

JULY 2009

SPORT Aerobatics

OFFICIAL MAGAZINE OF THE INTERNATIONAL AEROBATIC CLUB

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Aircraft Partnerships
Flying Primary





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Bryan Jensen flies his new Pitts Model 12 aptly named *The Beast*.

-Photo by Jim Koepnick

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Reggie Paulk

LETTER from the EDITOR

by Reggie Paulk

Time Flies When You're Having Fun

Wow! It's already July and EAA AirVenture Oshkosh is upon us once again. I've had the privilege of editing this magazine for 10 months now, and it's been an interesting journey. This past year has been a trial by fire, but it's been fun. The aerobatic community consists of some of the most interesting personalities I've had the honor to meet. If there's anything that really sticks out about my time with the International Aerobatic Club (IAC), it's the fact that just about everyone in the club goes out of their way to help you out.

From the armchair pilot picking up his or her first copy of the magazine to the seasoned aviator flying another Unlimited sequence, there's just something about aerobatics that makes you want to be a part of it. Even if you've never set foot in an airplane, there are ways you can participate in this wonderful organization. If daydreaming about *The Beast* we're featuring this month is all you'd like to do, that's fine too! We're glad you're here.

Last month, I stated that I don't often hear from our members. I'm glad I did! A few of you were kind enough to send me your thoughts and suggestions. As with everything within the IAC, I was amazed at the depth of the responses I received. Instead of a quick hello, I was sent laundry lists of what could be done to make the magazine more interesting for our readers. I appreciate the feedback,

and I will definitely be using it in upcoming issues.

This month's issue is considered our "Oshkosh handout issue." It's an opportunity for us to introduce people to the IAC and showcase our fascinating corner of aviation. If this is the first time you've picked up a copy of the magazine, don't be surprised if you have a compulsion to want to learn to fly upside down. It is this very act that ignited the passion within so many of our flying members. In fact, IAC President Vicki Cruse did just that.

Where else can you learn about what it's like to fly an airplane named *The Beast*, and then find out how to get your feet wet by flying the Primary aerobatic sequence? If you're not reading this magazine, you won't find it anywhere else. That's what makes us unique.

Lately, the economy has been on many people's minds, so we're highlighting ways for you to participate in aerobatics without breaking the bank. Vicki Cruse discusses aircraft partnerships, and we'll be doing a follow-up story with Mark Mattioli. IAC Hall of Famer Bill Finagin told me if someone has a passion about something, he or she will find a way to do it.

I sincerely hope your passion for aerobatics leads you to find a way. Thanks to all of you for your support.

See you at Oshkosh! 

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

PRESIDENT'S PAGE

by Vicki Cruse • IAC 22968
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Vicki Cruse

The Oshkosh Introduction

Why aerobatics should be important to every pilot

You either received this issue in the mail as an International Aerobatic Club (IAC) member, or you picked it up at EAA AirVenture Oshkosh from a kiosk or from our new location on the Oshkosh grounds. Without a doubt, Oshkosh is the grandest of all aviation events. I attended my first Oshkosh in 1994 and stumbled into the IAC building. I had no idea what the IAC was, with the exception of the neat planes out front. I took a chance and joined, collected as many free issues of *Sport Aerobatics* as I could, took them home, and had my eyes opened to a unique organization and the endeavor of aerobatics. I knew that someday I'd find myself more involved than just as a reader of the magazine.

Oshkosh provides a great opportunity to introduce the IAC to new people. This year we have a new location off the north side of AeroShell Square and a remodeled building. Next year we hope to have additional improvements to the building, like a new patio cover instead of the tent for our forums. By far the biggest attractions for passersby are the aerobatic airplanes by the building. The new building location resulted in a new aircraft parking area, but we'll rise to the challenge and create a new aircraft display.

One of the biggest hurdles the IAC faces is getting people involved in aerobatics. While there are several reasons for this, one might simply be the definition of aerobatics; it means different things to different people. If you ask the FAA, Sean Tucker, the U.S. National aerobatic champion, or an RV pilot what is meant by "aerobatics," you'll likely get four very different answers, all of which are probably correct. Taking it down to the basics might bring in the terms unusual attitudes and spin training. Depending on whom you ask, "unusual attitudes" could connote a parent's perception of their teenage son or aerobatic training. Spin training is much more definable, but strikes fear in the hearts of nearly every general aviation pilot.

Those pilots who have been through unusual attitude training and spin training know, without a doubt, the benefits of that program to their pursuit of flight. The late Eric Mueller said, "Aerobatics is an advanced flying technique that opens up the boundaries of flight and allows you to operate throughout the range of your own capabilities."

For many people, me included, it made the difference between using my certificate and never flying again.

Part of our job as IAC members should be to promote the safety benefits of aerobatic training by encouraging all those pilots we know to seek it out. With the remodel of the IAC Aerobatic Flight Schools page located at www.IACUSN.org/schools/index.php, the resource is easily accessible. There are also scholarships available to help pay for

the training: www.IAC.org/programs/scholarships.

As IAC members, we should be the ones out championing the positive aspects of aerobatics and how this area of aviation made each one of us a better pilot. For those just introduced to the

*Aerobatics made
the difference
between using
my certificate
and never
flying again.*

IAC, expand your flight envelope and seek out unusual attitude and spin training. You will never fly the same again. The late Duane Cole said it best: "Pilots trained in aerobatics are safer pilots by virtue of their knowledge of the adversities of the aircraft and smoother pilots because of improved coordination and feel of the controls." 

Our Best to Compete with the World's Best



Norm DeWitt

Norm DeWitt

President, Unlimited Aerobatics USA, Inc.

As you are reading this page, the best aerobatic pilots from the United States are preparing to compete with the best from the other countries of the world in the biennial World Aerobatic Championships (WAC). This year's WAC will be held in Silverstone, England. Arrivals and practice begin August 18, 2009. Competition flights run August 20-29, 2009.

As of this writing, 59 pilots have been accepted into the contest from 19 different countries. There are eight men's teams and two women's teams. In addition to the eight countries sending teams of three or more pilots, individual pilot entries from Brazil, Canada, Ireland, Finland, Hungary, Israel, Italy, Lithuania, Luxembourg, Portugal, and Slovenia will also compete for individual awards. The countries with teams are the Czech Republic, France, Germany, Russia, Spain, Switzerland, United Kingdom, and United States. This is a strong world representation, without a doubt.

Your team members have been selected through rigorous competition flights at the U.S. Nationals. The United States will send eight team members to this year's WAC. They are Debby Rihn-Harvey, Vicki Cruse, David Martin, Michael Racy, Robert Armstrong, Dan Clark, Hubie Tolson, and Jeff Boerboon. Len Rulason has volunteered to be the team's mechanic, offloading from our pilots worry about mechanical issues and setup and teardown of the planes before and after the contest.

Your team will meet before the WAC at the Dunkswell Aerodrome near Exeter to practice August 11-17, 2009. At this point, only two team members will be flying their own planes. One will be shipped to England by sea, the other by air. Unlimited Aerobatics USA Inc. (UAUSA) was unable to secure military transport for the team, so the

others have had to make arrangements for aircraft to fly in the contest. This is a little like sending a hockey team to the Stanley Cup playoffs, but having to borrow hockey skates once you are there. It certainly places our team members at a disadvantage in the Championships. Your team pilots are, however, mentally strong and will put this behind them.

UAUSA would like to give a special thank-you to our corporate sponsors and those who have made personal donations. Our corporate sponsors are Berkley Aviation, Champion Aerospace, Lightspeed Aviation, Headegon Aero, Sky-Tec Starters, Silver Parachute Sales, and The Pitstop. Berkley Aviation is the insurance underwriter for the International Aerobatic Club. Berkley has been very generous in making a financial contribution. Beyond that, it will provide the European insurance coverage required to fly in England and compete at the WAC. In 2007, this insurance coverage alone was roughly equal to each team member's annual U.S. premium. That is a nice savings for team members insuring through their agent: Northwest Insurance Group. Also, Sigrid Baumann made a substantial individual contribution to the team. Thanks, Sigrid, and thanks to our corporate sponsors!

It's not too late for you to help your team. Contributions of any amount help defray the additional cost your team members incur to represent the United States. You may make a PayPal donation through the team website mentioned below or by mailing your tax-deductible donation made out to:

Unlimited Aerobatics USA Inc.
148 Magnolia Dr.
Atherton, CA 94027

Please wish your team members success. They will make you proud. You can follow the WAC results at www.UnlimitedAerobaticsUSA.com. Visit the WAC site at www.WAC2009.com.

