

JANUARY 2008

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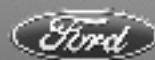
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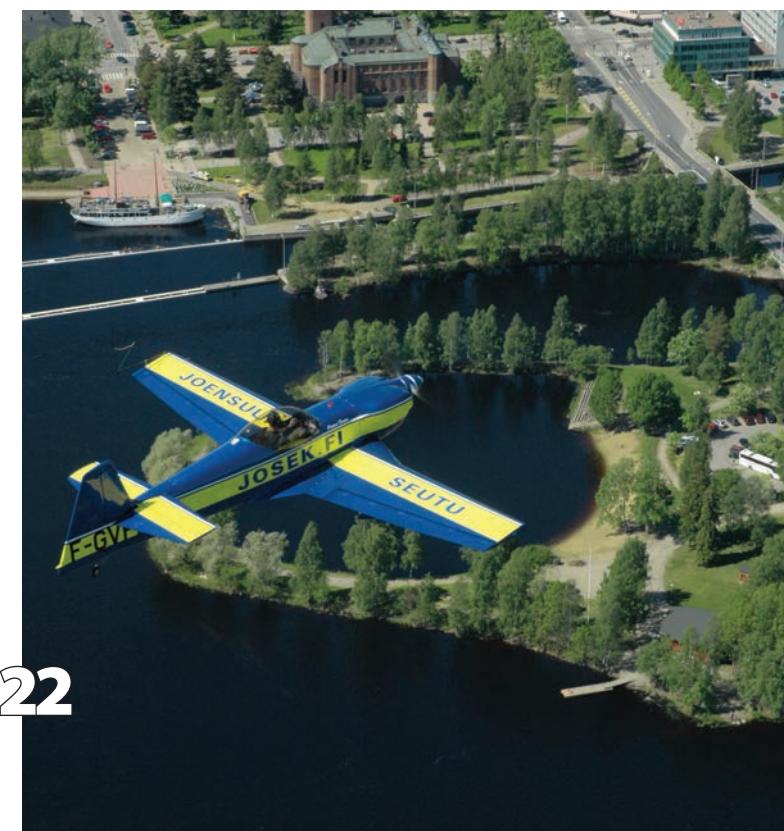
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Instructor Jamie Poppe and Purdue student Johanna Hawkins pilot the college's new Super Decathlon over AirVenture 2007. (Jim Koepnick)

SPORT Aerobatics

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB

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The International Aerobic Club is a division of the EAA.



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POSTMASTER: Send address changes to *SPORT AEROBATICS*, P.O. Box 3086, Oshkosh, WI 54903-3086. PM 40032445 Return undeliverable Canadian addresses to World Distribution Services, Station A, P.O. Box 54, Windsor, ON N9A 6J5, e-mail: cpcreturns@wdsmail.com.



Judson Bartlett

LETTER from the EDITOR

by Scott Westover

This year it really is all about you

Putting together the schedule for the coming year in the magazine business is a little like watching the ball drop on New Year's Eve. It provides a natural time to take stock of the last 12 months and consider the coming calendar. What went right? What didn't quite work out? What can we do better? The most important question with regard to *Sport Aerobatics* is simple: How can we deliver more value to our members? Luckily there are answers to these questions. In fact, many of you have provided the answers through e-mail, telephone calls, and conversations while leaning against an airplane or sitting on the porch of the IAC building in Oshkosh.

The comments I have received over the last year carry recurring themes that lead me to the following conclusion. First, you want to continue to see balanced content between competition and recreational aerobatics. Second, you want more information related to safety and flying technique. Third, you would like to read about local chapter activities and learn about different ways you can help to grow participation in our sport. This is valuable information to have in hand when putting together the editorial calendar for 2008, and over the coming months you will see your comments shape the content of this magazine as surely as ailerons turn an airplane.

Each month I invite your suggestions, article ideas, and contributions through this column. Dozens of readers have taken me up on the offer, and by far the best part of being your editor is working with IAC members to get their ideas and stories onto paper so that they can be shared internation-

ally. This month I would like to invite your contributions once again, and suggest that you consider the areas of focus that our members have asked for. More than anyone else, you know who the movers and shakers are in your local aerobatic community. Is there a local expert on safety that we should invite to write an article? I am willing to wager next month's avgas money that you know an instructor who is the best at teaching a particular technique — and that is someone I would like to call about writing a "How to Fly It" column. Has your chapter put on a successful contest or smooth patch qualifier? I'd like to hear about it.

In 2008 we have commitments from some of the biggest names in aerobatics to help all of us to improve our flying and safety habits. Many are back by popular demand, while others, like John Mohr, will be contributing because readers suggested them and they have accepted the invitation.

I am excited about the direction the magazine took in 2007, and I would like to thank all of the people who help to produce a superior magazine at EAA Publications. That team provides the energy we need to execute an impressive 2008. I would especially like to thank the two people I work most closely with at EAA. Phil Norton, who is our design guru, and Colleen Walsh, who helps our contributors find their voice. I would also like to thank the dozens of contributing authors who had the guts to share their stories or took the time to make us better pilots by sharing their knowledge. This year our focus will be even sharper. I look forward to your continued contributions and suggestions. Fly safely!

Sport Aerobatics is your magazine. To submit news, comments, articles, or article ideas, please send them to: IAC, P.O. Box 3086, Oshkosh, WI 54903-3086; or email them to tookyflyer@tds.net.

PRESIDENT'S PAGE

by Vicki Cruse • IAC 22968
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Vicki Cruse

Fly, Be Free

"You people wouldn't believe the things that I've seen." *

Flying at 7,500 feet above the San Joaquin Valley in central California gives one time to think about a lot of things, despite ATC in your ear and a groundspeed slightly in excess of 250 mph that cuts down the overall "thinking" time. Usually my thoughts drift to how fortunate we are to live in a country where avgas is relatively cheap, airplanes are readily available, flight schools are abundant, and we can fly almost anywhere at anytime we want. The freedom we have is truly incredible.

Think about your last cross-country flight. You saw things most people will never see. Even better, try that same flight in something slower than what you are used to. I used to use my Edge to commute between Santa Paula and Santa Monica, and at 180 knots, it was a quick trip. For my business, I hired a guy who flew out of Santa Paula in a Cardinal RG, and we began to use that aircraft for the commute. Even though we flew the same route as I had in the Edge, the slower cruise speed, and the ability to look down more frequently, allowed me to see things on the ground I had never seen. Fast isn't always better; it depends on your mission.

This weekend I had the opportunity to go flying in a helicopter, a Hughes 269A, which at a distance appears to be only a Lycoming engine attached to a set of skids, a rotor, tail boom, and a thin sheet of Lexan called a cockpit. Upon closer inspection, there

is even less to it. My friend Vicky and I flew cross-country at 500 feet above ground level (AGL) for about 30 minutes, at 80 knots or less, to go visit a friend of ours on a ranch in central California. Turns out he wasn't home, but the flight was incredible.

*This year, resolve
to introduce just
one person to
aviation and the
rewards it has
brought to your life.*

We flew over a nearby reservoir, spotting fish and blue herons, and then over a closed mine with an area she calls "the slot," which is probably 200 feet wide and 300 feet tall, leaving plenty of room for helicopters and aerobatic airplanes that wish to go zooming down its length (it's got "Wayne Handley" written all over it). From there, we headed back to the airport at about 300 feet AGL. We saw hundred-year-old oak trees that, upon their death, split with the branches and tree top splaying out 360 degrees, not the typical "timber" in one direction. We saw numerous

hawks, both hunting and resting in the tops of trees.

We took a detour to fly through a canyon and over a river that is far below its normal water stage, as are most waterways in California at this time of year. From this vantage point we saw fish, wood ducks that can outrun the helicopter, and magnificent bald eagles that cannot. We also saw where cascading pools, currently awaiting rainfall, drop about 2,000 feet into the river. This vantage point would be impossible from an airplane or even a hike. Few people have seen the river or its wildlife as Vicky chooses to see it.

Flying is many things to many people. It represents a source of income, a way to see the world, a risk taken to do something different, a test of one's ability to overcome fear, a desire to learn more about yourself through challenge, and a stress reliever to name a few. An interest in aviation is what brought all of us together, and the community continues to get smaller. Aviation expands your horizons and lets you see those horizons from a whole new level. This year, resolve to introduce just one person to aviation and the rewards it has brought to your life. There is something in aviation for everyone, but it takes people like us to make the introduction.

* From the movie *Blade Runner*, as spoken by Roy Batty played by Rutger Hauer. ↗

NEWSBRIEFS

Greg Koontz Earns Master Instructor-Aerobatics Designation



The National Association of Flight Instructors (NAFI) and the International Aerobatic Club (IAC) take pride in announcing a significant aviation accomplishment on the part of Gregory B. Koontz, owner of Greg Koontz Airshows and a resident of Ashville, Alabama. Recently, Greg was designated a Master Instructor-Aerobatics by NAFI and IAC.

To help put this achievement in its proper perspective, there are approximately 91,000 certificated flight instructors in the United States. Fewer than 600 of them have achieved that distinction thus far. The last 12 national Flight Instructors of

the Year were Master Instructors, while Greg is one of only 11 Alabama aviation educators to earn this prestigious "Master" title and one of only 14 nationwide to earn aerobatic accreditation. In the words of former FAA Administrator Marion Blakey, "The flight instructor is where the rubber meets the runway. The Master Instructor accreditation singles out the best that the right seat has to offer."

The Master Instructor designation is a national accreditation recognized by the FAA that is earned by candidates through a rigorous process of professional activity and peer review. Like a flight instructor's certificate, it must be renewed biennially. This process parallels the continuing education regimen used by other professionals to enhance their knowledge while increasing their professionalism. Simply put, the Master Instructor designation is a means to identify those outstanding aviation educators, those "Teachers of Flight," who have demonstrated an ongoing commitment to excellence, professional growth, and service to the aviation community.

NAFI is dedicated to providing support and recognition for America's aviation educators while helping them raise and maintain their level of professionalism. It is also committed to providing a safe and effective learning environment for student pilots. The Association was founded in 1967 and affiliated with EAA in 1995.

Additional information is available at www.NAFInet.org.

EAA Working to Preserve Amateur-Builders' Rights

EAA is supporting expansion of opportunities for enthusiasts representing a broad spectrum of aircraft building and flying interests. To that end, prior to making recommendations to the FAA on amateur-built aircraft regulations last week at the Aviation Rulemaking Committee, EAA's board of directors voted to preserve existing amateur-building rules:

EAA supports the intent of the experimental "amateur-built" regulation and its requirement that the majority portion of the aircraft be fabricated and assembled by amateurs for their education and recreation, while maximizing safety and promoting design innovation.

