

SPORT **Aerobatics**

SEPTEMBER 2010

OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB



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SPORT Aerobatics CONTENTS

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"Drawing on the experience of landing a Pitts S-1 with a broken tail post in a crosswind was valuable."

Rick Volker

FEATURES

6 From Competition
to Warbirds
Rick Volker

14 40 Years of IAC History,
Part III
Mike Heuer

22 Portugal's First
Aerobatics School
Greg Koontz

COLUMNS

03 / President's Page
Doug Bartlett

32 / Insurance
Ryan Birr

DEPARTMENTS

02 / Letter from the Editor

04 / Newsbriefs

05 / Non-Flying Awards

26 / Yellow Pages

30 / Contest Calendar



THE COVER

Rick Volker in a
Spitfire Mk. IX.
Photos courtesy
Rick Volker.



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REGGIE PAULK
COMMENTARY / EDITOR'S LOG

Nationals, Here we Come!

WELL, IT'S BEEN ANOTHER month, and AirVenture has come and gone. It's hard to believe how quickly Nationals is approaching. Where did the summer go? Why does it seem that the most pleasant weather is also the hardest to come by?

Oshkosh was colloquially referred to as "Sploshkosh" because of all the rain that fell in the days before and during the event. For those lucky enough to enjoy a bit of the conditioned air inside the offices of the IAC building, the humidity outdoors made it feel as if you'd melt. The October issue will feature more of AirVenture, but suffice it to say, it was full of good cheer and a lot of fun for those who attended. I

always enjoy getting reacquainted with those who I now consider to be my friends. Here's to you, Larry!

This month, we feature a piece by Rick Volker comparing and contrasting World War II fighters with today's modern aerobatic airplanes. I hope you enjoy reading it as much as I did. My grandpa flew Spitfires in the early stages of World War II, so I'm a little envious of the airplanes Mr. Volker gets to fly on a regular basis.

IAC historian Mike Heuer continues his series on the history of the IAC. As member number four, he has a unique perspective of the early days that effectively showcases the efforts that went into the formation, growth, and continued success of this unique aviation club. It's amazing to see the photos and names of those involved in the early days. Some

of today's most recognized individuals had their humble beginning when they became members of the IAC.

One of the main reasons I attend AirVenture is to gather stories and photos for upcoming issues of the magazine. One thing a lot of people were surprised to hear is that I am not constantly

inundated with stories or story ideas from people. It is more like a consistent trickle. The IAC doesn't pay for stories as a policy, so we're not as attractive as larger publications. That doesn't mean you can't get your start here! If you have stories or ideas you'd like to float my way, please feel free to do so. I try to respond quickly, but if I don't get back to you, please nudge me again. I always enjoy hearing from our members, so feel free to send a shout—even if you have a rant! **IAC**

Some of today's
most recognized
individuals had their
humble beginning
when they became
members of the IAC



DOUG BARTLETT
COMMENTARY / PRESIDENT'S PAGE

Don't Scare the New Member Away

DO YOU REMEMBER YOUR first aerobatic ride? Most likely when you got out of the cockpit from that ride you were hooked for life and the experience was a positive one. But that is not how it is for all first-timers. Recently I had an opportunity to talk with an individual who had a bad first experience with aerobatics and has no desire to try it again. What went wrong and what can we do as aerobatic pilots to ensure a positive experience?

Few people ever get an opportunity to go for an aerobatic ride, and most of them get only one chance. The goal of the aerobatic ride should be to give the individual one of the most positive experiences of his or her life and leave that person wanting more. It should not be to demonstrate the outside edges of the aircraft's flight envelope or the full range of the pilot's skills. Many factors contribute to a successful aerobatic ride. The steps I take are broken down into three parts: preflight discussions, the aerobatic experience, and the post-flight debrief.

