

SPORT

April 2017

Aerobatics

OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB



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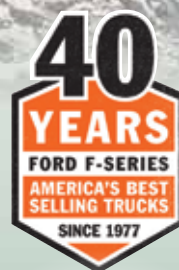


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Back in my hangar, a debrief awaited with lots of animated hand movements, mostly from me.

– *Tim Just*

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UND student Alex Talley with coach Michael Lents during sub-freezing winter training near Grand Forks, North Dakota. Photo by Michael Lents.

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Letters

EVAN PEERS, EDITOR

With this issue I assume the duties of editor of *Sport Aerobatics*. It is a challenging task, one I eagerly take on, to bring out the rich landscape of interests and expertise within the sport of aerobatics.

Mike Heuer has tasked me to go “in a new, more dynamic direction and deliver a publication that appeals to all of our 4,300 active members both here in the USA and abroad.”

Taking Mike’s call to action, I have immediately expanded the available communication paths between the IAC, its members, and the aerobatic community — from new social media venues (@*SportAerobatics* on Facebook, Twitter, and Instagram) to providing the ability for you, the IAC member, to have your voice heard through a new Letters to the Editor page. You will also find the magazine taking on a fresher, lighter, and more dynamic look over the coming months.

Now here is my call to action for you: The IAC is your organization. It was founded by its members. It is run by its members. It exists for its members. Only you, its members, know what you want from it. This space will become yours. Write about your passion. Send in photos of what brings you joy. Ask questions. Let your voice be heard.

Dear Editor,

In the story “Aerobatic Pilots” by Bruce Ogilvie and Champe Pool featured in the March issue of *Sport Aerobatics* magazine, the authors state that aerobatic pilots “are clinically speaking, a collection of extremely driven men.” I’d like to gently remind these gentlemen that there are also some extremely driven female pilots in the sport as well.

With two X chromosomes,
Beth Stanton, IAC 436050
Modesto, California

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. Letters should be concise, polite, and to the point. All letters are subject to editing for clarity and length.

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President's Page

Working with government and a new editor

MIKE HEUER, IAC PRESIDENT, IAC 4



For the past two years, the IAC has participated in the EAA/FAA Recreational Aviation Summit at EAA's headquarters offices and museum in Oshkosh, Wisconsin. This year's meeting took place February 7-8 and brought many of FAA's top-level executives from various FAA departments into one room with representatives of EAA, the IAC, and Warbirds of America. It was a very productive meeting. Subject matter was wide-ranging and detailed. But the most important aspect that I came away with was the face-to-face contact and personal interaction a meeting like this makes possible and to engage professionally and socially with top government officials. This type of relationship building is very important to getting things done and has been a part of EAA's tradition of dealing with government since its foundation in 1953. EAA founder and first president Paul Poberezny set the tone for cooperative and friendly relationships with the FAA, and this culture and way of doing business survives to this day.

I was particularly impressed with the EAA staff we have working for us. EAA's team included Jack J. Pelton, CEO and chairman of the board; Sean Elliott, vice president, advocacy and safety; Doug Macnair, vice president, government relations; Tom Charpentier, government relations director; and Mack Dickson, senior government advocacy specialist. My thanks to the EAA staff for including the IAC in the discussions and giving us time on the agenda to discuss our issues.

Attending on the IAC's behalf this year was Bruce Ballew, IAC government relations chairman; Doug McConnell, IAC vice president; and me, in my role as IAC's president. Bruce reports on the meeting elsewhere in this issue of the magazine, but suffice it to say, we were looking for answers and action on a few issues of importance to aerobatic pilots and aircraft owners. Please see *Lines & Angles* in this issue for additional information on the meeting. I also encourage IAC members to contact Bruce Ballew if you have any problems with contest waivers or aerobatic practice areas. Bruce and the IAC Government Relations Committee have decades of experience in dealing with these issues and work

with many IAC members throughout the year. They have straight and accurate information as to what to do.

Finally, a note about our magazine editor. Since 2008, Reggie Paulk has served as our editor. His tenure as our editor came to an end on March 21. Reggie produced many fine magazines over the years and was deeply dedicated to the IAC and its members. One of the friendliest, most courteous individuals I have ever met, Reggie was good to work with, and on behalf of the IAC officers and directors, I thank him for what he brought in the way of information and education to our membership. *Sport Aerobatics* is our most important product and reaches all 4,300 IAC members around the world, and so the work of the editor could not be more important to our members.

Evan Peers of San Carlos, California, assumes the duties of editor of *Sport Aerobatics* with the April issue of the magazine. Evan has served as IAC's official photographer since 2015 and has provided photo coverage of EAA AirVenture and the U.S. National Aerobatic Championships in 2015 and 2016.

For the past 16 years, he has owned and operated Airspace Media, which provides aviation and air show media content coverage to the industry, including UAV, aerial, air-to-air photography, and video as well as social media.

Originally a software engineer by profession, he worked for Oracle USA for 19 years but now devotes full time to aviation photography and journalism. Several of his photos have appeared on the covers of *Sport Aerobatics*. In 2015, he accompanied the U.S. Unlimited Aerobatic Team to France as its photographer and videographer.

His work has been recognized by awards from *National Geographic* and *Aviation Week & Space Technology*.

We now look to the future under Evan's direction, and I am confident that with his energy, drive, and creativity, we will move to new levels in our flagship publication. Welcome aboard, Evan!

Please send your comments, questions, or suggestions to president@iac.org.

IAC

IAC Participates in EAA/FAA Recreational Aviation Summit

By **BRUCE BALLEW**, IAC GOVERNMENT RELATIONS CHAIRMAN



PHOTO EAA/IAC

Mike Heuer, Doug McConnell, and Bruce Ballew at the EAA Museum during the Aviation Summit.

WISCONSIN — On February 7 and 8, Mike Heuer, Doug McConnell, and Bruce Ballew participated in the two-day EAA/FAA Recreational Aviation Summit at Oshkosh. This was the 13th annual meeting between the EAA and the FAA senior leadership. It was also the second year the International Aerobatic Club has been invited to attend and had a seat at the table to present and discuss issues important to the IAC and its members. EAA Chairman and CEO Jack J. Pelton and many of the EAA's other senior leaders participated in the entire event. IAC's participation provides the organization an opportunity to build stronger relationships with the FAA, EAA, and other EAA divisions like Warbirds of America and Vintage Aircraft Association.

The IAC had four items on the agenda for the summit:



ADS-B "Out"

The January 1, 2020, mandate for ADS-B compliance affects many of our IAC members and has others understandably concerned. Specifically, the currently available equipment is not capable of providing compliant data to the "system" while performing most aerobatic activities. The IAC has been working with the FAA on this for some time. The FAA is aware of the limitation and has reported it does not intend to pursue enforcement actions against aerobatic pilots performing aerobatic maneuvers. However, the IAC has asked the FAA to publish a policy statement stating its intentions until a long-term solution can be implemented. FAA representatives agreed to develop and publish this policy statement.

Long-Term Aerobatic Practice Areas (APA) and Contest Waivers

The IAC and FAA have worked together for several years and have made great progress in streamlining and improving the APA/contest waiver process. The process is not perfect but should get better over time. APA waivers are now issued for three years instead of two. The environmental impact documentation and review process has improved. However, we still face challenges related to getting the FSDOs to consistently and uniformly apply the regulations throughout the country, to making sure the FSDOs are aware of their obligations under the process, and to getting FSDO staff up to speed on the APA/contest waiver regulations.

The FAA representatives at the summit were aware of many of these issues and continue to be a great resource for resolving local FSDO issues as they arise. This process will take time to resolve completely, but maintaining a face-to-face relationship with the agency is critical to improving this process over the long term.

Additional Restrictions to Aerobatic Pilots With Special-Issuance Medical Certificates Related to Cardiac Conditions

The IAC has been following this issue recently. The NTSB has recommended to the FAA that pilots with special-issuance medical certificates related to cardiac conditions be restricted from performing aerobatics in waived airspace. This recommendation is primarily directed toward the air show industry, and the International Council of Air Shows (ICAS) has taken the lead on challenging the NTSB recommendation. However, because of the connection to waived airspace and natural regulatory creep, the IAC has voiced its opposition to the NTSB recommendation and will continue to track this. Because of a lack of applicable data, the FAA does not support the NTSB recommendation.

