

SPORT *Aerobatics*

AUGUST 2018

OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB



THE AEROBATIC CONTINUUM



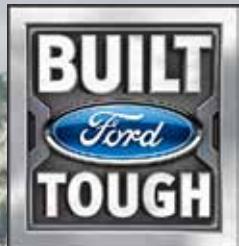
- ▶ IAC EXHIBITION 2018
- ▶ CATEGORY CREEP

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MSU Denver competitors prepare to fly in Fort Morgan.

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COVER

Super Decathlon
departing for the box
at the Ben Lowell Aerial
Confrontational in Fort
Morgan, Colorado.

Photo by Steve Nelson

The Giles Henderson Trophy

WE'RE PROUD TO PRESENT IAC's newest championship trophy, the Giles Henderson Trophy.

Thank you to all who donated to the trophy fund, commemorating such a fitting tribute to this IAC member and competition pilot who made such a mark on our sport. IAC has been committed to "grass roots" aerobatics for 48 years. Over the years and due to his outstanding performances in Sportsman category and his long-term commitment to IAC and competition flying, Giles Henderson became identified as the iconic Sportsman pilot. There could not be a more fitting and appropriate category and place for this trophy to be awarded.

We are looking forward to having the Henderson family with us in Oshkosh during Nationals, where they will personally present it to the 2018 U.S. Sportsman Aerobatic Champion during the award ceremonies. Will your name be first to be inscribed? **IAC**



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Category Creep

BY ROBERT ARMSTRONG, IAC 6712

IN MY PREVIOUS COLUMNS I have written about some of my observations and frustrations with the direction in which the IAC has drifted and given some limited insight to the corrections I feel are needed. In those articles I asked you for your opinion and direction that you want to see the IAC move in. I have received numerous e-mails from members and tried to respond to each. In one of my columns, I admitted that category creep was real. There have been several attempts to justify the validity of sequence progression over the years, but as some can report, statistics can be made to say what you want.

I have watched as the fleet of aircraft at contests has changed. This is not a bad thing, but it indicates that some of the category drift was justified by noting that the less-powerful aircraft were not flying in contests anymore. But why are these aircraft not flying competitions? Have they been sold or destroyed, or is the owner retired from competition? I'm not certain, but I think most are still on the registry. It may be that the difficulty that our sequences present simply left them in the hangar. If that's the case, we need to give those owners a place to fit in our organization again.

While studying this issue I developed the view that, conceptually, aerobatic competition is not unlike the education system. The teacher or professor who has been instructing the same subject for a number of years has little to change in the presentation of material year after year.

We have a multi-category program that has been, for the most part, unchanged for many years. I do not feel it needs a major overhaul — just a tuneup. Many years ago the IAC added the Basic category, later renamed to Primary, which may have been the first indication of a problem. Even this program has been altered a few times since its debut, each time by well-meaning parties, in my opinion not for the best interest of the pilots but for the desire to make it more exciting for them.

The Primary category must remain a simple and easy program.

**THE ORIGINAL CONCEPT WAS
TO ALLOW A PILOT TO TRY OUT
COMPETITION WITHOUT THE
PRESSURE OF NEEDING TO
REMAIN IN A BOX.**

The original concept was to allow a pilot to try out competition without the pressure of needing to remain in a box. It has, for some reason, had more figures added. From spin, loop, and roll to a six-figure program that now includes a 1-1/2-turn spin. This program should be able to attract the pilot who has completed a five-hour basic aerobatic training program, and I'm not sure that this is working well. For some feedback, could we hear from some aerobatic flight schools?

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

CONTINUED ON PAGE 4

CONTINUED FROM PAGE 3

Sportsman, the original starting point, has been evolving for years as well. We declare in our policies and procedures that it is to be flown with a 115-hp Citabria. To my knowledge this will also indicate that the aircraft has no provision to run inverted. This class of aircraft should also include clipped wing Cubs, Taylorcrafts, Cessna 150/152 Aerobats, and a full roster of homebuilt and vintage planes that share the same issues with inverted flight. To accomplish this, the range of maneuvers available gets rather limited. It must; it is never to become more exciting or interesting, as this is akin to the first grade-level of aerobatics. One limit to look for will be the lack of point rolls. The sequence must allow for flight-manual restrictions as well. How many are aware that a Citabria has a maximum speed to execute an aileron roll? The number is 127 mph. At 128 the elevator control will be on the forward

or down stop and the nose will begin to pitch toward the ground if in inverted flight. All of the programs are flown in advance by members of the Known sequence committee or

their representatives to determine that they are flyable. This does not mean that a new Sportsman pilot will be able to negotiate the sequence, only that it is technically a good program. This program should be able to attract a pilot who has completed something similar to a 10-hour aerobatic training program. If a pilot finds this is not challenging enough, Sportsman has a second program that is available with the option to design and fly a Free program.

With the graduation to Intermediate the most obvious increase in the difficulty is that the airplane will need to be able to sustain inverted flight. This base airplane is a 150-hp Decathlon. There is a much larger fleet of planes that can match the required flight envelope for this. The inverted flight should not require more than level flight, outside turns, point rolls, a simple inside rolling 90-degree turn, and no more than a push up of 45 degrees or push out of a 45-degree descending line to level flight inverted. The use of base figures that have three lines to have rolls added is inappropriate for this category. These

figures should not appear in Known or Unknown programs. The pilot still has the opportunity to design a Free program within the limits listed in the IAC rulebook. A review of Known programs since 1995 indicates that this category has been well-controlled and meets these parameters.

The Advanced category is where the horse runs away. The IAC website has a sequence archive that all members can review. It can be very educational and very frustrating at the same time. The oldest sequence is from 1995. It is a 16-figure program with only one snap and two negative-g pushes, one on an inside outside figure eight and the other a half-Cuban started inverted. The K average is 17.3. By the year 1999 the Known format became nine figures. In the 2000 contest program, the nine figures averaged 22K. By 2010, the same nine-figure program has four snaps and the average figure is 27.8K. In 2017, this being a sequence designed by committee, the nine figures now average 31.2K! This is quite a change.

The IAC policy is that the Advanced category is to be flown in a Pitts S-2B type. The design of programs using the figures with three lines for the addition of rolls, such as the double-humpies, puts the Pitts into the “thanks for coming” ranks. This is the type of sequence design that has reduced the Advanced category to a very small number of competitors at regional contests. The pilots are still around, and some do come to the contest to judge and help as volunteers, but the airplanes stay in the hangar. I see this as a result of following the CIVA lead for this category to align with the format it had. The current contest that CIVA conducts is greatly different, and the IAC no longer follows the same model. So we need to address the design of this Known, and the Unknowns as well. A good start will be to not use the “new” maneuvers, found in Appendix 3 of the IAC rulebook, that have three lines to add rolls on. These figures were conceived to allow Unlimited Free program design with the limited number of figures. With the exception of the figure N's the remaining figures, such as the super eights and double-humpies, do not add to the joy of flying a sequence and in my opinion have been one factor in the decline in the category.

That leaves Unlimited — a story in itself. I have been an Unlimited competitor for the last 28 years. It is all but gone in the United States. I will make that a separate report later. **IAC**

THIS PROGRAM SHOULD BE ABLE TO ATTRACT A PILOT WHO HAS COMPLETED SOMETHING SIMILAR TO A 10-HOUR AEROBATIC TRAINING PROGRAM.

AERO

APR 05 Snowbird Classic • Chapter 89 • X35: Marion County Airport, Dunnellon, FL
APR 13 Hammerhead Roundup • Chapter 36 • L08: Borrego Valley Airport, Borrego Springs, CA
APR 27 Carolina Boogie • Chapter 19 • W03: Wilson Industrial Air Center Airport, Wilson, NC
APR 27 Early Bird 2018 • Chapter 25 • 26R: Jackson County Airport, Edna, TX
MAY 03 Sebring 77 • Chapter 23 • SEF: Sebring Regional Airport, Sebring, FL
MAY 04 Duel in the Desert • Chapter 49 • KAPV: Apple Valley Airport, Apple Valley, CA
MAY 19 CANCELED 2018 Wildwood Acroblast • Chapter 58 • KWWD: Cape May County Airport, Wildwood, NJ
JUN 01 Ben Lowell Aerial Confrontation & 2018 IAC West Open Championship
Chapter 12 • KFMM: Fort Morgan Municipal Airport, Fort Morgan, CO
JUN 01 Coalanga Western Showdown • Chapter 38 • C80: New Coalanga Municipal Airport, Coalanga, CA
JUN 08 Bear Creek Bash 2018 • Chapter 3 • KRMG: Richard B. Russell Regional Airport, Rome, GA
JUN 09 Giles Henderson Memorial Challenge • Chapter 61 • SLO: Salem-Leckrone Airport, Salem, IL
JUN 15 CANCELED Ohio Aerobatic Open • Chapter 34 • KEDJ: Bellefontaine Regional Airport, Bellefontaine, OH
JUN 16 Flagstaff Regional Contest • AC Chapter 1 • CEK6: Flagstaff Regional Airport, Kilham, AB, Canada
JUN 22 Apple Cup • Chapter 67 • KEPH: Ephrata Municipal Airport, Ephrata, WA
JUN 22 Lone Star Aerobatic Championships • Chapter 24 • KGYI: North Texas Regional Airport, Sherman, TX

JUL 13 Green Mountain Aerobatics Contest • Chapter 35 • KVSF: Hartness State Airport, Springfield, VT
JUL 13 High Planes Hotpoxia Fest • Chapter 12 • KSTK: Sterling Municipal Airport, Sterling, CO
JUL 13 The Corvallis Corkscrew • Chapter 77 • KCOV: Corvallis Municipal Airport, Corvallis, OR
JUL 14 Michigan Aerobic Open • Chapter 88 • 3CM: James Clements Municipal Airport, Bay City, MI
JUL 14 CANCELED Super D Tango • Chapter 24 • XA68: Akronville Airport, Slidell, TX
AUG 04 Doug Yost Challenge • Chapter 78 • KSPW: Spencer Municipal Airport, Spencer, IA
AUG 10 Can-Am Championship • Chapter 67 • KCTB: Cut Bank International Airport, Cut Bank, MT
AUG 17 Kathy Jaffe Challenge • Chapter 52 • KVAY: South Jersey Regional Airport, Mount Holly, NJ
AUG 17 Upper Canada Open • AC Chapter 3 • CYHS: Hanover Saugeen Municipal Airport, Hanover, ON Canada
SEP 01 Rocky Mountain House Canadian Nationals • AC Chapter 7 • CYRM: Rocky Mountain House, AB Canada
SEP 01 CANCELED ¡Viva Santa Maria! • Chapter 26 • KSMX: Santa Maria Public Airport, Santa Maria, CA
SEP 08 Apple Turnover • Chapter 67 • KEPH: Ephrata Municipal Airport, Ephrata, WA
SEP 08 ACE's High Aerobatic Contest • Chapter 119 • KEWK: Newton City/County Airport, Newton, KS
SEP 08 NEW Hoosier Hoedown • Chapter 124 • KOKK: Kokomo Municipal Airport, Kokomo, IN
SEP 08 James K. Polk Open Invitational • Chapter 11 • KHWH: Warrenton-Fauquier Airport, Warrenton, VA
SEP 22 U.S. National Aerobatic Championships • KOSH: Wittman Regional Airport, Oshkosh, WI
OCT 06 The Clyde Cable Rocky Mountain Aerobic Contest • Chapter 5 • KLAA: Lamar Municipal Airport, Lamar, CO
OCT 11 NEW DATE Akrofest • Chapter 36 • L08: Borrego Valley Airport, Borrego Springs, CA
OCT 12 Texas Hill Country Hammerfest • Chapter 107 • KAQQ: Llano Municipal Airport, Llano, TX
OCT 19 Mason-Dixon Clash • Chapter 19 • KFVX: Farmville Regional Airport, Farmville, VA
OCT 19 Phil Schacht Fly Like Your Hair is on Fire • Chapter 288 • 42J: Keystone Airpark, Keystone Heights, FL
NOV 01 Sebring 78 • Chapter 23 • SEF: Sebring Regional Airport, Sebring, FL
NOV 02 The Tequila Cup • Chapter 62 • AVQ: Marana Regional Airport, Marana, AZ

2018

AEROBATIC CONTEST CALENDAR

Roll with us. Join the International Aerobatic Club through your local chapter, or at www.IAC.org
For the most up-to-date contest listing, visit www.IAC.org/contests

2018 US Advanced Aerobatic Team pilot A.J. Wilder
Poster design and photo by Evan Peers. © Airspace Media & International Aerobatic Club, Inc.