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Robert Armstrong • Debby Rihn-Harvey (US National Champion) • David Martin (Team Captain)

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THE BEAUTY IS





THE BEAST

Jim Keepnick

The Kimballs' latest killer machine

Budd Davisson

The Kimballs are at it again! Just when you think they can't raise the bar yet another notch, they do. Building on the foundation laid down by Curtis Pitts' Model 12, they have lightened, bent, folded, and spindled the original design until, over the years, no part of it has escaped their touch. The result is that the original has slowly disappeared and mutated into a not-quite-but-very-close-to-totally-new design, the latest variation of which is named—aptly, we might add—the Beast.



Jim Koeppnick

IT could easily be said that the Kimballs' latest killer aerobatic biplane shows their ability to keep stacking up subtle changes until the results are nothing short of ferocious—the airplane still looks like a Model 12, but when you get into the details, and then drop the hammer on them, you realize the old saying about something being greater than the sum of the parts is a gross understatement. This thing rocks! And it is no Model 12!

The *Beast* is one of those airplanes that is the result of the never-ending conversation any engineer/designer has with himself when he's actually building the final result of a given design study: "Next time I'll move this piece over here," and "I really wish I had tried to...." Designers are basically an unhappy bunch because they can't ever stop designing. Nothing is ever perfect. So, the first parts of the earlier super-12, the *Python*, hadn't even been powder coated when Kevin's mind was already daydreaming a new airplane that would incorporate things he thought he could do better. Enter Bryan Jensen of Lakeville, Minnesota.

First, even though Bryan is theoretically from Minnesota, he is one of many aerobatic souls who have been drawn to St. Augustine, Florida, by the weather, the on-airport aerobatic box, and the fact that so many aerobatic pilots live in town or close to it. And when an aerobatic type finds himself at St. Augustine, he'll often find himself in the company of folks like Patty Wagstaff and, inevitably, Carl Pascarell.

"Carl and I were hanging around the airport one day," Bryan remembers, "and he suggested we run down to Zellwood to see what the Kimballs were doing. I had never met Kevin or Jim, so I was all for it.

"When we got there, they had just finished building Jim LeRoy's *Bulldog II* so the conversation quickly turned to muscle biplanes and the *Python* in particular. Kevin was talking about why he did this and that with the *Python*. But he'd constantly say he thought there was a better way to do some things. I mentioned that I'd been looking for something that was a little different for an air show airplane, and I could see the wheels start turning in his head. I'm positive he saw me as a chance to try out some new stuff that hadn't been around when he did the *Python*. And I was all for that."

THE NEXT STEP

Bryan, like all aerobatic pilots, is constantly looking for something bigger, better, faster (climbing/rolling), and generally more breathtaking. Just like designers are never happy with their results, serious aerobatic pilots are constantly looking for a bigger adrenaline rush and an airplane that can do just a little more. For Bryan, however, even thinking about an airplane that was an improvement on the already legendary *Python* was a dream that had been a long time coming.

Bryan says, "I was an Iowa farm kid who was in love with airplanes from day one. I actually earned most of my ratings washing airplanes and pumping gas at the local airport and worked my way up to the airlines through the usual jobs, meaning anything that would get me in the air and add hours to my logbook. This included seeding thunderstorms, corporate, all the usual stuff.

"I got into aerobatic competition back in '95 and started very much at the low end with a \$9,000 EAA Biplane and then an Acro Sport II. I finally worked my way up to a Christen Eagle, Laser 200, and then a Pitts S-1S and decided to get some training from Nicholay Timofeev, the well-known Russian aerobatic coach. What I didn't know is that Nicholay assumed everyone could already fly at the Advanced level as a minimum, and he was underwhelmed by my performance. In fact, to some, Nik has said, 'If you make love like you fly, your children will never be born.' I had to laugh because he was right, and we're good friends now.

"By the time Carl and I went to Zellwood where Kevin and I started talking, I was ready for something new, but I hadn't really thought about having Jim and Kevin build me an airplane until we were standing there in the hangar. Then things began to solidify, and we officially pulled the trigger on the project at Sun 'n Fun 2007."

Readers, take note of the date when they decided it was a "go" and consider that we were standing in the airplane's shadow talking about how it flew only two years later at Sun 'n Fun 2009. Now, that's impressive airplane building.



Jim Koepnick



Carbon fiber is used extensively in the cockpit to keep weight to a minimum. The instrument panel (left) is a beautiful example of this.

... serious aerobatic pilots
are constantly looking for a
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just a little more

When Kevin had a customer for his ideas it didn't take him long to run down the list of new ideas he had already compiled while designing and building the *Python*.

Kevin says, "One of the things I definitely wanted to do with the new airplane was change the wings and the wingtips. A good friend of mine, Quique Somenzini, is the world champion in F3A radio-controlled (RC) pattern flying and is the inventor of what is known as 3-D aerobatics. He had been flying several *Python* RC models, one of them with slightly less than an 8-foot span, so what he was seeing in the models was fairly close to what we would see in the real airplanes. One of the questions Quique asked was why we always made the bottom wing of a biplane shorter and with smaller areas. He had a good point. It was usually done for upright stability, which had no bearing in this kind of an airplane. For some time he had been flying big models on which the bottom wing was the same area as the top wing, so on the *Beast*, both the top and bottom wings are 21 feet and have the same area."

He continues, "The square wingtips were something else I wanted to change. They were simply an easy way to shorten the span. But, besides the fact that they weren't very aerodynamically clean, I wanted to shift area at the tips back, so the longest span is right at the aileron tips, which really helps with the roll rate. We've measured the roll rate by videos, which is about the only way you can get an accurate number, and we have a firm 365 degrees a second."

THE BEAUTY OF (FLYING) THE BEAST by Carl Pascarell

The *Beast* is a "point design" aircraft guaranteed to impress even the most experienced, high energy, hot rod jockeys. In all likelihood, the airplane will exact a position at the very top of anyone's high performance wish list, and I do mean anyone's. I'm not without experience in this area, and I would be hard-pressed to name a higher performance aerobatic mount, and certainly could not name one that offered as much pure fun, performance, and excitement.

With a thrust-to-weight ratio better than one to one (and that's with pilot and fuel on board), the airplane offers acceleration and rates of climb that are positively ridiculous. Throw in a 102-inch three-blade prop, the massive torque of a geared, 420-hp Barrett-modded M-14, and you have the makings of a machine certain to be the talk of the air show circuit and the envy of every aerobatic adrenaline junky out there.

I think the thing that initially impresses, at least visually, is the *Beast*'s manifest "badassness." Sitting at a nearly 15-degree deck angle with that disproportionately large propeller (14 percent more outrageous than a dash one Bearcat) and a high torque motor stuffed into an airframe only slightly larger than an S-2B, the *Beast* could actually look scary... I said could. For those lucky enough to be handed the keys, the *Beast* is a truly benevolent monster whose sinister mien thoroughly

belies its kindly manners. A monster to be sure, but one begging to be tamed, an onerous brute with a soft spot for its master and, without question, the epitome of anyone's dreamt up super ships.

But enough of the flowery hyperbole, let's get to the flying.

Sorry, one quick digression: A full power, gross weight takeoff yields a ground roll just under 300 feet (not a typo). Now, rotate quickly to keep the airspeed at 80 or so and watch the ground fall away at 4,000 fpm while leaning back at 45 degrees. We're not done. Keep rotating, disregard the airspeed, and just keep pulling until on your back looking down at the middle of the 3,000-foot runway you just left. Now that's performance!

Okay, back to specifics. Ground handling, although blind, is straightforward directionally, and on takeoff the aircraft requires surprisingly little left rudder to stay straight (remember, the engine turns backward) even during maximum rate engine accelerations. Takeoff rolls

are, as you might expect, exhilarating and are the first chance you have to experience just what kind of monster you've strapped on. The entire takeoff lasts a far shorter time than it takes to talk about it—as little as 2-1/2 seconds... yes, that's what I said—when lightly loaded and shoves you so solidly against the seat back that you almost don't have time to screw it up.

Climbing out with wits re-gathered, full power (37 inches at 3000 rpm) is reduced for climb to a more sedate 30 inches and 2400 rpm where climb rate is an "anything but sedate" 3,000 fpm.