Aerobatic Practice Area Charting

The IAC, led by the efforts of Bill Finagin, has worked for many years to get APAs included on FAA sectional charts, similar to how glider and parachuting areas are depicted. The FAA had said that charts were to be released showing the new symbology last year, and we are now seeing the symbols showing up on charts. The launch of this IAC project dates back 20 years and we are happy to see the new symbols appearing and alerting pilots to the existence of APAs.

Though the IAC proposed a biplane as part of the symbol, FAA elected to go with a glider-like aircraft (as shown here), which is used for other types of special areas as well. While not what we recommended, it's good to see that these are finally on the charts.



First Aerobatic Clinic for RV Aircraft Announced

By RON SCHRECK



GEORGIA — IAC Chapter 3 will host an aerobatic clinic for Van's RV aircraft April 22-23, 2017, at Richard B. Russell Regional Airport (KRMG) in Rome, Georgia. The clinic is the brainchild of IAC Director Ron Schreck, who is an outspoken fan of the ubiquitous homebuilt experimental aircraft. With more than 7,000 aerobatic models of the RV now flying, Schreck is determined to see the RVs become as prolific in IAC competition as Pitts aircraft were in years past. Schreck has been competing in his own RV-8 at the Sportsman level since 2010 and plans to move up to Intermediate level competition this season.

Rome, Georgia, has long been a favorite venue for IAC competition, as Chapter 3 hosts the popular Bear Creek Bash aerobatic contest there each year. Schreck, along with Mark Fullerton, Chapter 3 president and a U.S. Advanced Team member, will be conducting a ground school at the clinic to familiarize RV pilots with all aspects of IAC competition.

Topics will include:

- Preparing your RV for aerobatics.
- Understanding Aresti notation.
- Contest registration and technical inspection requirements.
- Contest organization.
- Flying the Primary and Sportsman sequences.
- Judging standards.

Chapter 3 members will provide coaching as clinic pilots become familiar with the aerobatic box and the maneuvers flown in the Primary and

Sportsman sequences.

Schreck stresses that the clinic is not intended as a basic aerobatic course and that RV pilots should have experience with spin/upset recovery and be proficient at flying basic aerobatic figures. The clinic is designed for RV pilots who are comfortable with sport aerobatics and will prepare them for their first IAC competition event. Interested pilots should contact Ron Schreck at ronschreck@gmail.com.

Extra 330LE Aircraft With SiemensElectric Motor Sets New World Climb Record



GERMANY — On Friday, November 25, 2016, the Extra 330LE aerobatic aircraft, powered by a Siemens drive system, set a new world record for time to climb. At the Dinslaken Schwarze Heide airfield in Germany, the electric-powered plane reached an altitude of 3,000 meters (9,843 feet) in just four minutes and 22 seconds — for a climb velocity of 11.5 meters per second (37.7 feet per second). The time set by pilot Walter Extra was 1 minute, 10 seconds faster than the previous world record set by U.S. pilot William M. Yates in 2013. The world air sports federation, Fédération Aéronautique Internationale (FAI), has officially recognized the record flight in the category “Electric-powered planes less than 1,000 kilograms (2,200 pounds).”

The new drive system from Siemens completed its first flight in June 2016. The handy electric aircraft



motor was already a world-record holder for power-to-weight ratio even then. Weighing just 50 kilograms (110 pounds), it supplies a constant electric output of around 260 kilowatts, or five times as much as comparable drives.

Extra Aircraft Is Major Sponsor of IAC AirVenture

WISCONSIN — As we announced last month, Extra Aircraft of Germany and Southeast Aero of St. Augustine, Florida, will be the major sponsors of the IAC’s AirVenture activities in Oshkosh this year. The IAC and Extra are organizing a reunion of Extra owners, and all are invited to attend. You can preregister for the event at the EAA website (search for AirVenture anniversaries). Registration helps the IAC plan aircraft parking arrangements and the logistics for the event.

As part of the gathering of Extras, Walter Extra, chief designer and founder of Extra Aircraft, will attend AirVenture this year. This will be a great opportunity for Extra owners and pilots to meet and talk with Walter. The first Extra introduced to the aerobatic world was the Extra 230, which was flown in the World Aerobatic Championships starting in 1984 by Walter, Eric Müller of Switzerland, and Nicola Colangelo of Italy. The latest version of the airplane, the 330SC, is flown by many of the top aerobatic pilots in competition today, including pilots on the U.S., French, and Russian teams.

Frank Christensen to Attend AirVenture 2017

WISCONSIN — Frank Christensen, designer of the Christen Eagle aerobatic and sport aircraft and head of Christen Industries, has accepted the IAC's invitation to attend AirVenture as our guest as we observe and recognize the 40th anniversary of the Eagle II's introduction to the sport aviation community.

It was at Oshkosh in 1977 that Frank amazed the aviation world with the prototype of this beautiful airplane and the introduction of the Eagle II kit, which set a new standard for quality and completeness. The Eagle II remains one of the finest kitbuilt aircraft in aviation history. In addition to the two-seat version, Frank also created the single-seat Eagle I for the Eagles Aerobatic Team, which flew at Oshkosh for decades before its members retired.

Frank will be on hand on Friday and Saturday, July 28 and 29, and will attend the IAC Gathering of Members at the EAA Nature Center on Friday night. All IAC members attending AirVenture are invited to the dinner, where we will present awards and introduce our guests.

As part of the 40th anniversary celebration at AirVenture, the IAC will also hold a forum on the Eagle. The Eagle seminar will be held on Tuesday, July 25, at the IAC pavilion. The seminars are being organized by Michael Church. Speakers at the Eagle forum will include current Eagle owners and pilots Mark Ciaglia and Lynn Ojala.

Eagle owners and pilots are invited to attend AirVenture this year and join in on the celebrations. Those interested can preregister for the event at the EAA website (search for AirVenture anniversaries). Registration helps the IAC plan aircraft parking arrangements and the logistics for the event. As of March 3, 34 Eagles were preregistered for AirVenture.

Greg Koontz Airshows Aerobatic Instructor Scholarship Offered in Memory of Bobby Younkin

ALABAMA — The scholarship is intended for certificated flight instructors who have some tangible experience in aerobatics and have demonstrated through their actions that they are interested in becoming involved in aerobatic instruction. A current instructor certificate and a demonstrated need for the financial support provided by this program are required for eligibility. This scholarship consists of an eight-flight training program at Greg Koontz Aerobatics. All required ground-school training is included, along with a four-night stay at Sky Country Lodge with all-inclusive accommodations.

Deadline for submissions is June 30, 2017. Visit www.IAC.org/scholarships for more information and to apply.

Douglas Yost Memorial Aerobatic Scholarship Accepting Submissions

COLORADO — Administered by IAC Chapter 78, the scholarship is named for Doug Yost, an aspiring young career pilot who worked as a corporate pilot and was a rising star in aerobatic competition before tragically losing his life in a motorcycle accident in 2002. The scholarship grant is awarded annually from an endowment established by his family in 2002.

The purpose of the scholarship is to promote aviation safety through aerobatic training. The recipient will receive an award of \$2,000 in the form of a check made payable to the aerobatic school where he or she will receive training. Training must be conducted at a facility approved by the Chapter 78 Scholarship Committee, and it must be completed no later than 12 months after the grant is received.

Deadline for submissions is December 31, 2017. Visit www.IAC.org/scholarships for more information and to apply.

CP Aviation Offers Vicki Cruse Memorial Scholarship



Aerobatic pilot and former IAC president Vicki Cruse.

CALIFORNIA — This scholarship aims to promote aviation safety through unusual attitude and aerobatic training. The scholarship awards tuition in three modules of CP Aviation's EMT course: Stall/Spin Awareness, In-Flight Emergencies, and Basic Aerobatics. The course will be taught in a Citabria and Decathlon.

Deadline for submissions is June 30, 2017. Visit www.IAC.org/scholarships for more information and to apply.

