intermediate! I think it's a positive move and hope it survives!" **IAC**

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▶ **TOP STORY**

# Ed Bowes Inducted Into the Nebraska Aviation Hall of Fame

BY LYNN BOWES, IAC 14305

On January 23, 2020, longtime IAC member Ed Bowes, IAC 5296, received two awards from the state of Nebraska, which honors those who have dedicated their life work to the advancement of aviation. He was inducted into the Nebraska Aviation Hall of Fame and at the same time received the Wright Brothers Master Pilot Award honoring pilots who have practiced safe flight operations continuously for 50 or more years during the course of their aviation careers.

Ed began flying lessons on October 6, 1969, soloed on December 4, 1969, and earned his private pilot rating on August 21, 1970, at Lincoln Aviation at the Lincoln Municipal Airport. Ed subsequently used the GI Bill to fund his advanced flight training, obtaining his commercial certificate in March of 1973.

In April 1974, Ed added a CFI privileges to his logbook and instantly was hired by Lincoln Aviation to be a flight instructor. Like so many pilots, he built his flight hours by taking on students and led many through their own initial private pilot and then their commercial certificates. During that time, he also became proficient at giving aerobatic instruction. About 1984, Ed was selected by the FAA to be an aerobatic proficiency evaluator, which led to his appointment as an aerobatic competency evaluator for the International Council of Air Shows. Ed has evaluated and given Statements of Aerobatic Competency (SAC) to countless air show pilots across the United States, that SAC card being the beginning for many air show industry names.

In addition, from 1975 to 1977, he was employed as an aerial applicator in Chester and Wahoo, Nebraska, and he ran an aerial application business in Ashland, Nebraska, for three years. He amassed 1,200 hours of ag time in those years.

Ed's expertise as a certified welder and his mechanical knowledge as a metal fabricator were evident to lifelong friend Harry Barr while building an aerobatic airplane for Harry, who then hired Ed to start the welding and machine shop for Duncan Aviation. In 1975, Ed was the only welder employed by Duncan Aviation, but over time he developed the welding and machine shop and earned a repairman certificate to perform welding repairs to Garrett and General Electric engines under Duncan Aviation's Repair Station.

Ed was one of three pilots certified in Nebraska to do the stall series test flights on Learjets after the leading edges were modified or removed and replaced due to maintenance or upgrade. This task gave Learjet crews phenomenal information on how their airplane stalled, how it recovered, and how well it was repaired.



Lynn and Ed Bowes at the Nebraska Aviation Hall of Fame.



Ed in his air show days with his Pitts Special.



Ed in his homebuilt Formula One monoplane, which he raced at the Reno Air Races in the early 2000s.

In the 1970s through the 1990s, few pilots were more active in aerobatics than Ed, from local air shows to national aerobatic competition as a member of the Midwest Aerobatic Club. Ed has performed in a Pitts, Christen Eagle, Acroduster 1, and a J-3 Cub comedy act, as well as flying the jump plane for the area skydivers. Over the years, Ed built a HiperBipe, an Acroduster 1, and a OneDesign, and in partnership with others, two Cassutts.

In 2000, Ed and fellow builder and pilot Jim Debus built a Formula One monoplane air racer to race at the Reno National Championship Air Races. At Reno, Ed and his team were Miss Lynn Racing. In 2002, Ed was named the Formula One Rookie of the Year, and in 2004, Ed won the Silver Heat.

Ed began an airline career in 1989 at Midway Airlines and then moved to Southwest Airlines in 1991. He amassed over 20,000 flight hours in total. Ed has type ratings in the Learjet, the Citation 500 series, the DC-3, and the Boeing 737 with an airline transport pilot certificate. He also has a helicopter rating and made the first flights of seven experimental airplanes. Ed retired as a captain from Southwest Airlines in 2006 and has continued to fly for fun ever since.

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# Legacy Category

The **Legacy category** concluded its first contest season in 2019. While it was not widely used, it was decided at the 2019 fall board meeting that it should continue into the 2020 contest season with an eye toward including it in our U.S. Nationals.

What is the Legacy category and what is its purpose? It is primarily designed to entice previous Unlimited and Advanced level competitors to come back to the contest arena. Many Unlimited and Advanced competitors have had to leave those categories to get relief from the high g-loads, positive and negative. We are all living longer now and want to continue doing this thing we love, even at an “advanced” age (Yes, pun intended).

Big picture, Legacy is Intermediate with the floor of the box dropped down to the same altitude as Advanced.

### GUIDELINES

- Participating pilots must not be competing in any other category.
- Intermediate sequence and flights (Known, Free, Unknown) shall be flown and judged by current Intermediate rules.
- The floor of the Legacy category box shall be 656 feet AGL.
- Legacy flights will be flown concurrent and intermingled with the Advanced category flights or they will compete as a standalone category.
- The contest director must use the “Supplemental/Waiver of Rules” area on the contest listing page to request adding Legacy.

In 2019, Tony and Julia Wood competed in the Legacy category at a Texas contest. Julia said, “From a competitor’s standpoint, it seemed to go seamless flying with the Advanced category. It



Julia and Tony Wood

was easy and fun for us, and the judges seemed to have no problem grading us along with the Advanced pilots. All the other competitors accepted the new category and were pleased that we weren’t competing against them in Intermediate! I think it’s a very positive move and hope it survives!”

### IMPORTANT SETUP INFORMATION FOR CONTEST OFFICIALS:

Please review directions on contest listing conventions and additional information on running concurrent contest records in JaSPer. [www.iac.org](http://www.iac.org). **IAC+**



## 2020 IAC CONTEST SEASON CALENDAR



Find the full map online at [drive.google.com/open?id=1TSdH3xkp4bLoF2dDhzHPuqq15UlxPr&usp=sharing](https://drive.google.com/open?id=1TSdH3xkp4bLoF2dDhzHPuqq15UlxPr&usp=sharing).

DATES	HOST CHAPTER	NAME	REGION	LOCATION	AIRPORT
April 25, 2020	27	Tennessee Music Hwy Aerobatic Jam	Southeast	Tennessee	KMKL
May 1, 2020	23	Sebring 81	Southeast	Florida	KSEF
May 1, 2020	49	Duel in the Desert	Southwest	California	KAPV
May 15, 2020	24	Lone Star Contest	South-Central	Texas	KBKD
May 16, 2020	58	Wildwoods Acroblast!	Northeast	New Jersey	KWWD
May 30, 2020	61	Giles Henderson Memorial Challenge	Mid-America	Illinois	KSLO
May 30, 2020	12	Ben Lowell Confrontation	South-Central	Colorado	KSTK
June 5, 2020	5	Harold Neumann Barnstormer	South-Central	Kansas	KOWI
June 6, 2020	67	Apple Cup	Northwest	Washington	KEPH
June 20, 2020	11	James K Polk Open Invitational	Northeast	Virginia	KHWY



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# OPPORTUNITY

# SO





## Inaugural Williams Soaring Center glider aerobatic contest

BY DAVE WATSON, IAC 26557,  
AND MALLORY LYNCH, IAC 437512

**T**he weather in Northern California during November can be typically mild in temperature, graced with light breezes and abundant sunshine. Such were the conditions that greeted aerobatic glider pilots during their training camp and unsanctioned glider contest at the Williams Soaring Center.

# OPPORTUNITY SOARS

In between the Foxy Figures and Tequila Cup contests, IAC 38 hosted its first glider training camp and aerobatic glider contest with support from the Williams staff. A full three days were devoted exclusively to aerobatic flying as the airport was closed to normal operations and all attendees were given unlimited access to the center's MDM-Fox, towplanes, and tow pilots.

During setup, corner markers were placed in the surrounding rice fields to help the pilots clearly delineate the aerobatic box, which was situated parallel to the runway. The Williams Soaring Center is conveniently located off federal airways. So, the delay in getting a waiver did not hamper the planned camp/contest. The only compromise was that all aerobatic flight was restricted to having the bottom of the box at 1,500 feet AGL.

