

MARCH 2009

SPORT Aerobatics

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB

The 2009 Sportsman Sequence:

***This One
Hits the
Bull's Eye!***

- Chapter Growth
- Blast from the Past



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A beautiful Piper J-3 clipped-wing Cub over the Wisconsin countryside.
Photo by Phil High.

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LETTER from the EDITOR

by Reggie Paulk

Onward and Upward

There is no doubt the economy is reshaping our industry, but I'm of the mindset that adversity is the genesis of newer and better things. For instance, we are coming into practice season, and people are spending less time in the air. That doesn't mean the quality of their practice is lowered. Many people are getting together in order to critique each other's flying, which can greatly improve technique.

For this issue, Lorrie Penner has provided insight into how successful chapters grow and maintain their membership. The overarching theme that runs through the piece is inclusiveness and communication. The thing I've noticed during my short time with the IAC is that it doesn't matter whether or not you're a pilot; they'll find a job for you. Even if you've never been at the controls of an airplane, you can become a competition judge.

Gordon Penner's piece on the

2009 known sequence highlights the fact that the IAC is working to accommodate more pilots and aircraft by leveling the playing field a bit for those at the lower-powered spectrum of competition. This kind of inclusiveness will help us weather the economic storm.

*"... IAC is
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by leveling the
playing field..."*

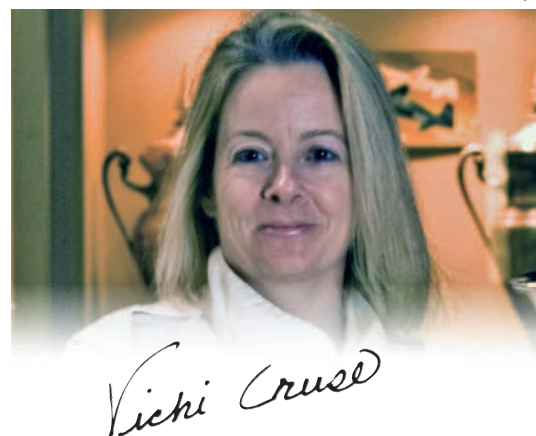
The world of aerobatic competition consists of a very tight nit group of individuals who all come together because they share a love of something that is beyond their own selves. It is this sense of community and common purpose that helps the organization move forward.

The coming months carry much uncertainty, but I think that the struggle we all face will end up bringing us closer and making us stronger. Just like the pilot flying aerobatics for the first time, the challenge may seem insurmountable at first, but the tribulations are part of a journey that, if seen through, ends in a growing wisdom. Keep moving onward and upward. 🛩️

Please submit news, comments, articles, or suggestions to: reggie.paulk@gmail.com

PRESIDENT'S PAGE

by Vicki Cruse • IAC 22968
E-mail: vcruise@earthlink.net



A Negative Downline for 2009?

Making the most of what we have

At the fall board meeting in 2007, the IAC board, and particularly Treasurer Doug Bartlett, predicted a down year for the International Aerobatic Club (IAC) based on what we saw beginning to happen with the economy. In response, IAC downsized a little by attempting some cutbacks while also offering more revenue-generating items such as new merchandise. That went over well, particularly at Air-Venture. In fact, after a slow start at Sun 'n Fun, it was our best year ever. Sun 'n Fun turned out not to be the barometer we'd predicted. Since that time, we have also placed merchandise ads regularly in the magazine.

The IAC generates the majority of its income through membership fees, followed closely by merchandise sales. Sponsorship of events is also a revenue-generator for us. Our biggest expense by far is the magazine; advertising doesn't come close to covering the cost of printing and shipping the magazine. Since we consider this our biggest member benefit, we have no changes planned for it, only to make it more diverse in its coverage and continually better at the hands of Reggie Paulk.

From the end of 2008 to today, our prediction of slower times is certainly ringing true. We are seeing more airplanes for sale and less flying, despite the lowest avgas prices we've seen in some time. So, how is this affecting the IAC and its members? Currently we are

sitting at about 4,300 members, which is down from 4,500 this time last year. This could be economic-related, or it could be that we just aren't offering what the members want, or it could be a combination of the two.

We can't change the membership fee, so \$45 it will remain, but we hope to try to offer more for the money. [EAA does offer a \$10 membership, but you lose the subscription to *Sport Aviation*.] We are currently revising some of the web pages under the guidance of your Technical Committee, using volunteers to create the revised pages. The website is a Catch-22. We need a new look, but we do not have a budget for many new pages, nor is assistance available through EAA. We will do the best we can with what we have. The changes will likely be slow, but hopefully they will be made. Currently, the website is not a good member value, nor is it current—we know this. We have been stuck between a rock and a hard place for some time regarding revising it, but efforts are being made to make it better.

Competitions will go on as they always have. Sanction fees and insurance fees will remain the same for 2009. We have been working with EAA's risk management department on a set of guidelines for chapter practice days, and those should be avail-

able by the time you read this. On the competition side, we are seeing more people get together to practice than we have before, at least on the West Coast. Perhaps less discretionary income is cutting into available practice time. The trend here used to be to practice extensively between contests and ramp up a little prior to contests. Now we are seeing more people getting together informally a few weekends before the contest to critique each other; it's less total practice time but a more concentrated effort due to critiquing from others.

"... after a slow start at Sun 'n Fun, it was our best year ever."

In the April issue of *Sport Aerobatics* we will run a feature on a new two-place airplane, as well as a feature on aircraft partnerships in aerobatic airplanes.

We think this will be a trend of the future, and perhaps this article will inspire you to look into a partnership. We will also feature a story on RVs and aerobatics by Budd Davisson, including instruction available for RV owners.

As we try to make the burden a little less by offering you more for your membership fee, we truly appreciate your support in the organization. As always, I welcome your feedback on what more you want and what you don't. Please feel free to contact me or anyone else on the IAC board. We're all in this together, so hang in there. 🇺🇸

NEWSBRIEFS

Pitts Takes 'em All

Kudos to Bill Finagin, one of the finest gentlemen and aviators I have had the pleasure of knowing as a member of IAC. Not surprisingly, Bill made no mention of his planned retirement when he participated in our chapter's fall 2008 contest in Farmville, Virginia. I now understand why he was particularly pleased with his performance that weekend in October, and why he reminded me three times to note in our newsletter that all five category winners flew his beloved Pitts Specials. Good luck on the next chapter in your illustrious career, Mr. Finagin, from one of your many admirers.--

—Kent Misegades, EAA 520919, IAC19



1st place winners in the IAC19 2008 Mason Dixon Clash, Farmville, VA, October 16th-19th. Left to right: Michael Davis (Primary), Luke Lee (Sportsman), Rob Bond (Unlimited), Hella Comat (Intermediate), Bill Finagin (Advanced). All pilots flew Pitts aircraft.

Patricia Deimer Hired to Manage IAC

After months of searching, IAC has hired Patricia (Trish) Deimer of Omro, Wisconsin to be the IAC Manager. Taking the place of Lisa Popp in the Oshkosh office, Trish will begin working for IAC on February 16th. She was formerly the National Association of Flight Instructors (NAFI) Program Manager. Trish is part owner of a clipped-wing cub and is working toward her Private Pilot Certificate. She will introduce herself in an upcoming issue of *Sport Aerobatics* and will be at Sun 'n Fun. IAC welcomes Trish to the club and we look forward to working with her.



Jim Koepnick

Jim Kimball Enterprises, Inc. Finishes Test Flights on Single-seat Ti-12

December 29, 2008 through January 1, 2009 found Ben Morphew back in Florida to complete the test flights on the Ti-12. All went well, with performance exceeding expectations. Top speed is 225 mph in level flight at full throttle. Vertical penetration from 230 mph is 3100 feet. The Barrett Precision engines power works well, with more speed on less fuel and no heat. (From Jim Kimball Enterprises, Inc. www.pittsmodel12.com)

First Leg of EAA B-17 Tour Set for Takeoff in April

Aluminum Overcast, EAA's restored B-17 bomber, returns Friday, April 3, to Chino, California, the first stop of nearly 60 planned for the 2009 Salute to Veterans national tour.

The first tour segment includes 16 stops in five states between April 3 and June 3. The tour continues with the airplane back "home" for AirVenture July 27-August 2, then back on tour through December.

The national B-17 tours have taken place each spring

and fall since 1994. Since then, tens of thousands of people have experienced this unique airplane through its flights and aircraft ground tours.

For more information regarding flights and ground tours, visit www.B17.org or contact EAA's B-17 Tour Office at 800-359-6217. Special pre-book rates on flights are available for EAA members and non-members, and group ground-tour rates are available for schools or other large groups.