IAC Nonflying Award Nominations Open

By PATTY ANDERSON, IAC AWARD CHAIR

WISCONSIN — Each year, IAC members nominate outstanding volunteers to be recognized for their contributions to the sport of aerobatics. This is an excellent opportunity to recognize outstanding IAC members who spend their valuable time volunteering for the benefit of many. Let's recognize our unsung heroes for 2016-2017!

You can nominate your fellow IAC members for one of the five nonflying awards below:

Frank Price Cup: Recognizes the individual who

has contributed the most to the sport of aerobatics in the previous year.

Robert L. Heuer Award for Judging Excellence: Presented to an outstanding aerobatic judge each year.

Kathy Jaffe Volunteer Award: This award recognizes an outstanding volunteer.

Harold E. Neumann Award for Outstanding Contribution as a Chief Judge: Recognizes an outstanding chief judge.

Curtis Pitts Memorial Trophy: Recognizes an outstanding contribution to aerobatics through product design.

Detailed descriptions of the nonflying awards, as well as nominating forms, can be found at www.IAC.org/legacy/non-flying-awards.

The deadline for nominations is June 2, 2017. Recipients will be recognized at the IAC Gathering of Members dinner during AirVenture in Oshkosh at 6:30 p.m. on Friday, July 28, 2017, in the EAA Nature Center. All IAC members are invited, and the dinner is complimentary.

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DIVING IN

BY TIM JUST, IAC 19479



EVAN PEERS

“Be in the hold 20 minutes after Bob [Meyer] takes off, and don’t be late,” I was told. I was nervous but excited, too. Circling in the hold, I watched and listened as I waited my turn. “Team, go when you are ready,” I heard over the radio. Full throttle, I dove into the box to fly the Advanced Known. As I completed the first couple of figures, the squelch broke on the radio: “No, No, No, No, No, No, No, No!” That’s seven rapid-fire no’s in amazingly quick succession. I’m not exaggerating; I still have the little cassette tape as proof. There is no ambiguity in his language. I asked if I could try again, and his immediate response was “LAND NOW!” I asked again but only heard silence. His radio was off. I could see the dust as he drove from the aerobatic box back to the Apple Valley Airport. Back in my hangar, a debrief awaited with lots of animated hand movements, mostly from me. Then the coach explained what he wanted and sent me back up. If nothing else, I was becoming an expert at hot-starting a Pitts.

This was my first formal training camp and the first professional coaching I had received. The voice on the radio was Sergei Boriak. To longtime readers, he needs no introduction. To those unaware, Sergei was a member of the Russian team for many years and immigrated to the United States in the mid-1990s. He is a brilliant pilot and has been coaching professionally since his arrival in the United States.

My goal for this first camp was to work on Advanced figures. After seeing me fly, Sergei knew exactly what holes I had in my aerobatic

flying that had to be filled before I could improve. Of course, he was right. After all, how can you do a vertical roll if you can’t even get vertical? He had me fly figures on the X- and Y- axis over and over. After many hours of solo practice without professional critique, I had some terrible habits, supported by great muscle memory.

I have no idea how many of my flights Sergei has coached. In the beginning, it was a combination of comical and painful. “Team,” — he still can’t pronounce my name — “can you tell you are dragging your left wing?” I replied, “No, sir.” Sergei: “LAND NOW!” And so it went over the next three days. Halfway through that first camp, things did start to click — well, they almost clicked. Again I heard, “Team, can you tell you are dragging your left wing?” While the real answer was no, I wanted to get at least a 0.2 on the Hobbs before I landed. I answered, “Yes!” Sergei asked, “Why you no fix?” I landed.

On the ground, his debriefs were incredibly detailed. Every second of every figure matters. During my primary aerobatic instruction, I was taught — as were most American pilots I have asked — to look left after the horizon disappears. Sergei wanted me to look straight ahead during the pull to the vertical. With 100 percent consistency, he could tell from the ground when I moved my head! He explained, “Same as driving car. Look left. You drift left. You see? No problem.” He said “no problem” a lot during our first

few camps. It wasn’t long before “no problem” was replaced by a word that I don’t think you can say on the radio or in front of your mother.

At the end of each camp, I would ask what he wanted me to work on before his next visit. He always had a plan for me. Fixing what’s wrong without losing what’s right became the next challenge. I found great value in having the pilots I normally practice with watch and listen to my coached flights. Having someone watch, just to be sure the old habits don’t start sneaking back in, is the goal.

It is a process, and it takes time to build a relationship with a coach. There has to be a transfer of trust to achieve real progress. A good coach will help to develop solid fundamentals, and you will get better. Most of the coaches record their comments. Listen to the recording after your flight and take notes. As you develop specific techniques for different figures, it’s great to be able to refer to your notes before a contest flight. Working with a coach is one of the most rewarding aspects of our sport, and Sergei is just one of a number of fine coaches available.

While this is just a rumor, I heard that when Sergei was teaching his son to drive, he never actually rode in the car with him. Instead, he wisely chose to follow behind with his trusty tape recorder and hand-held radio: “Why you no stop at intersection? No, no, no, no, no!” **IAC**

Move Up – All the Way Up

by PATRICK MILLS, IAC 437204

I started flying aerobatics when I was a student at the University of North Dakota (UND) in 2014. I initially signed up for the aerobatics course at UND in the Super Decathlon as I thought it would be a fun opportunity to be introduced to a different type of flying. The course did a fantastic job of teaching me about spins and upset training, as well as an introduction to competition-style aerobatics and what IAC judges are looking for in contests. After getting an introduction to aerobatics, the bug bit me and I was hooked. So I decided to ask Michael Lents to help me practice to try out for the UND Aerobatic Team. Mike, as well as UND coaches Greg Gilmer and Jon Sepulveda, helped me work on that year's Primary sequence in detail as well as general competition-style aerobatics, and I was flying well enough to make the team for the year. Thanks to the help from the coaches, both in the air and from the ground in the form of judge-like critique, I won one contest in Primary that year and took third in Primary at the U.S. National Aerobatic Championships.

The next year I was given an amazing opportunity to start competing in an Extra 300L as I moved up to Sportsman. Mike once again was monumental in helping me learn not only how to fly the Extra, but also how to present and compete in the airplane. That year I was also lucky enough to attend the Great Planes Aerobatics Camp

in Ashland, Kansas, hosted by John Morrissey, who provided me amazing coaching from the ground while Mike was able to help me in the air. All of the coaching helped me achieve a new level of understanding not just for how to succeed in competition aerobatics, but also how to fly the airplane better in any situation.

Any successful aerobatic pilot will tell you they could not be where they are if it was not for their coaching. This is not the type of flying that someone figures out by themselves — they practice and practice and receive critique, either in the air or from the ground, which helps them become successful. I've been a member of the IAC Collegiate National Champion Team with UND for the past three years, and I've been the highest-scoring individual in the IAC Collegiate Program for the last two years, none of which would have been possible without the amazing coaching I've had the opportunity to receive.

Since I started flight instructing, I have had the chance to begin coaching aerobatics a bit, which has been extremely rewarding. I was happy to help the UND Aerobatic Team as a safety pilot for student competitors in the Super Decathlon last year, as well as teaching aerobatics at UND trying to pass along all of the lessons that my coaches have taught me over the years. If anyone is new to aerobatics, I would highly recommend seeking coaching, whether it be in



COURTESY PATRICK MILLS

Patrick Mills.

the form of flight instruction in the airplane or critique from the ground, as it will certainly help your scores go up in any contest. Overall, I think receiving great coaching is essential to being a successful competition pilot. **IAC**

The first time practicing in front of your peers carries the weight of each line, radius, angle, and hesitation being offered for close scrutiny.

Practice Over the Northern Plains

by MICHAEL LENTS, IAC 434331

Over the practice field, a flurry of sensations and emotions cross the new competitor's mind. Intimidated, elated, nauseated ... hopefully not that last part. A thought occurs: "I'm starting below our training MRA." Over the radio, a voice calmly asks, "What's your altitude?" Within a moment of responding, the coach replies, "That'll work for your first run. I'm anticipating you'll end up around 2,200 feet at the end of your sequence and can walk it down once we see what you lose. You're big, so we don't want to be much below 1,800 in the Decathlon."