The preflight discussions are important. Do not rush into the flight. Understanding the expectations and concerns (fears) of passengers is the key factor to a positive experience. It is also important to explain that they are in control of their experience. Yes, you are the pilot-in-command, but they should have control of what is done and when the ride ends. Controlling anxiety is the key, and effort should be taken to remove as much of it as possible prior to and during the flight. Take a few minutes to learn about your passengers and why they have an interest in aerobatics. Explain your aerobatic background, experience, and why you are capable of demonstrating aerobatics to

them in a safe manner. Talk about your airplane and leave passengers with a good feeling about the aircraft that will take them on this adventure. Prepare a flight card with them and draw the maneuvers you are going to fly. Explain each maneuver, starting with simple rolls, then move on to loops, half-Cubans, and hammerheads. Stay away from yawing maneuvers such as spins and snaps, as these lead to rapid motion sickness. If you suggest a maneuver and you see fear in a passenger's eyes, take it off the list.

An important point is to have a plan on the ground of how you will judge passengers' level of fun. My passengers fly in the front tandem seat of the Sukhoi Su-29. I

tell them to give me a "thumbs-up" each time the wings come to straight and level if they want to continue and a "fist" if they want to stop. I explain to them the importance of giving a "fist" when they first start to feel bad and not waiting until it is too late. Now is the best time to get pictures. Bring a camera for your guests in case they forgot.

During the flight, follow your agreed upon flight plan and do not surprise the passenger. Let the person fly the plane if he or she wants to, but do not force it. As an example I say, "Let's roll right. Follow

with me on the stick. Nose up 30 degrees, stick to the right, now center it with wings level. Show me a 'thumbs-up.' Great! Now it is your turn if you would like to try." I continue this same way through the flight. Do not forget to laugh, clap, and congratulate the passenger for doing what few have ever done. Make it fun.

As you progress through your plan, carefully watch the hand signal you are given. Voice communications seldom tell you as much as hand signals will. At first you will get a sharp "thumbs-up," then with time it will start to be a little less enthusiastic or the passenger may even begin to forget to give you the signal. When this happens it is time to get the wings level and land. It is always best to land a little too early than a little too late. If the passenger always gives a brisk signal, press on. If you get to the end of the card and all is well, put together a few figures you have already flown in a simple sequence.

Once on the ground, let the passenger sit in the cockpit for a bit and enjoy the experience. Review what was flown, take more pictures, and give the passenger the flight card so he or she can do a "show and tell" with friends. Ask if your passenger enjoyed the flight and listen for opportunities on how to make your rides more enjoyable for others. Always remember, the objective is to give the passenger a wonderful introduction to the art of aerobatic flight and not to see what he or she had for breakfast. Be a professional, not a show-off, and always remember altitude is your friend. **IAC**

The goal of the aerobatic ride should be to give the individual one of the most positive experiences of his or her life.

EAA President's Award



DOUG BARTLETT WAS A gymnast in high school and at the U.S. Naval Academy. In 2002, after retiring as a captain in the Marine Corps, he earned his instrument rating and started flying aerobatics—what he describes as “gymnastics for old people.” Three years later, he was the Intermediate National Aerobatic Champion. He now competes in the Unlimited class.

EAA President Tom Poberezny said, “As president of the International Aerobatic Club, Doug increased the focus on the aerobatic community. He has pursued opportunities to expand membership through outreach toward those with a passion and interest in aerobatic flying.”

He has spanned the world of aviation, from sky diving to flying hang gliders to competing in the Edge 540. He also flies a Lancair Super ES built from a kit he donated to Mundelein High School in Mundelein, Illinois.

IAC President's Award

DURING THE IAC MEMBER banquet on Friday, July 30, IAC President Doug Bartlett presented Mike Heuer with the IAC President's Award in recognition for his outstanding continuous service to the International Aerobatic Club over its 40-year history. Heuer, who holds IAC #4, is also the IAC's historian.