Leveled off at 4,000 feet and run out at full power, the airspeed needle cruises past 200 and settles on an

indicated 207 mph, yielding a true of 225 or so. You almost have to look at the wings to remind yourself you're flying a biplane. Truth is, the airplane handles speed very well, and speeds in the aerobatic box are often up over 250. Even at that, the airframe is as solid and steady as ever, this as much due to the Kimballs'





Bryan Jensen (left) sits in his new office. He says *The Beast* has capabilities that will take some time to master.

WEIGHT WATCHING

Once he races through the various little aerodynamic tweaks, Kevin immediately shifts into his favorite subject, which is “performance through weight reduction.” Even though we all know that gravity is our enemy and weight is the friend of gravity, when it comes to building really light airplanes, few of us practice what we preach. “Oh, another pound here won’t even be noticed” is an often-repeated thought, and Kevin’s

mantra is, “Weight goes on by the pound but comes off by the ounce.” So, when designing the *Beast*, he was determined to make it the lightest beast he could.

“Saving weight isn’t easy, and it isn’t cheap,” Kevin says. “By the time we were finished I figure it cost about \$350 per pound saved. In this case the old saying should be ‘less is more...money.’”

It’s easy to see what he means as Kevin runs down the weight-saving features the *Beast* has versus any prior Model 12 derivative.

“Starting up front, the cowl is all carbon fiber, which saved about 12 pounds, and I managed to find two Russian-made M14P titanium exhausts, which was good for another 8 pounds. I don’t know how many they made, but these two were all I could find. The canopy frame and firewall are also titanium. However, as light as titanium is, there were some applications where it wouldn’t be the lightest way to go, and the landing gear is one of those.

masterful construction as Curtis’ sound airframe design.

Handling-wise, the *Beast* displays the classic Pitts symptoms of straightforward, put it where you want it, no surprises control and maneuverability. All forces are well balanced, and input to response ratios provides airspeed-appropriate feedback in a conventional and very Pitts-ish manner. No spades are provided or required, and their lack is at least part of the reason the roll centering is so nice. All point rolls, wherever placed, are so sharp and precise the gear does this boyoyoyoyo thing at each stop/start point. Rates in excess of 360 degrees per second are the norm, and although the airplane rolls faster to the right, the ergonomic disadvantage of pulling the stick right versus pushing left leaves one with the impression of equal rates, left and right.

Vertical performance, as you might guess, is phenomenal, generating a 3,000-foot gain from its ample 250 mph redline and allowing as many as eight vertical rolls in the process. Torque rolls seem to last forever with an inordinate amount of time spent hanging/rolling at the top and a rapidly accelerating “torque rolling” backup.

Hammerheads, when properly flown, are a sit and wait...and then wait some more, and then (if you’re me) still kick too early kind of thing. That 1,850 pounds of static thrust just doesn’t yield to gravity that readily.

But, once you get the idea of it, hammerheads pivot quickly with surprisingly little opposite aileron required to keep the wings “in plane.” The other hard part is to remember to kick right rudder. (Remember the motor?)

Generally speaking, the snap roll performance of the larger Pitts (S-2A/B/C) is, shall we say, less than spirited, at least as compared to the S-1 and the current crop of monoplanes. Happily, the *Beast* may just be the pleasant exception to that rule. Even multiple snaps break on command, stop on a dime, and accelerate more than most when “unloaded.”

Ben Morphew does a really cool triple snap on takeoff. Climbing out on what must be a 30-degree line, he hits it just as clean as you please, and whap, whap, whap around it goes with no noticeable speed bleed-off and not wavering 1 degree from the line.

I particularly love gyroscopics in the *Beast*. Predictably, that massive prop allows for all kinds of torque, P-factor, and disc effects to take place at the top of any “lump.” I think every tumble I did ended up somewhere else, doing something different. Notably, however, every one of them required proactive recovery

to keep it from doing further downhill gyrating and/or spinning. Bottom line: Hands-off isn’t going to do it.

I think the thing that impressed me most about the *Beast* was its “clawability.” Alluded to earlier, the *Beast*’s ability to blast its way out of anything, away from anything, over the top of anything, irrespective of airspeed, is probably its most impressive attribute and the one that will doubtless

be advantaged when developing new and different aerobatic maneuvers. Ben’s zero-speed loop is an example: slow to stall, pull the big lever, push the little one, and the airplane loops in not much

... the *Beast* is sure to capture everyone’s attention.

over its length. As we have said repeatedly: ridiculous!

Virtually every aspect of the *Beast*’s flying is shaped by propeller effects. From the cat shot accelerations on takeoff to the eye-popping drag rise when idling back to land, the *Beast* is sure to capture everyone’s attention.

And so it is we have this aerobatic wonder: an airplane that is, arguably, the perfect embodiment of sound, speed, smoke, and gravity-defying aerodynamics: a beast of a mount that can’t help but claw its way into the hearts and minds of even the most ardent air show aficionados.



Photos by Reggie Paulk

The ailerons have such close tolerances at full deflection (center photo above), no gap seals are required. The throttle quadrant (bottom photo) speaks to *The Beast's* personality traits.

"This is one area we really concentrated on to save weight and clean it up. Titanium would look to be a natural, but it doesn't form well, and to make titanium gear legs it would have required a straight piece on each side with lots of fittings top and bottom to fit them to the fuselage and axles. For that reason, a formed, Robbie Grove, one-piece aluminum gear was actually quite a bit lighter. Then Robbie airfoiled it and gun drilled it. Combined with Grove magnesium wheels and hollow axles, the axle-to-axle weight of the gear is 26 pounds lighter than on other Model 12s. That's a lot, especially considering that the gear is 3 inches longer, which is why the airplane sits at a 14.5-degree deck angle.

"The oil cooler for an engine this big is also large, and it's important it not only be light, but work extremely well, so we had a custom one made by Pacific Aeromotive that's aluminum and saves 3 pounds. We like the cooler so much, we've started making them available for other Model 12 builders.

"The engine is one of Monty Barrett's modified M14Ps. He's gone through the engine and done everything that he has found to work for all the years he's been building competition engines. This includes three-ring pistons that give a 7.8-to-1 compression, instead of the old 6.0-to-1. He tightened up all the clearances, polished most of the gears, and installed an Airflow Performance fuel-injection system. Besides giving better flow, this allows us to lean the engine manually, rather than the crude system the old carburetor used. He also switched the entire engine over to automotive racing wires and plugs, which besides working better and longer, are much cheaper. You can change the plugs at Pep Boys for \$28, as opposed to the hard-to-get aircraft plugs at \$950. The engine pulls 38 inches of manifold pressure versus the original 34 even though the blower ratio is still the same. Using the 102-inch MTV-9 prop with the wide blades, we measured the thrust at 1,850 pounds, which means the airplane actually has a better than one-to-one thrust to weight ratio, when loaded light."

The weight-saving program extended to the rest of the airframe, which included eliminating the wing tank, leaving a 36-gallon main and 12-gallon auxiliary that doubles as a smoke tank. He also eliminated the gorgeous adjustable pedal assembly he's known for.

"Bryan would be the guy flying the airplane most of the time, so we just set it up for him and let any other pilots make up the difference with cushions."

Other weight-oriented decisions included dropping the sheet metal from 0.032 inch to 0.025, which netted another 6.5 pounds.

"The instrument panel is another unpainted carbon-fiber unit, and although there was a lot of discussion about adding a lot of instruments, Bryan decided to equip it, as he calls it, for 'hard VFR.'"

"When it came time to finish the airplane we double covered it, meaning we have a thin layer of 1.7 ounce Stits (Poly-Fiber) laminated over the 3.4 ounce. Rib stitching is done through the 3.4-ounce material and then the entire assembly is covered with the lighter fabric, which eliminates the usual rib tapes. This makes for a really smooth, light surface to finish."



Paint is where many aircraft gain weight, and Kevin was especially aware of that, having been involved in painting hundreds of airplanes with his dad, Jim.

"First, we wanted a colorful airplane," says Kevin. "But we weren't pushing to fill the weave. In fact, one of our goals was that you easily see it and that we cover with the absolute minimum of paint. We shot black under the red, but it is lighter under the red areas, so even there we worked at keeping it light."

Regardless of how striking an airplane may be, the final impression is driven by the final paint scheme, which, in this case, is impossible to describe.