April 3-5, Chino, California (Host: EAA Warbird Squadron 16)
April 7-8, San Diego, California (EAA Chapter 14)
April 10-12, Torrance, California (Torrance Air Fair Association)
April 14-15, Camarillo, California (EAA Chapter 723)
April 17-19, Van Nuys, California (EAA Chapter 40)
April 21-22, Visalia, California (EAA Chapter 262)
April 24-26, Hayward, California (EAA Vintage Chapter 29)
April 28-29, Stockton, California (EAA Chapter 1432)

May 1-3, Napa, California (EAA Chapter 167)
May 5-6, Truckee, California (EAA Chapter 1073)
May 8-10, Sacramento, California (EAA Chapter 52)
May 12-13, Redding, California (EAA Chapter 157)
May 15-17, Portland, Oregon (EAA Chapter 105)
May 20-26, Seattle, Washington (EAA Warbird Squadron 2)
May 29-31, Ogden, Utah (EAA Chapter 23)
June 3-9, Denver, Colorado (Wings Over the Rockies Air & Space Museum)



WARNING

EAA Oshkosh may cause
unexpected friendships,
unavoidable enthusiasm,
unlimited resources,
unconventional opportunities,
and uncontrollable dreams.

July 27-August 2, 2009

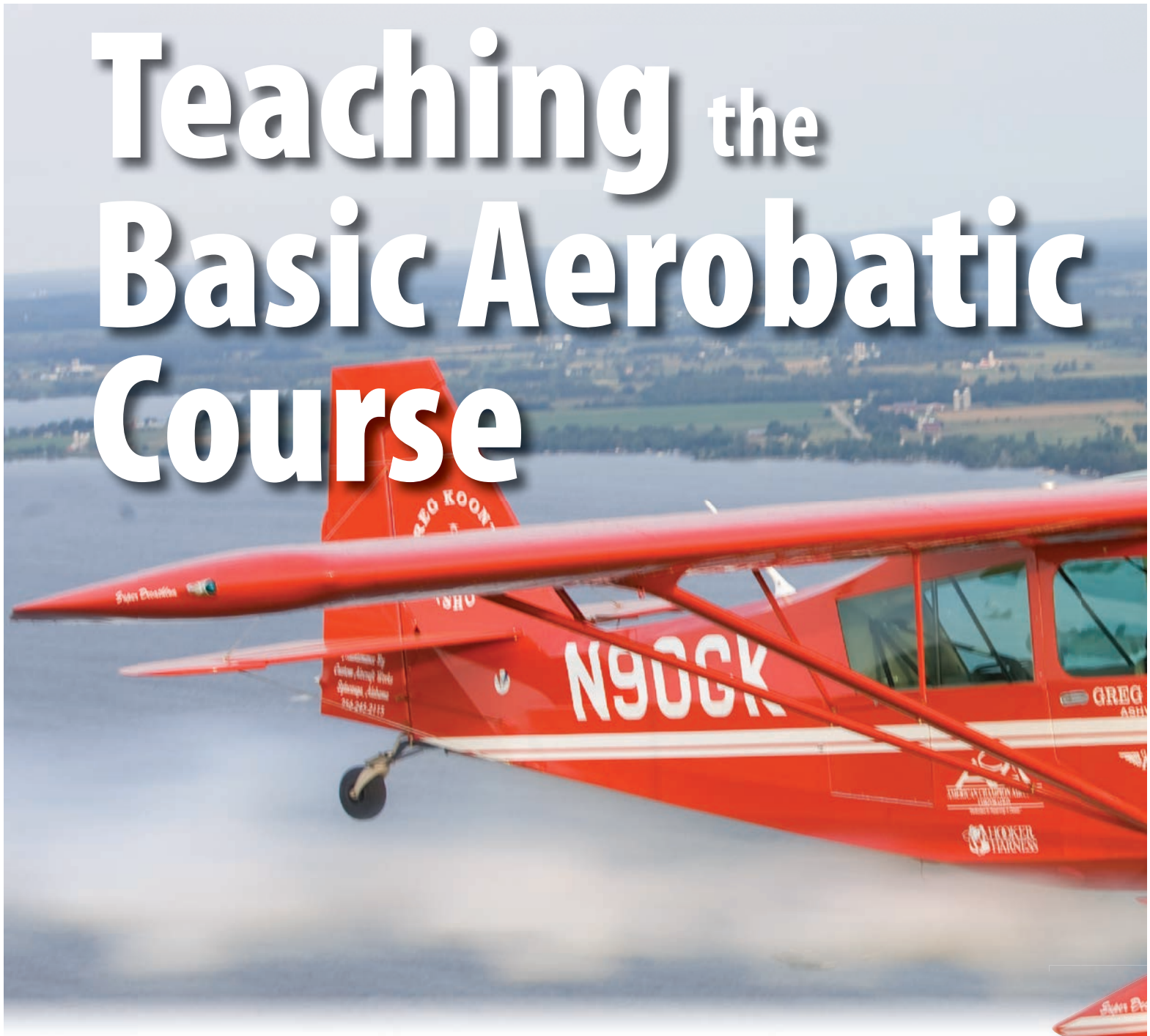
www.airventure.org



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Teaching ^{the} Basic Aerobatic Course

A red biplane with the registration N90CK is shown in flight, banking to the left. The aircraft has white stripes along the fuselage and tail. The background features a large body of water and a hilly landscape under a clear sky. The text "Teaching the Basic Aerobatic Course" is overlaid in large, white, bold letters.

Part Five: The final lesson

GREG KOONTZ, MCFI-A



This is the final part of a series about teaching a basic aerobatic course. Intended for the beginning student, the course covers the four fundamental maneuvers of aerobatics (loops, rolls, hammerheads, and spins). Here I will be addressing the instructor who wants to learn more about teaching this kind of course, but hopefully the contents will be helpful to those seeking to begin an aerobatic course as well.

Flight instructing is an art, and therefore it is personal. I will share my personal techniques and philosophy about the subject, but in the end each instructor will teach with a style that's best suited to him or her. Therefore, no information shared here is meant to be a judgment of the quality of the instruction given by anyone else.

As we take a look at the contents of lesson four, keep in mind that this is an initial aerobatic course for pilots who have no prior experience. Completion of this course should leave the student with the skills necessary to begin a regimen of solo practice with the instructor's supervision. When the student has had time to successfully develop his skills and confidence on his own, he should return to the instructor to hone the skills needed for the first competition.

Lesson four starts with a review of rolls, loops, and hammerheads. Your student has learned a lot about orientation by now, which has probably improved his tolerance for all this flipping around. If he is having a good day, this is a great time for some fun and challenges. Begin with a short run-through of each maneuver separately as a good review and warm-up. Then begin to link the maneuvers together. If all goes well, the student should be doing a string of maneuvers such as a hammerhead followed by a loop followed by a roll. Throw in a roll-off-the-top-of-a-loop that he learned in lesson two. Mix it up, have fun, and make him think a bit.

Let's follow this with some serious work on the roll. We originally started with a plain-Jane zero-lift aileron roll with no help from rudder or elevator changes. Next we added a little rudder at the start and top rudder at the end. Then we fed in forward stick and opposite rudder after the roll started until we rolled to the top left

rudder point at the last knife-edge. That's a complete roll with a few rough edges. Take this last flight to refine each step until each blends seamlessly with the others. One way to help the student see this is to put him into inverted flight and let him work on keeping the attitude that level inverted flight requires. Then have the student roll to inverted on his own, hesitate there, and then roll on through. I teach that every slow roll has a first half and a last half, with the level inverted attitude as the checkpoint in the middle. Never fly through inverted level without the right nose attitude.

Before you wear your student out with too much review, move on to stalls. The main point of this lesson is to learn stalls and spins as they relate to sport aerobatic flying. I start with a simple stall to evaluate recognition and recovery. You are looking for a smooth and gentle hand, unrushed and confident. Explain that the old technique of shoving the nose

hard forward and diving for speed will not work on top of a loop. We want a smart relaxing of the controls that allows the wing to unload and fly. Look carefully for anticipation and fear of the maneuver. Some people have a problem with stalls. I think it comes from a feeling of "losing control" of the airplane. I have seen a few flight instructors who are actually scared to stall an airplane and have passed this fear on to their students. Toning down a fear of stalls takes time and careful training. If you sense some anxiety in your student, you should

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FOR ALL THIS FLIPPING
AROUND."**



DeKevin Thornton

deal with it now by spending time teaching him to be in charge of the airplane throughout a stall.

Next have the student fly the “falling leaf.” Put him in a 45-degree climb with about 50 percent power and hold it until the plane stalls. He should hold the plane in the stall and use coordinated aileron and rudder to keep it straight. This builds great control and a good understanding of why the controls should be coordinated and the prop forces kept at bay. This is hard to do at first, so don’t wear it out trying to get it perfect. A student who is used to flying more benign planes such as Skyhawks might need more practice later.