At the camp/contest, there were a total of 12 practice and competition flights. An additional eight flights were flown for Achievement Award Smooth patches. The competitors were Ben Mayes (chief instructor at the Williams Soaring Center), Mallory Lynch from Oregon, and Laura Radigan from Florida. All three flew the Advanced Glider category. Ben originally had intended to fly Intermediate but moved up to Advanced. Without having practiced the Advanced sequences, he basically flew three Unknowns.

The camp/contest three-day weekend had spectacular weather with one nonweather-related interruption of a smoke screen. In the Northern California valley surrounding the Williams area, it is not unusual for rice farmers to set fire to fields to clear stubble, weeds, and waste before sowing a new crop. This particular controlled burn temporarily obscured Laura from the judges' view before she dropped tow for her Unknown flight.



Mallory Lynch, avid glider pilot and U.S. Advanced Aerobatic Glider Team member.



Left to right: Pablo Saso-Perkins, Dave Watson, Chris Harrison, and Dale Roberts.

Other than the temporary smoke screen, the volunteer judges enjoyed the creature comforts of being close to the beautifully designed WSC clubhouse and the mild weather. Most of the judges were used to power aerobatics, so they were treated to a relatively rare event for them — glider aerobatics. They enjoyed the opportunity to witness some great flying by the experienced glider pilots. The IAC 38 volunteer judges were Chris Harrison, Dave Watson, and Dale Roberts.

Since this was intended to be both a training camp and “pseudo-competition,” the judges and the contestants spent a significant amount of constructive time pre- and post-briefing each flight. Each briefing was in-depth and interactive for all. As the “competition” moved along, the contestants found more interest in the post-briefings than the standings. After each flight, we found ways to combine our varied experiences and backgrounds into supportive and constructive input for all. In the end, the rankings didn't matter to anyone as we all had such a great time and learned so much about each other's sport (glider versus power).

By the end of the event, Laura was heard to comment, “How fortunate we are to have such an amazing facility as the Williams Soaring Center. And to then have such spot-on coaching and judging for the three days of competition. Sometimes we need outside eyes to see how good it really gets. It was great!”

One truly impressive result from the competition flying was that Ben Mayes, despite never having flown Advanced before and having just finished writing his own Free just a few hours before flying it, won that flight! *Move up, Ben!*

With two IAC judges present, several pilots seized the opportunity to complete a total of 12 Smooth awards, Primary through Unlimited, including two All Five Smooth Special Achievement Awards.



With Dale judging (having been a freshly minted regional judge the prior week), Dave completed his Advanced and Unlimited Glider Smooth figures. Having previously earned the Primary through Intermediate Smooth awards, Dave qualified for the All Five Smooth Special Achievement Award.

Since the MDM-1 Fox was only insured for Mallory and Ben Mayes, not only did they compete but they also both tag-teamed as safety pilots for all the other camp and competition participants – including Dave. He pounded both of them through the snaps (inside and outside) and hard pushes of the Unlimited Smooth figures. The Unlimited figures included an inverted spin, reverse half-Cuban, hammerhead with quarter-roll up, inside snap on a 45-degree downline, 90-degree rolling turn with one outside roll, tailslide-wheels down, outside loop, and a half-Cuban with half-snap.

Conversely, having previously earned the Advanced and Unlimited Smooth patches, Mallory completed his Primary through Intermediate Smooth requirements with Dave and Dale judging. Thus, Dave and Mallory are Nos. 2 and 3 in IAC history to obtain the All Five Smooth Glider Special Achievement Awards.

Dale also enjoyed some flights in the Fox and obtained his Primary, Sportsman, and Intermediate Smooth Achievement Awards and started on the Advanced figures. Ben Harvey, another IAC judge, unfortunately could only stay for the practice day, but he was able to achieve his Primary and Sportsman Smooth Achievement Awards in just that one day.

If it were not for the Herculean efforts of Mallory and Ben Mayes, the event could not have happened. One of them was in the plane the whole weekend, devoting themselves to this event and the sharing of their love of glider aerobatics with the other participants.

We cannot thank enough the Chapter 38 members and the Williams Soaring Center who collaborated and made this event materialize. We had three days of very special glider flying and camaraderie. We all look forward to doing this event again in the years to come. Personally, it has inspired Dave to focus much of his attention to glider aerobatics and to hopefully someday achieve the All Four Glider Stars in competition. **IAC+**

## WILLIAMS SOARING CENTER

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**THE WILLIAMS SOARING CENTER (WSC)** is a family-owned and -operated glider facility located in Northern California, beautifully situated not too far from Redding or Sacramento. Rex Mayes and his wife, Noelle, along with their two sons, Ben and Nick, run the full-service glider center. Rex was previously the manager of Lagoon Valley Soaring in Vacaville, where he met his future wife, Noelle, who was working for the Mayes family there in 1991. He and his twin brother ran the family business until 1993 when the business was moved to Williams.

In early November 2019, WSC created an opportunity for aerobatic pilots of all kinds (glider and power) to compete and/or experience some glider aerobatics. They coordinated with Mallory Lynch, who spearheaded organizing the event on behalf of the IAC Chapter 38 members. Although Mallory lives in Oregon, he travels to Williams to fly two or three times a week. He also helps around the center by mentoring the center's students.

The center and staff support and teach the principles of the Soaring Society of America (SSA), which is dedicated to the art and science of motorless flight for both pleasure and competition, emphasizing a maximum degree of safety through professional training.

They encourage participation in the SSA badge program; local, regional, and national competitions; and record soaring. The IAC's Achievement Awards program was modeled after the SSA badge program in 1971 by IAC's second president, Verne Jobst, who had been a glider pilot for many years.

WSC proved to be an excellent environment for the November training camp and contest. Noelle said that the whole family was involved in the event with Rex and Ben both doing towing duties, and she played the role of hostess.

Besides the favorable weather conditions, the on-site amenities of a pilot lounge, clubhouse with a large kitchen, computer area, a training and briefing room, as well as the private 2,300-foot paved runway created excellent conditions for all participants. There are also complimentary bunk rooms, one with a kitchenette that the participants used during their stay.

Considering there may be five to 20 pilots flying on the weekend when the soaring conditions are right, the IAC 38 event organizers were overjoyed to be given the royal treatment when the airport was closed to normal operations for three full days of aerobatic flying. The use of the center's MDM Fox was offered at a flat fee that included parachute, tow, and glider and was appreciated immensely by the participants.

Noelle said that although they had a lot of experience with SSA National Soaring Championships, they had never hosted an aerobatic competition before. Not knowing how many would attend the training camp/contest but assuming it was a growing year, she said they were conservative and opted to close the airport. "We wanted the event," Noelle said. "It was fine that it was a smaller event; we'd rather learn and make it successful for the next year." The summer is busy with optimal soaring conditions, and they would coordinate around the World Glider Aerobatic Championships, which will be held in Germany. So, right now, another fall event is looking promising.

Although they are a private airport, Noelle says they encourage a culture of inviting the public to come out to the airport. In a day and age where there are barriers such as fencing and walls, she likes to invite people in. The Mayes family makes you feel like a part of the aviation tribe.

To learn more about the full-service family operation, visit its website at [www.WilliamsSoaring.com](http://www.WilliamsSoaring.com).

# Planning for the Thaw

## How UND starts the flying season

BY MICHAEL LENTS, IAC 434331, NAFI MASTER INSTRUCTOR-AEROBATIC, HEAD COACH FOR UNIVERSITY OF NORTH DAKOTA AEROBATIC TEAM

**AS THE SUN TRANSITS** its path low across the sky with sun dogs faithfully at its side, the unusually still breeze is punctuated by the sounds of dozens of Lycoming's finest. Airplanes maintain some warmth from sitting inside climate-controlled hangars as students and instructors eagerly await heaters to finally kick in against the frigid subzero air. The green University of North Dakota (UND) Super Decathlon sits patiently on the edge of the ramp for temperatures to warm.