"Mirco Pecorari (www.AircraftStudioDesign.com) did the actual paint scheme design," says Bryan. "But much of our inspiration came from a Boar's Head delivery truck. Mirco is the one who said, 'This thing is a beast!' and the name stuck, so we needed something that fit the name. The Boar's Head logo got us started, along with the red and black thing, although we wound up using a Dodge Viper red."

Although there's no argument that it's a truly handsome airplane, you have to wonder if it flies as good as it looks.

One of those standing on the ramp when Bryan landed after his first flight sums it up when he says, "When he landed and we asked him how it flew, he almost couldn't talk. We had to hit him with some cold water; he was so stunned."

Bryan says, "This is simply the most fantastic airplane I've ever flown, bar none."

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Aerobatic Aircraft Partnerships

The ins and outs from those already in a partnership

Vicki Cruse

In Europe, aircraft partnerships and flying clubs are much more popular than in the United States; however, as we go through more challenging economic times, budget-conscious pilots are looking for alternatives to owning an aircraft outright. Aerobatic aircraft are probably more conducive to partnerships because they typically have a narrow geographic range and are not flown for long trips, minimizing scheduling conflicts.

For this article, three IAC members, either currently or formerly in partnerships, were interviewed based solely on their geographic area: Howard Kirker, an Advanced pilot from the West Coast; DJ Molny, an Advanced pilot from the Mountain West; and Grant Russell, a Sportsman pilot from the East Coast. It turns out each partnership is as different as the planes they fly.

TIME SHARING IN A LASER

Howard, from Northern California, owns a Laser with three other partners, all of them friends, members of the local IAC chapter, and active aerobatic competitors for several years before forming the partnership. Initially, this started with Howard sharing Darren's airplane in an informal arrangement. Flying the Laser allowed Howard to step up from Intermediate, and it helped Darren keep the Laser active and partly defray ongoing expenses.

When Darren later moved to Oregon, he approached Howard about buying his Laser. Unable to part with his Great Lakes, Howard felt both the investment and operating costs of owning two airplanes would be too much of a financial stretch. Fortunately, Howard met Dave, who was an Advanced pilot and a close friend of the Laser's original builder. Dave was also interested in acquiring the Laser, and the concept of a partnership was born. While Howard and Dave were working out the specifics, they met Mike, an accomplished Sportsman pilot who was looking for a way to "move up." Mike expressed interest in participating in the sharing arrangement. Ultimately, a four-way partnership was created that also kept Darren, the original owner, in the partnership. As it turned out, the partnership allowed Darren to keep the ownership of the Laser and simply execute an agreement with the other three to share flying time and expenses.

TRADING UP TO AN EXTRA

DJ, from Colorado, has been in two partnerships. Initially he was in a three-way partnership in a Pitts S-2B. When one partner left, the remaining two wanted an airplane with more performance, so an Extra 300L was purchased by the partnership. However, DJ recently bought out this partner, who was not flying enough to justify the costs. He is currently looking for another partner in the Extra. This situation illustrates one of the key issues to iron out *before* entering into a partnership: what happens when one partner has a change of circumstances and wants out.

TWO SMALL AIRPLANES BECOME ONE BIG ONE

Grant and two other partners, John and Dave, own a Pitts Model 12 in Connecticut. The three found each other through friends and a former employer. John and Dave were partners in a Christen Eagle, while Grant owned a Pitts S-2B. John and Dave decided to sell the Eagle and buy a Pitts Model 12. Subsequently, when Grant decided to sell his S-2B, they invited him into the partnership. John and Dave were the initial partners who purchased the Model 12 and brought in Grant when he sold the S-2B.

LEGALESE

In our first example of the Laser, the ownership of the airplane remained in one party's (Darren's) hands and an agreement was drawn up to share the use of the airplane. This is probably the simplest of arrangements and allows the partners the greatest flexibility. Any partner can terminate the agreement upon specific terms. There is a written agreement that details the responsibilities, sharing of expenses, and aircraft operations. In this arrangement Howard, Dave, and Mike are equal partners, while Darren, presently an inactive, minority partner, has the right to return to active status at any time.

In the case of DJ's Extra, an LLC was formed and the title to the airplane was transferred to the LLC. This gives each of the partners a measure of protection against liability claims should one of the other partners be liable in an accident. Each partner has an equal share in the partnership. This partnership has a very detailed, written agreement drawn up by an attorney.

For Grant's partnership in the Model 12 there is no legal entity in place, nor is there any written agreement between the partners. Although John and Dave originally purchased the Model 12, all three partners are listed on the aircraft registration. A verbal agreement exists between the partners, and they have a contingency plan should one of the partners be unable to fulfill his partnership obligations.



DJ Molny is looking for a new partner in this Extra 300L.

SHARING COSTS AND AIRCRAFT TIME

One of the most complex items is how to divide the costs of aircraft operation among the partners, who administers the paperwork, and how often money is collected. Another source of conflict can be scheduling the airplane. In each of the partnerships above, scheduling has worked out quite well. Since these aircraft are typically not used for cross-country flights, they tend to spend most of their time flying around the area where they are based, which helps prevent scheduling conflicts.

In Howard's partnership, the three active partners share the fixed costs (insurance, hangar, taxes, annual condition inspection, etc.) equally. The operating costs (maintenance, supplies such as oil, and a reserve fund for major expenses such as an engine overhaul) are based on

each partner's usage at an hourly rate. Flight time is logged and the fuel tank refilled by the pilot after each flight. Howard currently is the administrator and bills the fixed and operating costs quarterly. This partnership maintains one bank account for expenses and to accumulate reserve funds.

The scheduling of the Laser is done very informally, according to Howard. While the partners typically are in frequent contact by e-mail regarding practice plans or coordinating critique sessions, the policy is basically to use it when you want it. If Howard goes to the airport and the plane is gone, he knows in about 20 minutes it will return. The partners use e-mail to let each other know if they have a squawk, need to schedule a get-together for maintenance, or plan to take the plane away from the home base for a time, such as for a training camp. All of the partners are competition pilots, and all currently own an additional two-place airplane, which ensures that each pilot and his stuff can get to the contest—the only issue being who gets to fly the Laser to the contest.

In DJ's partnership there were three types of expenses. Fixed costs such as the hangar were simply divided by two. Operating costs such as maintenance were paid back based on an hourly fee according to each partner's flight time, just like Howard's partnership. DJ said it took a little time to get this hourly rate just right, so they were not charging too much or too little. Finally, DJ maintained an engine reserve fund based on hours flown and an additional hourly fee. DJ maintained the books for the partnership and billed out the expenses quarterly or when larger expenses, such as the annual, were encountered. There was no set amount of time for each partner; they flew as much or as little as they wanted. He said there was very little conflict, and if either partner wanted to take the plane for an extended amount of time, he just called the other to let him know. DJ said with two partners it was not very complicated.

In Grant's Model 12 partnership, all expenses are divided three ways. Each pilot pays for his own fuel, but the remaining expenses are shared. They do not maintain a fund for future expenses, and it is agreed that every-



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John Homrock and Grant Russell, and their Pitts Model 12.



one will contribute one-third of any expenses encountered. For all the expenses, everything is written in a notebook, and at the end of the month (during the flying season) or quarterly (in the slow season), someone will determine what each partner contributed and what each owes.

In this partnership, there are no specific hours allotted each month to the partners. There has never been a conflict. Grant and John fly competition, but Dave does not, so the biggest conflict to date between John and Grant is who will fly to the contest. Grant says if he flies to the contest, John rides in the front, and then they switch for the trip home. Baggage is carried by a friend with a Decathlon. Most of the flying is done locally for practice flights by all three partners, and rarely does the airplane leave its home base, with the exception of competitions. Since two of the partners are corporate pilots and one is a cargo pilot, they prefer to stay local with practice flights and have little need for cross-country flights.

PARTNERSHIP POSITIVES AND NEGATIVES

When asked what the best thing about the partnership was, all three guys said it was the camaraderie between

the partners. Howard said it was great having three cooperative people who have a history with each other. DJ, who is currently partnerless, misses the financial advantages of the partnership, and he now finds everything much more time-consuming, such as disassembling and reassembling the airplane for an annual inspection. Grant enjoys the friendships between the partners and agrees with DJ that it wasn't much fun having an airplane all to himself when he had the S-2B.

"Having the airplane is great," said Grant, "but the friendships are even better."