You might have noticed by now that I am not preparing this student to do competition spins at this point. The stall and spin portion of this course is designed for recovery techniques. You want to send your student away with sound skills that allow him to stay safe. He will build confidence practicing many spins before he is ready to refine them into a competition maneuver.

The next step is the cross-controlled stall. With enough altitude to give a Sherpa a nosebleed, give your student the airplane with the nose a few degrees above the horizon (about climb attitude) and a power setting of about 50 percent. Ask the student to begin adding left rudder smoothly while holding the nose up and the wings level. This will require continually increasing opposite aileron as rudder is applied and continually adding more backpressure as drag increases. Keep encouraging him to add rudder and keep the nose up/wings level. Eventually the airplane will make a startling entry into a left spin that is fed with the energy of the engine and the gyroscopic propeller force caused by the sudden down pitch. Almost every student will relax the elevator first—which could accelerate the spin. Because the spin is not well developed, most students will see a recovery in about 1-1/2 turns. This maneuver provides a memorable demonstration of the effects of power and how it can drive a spin. If you are using a Decathlon for this, you will certainly find it takes quite a bit of follow-through to persuade the lightly loaded wing to do this. Nonetheless, it will still serve its purpose as a lesson, and it is easy enough for your student to imagine how much quicker this would be in a higher-performance airplane. While your student might practice spins in a power-off mode, he will more likely have a lot of power on when he inadvertently spins. He needs to feel this firsthand. A little safety note here: Since this maneuver can be surprising, be ready to help if things start going wrong. I have seen a few surprised students leave the power and spin inputs in place and cause a wild ride. Try to help out soon enough to avoid this demonstration from becoming too dramatic. You want the student to have a firsthand experience of the cross-controlled stall without scaring him away forever!

Finally, let’s do regular spins. While climbing back above that Sherpa altitude, set up a few ground rules. We’re intentionally spinning or intentionally recovering—nothing in between. If your student decides to relax the stick during a spin, he will accelerate the spin and cause a lot more altitude loss. If he relaxes during the entry stage of the maneuver, he will turn it into a nasty little spiral. So be sure he understands that a spin requires full rudder and full elevator deflection until the decision to recover is made.

DeKevin Thornton





DeKevin Thornton

After a good spin and recovery has been made in both directions, your student needs to experience an accelerated spin. Be sure your student is feeling well before attempting this, because someone on the verge of being sick will surely be finished off here. If all is well, have him enter a right spin as before. After the spin stabilizes, have him smoothly and firmly (but not quickly) move the stick toward the firewall. The results will come immediately. Don't wind him up too tight; it doesn't take much of this to make a point. Convert to a normal spin with full back-pressure and then execute a normal recovery. I think a student who never really experiences this will not be safe from making the wrong move when a clean recovery is needed.

I teach P.A.R.E. recovery; Power: Idle; Ailerons: Neutral; Rudder: Full opposite yaw direction; Elevator: Forward through neutral. Hold these inputs until the yaw rotation stops then; Rudder: Neutral; Elevator: Aft to recover straight ahead to a climbing attitude. I like this method because it establishes a clear and direct method of understanding the recovery. Always take the time to explain why that "E" is last. The accelerated spins should drive that point home with no questions. I also teach a recovery I call the "lawn dart" recovery. It is a lot like a Pitts recovery as it does not depend on knowing if you are turning right or left or spinning right-side-up or inverted. In the lawn dart method, simply

chop off the power, place your feet together for neutral rudders, and, as the rotation slows, move the stick to dead center neutral. This is a good "when in doubt" method, but it is not as fast as P.A.R.E. I believe if you get all the way through accelerated spins in one flight, you are lucky. It's just a lot of twirling for the beginner. If you do have a hardy student, your next option would be to cover inverted spins, but I find very few students at this

level who are ready for it. After they get some real time flying inverted, they are usually more fit and oriented to the inverted attitude and will absorb the lesson much better.

I feel inverted spins are a bonus at this level and are a lot more important to cover when teaching

the advanced student. If your student does choose to do some now, please remember the one pitfall: Inexperience is going to make the student slow to cause an inverted stall. This means you might hang upside down a long time coaxing him into the spin entry. By the time you do a few turns and initiate a positive recovery, you might have a good setup for a blackout. Be ready for the ol' grunt maneuver and try not to let him haul back on the stick too hard.

My old mentor and friend Jim Holland once told me, "You never know what a spin might do, so give yourself a lot of room." Take this advice very seriously. I have had the whole gamut of the unusual happen to me during spins. I have had students accelerate them

**"YOU NEVER KNOW WHAT
A SPIN MIGHT DO, SO GIVE
YOURSELF A LOT OF ROOM."**

and then pull back so quickly they've made a simple ol' Decathlon flat-spin a few turns. I have seen a person panic and clamp down on the controls, requiring "force" to get their attention. I even had one student somehow manage to get the top of the Decathlon's front stick up under the seat belt, where we couldn't get it back forward to recover! It took a lot of turns to get this figured out and some time to talk the student into unlocking his belt. Always have much more altitude than you could ever imagine needing and then climb some more!

No aerobatic lesson should ever begin without a good safety briefing tailored for the flight. For the spin lesson, the usual use of the chute and exit procedures must be accompanied by good positive control transitions, clear understanding of what is expected in every maneuver, careful inspection of the interior for unwanted cargo, and an accurate weight and balance computation.

At the completion of this lesson, you should be seeing a level of competency that assures you that your student is ready to practice the four fundamental maneuvers without you on board. You should supervise the practice flights and retain some authority so you can help in deciding when conditions are safe for practice at his skill level.

Please feel free to contact me with any questions. I have found flight instructing to be a skill that's continually developing, and I always welcome feedback from people who are willing to share their knowledge. I can be reached at Greg@GKairshows.com.



Greg Koontz is a NAFI Master Certified Flight Instructor-Aerobatic and has been teaching basic aerobatic courses since 1974. He is a full-time aerobatic professional sponsored by American Champion Aircraft flying shows in his Super Decathlon, is an aerobatic competency evaluator (ACE), and is a member of the International Council of Air Shows' ACE Committee. Greg is a member of the National Association of Flight Instructors (NAFI) and actively supports its efforts to raise the standards for aerobatic instructors.

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We won't be at **Sun & Fun** this year, so we are offering **airshow discounts during the whole month of April!**

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Stearman Pilot Chris Kappler
Oak Hill, West Virginia