As the days grow longer, so do the flight opportunities. In early March, a fresh class of bright-eyed aerobats start ground school and flying. Aerobatics presents a rare opportunity to push the envelope in a controlled environment. Their motivation ranges from safety and improving stick-and-rudder skills to developing into competitive aerobatic pilots. Many want a more in-depth understanding of spins and to experience unusual attitudes. All anticipate the thrill of that first roll and loop!



On the left Alex Hunt stands with fellow teammate Ashton Croy as they receive awards at the 2019 Midwest Aerobatic championships.



UND at the Doug Yost Challenge in Spencer, Iowa: Coach Mike Lents, Aris Leung, Sean Yamaguchi, Ashton Croy, Alex Hunt, Jon DeLone, Andrew Hollingsworth, Tariq Mela, and Liz Birch.

The UND course begins with an introduction to spins and upset prevention and recovery. As students grow confident in their new skill set, they become free to explore the full envelope of the aircraft. At this point, training depends on the goals of the student. We start with some recreational-style aerobatics: simple loops and ballistic aileron rolls. These form the basics for exploring horizontal eights and Immelmans as they work into more advanced reverse maneuvers and hammerheads. Here students decide exactly how precise they need to be and what type of challenges they will pursue. All learn something important about managing energy and how aircraft fly, often without realizing because of the rush of full three-dimensional flight.

While these students learn new skills, my returning competitors compete for aircraft time among the myriad demands on both their time and that of the training fleet. Their dedication grows infectious once team practices begin. In the meantime, however, there is plenty of work on the ground to accomplish.

## EFFECTIVELY WORKING TOGETHER TO SWAP PILOTS, SUPPORT EACH OTHER, CRITIQUE THE MANEUVERS, AND TAKE CARE OF THE PLANE MAKE THE TEAM WORK.

Team meetings are just firing up. As the weather transitions into spring, these cover a broad range of pertinent competition topics: perfecting the Immelmann, reading Aresti, and designing Freestyles, all while emphasizing safety in the box. With running a single Super Decathlon hard during a contest, developing the team mindset and good camaraderie ensure everything runs smoothly. Returning members anticipate reunions with friends and family made along their competitive journey. My new students can't comprehend what is in store until experiencing that first contest.

Transitioning into the competitive mindset happens during our team practices held in Grafton. The aerobatic box there allows team members to practice over the airport at competition altitudes with a safety pilot and coach onboard. Normally, the floor of our aerobatic flight lessons is 3,500 feet AGL near Grand Forks. At a contest, that altitude becomes the ceiling. In the sky over Grafton, operations occur at competition altitudes. While all risks are minimized, the ground appears awfully close for those who have not intentionally spun that low before. Due to the sheer size of the Super Decathlon, however, students are urged to keep it above 1,700 feet.

The sights and sensations of spins and inverted flight at these altitudes form only part of the equation. Effectively working together to swap pilots, support each other, critique the maneuvers, and take care of the plane make the team work. Knowing where to be, when to be there, and how to help each other take time to develop. While nothing compares to the rush of that first contest flight, the nerves of being under the watchful eye of coach and colleagues offer a small sample.

Once these team practices begin toward the end of April, everyone finds their groove and the Super D really gets rolling. UND's 2020 team will feature some familiar faces. From the 2019 team, Ashton Croy, Andrew Hollingsworth, and Jonathan DeLone are slated to fly in the Sportsman category. Aris Leung, Dustin Datoc, and Mikaila Gillis will be new to flying for the team. Aris and Mikaila attended a few 2019 contests as volunteers. They have a taste for the contest environment and eagerly await flying for those first marks.

Already, the students diligently work out anticipated altitudes, box placement, and presentation strategies. This year's sequence incorporates several basic figures that require forethought for good positioning and placement. In response, Ashton, Andrew, and Jon are actively developing several drafts to fly for their Free sequence.

As for me, I look forward to watching, mentoring, and coaching my students as they realize, achieve, and develop new goals and dreams. The skills, experiences, and community become part of their professional identities. It is an honor to share a few steps in that journey alongside the other coaches in the Collegiate Program.

If our season goes to plan, the UND Aerobatic Team hopes to see you in Salem, Illinois; Seward, Nebraska; Spencer, Iowa; and Salina, Kansas!



# Whirlwind Aerobatics for MSU Denver

Keeping the cycle going

BY DAGMAR KRESS, IAC 17721

**THE LAST FOUR YEARS** have been a whirlwind time for the Metropolitan State University of Denver (MSU Denver) Aerobatic Team, which is composed of 10 members who competed at five aerobatic contests in 2019.

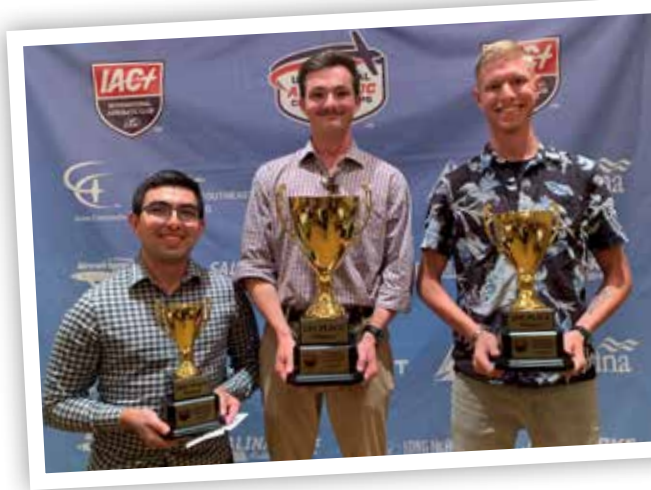
We have been using two airplanes, Nick Slabakov's Xtreme Decathlon N555XD, rented out through the Aspen Flying Club, and my Pitts S-2C N317JKJ.

The number of coaches also increased to a small flock, necessary to accommodate the increasing size of the team. Mike Forney — retired Coors IT software engineer, well-known member in the aerobatic community, a national aerobatic judge, and an Advanced South-Central Region champion flying a Pitts S-1T — is now a part-time faculty member at MSU Denver. Nick, who recently acquired an Extra 330LX, can be observed walking on air after climbing out of his new racehorse and wearing a permanent grin. Betty Stewart, two-time Unlimited Women's World Champion, sporadically enjoys helping us from the ground critiquing. I, Dagmar Kress, aerobatic flight instructor for approximately 30 years, lecture at MSU Denver.

In 2019, we competed at the Ben Lowell Aerial Confrontation, the Midwest Aerobatic Championship, the High Planes HotPoxia Fest, the Clyde Cable Rocky Mountain Aerobatic Contest, and the U.S. National Aerobatic Championships. We are deeply grateful for MSU Denver funding our trip to the Nationals at Salina, Kansas — a special experience we would not have been able to afford without our alma mater's financial support.

In 2019, luck was on our side, and we were fortunate to earn first place for our team in the IAC Collegiate Aerobatic Program. Our team members also took the podium in Primary at the U.S. Nationals (Austin Belleau, Landon Diedrich, and Jose "Leo" Garzon Gonzales).

As college curriculum predicts, students graduate and move on with their lives. Again, we had to sadly say goodbye to a group of graduates last year who are continuing their exciting career paths in aviation. Vibeke Gaard, who won second place in the 2019 individual collegiate aerobatic championship, is looking forward to her upcoming start date with Republic Airlines. Jenna Coffman is pursuing a career in higher education, and Brooks Dickerson is gathering flight hours toward his airline transport pilot certificate, piloting both a King Air and Twin Otter for a local skydiving company, as well as a PC-12 for a private owner.



2019 U.S. Nationals Primary Category. MSU team members sweep the awards. Left to right: Jose "Leo" Garzon Gonzales, Austin Belleau, Landon Diedrich.