2010 IAC Election Results

CERTIFICATE AND REPORT OF inspectors of the election

I, Ann Salcedo, as election official, do hereby certify that I have received and counted the votes of members cast by ballot for the election of officers/directors to the International Aerobatic Club board and report that the following persons received the number of votes set opposite their respective names:

Total Ballots Counted: 816

Invalid Ballots: 5

OFFICER ELECTION RESULTS – YEAR 2010

IAC President Election Results Year 2010

1. Doug Bartlett Total Votes: 770

IAC Secretary Election Results Year 2010

1. Ellyn Robinson Total Votes: 742

DIRECTOR ELECTION RESULTS – YEAR 2010

Name	Total Votes	Result
1. Wayne Roberts	313	NOT elected
2. Chris Rudd	280	NOT elected
3. Robert Harris	210	NOT elected
4. Melissa Pemberton	335	NOT elected
5. Debby Rihn-Harvey	673	ELECTED
6. Robert Armstrong	469	ELECTED
7. Bob Freeman	424	ELECTED
8. Randy Reinhardt	388	ELECTED

IAC NON-FLYING AWARDS

BY ALLYSON PARKER-LAUCK, IAC 15590



Each year, the membership of the IAC nominates outstanding volunteers to be recognized for their contribution to the sport of aerobatics. The award winners are selected by a secret ballot of the IAC board of directors. The winners of each of the IAC's Non-Flying Awards were announced at the IAC's annual meeting in Oshkosh. The awards will be presented to the recipients at the awards banquet at the U.S. Nationals.

The Frank Price Cup

The Frank Price Cup was created to recognize outstanding individuals in aerobatics and in honor of aerobatic pioneer Frank Price, the first American to compete in the World Aerobatic Championships. The purpose of the award is to recognize the person who has contributed the most to the sport of aerobatics in the previous year. This year's winner of the Frank Price Cup is **Norm DeWitt**. Norm volunteers for the IAC and EAA as an IAC director and as an EAA director and leads Unlimited Aerobatics USA, the fundraising and management foundation for the U.S. Aerobatic Team. Here in the United States you'll never find Norm far from the judging line or from mentoring a new aerobatic pilot at a regional or national contest. But Norm's contributions to the IAC don't end in the United States. Norm received international acclaim for his outstanding leadership at the 2009 World Aerobatic Championships in Silverstone, England, during the most difficult of circumstances when our organization lost our president, Vicki Cruse. Barry Tempest of the United Kingdom said this of Norm's leadership, "His whole style and personality must have been sorely tried when Vicki died so tragically. He undoubtedly was a rock that the team hung on to at a time of grieving yet also the need to continue with the contest. To say the very least this person should receive an IAC award at the highest level possible." The IAC agrees and congratulates Norm for receiving the Frank Price Cup, the IAC's highest achievement.

The Kathy Jaffe Award

This award was donated in the memory of Kathleen Jaffe. Her spirit and enthusiasm for aerobatics and the aerobatic community were truly remarkable. The purpose of the award is to recognize an outstanding volunteer during the previous year. General guidelines are that this person is one who consistently, unselfishly, and eagerly accepts more responsibilities than he or she can handle, meets these responsibilities with tireless effort, efficiency, and a smile, and places the needs of others above his or her own, making the sport of aerobatics more enjoyable for everyone. After reading these guidelines, if you don't immediately think of **Ann Salcedo**, you've obviously never met her! Go to any aerobatic contest where Ann is volunteering and you'll see she's the first to arrive, the last to leave, and always has a beaming smile on her face. Ann truly exemplifies the spirit of IAC volunteerism, and the IAC is proud to once again present the Kathy Jaffe Award to Ann.