"The EAA community consistently rallies behind efforts to open as many doors as possible to aviation enthusiasts of all stripes," said EAA President Tom Poberezny. "That's why we want to protect the existing amateur-building rules, including the spirit of the 51 percent requirement, to preserve the nearly unlimited scope of that category. Under those rules, an innovator has the flexibility to construct virtually any imaginable flying machine. We don't want to lose that freedom."

EAA is also focused on the big picture: A growing number of builders want to build and fly their own airplane, but some may not want to be bound by the requirement to perform at least 51 percent of the construction tasks themselves.

In addressing that segment of amateur-built aircraft, EAA board members also voted to pave avenues for kit-building approaches and builder-assistance programs that do not meet the 51 percent criterion:

EAA supports the revision of the existing experimental "primary kit-built" category to make this certification category readily available to consumers that desire to build their own personal aircraft without a restriction on the amount of commercial assistance they receive.

Accordingly, EAA Vice President of Industry and Regulatory Affairs Earl Lawrence says EAA is pushing for "a readily available alternative for many kit manufacturers and their customers." The alternative, he asserted, would entail a revision to the little-known and under-used experimental primary kit-built category.

The FAA has indicated that it will issue a policy statement after the new year, and open a comment period thereafter.

Sonex Education Starter Packs Released

Sonex Aircraft LLC has announced the release of Sonex Education Starter Packs, a scalable metalworking project and curriculum guide intended to provide youth with an introductory exposure to aircraft construction. For schools and community organizations wishing to eventually build a Sonex aircraft complete airframe kit as a full Sonex Education Initiative participating institution, this Starter Pack can be a great "pilot project" to determine the feasibility of using metal aircraft construction as a teaching tool and catalyst for inspired learning. For those who do not intend to build a complete aircraft, this Starter Pack is still a great way to introduce metalworking and technical communication skills to students within the exciting context of aviation.

This interactive metalworking project is the actual assembly constructed by prospective Sonex aircraft builders at Sonex Builder Workshops, held several times annually at the Sonex Aircraft factory in Oshkosh,

Wisconsin. This project and its documentation have been refined by hundreds of Sonex workshop attendees, and it is ideally suited for youth education.

"So long as it does not negatively impact shop safety, this is one class in which we feel that daydreaming is required for success!" remarks Sonex Education Initiative Project Administrator Mark Schaible. "Helping others work toward the fulfillment of their dreams is our business here at Sonex, and we believe in the power of a student's dreams to guarantee success in their future." More information about the Sonex Education Initiative and Education Starter Packs can be found online at <http://Education.SonexAircraft.com>.



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180 Degrees Delayed

First contest proves to be a lot of fun

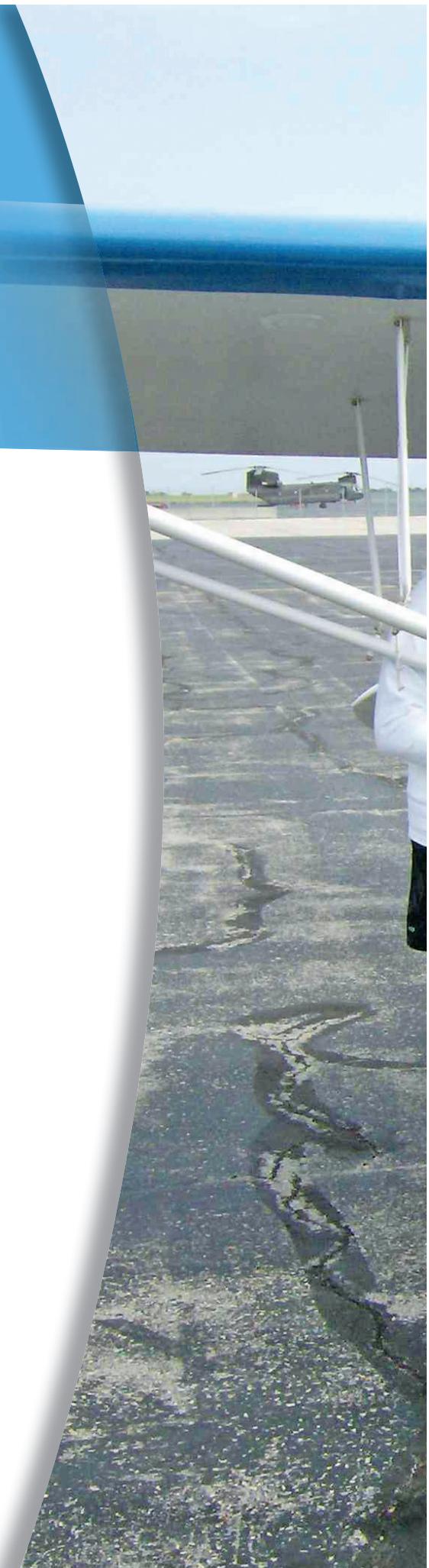
Diana Richards

Shortly after returning from a 30-day, 4,000-mile solo jaunt across the country, landing mostly at grass strips, I told my husband, Tom, I was going to enter an aerobatic contest at Kansas City in three weeks. "Sounds good to me," was his encouraging reply.

And so the next adventure began with a "newbie" about to enter her first contest. Should be easy, I thought. After all, I've flown my beloved Citabria several hundred hours, some of which included aerobatic maneuvers—the usual collection of aileron rolls, loops, spins, Cubans, and hammerheads.

Although I had never flown a competition sequence, I had been thinking about it for a while. A couple of years ago I established an

FAA-approved practice area over our farm to provide a safer aerobatic environment. This was necessary because we live within 4 miles of a Victor airway. A few friends thought they would use the practice area, and they did a few times. I use it several times a week but had never tried to put all of the maneuvers together in a sequence. In fact, I had never been taught how to do a slow roll in my airplane, a 150-hp 7GCAA without inverted systems.





Kim, Diana, Paul, and Ron. Making new friends was an important part of the contest for Diana.

To prepare for the Kansas City contest, I laid out the practice area like an official "box" over our two grass runways. My "exact" measurements centered the box over the grass runways with these boundaries: Highway 126 (N), the dirt road (E), Lightning Creek (S), and the hay bales in the neighbor's field (W). The end of the grass taxiway became the center of the box. With this setup the cows are the designated judges, with the chief judge being the bull.

When you attempt something new, you often have to convince yourself it's something you want to do. So why did I want to enter an aerobatic contest? My simple answer is, "Because I can." It is one more life experience within my grasp—at least I told myself it was. By nature I am an overly cautious woman (my husband says that is a huge understatement!). Once in a while I am able to wrestle the controls of life from this "fearful" woman and let that "adventurous"

woman take charge, at least for a while. When I am able to do this, I usually find the rewards worthwhile.

Aerobatic instructors aren't readily available in our area. Even so, I have been fortunate during the last few years to get several lessons from some aerobatic teachers (Chip Gibbons, Bobby Younkin, and Michael Hartenstine, to mention just a few), but none involved sequencing maneuvers. So I did some research, devouring aerobatic books, *Sport Aerobatics* articles (especially the recent Primary sequence article by Rob Holland), participating in aerobatic forums, and picking the brains of several aerobatic friends. Along with suggestions for perfecting the maneuvers, Niccolai Murphy was most helpful, providing a cadence count for the entire sequence.

When Tom asked me how it went the first time I tried to put the Primary sequence together, I started crying tears of frustration. "That's all right," he

said, reassuringly. "We need moisture on the pastures." Oh well! It's been an unusually wet summer here on the farm, and I did my part to help.

Finding Encouragement

In an e-mail to Chip Gibbons, my longtime mentor and good friend, I wrote, "I'm just flopping around in the sky trying to figure it (combining the various maneuvers) out. Let's see, today I fell out of my latest attempt at a slow roll and zoomed out of the lower limits of the box right where the cows (judges) were. Not good. I nearly exceeded V_{NE} and redlined the rpm. Not good either. Suggestions?"

Chip did better than just offering suggestions by e-mail. He came to the farm and critiqued me from the ground, kindly noting I was making the usual mistakes, like that my 45-degree up- and downlines were closer to 60 degrees. This was a turning point for me, as no one had made suggestions from the ground while I was flying the sequence before. At least now I knew what I was supposed to be doing, albeit not necessarily doing it well. He also brought, and briefed me on, all the paperwork I would need.

After reading my questions on the Citabria forum, I received an e-mail from Paul Thomson, the Kansas City contest director. He answered my many questions, reassuring me in every way. When I said I had no idea what the sequence should look like from inside the cockpit, he said, "I'll go fly and film the Primary sequence from my Decathlon and send the video to you." He did. This was so thoughtful and gave me a better sense for the timing. Paul also gave many other constructive hints and tips on flying the sequence. He even relayed his personal rules when competing, which include Rule No. 1, be safe. Rule No. 2, have fun. I found the first rule easier to follow.

Adventure Awaits

With fear of the unknown gnawing at me and questioning my own skills and abilities for competition, Tom and I headed to Kansas City in faithful N4216Y. A few times on this flight I thought about doing a 180. After all, I didn't want to look like a total idiot in front of strangers. Then again, strangers they weren't. I walked into the registration room and met only



ABOVE: Fellow competitor Dick Swanson helped show the "newbie" the ropes.

RIGHT: Diana suits up to fly her first contest sequence.



smiling people who made us feel at home immediately. Thinking there would only be two or three people in the Primary category (I would have to win something, right?), they showed me a list with nine pilots on it. One of the names jumped off of the page... the famous Giles Henderson, who would be flying his Cassutt Racer. Giles wins nearly every contest regardless of the category he enters. It took me by surprise when I first heard that Giles might be competing in Primary. I thought I would be flying against regular people like me, not legends.

The Primary category planes included five Pitts, one Decathlon, one EAA Biplane, one Cassutt Racer, and my barely aerobatic Citabria. Seeing this lineup reminded me of the comments I heard from other people about the "good old days" when more airplanes like mine were involved in competition. I found myself wishing it was more like that today. I secretly cringed, asking myself why I hadn't made the 180 when I had a chance.

Maybe even a quick 180 would still work, except Paul had asked me to be the contest "medical director" and that made me feel more obligated to stay. As

it turned out I had only one "patient." He was a fine gentleman, a "newbie" like me, and now a new friend.