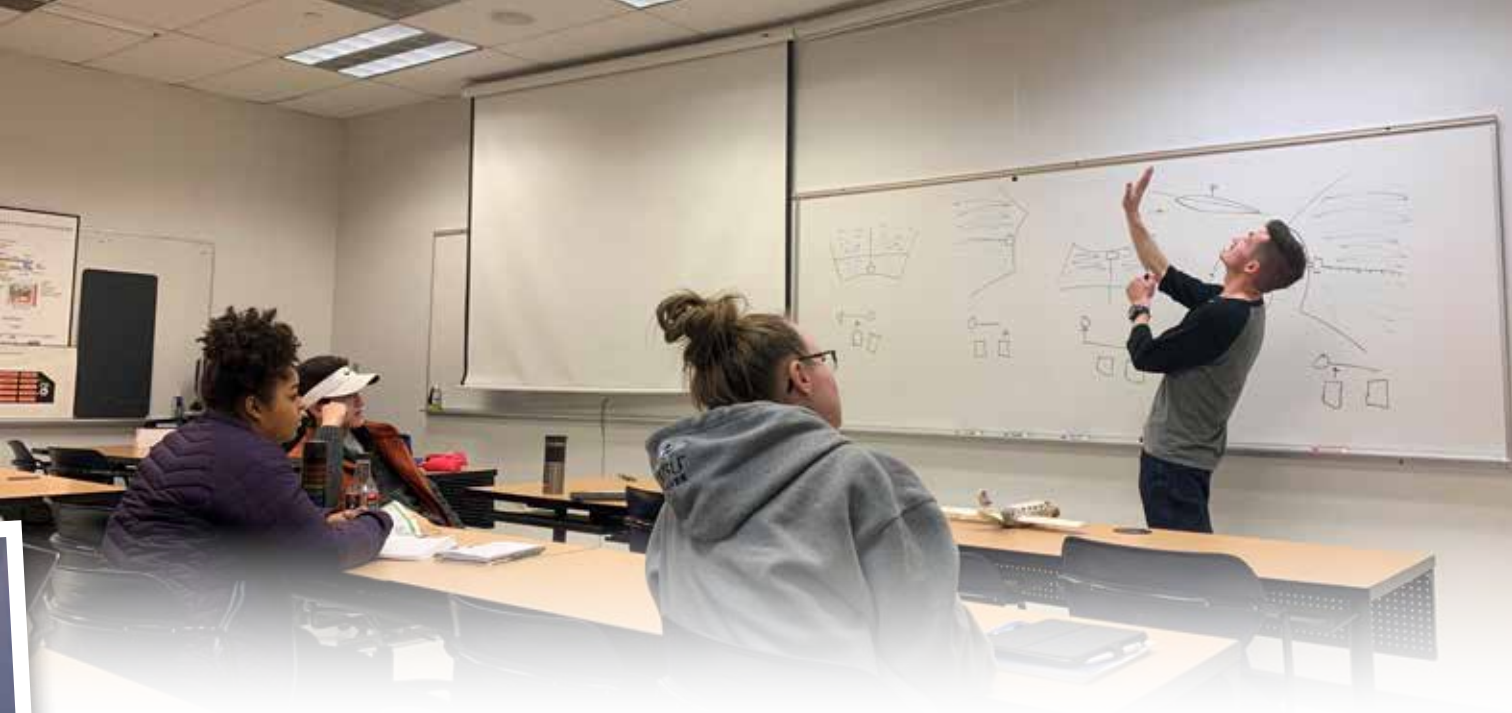
Remaining members from last year are Austin, Landon, Leo, Jenny LeCuyer, Kylie Lynch, Sam Robinson, and Daniel Wilmoth, who will all upgrade to the Sportsman or Intermediate categories.

New members on the 2020 aerobatic team are Colin Armistead, Katrina Baker, Andrew Balistreri, Tom Garner, Ameyaltzin Luera (Meya), Luca Mueller, Alex Sarabia, Madison Siegrist, Julia Ssessanga, Ryan Tierney, and J.C. Webb.

Since the aerobatic team grew to 17 members going into the 2020 season, we are facing a challenge regarding aerobatic flight instructor and airplane availability. Instructors have been easier to come by than airplanes, as we were able to grow them at home within the team.

Senior team member CFIs showing the ropes to the "younglings" are Sam, instructing and competing in the Pitts in the Intermediate category; Jenna, who graduated last year and is employed now as part-time faculty at MSU Denver; and Austin, who took his CFI ride in the Decathlon and now instructs in that airplane.





Captain Austin Belleau teaching a loop.

## **SINCE THE AEROBATIC TEAM GREW TO 17 MEMBERS GOING INTO THE 2020 SEASON, WE ARE FACING A CHALLENGE REGARDING AEROBATIC FLIGHT INSTRUCTOR AND AIRPLANE AVAILABILITY.**

There is Jared Hulse, who returned home to graduate at MSU Denver after a two-year sabbatical/stint at Sky Combat Ace in Las Vegas, where he took thrill-seekers for rides that they will never forget. Jared racked up some 500 hours in Extras there and now conveniently qualifies as an instructor in Nick's Extra 330LX. He instructs in the Decathlon and Extra through the Aspen Flying Club and will compete this year in the Intermediate category in the Extra. Jared will start flying straight and level for Republic Airlines later this year.

Landon and Daniel are working toward their commercial/CFI certificates, planning on taking their checkrides in the Decathlon in order to teach in it thereafter.

Austin and Landon took over the captain positions of the MSU Aerobatic Team, bringing with them U.S. Air Force ROTC structure. They are better organized than the senior bumbling coaches, establishing spreadsheets with practice schedules and coaching sessions from the ground. They even threaten drill weekends upon us to improve the team's physical health and bonding.

We found that the formula for team sustainability is to attract new freshman team members every season, to be instructed by senior members once those members acquire their CFI certificates, and to keep that cycle going. This approach takes some pressure off the coaches who were wearing out flying with up to six students during practice and competition.

To economize the ground instruction, which accompanies the aerobatic flight training, we established an official three-credit-hour Fundamentals of Aerobatics class at MSU Denver. Beginning team members are required to take this class. Mike Forney and I share the majority of classroom instruction, with guest speakers complementing and contributing valuable information.

At the time of writing this article, we are one month into the spring semester. The students have learned aerodynamics and basic Primary figures from class materials. We have started training our new team members in the art of flying the perfect loop and a roll without losing 1,000 feet. Instruction on recovering the spin on heading and letting the airplane accelerate vertically down toward the ground before pulling out is always good for some chuckles on the instructor's side, too.

Practice makes perfect, though, and we have until the end of May for our first contest at the Ben Lowell Aerial Confrontation. Soon we will venture back out to Fort Morgan Municipal Airport where our local IAC Chapter 12 has an FAA-sanctioned aerobatic box marked, thanks to Duncan Koerbel. There we can effectively combine flight training with ground coaching.

We can't wait to reconnect with the greater aerobatic community we have grown to love, and we are looking forward to seeing our friends from the University of North Dakota and U.S. Air Force Academy teams again. Hopefully, other teams will form and join or rejoin. May the weather gods be kind, our airplanes not break, and all of us stay vigilant and safe throughout the seasons to come. Mike Lents and Mark Matticola, come get your trophy back!



# IT'S LIFE!

Competition planes lined up anticipating  
the moment when the engines roar.  
Farmville, Virginia, 2016.



# More Than Just Flying – It's Life Lessons

United States Air Force Academy Aerobatic Team

BY MARK "MATTY" MATTICOLA, IAC 432581



USAFA cadets and instructors work together to prepare a launch at the U.S. National Aerobatic Championships.

**SERVICE IN THE UNITED STATES AIR FORCE** is an integral part of the national defense of the United States. The men and women who made that choice have put that commitment before all else. The path to get to that place for each of these individuals is as numerous as the stars, but something during that journey enticed them to a life in the skies. The United States Air Force Academy (USAFA) does an outstanding job exposing each and every cadet to airmanship opportunities for all four years of their college education. Cadets are exposed to glider flight, powered flight, and jump operations through six squadrons in the 306th Flying Training Group. This group has long and storied roots as far back as World War II. One of these squadrons, the 94th Flying Training Squadron (94 FTS), has its roots as the 94th Troop Carrier Squadron flying Waco CG-4 gliders, going as far back as the Invasion of Normandy.