BREAKING THROUGH

A nervous beginner's perspective on diving into competition

BY JOHN STRONG, IAC 435285

I SAT THERE ON the south ramp of Kenosha Regional Airport (KENW) in southeast Wisconsin that Friday morning, strapped in and hesitating. I was peering at the foreboding southern sky, tracking the red and yellow blotches on the weather map on my phone, reviewing the area forecast, then looking back at the sky again. I was tense, and not just because of the weather. I started to think seriously about shutting down my 1979 Super Decathlon, pushing it back in the hangar, and going home to do something less daunting, perhaps something involving a glass of red wine. A text came in just then from my wife: "Be careful! It looks ugly out there." The stress level just upped a notch. I wasn't ready to surrender, though.

I had been committed for the last year to take my rather tame recreational aerobatic skills to the next level and finally participate in a contest, the first one of the season being the Giles Henderson Memorial Challenge at Salem-Leckrone Airport (KSLO), a 2-1/2-hour flight south. You may note I say participate here instead of compete. It is a competition, after all. However, I knew the real competition wasn't going to be against any of the other pilots. It was really going to just be me against me. I was challenging myself to see just how good (or not good) of an aerobatic pilot I really was, and to not let the nerves take the fun away in the process.

I earned my private pilot certificate 27 years earlier but didn't have a lot of hours to show for it, having put flying aside early on as life changes took precedence. I moved from the West

Coast to the East Coast during engineering graduate school and eventually settled down in the far northern Chicago suburbs for work. It was there that I later met my wife who, one fateful day, said to me, "Hey, why don't we go up to that huge air show up in Oshkosh. It's only two hours away." Boom. I was hooked again. After EAA AirVenture Oshkosh I bought a 60-minute aerobatic ride on an Extra 300 and had a blast despite major g intolerance. The pilot let me take the controls, and I was surprised at how being up in the air felt foreign yet familiar at the same time. The Extra was certainly a bit sportier than the Cherokee 140 I was more familiar with. I had been away from flying for far too long, I decided.

So, at 44 years old I was determined to get current again and trained in Diamond DA-20s at a nearby flight school, after which I got my tailwheel endorsement and basic aerobatic training in a Decathlon down in Sugar Grove, Illinois. It was a 90-minute drive to Sugar Grove, but I was committed — I wanted to fly acro. I had joined IAC by then and eagerly anticipated *Sport Aerobatics* magazine arriving each month, hoping I could find some way to eventually get into competition but not sure how. I had no aspirations of ascending into the upper categories, instead mostly wanting to just master basic maneuvers and enjoy the camaraderie of other aerobatic pilots. The Sportsman sequence looked like a practical goal to work toward. I was an old dog, after all, and I doubted my capacity for learning new tricks. My hopes took a hit a couple of years after my initial aerobatic training when the rental Decathlon was no



longer available and I couldn't find any other local rentals, let alone one that I could take for several days on a contest trip. At some point I had tried to make contact with IAC Chapter 1, the Chicago-area chapter, to get some advice and hopefully make some useful connections. Unfortunately, I received no response and learned from asking around that the chapter had apparently become inactive. Having no leads for competition aerobatics, I decided I'd have to figure things out myself. But I still needed an airplane, and I had never owned one before.

This time I approached my wife. "Honey, you know, I think we could afford an older Super D, and I can finally start doing some serious acro training." Surprisingly, she acquiesced — she had to, from my point of view, since she was the one responsible for giving me the flying bug again! Or at least that was going to be my defense if she demurred. I found my Super D in Alamogordo, New Mexico, and enlisted the help of a CFI buddy and acro/warbird pilot Ted

Ribbens to fly it home to Kenosha. Now I was ready for some serious acro practice! Or so I thought.

I was aware of the spar AD on these airplanes, but I was still a naïve airplane buyer, and the lack of inspection covers should have tipped me off that the AD inspection wasn't being done thoroughly. To ease my mind I

decided to do a thorough borescope spar inspection and found a worrisome crack. The A&P/IAs I talked to were hesitant to sign off an annual with it there. "Honey, the wing is cracked. Can I buy some new wings?" You can imagine how that went over, but we bit the bullet and ordered new aluminum spar wings from the factory.



It was worth it — not only did I have restored faith in the airframe, but the roll rate with the new aileron design was noticeably increased. Nice! However, the wait for the wings and the long upper-Midwest winter had kept me from doing any aerobatic training up to that point. I doubted I could get ready for the contest season that year, and I resigned to just working on it and planning for the following year.

I studied the Primary sequence. It didn't look too difficult, since I had learned all the maneuvers already, except for the slow roll. I'd have to work on that one, but conceptually the control inputs seemed straightforward. Spins seemed easy, and I could recover more or less on a heading. The loop? No problem, how hard is it to do a loop? Half-Cuban, check. It all looked like something I should be able to do in my sleep with a little practice, I assured myself. Foolishly, I hadn't taken the time to read the IAC rules and really had no idea how maneuvers were scored or what the judges were looking for. Instead of weaving the sequence together with an energy flow mindset, I was tackling the maneuvers individually with no regard to entrance or exit strategy. I had nobody watching me from the ground to tell me how my maneuvers actually looked as opposed to how I thought they looked. The aerobatic box? I wasn't even paying attention to that little detail. It wasn't until my first contest experience that I realized how naïve I had been.

In my days playing mandolin in a bluegrass band, I had become very aware that the way you rehearse becomes the way you play. If you practice sloppy, you play sloppy. If poor technique is tolerated in your practice, it becomes cemented in your performances. Insidiously, once you've trained your neurons and synapses to fire a certain way it's hard to change them, especially when your gray matter is not so young and malleable as it used to be. I wasn't aware that I was practicing competition aerobatics wrong. Adding to that was the difficult time I was having building up my g tolerance. Dealing with that discomfort was significantly cutting into the fun factor for me and was limiting the time I was able to dedicate to relearning these maneuvers.

As spring rolled around the following year, I felt I really hadn't made enough progress. I had built up my g tolerance and I felt I could do a decent slow roll, but I was becoming aware that my 10 pounds per hp airplane meant I had to start thinking about trading off altitude for speed, and I really hadn't considered the limits of the box as part of my practice yet. I was starting to realize that I had

vastly underprepared, and I had lots of questions. I really needed to talk with, and fly with, an experienced aerobatic competitor if I was serious about competing that season. Since I was serious, I didn't skimp — I contacted Patty Wagstaff and arranged for custom training at her facility in St. Augustine, Florida. I was pumped! Due to schedule changes Patty ultimately wasn't available, but her chief instructor Allan Moore stepped in, and he was superb. His relaxed mastery of the Primary and Sportsman maneuvers and excellent instruction instilled new confidence in me that flying the Primary sequence was something that I could actually do.

Another piece of good news was that IAC Chapter 1 was active again. On a lark I had decided to e-mail the contact address after running across their webpage again in an internet search, and this time chapter president Todd Ashcraft quickly replied. Todd explained that there wasn't a good reason for the past inactivity nor the recent resurgence, other than the cyclic nature of things and the efforts of a couple of motivated members. In any case, I now had this resource available to me. A chapter meeting was coming up, along with plans for a safety day plus two acro play days. Things were looking up! I was finally going to get some ground judging and have access to advice from seasoned competitors. In the meantime, I located a square of farmland on Google Maps that could function reasonably well as my practice box and started work on performing the entire Primary sequence within those constraints. My eyes were opened once again. How in the world was I going to fit that whole sequence in a region of space that I could entirely traverse in a measly 15 seconds? It seemed almost impossible.

Compounding my newfound worries was the cancellation of the first play day due to rain and missing the second one due to gusty winds. Once again I appealed to Todd, not wanting to make a fool of myself at the looming contest at KSLO — what could I do? Todd reached out to someone named Doug Bartlett who could be my mentor at the contest





and got us connected. I didn't know who this Doug guy was (I will leave it to you, the IAC reader, to find out if you're not already quite aware), but whoever he was I was glad to have his help. Doug and I made plans to get together Friday afternoon at KSLO, go through some ground schooling, and get me some practice time in the box with ground coaching.

**MY EYES WERE OPENED ONCE AGAIN.
HOW IN THE WORLD WAS I GOING TO FIT
THAT WHOLE SEQUENCE IN A REGION OF
SPACE THAT I COULD ENTIRELY TRAVERSE
IN A MEASLY 15 SECONDS?**

So there I was, on the south ramp at KENW, my Super D smoothly idling on as I procrastinated, watching the weather. The Giles Henderson competition was here. I knew I wasn't ready; I could count on one hand the number of times I performed a complete Primary sequence, much less completed it without some big mistakes. But I also knew that I would never be truly ready for my first contest. I also had good reason to have some confidence: The airports along my route were now all reporting 10-mile visibility and decent ceilings despite the isolated storms moving through the area, so I could no longer use the weather as a good excuse not to try. I finally broke through the paralysis and got cleared for take-off. With that, I banked my trusty Decathlon to the south and committed to my first contest.

To be continued ... **IAC+**

Dad and son.