Kim Pardon, a friend and fellow pilot from the Kansas City area, provided much-needed moral support every day of the contest. She also lent us her Mercedes for the three days we were there and arranged for us to park the Citabria in her hangar each evening. Dick Swanson and Aaron McCartan, a couple of new friends from Iowa whom we shuttled to and from the motel, asked whether we always rented Mercedes. That gave us a good chuckle—we who drive around in 1980 vintage pickups on the farm. (We give meaning to the saying, "We drive old vehicles so we can afford an old airplane.")

Thinking Inside the Box

On the day we arrived there was one time slot left in the practice session just before sunset. The winds were quite strong (30 knots) at altitude. I had never flown the sequence in strong winds before and had never flown in a real "box" with actual markers. I could only climb to 3,400 feet AGL because of clouds and

realized those box markers are really, really tiny. I thought they would be bigger. The big round hay bales back home were easier to see.

Thinking it would work, I started the sequence at 3,400 feet, some 400 feet lower than normal for me. As I dove into the box I realized I wasn't making forward progress like I expected, so I kept diving, trying to get into the box. I became so focused on this I didn't realize I had lost so much altitude. Finally I started the 45-degree climb, capped off, counted "one-thousand-one, one-thousand-two," and with right rudder and the stick back, entered the one-turn spin and downline. Then I pulled for the one-half Cuban. As I rolled, I realized that I was too low just as my radio screamed to life with, "Sixteen Yankee, break off! What is your altitude?" I responded, "Eleven hundred." What a confidence killer. If only I had done the 180 on the way up to the contest. Could I do one right now? I've read about contestants finishing their sequences and then flying off, never to be seen or heard from at a contest again. I can now understand how that could actually



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Contest legend Giles Henderson flew Primary in his Cassutt Racer.

happen. I was so close to the 180. But Tom might not have liked that since I was his ride home.

Instead, I climbed to altitude and, with radioed suggestions from experienced pilots on the ground, I flew the sequence again and worked on staying in the box in spite of the wind. During this practice session I found out what it means when your brain turns to mush and you become a deer staring at the headlights of a vehicle. One or both of you might get hurt. If I could have found a shovel once I landed, I would have dug a hole and crawled in.

Fueled by Friendship

My friend and mentor, Stephen, who flies an aerobatic Bonanza sent an e-mail that read, "If you win a trophy, I will be extremely proud of you. If you don't I will be equally proud that you attempted something that only a year ago would have been so out of reach for you and did it to the best of your ability. So crawl back out of your hole, stop feeling sorry for yourself, pick yourself back up, and go kick some butt. You have made your mistake; now it is time to show them what you can really do."

Marijke Unger, a fellow Citabria pilot, had recently entered her first aerobatic contest in Colorado. She wrote, "Diana, you love flying. Your eyes still open up big with wonder when you take your bird up in the sky and fly a loop. Nobody can take that away from you, even if your loop isn't round or if you come out

off heading or whatever. Trust me. I read all my judges' comments, and I still go out there and gasp every time I turn the mountains upside down. *That* is far more important than any contest. So fly it that way, just for you. The rest of it...well, if you have fun, great, and if you don't, you never have to try it again."

As you might expect, I didn't sleep much that first evening. My thoughts wandered to my first aviation mentor, my dad. When he got his certificate, I was his first passenger. Twenty-some years later when I got my certificate, he was my first passenger. At the time I remember him saying, "I'm so proud of my little girl." Per his request I gave Dad his final Citabria flight when I scattered his ashes over our farm a couple of years ago. Now I wondered if he would still be proud.

The next morning I thought about my dad once again as I climbed into the holding area for the first official contest flight and remembered one of the more valuable life lessons he imparted to me as a young girl. It seemed equally appropriate after my ugly practice session the previous day. As he had said years before, "Diana, you get back up on that pony and show it who's boss!"

Back in the Saddle

Dad's advice worked. I flew the first official sequence and felt an incredible sense of elation as I left the box. I was excited not because I flew it all that well, but because I flew it without zeroing or omitting any maneuvers

and didn't get too low. My confidence was somewhat restored. I had flown with total focus. Even if I had the most limited aerobatic mount in the contest stable, I felt good and was glad I didn't make that 180 after all. One of the most precious moments was when Tom approached the Citabria as I deplaned after the first round. His big smile, the look of pride on his face, and his "thumbs up" made me want to cry...it was a touching moment. Even if I didn't win anything, I was a winner to him.

I didn't score as well as I had hoped and didn't fly as well as I wanted. But who does? I didn't zero any maneuvers and stayed in the box. I did better than I thought I would but not as well as I hoped as far as scoring went. I was ahead of one out of nine contestants. Oh well, it's hard to make a Citabria fly as well as a Super D, a Pitts, or anything that Giles Henderson flies. Actually, Giles was assigned to me as my contest mentor. What a nice gentleman he is. He talked to me quite awhile and suggested several useful strategies in the box along with using "one chuckle, two chuckle" as timing for the half-Cuban. He mentioned that some contest pilots might seem distant at times because they're so focused and take everything so seriously. After my first flight, Giles reviewed my score sheets and made constructive suggestions. Those score sheets were easier to interpret than the comments from the "cow" judges back home, although a "2" sounds an awful lot like a "moo."

Camaraderie over Competition

Contestants and judges Jamie Treat and Dick Swanson offered words of encouragement and useful advice as well. It felt good to have so many people offer their support, actually mentoring me. I don't know what I would have done without their help. The number of people who so generously shared their knowledge impressed me. This was a great feeling of camaraderie that I hadn't expected but certainly appreciated.

I have a lot of respect for pilots like Giles who can fly a basic airplane so incredibly well and who can fly better than some people with fancier, snappier airplanes. I had the same high regard for Bobby Younkin when he flew

his Decathlon in the air show at OSH. His performance in the Decathlon was always so graceful—one that really turned heads. These are the kinds of skilled pilots who inspire me.

Weather kept us from flying more than one session the first day. This made the final day rather full. Fortunately, the weather cooperated and most pilots completed two sequences each during a single flight. I was one of the first to fly and the chief judge gave me the option of starting my first sequence at 3,000 feet due to cloud bases. I declined, remembering the lesson I learned when I started lower during the practice session. A short time later the clouds dissipated and my sequence went smoothly (though it was somewhat rushed), with one exception. My throttle stuck wide open when entering my one-turn spin. I fought the problem, fixed it, and kept going. I did what I needed to do and kept flying the airplane and was relieved that I did not have to use the mixture control to bring the Citabria to the ground. After we got home,

our mechanic discovered why the throttle hung up that one time and fixed the problem.

I felt my best after my last flight, at least up until the final posting of results. When I saw that I had placed ninth out of nine, I had that 180 thought again. But like Charles Seiferd, a Pitts pilot and neighbor, said after we returned home, "The thing about coming in last is that there's nowhere to go but up." People congratulated me for participating and trying my best, and their encouragement made this "newbie" feel better. After the awards and goodbye hugs it was time to finally do that much contemplated 180 and head back to the farm.

On the way home I reflected on all the nice people I had met and friends I had made. My goals going into the contest were 1) be safe, 2) don't fly out the bottom of the box and get sent home, 3) don't embarrass myself, 4) make good landings in front of everyone, 5) don't zero any maneuvers (or fly them backwards, or leave one out), and 6) earn a decent score.

I met most of my goals, so what's next? Will I fly in another aerobatic

contest? I don't really know. I might. Well, yes, I probably will.

I would like to see and visit with some of those great people again. Perhaps next time I will be able to enjoy everything more and fly for the "fun of it all." Maybe I can even make some other "newbie" feel welcome and make it a positive and rewarding experience for him or her, just as the people did for me at the Kansas City contest. To those thinking about entering a contest, I say stop thinking about it and do it. But first I encourage you to get quality instruction from an aerobatic instructor and get critiquing from the ground. Arm yourself with a pocketful of mentors. Take a break when you need it, especially if you might get too low.

I would encourage all seasoned competitors and contest directors to welcome and nurture the "newbies." No doubt the greatest benefit I took away from this total experience (before, during, and after the contest) is that it made me a better and safer pilot. And really, isn't that what it's all about? 

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PURDUE AVIATION TECHNOLOGY



Putting fun and safety in the same sentence

Scott Westover

Brian Dillman and the Purdue students he and instructor Jamie Poppe accompanied to EAA AirVenture Oshkosh 2007 were on a mission to learn more about the aerobatic community. Purdue has a well-established and respected aviation program that is now part of the Purdue University College of Technology. The program has roots dating back to the 1940s and has earned a reputation for being progressive. Many pilots have benefited from the development of crew resource management, better known as CRM, a

management approach that Purdue helped to develop in the 1980s. Purdue University's aviation technology program has taken another progressive step forward by making upset and spin recovery training a permanent requirement for pilots completing the aviation technology program. Brian is an associate professor with the program and an ambassador for both Purdue and aviation safety. It was no accident that he spent a significant amount of time around the International Aerobatic Club (IAC) building during his days at EAA AirVenture.

At the center of the program sits (or flies) Purdue's new Super Decathlon. Up until 2007, a course in upset and spin recovery was provided at the controls of a de Havilland Chipmunk. The Chipmunk joined the Purdue fleet in 1987, and for 20 years it gave students a memorable but cursory introduction to the world of emergency training—and a unique entry in their logbook. However, for the three years leading up to the arrival of the Decathlon, parts availability and



"The problem that I see is that we have never competed before. We could use some help from people who are involved with IAC who could show us the ropes."

increased maintenance issues signaled that the Chipmunk was on short final for retirement from the heavy workload of the collegiate program. This gave the faculty an opportunity to think about the future of the program and to consider the role of emergency training carefully.

Purdue set out to replace the trainer and kicked a lot of tires, spun several different props, and strapped into a variety of cockpits. Purdue was looking for an airplane that offers the feel of general aviation and provides an environment that students are

familiar with. According to Brian, "The Decathlon is an airplane that demands positive control inputs. To recover from an upset, students have to actually fly the airplane. Many of the aircraft we looked at made it too easy for students to recover." He added, "We need to remember that most of our students will be applying what they learn in non-aerobatic airplanes." Countless aerobatic students will attest that the Decathlon is indeed an "honest" airplane. Once the student is comfortable at the controls, the Decathlon has a tremen-

dous amount to offer, as attested by anyone who held his breath as Greg Koontz cut ribbons on a low pass with his inverted Decathlon tail.