No matter how many times one practices a maneuver at altitude, the first competition can be shocking and exhilarating. Once safety and proficiency are established, getting students to "train how they'll fight" is the next step. Over the Northern Plains, struggling against the cross-box wind under the gaze of mentors and peers, students ignite their desire for competition.

Only months before, the lowest our students would finish a maneuver was at 3,500 feet AGL. Over the practice field, that's now the ceiling, and the maneuvering floor is 1,500 feet AGL. On the ground, a half-dozen students flank a coach as they track the Super Decathlon cutting through the box. Split into groups similar to the judging line at a contest, the more experienced competitors evaluate lines and practice scoring their teammates' performance. The competitor in the aircraft re-

ceives immediate feedback before attempting another run or practicing a selected series of maneuvers. A team develops.

The "box," our 1,000-meter cube of sky, lies just off the runway and away from the VFR traffic pattern. Careful planning goes into complying with all applicable regulations and coordinating with the airport manager and operators. We take all precautions, with multiple radios and observers monitoring CTAF and watching for traffic.

Andy Tibert, the airport manager, welcomes us every time with open arms, often reminding us that the propane for the grill is topped off and ready for lunch.

Still relatively early in the morning, Coach Jonathan Sepulveda has the student, Alex, pull the aircraft up near our "judges line." The next student swaps parachutes with Alex and loads up. We keep fuel loads light but maintain enough for about three student practices plus legal reserves. When we stop for fuel, I'll switch places with Jonathan and take up station in the back seat.

On the ground, experienced competitors from the previous season match aerobatic performance to the judging criteria. AJ Volberding qualified as a regional judge last year and maintains careful watch. He and competitor Estin Johnson excel at calling faults with lines and maneuvers. This helps free the coaches to focus on refining technique and troubleshooting student control inputs in



COURTESY MICHAEL LENTS

Michael Lents.

response to ground critique.

Helping students develop their unique style of maneuvering and energy management is extremely rewarding. Habits and muscle memory develop through a variety of experiences. Some techniques transfer well between machines, while others lend themselves to adaptation.

James Jacobson is our youngest team member. The first time practicing in front of your peers carries the weight of each line, radius, angle, and hesitation being offered for close scrutiny. From the ground, I call up over the radio to see if he's ready for the critique. A tension hangs in his voice, followed by an affirmative reply. The positive details are broadcast across VHF, with clicks verifying reception and understanding. "One more thing," I radio. My students assisting saw something peculiar about the rolls but were having trouble placing it. "You're flying a Super D; you did a Cub roll." This breaks the tension and



MIKE VANDERMEULEN/UNIVERSITY OF NORTH DAKOTA

The 2016 University of North Dakota Aerobatic Team.

is all he needs to hear to make the next attempt work. James went on to make the podium at the 2016 U.S. Nationals in Sportsman.

Team building thrives during these practices. Students experience flying at competition altitudes, critiquing each other and managing the fast-paced operations of sharing an aircraft. Some, like Mike VanderMeulen and Ben Golden, work the camera between flights to share photographs among their fellow students. Others take turns at the grill, helping with preflight checks on the aircraft or taking time to discuss aviation with visitors curious about the aircraft they saw doing maneuvers near the airport.

Once back at Grand Forks, the team forms up for dinner to relive the excitement of the practices. A botched maneuver, a botched radio call, a botched critique all become fodder for each other's amusement. Congratulations for good performance, for growth, for assisting the team lead to anticipation of the coming competition.

The intensity of these sessions pushes pilots to rise to the challenges of competition and expand their limits. They quickly discover more about themselves and about the close-knit commu-

nity of aviators.

I recently read the following quote in an *AOPA eBrief*:

"Live daringly, boldly, fearlessly. Taste the relish to be found in competition — in having to put forth the best within you to match the deeds of risk-taking, hard-working competitors." — Henry J. Kaiser, industrialist

For those striving to be the best at their craft, this perfectly sums up the joys of aerobatic competition. To put forth the best within us and our machine, to daringly

meet on the field of competition, calls to the aerobatic pilot. Knowing the limits of risk-taking and risk-management, putting a machine safely through its paces, and presenting the craft as best as one can earns the respect and admiration of our peers.

Watching students discover their strengths, analyze maneuvers, and work together is inspiring. Some will return for a time as instructors to help safety-pilot new students, like alums Greg Gilmer, Jordan Weis, Aaron Fettig, and Patrick Mills. Some, like Cameron Jaxheimer, take their skills to the world stage. All readily give back to the aerobatic community and promote both the safety and excitement that aerobatic competition offers. As a coach, that has been my honor: to develop a student's style and promote a safe approach to expand his or her envelope. **IAC**

Practicing at Altitude With Traffic

At the University of North Dakota, aerobatic lessons and practice occur outside the Class D and away from the Victor airways. Our policies establish 3,500 feet AGL as our minimum recovery altitude (MRA). This leaves plenty of room for error and experimentation to promote exploring the full aerobatic envelope in a low-risk environment. It also keeps operations above the arrivals and departures in the busy airspace surrounding Grand Forks, North Dakota. But there is still traffic in the area.

The aerobatic instructors at UND developed an understanding with the local RAPCON. We keep out of the way, and they update us on potential conflicts using cardinal headings instead of clock positions. "Traffic 3 miles at your 4 o'clock" loses its effect when pivoting in a hammerhead. The controllers in the area work magnificently with the challenges of a high-volume training environment.



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Paying it Forward

The Coach

by DAVE WATSON, IAC 26557

After a joy ride I took with Dagmar Kress, I took the hook deeply and was inspired to fly, shortly thereafter earning my pilot certificate. In 1999 I bought a Super Decathlon and joined IAC Chapter 35 in New England. Several of the members embraced me after I stepped up at my first meeting and agreed to be the newsletter editor. In mid-1999 a small team of us formed around the leadership of Craig Lesinski (Unlimited pilot, CFI, and judge) and Hans Bok (Advanced pilot and judge). I moved my plane to Mansfield, Massachusetts, to where Craig taught, and I allowed him to use it for aerobatic instruction. Our airport was away from airways, so we were fortunate to be able to practice aerobatics directly over our home field. Over the second half of 1999 and throughout 2000, we practiced nearly every flight with at least Craig and/or Hans providing critique from the ground. At the end of 2000, Mike Ganor (Primary), Hans, Craig, and I (Sportsman) each won the first place Northeast Aerobatic Championship trophies (which at the time were sponsored by the New York chapter prior to inception of the IAC Regional Series).

Do I think there is a relationship between critiquing and flying well? Indeed I do. Those flights with eyes from the ground ensured that all of us were not teaching ourselves and reinforcing bad habits. Additionally, as a newly minted judge in 2000, watching Hans fly and listening as Craig critiqued or vice versa taught me how to see the errors; I think this vastly contributed to my growth as a pilot and as a judge.

Winding the clock forward, now with more than 70 IAC contests flown and judged, I enjoy and am

delighted to provide critique to others as a way to pay forward what Hans and Craig as well as numerous others have provided to me over my years of aerobatic flying. I have been back in California for the past 12 years. Holding two FAA-waivered boxes, our Chapter 38 now provides approximately six to eight critique days for our members each year. On those days, the senior members of our chapter provide ground critique to our members, and to each other, as we train. Not every one of our members avail themselves of this benefit. But I can say that the precious minutes in the box when Howard Kirker or Tom Myers and other members have eyes on me more than makes up for the hours I spend critiquing others. On chapter critique days and while coaching official aerobatics camps, I have watched many of our chapter members improve vastly from the ground critiquing.

A few years ago a chapter member approached me for support. Josh Horwich had been renting a local Pitts S-2C, and after several years, a couple of hundred hours of solo practice, and numerous contests, his scores were not improving and he was getting frustrated. I flew with Josh in my Super Decathlon and immediately noted he had many bad habits. Among them, he was not even looking where he needed to be looking and as a result was simply flying blind. With the bad habits ingrained, ground critique alone was unlikely to help. We needed to start over, and the best plane ever created for learning aerobatics is the Super Decathlon. From the back seat I could observe and critique every move Josh made. Josh agreed to step

back from the Pitts for a while. Resulting from numerous flights with both ground and onboard critique, Josh's scores skyrocketed while flying my Super D. In 2015 he took third place in the IAC Southwest Regional Series and is now president of our chapter. Josh's confidence and appreciation of the sport was rekindled from the support our chapter provided to him. It is now my delight to have Josh as a named pilot on my Pitts S-2B, and I continue to watch and routinely fly with him to reinforce his skills.