PHOTOGRAPH COURTESY OF JOHN STRONG

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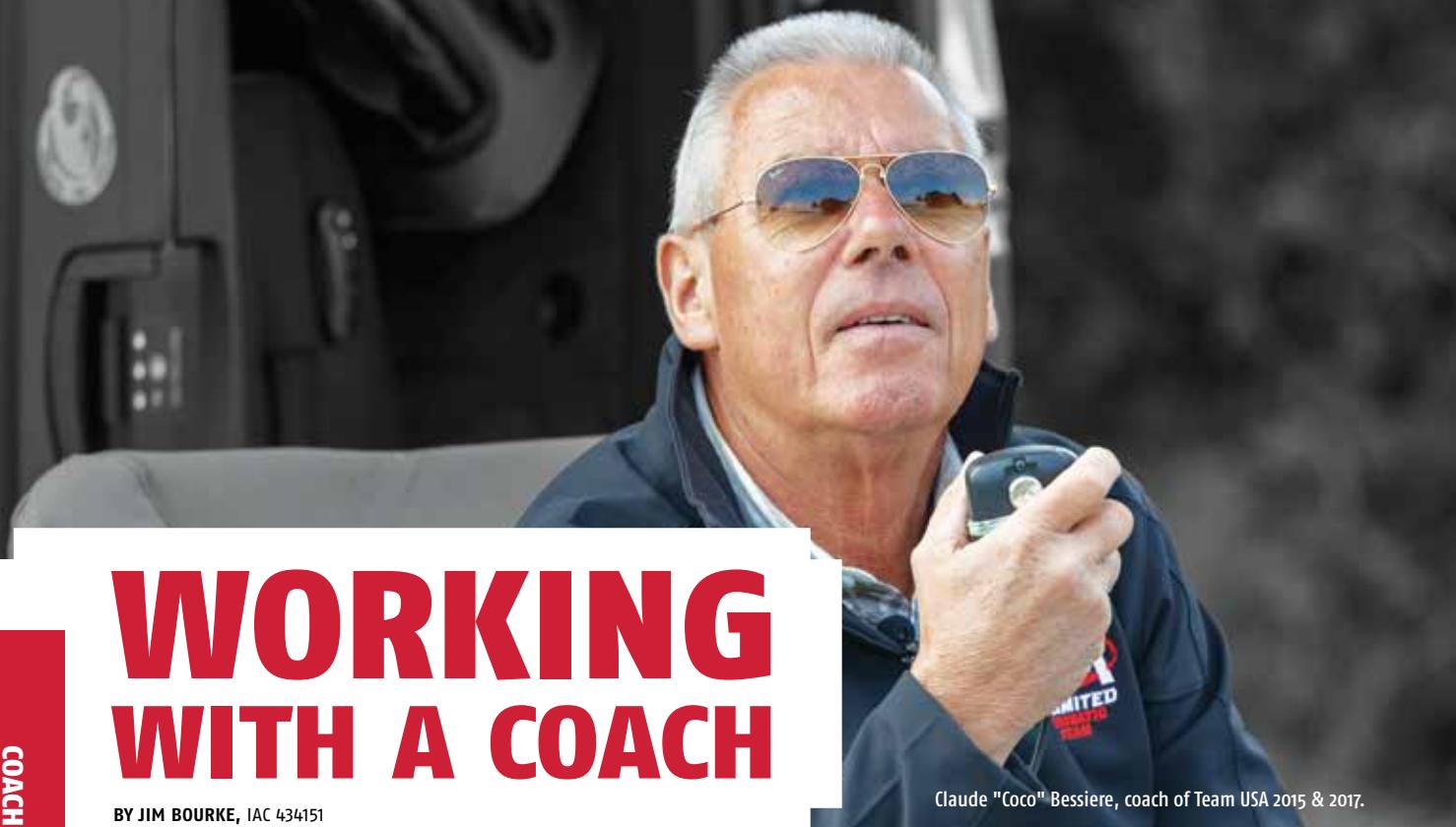
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WORKING WITH A COACH

BY JIM BOURKE, IAC 434151



Claude "Coco" Bessiere, coach of Team USA 2015 & 2017.

DID YOU HEAR THE story about the champion Olympic weightlifter who figured everything out on her own? Or the one about the winner of the Tour de France who taught himself everything he knows? Or about the famous golfer who learned just by watching other people play?

No? Well, me neither! Because the best have coaches.

WHAT IS AN AEROBATIC COACH?

An aerobatic coach picks up where your basic aerobatic instructor left off. Whereas an instructor flies in the plane with you, a coach will sit on the ground critiquing your flights using the radio for communication. While it is comforting to have someone on board with you once you've learned the basics, you must begin flying solo with a coach.

A coach will tell you where the controls should go when you are learning something new. A coach will help you feel calm and ready for the next challenge. A coach will hold you accountable for your practice sessions. A coach will communicate to you clearly without beating around the bush, but at a comfortable pace. A coach will teach you many things beyond just the skills you need for flying, such as how to walk a sequence or how to design one.

Any judge can offer a critique, as can other pilots. But a coach offers more because he or she is entirely on your side. No judge can afford such a bias, and the advice of fellow competitors is naturally suspect. A good coach is in your corner, thinking about what is best for you.

What makes a good coach? Good coaches are not necessarily athletes themselves, but they know what it takes to win. A good coach is a master of synthesizing contradictory information into a compact and timely message. A good coach can

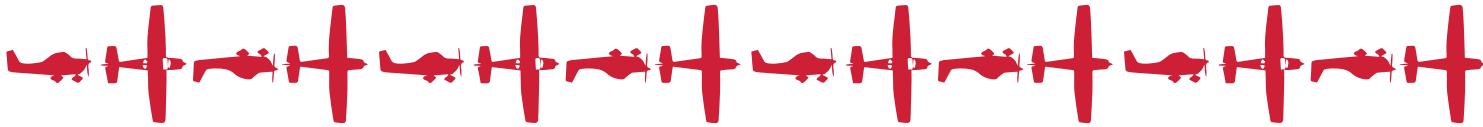
A GOOD COACH IS A MASTER OF SYNTHESIZING CONTRADICTORY INFORMATION INTO A COMPACT AND TIMELY MESSAGE.

share knowledge without any trace of ego, exaggeration, shyness, or impatience. A good coach knows which errors you are ready to fix and which can be set aside for later. A good coach accepts you for who you are, but motivates you to take the next step. A good coach sets goals that are realistic and exciting.

On the day of your performance, a coach's presence relaxes and readies you so you can make your best effort. If you succeed, the coach is there to congratulate you. If you fail, the coach is there to help you find perspective.



Coco works with Mark Nowosielski in Kokomo, Indiana.



WHEN TO USE A COACH

It's most common to seek the help of a coach just before a major contest like the U.S. Nationals, but there is no bad time for coaching. Coaches are great at the start of the contest season when you are working on the Known program, but they are just as useful mid-season to work out any bad habits you've developed. They are equally valuable during and after a contest so they can help you see what needs to be addressed in your practice sessions. Another great time to use a coach is when you are moving up in category or working on new figures. Coaches are great for figuring out your weak areas. Do you always roll to the left? A judge probably won't comment on that, but a coach will.

HOW TO GET THE MOST OUT OF A COACHING SESSION

Arrive for a coaching session prepared. This means first of all that you've practiced between sessions. It also means you are g-ed up, you've slept, you have your family and work needs resolved, your plane is ready, and you've taken time to reflect on your goals.

Talk to the coach about any feelings that come up when you think about flying. Are you feeling insecure? Afraid? Overworked? It's best to get any barriers to learning out in the open. It's normal to feel anticipation. It will probably go away after a bit of conversation. You'll learn better if you are mentally and emotionally prepared.

While you are in the air, trust your coach. This means you should pretty much do what you are told. You should not argue or make excuses during a session, but do speak up if you feel unsafe. A good coach will notice when you are getting tired and tell you the session is over, but you know best. Listen to your body and tell the coach how you are doing.

Most coaches don't like to spend time talking to you over the radio while you are flying. They just want to give you instructions and watch you. It doesn't really help to explain to the coach why you made a mistake, or to argue with the coach about whether something you did was right or wrong, or whose fault it is. If the coach tells you to do something, there's a reason so just do your best and save the conversation for later.

CAMPS

Coaches must get paid, which includes transportation costs, meals, and some money for their time as well. It's a lot easier to afford a coach if you work with a small group of people to create an aerobatic camp. There are regular coaching

camps in the aerobatic hot spots of the United States, which includes California, Florida, and Texas.

With a camp there is generally one member of the group responsible for logistical concerns like arranging the lodging, making sure the box waiver is up to date, and collecting funds. It's good to have a host to take care of those things so the coach can focus on the flying.

The wonderful thing about a camp is that you can learn from all the other pilots as well as the coach. A camp is also a great chance to get to know other competitors or just to relax and enjoy hanging out with people who like to talk about aerobatics.

NEXT STEPS

Finding a coach in your area is as simple as asking the folks in your local IAC chapter. If that doesn't work for you, reach out to a top-scoring pilot. Chances are the best pilots at your favorite contest have worked with a coach.

If you are really stuck, e-mail me at jbourke@gmail.com and I'll point you in the right direction. **IAC**

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PRESENTATION JUDGING & SCORING

BY STEVE JOHNSON, IAC 20081

EARLIER THIS YEAR, I discussed the judging of individual figures in a sequence. Now I'll look at the overall presentation score and how it ties to individual figures and the overall presentation of a sequence. The presentation of individual figures is vitally important in our IAC contest environment. Good competition pilots know they must set their 45-degree climbing lines slightly shallow when flying into a headwind and slightly steep when flying downwind. This is part of the individual figure presentation that must be flown to get good scores from the judges. A good aerobatic flight sequence should look correct and balanced, or perhaps artistic, to the judges. Forty-five-degree lines that look to the judges to be steep or shallow, for whatever reason, don't and shouldn't score as well. It is the pilot's job to fly a figure that looks perfect to the judges, no matter what that takes, and the judges should always be looking for the perfect figure. If a judge needs to see a 45-degree upline, he or she should expect nothing less, and any error should be deducted.

The pilots have a much harder time with more complex figures and sequences, though the same presentation or artistry still apply. Presentation of a perfect figure is the pilot's job, and as IAC judges, we must be willing to accept only that perfect presentation.

I had the opportunity to go to South Africa with the U.S. Unlimited Aerobic Team when it competed at the World Aerobatic Championships in Malalane, South Africa, in September 2017. Prior to traveling to South Africa, I was the videographer for the U.S. team practices in Union City, Tennessee, for the U.S. team coach, Claude "Coco" Bessiere. Coco is a world-champion pilot himself and recently

coached the French Unlimited Aerobatic team to world championships. Without doubt, he is one of the best World Aerobatic Championships coaches around.