Each person was also asked if there were any drawbacks to the partnership. While they all said they were sure there were, they all are happy with the arrangement they have. One said that having formerly been someone who had sole ownership of an airplane and knowing every minute of every flight, sharing an airplane has some negatives such as not knowing everything about how it has been flown by a partner. One person also said that there are many great reasons to do it because it enables people to own an airplane, but it would never be quite the same as sole ownership.

SAGE ADVICE FROM THE PROFESSIONALS

The last question asked of these guys was, "What piece of advice would you give to anyone considering a partnership?" Howard said to do your best upfront to know the partners well enough to predict compatibility in the broadest sense, but specifically knowing what they want out of the partnership, how they will use the airplane, and how they will get along. He said you'll never find a perfect arrangement, but understanding the partners goes a long way to ensuring a good relationship.

DJ added to make sure that everyone has the same expectations. And Grant further expounded on Howard's thoughts, saying partnership is almost a type of marriage where you have to trust and respect your partners. He suggested spending a lot of time talking to the person or persons with whom you want to partner and finding out their philosophies on things such as ownership, maintenance, the



Dave Watson, Mike Eggen, and Howard Kirker in front of their Laser.

type of flying they like to do, and their willingness to adhere to regulations and financial issues. Grant sums it up well by saying, "Just because someone is a good friend, doesn't mean they will be a good partner."

WHERE TO GO FROM HERE

If you are interested in forming a partnership, you can see you have several options regarding the kind, the legal entity involved, and how the costs are distributed. There are a few resources readily available for more information. EAA recommends the book *Keeping the Peace in Partnerships* by Bruce Luedeman. This book includes guidance on putting together a partnership agreement, sample bylaws, and suggestions for dealing with various situations and problems that might arise in a partnership situation. You can order the book through EAA membership services by calling 800-843-3612 or 920-426-5912. The catalog number is F-38000, and the price is \$16.50 plus shipping. On a slightly related topic, EAA also has information available on starting a flying club. This is available through Joe Norris, the hombuilders' community manager, by e-mailing jnorris@eaa.org.

In addition, AOPA has a guide to partnerships called *The Pilot's Guide to Multiple Ownership: Co-ownership and Flying Clubs*. It can be found on AOPA's website (www.AOPA.org/members/files/guides/multiple). There is also a relatively new organization called the Aircraft Partnership Association (www.TheAPA.com) that tries to partner people of similar needs and location. You are not likely to find your next Pitts S-2B partner here, but there are helpful resources available.

Ask around your airport and talk to people who are already in a partnership. They can be a great source of information by sharing the basic information with you, and they do not need to fly upside down to do it. In fact, from what we have heard here, having an aerobatic airplane that is mostly based at one airport seems to be the norm, and aircraft availability issues are minor for us compared to the general aviation crowd.

Next month, Mark Mattioli will cover the legal side of partnerships, both the good and the bad, as well as possible pitfalls that can be encountered. 🛩️

Do's and Don'ts of Picking a Partner By Budd Davisson

Do

- Pick a partner based on personality, not flying skill. You can teach anyone to fly, but a jerk is always a jerk.
- Partnering on an airplane is like a marriage. Ideally, you'd be willing to have her as a houseguest for a month.
- Financial, mechanical, and aeronautical *responsibility* helps protect you and the airplane.
- Establish a proficiency standard, for example, if he doesn't fly for two months, he flies once with you.
- Have penalties spelled out for late payments, airplane damage, schedule screw-ups, etc.
- Keep a capital fund that is fed by hourly charges and/or monthly dues.
- Ask for references from the bank, friends, former partners.
- Listen to your gut. If something doesn't feel right, it generally isn't.
- If the airplane requires some skill, for example, a Pitts, require a checkout before signing a partnership agreement.
- If she can't fly the airplane, she has to agree to a sign-off from an agreed-upon instructor. Her cost.
- Have operating rules, some of which are grounds for forfeiture of partnership, including buzzing, low-level aerobatics, or willingly breaking FARs of any kind.
- Require hard crosswind experience or training, and advanced spin training.

Don't

- Pick a partner just because he applied. Better no partner than the wrong partner.
- Partner with someone who brags about exploits, wonderful skills and daring. She'll get you in trouble.
- Take him at face value: look up his certificate on the Internet to make sure he is who and what he says he is.
- Partner until checking with your insurance company. Some pilots will require dual instruction to qualify.
- Think a partner will automatically solve your ownership problems. Go into it prepared to iron out problems.
- Have a partnership agreement with no clear-cut "I want the hell out of this" clause.

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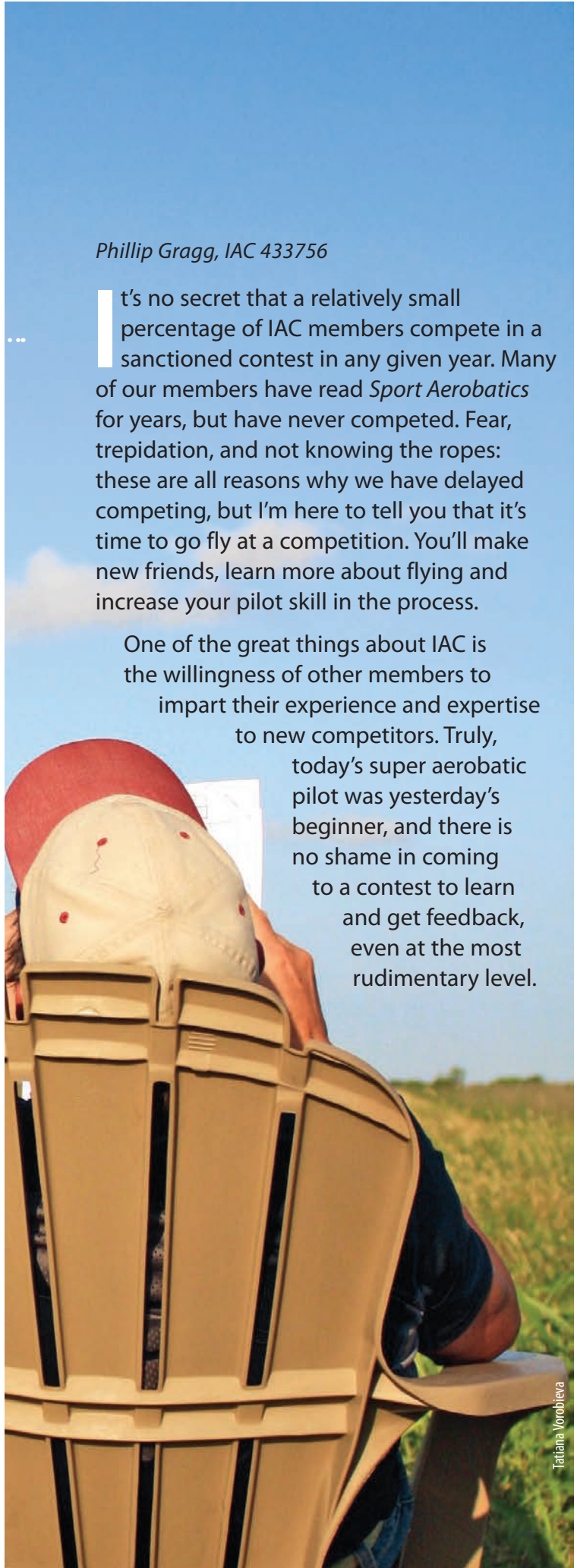
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IAC
INTERNATIONAL AEROBATIC CLUB

It's Time for your First Contest!

Or, how I learned to stop worrying and love Primary





Phillip Gragg, IAC 433756

It's no secret that a relatively small percentage of IAC members compete in a sanctioned contest in any given year. Many of our members have read *Sport Aerobatics* for years, but have never competed. Fear, trepidation, and not knowing the ropes: these are all reasons why we have delayed competing, but I'm here to tell you that it's time to go fly at a competition. You'll make new friends, learn more about flying and increase your pilot skill in the process.

One of the great things about IAC is the willingness of other members to impart their experience and expertise to new competitors. Truly, today's super aerobatic pilot was yesterday's beginner, and there is no shame in coming to a contest to learn and get feedback, even at the most rudimentary level.

Primary? That's not even a category!