The Harold E. Neumann Award

A number of IAC members collaborated in conceiving the idea for presenting a trophy to the outstanding chief judge each year. The family of Harold E. Neumann provided the permanent trophy in 1998 to recognize the outstanding chief judge and to honor the name of Harold E. Neumann, Collier Aviation Trophy recipient, Thompson Trophy Race winner, active IAC competitor and judge until well into his 70s. The award is given annually for outstanding contribution as a chief judge during the prior contest year. This year the IAC is pleased to present this prestigious award to **Greg Dungan**. Not only has he been an outstanding judge for many years, having been chosen to judge U.S. Aerobatic Team selection and as a judge for the World Aerobatic Championships, Greg has also headed up the IAC's Judging Program, taught countless judges' schools, and served as chief judge at the National Championships. Being a good chief judge requires attention to detail and professionalism, and nobody does that better than Greg. Congratulations, Greg, for this outstanding recognition.

The Curtis Pitts Memorial Trophy for Innovative Aerobatic Design

This award was donated by the Pitts family in the memory of Curtis Pitts. From his first design called the Little Stinker in 1944 to the Model 14 designed just before his death in 2005, Curtis Pitts was one of the most prolific aircraft designers in aviation history. His designs, and their descendants, forever changed the world of aerobatics. The purpose of this award is to recognize an outstanding contribution to aerobatics through product design. When one thinks of the Pitts aircraft, **Herb Andersen's** name may not be the first to come to mind; however, do a little research, and you'll learn that Herb played an integral role throughout the years of taking Curtis Pitts' innovative designs and prototypes and making them into production airplanes. Working as a draftsman and design engineer in the days of Al and Art Mooney, Herb Andersen became part of the certification team of the Mooney M20. With his design and manufacturing expertise and Curtis Pitts' consulting, Herb transformed the Pitts S-2A with the powerful Lycoming IO-540 into the single-seat Pitts S-2S. Today, the Pitts S-2S is the backbone of the air show muscle biplane. Soon after the S-2S was certified, Mr. Andersen upgraded this powerhouse into a two-seat configuration based on the Pitts S-2A, creating the Pitts S-2B. Without Herb's influence, it is safe to say the Pitts would have never reached the four corners of the world. The IAC is pleased to present the Curtis Pitts Memorial Trophy to Herb Andersen Jr. **IAC**






From Competition to **WARBIRD**

BY RICK VOLKER

... It's not about the numbers



During childhood, the dream of flying a World War II fighter often provides the spark to initiate flight training later in life. Many pilots are faced, however, with the grim reality that the costs of owning and operating a warbird are beyond their reach. They find other ways to satisfy these primal urges for speed and challenge. In some cases, this takes the form of aerobatic competition in high-performance aircraft that possess a character remarkably similar to the piston warbirds of which old dreams were made. For those who have pushed the dreams aside, a single close encounter with one of these forgotten warriors is all that is needed to reawaken their youthful desire.

Remember what started it all for you? Before taking my private pilot test, I had a ride with one of the Northern Lights in a Pitts S-2B that changed my world forever. The takeoff acceleration and departure deck angle alone were worth the price. The handling and exhilaration rekindled my childhood warbird dreams. *This* was going to be my little fighter! Thus began my journey into the world of aerobatic competition and air shows. Eventually, I had the opportunity to watch a Mustang fly a beautiful air show display. Next, I made the mistake of flying my Sukhoi in formation with this fighter after the show. Finally, I sat in a Spitfire on display at a private museum. Curiosity and desire rose to a fever pitch. I just had to know: Does an advanced aerobatic competition pilot have what it takes to fly aerobatics in a WWII fighter? The answer is a resounding yes!

CROSS OVER

Aerobatic competition pilots know that aerobatics provides the best way to learn an aircraft's complete flight envelope and makes them safer pilots in handling and avoiding emergencies. Most of these pilots have become proficient in a large number of high-performance aircraft in their quest for the perfect competition plane. Give an aerobatic competition pilot a new airplane, and he'll spin, snap, and tumble his way to proficiency in a heartbeat. Taken a step further, four-minute freestyle flying and the related complex development of aerobatic maneuvering for air show flying produce an awareness and management of gyroscopic forces, three-dimensional spatial problem solving, and energy management that are second to none. This skill set provides the pilot with great insight in understanding the character of a piston warbird. Adapting to a WWII fighter becomes straightforward, without difficulty or surprise. In addition, currency can be maintained in an aerobatic competition aircraft, sparing the vintage warbird from the learning and proficiency exercises that diminish airframe and engine life.