The coaching that Coco provides to our U.S. teams is about the presentation of each of the figures in a sequence. He can not only coach a pilot on how to better fly a figure, but also coach the pilot toward placing figures where they need to be to maximize score potential. This includes

AS AEROBATIC PILOTS, WE MUST SHOW THE JUDGES WHAT THEY EXPECT TO SEE IN A PERFECT FIGURE, NO MATTER HOW THE PILOT ACTUALLY FLIES THE FIGURE.

placement of the figure in the aerobatic box as well as flying the figures so they show best in the box. This may mean flying the figure slightly differently, perhaps over- or under-rolling a vertical roll for best presentation for the judges. As aerobatic pilots, we must show the judges what they expect to see in a perfect figure, no matter how the pilot actually flies the figure. Read that last

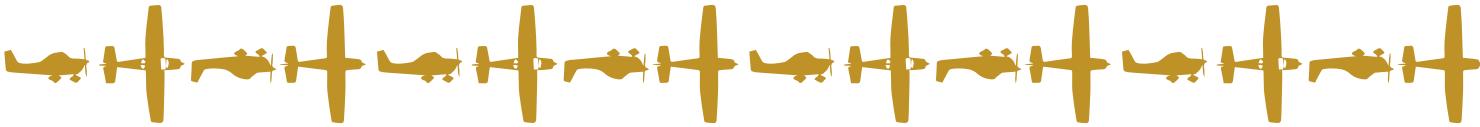


FIGURE 1: SAMPLE FLIGHT SCORES

Fig No	K factor	J1	J2	J3	J4	J5	J6	J7	CHZ	Avgc marks	Equv scores
1	18	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
2	32	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
3	22	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
4	20	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
5	20	HZ	HZ	HZ	HZ	0.0	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
6	13	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
7	6	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
8	17	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
9	30	HZ	HZ	HZ	HZ	HZ	HZ	HZ	CHZ	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Press	26	8.0	7.0	Lo 0.0	7.5	3.0	7.0	Lo 0.0	OK	4.64	116.00
		7.48	6.64	6.57	6.76	4.71	7.26	6.57		6.57	164.30

This sequence has been completed. FairPlay scores here are FINAL.

Judge Scores 175.15 155.18 165.42 173.61 161.07 164.34 155.59

Processed score total (2030 = max.poss) 164.34

Boundary	0.0
Interruption	0.0
High Altitude	0.0
Low	70.0

Minus 70 penalties: 94.34

Final score valuation 4.65 %

FairPlay System explanations

ACRO Version 4.2 Built: 18/08/17

sentence again, as it is very important! It is the basis of judging an aerobatic flight.

I have been an IAC regional judge since 1995 and a national judge since 2007, and have judged regional and national contests every year. In 2013, I was asked to become an IAC judge instructor, and I have taught IAC judging schools annually since then. It is my observation that as IAC judges in the United States, we are way too lenient in grading figures and giving presentation scores. Please look at the flight scores shown in Figure 1.

Note that the pilot received hard zeros for each and every figure flown, yet some judges still gave 7s and 8s for presentation. In this flight, the pilot flew in the wrong direction, hence the hard zeros, but why should flying in the wrong direction get good presentation scores of 7 and 8? I was Judge 7 in this flight and awarded a presentation score of 0. Unfortunately, only two judges gave zeros for this presentation score, and the FairPlay scoring system raised my 0.0 to a 6.57. Why should a pilot who flew a sequence in

the wrong direction get a good presentation score? Each contest flight in itself is a performance, and poor performances should get poor presentation scores.

In South Africa, watching the winning flights was an amazing sight. The nearly instantaneous roll rates, with stops at exactly the right place as perceived by the judges, were wildly impressive. I was able to move to other positions around the aerobatic box to see what the airplanes looked like from different perspectives. At other angles, the French and Russian pilots didn't look so great, but at the official judges' positions, the flights looked very clean, but still not flawless, as the world judges are very astute and extremely unforgiving for any error noted in a figure, as well as the presentation of that figure. Flying in the back of the box caused a very low presentation score, as well as low figure scores.

Our current IAC presentation score is a purely subjective score given by a judge, and has a fairly low K-value, so is seen by some judges as a kind of throwaway score. That doesn't

sit well in my head, so I started using the CIVA presentation scoring system. There is still some subjectivity to the CIVA scoring method, but much less than the IAC-defined "subjective" score. CIVA judges will call "left," "right," "near," "far," "left left," "right right," etc., to document presentation errors for each figure during the flight. The recorder will place the letter of the error noted in that figure's comments box, and the total errors are subtracted in 0.5 or 1.0 increments from 10 to give a presentation score. This is very similar to normal figure scoring but applies to the presentation only. It is a method that works for me, but I think it is better than a purely subjective score.

I have heard over the years that we need to keep IAC separate from CIVA. The reality is that, from a pilot's first contest, we should be training all of our pilots to be internationally competitive, so if and when pilots decide to test their skills at a CIVA contest, they are prepared to represent IAC and the United States to the best of their ability. **IAC!**

2018 U.S. National Aerobatic Championships

August update

REGISTRATION

Preregistration for pilots and volunteers for the 2018 U.S. National Aerobatic Championships is now online. The preregistration system went live a short time ago at www.IAC.org/nationals. Click on registration to access the sign-up form.

The onsite registration office will be open the first day of practice, on September 19.

- The pilot welcome packets and contest entry paperwork will be available in the registration office located in the Press Headquarters building north of the IAC Pavilion across Waukau Avenue from the ATC tower.
- Volunteers or observers who are flying in will be able to pick up their welcome packet at the IAC Pavilion.
- Volunteers and observers who are driving in can pick up their welcome packets at Gate 31. Directional signage will be posted on Waukau Avenue.

NOTAM

As we get closer to the arrival date, watch for new procedures that we are putting into place to enable the contest to run smoother. At this point we have had some very positive discussions with the FAA, control tower, and the new airport manager, all of whom want to make this a smooth and successful event.

SOCIAL PLANS

For 2018 we will be focusing on providing more opportunities for fun social interaction among everyone who is making the effort to attend. Our goal is to have some sort of activity almost every night so you can build the friendships that are so important for the future of our sport. To date, the following are planned. Suggestions for other evening activities are welcome.

- Saturday, September 22, is the opening reception and barbecue at the EAA Nature Center sponsored by the Oshkosh Convention and Visitors Bureau.

SCHEDULE



Wednesday, September 19

Practice Day

Thursday, September 20

Practice Day

Friday, September 21

Practice Day
Technical Inspections
On-Site Registration

Saturday, September 22

Practice, Technical Inspections,
and Registration
Opening Ceremonies
Unlimited Known Program

Sunday, September 23

Glider Practice
Unlimited Free Program

Monday, September 24

Intermediate Known Program
Advanced Known Program
Primary & Sportsman Known Program

Tuesday, September 25

Unlimited Free Unknown 1 Program
Intermediate Free Program
Advanced Free Program

Wednesday, September 26

Primary & Sportsman Free 1 Program
Intermediate Unknown Program

Thursday, September 27

Primary & Sportsman Free 2 Program
Unlimited Free Unknown 2 Program

Friday, September 28

Advanced Free Unknown Program
4-Minute Free Program



- Monday, September 24, will see us enjoying each other's company and some great local pizza.
- Tuesday, September 25, is a dinner and Dance Your Sequence Party with casual competition for best "dancer"
- Wednesday, September 26, is the Key Volunteer Group dinner to thank them for their hard work and long hours toiling away to make U.S. Nationals 2018 the best ever!
- Thursday, September 27, is a special local Wisconsin-style dinner to distribute flight medals.
- Friday, September 28, we'll hold our awards ceremonies and banquet in the Founders' Wing at the EAA Aviation Museum.

SECURITY

We have had good interaction with EAA security, and they have proposed a system that will work much better than last year. Instead of wristbands and badges, a simple parking flyer in your car will get you through the gate and to the parking area next to the hangar. Those who may be staying on site and walking to the ramp will have a similar setup that is yet to be finalized.

RENTAL CARS

Hertz is again the official car rental company for the U.S. National Aerobatic Championships. This year a transportation coordinator will be stationed at the registration office and will set you up with a ride over to Hertz at the terminal to pick up your rental car. If you are arriving late, please advise Hertz, and the car rental paperwork and vehicle key will be available for pick up at Basler Flight Service until 8 p.m.

LODGING

There is special pricing for three Oshkosh hotels: the Cobblestone, La Quinta, and Hilton Garden Inn. Reservations should be made by August 19 to receive a discounted hotel rate. Tent or RV camping is available again at Audrey's Park. New this year is the no-frills EAA Volunteer Bunkhouse, which will also be open to pilots. Details for lodging are located on the U.S. Nationals website at www.IAC.org/nationals. **IAC**

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► STICKER SHOCK

The legacy of aerobatic competition is richly illustrated in this collection of patches and stickers – from an early Coupe Mondiale in 1934, to the 1983 Hilton Masters of Aerobatics, to present day U.S. and world competitions. Collection by Mike Heuer, IAC historian.





ACRO SPORT

45th Anniversary

ONE DESIGN

25th Anniversary

IAC EXHIBITION 2018

Exhibits 1-4, The History of the IAC, remained in place from 2017 and are not shown.



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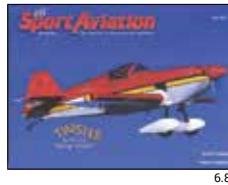
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6.8

5. DAN RIHN: PILOT, ENGINEER, DESIGNER

Dan Rihn began flying gliders at an early age and soloed on his 14th birthday. He flew a J-3 Cub on his 16th birthday and went on to earn his private pilot certificate and commercial rating on his 17th and 18th birthdays, respectively.

In 1978 shortly after completing a Pitts S-1S he built from scratch, Dan began competing in IAC sanctioned contests. He moved up through the ranks and competed in the Unlimited category for many years.

During his competition years, he became concerned about the high cost of newer high-powered monoplanes. He, along with Jim Young, decided to design their own new aerobatic airplane. Observing the dominance of the Pitts biplane in competition, Dan engineered and did the drawings for his first foray into designing an aerobatic biplane he named the Sunbird-1X.

An experienced engineer with Northrop Corporation, holding a Bachelor of Science degree in aerospace engineering and an A&P mechanic rating from Northrup University, Dan used his background and his experience with his own homebuilt Pitts S-1S to design a number of aerobatic airplanes. As chief engineer of advanced projects, Dan would later go on to win the 2013 Collier Trophy for the X-47B with his team from Northrop.

After the Sunbird-1X Dan designed five more aerobatic airplanes and consulted on numerous modifications on many other existing aircraft prior to designing the DR-107.

The idea for the DR-107 came from several similar formats for "One Design" types in other sporting competition and championships, mainly the Schweizer 1-26 glider, sailing, windsurfing, IROC Z car races, and the Masters Series of Aerobatics in the early 1980s. The DR-107 was a way to maintain grassroots aerobatic activity and level the playing field in competition aerobatics. Dan wanted to bring in an affordable, compact, fun, and easy-to-build airplane for the average homebuilder that would be competitive all the way through the Unlimited category.

Photo captions see page 24.

6. PLANS AND MATERIALS

The idea of making plans available for purchase evolved with a lot of help from Dave Gustafson, Mike Heuer, and Steve Morris, who was the president of the IAC at that time. Originally, Dan wanted the IAC to sell the plans, but when Jim Irwin at Aircraft Spruce offered to sell them, that made a lot more sense. Dan worked with his team to prepare a material kit.

Later several other people began making kits. Bill Scheunemann made wonderful wing kits, for example. While not kits per se, Doug Dodge and Roger Rourke also sold all the metal parts and you could pick and choose what you needed.

In keeping with a One Design theme, Dan designed the original paint scheme himself. He decided to keep it simple and easy as well in order to accentuate the size and shape for better visibility while flying maneuvers during competition.