Since making the science of survival and appreciation for aerobatic flight an official part of the program, Purdue students are energized about upset and spin recovery training. Their enthusiasm is leading them to expand their horizons beyond the artificial type. Students who have flown the new Decathlon seem to develop a desire to learn more about aerobatic flight. A little taste of the

one-of-a-kind fun represented by aerobatics tends to get people hooked. "Aviation is supposed to be fun," Brian explained with a huge smile on his face as we talked about his students in the conference room of the IAC headquarters. "It's a fun career and something they love to do. But in a tightly structured college curriculum, some of that fun falls away. Students are flying so much, sometimes they lose sight of why they are in the field they are in." According to Brian, this module helps to bring "the life and fun back into their training." The students leave the upset and spin module with an increased appreciation for what an airplane is capable of and more confident in their flying skills, not to mention a permanent smile on their face.

Despite the obvious advantages to college students and commercial pilots who participate in upset and spin recovery technique as part of their training, there are barriers to every college program making such training mandatory. The Federal Aviation Administration does not require this specialized instruction, and for some programs, doing anything outside of the requirements is a luxury. As colleges grapple with skyrocketing fuel, maintenance, and insurance costs, adding a component that is optional to their program is not something some can seriously consider. Purdue took this step because it understands the value specialized training offers to students and the companies those students will be flying for. "We feel that it is important for students to experience this kind of training because it is the

only way to have them understand exactly how an airplane gets into and out of trouble," said Brian. "In just that one flight I have seen a drastic improvement in the skill level of our pilots. When they first start flying the Decathlon, they are very timid on the controls. By the end of the flight, they are using full control inputs and they show greatly improved situational awareness."

After the flight, students report they do not feel as timid in the airplanes they are flying to meet the requirements of their core curriculum. When they return to the cockpit of their trusty Piper Arrow, for example, they are more likely to fly routine maneuvers with more precision and to experience the maximum safe performance of the airplane.

The mandatory upset and spin recovery training module provides instruction on the ground as well as in the air. In ground school students learn about aerobatic principles, recovery techniques, common emergency scenarios, and accident statistics. Instructors cover a range of potential scenarios in which this type of training and flight experience could be the difference between recovery and disaster. The process of recovery is introduced methodically and is coordinated with the instructional flight.

While the current mandatory module is one flight, it is a significant step in the right direction. The goal of the program is to increase awareness and, as Brian said, "Show students that in the appropriate airplane with the right instruction, aerobatic flight is something they can handle. They are

not going to be hurt by manipulating the controls to their maximum authority as long as they understand how that input will affect their flight." Future plans for the program include possibly expanding the upset and recovery training to multiple flights, providing tailwheel endorsements, and exploring the involvement in the IAC collegiate series. That last item is an opportunity for all IAC members and chapters to roll out the red carpet for Purdue and other colleges and individuals who are making aerobatics and/or contest flying a part of their plans in 2008. Purdue already has flight teams in place for other disciplines. Participating in competition and flying aerobatics against other schools is a real possibility.

Brian is clear about the need for some assistance when it comes to fielding a team. "The problem that I see is that we have never competed before. We could use some help from people who are involved with IAC who could show us the ropes." Brian took a first step by talking with Southern Illinois University (SIU), the college aerobatic team that has dominated the series in recent years. As you would expect, SIU has been helpful. However, there is no substitute for showing up at a contest and getting involved. "I would foresee us volunteering and observing before we compete," Brian said. I hope that we can answer all the questions that Brian and the college have so that we see a Purdue team on the collegiate roster in the very near future.

The four-year bachelor's degree program at Purdue is structured so that a motivated student will have a

Prior to the introduction of the Decathlon, students received upset and spin recovery training in the reliable Chipmunk.



Courtesy Purdue Aviation Technology

tremendous amount of lift and thrust when she completes the program. A dedicated student entering the program will receive her private pilot certificate in the first semester. The next two semesters are spent building time and experience, and the fourth semester she will receive her commercial certificate and an instrument rating. Most students will pick up their certified flight instructor (CFI) rating between their sophomore and junior years, and as juniors and seniors they would be instructing at Purdue. While instructing, students earn a multiengine certificate in the first semester of their junior year, and after that they focus on acquiring approximately 120 hours of simulator training flying 727s. Students will pick up multiengine time in a King Air transporting Purdue administration, and a select group of 12 students will pilot the college's Raytheon Beechjet 400A. About the Beechjet crew, Brian said, "It's a genuine corporate program that gives student pilots a real-world taste for corporate flight operations."



Jeff Miller

Purdue flight instructor Jamie Poppe and aviation technology student Johanna Hawkins flew the photo mission over EAA AirVenture 2007.

At the completion of the program, graduates hold a bachelor's degree in aviation technology, and certificates and ratings that include commercial, instrument, multiengine, and in most cases a CFI. Soon, that list might include tailwheel

and spin recovery endorsements. For more information on the aviation technology program at Purdue University College of Technology, visit www.Tech.Purdue.edu/at or e-mail Brian Dillman at dillman@purdue.edu.

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Aerobatic Instructor Designation

Advancing professionalism in aerobatic training



Rich Stowell, MCFI-A

Aviation authorities in many countries have established formal certification criteria for aerobatic instructors. Here in the United States, however, the FARs contain no provisions for a specific “aerobatic instructor” rating or certification. In fact, a private pilot could theoretically teach aerobatics as long as no compensation is received. A commercial pilot, on the other hand, can at least be paid for aerobatic training services but, like the private pilot, cannot pen any of the FAA-required endorsements that a certificated flight instructor can provide.

Given the success of industry-based certification programs such as the NAFI Master Instructor Designation Program and the ICAS Aerobatic Competency Evaluation (ACE) Program, the time had finally arrived for NAFI and IAC to collaborate on the administration of a broad and strictly voluntary aerobatic instructor program. Many of the same reasons that drove the Master Instructor and ACE Programs also drove this process, namely the desire to:

- Establish professional standards
- Establish and promote a code of ethics

- Encourage continuing aviation education and self-assessment
- Provide a process for peer review and recognition of accomplishment
- Improve interaction and cooperation between FAA and aviation organizations
- Foster increased trust in consumers of aerobatic-related training services
- Foster increased trust—within and outside of the aviation community—of the important role of aerobatic-related training activities

Rather than reinventing the wheel, this new program draws heavily on the existing NAFI Master Instructor-Aerobatics Program, with additional requirements drawn from a host of other sources. The program recognizes three levels of aerobatic instructor:

Level 1. Flight Instructor-Aerobatics (FI-A):

This individual is not a current FAA-certificated flight instructor, but possesses at least a commercial or an airline transport pilot certificate, has received instruction in and passed the FAA knowledge test covering the fundamentals of instruction, has a spin endorsement, and within the previous 24 calendar months has qualified to be an FI-A per the NAFI/IAC requirements.

Level 2. Certificated Flight Instructor-Aerobatics (CFI-A): This individual is a current FAA-certificated flight instructor, and within the previous 24 calendar months has qualified to be a CFI-A per the NAFI/IAC requirements.

Level 3. Master Certificated Flight Instructor-Aerobatics (MCFI-A): This individual is a current FAA-certificated flight instructor, has either been a CFI for at least four years or been a CFI for at least two years and holds Gold Seal status, and within the previous 24 calendar months has qualified to be an MCFI-A per the NAFI/IAC requirements.

Introduced in 2001, the existing MCFI-A criterion remains unchanged. The MCFI-A represents the highest title that can be achieved by an aerobatic instructor. Nine pilots currently hold MCFI-A status. The criteria for the other two designations are abbreviated versions of the full MCFI-A program, yet the criteria still allow qualified individuals the opportunity to become credentialed aerobatic instructors. First-time applicants must have received at least 10 hours of aerobatic training and given at least 50 hours of aerobatic instruction to qualify. Furthermore, an initial applicant's aerobatic knowledge and teaching ability are assessed through two forms: One form solicits information about the applicant's prior aerobatic training, including aerobatic books and DVDs studied; the other is a survey that is filled out by at least three of the applicant's aerobatic students.

All NAFI/IAC aerobatic instructors—specialists dedicated to spin

training, emergency maneuver/upset training, and traditional aerobatic training—are required to maintain current NAFI and IAC memberships for the duration of their designations (designations are valid for two years). NAFI/IAC aerobatic instructors are not only ambassadors for the sport of aerobatics but also recognized professionals in the field of flight instruction. Designated aerobatic instructors, therefore, agree to abide by the NAFI Code of Ethics and are encouraged to take the IAC Aerobic Leadership Pledge.

DETAILING THE DESIGNATION CRITERIA

Competent flight instructors must have an understanding of the laws of learning and the student-instructor dynamic. Thus the FAA requires flight instructor applicants to pass a knowledge test on the fundamentals of instructing. Flight instructors must also be well versed in the subject of stall/spin awareness. Thus the FAA requires flight instructor applicants to receive not only specific training in stall/spin awareness, but also a logbook spin endorsement. For the aerobatic instructor in particular, the importance of a thorough understanding of the stall/spin environment cannot be overstated. It is strongly recommended that ground and flight training for a spin endorsement includes the following:

- All of the requirements spelled out in the applicable version of the FARs
- All of the stall/spin training scenarios detailed in the applicable version of Advisory Circular 61-67, Stall and Spin Awareness Training
- A sufficient number of intentional spins performed to be able then to teach spins competently and safely
- Practical experience with common student errors during spins, including recoveries from botched aerobatic maneuvers

The above requirements are relevant to those seeking the flight instructor-aerobatic designation; hence, they have been incorporated into the minimum requirements for initial FI-A applicants. Additionally, first-time applicants must satisfy all of the published minimum initial

requirements. Previously designated MCFI-As, however, are grandfathered in and are exempt from the initial requirements. Current MCFI-As will continue to renew their designations according to the published renewal requirements.

Applicants who have already held an aerobatic instructor designation, but who are changing their designation status (e.g., FI-A to CFI-A; CFI-A to MCFI-A) are considered renewals provided the eligibility requirements for the particular designation level have been satisfied.

For those interested in becoming NAFI/IAC aerobatic instructors, the application process should be treated as if it were a checkride with an FAA designated pilot examiner. Also bear in mind that the board of review is a volunteer group of your peers. First-time applicants can proceed one of several ways:

Initial applicants can, for instance, elect to reconstruct their activities retroactively for the previous 24-month period. Although this may be somewhat time-consuming, it is the fastest way to earn your initial aerobatic instructor designation. On the other hand, first-time applicants could also begin to collect qualifying activities and supporting documents from this date forward, with the goal of applying for the designation once the required number of qualifying credits has been attained and documented.