As Beth Stanton, another one of my students (and often mentor) and past chapter president, is often heard to say, "It takes a village." Chapter 38 is a village, and it has been such a pleasure to be part of such a vibrant and healthy organization. I have had the great pleasure to work intensely with several members of our chapter, and I have personally grown from the opportunity to see them advance through the categories while they and I continue to enjoy the sport. I believe that sharing and learning from each other is the key to doing well and ensuring longevity in this sport. It's as demanding a sport as there is. You cannot self-teach the skills necessary and cannot get the full benefit of it unless you have participated openly and collaboratively. Get coaching as soon as you can and continue to get it throughout your career. If you are a judge or have extensive competition experience, please give back and take others under your wing to bring them along. I can attest that the reward I get from watching those whom I have coached do well is the energy that keeps me in this sport.

IAC



Dave Watson (left) presenting the 2015 California Points Series Third Place Sportsman award to Josh Horwich.

No Longer Stuck

The Student

by JOSH HORWICH, IAC 432322

Over the years, I have read the advice about seeking ground critique and coaching in *Sport Aerobatics* as well as from other pilots, but until I started working with my coach, Dave Watson, I couldn't appreciate how helpful coaching truly is.

Let's rewind a few years, to before I had first dipped my toe into the contest waters. I had been flying aerobatics for quite some time, most recently having racked up a few hundred enjoyable hours in a Pitts S-2C on the line at a local flight school. After receiving a thorough checkout in late 2003, I mostly flew it solo and occasionally took friends for rides. When going solo I'd sometimes practice a Sportsman sequence before moving on to some less structured playtime — but without any real feedback I wasn't really getting much value from the practice other than the sheer enjoyment of it.

I joined the local IAC chapter shortly thereafter, and each year I would think about making it to a contest but never quite made it happen until 2011. Over that summer, during one flight I got a few pointers from a CFI who had some competition experience, but other than that I was largely on my own in terms of flying to competition standards. Relying on my familiarity with the plane, along with the fact that there were only two

other first-time Sportsman pilots, I was able to garner the coveted "First Time Sportsman" award at Delano. However, I could tell there was a significant gap in skill and technique between my vantage from the middle of the pack and the pilots who were receiving the clinkies.

I flew a few more contests over the next few years in this manner — placing in the middle, not having high expectations as I wasn't practicing much compared to other competitors, but still having fun. I even attended a chapter critique day or two along the way and attended judges school in 2014 so I could learn more about the grading criteria. By late in the summer of 2014 I had flown my fourth contest, and I could tell I was not making progress. I reached out to Dave Watson — a longtime chapter member and someone I knew coached others — for help.

He laid out a plan — as his Super Decathlon would be down in Borrego Springs in October for Chapter 36's fall contest, I would fly that contest after we did a few flights over the intervening weekends. At first I had some trepidation. I hadn't flown a Super D in over a decade, and never with an eye toward competing. But after a few flights with Dave coaching me from the back seat, my eyes opened up. He was rapidly giving me pointers on all manner of details I hadn't really learned properly or methodically before. Where to look/focus, how to be crisp, how much to float the back side of a loop, how to center rolls on lines — the details were pouring in. I also found

flying the Super D a challenge. I was spoiled by the fast roll rate and the excess power in the Pitts. But it was also a blessing. It gave me — and Dave! — time to see the subtle errors in rolls that were happening when I tried to fly them mechanically and without adjusting for what the plane was actually doing.

Dave also added another element to the mix — he recommended a Sportsman Free that would likely score higher, and I enjoyed the extra challenge. By the first contest, I already saw the benefits of his coaching. I got two clinkies, missed third-place by one-tenth of a percent, and noted that I scored 6 percent higher on my Freestyle flights than the Known ... all in a plane I had flown at most a half-dozen times before the contest. I was hooked!

In addition to enjoying even more success in 2015, and moving up to Intermediate in 2016, I also gained a newfound appreciation for the teamwork aspect of the sport. Under Dave's coaching, I was no longer a solo pilot showing up at contests. Now I was working as part of a group. In addition to flying more contests, I involved myself in the sport in other ways, becoming a regional judge in 2015 and stepping into the role as our chapter's president this year.

So for me, the value of getting coaching is clear — it helps me get feedback much more quickly, I get to learn from a more experienced competitor, and the results speak for themselves. For anyone who wants to get serious about competition but doesn't yet have a coach, find one and avail yourself of their knowledge!

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Golden Feathers

Layne Lisser's Christen Eagle II sporting golden feathers during the 2016 Apple Valley Duel in the Desert contest (KAPV). Layne has configured his Eagle in a single-seat configuration and named her "Aguila de Oro" (Golden Eagle).



Who's the Aerobatic Instructor?

by GREG KOONTZ

I started teaching aerobatics in 1974. I had moved from my home in Alabama to work at Aero Sport in St. Augustine, Florida. I had flown a few air shows with their air show troupe, Colonel Moser's Flying Circus. They needed to use my Cub so they let me do a comedy act to lure me to Courtland, Alabama. We got along well, they liked my act, and they needed a flight instructor at their FBO, so I ended up moving to Florida.

I was needed for all kinds of instructing, but the biggest lure to Florida was the aerobatic instructing. Aero Sport was a Bellanca dealer back then, and it used the Citabria (later the Decathlon) for the acro school. I had flown a Citabria some, so I was given the chance to fly the aerobatic and tail-wheel stuff. It was a dream come true. We were doing a dozen air shows a year, and in between I was the aerobatic instructor!

The little catch left out of all this enthusiasm is I had no idea how to teach aerobatics. I was mostly a self-taught aerobat. What I lacked in aerobatic skills was hidden by my ability to kind of make it look okay from the ground. But getting in the Citabria and trying to teach something I really didn't know became a comedy of errors.

Luckily, I had Jim Moser and Jim Holland on hand. They were

both accomplished air show pilots and now, like it or not, my mentors. I spent many an evening hanging out with them over a cold one, picking their brains to figure out why my rolls dished to the right, why my hammers rolled over upside-down, and why my loops looked like they were laid by a chicken. One day, Jim Holland even flew his Pitts right behind me and barked instructions over the radio as I slow-rolled about a thousand times, jerking and kicking and trying to morph from a gorilla into a ballerina.

I feel kind of sorry for my first few dozen students who learned, well, I don't know what! I guess they had no idea they were really paying for my aerobatic instruction. Today, I run what may be the busiest aerobatic school. I fly 80-plus people a year in two-day aerobatic courses, working out of my house on a grass strip as a "bed and breakfast aerobatic school." After 40-plus years of teaching aerobatics, I can tell you with a straight face that I am still learning.

Teaching an eye-hand-coordination skill is much different than doing it. Some of the top aerobatic personalities in the business have asked me, "How in the world do you do this?" But knowing how to do aerobatics well does not mean

you know how to teach it to someone else. Teaching requires a carefully laid-out plan. It has taken me years to figure out the right plan, and I am always tweaking my techniques. A teacher learns to start with a sound foundation and then carefully builds layers upon layers of information in just the right sequence to produce a final product.

So if finding the top aerobatic pilot doesn't necessarily ensure you have found the best instructor, how *do* you find a good aerobatic coach or instructor? What are you looking for?

First, I would want a person I felt comfortable with. An instructor has got to have your confidence. He or she should be able to talk to you — not at you. Once you've established a rapport, you're ready to evaluate your instructor's teaching.

Look for patience. A person who is rushing to the airplane to fly might be more interested in getting the Hobbs clock ticking than in providing good instruction. A good lesson consists of explanation, demonstration, practice, and review. If your instructor's lesson plan doesn't start with a thorough ground school that explains every detail of the flight lesson, you're in the wrong place — you're about to pay for an airplane ride, not a lesson!