There are always challenges with the design, but Dan credits fellow pilots and mechanics with putting in many hours on the prototype for bringing the final product to completion. After drawing up the plans for the DR-107 in 1992, Dan worked with Doug Dodge of Acro Specialties, Jon Staudacher built the wing, and Chris Gardner was chief mechanic on the project. Chris built up an O-320 Lycoming engine that had been lifted right out of a Cessna 172. Dan gives a great deal of credit to Lew Shaw for the ultimate success of the project, because without his funding and belief in the project the DR-107 may never have come to fruition.

From 1993 through current day, a total of over 600 sets of drawings for the DR-107 have been sold. The One Design has been built or flown in at least 16 countries: Australia, New Zealand, Tahiti, USA, Canada, Argentina, Brazil, England, France, Spain, Germany, Denmark, Switzerland, South Africa, Iceland, and Italy. It has become the most popular in Australia and England.

Photo captions see page 24.

ACRO SPORT

45th Anniversary

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IAC EXHIBITION 2018



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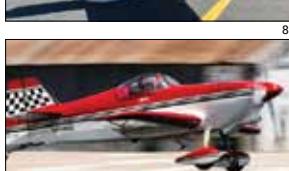
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7. ABOUT THE DR-107

The One Design is a single-seat aerobatic monoplane designed for aerobatics, both recreational and competition. For years, the Pitts Special dominated the competition scene. A Pitts could be acquired or built for a reasonable amount of money and was competitive in all categories. Then along came the mighty monoplane.

With their high-horsepower engines to give them tall vertical lines, and their blinding fast roll rates, the monoplanes started taking over as king of the hill in the competition world. These aircraft maintained high levels of energy and could sustain very high *g* loads. Pilots loved the way the monoplanes performed and more importantly, so did the judges, but costs could be prohibitive.

Dan Rihn stepped up to the challenge to fill the gap between performance and cost. Well respected as a pilot and an aircraft designer, he designed the DR-107 single-place monoplane as an aircraft that has great performance and is easy to build and fun to fly.

"The One Design is exciting, if nothing else, because it offers serious monoplane performance for sport pilot and akronut alike. Also, whether the One Design class concept takes off or not, the airplane gives homebuilding a new plansbuilt design that's within the reach of many possible competitors who were previously financially grounded. Now they can get in there and mix it up with the big guys." — Budd Davisson, EAA Sport Aviation, February 1994, Pirep: One Design.

7.1 Greg Shetterly, IAC 24114. Tail number N372GM.

7.2 Alan Kilpatrick, Australia's current Unlimited aerobatics champion during his aerobatic display in his DR-107 at the Red Thunder Air Show, Watts Bridge.

7.3, 7.4 Doug Jardine, IAC 10411. Tail number N107D.

7.5, 7.6 Patty Wagstaff, IAC 9010, flew the DR-107 for Budd Davisson's Pirep in 1994. Photos by Budd Davisson, www.airbum.com.

8. DR-107 IN COMPETITION

The original concept for the DR-107 "One Design" was to design and develop, not only an easy to fly and reasonably affordable homebuilt option, but also another category for IAC regional contests.

In the One Design newsletter written by Dan Rihn, he announced in October of 1993 that the IAC board of directors had given the green light to the One Design class concept and a preliminary set of rules would be published in *Sport Aerobatics*.

Fast forward to December 1994 and Howie Stock, IAC rules chairman at the time, published an article containing the One Design rules in that issue of *Sport Aerobatics*. The rules were set to go into effect in January 1995. The rules were developed through many letters and conversations between the rules committee and the IAC membership.

In an October 1995 article in *Sport Aerobatics* by Sam Burgess, IAC 23, titled "The IAC Spirit," he described the importance of the paint scheme being followed for anonymity at a contest. Dan confirmed that some people say the One Design competition never took off because the rules called for a simple red/blue/white paint scheme. He indicated that the rules could have easily been changed, but no one ever formally challenged it. It was interesting to Dan that there was such a huge response to have a One Design contest, but felt that the lack of the airplane itself (it takes time to build a fleet of home built aircraft) as well as logistics were determining factors.

Doug Jardine did debut the One Design in the Intermediate category at the 1993 U.S. National Aerobatic Championships. During the Nationals, the prototype got quite a workout by being flown and evaluated by pilots of all skill levels. By the end of the week over 50 pilots had flown and evaluated the airplane. However, even with the amount of enthusiasm that was shown for the plane, a stand-alone One Design contest was never held.

The One Design airplanes can still be found at regional contests throughout the United States. In 2017 there were three DR-107s competing at the U.S. National Aerobatic Championships. The same year saw 13 DR-107s owned by IAC members being flown in competition from the Sportsman through Unlimited categories. Twelve of the pilots flying DR-107s in those regional competitions placed in the top three for their category in one or more contests that they entered.

Photo captions see page 24.

ACRO SPORT

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ONE DESIGN

25th Anniversary

IAC EXHIBITION 2018



9.1



9.2



9.3



9.4



9.5



9.6



9.7



10.1



10.2



10.3



10.4



10.5



10.6



10.7

9. AROUND THE WORLD

Builders in 15 countries have purchased the One Design drawings. The plans are especially popular in Australia and England and he has discovered that the One Design is a real winner in competition in those two countries. Two of the most successful pilots have been Phil Burgess, flying G-RIHN in Great Britain, and Richard Wiltshire, flying VH-RSW in Australia. Both have won numerous awards and competition titles flying their DR-107s.

From 2010 until 2017 Phil Burgess flew G-RIHN in the Intermediate through Unlimited categories. The majority of the build took place in Canada, and with about 90 percent done and 90 percent still to do the airframe was imported to the U.K. and completed by James Brown. After around 50 flying hours, the original engine and fixed-pitch prop were replaced with a brand new Lycoming/Titan ECI AEIO-320 and MTV-11C prop, a lightweight starter and alternator, Sky-dynamics cross-over exhaust and Airflow Performance fuel injection system delivering around 160 hp. This results in a climb rate of 2,150 fpm at max, all up weight.

Phil is the chief coach for the Royal Air Force Flying Club Aerobatics Squad. He is an air show pilot in the U.K., who started out flying a Pitts Special S-1C until he acquired the DR-107. His air show displays have been viewed by an estimated 1.3 million people in the U.K.

9.1 Brian Turner, VH-IAC, Australia.

9.2 Richard Wiltshire, VH-RSW, Australia. Three-time Australian Aerobic Champion.

9.3 Line of DR-107s on the ramp in Temora, Australia. Left to right: yellow and white VH-RSW, Geoffrey Johnston and Alan Kirkpatrick; blue and yellow, owner unknown; red VH-KGB Christopher Taylor; blue and yellow VH-XSG, David Foord; blue and yellow VH-IAC, Trent Stewart, Kingsly Just, and Krishna Parikh. Photo by Geoffrey Johnston.

9.4 Rainer Heufner DR-107: Sabre-tooth Pussy Cat. QBE DR-107 New Zealand, from *Sport Aerobatics*, September 2014. Winner of Australia's Sport Aircraft Association's Concours d'Elegance and the John Liddell Award.

9.5 Phil Burgess, G-RIHN, Great Britain. Pictures with a number of his trophies, including Gold in the Brighton Advanced Finals, Cavendish Hotel Trophy, Advanced Masters, and British National Championships (Advanced category).

9.6 David Keen, G-IIID, which was previously owned by Vernon Millard; Neil Bigrigg, G-CVII, built over a six-year period by Neil, Mark Davies, and Ian Tunstall, at a cost of \$82,760 in USD; Phil Burgess, G-RIHN, Great Britain.

9.7 G-IIID when Vernon Millard owned it.

10. DESIGNS BEFORE AND AFTER DR-107

In 1972 Dan was a senior in high school, logging as much time in his family Piper J-3 Cub as he possibly could. He had decided that he was going to become an aerobatic pilot someday and that he was going to fly a Pitts Special, even if he had to build it himself. He persuaded his metal shop instructor to teach him how to weld, then set off to build his Pitts Special. With help from his father the two built up a set of tail surfaces. That was as far as the project got.

Dan went on to college and became an aeronautical engineer. After college, Dan met up with Jim Young, who was building a Starduster. Dan pitched in, but through countless hours of chatting and working on the Starduster the two decided to build two Pitts S-1Ss. So began Dan's journey into designing a series of aerobatic bi-planes.

The first would be the S-1X Sunbird. Jim purchased stock S-1S wings, horizontal tail, elevators, and spring gear from the Pitts factory. From the nose to tail this was a very different airplane. They used a stock Lycoming O-540 with a PS-5 carburetor driving a two-blade 80-inch diameter Hartzell propeller. A few years later good friends Amos Buettell and Mike Anderson talked Dan into designing new airplanes for each of them. By 1984 Dan had completed the drawings. Mike built and named his plane the Phoenix and Amos was calling his plane Awesome Lady.

The end of the 1980s Dan moved from designing biplanes to monoplanes. The Sabre was a mid-wing, Laser-type based on Henry Haigh's Superstar, but with a larger engine. Early in the 1990s Dan focused his attention on the concept of the One Design, which was intended to provide an economical airframe capable of Unlimited category competition performance. Before the plans for the One Design were even drawn up, Dan announced his intentions to build a two-seat aerobatic aircraft that would look like a stretch version of his popular single-seater. The first concept sketch for the DR-109 pre-dates the DR-107 by five years.

Photo captions see page 24.

ACRO SPORT

45th Anniversary

ONE DESIGN

25th Anniversary

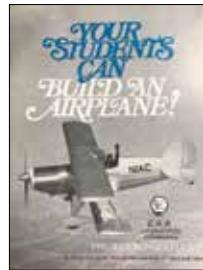
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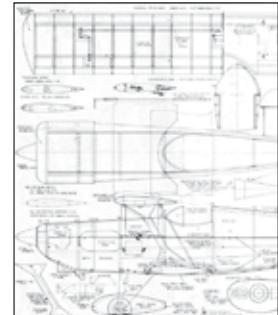
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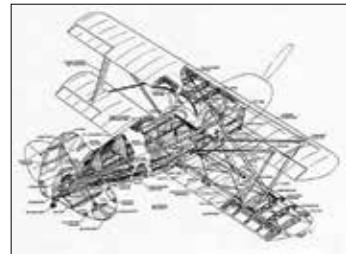
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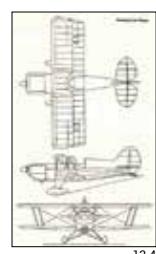
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12.4

11. NTAC

In March of 1971 EAA President Paul Poberezny, aside from his many other duties, was putting in many hours at the drawing board in an effort to keep ahead of rapid progress being made on the Acro Sport project by staff members and several volunteers in the EAA shop. Paul always had an interest in biplanes. He had visited with Curtis Pitts at his office in Homestead, Florida, in early 1970 and had gone back home to design and develop the first single-place Acro Sport. The first aircraft had a 180-hp engine. On the second one, he changed the wing to a more symmetrical design, installed a 200-hp engine, and called it the Super Acro Sport.