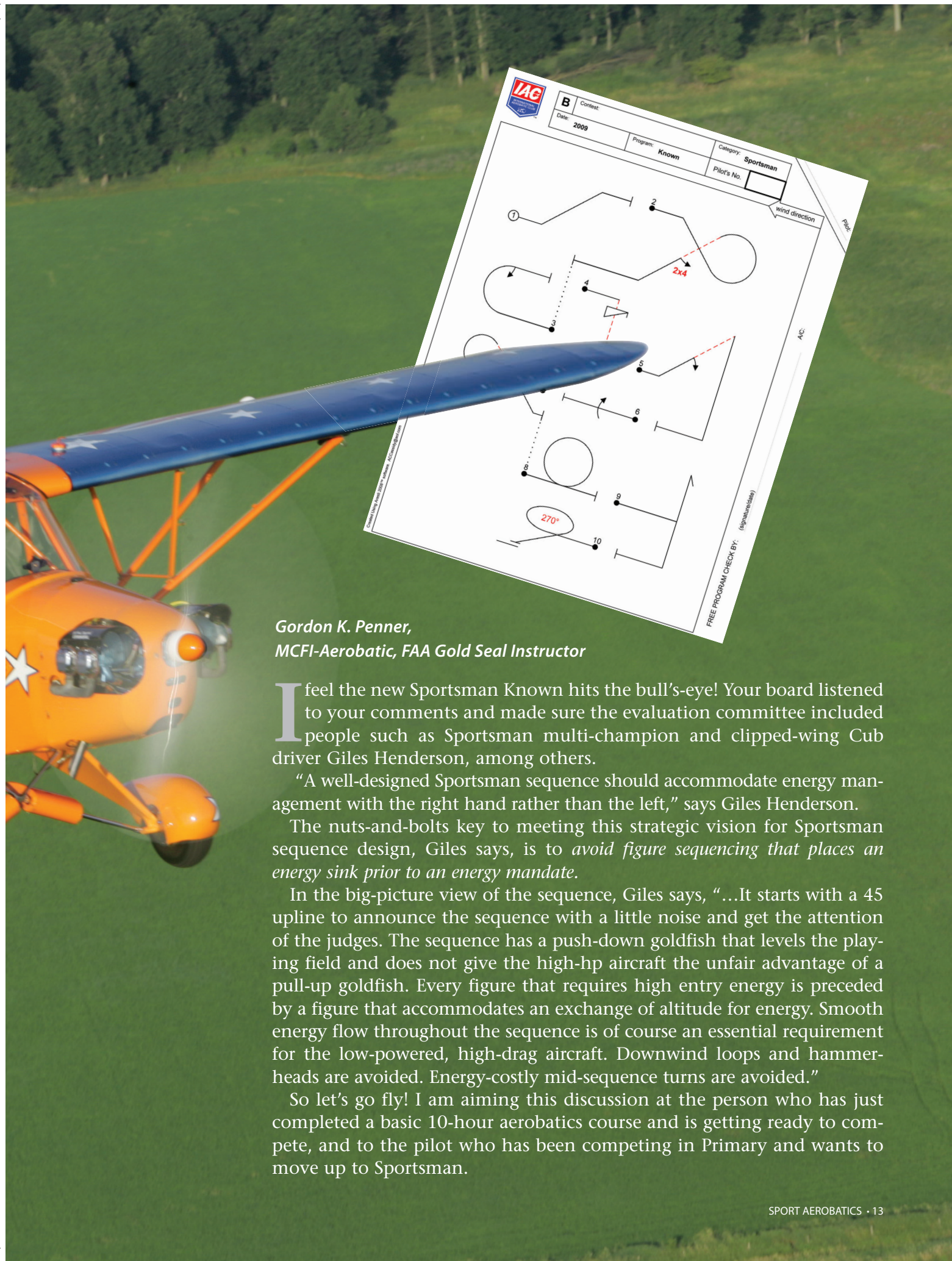


Phil High

"A well-designed Sportsman sequence should accommodate energy management with the right hand rather than the left."—Giles Henderson

The 2009 Sportsman Known Sequence

Part I



Gordon K. Penner,
MCFI-Aerobatic, FAA Gold Seal Instructor

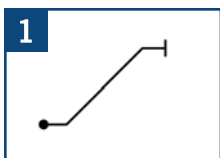
I feel the new Sportsman Known hits the bull's-eye! Your board listened to your comments and made sure the evaluation committee included people such as Sportsman multi-champion and clipped-wing Cub driver Giles Henderson, among others.

"A well-designed Sportsman sequence should accommodate energy management with the right hand rather than the left," says Giles Henderson.

The nuts-and-bolts key to meeting this strategic vision for Sportsman sequence design, Giles says, is to *avoid figure sequencing that places an energy sink prior to an energy mandate*.

In the big-picture view of the sequence, Giles says, "...It starts with a 45 upline to announce the sequence with a little noise and get the attention of the judges. The sequence has a push-down goldfish that levels the playing field and does not give the high-hp aircraft the unfair advantage of a pull-up goldfish. Every figure that requires high entry energy is preceded by a figure that accommodates an exchange of altitude for energy. Smooth energy flow throughout the sequence is of course an essential requirement for the low-powered, high-drag aircraft. Downwind loops and hammerheads are avoided. Energy-costly mid-sequence turns are avoided."

So let's go fly! I am aiming this discussion at the person who has just completed a basic 10-hour aerobatics course and is getting ready to compete, and to the pilot who has been competing in Primary and wants to move up to Sportsman.



Maneuver No. 1A: Box Entry

Come in loud, fast, and proud! Show the judges you mean business and

are here to fly! Most new aerobatic pilots don't practice their box entry together with their first maneuver. This is a big mistake. Don't throw away this chance to make a good first impression. Think of the entry, with the wing-wags and 45-degree upline, as one maneuver and then practice them that way.

Set up the box entry on a descending line so that all three wing-wags are completed and the airplane arrives at the start point of the 45-degree upline at the correct beginning box position, the correct altitude, and with the desired airspeed. Being close to the airspeed redline here is a good idea and will take practice to nail down. Also, when on this downline, you can see the box better! Placement of the entry downline and the 45-degree upline are determined by

where you want Maneuver No. 2 in the box.

Give some thought to the wing-wags, as they are part of the judges' first impression. Are they snappy and precise, or are they mushy? Don't just wiggle the stick back and forth trying to quickly move on to the "real" maneuvers. Allow enough time on the box entry downline to move the airplane to *at least* 45 degrees of bank, pause, then return to wings level three times. It is also a good idea to bank toward the judges instead of away.

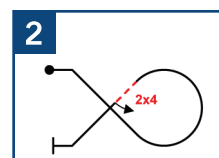
Maneuver No. 1B: The 45-Degree Upline

Forty-five-degree uplines and downlines require ground coaching; there is just no way around that. You are flying for imperfect, human judges. *Remember, your job is not to fly perfectly. Your job is to present the illusion of flying perfectly.* You fly for the judges, not yourself, so ground coaching is essential.

So how do you know if you are on a 45-degree upline? This will vary

from airplane to airplane and from pilot to pilot, but everything depends on the pilot's eye position. Whatever sighting system is used, it is very important that the pilot be absolutely anal about seating position. Always use the same seat position and the same cushions so that the eye position, and its relation to the sighting system, is the same every flight.

The sighting system must not only help you fly the 45-degree line, it must also prevent things such as flying with a low wingtip. There are many sight reference possibilities, depending on the aircraft, both ahead (Russian system) and to the side (Western system). Ultimately, you must get a ground coach to tell how the 45s look from a judge's perspective and adjust from there.



Maneuver No. 2: Downward Goldfish With a 2 of 4

In this maneuver, pilots usually pinch the

top of the looping segment, which is a downgrade. The end of the looping segment, before the last 45-degree downline begins, *must* be rounded out enough so that the radius of the 3/4 loop is constant throughout. That takes energy. The looping segment must be started with enough energy to fly that constant radius. Pulling the necessary beginning G's will scrub off speed, so the 45-degree downline must be held until the proper speed is attained before pulling up into the 3/4 loop. Learn that entry speed for your airplane.

The next big point is, "*Don't rush the point rolls,*" as Rob Dorsey has repeatedly said in his Sportsman articles. There are judging criteria about needing to center the roll on the downline, but the only requirement for how long one must spend at each point is that *the judges must see them!* They must be crisp, and they must be held long enough for the judges to see them as hesitations and not bobbles. The general technique that's taught is to spend approximately as much time on the point as one spends getting to the point. The slower the aircraft rolls, the longer the point must be held for it to be seen.

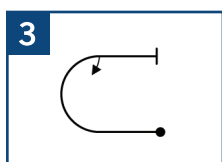
Since the next maneuver, the Immelmann, requires high energy,



Jim Koepnick



make the downline long enough to have enough energy for it. But watch your airspeed and engine redlines.



Maneuver No. 3: Immelmann

The Immelmann is the bane of many new pilots' existence and one of their

biggest sources of frustration. The biggest problem, especially for those with low-power/high-drag airplanes, is having insufficient energy at the top to do the half-roll. If done with too little energy, the half-roll can turn into an inverted spin entry. If no spin occurs, there is still the possibility of partially stalling and wallowing as the half-roll is finished. The third problem is finishing the half-loop "early," the fourth is sagging or settling after the roll, and the last is finishing off heading.

The Immelmann speed for your aircraft must be considered a minimum. More is better. Notice that the Immelmann speed should always be slightly faster than the looping speed in order for your airplane to have enough energy for the half-roll. Two other bits of coaching I've received

on this maneuver are to avoid floating the top half (last 90 degrees) of the half-loop as much as you would the top of a regular loop and to pull another 1/4 to 1/2 G more at the beginning than you would for a regular loop.

Finishing "early" means finishing the half-loop before being over the starting point. This is a downgrade. The aircraft is going quite slow at the top of the maneuver and is also flying into the wind. If it is "floated" as in a normal loop, the airplane will appear to stop in space as the looping segment is finished. The above techniques will counter this effect and also help you feed that higher entry speed into the half-roll. All of these tricks will help give more control in the half-roll and will also help prevent settling during and after the roll.

One must not draw a line between the end of the half-loop and the beginning of the half-roll, but the judging criteria require that there be an end to the half-loop before the half-roll is started. Don't blend them together too much. To quote the rulebook, *"The (no line) criterion IS NOT meant to imply that one element (roll or loop) must start before the preceding element is completely finished. A brief*

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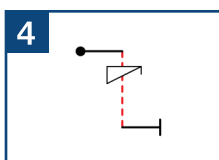
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hesitation between elements (similar to opposite rolls) must *not* be downgraded.” I know judge gurus Greg Dungan and Brian Howard would like their judges, as well as all pilots, to hear this one loud and clear.