While it's true many competitors start at the Sportsman level, Primary has some distinct advantages. Most people are bound to feel some trepidation about their first contest. There is a lot of activity at a contest, and the rules about "outs" and "interruptions" can be confusing. Just physically orienting one's self to the box properly can be a bit of a challenge for a newcomer. The first time competitor should not worry about these things: just show up and fly and you are bound to learn a lot.

A good first contest would be something like Chapter 72's Chuck Alley Cajun Aerobatic Contest. Held every year in late April or early May, it is a relaxed and friendly atmosphere. In addition to the great Cajun food, each competitor takes part in the judging line duties of other categories, which is a wonderful educational benefit. In 2008 there were three first time competitors in Primary, all flying Super Decathlons, and this year continued that trend. In both cases, the first place finisher ended up with not one, but three trophies: grassroots (highest scoring 180hp or less), highest scoring first-time competitor and 1st place Primary. How's that for motivation?

There are huge benefits beyond trophies, however, and safety and education are more prominent hallmarks of the Cajun Contest than all out competition. In the early stages of competition, a healthier approach would be to proceed as though you are competing against yourself. One pilot may have ten hours of aerobatics and another may have fifty. In this regard, results should probably come with a big asterisk. Success over a period of years and through the categories is a game of long duration and continuous improvement. No one expects a first time competitor to light the world on fire.

Last year in April I was contemplating making the Cajun Contest my first official IAC sanctioned event. Although I had about twenty hours in a Pitts over a period of six years, I had just a few hours in the Decathlon, and living 250 miles away from the Decathlon and flying only once a month, I was conflicted about how to proceed. I was not comfortable enough to fly Sportsman, but I felt like Primary was somehow beneath me—as if it was the scarlet letter of aerobatics. In my mind I was thinking, "Someday I'll be at a competition or performing at an air show and someone will say, 'Wow, he's great!' This comment will quickly be followed by, 'Yeah, but did you know he started in *Primary*?' While in the throes of contemplating this potential malignancy, I received some sound and straightforward advice from two-time National Aerobatic Champion Debby Rihn-Harvey.

"A first contest is a first contest," she said. "Just get it over with."

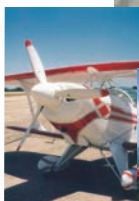
She was right; I was building this up to be too much. For me, my first contest was about just that—getting my foot in the door and going from aerobatic aspirant to competition aerobatic pilot. It was time to make the transition, and I have no regrets about how and when I did it.

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Primary is not so basic.

The 2009 Known sequences are a great complement to one another, and the Primary sequence is no exception. In order, this year's Primary category consists of a 45 degree line, a one-turn spin, a 1/2-Cuban, a loop, a competition turn and a full slow roll. Would you be surprised to learn that these figures are figures 1, 4, 7, 8, 10 and 6, respectively, of the 2009 Sportsman sequence? If you are not ready for Sportsman just yet, or have concerns about your first contest, Primary will prepare you for 6 out of the 10 figures in Sportsman!

This year's Primary category Cajun Contest competitors came from

different areas of aviation to participate in their first contest. Jim Gross, an airplane pilot and CFI in helicopters, is involved in air medical operations. Although Jim is new to aerobatics, he is interested in purchasing a Pitts and working his way up the categories. He flew with safety pilot, IAC Chapter 72 member and contest host, Scott Schumacher.

"I had a great time, and learned a lot," he said. "I may have learned more working with the judges than anywhere else. It was a great learning experience."

Jim also noted that preparing for the contest gave his aerobatic training purpose.



Photos by Tatiana Vorobieva



CLOCKWISE, UPPER LEFT: The author checks out the competition. Bill Phillips and his Extra 200 fly over the moon. The Judging Line (L to R): David Tracy, Bill Phillips, Patrick Clark, Wallace Knight, Jim Gross, Dan Clark & Bobby Phillips.

advice for first timers:

- Try to find a mentor, but **remember** the pilots in the higher categories need to have time to focus on their own flying too.
- **Talk** to other "competitors." These people may be your competition, but they will be your friends, mentors and trainers too. One day you may well mentor the newcomer.
- Show up and be ready to **help**. Helping is a great way to absorb the rules of the game and the principles of judging.
- Be prepared to **listen** and share. There are a lot of great pilots at contests. Even pilots with limited aerobatic experience may be seasoned in a different area of private, commercial or military aviation.
- Get out there and **do it!** You've read about it, now it's time to experience it.

Wallace Knight is a private pilot and holds a repairman certificate for his Pitts S-1C. When he was unable to finish some repairs on his S-1C in time for the contest, he opted to fly Primary with fellow IAC Chapter 27 (Tennessee) member Jeff Reed as safety pilot.

"I had pretty much forgotten about going and then Jeff invited me along in the back seat of the Decathlon," said Knight, "so I jumped at the chance! I decided to fly in the Primary since I was flying a new (rental Decathlon) plane to me. I had flown this airplane 2 years before but only enough to get my tailwheel endorsement. And I had not flown any aerobatics at all in several months. Plus, with Jeff in the back as safety pilot, I felt like I could at least get through it."

Most unusual this year was Matthew Liprie, a 17 year old student pilot who was only weeks away from his private pilot check ride at the time of the contest. He also flew with Scott Schumacher as safety pilot. Matthew was an enthusiastic competitor and was very excited to fly in his first contest.

"It was great," Matt said. "I'm looking forward to more contests and getting to meet more people. I really enjoyed hanging around like-minded pilots."

Each competitor flew three times, which meant three chances to confront butterflies, three chances to enter and perform in the box and three chances to prepare and execute a competition flight. The IAC now has three new competition pilots to add to its ranks.

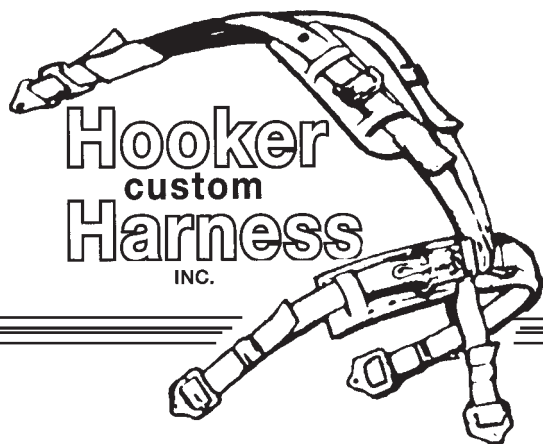


This year's Cajun Contest was a full category contest, with competitors in all 5 categories flying. Special thanks to Registrar Stephanie Vidrine, host Scott Schumacher, Contest Directors Bobby Phillips & David Tracy and everyone else at IAC Chapter 72.

Where do we go from here?

Onward and upward, of course. At last year's Cajun Contest, I flew Primary in a Super Decathlon. This year, I brought my newly acquired Aerotek Pitts S-1S (that's a different story), and flew Sportsman, missing first place by 8 points or .20 percent (*Ouch!*) Working on the judging line this year taught me even more than last, and the game of aerobatics is making more and more sense. Even if you are not competition minded, contests are a great way to get a quality critique of your aerobatic abilities. If you view competition as a learning experience, then you are sure to be satisfied with the results.

Completing your first contest will lower the threshold for participation in future events, and will put you on the long road to continuous improvement. 🚀



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Wednesday July 29

10:00-11:15am

Presenter: Vern Rodgers

Topic: Parker/Cleveland
Wheels & Brakes
Maintenance

1:00-2:15pm

Presenter:
B&C Specialty
Products

Topic: Aerobatic
Electrical Systems /
Inverted Oil Pickup and
Oil Filters

Thursday July 30

10:00-11:15am

Presenter: Kevin Kimball

Topic: Pitts Model 12
by Jim Kimball Enterprises

11:30a-12:45pm

Presenter: Bill Finagin

Topic: Aerobatics -
how to get started.

1:00-2:15pm

Presenter: Giles Henderson

Topic: US Aerobatics,
the past 60 years

Friday July 31

8:30-9:45am

Presenter: Budd Davisson

Topic: "So you want to
buy an aerobatic airplane?"

10:00-11:15am

Presenter: Allen Silver

Topic: Emergency Bailouts
and Survival Equipment

11:30a-12:45pm

Presenters: Gerd Muehl-
bauer, and Martin Albrecht
MT Propeller

Topic: Propellers for
Aerobatic Aircraft

1:00-2:15pm

Presenter: Bill Waterman,
Pres. Aloft Technologies

Topic: 'In-the ear' headsets
in aerobatic aircraft

Saturday August 1

10:00-11:15am

Presenter:
Allen Silver

Topic: Emergency
Bailouts and
Survival Equipment

11:30a-12:45pm

Presenter:
Elgin Wells

Topic: Aerobatics
for Fun,
Competition,
and Air Show Flying

1:00-2:15pm

Presenter:
Greg Koontz

Topic: Teaching the
basic aerobatic
Course - A primer for
instructors and
students.