All of this was taking place just over a year after the formation of the International Aerobatic Club (IAC) as one of EAA's divisions. There was tremendous interest amongst EAAers for aerobatics and IAC's membership blossomed to over 1,000 in the first year. Paul wanted to contribute a new design to the menu of choices homebuilders had available to them in the way of single-seat aerobatic biplanes with competition capabilities. The Acro Sport was the result of Paul's vision.

Bill Blake of St. Louis, Missouri, an excellent illustrator and draftsman, made several visits to headquarters, compiling information, making sketches, and taking Paul's shop drawings back with him. Using those drawings he produced a detailed and well-illustrated set of plans that would encourage industrial arts teachers and students to consider the educational merits of aircraft construction in the school, as well as experienced homebuilders.

A note of interest is the FAA registration number obtained for the Acro Sport of NIAC, which can also be read as NIAC (International Aerobatic Club). The EAA thanked Curtis Pitts, designer of the famous Pitts biplane series, for his cooperation in permitting the use of various fittings and control system designs for use in the Acro Sport.

11.1 Bill Blake's early concept artwork for the Acro Sport.

11.2 Paul Poberezny at one of his favorite places – in his office and at the drawing board working on the Acro Sport design.

11.3 The Acro Sport was also designed for Project Schoolflight. This EAA program was structured for high school industrial arts classes and other youth groups to encourage them to build aircraft in their shops. Through the construction of an airplane, students would learn about aircraft design, various systems, and the importance of quality, craftsmanship, and safety.

12. PLANS AND MATERIALS

The EAA Acro Sport was designed for several purposes. First, to promote and remember the nostalgia of flying and to provide inspiration and a memory of those pioneers who offered so much to make aviation what it is today. And second, the Acro Sport was designed for use in schools – high school industrial arts programs, Civil Air Patrol groups, and any other similar activities.

All airplanes start as a dream. EAA had the successful "EAA Biplane," which was an early design that helped launch the homebuilding movement in EAA's first years. Paul Poberezny thought that by using the basic components of that aircraft he could improve upon it and come up with another successful design. However, after reviewing the situation he determined that starting from scratch would be the best course.

After the first prototype flew, it was not long before plans were made available to the sport aviation community and many Acro Sports were under construction around the world.

12.1 The Acro Sport builder's manual published by EAA.

12.2 A sample of the Acro Sport plans draft by Bill Blake.

12.3 A cutaway of the Acro Sport by Bill Blake.

12.4 A three-view drawing of the Acro Sport by Ron Wojnar.

ACRO SPORT

45th Anniversary

ONE DESIGN

25th Anniversary

IAC EXHIBITION 2018



13.1



13.2



13.3



13.4



13.5



13.6



14.1



14.2



14.3



14.4



14.5

13. LOG BOOK – THE PILOTS OF N1AC

More than a dozen pilots flew the prototype, N1AC, after its first test flight by Paul Poberezny and everyone who did liked it. The Acro Sport was probably tested and evaluated by more aerobic pilots in its first five hours of flying time than any previous homebuilt aircraft constructed – from inside to outside maneuvers.

After the test flights, Paul Poberezny felt very fortunate that no changes whatsoever were required in the design.

Pilots flying the Acro Sport and providing their feedback included many of the aerobic luminaries of the day and included Paul Poberezny (the first test flight), Tom Poberezny, Verne Jobst, Gene Soucy, Bob Heuer, Mike Heuer, Bob Davis, Don Taylor, Pete Myers, and Carroll Dietz.

- 13.1 Paul Poberezny straps into the Super Acro Sport in preparation for his competition flight at the IAC Championships in Fond du Lac, Wisconsin, in 1976. His son, Tom Poberezny, looks on.
- 13.2 Paul Poberezny, the founder and first president of the Experimental Aircraft Association and the designer of the Acro Sport.
- 13.3 Mike Heuer flies the prototype Super Acro Sport N5AC in the skies over Wisconsin.
- 13.4 Bob and Mike Heuer, two of the first pilots who flew the Acro Sport prototype N1AC. Both were inducted into the International Aerobatics Hall of Fame.
- 13.5 Paul Poberezny taxis from his Sportsman category flight at the IAC Championships in Fond du Lac, Wisconsin. With virtually no practice, Paul came in 14th place out of 31 pilots that year. Fond du Lac was the largest contest in the world.
- 13.6 The logo of the championships held in Fond du Lac in 1976 which was also the USA's bicentennial.

14. ODYSSEY IN A ONE SEATER

In 1970, EAA and IAC member Sam Burgess of Honolulu, Hawaii, flew his homebuilt Bücker Jungmeister N258H to all 50 states in the USA to promote sport aviation. That airplane is now in the collection of the EAA Aviation Museum in Oshkosh. That was also the year that the International Aerobic Club was formed and Sam, IAC 23, became one of the club's first members.

With the prototype Acro Sport N1AC now well proven but somewhat inactive in the museum's collection, Paul Poberezny urged Sam to conduct another tour in 1974, this time with the Acro Sport. In an article for *Sport Aviation* magazine later that year, Sam wrote the following:

"The purpose of the mission was to promote aviation education, sport flying, the EAA, and the IAC. The Acro Sport, with its simplicity of design and construction, nobly fulfilled its mission by interesting vocational schools in building aircraft in their shop facilities. This is an excellent means of developing the hands and minds of young people. The construction of an aircraft such as the EAA Acro Sport provides an opportunity for young people to learn many and varied skills and develops an appreciation for fine workmanship. All of the skills required are applicable to almost any phase of industry and experience gained is invaluable."

"The EAA Acro Sport, designed by President Paul Poberezny, was built by EAA Aviation Museum personnel as an educational venture and the plans were specifically designed to be used in classroom projects. There are presently over 100 EAA School Flight classes actively engaged in planning, engineering, and building the Acro Sport."

Sam started the 48-state tour in April 1974 and wound his way around the nation in the weeks subsequent, visiting countless chapters, talking to hundreds of EAA members and aviation enthusiasts, and visiting Acro Sport projects in progress. The airplane had no electrical system and had to be hand-propelled to start. It has a battery-powered radio but no electronic navigation system, and with only 25 gallons of fuel and a 120-mph cruise speed, was quite limited in range.

Nonetheless, the tour went virtually without a hitch and Sam returned the airplane safely, without a scratch, to the Milwaukee area on July 1, 1974. During this time, he visited 126 chapters, made over 100 takeoffs and landings, flew 135 hours, and did numerous TV and newspaper interviews.

Photo captions see page 24.

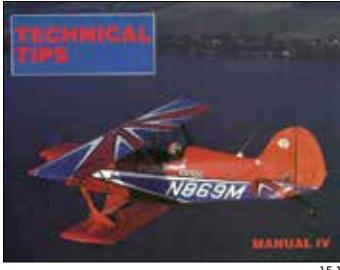
ACRO SPORT

45th Anniversary

ONE DESIGN

25th Anniversary

IAC EXHIBITION 2018



15.1



15.2
www.airbum.com



15.3



16.1



16.2



16.3



16.4



16.5



16.6

15. PILOTS AND BUILDERS

John Willkomm, IAC 7388, of Kenosha, Wisconsin, flew Acro Sport N869M in competition from 1982 to 1994. The plane only had 150 to 200 hours on it when he bought it from John Inman.

Unique to the airplane were three camera mounts on it that he had to remove. John earned his Basic through Advanced smooth and stars awards in the Acro Sport but never found time to try the Unlimited figures in the plane and knew he could not compete in Unlimited.

In 1990 he took the plane apart, did extensive work, and changed the colors. In subsequent years, he could be found flying the airplane at the IAC Championships in Fond du Lac, Wisconsin.

The following is an excerpt from a pilot report written by well-known author and aerobatic instructor Budd Davison. His website is www.airbum.com where the full pilot report can be found:

"N869M is the second plans-built Acro Sport to be finished. The fact that it was finished as fast as it was is the result of several unusual situations. Jim Inman, the owner, had gone to Oshkosh with a wad of bills in his pocket determined to come home with an airplane. He was tired of rattling around in his T-34 and was hot for something else. He came home empty handed because there just wasn't anything available that fit his needs."

"What did fit his needs was the EAA's Acro Sport that he saw being demonstrated along with the components display that Wag-Aero had in the exhibit building. His solution? Have an Acro Sport built! Enter Bill Shaft, local A&P and all around bolt bender. Bill did most of Inman's T-34 maintenance and '...is the only guy we trust to work on our Pitts. He's good at what he does and almost never misses an Oshkosh. He's a torch and dope man who knows and digs flying machines of the "Wisconsin Weird" variety. What more can you ask for?"

At the conclusion of his report, Budd wrote the following: "What the Acro Sport represents is exactly what the EAA wanted: It is an acrobatic airplane with almost-Pitts performance and better-than-Pitts manners. One of my friends persists in calling it a "Pitts for grandfathers," and I think he's right, which ain't all bad."

Photo captions see page 24.

16. ACRO SPORT II

The Acro Sport II was designed by Paul Poberezny as a follow-on to the original single-seat Acro Sport due to the demand within the sport aviation community for two-place biplanes. In fact, many homebuilt biplanes started their development as single-seaters, with two-seat versions offered later by their designers.

The Acro Sport II can be constructed for little more than its single-place siblings. With its larger wheels, wide landing gear, and light gross weight, the Acro II is a fun, docile, sport airplane designed for engines ranging in power from 115 to 200 hp. When fitted with a 180-hp Lycoming, its empty weight of 875 pounds makes it one of the lightest custom-built airplanes of its class.

Like all Acro Sports, its cockpit is designed to be comfortable for pilots up to 6 feet, 6 inches and 240 pounds. The airframe is somewhat larger than "midget" biplanes to avoid "touchy" flight characteristics and allow for more baggage.

In 2017, 83 examples were on the Federal Aviation Administration aircraft registry in the United States and there were 11 registered with Transport Canada.

16.1 The prototype Acro Sport II, designed by Paul Poberezny, and built in 1978. N9EA is shown here at Pioneer Airpark next to the EAA Aviation Museum in Oshkosh.

16.2 The cockpit of Acro Sport II N9EA.

16.3 Another view of the Acro Sport II prototype.

16.4 Acro Sport II N39CC owned by Beth and Gary McCartan, IAC 11267, of Pocahontas, Iowa. The airplane was purchased by them in Eagle, Michigan, in 1990 and ferried back to Iowa, where it was operational until 1997. At that time, it was disassembled and rebuilt and flew again in 2001. It is powered by a Lycoming O-360 with a fixed-pitch Sensenich propeller. The canopy is a modified Pitts S-2A part that was fitted to the fuselage. Photo courtesy of Aaron McCartan.

16.5 Acro Sport II N57DF owned and flown by Dennis Flamini, IAC 437620, of Spring, Texas. Dennis flew the airplane at the 2017 U.S. National Aerobatic Championships in Oshkosh.

16.6 Tony Brotherton, IAC 27860, with his Acro Sport II, tail number N42690. Winner of the Paul Poberezny Founders Award for Best Classic Homebuilt at EAA AirVenture 2016.