Newer aerobatic pilots tend to finish the Immelmann off heading for a few reasons. One reason is that they aren’t coordinated when they start the half-roll. Remember, opposite rudder is coordinated rudder when upside down and holding negative G. Hold enough opposite rudder to be coordinated as you initiate the half-roll and hold it until about 45 degrees of roll have been completed. Then switch to “top” or “sky” rudder. Also, as covered in Alan Cassidy’s book *Better Aerobatics*, a little push about the same time as the feet are switched (to the “top” rudder) will also keep the nose pointed correctly as the rolling motion continues, as the tip of the nose draws Alan’s “sacred circle” around that desired heading. There will be more on Alan Cassidy’s “sacred circle” later when we cover slow rolls in Part 2. Additionally, once the rudder pedals are switched,



the roll rate will increase, which is a downgrade. Ease off the aileron a bit when the rudder pedals are switched so the roll rate stays the same.

Maneuver No. 4: One-Turn Spin

There are a million techniques out there for entering the spin and getting out on heading, most of which are airplane-specific. A pilot simply cannot come to a contest without spin training, and airplane-specific spin training abounds. I will talk, instead, about what the judges must see. Again, to quote the “good book,” *“When the aircraft stalls, the aircraft must simultaneously move around all three flight axes: (1) the nose will pitch toward the ground; (2) the nose will yaw in the direction of spin; (3) the wing tip will drop in the direction of the spin. Failure to achieve simultaneous motion about all three axes will be downgraded 1 point per 5 degrees of deviation on EACH axis. (emphasis added).”*

Four things must be kept in mind for spins. First, don’t settle or climb on the entry line. I watch my altimeter as I am slowing down toward the beginning of the spin departure. Second is the entry criteria covered above. Third, the spin exit must be practiced enough so that a finish on heading is reliable, and the pilot must maintain orientation throughout. This is critical. Rich Stowell suggests counting each half-turn, which works for me. Speaking of counting, I can’t count how many times I’ve seen a spin finished 45 to 90 degrees early or late and watched the competitor charge off, unknowingly, in a “zero-inducing” direction.

Fourth, get reliable ground coaching to make sure your downlines are straight down. Setting the trim before the sequence begins (and leaving it there throughout) at something slightly above looping speed will help in this area. Holding a good downline is a perception thing, which is why you need ground coaching and practice. A lot of new aerobatic pilots tend to push too much going downhill, getting “negative” or over



Mike Steineke

on their backs. When your headset is flying up off your head, you *may* be pushing too much!

Last, the second you finish the spin and begin the downline, hammer the power! You need to feed a lot of energy into the next maneuver. You will gain speed quicker while losing less altitude (believe it or not!), and your elevator will work better for the pullout.

Compensating for Wind

One reason the Known sequence exists is it's a good safety qualification flight. Another is *education*. Part of your required education is to learn how to compensate for wind—crosswind as well as head wind. Remember, your job is not to fly perfectly. *It is a presentation. You fly for the judges, not for yourself.*

Here is aerobatic coach and instructor John Morrissey talking about the Sportsman sequence and wind in the February 2008 *Sport Aerobatics*: *"But what if there is a big crosswind? There are no cross box maneuvers! Exactly so. And that is why they have 1st, 2nd, and 3rd place trophies...You must learn to handle the wind as naturally as you blink your eyes. The techniques required to implement those procedures are not possible to teach in print. It takes a while to learn, but once you do, you will never be held hostage by the wind again in aerobatic competition. And without wind control, consistently good presentation is impossible."*

Conclusion

We will finish the sequence in Part 2, beginning with Maneuver No. 5, the reverse wedge or sawtooth. I'll leave you with a suggestion from aerobatic champion Bob Herendeen. He says you should practice the whole sequence first a few times, *then* work on the individual maneuvers. Doing maneuvers in a sequence is different than doing them by themselves. As in billiards (borrowing from Rob Dorsey), you not only have to make a good shot, the cue ball must finish in position for the next shot. Fly safely! 🛩️

Gordon Penner is an NAFI MCFI-A and an FAA Gold Seal CFI who instructs at Stewart's Aircraft Service in Ohio. He is a past president of IAC Chapter 34, is a disciple of Rich Stowell's EMT program, and is co-editor, with his better half, Lorrie Penner, of IAC 34's newsletter. He currently flies for a major airline.



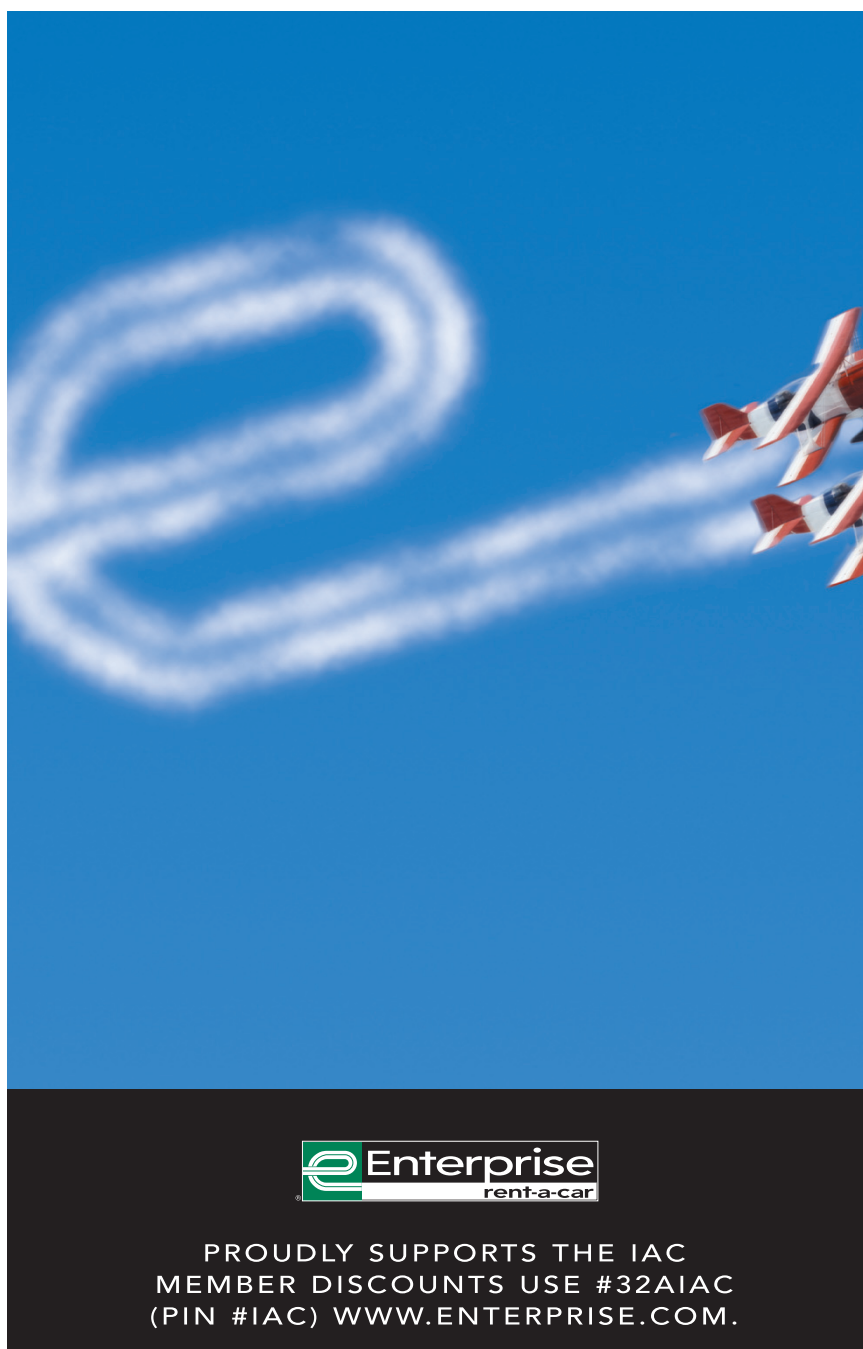
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Feeding *the* Membership



Lorrie Penner, IAC 34 Secretary

Pancake breakfasts, chili cook-offs, and Friday fish fries. Do any of these sound like your chapter's latest membership drive or club meeting? Does the sweet smell of **free food** circle above your best-attended meetings? Most chapters I polled mentioned using these devices as the way to the aerobatic pilot's heart. But is it working?

Could it be as simple as "Bake it and they will come?"

I asked several International Aerobatic Club (IAC) chapter leaders about the key to retaining members and growing their chapters. They all agreed free food was fine for growing a pilot's waistline, but the factors for maintaining a chapter's health and well-being were a bit more complex.



*"A chapter that grows,
must have some established
members who take an
interest in new members
... and help them
feel they are a
part of the
group."*

Mark Mattioli, president of IAC Chapter 52, thinks flight school affiliation is important. "Chapters that are affiliated with flight schools have a definite advantage," he says.