I started down my warbird path by demonstrating proficiency in the T-6, widely considered the only litmus test available for



ABOVE: Rick flies his Sukhoi SU-26M with Patti Wagstaff in Jim Beasley's P-51 Mustang.



LEFT: The Spitfire Mk.IX was known to respond to thought and fit like a glove. Sound familiar?



predicting piston fighter aptitude. This advanced pilot maker has most of the fighter characteristics in spades but is underpowered. It has the reputation of being difficult to fly and is incredibly challenging to fly well. People used to say that if you could fly a Corsair, then you could fly the T-6, implying that the T-6 was more difficult to master than the Corsair. One common suggestion is that a pilot should get 200 hours in the T-6 before even thinking about flying a WWII fighter. But after flying various Unlimited aircraft in contests and air shows, the "terrible" T-6 felt like a big lovable toy. I spent an hour putting it through its paces and immediately grew accustomed to the wing and weight. The T-6 was a quick rehearsal for managing fighter systems and procedures, not some beast that took hundreds of hours to finally master before stepping in a fighter. I flew it from the back seat, and after





The T-6 is known as the Harvard in Canada.



The Bf109E shares more traits with the Pitts S1 than any other existing aircraft.

demonstrating three proper landings on my second flight, I was given the opportunity to fly a Spitfire. It's not always about the numbers. Most of my warbird preparation had already been accomplished by flying a Sukhoi in aerobatic competition and air shows for many years.

The Sukhoi proved to be a much better trainer than the T-6 in preparation for the Spitfire. Most of the critical operating requirements of the Spitfire are present in the Sukhoi to the same degree: poor prop-to-ground clearance. Easy on the brakes to keep the tail down. Free-swivel tailwheel and brakes-only to taxi. Same power-to-weight ratio. Same engine torque. Equivalent gyroscopic forces. Same pitch sensitivity. Similar control harmony. Watch the radiator temp in the Spitfire, or watch the cylinder head temp and oil temp every few seconds during an eight-minute aerobatic freestyle in the Sukhoi SU-26. Curving approach with same speeds. Same sight picture. Same dumb grin on my face. My background had prepared me well for this warbird challenge.

When given the opportunity to fly the Messerschmitt Bf 109E, again it was the experience with different Pitts, Sukhoi, as well as the Extra that eased my conversion. While the T-6 experience was again useful for systems review, the handling was too sedate to prepare for the frenetic behavior of the Bf 109E. Drawing on the experience of landing a Pitts S-1 with a broken tail post in a crosswind was valuable. The experience of controlling and utilizing huge gyroscopic forces in the Sukhoi during air show flying was priceless.

Having a complete power failure in a fighter made me cherish the experience of thousands of power-off Pitts and Sukhoi landings with 4-to-1 glide ratios or worse, and at the same speeds. If you fly a warbird piston fighter or a competition aerobatic aircraft long enough, mechanical emergencies will come, with blown engines, broken oil lines, lost canopies, and bad brakes (insert your own personal experience...) uncomfortably common in both. Seventy-year-old airframes shouldn't be pushed to explore the edges of their original design envelope. An Extra 300L, however, provides a worthy alternative in rehearsing the necessary skills to simulate warbird emergencies, with aileron use disciplined to 90

degree/second roll rates. Engine-outs, stalls, and snaps can be placed at all the dangerous places, preparing the pilot for warbird emergency management in an aircraft that won't be dangerous at g-loads that would break or damage a fighter.