***Rather than
reinventing the wheel,
this new program
draws heavily on
the existing NAFI
Master Instructor-
Aerobatics Program,
with additional
requirements drawn
from a host of other
sources.***

Whatever method is used for the initial application, one simple method for collecting information for future renewals is to set up a manila folder. Each time you participate in a qualifying activity, drop copies of the supporting documents into the folder as the activity occurs over the next 24 months. When it's time to renew, pull out the folder. All of your information will be in one place, ready to be assembled.

WHAT YOU GET IN RETURN

Your application will undergo preliminary screening at IAC HQ. It will then be forwarded to the board of review. The board will notify you if additional information is needed; the board will contact you once your application has been approved as well. The following will occur soon after approval:

- A news release extolling your accomplishment will be e-mailed to you and the aviation media
- Initial applicants will receive an IAC lapel pin similar to the new Achievement Award pins with the inscription "Aerobatic Instructor"

- Initial applicants will receive a wooden wall plaque with a date plate listing their designation

- Renewing applicants will receive an updated date plate to add to their wooden plaques

- You will receive a wallet card listing your aerobatic instructor designation information

- You will be granted the well-deserved right to advertise yourself as a NAFI/IAC designated aerobatic instructor

- Your name will be highlighted on the IAC Directory of Aerobatic Schools

- You will earn a separate listing along with other designated aerobatic instructors on the IAC website

In addition, master aerobatic instructors receive the following:

- A NAFI "Master" lapel pin
- Exclusive access to NAFI Master apparel (clothing, hats, patches, etc.)
- Special professional discounts

- Discounted CFI insurance through Falcon Insurance Agency

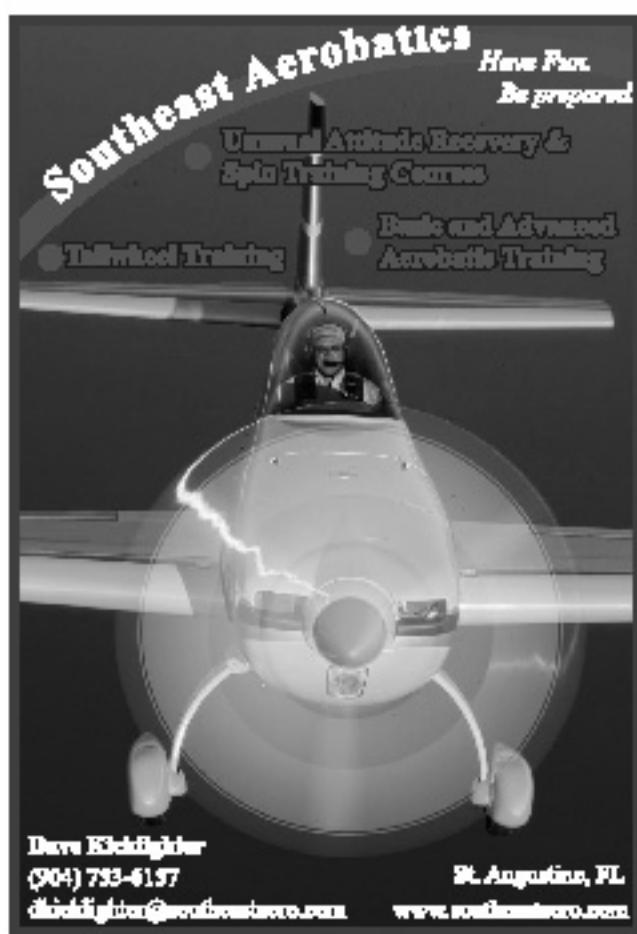
- Eligibility for Gold Seal status (for AGI and IGI holders)

- Optional: FAA CFI certificate renewal through NAFI

A CALL TO ACTION

Excellent aerobatic schools and talented aerobatic instructors dot our country. And those involved in teaching aerobatics are often the vanguard for membership in IAC. Unfortunately, all it takes to cast what we do in a negative light is one self-styled "instructor" who is more interested in showing off than actually teaching. The aim of this new program is to highlight the best the aerobatic training community has to offer. Moreover, the benchmark set will help those who seek aerobatic training services to make better decisions about the qualifications of their instructors.

The cost to participate in this program is currently \$199. More detailed information on the requirements as well as application forms is available at the NAFI website, www.iac.org/programs/designation.html.



Current Designated Aerobatic Instructors

(in order of their initial designations):

MCFI-A

Rich Stowell
Bill Cornick
Michael Church
Patrick Dugan
Judy Phelps
Paul Ransbury
Lowell Hinchee
Bill Hill
Greg Koontz

CFI-A

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I09356	Turquoise M	I09361	Black M
I09357	Turquoise L	I09362	Black L
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I09946 M	I09951 M	I09956 M	I09962 M
I09947 L	I09952 L	I09957 L	I09963 L
I09948 XL	I09953 XL	I09958 XL	I09964 XL
I09949 XXL	I09954 XXL	I09959 XXL	



CELEBRATING CAMARADERIE

2007 Mason-Dixon Clash a huge success

Larry Macon

Three months of intensive preparations by International Aerobatic Club (IAC) Chapter 19 members paid off: the 2007 Mason-Dixon Clash during the weekend of October 18-21 in Farmville, Virginia, was one of our best ever. After weeks of dry and clear skies, the weather played some tricks on us on Thursday with low ceilings around Farmville and cells of thundershowers blocking the paths of a few competitors. By early afternoon, however, most pilots found a way to the airfield and Mother Nature rewarded them with splendid conditions for the remainder of the day. This tightened the schedule, resulting in a busy practice session ended only by the setting sun.

Rain and more low clouds prevented all flying on Friday, but Bill Finagin used this opportunity to review with everyone proposed IAC rule changes. His perspective on these proposals, based on decades of involvement in aerobatics, was welcome. Saturday started blustery, but other than a wind delay of one

hour around lunchtime, conditions prevailed to permit nearly all planned flights. Judges did a bit more neck-flexing early on as the winds aloft quickly blew pilots outside the box. Landings proved the greatest challenge for most, but fortunately the winds settled by mid-afternoon.

Twenty-two pilots competed in all five categories, the largest groups being Sportsman and Intermediate. With Bill Finagin being the only pilot competing in Advanced, Rob Bond offered to fly in both Advanced and Unlimited categories so that Bill could count this contest. Rob also flew as a safety pilot with Andrew Godbold, flying in three separate categories and six flights on Saturday. Following the last flight, he finally admitted his exhaustion, but added, "That's why I came—to fly!" If it existed, Rob would win the cumulative g's award for the contest.

At Farmville, IAC 19 was fortunate to have a superb team of volunteers consisting of its members; their families; the famous Grimes family,

who runs the Farmville airport; and their helpful staff, who attended to our every need. Evenings saw attendees at the traditional Mexican arrival dinner, Friday evening billiards, and a banquet at Charley's Waterfront Café in downtown Farmville.

IAC 19 was fortunate to have Daryl Jacobs on hand to capture the contest with photos and create a kick-butt rock 'n roll slide show. You can see and hear his masterpiece on the chapter website, www.IAC19.org. While visiting on the web, be sure to check out the additional photos taken by Kent Misegades to document the contest and the 25th anniversary of IAC Chapter 19. It seems everyone had a great time this year, as we were able to get in all flights and also celebrate Bill Finagin's birthday with special recognition given to him as our aerobatic senior spokesman. Congratulations, Bill, for all of your contributions to IAC Chapter 19, IAC national, and aerobatics in general.

Contests are always special, as they give us a chance to renew

friendships with fellow aerobatic pilots and to make new friends who share an interest in aerobatics. It is also a time to learn new things about flying and aerobatic airplanes. For example, last year, fellow Pitts drivers were discussing Pitts' landing gear flaps. This caught me somewhat off guard, as to my knowledge the Pitts does not have a gear up-down lever, so what was the deal about landing gear flaps? Come to find out, if the bungee cords (Aviat calls them shock rings) that provide shock absorption for the main gear are weak, the flap attached to each main gear under the aircraft will "hang down." This is an indication that it is time to consider replacement. That gave me something new to add to my preflight inspections of *The Ride*.

This year, Bill Finagin gave Pat Hayes some very useful information and help on his Pitts S-2E (experimental) tail wheel. The end result was much improved tail wheel construction and operational

knowledge. It is almost impossible to find this level of expertise and help anywhere else without paying a "bundle" for it—and is just another reason to attend contests even if you do not compete.

In addition, the practice session prior to the contest is especially helpful to receive flight critiquing. In

comments and appropriate point deductions. The moral of the story is to pay attention to critiquing input from qualified judges and adjust your flying to achieve higher scores. Maybe I'll learn next time!

As I write this, we have just completed a critique session on our 2007 contest and are already beginning the planning process for Farmville 2008. In addition, under the leadership of Jim Walker, we are also pursuing a spring contest in Lumberton, North Carolina; it will be named The Carolina Boogie. We will keep everyone posted on our progress for this new event for IAC Chapter 19 to be held April 24 - 27—be sure to check the calendar at www.IAC.org for information.