The 94th was recommissioned after the Air Force Academy was founded in 1959, and it moved from Lowry Air Force Base to its present location in Colorado Springs. USAFA then realized it needed an airfield to expose its cadets to airmanship. Airmanship at USAFA has had many different shapes and sizes since then, from navigation training in a Boeing T-43 Bobcat, to even balloon training with the 94th Airmanship Training Squadron as its beginning. In the last 50 years, the USAFA Airfield has grown into four runways, a jump training facility, multiple hangars including one to hold 24 gliders, the largest tower cab in the Air Force, the third busiest day-VFR airfield in the world, and an aviation turf landing field that is the largest in the world, with four 4,000-foot-long runways painted on it for glider recoveries. The three north-south runways are home to the Soaring Program, all with a drop zone in the middle of the glider traffic patterns.



USAFA gliders comfy in their hangar in Colorado Springs, Colorado.

**THE OPPORTUNITIES AND LIFE LESSONS THAT THE CADETS AT THE 94TH FLYING TRAINING SQUADRON GET IN TERMS OF LEADERSHIP, AVIATION, COMPETITION, AND SHEER WORK ETHIC ARE UNRIVALED ACROSS THE UNITED STATES AND THE WORLD.**



Cadets trailer their gliders to contest locations. Once at the contest site the cadets coordinate and stay focused to avoid missed steps. A critical assembly checklist is completed to ensure proper assembly has been completed.

The 94th Flying Training Squadron is at the forefront for offering airmanship classes to academy cadets. The 94 FTS owns 19 DG-1001 Club gliders to support core programs. As freshmen, all 1,300 cadets are exposed to their first aviation course at USAFA. They get to fly four glider flights with the fourth one being an aerobatic flight. The summer between their freshman and sophomore year, as many as 500 academy cadets and Reserve Officer Training Corps (ROTC) cadets get the opportunity to fly up to 14 glider flights in an attempt to solo. Thirty-five percent of these cadets actually solo their \$200,000 gliders out to the soaring areas. Out of the 500 cadets that take this course, 80 are selected for the sophomore fall semester to attend the Cadet Instructor Pilot Upgrade Course. These cadets fly fall and spring semester every other day to complete 90 upgrade sorties, then take an Air Force check ride to be certified as cadet instructor pilots. This status does not qualify them as FAA-certified flight instructors, though. These 20-year-old cadets then instruct the first two courses to which the 18- and 19-year-old freshmen and sophomores are exposed. From here, junior and senior cadets also get the opportunity to become spin instructors and cadet evaluator pilots. The 160-strong cadet cadre instruct over 94% of the 19,000-plus instructional flights that the 94 FTS flies each year. Some of these cadets can fly as many as 500 instructional flights over the three years that they fly at USAFA, all while taking as many as 25 credit hours per semester in majors such as Aeronautics or Astrodynamics, and attending as many as five soaring training/competition/air show deployments a year.

The upper two classes of instructors also comprise a cadet staff that runs the entire soaring program at USAFA. Leadership is the primary mission that the cadets are exposed to at the USAFA Airfield with airmanship and excellence through the competition teams as a byproduct of their opportunities. There are also 50 active duty, civilian, contractor, attached, and reserve pilots who support and mentor the soaring cadet squadron staff to success. USAFA also

contracts a prime maintenance contractor to maintain all of the aircraft on the airfield, and it also provides tow operations to the 19,000-plus glider sorties annually, essentially doubling the aircraft movements at the 94 FTS to 38,000-plus sorties per year. After the cadets finish Instructor Pilot Upgrade, they get the opportunity to apply for and get selected to be members of the Cadet Aerobatic Demonstration Team, or the Cadet Sailplane Racing Team. Each class has six members per team, making each team 12 members strong.

The Cadet Aerobatic (Acro) Demonstration/Competition Team progresses through the International Aerobatic Club's (IAC) Primary, Sportsman, Intermediate, Advanced, Unlimited categories. They then proceed to become aerobatic instructor pilots in the two years that they have left at the academy. The Acro Team competes in IAC competitions at the regional and national level across the United States. This team was founded in 1985 when USAFA acquired Schleicher ASK-21 gliders and has flown several different aircraft since. The team currently flies the DG-1001 Club and is currently looking at acquiring an Unlimited aerobatic MDM-1 Fox. Since 1985, the team has dominated the glider aerobatic scene and has earned hundreds of medals and trophies. But with such a small glider aerobatic community across the United States, the Academy Team also pits its skills against IAC-powered aerobatic collegiate competitors and has earned multiple second- and third-place trophies over the last 20 years. The Acro Team also participates in 40 static glider displays and over 20 aerobatic demonstrations at air shows and academy events across the United States each year.

The opportunities and life lessons that the cadets at the 94th Flying Training Squadron get in terms of leadership, aviation, competition, and sheer work ethic are unrivaled across the United States and the world. These men and women take on these experiences and use them to eventually grow into warriors in the future defense of the United States of America. *IAC+*

# Czech OUT



**FLYING THE GRAND DAME OF  
MODERN AEROBATIC COMPETITION**

## The Zlin 526F Trener — Part II

BY PHILLIP GRAGG, IAC 431292

**THE ENGINE ALONE MAY** be worth the price of admission. The Walter Minor is held on with an industrial-grade engine mount, and each cylinder is fed by something akin to sequential port fuel injection, if I understood my co-pilot correctly. It barks to life and has a unique presence that is slightly reminiscent of a vintage fighter, but at far less cost. It is extremely smooth and responds immediately to throttle inputs. It writes symphonies.

The sad addendum to this account is that engine life is now limited by the government to 15 years in the Czech Republic. Zlin is promising a Lycoming retrofit. I love Lycoming engines, but this development will not improve this particular airframe in any way. The overhaul of the engine is said to run around \$50,000. It is sad to lose this heritage to short-sighted bureaucracy. If there is an upside, maybe when these engines time out, more of the airplanes will make their way to other countries, including the United States.

Once the engine is lit, there is no need to hurry. On a warm day with the canopy back and the siren song of the engine speaking to you, it's just best to absorb the experience. The Zlin has presence while stationary but demands attention while in motion. People stop and watch. It gets respect. It is the grand duchess of modern Czech aviation and the modern aerobatic movement.

Ground handling is easy. The view from the front cockpit is unlimited, and the rear cockpit requires mild S-turns to see. The track is wide and long; brakes are effective. Letňany Airport is a dual runway grass field, so naturally, taildraggers are quite happy there. After a quick run-up, we made a call to the military field immediately adjacent, Letiště Praha-Kbely.

On takeoff, a steady advance of the throttle brings the engine quickly to life. Its cool tones at idle give way to a smooth rush of mechanical glory. It's not harsh or earsplitting; it simply feels like it quickly finds its groove, and the engine leads you into flight. Performance from a standstill is not blistering, but you get a nice progressive push. Rudder is active fairly quickly, and the airplane is quite responsive to inputs. There is nothing rapid-fire or quick about the input and reaction here. The long beam of the fuselage has a heavy influence on characteristics — mild and predictable but requiring of pilot skill. The aircraft is smooth and confident, without any hint of lethargy.



The Walter Minor six-cylinder air-cooled inverted in-line piston engine.

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Getting down to the business of some basic aerobatic maneuvers, roll rate is about 120 degrees per second on a fast line and 90 degrees per second on the slow line. The feel in roll is smooth, predictable, and highly capable. The airplane seems to roll equally well left and right. Breakout is light but affirmative, and the center is easy to find. The first third of stick displacement is light, the second third slowly but progressively gains weight on the hand, and the last bit of travel requires additional force — not heavy, but my shoulder doesn't "pull" right as well as it pushes left. It isn't Great Lakes bad at the extremes, but stick forces in roll can only be described as "high" by modern standards. I eventually found myself using two hands to reduce stress on my right shoulder. The aileron linkage is by pushrod, and it is pushrod and rod end bearing *smooth*. There is zero friction in the system, although the components themselves are heavy. The feel then is a solid, confident one that can move when you want it. Among many excellent flight characteristics generally, its aileron action and rolling capability are very good.