COURTESY GREG KOONTZ

Look for a curriculum that builds from basic to more complex maneuvers. I've had many students come to me who'd had a first lesson consisting of slow rolls, snap rolls, Immelmans, etc. That's not a first lesson; it's watching your instructor have a good time on your nickel! It took me a few years to totally get it, but when I finally found the right sequence in which to teach the maneuvers, students started learning much more, much faster. It might be a warning sign if all that a 10-hour aerobatic course gets you is some basic maneuvers.

Ask around. If the instructor you are considering produces a successful product, there should be some good examples of that product walking around. Nothing is more valuable than a good referral from a satisfied customer. If no one can be found, it might not necessarily mean the instructor isn't a great choice — it might simply indicate he or she doesn't instruct much or is new at it. I would approach either situation with some scrutiny. I understand the dilemma new instructors face. They can't get students because of their lack of experience and can't get experience because they don't have students. This is why I am a strong believer in mentors. If an instructor is a novice, he or she should be working under the advisement of a good instructor. It's a system that works in most skilled professions.

Having the right mentor or instructor is the key to success. Teaching yourself aerobatics is a lot like teaching yourself how to dance — you might have a lot of moves, but you might just be looking pretty silly out there. Being taught in the correct sequence will lead you down the right path. The path starts from a humble beginning and progresses slowly and evenly to the big goal. You don't build a house starting with the second floor. So get some good help, build a foundation, and have some fun.

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Knocking the Dust Off



Finally, it's time to go flying. When you go up for the first time after a winter layoff, whether in a Pitts or in your carbon-fiber wonderplane, your cardiovascular system is acclimated to your sedentary 1g lifestyle. Just like an out-of-shape muscle, it will need time to bulk up.

Acclimate Yourself to the G-Forces and Basic Maneuvers for Your Category

The first couple of flights I take each spring are just to get reacclimated with normal operations of the airplane. Take some short flights to make sure there are no mechanical issues. Do some normal takeoffs and landings and some crosswind landings. Maybe fly a short cross-country flight to make sure the GPS and the autopilot

lot (yeah, sorry, I have an autopilot) are working correctly.

G-force acclimation flights start with tight turns to tolerance and practicing the straining maneuvers. It's important to work up slowly so that you can recall and easily recognize the sensation of reduced cerebral and retinal blood flow. If a higher g-force is reached slowly, it is very easy to learn when you are starting to feel a little woozy or when your vision begins to tunnel down. Each time you do this, you become more comfortable and familiar with the sensation and can readily recognize the onset of excessive g-force and release the pressure. Also, your cardiovascular system begins to respond more quickly each time.

Then begin cycling between positive and negative g. Do a pull followed by a roll and then a gentle push. In my experience, the most difficult thing about g-force loading is in the rapid cycling between positive and negative g.

Again, this will take time for your cardiovascular system to acclimate. The training needs to be started early in the season, and you need to practice regularly to maintain this special type of physical fitness. This is why you need to have budgeted for your season. If you are going to fly safely, you will have to run a lot of gas through the carburetor.



Excerpted from the IAC Ohio Chapter 34 newsletter, April 2015

by JEFF GRANGER

Learn the Known Program and Practice in Front of a Coach

You can have a lot of fun flying recreational aerobatics and never go to a contest. You can do maneuvers that look beautiful to you and a passenger in the plane. But if you want to win at a contest, it has to look right to the judge on the ground. It doesn't really matter how it looks to you in the cockpit — only what the judge sees. There is absolutely no way you can practice this unless you have a ground-level observer.

An important part of chapter development that I worked on during my years as an officer was a stable home base airport with a congenial FBO and airport board, then the establishment of a full-time waived aerobatic box on the field. Although we lost this at Marysville, it has

been continued at Bellefontaine. We should have some scheduled practice days and an acro camp each year.

Begin by practicing your Known and Freestyle sequences off-site. Practice all of the maneuvers separately and repeatedly and get proficient with them before flying full sequences. When you do start flying the full sequence, start up high and loose, then gradually get tighter and tighter, and bring it down to a lower level. Altitude is life insurance. You will botch a lot of maneuvers early on. Do it up high where there's plenty of room to recover.

Practice far from your home base field and avoid practicing in the same location more than once or twice per season. It's certainly tempting to get a couple of favorite reference points and practice over them repeatedly, but it will result in phone calls to the airport or the flight standards district office. Mark out a grid for your practice areas and check them off as you go so you don't repeat the same area too often.

Now it's time to call flight service and open the box. You and your buddies do a rotating schedule of flying and coaching each other. One more reason to get certified as a judge.

Just as you did when you were working off on your own, when you get in the box, work first on the basics. There's no point in flying a full

sequence if you can't do a vertical line or a 45 degree line to the satisfaction of the judge.

There's no point in doing looping maneuvers if your looping segments are not round. This is also the time to develop your timing. You can estimate that the line after the roll on a half-Cuban is going to be approximately half of the count before, but you need to have a coach tell you if this is true. Your sighting guide may be off. You might have it perfectly on the horizon during your verticals and could still be negative or positive. Errors in technique on the basics tend to be perpetuated and amplified when they are combined into full figures.

Finally, when you have the sequence altogether nice and tight and down at a contest altitude, you can develop the timing and muscle memory that will carry you through into the contest season. When you dive into the box during your first contest flight of the year, it should be no surprise at all. You will think, "What fun, all I have to do is fly this one sequence just like I practiced it." The flying will be virtually automatic. The comfort level will allow you to concentrate on wind correction and presentation and not on the individual maneuvers. You will experience the satisfaction of coming closer and closer to mastering something which can never be mastered.

IAC

Contest Calendar 2017

www.iac.org/contests

Date	CANADA	Prov	Airport	Categories
2017-06-17	Killam Flagstaff Aerobatic Contest	AB	CEK6	P:PSIAU
2017-08-19	2017 Canadian National Aerobatic Championships	ON	CYHS	P:PSIAU
2017-09-02	Rocky Mountain House Aerobatic Championships	AB	CYRM	P:PSIAU

Date	NORTHWEST	Chapter	State	Airport	Categories
2017-06-23	Apple Cup	67	WA	KEPH	P:PSIAU G:SIAU
2017-07-14	Corvallis Corkscrew	77	OR	KCVO	P:PSIAU
2017-07-21	Can-Am Aerobatic Challenge	67	MT	KCTB	P:PSIAU
2017-08-11	Beaver State Aerobatic Contest	77	OR	KPDT	P:PSIAU G:SIAU
2017-09-08	Apple Turnover	67	WA	KEPH	P:PSIAU

Date	SOUTHWEST	Chapter	State	Airport	Categories
2017-04-07	Hammerhead Round Up	36	CA	L08	P:PSIAU
2017-05-05	Duel In the Desert	49	CA	KAPV	P:PSIAU
2017-06-02	Coalinga Western Showdown	38	CA	C80	P:PSIAU
2017-09-02	Happiness Is Delano	26	CA	KDLO	P:PSIAU
2017-11-03	The Tequila Cup	62	AZ	KAVQ	P:PSIAU G:SIA

Date	SOUTH CENTRAL	Chapter	State	Airport	Categories
2017-04-22	Ben Lowell Aerial Confrontation	12	CO	KAFF	P:PSIAU G:SIA
2017-06-02	Lone Star Aerobatic Championship	24	TX	KGVI	P:PSIAU
2017-06-23	Gulf Coast Regional Aerobatic Contest	25	TX	26R	P:PSIAU
2017-06-24	Midwest Aerobatic Championships	80	NE	KSWT	P:PSIAU
2017-07-08	Super D Tango	24	TX	XA68	P:S
2017-07-15	High Planes Hotpoxia Fest	12	CO	KFMM	P:PSIAU
2017-09-09	ACE's High Aerobatic Contest	119	KS	KEWK	P:PSIAU G:SIAU
2017-10-07	The Clyde Cable Rocky Mountain Aerobatic Contest	5	CO	KLAA	P:PSIA G:SIA

Is your chapter hosting a contest that is not listed? Want to find out how to host a new contest?
Contact Lorrie Penner at excdir@iac.org.