COMPARISONS

To better appreciate the similarities between warbirds and aerobatic competition aircraft, consider a flight in a WWII fighter from the perspective of an aerobatic competition pilot:

Huge amounts of engine torque, P-factor (left-turning tendencies of aircraft with a propeller), and gyroscopic forces combine with inadequate control authority at slow speeds to require a gradual application of throttle on the takeoff roll. If you don't rush it, the forces will be similar to your aerobatic aircraft. You may even use up less runway width than your first Pitts takeoff. The noise is either ungodly wicked or heavenly, depending on your testosterone level. Preflight use of competition-style visualization is invaluable in keeping up with the airplane and preparing for emergencies.

WWII fighters have half of the departure deck angle of an Extra, yet achieve the same climb rate with a V_y (best rate of climb speed) in the neighborhood of 170 mph. Many of the pilot notes recommend rudder trim on takeoff, but if you aren't climbing to 30,000 feet in search of the enemy, most can be flown with neutral rudder. After gear and flaps are up, fighters have been designed to keep the workload down, with a panel scan requirement similar to a high-performance competition plane. If you're a Sukhoi pilot, you'll be used to monitoring and maintaining cylinder head temperature (CHT) and oil temperature to a fine degree. This serves you well in a 1,600-hp

Merlin-powered craft that will be on fire if a problem disables the radiator cooling system. In liquid-cooled engines, you'll need to substitute radiator temp for CHT in your continuous scan. Power changes should be slow to preserve engine life, with time between overhauls that can be anywhere from 100 to 1,000 hours in different warbird types.

Several fighters were approved for dive speeds in excess of 500 mph, though control forces can stiffen until they feel locked in concrete at that speed. Aerobatic maneuver entry speeds for most piston fighters are usually in a range from 260 to 300 mph—achievable in a Sukhoi, impossible in a T-6. Pitch forces

. . . control forces can stiffen until they feel locked in concrete . . .

can vary from 3 pounds per g in a Spitfire to almost 20 pounds per g in some U.S. fighters. Ailerons can be fingertip light below max cruise speeds, while two hands may be required to achieve max roll rate at higher speeds. Roll rates are generally between 80 and 120 degrees per second. Some fighters will get an aileron stall and snatch the stick out of your hands if moved too quickly at low speeds.



Loops in a 1,600-hp warbird require significant rudder to compensate for propeller slipstream when slow. Gyroscopic forces are strong. Delayed or excessive rudder corrections during slow flight phases can produce a snap roll or spin in a fighter with as much surprise as in a Pitts but with far more dramatic results. The competition pilot is used to applying similar forces in an aerobatic plane to complete advanced figures. Many fighters aren't approved for spinning or are placarded against spinning below 10,000 feet. Some airplanes demand 5,000 feet for a recovery from a one-turn spin, suggesting that these particular aircraft might be intolerant of flying at this edge of the envelope. There are also piston fighters that could easily do a Sportsman routine, if you had the money to risk the published oil pressure limitations. This would require at least a 6,000-foot box to work in, due to speeds and loop diameters. The piston fighter has a freight train of momentum, making the prolonged 4g around a 2,500-foot-diameter loop require as much straining as 8g in an aerobatic plane, exacerbated by an upright seat position. While design limits allowed 7g in combat, current WWII fighters will benefit from skilled aerobatic pilots who have a feel for limiting g-load to 4g with enough accuracy to prevent increased wear and tear on a 70-year-old airframe. These aircraft must be preserved for many generations, not discarded at 2,000 hours like some plastic Unlimited planes. Don't even think of snap rolls or tumbles unless you want to retire the airframe (or yourself) forever.

None of the fighters have a true inverted fuel and oil system. Inverted flight is limited to a few seconds. Or your wallet. You must keep *all* maneuvers positive to preserve the engine life. Setting elevator trim to maintain hands-free level flight,



Bare minimum instrumentation + set and forget controls= pilot focused on one thing: winning.



point rolls are allowed to become barreled with about 0.3g maintained at the stops with neutral stick. Warbird Cubans demand that the roll component begin in a barreled manner before reaching zero g on the downlines. Verticals must stay slightly positive. If you see zero oil pressure during any maneuver, land immediately, lock yourself in a room with a Luger, and do the right thing!