Annual IAC Meeting & Member Reception

Friday, July 31st, 6pm at the Nature Center, Tent No. 1

OTHER FORUMS of INTEREST

Monday July 27

11:30am-12:45pm • Choose an Aerobatic Plane • **Budd Davisson** • Forums Pavilion

Wednesday July 29

4:00-5:00pm • Devil with the Red Dress • **Corky Fornof** • REMOS Aircraft Pavilion

Thursday July 30

11:30am-12:45pm • Stearmans • **Terry Ladage** • GAMA Pavilion

Thursday July 30

1:00-2:15pm • Aerobatics for GA pilots • **Vicki Cruse** • REMOS Aircraft Pavilion

Friday July 31

1:00-2:15pm • Visit with Bob Hoover • **Bob Hoover** • Eagle Hangar Mainstage

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Liability Coverage... The Wild Card

Ryan Birr, President, Northwest Insurance Group

Last month I talked about the general process of adjusting aircraft physical damage claims. Part two this month is a discussion about the liability coverage in your aircraft insurance policy. In the case of a severe crash, adjusting the loss of the aircraft is relatively homogenous; the aircraft is a total loss, coverage is determined to be valid, and the company subsequently cuts a check naming all the interested parties on it. But the liability component of the crash lies in wait now, ready to rear its ugly head sometime in the future (which may be years in the making), which is a real fear that most aircraft owners share and hope they don't have to experience.

I hated getting that call a couple weeks ago, on a Saturday morning at 11:00. That call where an aircraft that I had provided insurance for crashed somewhere in the desert, and the pilot and passenger are now deceased. Sometimes I get the call first; sometimes the National Transportation Safety Board (NTSB) calls me; sometimes I see it on the news. Whenever there is substantial bodily injury or property damage, I can usually assume there will be liability consequences for many of the involved parties. Who is responsible for the crash? Was it the pilot? Was it the manufacturer of the aircraft? Did the mechanic fail in his duties to properly maintain the aircraft? Those primarily interested in knowing the answers include the NTSB, the FAA, the insurance carrier, and, of course, the families of the occupants. As an aircraft owner, you may end up being responsible for some of the liability to injured or deceased people and/or property damage that your aircraft caused (even if you were not on board the aircraft at the time of the loss). This is where your liability insurance steps in—to provide a defense and pay on your behalf.

Every liability claim is absolutely unique; the pilot, the aircraft, the circumstances, the list of insureds on the policy, and the list of claimants are all included in the aggregate summary of the loss. Once liability coverage is triggered, it's up to your insurance company to defend you and the other insureds listed in your policy. This is an extremely important point. The insurance company is going to provide you a defense, and you must not do anything that might jeopardize its ability to do so. The cost of all defenses is in addition to any liability limits you have purchased, so don't worry about this expense eroding your liability limit. But there are many conditions that you must adhere to for the policy to work for you, so make sure you read your contract in its entirety.

The multitudes of liability coverages that are available in your aircraft policy are beyond the scope of this article. Primarily, your liability coverage protects you in the case of losses that occur outside your aircraft, such as property damage and bodily injury; that is, crashing into a house or another aircraft. Most policies also extend that coverage to include passengers inside your aircraft (unless they are employees) and likely at some reduced amount from your primary aircraft liability limit. But in any case, whatever limit you purchased, the limit encompasses the total of all third parties and passengers, and it won't pay more for those than what you have purchased.

You do not have any liability expense unless you get sued for such. Once you (or your estate) have been notified that you are party to a lawsuit, the insurance company is obligated to provide you a full legal defense. It will hire and pay for legal counsel to move you through the process and to court, if necessary. It is in its best interest to settle the claim within policy limits, and it will try to do so and obtain a release of any further liability for you. Unfortunately, you may end up with a financial obligation in excess of your policy liability limits; the insurance contract only provides financial assistance up to your purchased limits, and any amounts resulting therefrom declaring that you owe over that limit...are your own personal financial obligation.

I am often asked, "What limit of liability should I purchase," but I can't answer that question; we don't get a full picture of your financial position, a list of your assets, or copies of all your other insurance policies. We are not equipped to help you through this process. Often, by default, the limit of liability that you end up purchasing is a function of what the market will allow you to purchase. Since the aviation insurance market is small, and the availability of liability limits is restricted, the amount you may purchase becomes market-driven. Your risk-management decisions then center on the type of aircraft you will fly, where you will fly, and who may be a passenger on board your aircraft. These considerations will dictate the magnitude of the liability you will have to other people after an aircraft crash. If you have something to lose, then choose your aircraft, your operations, and your passengers wisely. 🛩️





IAC Safety

By Stan Burks, IAC 431160

Editor's Note: After a long hiatus, we've found someone to fill the shoes of Bruce Johnson and his Mishaps Data column. I'd like to introduce you to Stan Burks. Stan is the Safety Committee chairman and chief pilot for the Mississippi Forestry Commission. He has 25 years of experience as a certificated flight instructor and patrol pilot. He also holds an airline transport pilot certificate and flies his Pitts S-1C for fun. Welcome aboard, Stan!

	2006	2007	2008	2009
JANUARY	0	0	0	1
Mishaps	0	0	0	1
Fatalities				
FEBRUARY	1	0	0	0
Mishaps	2	0	0	0
Fatalities				
MARCH	1	1	0	1
Mishaps	1	1	0	2
Fatalities				
APRIL	1	0	1	4
Mishaps	0	0	1	3
Fatalities				
MAY	1	0	3	
Mishaps	1	0	4	
Fatalities				
JUNE	1	1	2	
Mishaps	0	2	2	
Fatalities				
JULY	0	1	3	
Mishaps	0	1	2	
Fatalities				
AUGUST	1	1	0	
Mishaps	0	0	0	
Fatalities				
SEPTEMBER	0	1	0	
Mishaps	0	1	0	
Fatalities				
OCTOBER	1	0	1	
Mishaps	1	0	2	
Fatalities				
NOVEMBER	1	2	0	
Mishaps	1	1	0	
Fatalities				
DECEMBER	1	0	0	
Mishaps	2	0	0	
Fatalities				
TOTAL Mishaps	9	7	10	
TOTAL Fatalities	8	6	11	

I have completed the statistical review of 2008 that shows an increase in both the number of accidents and fatalities when compared with 2007. In addition, the first quarter statistics for 2009, show there have already been six accidents with six fatalities. This represents more than half of both the accidents and fatalities of 2008. The accidents from the first quarter of 2009 include both seasoned aerobatic performers and less experienced pilots. I urge each of you to obtain the proper training from a qualified instructor and diligently practice at the appropriate altitude. I think it is best to plan your flights before you are in the aircraft and stick to your plan while in the cockpit. Our favorite activity is no place for spontaneity.

Over the past several years, the International Aerobatic Club (IAC) Safety Committee has kept records of only the accidents that occurred while in maneuvering flight. After reading several years of accident reports, I feel we need to broaden our scope of recording accidents to include *all* accidents in aerobatic aircraft. I believe by recording all accidents we will have a truer picture of aerobatic safety statistics. To illustrate my point, there were three accidents last year where aerobatic aircraft struck obstacles while landing. In addition, there were two accidents that occurred while scud running, and one accident that occurred while the pilot was under the influence of drugs. It is my opinion that we should record and report incidents such as these to broaden the awareness of the consequences of these types of operations for our IAC members.