Breaking the roll down a bit further, the first half of the roll seems conventional; a little more forward pressure inverted is needed than you might expect, but the last quarter of the roll, due to the angle of incidence and the symmetrical airfoil, requires forward stick later in the roll as compared with other airplanes, making the transition to a little back-stick seem all the more awkward as the roll finishes. Slight differences in roll characteristics and my lack of general proficiency contributed to less-than-perfect rolls, but in reality, heading errors were slight and the aircraft is generally a good rolling machine.

Interestingly, the 526F has spades, small ones by modern standards. My co-pilot pointed them out as though they would be something I'd not seen before. I think he was a little surprised when I said, "Everyone has those," although I personally never felt the need for them on my factory-built S-1S.

After a series of full rolls and various hesitation rolls, I wanted to venture into sustained inverted flight in part because of the unusual characteristics of the wing. Unfortunately, it was not to be. While I did not gain a full understanding of the inverted oil system, it was purpose-built for the airplane and engine combination. A novel feature of the aircraft is that if the inverted oil plug is not working, the auto mixture will enrich the mixture to the point where the engine will start to cough. This is a sign — get it upright! It was explained to me that this step was done to prevent the aircraft from sustaining abuse in its military role. As I understood it, the cylindrical plug moves inside a shaft, not unlike the balls in the Christen inverted system (but only one plug). The design is such that if it is not used frequently enough, it sticks. Such was the case in our situation, so while we repeatedly transitioned through -1g inverted flight, there were only briefly sustained episodes after we discovered the issue.



The Zlin is a long, sleek, stately, and elegant. It sits comfortably at the Letňany Airport next to a grass field runway with other taildraggers that are quite happy there.

The aircraft is smooth and progressive in pitch. Stick forces aren't high, but with the long wing, neither are g-loads. Looping maneuvers are pleasant enough, although speed does tend to build a little faster than you would expect because of the clean airframe. I don't believe it would be an excessively difficult airplane in which to train a pilot on an initial aerobatics course, but neither does it have quite the same safety margin and forgiveness of airspeed indiscretions as do biplanes or modern monoplanes.

While the cockpit is fairly conventional, with a few foibles, the airspeed and altimeter were vexing if not concerning to me. The altimeter points *down* to zero and reads in hundreds of meters. So, a full revolution is 1,000 meters. Naturally, there is no third hand on the altimeter. (Do the math!) With each large tick of the altimeter showing over 300 feet, and each small tick imprecisely indicating about 66 feet, you are left feeling somewhat as though you are wallowing around the vertical space with insufficient information. I'm grateful for altimeters graduated in feet, where you can see at a glance, with precision, a 10- or 20-foot deviation. However, Europeans seem to fly quite well with altimeters that have larger increments, so perhaps all is well. The airspeed indicator likewise points down for zero. It also points down for 200 and 400 kph. The gauge face is a corkscrew! When I saw the gauge face, I truly thought it was going to be a disaster, but in truth, across the entire flight envelope, I never once misread the airspeed indicator once the needle was live. **IAC+**

**PHILLIP GRAGG** has been flying for 23 years, has owned a Luscombe 8A (*Evelyn*), Aerotek Pitts S-1S (*Woodshed*), and a Cessna 172N (soon to be rechristened *Robohawk II*), and has flown over 30 types of aircraft.





**JULY**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		30	1	2	3	4
		7	8	9	10	11
5	6	13	14	15	16	17
12	13	20	21	22	23	24
19	20	27	28	29	30	31
26						

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# IAC 50th

## Anniversary Spotlight

**Leo Loudenslager**

BY LORRIE PENNER, IAC 431036

**L**eo Loudenslager won the U.S. National Aerobatic Championships seven times, and in 1980, the World Aerobatic Championships. He served as ambassador, setting out to instill enthusiasm, safe practices, and showmanship. “Leo Loudenslager always led by example, inspiring millions to excellence,” Sean D. Tucker noted. Tom Poberezny called him a dynamic and creative pilot and one of the most focused, dedicated, and hardworking individuals he had met.

Like most things in his life, Leo’s aerobatic goal was approached in a nontraditional way. He hit the scene as a virtual unknown; no one in the industry had ever heard of him or the mid-wing airplane he had built in the basement of his home. Presumptuous as it appeared to the other contestants, Leo entered at the Unlimited category of the 1971 U.S. Nationals in Oak Grove, Texas. It was a feat that had never been done — for a brand-new aerobatic pilot to take a brand-new machine and try for the world team. Although he didn’t make the team that year, he did force the aerobatic world to take notice of his skill and determination.

One of Leo’s innovations was the full bubble canopy. He chopped the rear half of the canopy off and raised the turtle deck to meet the crown of the canopy. This created fuselage lift, especially in knife-edge flight.



After four years of alterations on the airplane that he then called the Laser 200 and many hours of practice, Leo entered and won the U.S. National Aerobatic Championships in 1975. That win made him the nominal leader of the U.S. team headed for Kiev, Russia, and the 1976 World Aerobatic Championships. Leo and the American team didn't score well in that contest, but it had no influence on his drive to win again in the United States.

He repeated his win at the U.S. National Aerobatic Championships six times — in 1976, 1977, 1978, 1980, 1981, and 1982. In 1980, Leo achieved what he had so aggressively pursued — the World Aerobatic Championships. He is one of the only three Americans to earn that place in aviation history with Henry Haigh and Charlie Hillard being the other two. Until 2017 when Rob Holland tied his record, Leo was the only person to win seven national titles. **IAC**



**ABOVE:** Leo's modifications to his Stephens Akro increased roll rate, climb rate, and overall strength while decreasing the empty weight.



**ABOVE:** In 1983, the Laser was painted in the brilliant red Bud Light scheme to reflect its sponsorship.

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# G and Your Spine

BY WES LIU, IAC 10467

**DID YOU PULL +7G** on your last flight? How does your back feel? Are you used to shaking off some back pain during or after a hard competition flight? We often blame the aging process, but in fact, most of the problem may be your seat and parachute.

First, a little anatomy. The spine is generally composed of 33 bones. In the model pictured, there are seven vertebrae in the cervical (upper) region, 12 in the thoracic (middle, orange) region, five in the lumbar (pink) region, five in the sacral region (not visible behind the white pelvis), and four in the coccygeal region (also not visible). In between the vertebrae are the disks. Disks are flexible shock absorbers that allow us to bend and twist.



Note an important aspect of the spine model. The spine has a natural curve. The disks are shaped correctly and comfortably when our posture allows our spine to be in its natural curve.

Which brings us to the seat back you sit against and the parachute you wear. Is your seat back flat? Does your parachute pack ride in the seat back to form a concave curve that forces the lumbar region of your spine into a curve in the opposite direction that it naturally wants to be in? Is your back sore or even painful after pulling g's?

When we sit with our spines misaligned and then pull significant g's, we are forcing disks that are normally relatively flat donuts into wedges and can apply pressure to nerves that will immediately send pain signals. Age makes this worse as disks shrink and become less flexible after we pass age 40. If your physician has been noting that you are getting a little shorter each annual visit, welcome to the club. And that flat seat back and the parachute pack that slumps into a curve that is the reverse of your spine's normal posture? They are not your friend.

What do we do? I fly a 1974 Pitts S-2A with a flat and upright seat back. I discovered that I had reached an age and condition where g's resulted in back pain. Some research produced the answer — lumbar support! As little as a 5-inch-tall and 1-inch-thick band of medium density “astronaut” Confor foam — the width of your parachute container — can provide enough support to keep the spine in alignment under g. Sew a fabric sleeve around the foam and have your parachute rigger attach it with Velcro to your parachute rig. Done! No more back pain.