"In my experience, IAC chapters rise and fall with their connection to at least one successful aerobatic flight school," echoes Michael Church of IAC Chapter 120. "So, in the long run, it is the rise and fall of the schools that determines club health."

Of course, there are IAC chapters still growing that are not affiliated with a flight school, but most are. Many current and longtime members came to the chapter through their connection with a flight school that provided aerobatic training. In many cases there was an existing IAC chapter presence on the field or some IAC chapter members who flew at their airport.

Church gives an example of the rise and fall in one IAC chapter's history: Chapter 49 in Los Angeles. "[They] had no strong school and shrank annually through the '90s," says Church. "Then, two years ago, an existing school began strong contest support, and the chapter is again on the rise."

What if an aerobatic school isn't available? Bob Hart, IAC Chapter 1, offers that the next best thing is making those critical connections at the local airport—even if it doesn't have aerobatics. He says their chapter actively seeks members from local airports through cross involvement with local EAA chapters. So, the first rule of any marketing: Drop your bait where the fish swim. Got it.

Then there's IAC Chapter 52 Webmaster Doug Lovell, who explains the importance of the personal touch. "The club needs some people who enjoy getting to know new people and helping them succeed," he says. "Those are the same people who strike up a conversation with a stranger at the airport and talk with them long enough to interest them in the club." Fly friendly skies: check. Exposure to general-aviation pilots is the best bang for the buck—they already like to fly; they just need to hear more about aerobatics. Preach to the converted: check.

But wait. We're getting ahead of ourselves. Why would anyone want to join IAC in the first place? What keeps them paying dues? Hart tackles



Courtesy Laurie Zaleski

Volunteers were ready to help at this year's IAC Chapter 52 Blue Bowl.

that question. "[By] demonstrating to all current and potential members there is value in our product," says Hart. "Although we may be passionate about our sport, not everyone considers it at the same level. With discretionary income becoming more restricted, people tend to ask, 'What do I get for my buck?'" As Hart begins to make clear, at the end of the day we are selling a product. And our product ranges from the tangible to the intangible. Whether we are demonstrating through enhanced websites our resource availability and communications and networking tools, or simply the social interaction that comes from being surrounded by enthusiastic and like-minded pilots, we need to be clear that we offer a quality experience they want to be a part of.

Gordon Penner, IAC Chapter 34, points out an obvious benefit, often overlooked, that our chapters can offer to all pilots, from novice to expert. It's a unique, tangible resource unavailable anywhere else and easily accessible: At IAC chapters, we know a lot about flying airplanes. Obvious?

"Some of those people may want to join our merry little band," Penner says. "But overall, we want them to

know that we are here and that we are the aerobatic memory bank they can go to. Our collective knowledge of traditional aerobatic aircraft and their performance is extensive."

Why Google it? We have it right here firsthand. Some of the best, most experienced pilots around the country are IAC members ready to share their knowledge.

"One of the main missions of our club is to reach out to other groups of pilots about aerobatics," says Mattioli, dovetailing Penner's outlook. "By far, our educational seminars are a key offering of IAC chapters to other pilots and groups."

So, attracting new people to aerobatics is about outreach and making it a priority to attract and retain membership. As a club, we have to be noticed, but how?

Be there. Be visible. Kent Misenegade's IAC Chapter 19, a regular presence at local fly-ins, engages attendees with a static display it shares with other area EAA chapters. Hart points specifically to his chapter's visible presence at an air show in northern Illinois. These venues offer both the flying and nonflying public a chance to interact and gain interest in the

sport of aerobatic flying; they are valuable tools used to increase sport and name recognition. Penner's Ohio chapter has also hopped on board by attending local air shows and regional fly-ins three times a year.

The hot topic lately has been attracting fresh public interest and growing the IAC with new members. However, while that's an important aspect to the overall health of the organization—and must not be overlooked—some see it as secondary to retaining membership. How do we hang on to the members we already have?

"I think the single most critical factor in retaining someone who has real interest, who isn't going to drift off, is that they find one or four people in the chapter who are friendly to them," responds Lovell.

Hmm...another member seeing value in the personal touch. Wait a minute—isn't that cheaper (and more effective) than Spaghetti Night?

"A chapter that grows," continues Lovell, "must have some established members who take an interest in new members, introduces them, helps them gain some notice, and helps them feel they are a part of the group."

As chapters, we need to develop and maintain a priority to attract and retain our chapter membership.

For the continued growth and retention of a chapter, there's a general consensus: The chapter needs to make it a priority to remain active and engage as many of its members as are interested. Some suggestions for activities that are working for their chapter come from Misegades:

1. Regular monthly flying and critiquing meetings from spring to fall at an airfield with a box.

2. Meetings at several airfields to attract a membership that is spread over four states (North Carolina, South Carolina, Virginia, and Tennessee).

3. Website and regular newsletter.

4. Frequent e-mail blasts to the entire chapter to keep people informed and warm.

5. An open-door policy to anyone interested, from tire kickers to Unlimited competitors.

6. Two, family-friendly annual contests focused on low cost, simplicity, safety, and fun.

Bob Hart adds a couple of practical suggestions:

1. Target noncompetition pilots, convincing them of the membership resource value regarding recreational aerobatics, training, proficiency, and maintenance considerations.

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Courtesy Lorrie Penner



John Sollinger and the author, Lorrie Penner manning the IAC Chapter 34 booth at the Mid-Eastern Regional Fly-In (MERFI).



Courtesy Lorrie Penner

Avin Chakravarti (left) and Gordon Penner at IAC Chapter 34 AcroCamp.

2. Actively pursue current members for their dues. If you haven't seen them in a while, they'll likely slip away. This usually requires reaching out to them with a personal phone call. It's amazing what you can get done with a cell phone and "hands free" on the way to and from O'Hare.

One outreach program our Ohio chapter has already established is

hosting a Federal Aviation Administration (FAA) Safety Seminar. It's an event that's working well. The beauty of this is that the FAA advertises for us and we usually end up with 25 to 30 local pilots we have never met before. Our chapter members are always interested in learning new things, and cost is minimal, since we serve only coffee and donuts. (The chapter will need a club member who is a certificated flight instructor and

will qualify with the FAA to be a speaker. Otherwise, make contact with the FAA Safety Team to set up an FAA speaker: www.FAAsafety.gov.)

On the subject of retaining members, Mattioli says his chapter likes to give as many members as they can a real function within the club. Members who can contribute feel more like a part of the process and are less likely to fade off. Why be a part of the club if you're not made to feel like a part of the club? They actively bring members up through the ranks into leadership roles. Whether the role is occasional guest speaker, new social director, or tapping members for specific jobs in the contest realm, making chapter members an important part of a team can help retention.

"An experienced member lost is worth two new members gained," Mattioli says. That about sums it up.

Did you notice nobody mentioned our contests as a source of new membership? Maybe experience has shown us something. Let's look at contests. Even though most chapters spend a considerable amount of time and effort organizing and running a

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contest, they probably aren't the best way to attract new members.

"New members don't want to make a fool of themselves flying at a contest for the first time," says Lovell. "They want to make a good impression."

It is becoming apparent, from most of the folks I've talked to, that providing a welcoming atmosphere to new people and making them feel like they are part of a group are important factors in IAC outreach success. So late on a Saturday afternoon of a contest, with our members juggling a thousand details in their minds, isn't likely the best place to communicate that personal touch.

"There just isn't enough time to give to a new person during the frantic pace of keeping the contest on track," adds Penner, a past contest director.

There are as many ways to attract and retain members as one can dream up, and a few basic tenets that can help along the way. But the key ingredient remains: The chapter must make it an important priority, and not just the leadership is responsible—it's everyone within



Ron Chadwick (right) entertains Bill Green (left) and Kendal Simpson.

the chapter. From making a phone call to striking up a conversation at the airport, every member is an ambassador for the chapter. And don't forget the free food! 🍷

Lonnie Penner is the IAC Chapter 34 secretary and IAC Achievement

Award chair since 2006, newsletter editor, and website administrator since 2002. She is a private pilot with glider rating, was the recipient of the Primary Achievement award in noncompetition aerobatics, and was the IAC 2008 Frank Price Cup winner with Gordon Penner.

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Congratulations to the winners and everyone who flew in the 2008 Regional Series. A very special thank you also goes to **Lightspeed Aviation** for their support of the series.

The Regional Series began in 2002 with 60 pilots competing for the series titles. To be eligible, a pilot must fly at least three contests during the year (two for the Northwest Region due to unavailability of contest sites) and one may include the U.S. Nationals. If more than three contests are flown, the highest scores are used to arrive at each participant's total percentage.

First, second, and third place trophies are awarded to qualified participants in each category (Primary through Unlimited) in each of the six regions. Trophies are sent to the chapter presidents of the winners in each region for awarding at an event held in the local area such as a chapter meeting or first contest of the next season.