IAC EXHIBITION 2018

ADDITIONAL PHOTO CAPTIONS

- 5.1 First solo at age 14 in a SGS 2-33A.
- 5.2 Building his Pitts S-1S in 1975.
- 5.3 Building his Pitts S-1S in 1978.
- 5.4 1987 California State Unlimited Champion.
- 5.5 Dan with the DR-109 that he designed. Much of the fuselage fabrication took place on Doug Dodge's machining equipment at Aero Specialties around 1997.
- 5.6 A great birthday in May 2017 flying his Schweizer 1-26E No. 695.
- 5.7 Dan with the Collier Trophy-winning X-47B.
- 6.1 DR-107 prototype at AirVenture 1993.
- 6.2 At EAA AirVenture in 1994: left to right, Ben Morphew, IAC 1983, who flew the DR-107 at AirVenture from 1994 to 1996 and in other air shows; Dan Rihn, IAC 3836; and Doug Dodge, IAC 1096, of Acro Specialties.
- 6.3 AirVenture 1994, Ben Morphew with Leo Loudenslager in the cockpit.
- 6.4 The DR-107 One Design information, plans, and kit components continue to be sold via Aircraft Spruce & Specialty Co.
- 6.5 Dan's father, Dick Rihn, IAC President Emeritus 1996-1998, builds and flies his son's design in 1999.
- 6.6 January 1994 Sport Aerobatics cover.
- 6.7 February 1994 Sport Aviation cover.
- 6.8 April 2001 Sport Aviation cover.
- 8.1 An excerpt from the original One Design category rules.
- 8.2 Stan Burks, IAC 16903 - N105DR.
- 8.3 Pablo Blanco, IAC 435728 - N95HB.
- 8.4 Krysta Paradis, IAC 435851 and Adam Cope IAC 25104 - N75KA.
- 8.5 Chris Thomas, IAC 436801 - N1421W.
- 8.6 Jeff Seaborn, IAC 438260 - C-GPIO.
- 8.7 Richard (Rick) Dillman, IAC 435025 - N419MG.
- 8.8 Cody Zorn, IAC 437939 and Tony Zorn, IAC 24372 - N8KV.
- 8.9 Andrea Kuciak, IAC 27089 - C-FLCK.
- 8.10 Todd Ashcraft, IAC 21499 - N123TA.
- 10.1 DR-101 Sunbird. The Sunbird was capable of 2,600 feet on a vertical upline in a Hammerhead and had the ability of capturing 1,800 feet after a vertical up maneuver and flying away. The top speed was 205 mph in level flight.
- 10.2 DR-102 Sunbird II. Dan sold only three sets of plans for this version of the Sunbird. One was to Tom Aberle, of sport biplane racing fame. The project was finished by Dick Green, who flew it in air shows and competition. Another set was sold to Kenny Blalock, who used the plans as a basis for his own design, which became known as the Pitts Falcon.

- 10.3 DR-103 Awesome Lady. Specifications for the Awesome Lady are: wingspan 20 ft., length 19 ft., empty weight 1380 lbs. The top speed in level flight is 230 mph with a cruise speed of 175 mph. The sound of the eight-cylinder engine and four-bladed propeller was like no other aerobatic airplane at the time.
- 10.4 DR-104 Phoenix. The Phoenix is somewhat smaller than the Goshawk and bears many resemblances to the Sunbird. Wing span is 17.33 ft., wing area is 102 sq. ft. (including the fuselage area) and the length is 16.5 ft. The empty weight turned out to be 1023 lbs. and the competition weight is 1280 lbs. Powered by a pumped-up Lycoming IO-540 capable of putting out 350 hp and driving a three-bladed MT propeller, the Phoenix has a power-to-weight ratio of 3.7 lbs./hp.
- 10.5 DR-105 Goshawk. The Goshawk weighed in at just under 1100 lbs. and is powered with a pumped-up Lycoming IO-540, which had a dry weight of 410 lbs. with a compression ratio of 10 to 1, it is capable of producing about 345 to 350 hp, a tribute to Dick DeMars' expertise.
- 10.6 DR-106 Sabre. Designed as an IO-540 powered mid-wing monoplane for Rory Moore, a sort of Laser/Extra/Superstar clone but with a larger engine. Halfway through the project Rory sold it to Cecilia Aragon. Alan Geringer and Rick Kunkle coordinated the construction and finished up the project, which became known as the Sabre. Flying the Sabre, Cecilia won a spot on the U.S. Aerobatic Team and took the plane to the 1992 World Aerobatic Championship in Le Havre, France, that summer.
- 10.7 DR-109. Ashcraft Aero Works, Inc. provides the aircraft homebuilder with the DR-109, DR-108, plus other exciting new designs and parts for the DR-107.
- 14.1 A sample of the dozens of newspaper articles that appeared on the tour. This one is from a Seattle, Washington, newspaper.
- 14.2 Sam Burgess climbs in the cockpit of Acro Sport N1AC at the beginning of the tour. Photo by Lee Fray.
- 14.3 A map of the 48-state tour flown by Sam Burgess in the Acro Sport. Sam began the tour in April 1974 from Burlington, Wisconsin, and finished back at Burlington on July 1, 1974.
- 14.4 The finish of the tour on July 1, 1974. EAA Founder and President Paul Poberezny (left) looks on as Sam Burgess shows him the logbook of the airplane. All chapter presidents who he visited on the tour signed the book. Photo by Lee Fray.
- 14.5 Another sample of the dozens of newspaper articles that appeared on the tour. This one is from a Mansfield, Ohio, newspaper.
- 15.1 John Willkomm flies his Acro Sport near Fond du Lac, Wisconsin.
- 15.2 This photo accompanied Budd Davisson's pilot report on his website. It was taken when Jim Inman still owned the airplane prior to its sale to John Willkomm. Photo by Budd Davisson, www.airbum.com.
- 15.3 The prototype Acro Sport at Burlington, Wisconsin.

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2018 West Open Championships

Chapter 12's Ben Lowell Aerial Confrontational

BY DUNCAN KOERBEL, IAC 437649, CONTEST DIRECTOR

WE SAFELY AND SUCCESSFULLY held the IAC West Open Championship at Fort Morgan Municipal Airport (FMM) northeast of Denver over the first weekend in June 2018. We had an excellent turnout with 32 competition pilots: nine Primary, 11 Sportsman, five Intermediate, five Advanced, and two Unlimited.

This resulted in about 96 competition flights as we had one plane not finish and another repeated a flight due to an approved in-flight mechanical abort. We had two boxes set up during the competition weekend, and on the official Friday practice day we conducted 50 practice flights. I would equate the tempo to being equivalent to the U.S. Nationals as we executed the 150 total flights safely in about two and a half days.

In addition to the contest flights, we were scheduled to have a two-plane 4-Minute Freestyle competition between two of our 2017 U.S. Unlimited Aerobatic Team members — Mike Galloway and Bob Freeman. Mike had to leave to get home before dark so the competition turned into a demonstration, and Bob flew a spell-binding routine with music in front of show center. This was an excellent conclusion to the contest.

We continue to develop our relationship with the Metropolitan State University of Denver program, coached by Dagmar Kress. These student competitors continue to impress us. Several are now in Sportsman and are also flying solo in the Decathlon. There is an approximately 50-50 split between male and female pilots, and I am encouraged to see this mix. These aviators will be flying my grandkids on United Airlines someday. They will be better pilots due to their aerobatic experience.

The contest tempo was vigorous so I asked DJ Molny to chief judge the entire contest to minimize downtime during swapping of judges and to keep the cadence tight. We were fortunate to have five sets of experienced judges for all flights. DJ was assisted by an air boss to help coordinate with the

starter and the north and south hold system to keep the contest box full. He did an outstanding job. We also had two sets of three starters to make sure everyone was in line and ready to go and to let the starters have an occasional break. Even with these dedicated assignments, we briefed each day at 7:15 a.m. and finished on Saturday at 7 p.m. The contest award ceremony was Sunday at 4:30 p.m.

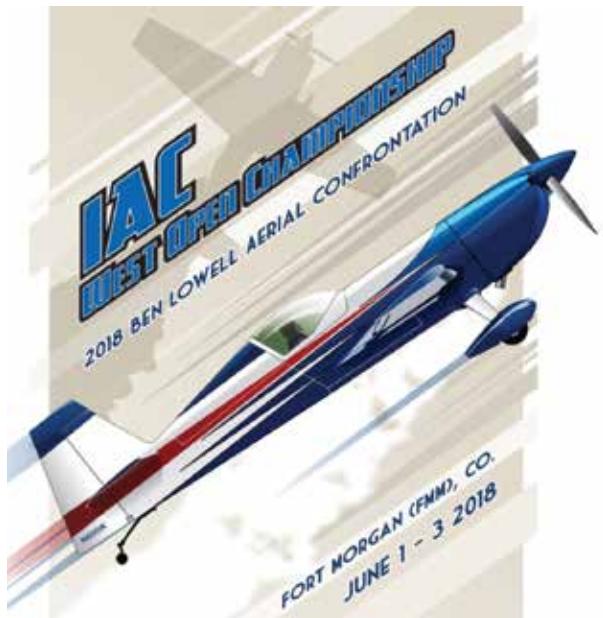
Since this was the IAC West Open Championship in addition to our regional contest, we decided to provide food and beverages all day versus just breaking for lunch. We arranged to have the Flight Deck Grill based out of Vance Brand Municipal Airport (LMO) in Longmont, Colorado, cater the event on Saturday and Sunday. They opened at 7 a.m. and closed around 5 p.m. each day. They served a solid breakfast and lunch menu with appropriate snacks and beverages through the day. We underwrote the pilots with food vouchers for \$15 each for their lunch on Saturday and Sunday as part of the contest fee. We guaranteed a minimum in order to entice the Flight Deck Grill to come, and we missed that by only about \$300 so all in all this was a success. It was the first contest I have been at in the last three years where nourishment and beverages were available on-site the whole time. We need about 30 pilots to make this economically viable. We will try a slightly





modified version in Sterling at the High Plains Hotpoxia July 13-15 with a local food vendor. This takes a big burden off club members and their significant others while also allowing for food for spectators and minimizing the downtime over lunch.

IAC Chapter 12 is grateful to have had the privilege of hosting the 2018 West Open Championship. We created and sent e-mail invitations to the 211 IAC pilots who participated in a contest west of the Mississippi in 2017. We got a total of approximately 65 responses and eventually 32 attendees. We had ample time to practice in our dual box arrangement and implemented a free break during the competition per the rulebook. Hence, the pilots had minimal objections to any density altitude concerns. Ironically, one of the attendees, Shaun Brautigan, was from Florida. Shaun won first place in Intermediate and intends to compete in the East Open Championship and the U.S. Nationals later this year, so he could sweep the USA.