**RIGHT:** Acro Strong Parachute.



**ABOVE:** Softie Parachute Lumbar Support.

You may have to experiment to find the right thickness and height of material for your personal lumbar support. We are all different heights and girths. A good place to start finding what works is to roll up a towel and slide it between your parachute and the lumbar region of your back. Once you find out how much towel is comfortable, you can get with your parachute rigger and construct a more permanent pad.

I reached out to the parachute manufacturers at Strong Parachutes, Softie Parachutes, and Butler Parachutes; they all offer lumbar support pads as options for their rigs. There is no reason to accept discomfort when you fly.

See you at the box. **IAC+**

**WES LIU** competes in Intermediate in a 1974 Pitts S-2A. His current daytime job is building software for a medical robot used in spine surgery.



# The Yard

BY TOM MYERS, IAC 16830

**NOT LONG AFTER GETTING MY PRIVATE TICKET,** I bought my first airplane, a Super Decathlon. One of my goals was to learn how to maintain an airplane. Let's just say that I picked the right plane for giving me opportunities to achieve that goal.

During the time that I owned the Super D, a Magnaflux inspection of the prop hub became required. The closest facility that could perform the inspection was Anderson Aviation at Hayward, California. I flew the Super D across San Francisco Bay to Hayward and got there while the Magnaflux operator was at lunch. Anderson Aviation was a big, busy maintenance facility, so there was plenty to watch and see to occupy the time until the operator returned.

Eventually, I wandered out of the large roll-up door at the back of the facility and discovered The Yard.

Unbeknownst to me, Anderson Aviation served the aviation world in a number of capacities. One of those capacities involved the use of its large flatbed truck with a crane mounted on it. Occasionally, GA aircraft returned to earth in the Bay Area where an airport was not located. When the FAA and the NTSB needed what was left to be transported and sequestered, Anderson Aviation was usually called.

The Yard was a large, fenced-in area in back of Anderson Aviation where the debris was sequestered. I write "debris" because on the day that I stumbled upon The Yard, that was all there was to see.

Fourteen piles of debris. The only reason I had any belief that the piles used to be aircraft was that they were locked up at an airport. They all may as well have been run through an industrial wood chipper for all that was left.

It turns out that Carl Anderson, the founder and owner of Anderson Aviation, was the Magnaflux operator. About the time that I discovered The Yard, he returned from lunch and came looking for me. When he found me staring into The Yard, he said it was obvious that I had never seen anything like it before, because I was pale as a sheet.

Carl proceeded to explain to me what I was looking at. He then asked me a question: "How many do you think were mechanical failures, and how many do you think were pilot errors?" Not knowing any better, I guessed that it was about a 50-50 split. Wrong. Not even close. It turned out that 13 of the 14 were pilot stupidity, and the 14th was a minor mechanical problem that the pilot turned into a major stupidity.

Carl then asked me a second question: "What's the easiest way not to end up back here in The Yard?" That question I did much better on. I replied, "Don't make stupid decisions with an airplane, and if something does go wrong, stay calm and deal with it intelligently." Carl liked that answer a lot. He told me that if I stuck to that, I would survive aviation just fine.

So far, so good.

The ultimate ironic twist to this story occurred a few years later. Late one night, a plane just barely made it through the fog right at the top of Altamont Pass. Altamont Pass is at the

**THE ONLY REASON I HAD ANY BELIEF THAT THE PILES USED TO BE AIRCRAFT WAS THAT THEY WERE LOCKED UP AT AN AIRPORT. THEY ALL MAY AS WELL HAVE BEEN RUN THROUGH AN INDUSTRIAL WOOD CHIPPER FOR ALL THAT WAS LEFT.**

east end of the Livermore Valley, which is just east of Hayward. There is a long history of pilots trying and failing to successfully sneak VFR through the pass just under the fog. The FAA was unsuccessful at getting in touch with Carl to have him avoid going out to Altamont. It was because Carl was already there. Carl had been asleep in the back seat of the plane when the attempt through the pass was made. I have no doubt that if Carl had been awake, the attempt would not have been made.

In other words, it's also a good idea to be paying attention and doing what you can to help keep other people from making stupid decisions.

Please fly safe.

Please fly smart. **IAC**

# Malcolm Pond

**Defy gravity, fly aerobatics**

**BY ZINNIA KILKENNY, IAC 437244**



Malcolm Pond

**WHILE SITTING IN MALCOLM'S** well-appointed breakfast nook, listening to the wall clock's metronomic ticking, I was thinking and feeling, "It's too quiet in here for the likes of Malcolm."

We'd intended to meet for an interview during that introspective crevasse in between flying in the Unlimited category and, as Malcolm puts it, "when life gets in the way."

Though we spent the weekend busying ourselves with flying and having impassioned discussions about aerobatics in the camaraderie of our aerobatic family, there still wasn't enough airplane noise.

Meet Malcolm Pond, inscriber of sky poetry, Nationals judge, recipient of all 10 Achievement Awards, and prodigious builder of aircraft.

## **ZK: EVERY AVIATOR HAS A STORY. WHERE DID YOUR INSPIRATION TO FLY COME FROM?**

MP: I've always considered myself a risk-taker. I have broken a hip, a knee, and a shoulder from mountain biking to prove it. A family friend introduced me to flying when I was a teenager. He, his wife, and I took off on a grand journey through Alaska, then Northern Canada to Hudson Bay, in a Cessna 180. I survived the mosquitoes, bears, and moose, and truth be told, we were lost at least once or twice. But what a grand adventure.

After college and medical school, I yearned for more adventure. I learned to fly in 1976, while I had an extended monthlong vacation in my first year of fellowship at Johns Hopkins Hospital. I decided to take flying lessons at Essex Sky Park rather than wasting my time reading medical journals. Throughout my subsequent years in cardiology fellowship, I took time to earn my private pilot license. Along the way, I was attracted to soaring and in particular to the Allegheny ridges in fall and springtime.

After completing my medical training, I married and moved to California in 1978. I became a partner in a Piper PA-28, then a Mooney 252, and earned my instrument rating. I also purchased an ASW-20 15-meter sailplane and had many fantastic flights locally, and up and down the Owens Valley in Eastern California and Nevada. I earned all three Diamond badges in soaring, but never competed.

Being impatient to wait for a tow while the thermals were booming, I traded the sailplane for a Glaser Dirks DG400 self-launching motorglider and continued my exploits with different soaring camps in the High Sierras, Tahoe, Arizona, and Utah.

Unfortunately, one flight ended badly in 2001, as a result of a partial engine failure on takeoff, with no runway underneath, and I punched a hole in one wing and collapsed the landing gear.

## **ZK: WHAT GOT YOU INTO AEROBATICS?**

MP: While I was waiting for repairs to the motorglider, I saw an ad for aerobatic lessons in a Pitts S-2A with Dennis Brown in California. After my first flight, I was totally hooked and pushed him to show me more and more. This led to my selling the motorglider and purchasing an S-2B in 2002.

I joined the IAC and competed for several years in Sportsman. Through a combination of aviation fuel, coaching, and perseverance, my flying improved. I enjoyed coaching from Sergei Boriak, Mike Mangold, Alan Gerringier, Tim Just, Reinaldo Beyer, and Bob Meyer. I sold the Pitts and moved on to an Edge 540. I became a regional, then national judge, attended Nationals in Texas several times, won the Advanced category in 2009, and made the team for the World Advanced [Aerobatic] Championships. Unfortunately, at that time my Edge 540 didn't qualify under CIVA rules because of "too much horsepower." Go figure!

I moved up to Unlimited and competed there until 2018. I attended contests all over California and Arizona and once in Ephrata, Washington. I've lost count, but I estimate more than 50

contests in all. Along the way, I also contributed two articles to *Sport Aerobatics* about the physiology of the “wobblers” and the effects of positive and negative g’s.