Date	NATIONAL	State	Airport	Categories
2017-09-23	U.S. National Aerobatic Championships	WI	KOSH	P:PSIAU G:SIAU

Date	MID AMERICA	Chapter	State	Airport	Categories
2017-05-20	Hoosier Hoedown	124	IN	KOKK	P:PSIAU
2017-06-03	Salem Regional Aerobatic Contest	61	IL	KSLO	P:PSIAU
2017-06-16	Ohio Aerobatic Open	34	OH	KEDJ	P:PSIAU
2017-07-08	Michigan Aerobatic Open	88	MI	3CM	P:PSIAU

Date	NORTHEAST	Chapter	State	Airport	Categories
2017-04-14	Carolina Boogie	19	NC	W03	P:PSIAU
2017-05-20	Wildwood Acroblast	58	NJ	KWWD	P:PSIAU
2017-07-14	Green Mountain Aerobatics Contest	35	VT	KVSE	P:PSIAU
2017-09-09	East Coast Aerobatic Contest	11	VA	KHWY	P:PSIAU

Date	SOUTHEAST	Chapter	State	Airport	Categories
2017-03-31	Snowbird Classic	89	FL	X35	P:PSIAU G:S
2017-05-04	Sebring 75!	23	FL	KSEF	P:PSIAU G:SIAU
2017-05-26	Armed Forces Memorial Aerobatic Contest	27	MS	KGNF	P:PSIAU
2017-06-08	Southeast Aerobatic Open - Bear Creek Bash	3	GA	KRMG	P:PSIAU

CATEGORIES: [P]ower/[G]lider: [P]rimary, [S]portsman, [I]ntermediate, [A]dvanced, [U]nlimited.

ADDITIONAL DETAILS: including registration details, contact information, complete contest and practice dates, and more can be found on the IAC website at www.iac.org/contests

NOTE: The IAC online pre-registration system is currently unavailable while undergoing overhaul. Please contact the Contest Director or a representative of the listed Chapter to pre-register or to volunteer. Pre-registration assists the limited volunteer staff to accommodate all participants and make each contest a success.

The Intangible Aspects of Aerobatic Judging

by JOHN MORRISSEY

After you complete the required prerequisites for your judging certification and join the current judges list, there will come the day when you go to the judging line the first time with your assistant judge and recorder. The day when you are responsible for your judging station. The day when your operational application of judging begins. You will be as prepared as you can be from a technical knowledge perspective, but there are some intangible aspects of judging that are not covered in the rule book, aspects that can only be gained by practical operational experience. I have been at this game since 1975 and taken a few notes along the way. I pass those on as the last points to consider when teaching a judging school, and to those interested in becoming better judges. Most of these suggestions are intuitive, and some are not.

Keep in mind that you may be on the line for a long time in all kinds of weather, and for more than one day. There are fatigue factors to be considered. There are different ways to organize your assistants as well. What follows are just a few points that I had to learn over time that may be of some assistance.

Let's start by defining the judge's mission, your job: to award an accurate score for the maneuver in progress and ensure it is recorded in the correct place on Form A. All other functions can be sorted later. You must grade the maneuver the instant it is finished. The assistant judge will not (should not) call the next maneuver until you give the score. That next maneuver can begin one to three seconds after the preceding maneuver. In that short period of time the score must be given and recorded, and the caller must begin to announce the next maneuver. The point here is that if for any reason you cannot give the grade the instant the maneuver ends, there is no time for discussion or meditation. You are not going to be

any smarter 10 seconds after the maneuver has been completed than you were the instant it finished. If you do not have the score in the moment, award an A (average) and move on. Any delay affects the scoring of maneuvers that follow and disrupts the flow of your judging station.

Here are a few tips you may find helpful when preparing to go to the judges line as well as during the flights you will be grading.

- Protect yourself from the sun. Use protective clothing. Protect your exposed skin with SPF. Make certain your (sun)glasses are clean. Take cleaning cloths and fluid to the line to keep them clean. Have a sunglass repair kit handy. Don't look directly into the sun under any circumstances! Do not fry your maculars.
- Obtain and use a reclining chair. This helps eliminate parallax viewing errors and saves your neck. Square your judging chair and your shoulders with the X-axis. Place yourself in the middle, caller upwind, recorder downwind.
- Keep the same assistants throughout all programs. Use the Known Compulsory flight for training your team when every sequence is the same. Your team will need that training to efficiently handle the Frees when every sequence is different.
- If you discover your assistant cannot accurately read and call an Aresti sequence, you must find another who can or call your own flight.
- Brief your assistants on your preferences for



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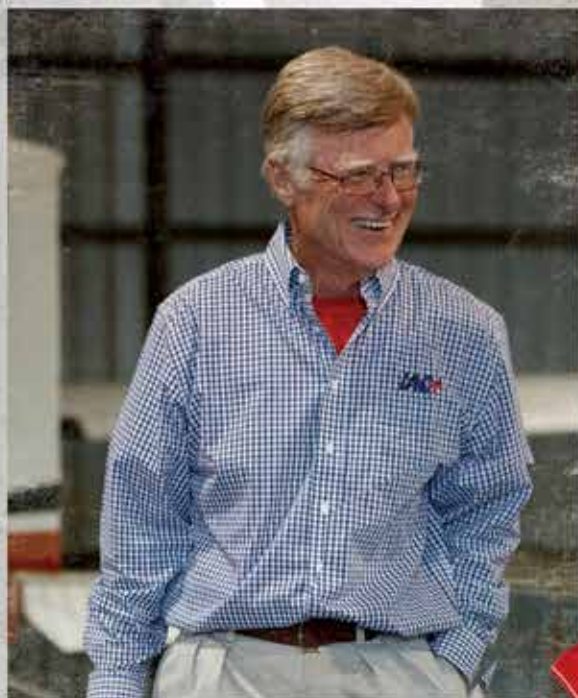
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calling and recording. Have your assistant, and recorder if qualified, count points on rolls, the number of rolls in rollers, and rotational elements in spins and rolls. Have your caller announce “opposite or same” just prior to all linked rotational elements.

- Be certain! If you are not, for any reason, grade the figure an A.
 - If you get behind for any reason, pick up scoring at a known figure/point and give an A to all you missed.
 - Give lows when you are certain regardless of what you think other judges may do.
 - Be in charge, but not intimidating.
 - Do not grade to look good on the RPI. You should be able to see the same maneuver flown the same way three years hence and award the same grade plus or minus one point, preferably half a point. In other words, be consistent. It is the only way to be fair.
 - Do not concern yourself with scores other judges may be awarding.
 - Keep nonessential conversation to a minimum, in volume and length.
 - Grade the maneuver, not the pilot. Try the best you can to not know who is flying. Have one of your assistants handle the order of flight verification at the Chief Judge’s table. On Frees, have your assistant fold the pilot’s name under in the upper right corner of the B/C form before you receive it.
 - Grade the maneuver as it progresses. When it is finished subtract the number of your folded fingers from 10 and award that score. The lowest score will be a numerical 0.0, or an HZ.
- Keep in mind that you may be on the line for a long time, in all kinds of weather, and for more than one day.
- Once a maneuver has been graded, forget it. It is history. Immediately transfer your complete attention to the next figure.
 - Limit your comments in the Remarks on Form A to Low, Low-Low, High, Interruption, and Reason for HZ and a 0.0. This is a contest, not an aerobatic training camp. If your recorder is trying to write down all your comments, he or she will get behind. And when the recorder gets behind, your judging team gets behind.
 - Do not entertain complaints from competitors regarding your scores in the flights you have judged. A brief anecdote about those situations: Several years ago in a regional contest, an annoyed Intermediate competitor approached me with his score sheet, not the individual Form A’s, and asked why I had scored his flight lower than other judges. Well, I said, I have no idea as I do not remember the flight. Having said that, I took the time to check all the other Intermediate pilots’ score sheets. As it turned out, while I had scored his flight lower than most other judges, my score for his flight was the highest I had given versus his competitors on that flight.
 - And finally, take a close look at every Form A before the runner carts them off to the Chief Judge’s table.

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MEET A MEMBER

by GARY DeBAUN

Luke Penner

IAC 437639

Chapter Affiliation: International

Occupation: Chief Flight Instructor,
Charter Pilot

Age: 33



GD: Luke, tell us a little about how you got started in aerobatics.