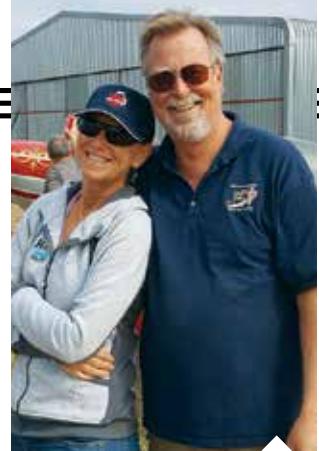
We think the event was a success all the way around. The rules prohibit us from repeating as hosts in back-to-back years, but we will consider hosting again in 2020. On a side note, as we get closer to the appropriate time, I would like to personally work with IAC headquarters to submit a bid to host the World Advanced Aerobatic Championships in the United States in 2022. This would be the first time the Advanced worlds would be held in the United States since Pendleton, Washington, in 2008. **IAC**



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those who loved aviation.

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Steve & Alice Johnson

BY GARY DEBAUN, IAC 4145

GD: HOW DID YOU TWO FIRST BECOME INVOLVED IN COMPETITION AEROBATICS?

AJ: My answer is my mother-in-law, Steve?

SJ: My mother bought me a ride in a Pitts S-2B for my birthday. Alice and I drove up to the airport, and I met Don Panek, an aerobatic pilot who flew for the Holiday Inn Aerobatic Team for several years. Don gave me my first two lessons in the Pitts, and I was hooked, but couldn't afford a Pitts. Fast-forward a few years and Alice told me I needed a "project." I found a perfectly flying, in great shape EAA Super Acro Sport, which wasn't much of a project, but the price was right, and I bought it. A couple of weeks later, we went to Stillwater, Oklahoma, and watched an IAC competition. It was amazing, and we got to work on the line as recorders. I was more hooked. A few weeks later there was another Oklahoma contest, so we went, and had a great time flying the contest. The rest is history!

GD: ALICE, YOU WERE THE TEAM MANAGER FOR THE U.S. UNLIMITED AEROBATICS TEAM IN 2017. TELL US A LITTLE ABOUT THAT EXPERIENCE.

AJ: I don't think I can just say a little about anything. I truly enjoyed the experience. The team was wonderful, quirky, and extremely hardworking. Everyone's personality was so different, yet they truly became a team. I don't know what I really expected South Africa to be like, but I was surprised when it was so much like the U.S. Southwest. Kind of made me feel as though I was back home. The contest was well-run, and the contest staff and home team were very hospitable. I consider myself very fortunate to have had the opportunity to be a part of the team.

"I TRULY ENJOYED THE EXPERIENCE. THE TEAM WAS WONDERFUL, QUIRKY, AND EXTREMELY HARDWORKING."

— Alice Johnson

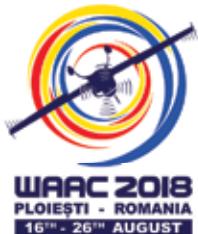
GD: STEVE, YOU HAVE BEEN FLYING COMPETITION A LONG TIME. WHEN AND WHERE WAS YOUR FIRST CONTEST AND HOW DID YOU DO?

SJ: My first contest was at El Reno, Oklahoma. I had never had coaching, but had read Neil Williams' book on aerobatics, so I was flying a reverse wedge as a reverse half-Cuban-eight. One of the other competitors mentioned that to me, and I learned that the rules had changed since Neil wrote his book! I flew the reverse wedge correctly, got third place overall, and won Best First-Time Sportsman!

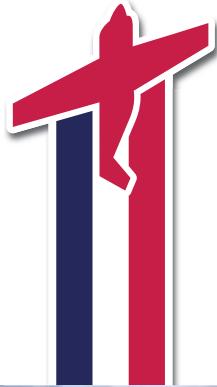
GD: ALICE, YOU WERE INSTRUMENTAL IN GETTING STEVE THAT BEAUTIFUL MX. HOW DID THAT COME ABOUT AND WHAT'S THE DEAL WITH THE FEATHER?

AJ: It was kind of the prize for staying married to me for 20 years. For the feather it is really more Steve's story, but since you asked me, it comes from a story out of Richard Bach's book *Illusions*. It was required reading when I was dating Steve. Also on the required reading list was *The Shepherd of the Hills* by Harold Bell Wright. Steve's tastes are rather eclectic.

SJ: The story of the MX is best told at www.Vimeo.com/25439247.



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we will take on the world.**



The road to victory is never traveled alone.

James & Tim Bagley
Kyra Barthel
James Bourke
Dan Callender
EAA Chapter 677
Martin Flounoy
Jeffrey Hove

Kenneth Hunt
IAC Chapter 23
Sarah Jackson
Jerald Lewark
Chris Magon
Bruce Mamont
Dewey McCarley

William McLean
Grant Nielsen
Cindy Seal
Brent Smith
James Wheaton
and the family of
Jim Risher

We recognize these contributors as part of our team helping us get down the road to Romania. Thank you.

We are proud to represent you and the United States of America at the 2018 World Advanced Aerobatic Championships in Ploiesti, Romania, vying against the best aerobatic pilots in the world.



Team USA (L-R): Angelo Cillaroto, Stan Moye, Marty Flounoy, Brent Smith, A.J. Wilder, Mark Fullerton (alt), John Wacker, Michael Lents, Aaron McCartan, Matt Dunfee. Not pictured: Jason Flood (alt), Nikolay Timofeev (coach)

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Thank you for helping us keep our eye on the road and our focus on flying our ultimate best to achieve victory.



MEET A MEMBER

GD: STEVE, YOU'VE DONE EXTREMELY WELL IN ADVANCED, MAKING THE TEAM SEVERAL YEARS IN A ROW. DO YOU HAVE ANY PLANS TO MOVE TO UNLIMITED?

AJ: I will probably not move up to Unlimited. It has become much more of a younger person's sport, as well as taking a lot of time and money. I do dabble in the Unlimited figures, but I am competitive enough that I don't want to make a fool of myself trying to be good in Unlimited. I have too much respect for the folks that do it well to try to fly in their arena.

GD: ALICE, IN 2016 AND 2017 YOU WERE THE VOLUNTEER COORDINATOR AT THE U.S. NATIONAL AEROBATIC CHAMPIONSHIPS. THAT'S A HUGE JOB — HOW DID YOU PULL IT OFF SO WELL?

AJ: 2016 was baptism by fire. It worked out mainly due to the great prework that Ellyn Robinson did, so I had a great place to start. 2017 was interesting since the judges were already chosen. One thing I have implemented is using Excel to help organize the process. I love a good spreadsheet.

GD: STEVE, WE ARE STARTING TO GET A LITTLE SHORT ON NATIONAL JUDGES. ANY IDEAS ON HOW CAN WE FIX THIS?

SJ: Wes Liu and I have had several conversations about this, and it's one of the reasons Wes made me a judge instructor. Unfortunately, it takes practice for judging at contests just as much as for flying contests, but we have fewer contests than in the past, and each one is more expensive than in the past, so practicing judging is getting harder. Wes has done a great job with the judge mentoring now required, and his YouTube videos, How Did They Miss That?, are helping judges to realize they must work as hard as the pilots to do a good job of judging. Judging is hard work! One of the problems is that national judges used to be compensated somewhat for judging at the Nationals, but that stopped, so the judges are now other competitors. This means the higher category pilots are being judged by lower category pilots, which, typically but not always, means lower skilled pilots and judges. Good judges need to be treated like good judges, and not like a pilot who is also a judge that happens to be free.

GD: ALICE, WHAT ARE YOUR THOUGHTS ON THE AFTER-CONTEST BANQUETS? ARE THEY REALLY NECESSARY OR SHOULD WE JUST HAVE PIZZA AND FLY HOME?

AJ: Wow, that covers a lot of ground. My stock answer is we're here to fly; my husband can get bad food at home. I think the focus of after-hour events should be whatever makes sense, given the contest venue, to have a chance to relax and have some good fellowship. Of course I'd love to see more salads, fresh vegetables, pasture-raised proteins, and craft beer served at contests, but I'm a dreamer.

GD: STEVE, DO YOU HAVE A PRE-AEROBATICS ROUTINE LIKE STRETCHING, YOGA, OR LISTENING TO MUSIC?

SJ: I have the breakfast Alice allows me (just kidding!), then listen to my coach about what he or she wants to see this flight, then go try. I do try to walk through my sequences several times before the flight, even my Free, to get it soaked into my head well. I move my stick and throttle hands in the appropriate manner while walking the sequence to start the muscle memory working, too. I will focus on just one or two things in a flight — verticals, 45s, snaps, etc. — until they are good, then move to something else. I can't learn it all well until I get the different parts done well.

GD: YOU TWO HAVE BEEN AROUND THE IAC FOR A LONG TIME. IS THERE ANYTHING YOU WOULD LIKE TO SEE CHANGED IN THE IAC?

AJ: Hey, I haven't been around that long!

SJ: We have developed a wall between grassroots pilots and U.S. teams that seems strange to me. IAC and our sport should be prepared to build grassroots pilots into U.S. team members. All aerobatic pilots start at the beginning and work their way up. If they aren't interested in flying higher categories or being on the U.S. team, that doesn't mean we should score them easier or differently. Lower-powered aircraft pilots have to work harder to fly higher-category sequences, but it's up to each pilot about what category they want to fly. Like Alice said, when I go to a contest, I am there to fly! The banquets are fine, but we should fly until the sun sets. Similarly, we used to go to contests where the contest director had "bad weather" plans in place. I learned a tremendous amount sitting in the hangar listening to Robert Armstrong and Doug Bartlett (our new leadership!) teaching the mental things about flying aerobatics. Once, in Oklahoma, we had 2,500 broken all weekend, but Danny Adams from the Pitts factory was there, and he tweaked every Pitts in the hangar, including the fit of my S-2B canopy. It closed smooth as spreading butter after his work. Even if the weather is bad, don't cancel! Have judging classes! Watch Wes' videos and have lively discussions about the judging.

GD: WHO IN THE SPORT HAS BEEN AN INSPIRATION TO YOU?

AJ: Everyone I've met in this sport has inspired me in some way. Really. No one takes an easy route into this sport whether they are a competitor or a volunteer.

SJ: I mentioned a few names earlier, and would add Giles Henderson and Debby Rihn-Harvey. They have both always been available to talk to anyone, even brand new aerobatic pilots about anything to do with flying aerobatics safely and well. Tom Adams is my great friend and great coach, who helped me to move up from Intermediate to Advanced, and that is a big step! Plus his name is scattered all over the banners we used to have at the Nationals! That is an amazing history!

"WE SHOULD FLY UNTIL THE SUN SETS." — Steve Johnson

GD: DO YOU HAVE ANY INTERESTS OUTSIDE OF FLYING?

AJ: Cooking, photography, and running. I'm on schedule to complete my 60th half-marathon by the end of 2018.

SJ: I like sailing and would like to get more involved in sailing again. I have flown RC airplanes since I was very young, and I still do that. The new RC airplane technology has changed as much as our aerobatic airplanes. And I am supporting Alice all I can in helping her reach her half-marathon goal. It takes as much time and practice as flying, though the shoes aren't quite as expensive as an airplane. **IAC**

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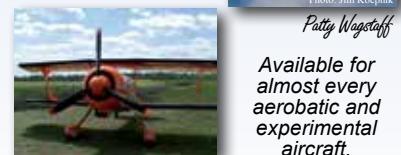


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