**ZK: CAN YOU EXPLAIN THE EXTENUATING CIRCUMSTANCES IN 2016 THAT THREW YOU FOR A LOOP?**

MP: I had known for a number of years that I had a heart murmur. After all, I’m a cardiologist, and that is my profession! But I began to have shortness of breath and palpitations, and I diagnosed myself with severe mitral regurgitation secondary to mitral valve prolapse. In this condition, the mitral leaflets become elongated, and valve support tissues sometimes break down. By the way, this was not a result of extreme positive or negative g’s; just the luck of the draw.

I went through uneventful open-heart surgery; the mitral and tricuspid valves were repaired, not replaced, by a world-renowned heart surgeon at Sinai Hospital in New York. Everything was fine until post-op Day 7, when I awoke with weakness in my left arm and leg and gibberish for speech. I had sustained an embolic stroke. No definitive treatment could be done because I was recovering from heart surgery. And no blood clot or arrhythmia were ever identified.

The following months were a test of my fortitude and my conviction to get better. I was depressed. I went to a rehab center closer to my home and learned again how to walk and talk. I had what is called a mild form of expressive dysphasia and went through speech therapy. I am greatly indebted to my therapist, Brian Sharp, Ph.D., who taught me about “neuroplasticity,” which is the ability of the brain to heal itself.



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## MEET A MEMBER

### ZK: AFTER INJURY OR ILLNESS, SOME WOULD REFRAME THEIR LIFE WHEREAS YOU BUILT A PLANE AND BOUGHT A PITTS.

MP: Within a year, I was almost myself again. I retired from work because it was time, went back to aerobatics primarily as a judge, and decided to further my hand coordination and other skill sets by building an experimental airplane. I constructed a Van's RV-14 out of a collection of parts in a builder's assistance program, Synergy Air, in Eugene, Oregon. From first rivet to first flight took 14 months, and I'm extremely proud of the work I was able to do, both physically and mentally.

### MALCOLM POND

IAC 429965

Chapter: 36

Member since 2002

**Occupation:** Physician, specifically cardiologist. Started solo practice in 1978 and then founded Riverside Cardiology Associates in Riverside, California, in 1991. We have three partners. I retired in 2018.

**FAA certificates and ratings:** ASEL, commercial, instrument, glider

### ZK: ONE AIRPLANE PROJECT IS NEVER ENOUGH.

MP: I've recently taken on another project, restoration of a Pitts S1-11B. I came across this airplane last summer. It was previously flown by Mitch Wild in the Nationals, then sold to another pilot. I was attracted to its power, performance, and price for a biplane. As of now, the plane has been completely redone, with a refurbished engine, crankshaft and camshaft, new side-pull canopy and turtledeck, new fuel and smoke tanks, new paint scheme, ADS-B, and radio. I intend to wring it out soon, and if everything looks right, I'll be back in the hunt, at least for Advanced category, anyway. I'm not sure if it will perform up to the standards of Unlimited, but who knows?

### ZK: WHAT ARE YOU MOST PROUD OF?

MP: Overcoming the stroke, both physically, emotionally, and mentally. I could not have done it without the help of my ever-patient wife. There are still exciting things to do, and I want to get on with life!

### ZK: WHAT ARE YOUR GOALS?

MP: To compete again, even if only to show that I can do it. More importantly, to rejoin the fraternity of aerobatic pilots and offer them my encouragement and support. **IAC+**

## WITH YOUR HELP... WE CAN TAKE ON THE WORLD!



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# WELCOME NEW MEMBERS



**MEMBERS ARE THE HEARTBEAT OF IAC**, and our heart is beating at a healthy pace. In the last quarter of 2019, IAC greeted 65 new members into the ranks of aerobatic competitors, recreational pilots, and enthusiasts around the United States and the world. In addition, we especially recognize the members joining or upgrading to a lifetime membership, demonstrating a commitment to enhance the safety, education, competition, and enjoyment of aerobatics.

## LIFETIME

Malcolm Johnson; Los Angeles, California  
Brett Schuck; Elkhart, Indiana

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Oztronix Aviation [OZAV], Melbourne  
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Cameron Lubbock, Keene  
Abishek Nair, Coquitlam

## GREECE

Averkios Anatasiadis, Alimos

## JAPAN

Hiroshi Ohsato, Nasushiobara-shi

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Lincoln Jones, Palmers North

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Jeff Black, Hartselle

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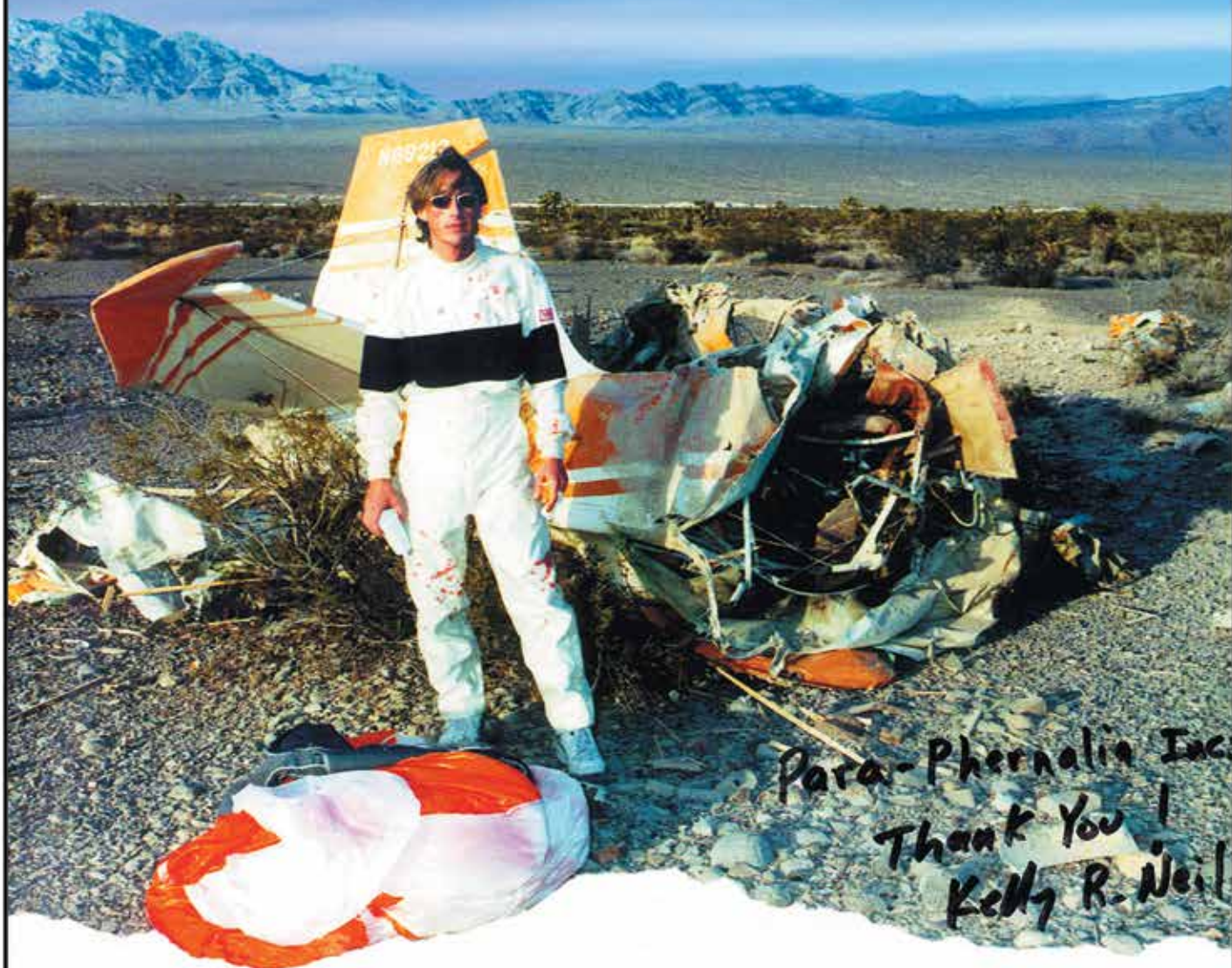
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