Our contest is truly a volunteer effort, and without everyone's untiring efforts, it would not be possible. To all the volunteers, please accept my sincere thanks for making our 2007 Mason-Dixon Clash a great success! For complete contest results, visit www.IAC19.org. ☺

Our contest is truly a volunteer effort, and without everyone's untiring efforts, it would not be possible.

my case, when practicing I received valuable input that my vertical up-lines were consistently positive even though my sighting device indicated true vertical. Perception is everything. During the contest, I still flew by my sighting device and what did I get? "Positive on the up-line"

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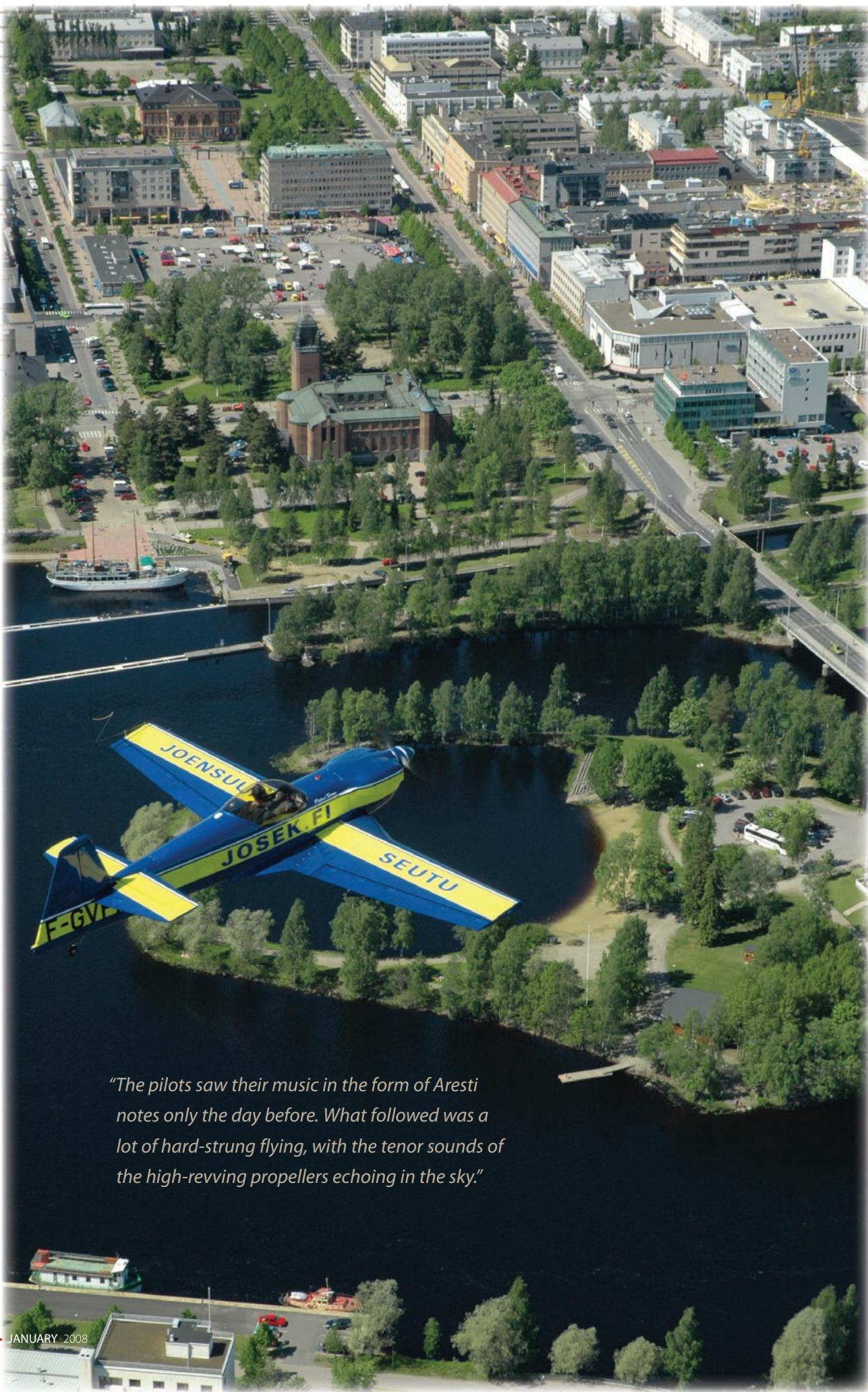
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"The pilots saw their music in the form of Arresti notes only the day before. What followed was a lot of hard-strung flying, with the tenor sounds of the high-revving propellers echoing in the sky."

European Championships in a Far Corner

(a symphony for wings)

Story and photos by Paavo Koponen

If it was a symphony that was played in the skies of Joensuu in eastern Finland last July, then the key signature was AEAC, noting the Advanced European Aerobatic Championships 2007. The competition was the fifth of its kind. The venue was the northernmost ever for an international aerobatic competition with which the organizers scored their first record. The hosts were the Finnish Aeronautical Association, the Aerobatic Club of Finland, and the Sport Flying Center of Eastern Finland. The actual physical work, quite a lot of it, was done by the volunteers of the local clubs.

The championships had a happy basic tune, provided by the weather. Between July 21 and July 28 there was so much fine weather that all four competition tasks could be flown without trouble. An especially warm tone was heard from the many participants singing their praises of the smoothly working organization headed by Competition Director Matti Peura. There was, however, a blue note. It was played by the Russian team. They came, but their own bureaucrats managed to stop their aircraft well before the Finnish border.

The orchestra was also short of a few players. The Swedish and Georgian teams sent their entries at the last moments but in the end did not arrive. All told, there were 30 pilots from nine countries flying. The largest teams came from France and Poland, with five pilots in each team. There were four pilots from the Czech Republic and Finland; three from England, Hungary and Germany; two from Lithuania; and one from Ireland. They brought along 15 aircraft.

During the competition the Joensuu hangar was inhabited by a somewhat hotter fleet of aircraft than usual. Even the regular visitors, like a Pitt's Special and a Christen Eagle, looked a bit timid, let alone the resident Pipers and Cessnas. The different Extras, the Edge 540, and the Yak-55M would have been fit beyond the Advanced class.

A Prelude and Four Movements

The prelude to the aerobatic symphony was heard during the practice week. Some teams went to other airfields in the area and attracted a fair amount of publicity. The favorite of the press was Bénédicte Blanchard, the only



Displaying their unique trophies and medals from left to right
Tamas Illes (second place), Jean-Emmanuel Antal (third place) and
Champion Alexandre Leboulanger.



The Extra 200 flown by David Bruton from Ireland sported the brightest colors at the contest.



The only lady pilot, Bénédicte Blanchard, after a flight. The CAP 231 was the most successful aircraft of the event.

lady pilot in the event, flying for the French team. The favorable publicity was indeed welcome, as the proud fanfares of the screaming propellers did not please everyone. All the same, the prelude ended in the Joensuu market square with solemn opening words by Lars-Göran Arvidsson, the Swedish delegate of the Fédération Aéronautique Internationale (FAI) Aerobatics Commission (CIVA). He was accompanied by a tight formation on three floatplanes flying overhead.

The first task on Saturday, July 21, was the Q-program. The pilots had

been able to practice it for several months, which showed. The scores of the first day hinted at the leading themes of the whole competition. Some pilots were to rise, others to fall into the background. There were three French pilots in the top 10. The Finnish team had a hold on a team medal, and in personal scores their Sami Kontio was in second place. The home team's hopes were high.

From day two of the event the pace got quicker, but the mood was more relaxed. Mr. Kari Kemppi at the start line would not have any

tactical waits and sent the pilots aloft without delays. As the time in the box was also shorter, the Free programs were all easily flown during the Sunday. There were some delays due to other traffic, but the Finnish summer day is long. At 9 p.m. it remains full daylight. Still,

the thrill of competition took its toll. For example, while Kontio was doing his stuff and his teammate Petteri Tarma was explaining the program to the public, there was a sudden pause. Tarma's finger stopped on the Aresti notes, his voice faltered,

and his eyes shifted between the paper and the sky. Kontio skipped one maneuver. Goodbye, medal.

When the Finnish Aeronautical Association first decided to apply for the championships, the Finnish delegate and vice president of CIVA, Mr. Osmo Jalovaara, himself an experienced aerobatic pilot, threatened to flee to Timbuktu. The Finnish weather would be too unsure. Matti Peura promised to buy him the ticket, one way only. As it happened, each and every task could be flown in one day, and during the week there would have been days to spare.

Actually a couple of days were spared for activities like taking a sauna, swimming in a lake, flying in floatplanes, and eating local delicacies. What would you say to wild boar sausages, venison, and fresh sweet water fish? One entre worthy of mention is "beach fish." It is made of a small salmon family fish called "muikku," or vendace, which is cooked on an open fire at the beach in a huge cauldron with plenty of butter and a fair sprinkling of salt. It beat the paella at the beach party approximately 12 to two. Points go to Finland.

The all-important Unknown programs started in a situation where two Frenchmen, Alexandre Leboulanger and Emmanuel Foulon, were in the lead. Hungary's Tamas Illes was third. So it was two crucial movements of the symphony played nearly prima vista, on first sight. The pilots saw their music in the form of Aresti notes only the day before. What followed was a lot of hard-strung flying, with the tenor sounds of the high-revving propellers echoing in the sky. The only biplane, Kontio's Ultimate 300, had the heaviest engine and propeller sounds with the

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added soprano whistle of the struts and wires. The Extra 300Ls, with their mufflers and four-bladed propellers, had a softer bel canto sound, though. The Yak-55M, with its steadily droning nine-cylinder radial engine, of course, sang in a baritone voice. It was only in the concluding air show when the bass was heard, represented by a Finnish air force F-18C Hornet and a private An-2.

Again, the Unknown programs were flown in a day. The weather would not have been any better in Timbuktu. In the top 10 the points spread fairly evenly, so the judges did not have it easy. To an untrained eye, competition aerobatics do look almost angular with all the attention to precision. In the air show on the last Sunday it was different with the pilots and their aircraft performing a ballet not to score points, but to please the public.

The Finale: *la Marseillaise*

In the prize-giving ceremony, again in the Joensuu market square, *la*

Marseillaise was heard not fewer than four times. Leboulanger got gold for the Free program and the second Unknown program. The French team also won the team championship. The Hungarian national anthem was played to Tamas Illes, who won the first Unknown program. The fourth *la Marseillaise* was again played to Leboulanger, the Advanced European Aerobic Champion 2007.

Of special importance for the hosts were the silver medals won by the team Mikko Jägerholm, Tarma, and Kontio. They were the first medals ever for Finnish pilots in continental aerobatic championships. In the end, the anthem of the FAI was played, the flags came down, and the final "goodbye" and "thank you" bows were bowed. What next in Joensuu? The World Championships? At least Chief Judge Graham Hill from the United Kingdom said that these had been the best-organized European aerobatic championships ever. The pressure is on. ☺

What Flew Over Finland?

If there had been a trophy for manufacturers it would have gone to France, too. Four top 10 pilots (the winner included) flew the CAP 231. Below are listed the individual aircraft and the pilots who flew them. The number after each name denotes the position of the pilot in the final scores.