LP: Over 40 years ago, my father started “Harv’s Air,” which has become one of Canada’s largest flight schools and has always had a storied history in promoting the value of tailwheel, stick and rudder, and aerobatic flying. My father taught me how to fly on a 1942 Taylorcraft L-2, then a variety of other tailwheel airplanes before eventually checking me out on the school’s Pitts S-2B. Needless to say, it was love at first flight, and I’ve been teaching aerobatics on our three Citabrias and Pitts for the last 11 years.

GD: When and where was your first contest? How did it go?

LP: After teaching basic aerobatics for over a decade, I finally stopped making excuses and flew in my first contest in Seward, Nebraska, in 2016. I was very nervous going into it, but thankfully through some generous last-minute coaching from Tom Adams, I was able to finish first in Sportsman. I also picked up the Highest Scoring First-Time Sportsman trophy. It was a fantastic weekend, not only due to my results, but because I met so many great people whom I now consider to be friends. I remember speaking to you, Gary, at AirVenture a few years ago, and you told me that one of the best parts about the sport is the people. You were right!

GD: Do you have any specific goals in aerobatics?

LP: This year I’ll be flying in Intermediate, which I’m very excited about! In a few years I’d like to move up to Advanced, and if that goes well, Unlimited one day.

GD: What is your current acro ride? Any changes in the future?

LP: I am currently competing in a 1983 Pitts S-2B, which is a wonderful airplane, but in the next few years I hope to move up to an Extra 300L.

GD: Last year was your first trip to the U.S. National Aerobatic Championships. What were your impressions? Will you be back this year?

LP: I had a very positive experience at Nationals last year! From the moment I arrived from my 1,000-nm trip from central Canada to North Texas Regional, I was greeted by familiar, friendly faces who took time to get me orientated (which was very appreciated since I was quite intimidated with this being Nationals, and not to mention it was only my second contest ever). I found it to be very well-organized, and I especially appreciated the social media news feed to keep us informed of the schedule. I look forward to seeing everyone at Nationals in Oshkosh this year!

GD: What is your favorite figure to fly?

LP: I love snap-rolls! However, if I’m giving someone a joy ride in the Pitts, then you can’t beat the dynamic, yet graceful, barrel roll.

GD: What’s your favorite banquet food?

LP: Any type of seafood!

GD: Do you have any pre-acro routine, like stretching, yoga, or listening to music?

LP: Like everyone else, I walk through my sequence many times. I also try ignore what everyone else in my category is doing and just focus on executing my plan.

GD: Who in the sport has been an inspiration to you?

LP: For as long as I can remember I have looked up to Patty Wagstaff. She has been of great encouragement to me, as well as provided me with guidance in competitive flying. I've also been inspired by Aaron McCartan, who finished first in Advanced at Nationals last year. Aaron's passion and skill are matched by his willingness to mentor new pilots to the sport, and the encouragement and advice that I've received from him have been greatly appreciated.

GD: If you could make one change to the International Aerobatic Club, what would it be?

LP: There is no IAC chapter where I live in central Canada. I'm hoping that, with time, I can change that.

GD: Do you have any interests outside of flying?

LP: Travel, photography, music, and scuba diving!

In the March issue of *Sport Aerobatics*, we introduced you to Juan Miguel Garcia Salas from Guatemala. The IAC was informed that Juan tragically lost his life in early 2016 while performing at an air show. Our heartfelt apologies to his family and friends for resurfacing emotions through this oversight.



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Visit www.iac.org/aerobatic-flight-schools for additional details, including aircraft types, instructors, and available courses. International schools may also be found at the same site.

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FL St. Augustine	Patty Wagstaff Aerobatic School		pattyaerobatics@gmail.com	www.pattywagstaff.com/school.html
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PA Doylestown	Everett Flying Services	215-353-3208	baeverett@comcast.net	
PA Lititz	Aero-Tech Services, Inc.	717-394-2675	info@aerotechservices.com	aerotechservices.com
PA Palmyra	Reigle Aviation	717-838-5519	Duanereigle@hotmail.com	ReigleAirport.com
SC Charleston	Volare, Inc.	828-302-3853	N6146F@gmail.com	
TN Fayetteville	Keith Davis - Aerobatics	805-550-1928	Keith@joecessna.com	kdairshows.com/
TN Knoxville	Upsey Daisey	865-560-6599	garysumner@bellsouth.net	
TN Nashville	Steve Johnson Aerobatics	615-557-2364	gjunkier@aol.com	www.stuntplane.com
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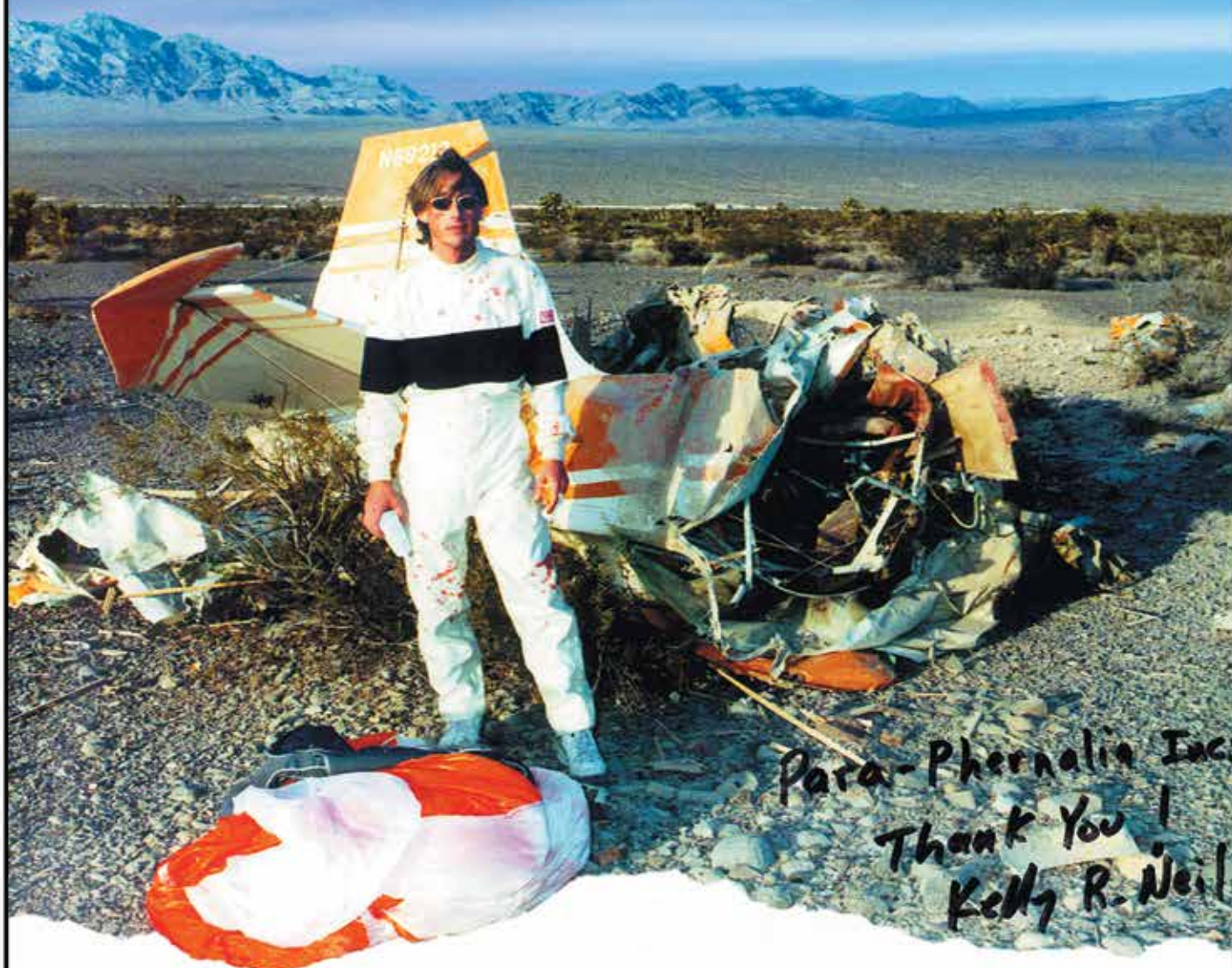


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