Even though I have taken the opportunity to update the reporting of aerobatic accidents, I thank my predecessors for initiating this program and moving it in the right direction. I would also thank Vicki Cruse for helping me with the updates and getting the program headed to the next level. As always, get the proper training, plan your flights, and practice, practice, practice. 🇺🇸

Calendar of Events

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

Green Mountain Aerobatic Contest (Northeast)

Friday, July 10 - Sunday, July 12, 2009

Practice/Registration: Thursday, July 9 - Friday, July 10

Power: Primary through Unlimited

Location: Hartness State Airport (KVSF):

North Springfield, VT

Contest Director: Weston Liu

Tel.: 603.673.6538 • **E-Mail:** weston.liu@charter.net

Website: www.iac35@aerobaticsweb.org

11th Annual Okie Dust Devil (South Central)

Friday, July 10 - Saturday, July 11, 2009

Practice/Registration: Thursday, July 9 - Friday, July 10

Rain/Weather: Sunday, July 12

Power: Primary through Unlimited

Location: Weatherford-Stafford Airpoprt (KOJA):

Weatherford, OK

Contest Director: John Creswell

Tel.: 580-774-9176 **E-Mail:** creswell@classicnet.net

Michigan Aerobatic Challenge (Mid-America)

Saturday, July 11 - Sunday, July 12, 2009

Practice/Registration: Thursday, July 9 - Friday, July 10

Power: Primary through Unlimited

Location: Reynolds Field (KJXN): Jackson, MI

Contest Director: Robb Butts

Tel.: 734.255.2263 • **E-Mail:** rtbutts@iac88.org

Website: <http://www.iac88.org>

Salem Regional Aerobatic Contest (Mid-America)

Saturday, July 18 - Sunday, July 19, 2009

Practice/Registration: Friday, July 17

Power: Primary through Unlimited

Location: Salem/Leckrone Airport (KSLO): Salem, IL

Contest Director: Bruce Ballew

Tel.: 314.369.3723 • **E-Mail:** bruceballew@earthlink.net

Hill Country Hammerfest (South Central)

Friday, August 7 - Saturday, August 8, 2009

Practice/Registration: Thurs., August 6 - Friday, August 7

Power: Primary through Unlimited

Location: Llano Municipal (KAQO): Llano, TX

Contest Director: Andrew Wright

Tel.: 512.394.4396

E-Mail: akwright@acm.org

Beaver State Regional (Northwest)

Friday, August 7 - Saturday, August 8, 2009

Practice/Registration: Thursday, August 6

Rain/Weather: Sunday, August 9

Power: Primary through Unlimited

Location: Eastern Oregon Regional Airport (KPDT):

Pendleton, OR

Contest Director: Robert Harris and Robert Toppel

Tel.: 503.757.1247

E-Mail: rboydt@comcast.net

Website: www.iac77.org

Kathy Jaffe Challenge (Northeast)

Friday, August 14 - Sunday, August 16, 2009

Practice/Registration: Thurs., August 13 - Fri., August 14

Power: Primary through Unlimited

Location: Flying W (N14): Lumberton, NJ

Contest Director: Ron Chadwick

Tel.: 732.865.1610

E-Mail: bubbaron@comcast.net

Website: www.iac52.org

Aspen Leaf Acro Challenge (South Central)

Saturday, August 15 - Sunday, August 16, 2009

Practice/Registration: Friday, Aug. 14 - Saturday, Aug. 15

Gliders Categories: Sportsman Intermediate

Power: Primary through Unlimited

Location: Sterling (KSTK): Sterling, CO

Region: South Central

Contest Director: Bob Freeman

Tel. 303 709 6465 • **E-Mail:** bfree.man@comcast.net

Website: www.iac12.org

Doug Yost Challenge (Mid-America)

Saturday, August 15 - Sunday, August 16, 2009

Practice/Registration: Friday, August 14

Power: Primary through Unlimited

Site: Spencer Municipal Airport (KSPW):

Spencer, IA

Contest Director: Mike Niccum

Tel.: 952.239.7114

E-Mail: pgnic@aol.com

Website: www.iac78.org

Harold Neumann Barnstormer (South Central)

Saturday, Sept. 5 - Sunday, Sept. 6, 2009

Practice/Registration: Friday, September 4

Power: Primary through Unlimited

Location: New Century AirCenter (IXD): Olathe, KS

Contest Director: Brenda Lea

Tel.: 913-908-3362 • **E-Mail:** info@iac15.org

Website: www.iac15.org

Illinois State Aerobatic Open (Mid-America)

Saturday, Sept. 5 - Sunday, Sept. 6, 2009

Practice/Registration: Friday, September 4

Rain/Weather: Sunday, September 6

Power: Primary through Unlimited

Location: * (*): Airport Location to be determined, Illinois

Contest Director: Jim Klick

Tel.: 8156097165 • **E-Mail:** jimklick@sbcglobal.net

Website: www.iacchapter1.com

Rebel Regional Aerobatic Contest (Southeast)

Friday, Sept. 11 - Saturday, Sept. 12, 2009

Practice/Registration: Thursday, September 10

Power: Primary through Unlimited

Location: Everett-Stewart Regional Airport (UCY):

Union City, TN

Contest Director: Mike Rinker

Tel.: 731-796-0849 • **E-Mail:** mdr@vaughnelectric.com

East Coast Aerobatic Contest (Northeast)

Saturday, Sept. 19 - Sunday, Sept. 20, 2009

Practice/Registration: Friday, September 18

Power: Primary through Unlimited

Location: Warrenton-Fauquier (KHWH): Midland, VA

Contest Director: Scott Francis

Tel.: 703-618-4132 • **E-Mail:** s.franis@ieee.org

Website: www.iac11.org



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Just for Starters

Greg Koontz

The International Aerobatic Club (IAC) is a club for the sport of aerobatic flying. Just look at what it named its magazine—*Sport Aerobatics*. The title itself is a beacon to anyone interested in giving this a try. And how many pilots have picked up a copy of this very magazine out of curiosity about the sport?

The IAC is deeply involved in competition aerobatics. Once you learn to flip-flop all over the sky, there soon becomes a need to do something with those exciting new skills. They give you a goal, and goals give you motivation. What better way to expand aerobatic skills than testing your mettle in a contest? For a lot of pilots, it is the eventual direction for their aerobatic ambitions. Whatever your level of participation, any involvement in aerobatic competition is an asset to your flying skills.

Somebody has to look over this complex arena of our sport, so the IAC has been entrusted with the task. Many of those who climbed their way from Primary to Unlimited competition have made their mark in aerobatics elsewhere. Many of those famed air show headliners we love to watch, honed their skills in competition aerobatics. Patty Wagstaff, Mike Goulian, and Sean Tucker all were competition champions long before they took their skills to an air show. And if you like watching those Red Bull races, you can rest assured that pilots like Kirby Chambliss cut their teeth in the competition arena.

Sport Aerobatics magazine, therefore, puts focuses on the competition world. You can look to the magazine for articles on how to fly the maneuvers, what the judges are looking for, and how to stay safe. Even if you don't compete, these articles are valuable learning tools.

I have always felt there was room in *Sport Aerobatics* for more information for the beginners. Years ago, I pursued a love for whitewater paddling. All the magazines for the sport reported on the contest, the wild first descents down complex rivers, and the latest high-tech equipment. I loved to read them, but what I really needed was some help on where to train and how to do basic techniques.

Those articles were few and far between. It was this concern that brought the editor to ask me to contribute some articles a couple of years ago. It was my first opportunity to share my thoughts in such a mainstream publication, and I have got to tell you, it felt like flying for the judges that first time!

I'm not the "old pro from Kokomo" here to tell you how to grab a few more points at your next contest. What I really do is teach. I have enjoyed aerobatic training since 1974. I originally taught for Aero Sport in St. Augustine, Florida, while working for Col. Moser's Flying Circus. Later I ran an aerobatic school out of a private hangar, while pursuing a corporate pilot career for 20 years. But, in 2003, I raised my aerobatic school to the next level. Ever since, it's been full-time aerobatics for me.

I have always specialized in the basics. I prefer working with the starters in this great sport. Each season I mentor a few pilots through their first Primary or Sportsman contest. It is from years of being involved in basic aerobatics that I want to use the space on these pages to address the issues of getting started: learning it, teaching it, and practicing it.

So let's talk. My wife assures me that I'm never short of something to say about aerobatics. She hears this stuff over the dinner table here at Sky Country Lodge almost every night. But what I really want is your side of the story. If you're learning it or teaching it, you have stories and ideas. We're launching a series of articles just for those of us involved in getting started. I want to hear from you. 🇺🇸

Greg Koontz has been involved in sport aerobatics since 1971. Greg flies air shows sponsored by American Champion Aircraft, is an aerobatic competency evaluator for the International Council of Air Shows, operates Sky Country Lodge aerobatic school, and is a Master Instructor-Aerobatics. Visit www.GKAirShows.com. Please send your stories and ideas to Greg@GKAirshows.com.

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