TYPE	REG.	PILOTS
CAP 321	F-GVPA	Petteri Tarma (15)
	F-GUCF	Alexandre Leboulanger (1), Emmanuel Foulon (8)
	F-GRSL	Bénédicte Blanchard (11), Vincent Lefevre (5), Jean-Emmanuel Antal (3)
Edge 540T	N540TA	Tamas Illes (2)
Extra 230	G-CBUA	Julian Murfitt (13), Steven Maddle (27)
Extra 200	EI-SAM	David Bruton (20)
Extra 300	OH-EWA	Alan Cassidy (6)
	SP-ACM	Robert Kowalik (12), Ireneusz Jesionek (25)
Extra 300L	G-EXEA	Peter Simonsen (30)
	D-EXIR	Rainer Bendt (23), Bernhard Drummer (14), Heiko Hornburg (22)
YAK-55M	OH-YAK	Mikko Jägerholm (7), Eltonas Meleckis (4), Bleifertas Donaldas (21)
Zlin Z50L	OK-RRD	Petr Kopfstein (17), Jan Zival (16), Miroslav Sazavsky (21), Jaroslav Svoboda (26)
Zlin Z50LS	SP-AUD	Radoslaw Rumszewicz (9), Wojciech Krupa (18), Artur Kielak (28)
	HA-SIF	Tamas Abranyi (24), Tamas Nadas (19)
Ultimate 300	OH-XSF	Sami Kontio (10)

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TOP STORY ▶

EAA Launches New Website

EAA launched its new website at www.EAA.org on Thursday, November 15, after a year-long development. The new site has a cleaner, less cluttered look, simpler navigation, and a flexible, modular architecture for rapid content changes.

"The new website gives us the foundation for efficiently providing much more information and services to our members today and well into the future," said Adam Smith, vice president of membership.

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20 Years at Oshkosh

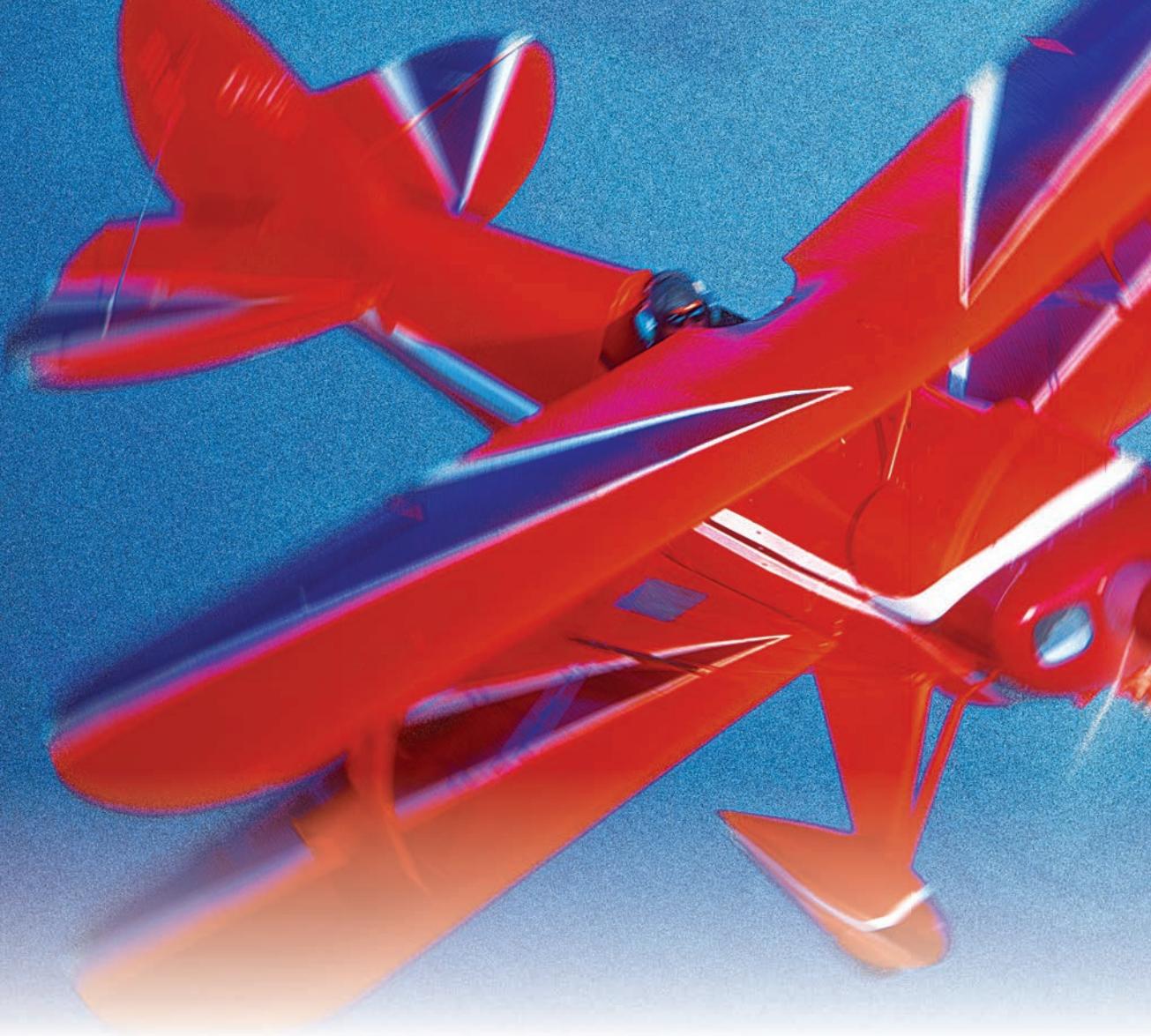
Met P.W. and Dorothy McCaffery of Billings Montana, who have camped in the North 40 at EAA AirVenture Oshkosh for the past 20 years. "We quit jobs to come here, because you can always get a job, but this is only once a year," R.W. says.

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TECHNICAL ADVISOR

Story and photos by Michael Flynn



Control Linkage Failure

THE FLIGHT > I was returning to Livermore, California, from a simple, relaxing flight to a private field in the foothills of the Sierras in my Pitts S-1S. It was a beautiful day: 50 miles visibility, warm, and sunny. About halfway home, things changed. I had been using only fingertip pressure on the stick, my arm resting on my knee. Without warning, the stick went completely slack in my hand. The plane is so well rigged, and at that moment was so well trimmed, that it continued to fly happily along, straight and level. I gingerly experimented with the stick. There was a huge amount of slack. By pushing as far forward as I could reach it was possible to get a little nose-down elevator, and by pulling back as far as I could, I could get a little nose-up; but it seemed very sloppy. I was concerned that if I moved the stick much in any direction things would break more than they already were, and I would lose control of the plane.



Cotter pins and other important lessons . . .



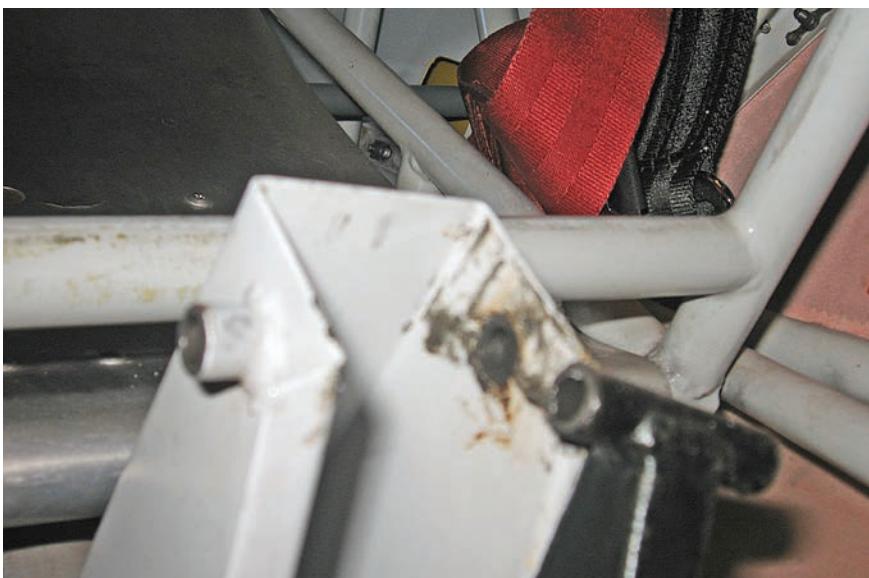
Loss of control! I contemplated bailing out. I was wearing a parachute and was at 2,000 feet, plenty of altitude to jump; nice flat, green fields were below, nice for me to land in, and the Pitts would not harm anyone on the ground when it crashed. Nevertheless, I was reluctant to jump. This was not the kind of emergency for which I had planned. A structural failure, a fire, a control failure in the middle of a sequence, or a spin I could not stop: In cases such as those, I would have been out of there in a flash with no hesitation, but this was different. The airplane was flying along contentedly as though nothing were wrong; it did not seem right to abandon it. I had a lot of time to think things over.

Although I had made 700 sky dives in my youth and had complete faith in my emergency parachute opening almost instantly, I found the prospect of jumping out quite frightening. I also found the idea of trying to land the aircraft daunting. It crossed my mind that I might be killed. If I had been a lot higher, I would have experimented more with the controls and even simulated a landing, then just bailed out if I lost control. I was not high enough to experiment much and I did not like to add a lot of power to climb because I was sure that with almost no down-elevator available I would not be able to keep the nose down.

All the time the aircraft just kept flying toward home. I called Livermore Tower farther out than I normally would during a lull in activity on the tower frequency. Despite my intention to declare an emergency, I did not at first do so. I told the tower the nature of my problem and said that I would like gentle handling. He asked quite specifically whether I wanted to declare an emergency and have the equipment deployed. It would be foolish to crash on the runway and then die for want of a little first aid or firefighting. "Yes," I said.

The tower cleared other aircraft out of the way and gave me the usual right base for the 25-right approach. When I was getting closer, the tower informed me that emergency services were not there yet and asked whether I would like to circle for a while until they arrived. I did not like the idea of circling overhead: too many power changes and turns. "I'll just go ahead and land," I told him. All the way in, I was concerned that as I reduced power to descend or used the ailerons or rudder I might suddenly lose control—the plane diving toward the ground or the nose coming up and my not being able to keep it down and the plane stalling, realizing that I would be too low to jump.