Congratulations again to all of the series winners. For additional detailed information on the 2008 Regional Series, go to <http://Members.IAC.org> under Contest Results, Regional Series. Information and registration for 2009 is available on the Internet.



SOUTHWEST

SOUTHEAST

SOUTHCENTRAL

	Rank	Pilot	PP%	Rank	Pilot	PP%	Rank	Pilot	PP%
PRIMARY	1	Kathleen Howell	82.36	1	J Lumpkin	82.49			
				2	Jon Elam	77.87			
				3	Lynne Harrison	74.53			
SPORTSMAN	1	Stephen De La Cruz	87.95	1	Joe Haycraft	87.65	1	David Lutes	83.55
	2	Steve Packer	87.75	2	Charlie Wilkinson	85.29	2	Charles Benham	82.84
	3	Mike Eggen	87.18	3	Stanley Moye	85.07	3	Jerry Benham	82.44
INTERMDT.	1	Thomas Francioni	83.36	1	Martin Flournoy	85.55	1	Paul Reader	82.67
	2	Michael Montgomery	83.29	2	Mikhael Ponso	80.28	2	Robert Buckley	81.58
	3	Jason Wondolleck	82.16	3	Michael Kovalcik	80.23	3	John Ostmeyer	81.06
ADVANCED	1	Malcolm Pond	83.76	1	Nick Galyon	83.46	1	Patrick Clark	82.11
	2	Reinaldo Beyer	82.93	2	Joe Brinker	77.13	2	Louis Judy	78.09
	3	Randy Owens	76.93				3	William Denton	77.88
UNLIMITED	1	Vicki Cruse	82.76	1	Pete Eslick	68.16	1	Dan Clark	91.72
	2	Norman DeWitt	80.20	2	Paul Lopez	58.24	2	Michael Gallaway	67.00
	3	Todd Whitmer	76.38						

Series Winners

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	Rank	Pilot	PP%	Rank	Pilot	PP%	Rank	Pilot	PP%
PRIMARY	1	Steven Litsky	59.47%	1	Michael Davis	75.73%	1	Lynne Harrison	64.77%
	2			2	Scott Jordan	74.88%			
	3			3	Randol Webb	73.51%			
SPORTSMAN	1	Steve Packer	84.93%	1	Will Morey	82.93%	1	Joe Haycraft	90.75%
	2	Barbara Higbee	82.22%	2	Wesley Jones	82.75%	2	Patrick McAlee	85.09%
	3	Noel Jones	81.36%	3	Jason Flood	81.49%	3	Ryan Ott	82.94%
INTERMDT.	1	Thomas Franscioni	84.05%	1	James Wells	75.11%	1	Robert Butts	84.74%
	2	William Allen	80.06%	2	Larry Bashore	74.29%	2	David Underwood	82.77%
	3	Jerry Riedinger	77.01%	3	Bryan Taylor	74.11%	3	Cynthia Lyons	71.29%
ADVANCED	1	Douglas Sowder	78.23%	1	Sergey Prolagayev	74.92%	1	Steven Johnson	84.26%
	2	David Engh	76.36%	2	William Finagin	74.27%			
	3	Victoria Benzing	62.01%	3	Scott Francis	72.80%			
UNLIMITED	1	Vicki Cruse	78.69%	1	Steven Grohsmeyer	54.53%	1	Michael Vaknin	83.50%
	2	Todd Whitmer	75.74%	2	Dennis Thompson	54.17%	2	Douglas Bartlett	80.57%
	3	Norman DeWitt	74.54%				3	Hugo Ritzenthaler	68.95%

Back FOR Gold

Norm DeWitt

President, Unlimited Aerobatics USA, Inc.



Do you love aerobatic flying? Have you ever attended a world-level contest in Europe? Do you speak English? Are you and your significant other wondering where to vacation this summer? How about England?

The 25th FAI World Aerobatic Championships (WAC) will be hosted by Great Britain August 19-29, 2009, and the contest site will be Silverstone, England. Silverstone, 70 miles north-northwest of London, is the home of the British Grand Prix and a Formula One racetrack. Driving time from Heathrow Airport is approximately one hour and 20 minutes. The track is overlaid on a surplus World War II airport. The setting for the contest should be spectacular with viewing stands offering great perspectives of the competition.

If you arrive early or remain after the WAC, you may be interested in test driving a Ferrari or Aston Martin on the track for less than 99 pounds. If this is of interest to you, visit www.Silverstone.co.uk/php/home.html. Do a Google search on Silverstone, England, and you can select hotels, restaurants, and nearby points of interest. London and the rest of England offer limitless opportunities for sightseeing, exploring, and fine dining. Why not plan a surprise vacation for your special companion? The dollar has strengthened against the pound, and you will have an opportunity to cheer for your national team. For more information on the contest visit www.WAC2009Admin.com.

Our team is returning to Europe in its quest for FAI gold medals. The IAC has selected nine team members and an alternate to represent the United States this summer. There are six male pilots and three female pilots. The male team members are David Martin (captain), Robert Armstrong, Dan Clark, Michael Racy, Hubie Tolson, and Jeff Boerboon (rookie). Zach Heffley is in the wings as the

alternate. The female team is represented by Vicki Cruse, Debby Rihn-Harvey, and Allyson Parker-Lauck. Vicki, how come you don't have a second last name?

As always, the team members are responsible for their own expenses. The major expense categories are aircraft shipping, entry fees, team manager expenses, personal air transport to the contest, the wine and cheese party, and the pre-WAC training camp. Thanks to Harry Barr, Chandy Clanton's father, the team has congressional support from Rep. Sam Graves of Missouri to approach the State Department to request U.S. Air Force C-5A transport to and from the contest. The team hopes for success this time, but you can help with contributions to the team. Please visit www.UnlimitedAerobaticsUSA.com to contribute through PayPal, or mail your tax-deductible contributions to:

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Atherton, CA 94027

You may contribute to the team or to one or more team members by indicating the member on the memo line on your check. Thank you in advance for your generosity.

Your U.S. Unlimited Aerobatic Team is preparing to head "Back for Gold." Help them make us proud.

2002

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Aerobatic Team

Michael Racy, Dan Clark, Vicki Cruse, Robert Armstrong, Debby Rihn-Harvey,
David Martin, Allyson Parker-Lauck, Hubie Tolson, Jeff Boerboon, Zach Heffley



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For more information, contact

Norm DeWitt, President,

Unlimited Aerobatics USA

at 650 321-8499.

**BACK FOR
GOLD**



IAC Aircraft Insurance Program

Understanding rates and underwriting practices

Ryan Birr, President, Northwest Insurance Group

Wow, we have been partners with the International Aerobatic Club (IAC) and its members for nearly a year now, on April 1. Unfortunately, there isn't enough space to completely explain how underwriting a rate structure really works, but here's a brief explanation.

Win-win: First, our goal is to provide affordable rates that are competitive within the marketplace. We want to encourage participation in and use of the IAC Aircraft Insurance Program; this benefits the IAC, you, and us. The IAC has group buying power, and this is a key element of the program to keep costs down; if you can find commensurate rates and coverage elsewhere, then you aren't motivated to buy this insurance package and we haven't done our job. We also have to include the insurance carrier's rights and needs to profit from the program, because if it's not profitable for the carrier, the current premium rates and/or coverage cannot be sustained over time.

Group Underwriting: We crafted an insurance policy that would provide the coverage needed by a large percentage of the potential insured population. We then built a simple rating matrix to accommodate a wide scale of aircraft values, not excluding experimental or radial-engine aircraft. Understand that other insurance companies develop rates often for specific models of aircraft; our matrix didn't do this. Unfortunately, some of your aircraft insurance rates in the IAC program didn't prove to be competitive, while others proved to be low. To continue to keep the program healthy, we need rate adjustments and we also need to add as many new accounts as possible. Consequently, on April 1, minor changes will be made to more adequately accommodate all IAC members as a result of our experience with competitive rates thus far.

Underwriting obstacles: IAC members are not a "homogenous" group, and the variety of aircraft and needed uses along with associated pilot experience can be a problem for underwriting. Insurance works because

a large group of homogenous accounts is predictable with regard to expected losses...but in your world, every pilot and aircraft is a single and unique risk; actuarial rules simply don't apply very well. Additionally, there is the need to accommodate some dual instruction and air show type of exposures. Although the IAC program isn't designed for flight schools or full-time air show performers, we don't want to exclude IAC members who can benefit from these types of activities. Finally, many of the insured aircraft are simply not replaceable whether they are homebuilt or foreign-built, and this can be a problem because a small physical damage loss to one of these aircraft can result in a total insurance loss since the aircraft can't be repaired.