I kept it high until quite close in. My Pitts, like most, has glide characteristics somewhere between those of a sheep and a brick (it does not so much fly as plummet), so I like to keep it quite high until I start reducing the power. I always feel as though I am far too high when turning from base to final and have to force myself to let it settle for a while but, usually, what had seemed far too high turns out to be about right. Then I make further power reductions and try to be on short final with little or no power. This time, I wanted to be sure that I did not have to add any power because I might not be able to control the resulting pitch up. Adrenaline really does focus the mind and my approach was perfect. I made a long, curved approach, steadily reducing power until I was certain that I had made the runway. With about 200 feet to go, I kept my attention outside the aircraft. I pulled the power back as far as it would go and instead of just keeping my hand on the throttle, I made a conscious effort to keep constant back pressure on it to ensure it was developing the minimum power; I wanted to be sure that I stayed on the ground after I landed (or hit).



TOP: The missing bolt as found on floor. Also the idler, as found, out of its housing and the housing restricting its movement. **ABOVE:** The idler fell sideways and its movement was restricted by the housing.

I was over the runway, keeping the power back as far as it would go, pulling back as hard as I could on the stick. The plane landed, not as lightly as a feather, but no harder than some of my less graceful landings. Thankfully, it wanted to stay on the runway and not bounce, so I concentrated on keeping it straight. I stopped in the middle of the runway opposite taxiway Charlie. I was quite amazed. The tower was saying, "Good job. Well done!" I started to feel amazingly happy but also quite confused; the change from having a lot to do to sitting in a motionless aircraft, safely on the ground,

was disorienting. "Thank you. Thank you," I said. I was sort of thanking him, the plane, everyone. I noticed the firetrucks showing up. "What do you want to do?" asked the tower. "I am pretty sure I can taxi; I'd like to taxi to the south hangars," I said. He cleared me to taxi.

SOURCE OF THE PROBLEM

Back at my hangar, I called a pilot friend and talked a thousand words a minute, evidence that I had been more frightened than I thought. I pulled out the seat back and found the source of the problem: The bolt that locates the elevator control idler

in its housing had come all the way out and was lying on the bottom of the aircraft. The idler had moved sideways and was wedged up against its housing, preventing it from moving forward (up-elevator). After a lot of searching, the castellated nut that should have held the bolt in place was found, with its washer, under the seat. The cotter pin was nowhere to be found.

At some point, the cotter pin must have come out, then the nut must have worked its way off, then the bolt had come out. Any aerobatics makes loose items drift to the tail. The nut and washer must have come off on that very flight, hit the floor, and rolled forward; even a takeoff would have made them slide back a bit. The cotter pin could have come out a few flights ago. I do look behind the seat when I preflight, but I had not usually looked specifically at the cotter pin; it could have been gone for a while.

The effect of the idler coming loose meant that there was a lot of slack in the linkage and, the idler being wedged against its housing, the housing prevented forward movement (up-elevator) of the linkage.

LESSONS LEARNED

Having decided that I would definitely not attempt a go-around, reasoning that adding power to go around I would have been unable to prevent the nose from coming up and probably would have lost control, on short final I should have switched the engine off. In mitigation, landings happen quickly in a Pitts and I think it is best to keep one's attention outside, but I should have been able to spend a fraction of a second turning off the mags and pulling the mixture or switching the fuel off.

Do declare an emergency. Talking to a controller is very calming. It is also encouraging to feel that someone else is helping out. One of the reasons I did not like the idea of landing at some strip in the valley was that it seemed liked it would be kind of lonely. Once one has declared an emergency there is a feeling that one is not alone and, although the landing would be up to me, the controller's calm professionalism probably helped me stay calm and make thoughtful rather than panicked decisions. Back in my hangar, I called the tower to

thank them and give them my name and contact info. I have never heard anything about it, so do not avoid declaring an emergency because you do not want the attention of the authorities. It is also worth declaring an emergency so that rescue services can meet you at the runway. I have read of several incidents in which people have died after a crash landing who could have been saved by prompt firefighting or first aid.

Do not fail to take the precautions on a non-aerobatic flight that you would if performing aerobatics. The hard life that aerobatic aircraft have to endure has cumulative effects. The part that breaks may do so on any flight, not just an aerobatic one. The flight on which the incident occurred was a gentle one that placed little stress on the aircraft. Therefore, if you normally wear a helmet, fireproof gloves or clothing, and a parachute when performing aerobatics, then do so when flying on non-aerobatic flights in aerobatic aircraft. Fate will not arrange for failures to occur when it is convenient for you.

I was wearing a helmet. I wear it in case I crash on landing, have an off-field landing, or have to land a parachute. It would have helped if the landing had not turned out so well. It has a tinted visor, which I never use; once I had the runway made, I should have pulled the visor down, as it would have provided some protection to my face and eyes if there had been a fire.

I do not wear fireproof clothes with the exception of flame-retardant gloves. In fact, I was wearing shorts and a T-shirt, which would have been of little protection in the event of a fire. I will not be changing my practice, but it is something to think about.

Although I said that I did not want to add power to climb higher to jump or experiment more with the controls because of lack of nose-down elevator, I did in fact climb, slowly without adding power, another thousand feet to gain clearance over the hills around Livermore. I could have climbed to 7,000, then experimented and jumped if necessary. I think that, having decided to go to Livermore, I stopped considering other options. I ought to have made a conscious effort to review the plan frequently and modify it if necessary.

Bailing out would have been a good choice. At 2,000 feet MSL, about 1,900 above the ground, I had more than enough altitude to jump from a level-flying aircraft. I am surprised at my reluctance. As I said earlier, I've made more than 700 jumps, including with an emergency chute that is almost identical to the one I use for flying. If things had been happening quickly, if the aircraft had suddenly become uncontrollable, or if a wing had fallen off, then I would have jumped without hesitation, but when it was one of several alternatives, it

was not very appealing. In the future, I will not be critical of those who fail to jump; it is a tough decision to make if there is a chance of landing the plane.

Do look at the cotter pins on any bolts that you can see when you do your preflight. I always look behind the seat and would have noticed if the bolt was out, but I did not look closely at the cotter pin. I will now. I have been told that castellated nuts with a nylon lock insert are available. It might be an option to consider.



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TOP: The drilled bolt. **ABOVE:** The castellated nut and its washer, after having been found forward of the idler, under the seat. The cotter pin was never found.

Practice flying with just the trim. When I was getting my commercial certificate, my instructor made me practice landing with the trim. However, it's been years since I practiced this technique. Now I will. Be sure you think about how the trim works, though. If the elevator is trailing freely, then you can fly the aircraft with the trim, and nose-up trim will make the aircraft pitch up; but if the elevator is jammed or has very limited travel, then when the

elevator is as far as it will go, the trim will act the other way because the trim tab will act like a little elevator, so nose-down trim will act as up-elevator. Furthermore, the elevator is most effective when the trim tab is in a neutral position, so if you have some elevator control available, your best option might be to keep the trim at neutral.

I did not have a good picture in my head of the construction of the control column and its linkage to

the elevators and ailerons. I had visions of a rod end having come loose but still providing some connectivity. I also had visions of the problem affecting the ailerons too, so was reluctant to make more than tiny roll inputs. A better picture in my mind's eye of the linkages and how they work would have helped me deal with the emergency. Well-informed decisions are likely to be better ones. Since the flight, I have familiarized myself far better with the control systems so that I can make better choices in the event of an emergency.

CONCLUSION

Jumping out might very well have been the best and safest option. If you are not sure, do not hesitate to jump; the parachute will work. Have a good understanding of how the aircraft works. Don't just leave the nuts and bolts to a mechanic. Perform very thorough preflights; look at every accessible cotter pin. Take the same precautions on non-aerobatic flights as on aerobatic ones. If you wear a parachute and helmet on aerobatic flights, then do so on other flights. Do declare an emergency. The controller cannot fly the plane for you, but articulating the issues to another helps you think about them and calms you down.

If the loss of elevator had occurred soon after takeoff, I very well might not be here. It would have taken an instant recognition of the problem and a power reduction to keep the nose down and not stall, roll over, and crash. As I said earlier, I had expected an engine failure, a fire, or something breaking during an aerobatic maneuver, but not such a slowly developing emergency that gave me so many options. Be prepared for any emergency you can think of, but also be prepared for an emergency you have never imagined. ☺

Michael Flynn is an engineer and attorney in the San Jose, California, area. He is a single- and multi-engine-rated pilot with an instrument and commercial certificate. He has 800 hours' total time and 200 hours in his Pitts. Prior to the Pitts, he owned a Cessna 140. He is a member of IAC Chapter 38 and obtained his aerobatic training from Attitude Aviation in Livermore, California.

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meet a member

Name: Jackie Forsting

City, State: Burbank, California

Occupation: Real Estate Appraiser

Pilot Certificates: Commercial,
Instrument, Ground Instructor

How did you get involved in aerobatics?

Like some, it was a scary incident. ATC vectored an Airbus in front of my friend, and the vortices flipped him over. He pulled instead of pushing, but luckily the plane righted itself in time. After that, I put together a class on emergency maneuvers and invited a speaker. Spencer Suderman was up for the challenge, and of the 10 who made it to his seminar, five of us took some training with Spencer. I think I was the one most excited about the training, especially when we started doing maneuvers. Before I knew it, I was competing in my first contest in the mighty 152 Aerobat (no snickers, please!).

How many contests have you flown?

Unfortunately, only two. I had just changed my career to real estate appraising, and by the time I got my trainee's license upgraded to a full license, business started to tank ... so that curtailed my flying.

How have you stayed involved in the sport?

I decided that if I couldn't fly, I still wanted to participate in the contests. That is when Jim Nahom cajoled me into being the volunteer coordinator (VC) at the Apple Valley, California, contest in May 2006. I had so much fun that I've been the volunteer coordinator at six contests in the past two years.

Seems like you like it, correct?

I love being the VC as I'm a very social person. Being an appraiser with my own business, I see maybe one or two homeowners a day and then sit in my office for the remainder of the day talking to myself. At the contests, I am one of the few people who gets to know everyone, and I have made some great friends!

Who do you admire most?

Anyone that will gladly work corners for me!

Are you involved in aerobatics other than contests?

Yes. I am the new vice-president of the Los Angeles Aerobic Club, the great IAC Chapter 49. We have a completely new board of directors, and we're looking to revitalize the chapter by bringing in new members, having educational seminars and regular training camps, all with the direction and advice of past directors and mentors.

Where would you like to see yourself going in the sport?

Flying a lot more, of course! If I could fly one or two contests each season, I would be happy. Also, since I usually bounce around at a contest like a pinball, I rarely get to watch much of the flying. I will be taking a judge's class soon and hope to get my reading of Aresti up to speed. It's all a good time, so whatever I'm doing in aerobatics, I'm happy!



Kate DeBaun

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