IAC Insurance program renewal - April 1, 2009: In our first year, 250 IAC members acquired the new IAC Aircraft Insurance Program, but we need to grow to about 1,000 policyholders in the next two years to get to "critical underwriting mass." We also learned more about the program's needs and rates, so on April 1, there will be some rate corrections. The entire program will take about a three percent increase to address the corrections and to accommodate rising administration costs and bad debt.

Return on investment: The insurance carrier has made a tremendous financial investment in developing your insurance program. The amount of premiums it is earning must at least be equal to the program's expenses plus cost of claims. You are enjoying a return on your investment as well as an exceptional insurance policy, but your participation also helps us sponsor IAC events, including Nationals and your local chapter events (call us about trophy sponsorships), as well as advertising dollars to help keep your association financially healthy. We have made the process of applying for your individual aviation insurance very easy by setting up an online application which immediately shows you the coverage and premium. Give us a try again this year by going to www.NWinsurance.net and clicking on the IAC icon. We hope to earn your business. 



ladies' apparel

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Cubavera Shadowbox Woven Women's Camp Shirt. Pitts or Monoplane embroidered on left chest. 70% rayon/30% polyester shadowbox pattern woven camp shirt. Point collar. Front and back contour darts flatter your figure. Coconut shell buttons. Available in navy and ivory. **All sizes \$44.99.**

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I15216 Navy MD Monoplane
I15217 Navy LG Monoplane
I15218 Navy XL Monoplane
I15219 Navy SM Pitts
I15220 Navy MD Pitts
I15222 Navy XL Pitts

I15130 Ivory SM Pitts
I15133 Ivory XL Pitts
I15135 Ivory SM Monoplane
I15137 Ivory LG Monoplane
I15138 Ivory XL Monoplane



I'd Rather Be Flying Aerobatics T.
100% cotton 4.6 oz jersey in white with pink and lime green silkscreen. Basic Junior fit. Tagless label.
All sizes \$15.99.

I15020 SM I15021 MD I15022 LG I15023 XL



Women's Hooded Sweatshirt.
This 60/40 fleece full-zip sweatshirt with hood is super soft and comfy. Features a Pitts aircraft and IAC logo on left chest. Available in white.
All sizes \$29.99.

I15024 SM I15027 XL
I15025 MD I15028 XXL
I15026 LG



This Angel has Aerobatic Wings T.
100% cotton 4.6 oz jersey in pink fusion with light blue silkscreen and angel dust glitter. Basic Junior fit. Tagless label. **All sizes \$15.99.**

I15016 SM I15017 MD I15018 LG I15019 XL

I love Aerobatics. Dancing with the Clouds. Brown Fashion T with light blue neckline and cuffs. Flattering Misses fit. **All sizes \$15.99.**

I15012 SM I15013 MD I15014 LG





Calendar of Events

For complete and up-to-date information, visit www.IAC.org. If hosting a contest, let the world know by posting it there.

Borrego Minifest (Southwest)

Saturday, April 18 - Saturday, April 18, 2009

Practice/Registration: Friday, April 17

Rain/Weather: Sunday, April 19

Power Categories: Primary and Sportsman

Site: Borrego Valley (L08): Borrego Springs, CA

Contest Director: Randy Owens

Phone: 714-321-8917 • **Website:** www.iac36.org

E-Mail: webmaster@iac36.org

Carolina Boogie (Northeast)

Friday, April 24 - Sunday, April 26, 2009

Practice/Registration: Thurs., April 23 - Fri., April 24

Rain/Weather: Friday, April 24

Power: Primary through Unlimited

Site: Lumberton (KLBT): Lumberton, NC

Contest Director: Michael Davis

Phone: 434-251-9467 • **Website:** <http://iac19.org/>

E-Mail: Michael.Davis@areva.com

LA Gold Cup (Southwest)

Friday, May 1 - Saturday, May 2, 2009

Practice/Registration: Thursday, April 30

Rain/Weather: Sunday, May 3

Power: Primary through Unlimited

Site: Apple Valley (KAPV): Apple Valley, CA

Contest Director: Patrick Dugan

Phone: 805-612-0976 • **Website:** LAGoldCup.info

E-Mail: patrick.dugan@yahoo.com

Robert L. Heuer Classic (Mid-America)

Saturday, June 6 - Sunday, June 7, 2009

Practice/Registration: Friday, June 5

Power: Primary through Unlimited

Site: Greater Kankakee Airport (KIKK):

Kankakee, IL

Contest Director: Jim Klick

Phone: 815-609-7165 • **Website:** iacchapter1.com

E-Mail: jimklick@sbcglobal.net

Southeast Aerobatic Open (Southeast)

Friday, June 12 - Saturday, June 13, 2009

Practice/Registration: Thursday, June 11

Rain/Weather: Sunday, June 14

Power: Primary through Unlimited

Site: Treea Field (4A7): Atlanta (Hampton), GA

Contest Director: Marty Flournoy

Phone: 706-326-4877 • **Website:** iac3.org

E-Mail: marty.flournoy@fcrealtors.com

Lone Star Contest (South Central)

Friday, June 12 - Saturday, June 13, 2009

Practice/Registration: Thursday, June 11

Rain/Weather: Sunday, June 14

Power: Primary through Unlimited

Site: North Texas Regional Airport (GYI): Denison, TX

Contest Director: Jeremy Humphreys

Phone: 940-564-6673 • **Website:** www.iac24.org

E-Mail: jjhumphreys@airtractor.com

Ohio Aerobatic Open (Mid-America)

Saturday, June 20 - Sunday, June 21, 2009

Practice/Registration: Fri., June 19 - Sat., June 20

Power: Primary through Unlimited

Site: Union County (MRT): Marysville, OH

Contest Director: Chris Keegan/Jeff Granger

Phone: 513-265-5640 • **Website:** www.iac34.com

E-Mail: cke8009542@aol.com

or jgranger@columbus.rr.com

Wildwood AcroBlast (Northeast)

Friday, June 26 - Sunday, June 28, 2009

Practice/Registration: Thurs., June 25 - Fri., June 26

Power: Primary through Unlimited

Site: Cape May County Airport (KWWO):

Lower Township, NJ

Contest Director: Craig Wisman

Phone: 717-877-8933 • **Website:** www.iac52.org

E-Mail: cwisman@aol.com



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a blast from the past



EAA Photo Archive

Charlie Hilliard in N31SA.

The Spinks Akromaster

JJ Humphreys

In the spring of 2008, I paid a visit to David Martin to look at his Extra 300L. While I was there, I explained what I had in mind for an aerobatic plane I wished to design. David mentioned that Pappy Spinks had done something similar back in the 1960s. He showed me a picture of the Spinks Akromaster. I asked if he knew if the plane still existed, and he said it had been donated to the EAA.

I contacted IAC President Vicki Cruse to see if she could get me any additional information on the airplane. The EAA AirVenture Museum had it at one time but lent it to the Texas Air Museum (TAM) in Slaton. I called the museum only to find out the plane was not there but in a hangar in Snyder, and it was about to be moved to San Antonio.

After a 150-mile drive to Snyder on Super Bowl Sunday, I found myself in the doorway of a battered hangar. There it was: the Spinks S-1 Akromaster! I had seen only the one photo of it in David's book, and I was expecting the plane to be about the size of an RV-8, but it was much

larger! The long, pointy nose and the tall spring landing gear give it an imposing stance. The fuselage profile is long and lean, and the wings are thin compared to today's generation of monoplanes.

After a quick walk around, I realized that I wasn't going to get much in the way of ideas for my plane. The Akromaster was 1960s technology, and I'm designing a 21st century monoplane. I quickly cheered up when I saw the dataplate riveted to the back of the cockpit. I wasn't looking for ideas any longer; I was looking at history! I opened the tiny bubble canopy and looked into the cockpit. The wood control stick handle was weathered and splintered. The heel brakes reminded me of my days in the Cub. With one hand still propping up the canopy, I dug out my trusty tape measure and measured the width between the longerons behind the seat—27 inches! Compared to the approximate 21-inch width of a single-place Pitts, it is absolutely huge! I closed the canopy and walked out of the hangar. As John Rogotzke (Snyder chapter of the TAM) slid the rusty hangar door shut, I thought, "Dad would like that airplane."

"Pappy" Spinks built the Akromaster in September 1968, and Charlie Hilliard flew it in the 1970 World Aerobatic Championships. In some ways the plane was designed before its time, and Charlie went back to a Pitts for the 1972 World Aerobatic Championships where he became world champion. 🇺🇸

JJ Humphreys celebrates his 10th year with Air Tractor this year. He is a second-generation aerobatic pilot and flies in the Sportsman category.



JJ Humphreys

**Remember,
things don't always go
according to plan!**



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