When flying an aerobatic competition plane, one can easily land from any approach angle, any airspeed, and make big changes at any altitude. With low mass and low wing loading, corrections happen immediately. The fighter demands a highly stabilized approach to keep a more predictable energy state before you rotate. A variance of 10 mph in speed can result in huge changes in attitude and sink rate during the approach. Corrections take time with heavier mass and high wing loads. Of course, this is important in all aircraft. You are just punished more severely for getting it wrong in the fighter. With some fighter types, there is the very real danger of an unwanted snap roll when trying to go around with a hurried full-power input coupled with inadequate control authority at landing speeds.

Unlike the aerobatic competition plane, fighters also have very little control authority during rollouts. Once the tail starts to swing, it's gone! The good news is that the sight picture is the same in a fighter as an aerobatic competition plane, and that the footwork skills you have cultivated in your Pitts will directly translate into good fighter landings.

The current warbird culture doesn't have enough familiarity with the limited number of seasoned aerobatic competition pilots to understand and accept what this skill set has to offer—the ability to find the edge of a high-performance airplane and play there, learning every idiosyncrasy. This is a skill that has been quantified by judges and refined with feedback from coaches. In comparison, 200 hours of T-6 time *might* mean that a pilot has repeated the same one-hour mistakes 200 times, avoiding the challenging areas of the envelope that build the understanding necessary to fly piston fighters safely. Advanced competitors fly machines that are more like the fighters than the original trainers with a better match of power-to-weight ratio, power-off glide ratio, gyroscopic forces, and speed of maneuvers. With sufficient altitude, performing aerobatics in the warbird will give the seasoned aerobatic competition pilot few surprises. The skills gained during the expansion of the aerobatic envelope allow the increased ability to respect boundaries imposed by age and/or type better than the rest. Situational awareness, engine management, and energy management—these are what the advanced aerobatic competition pilot does best. Contest box savvy transfers to warbird air show flying. Yes, the advanced aerobatic competition pilot has what it takes to fly aerobatics in a WWII fighter! The greatest challenges remain convincing the warbird community of this new paradigm in building complete proficiency and finding the opportunities to prove it. **IAC**

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40 Years of IAC History

Part III

BY MIKE HEUER
IAC #4 & IAC HISTORIAN

SEPTEMBER 1970 AS THE month opened, much had happened in the world of aerobatics since it was the first year of IAC's existence and many new programs and competitions had been created.





Giles Henderson, IAC #159, of Charleston, Illinois in his Clipped Wing Cub. Giles was the winner of the Soucy Award when this photo was taken in Fond du Lac in 1976. Giles first won the award for the 1975 contest year and went on to win it again on several occasions.

The two most notable aerobatic events that took place during that very busy summer were the 6th World Aerobatic Championships in Hullavington, Great Britain, and IAC's first Championships in Fond du Lac, Wisconsin. At that time the Fond du Lac event, though organized by IAC and under the direction of Duane Cole, was still called the "EAA International Aerobatic Contest."

The Fond du Lac contest was the continuation of the EAA contests that had been held in Harvard, Illinois, and in 1970, it attracted 41 competitors. It was to grow very quickly in the years ahead. There were 23 Sportsman, 9 Intermediate, 3 Advanced, and 6 Unlimited pilots that year. All were flown in two days, the 4th and 5th of August. But more important than the numbers, it was the first gathering of IAC members from across the nation and it was already a cohesive, collegial, and close-knit organization. Most came that year, proudly wearing their new IAC red jackets and shirts, usually accompanied by white pants. It was quite a scene. On the field in those days were the

Citabrias and Pitts we still see today but also Clipped-Wing Cubs, T-Crafts, Smith Miniplanes, Great Lakes, a modified DeHavilland Chipmunk, a PJ-260, a Zlin 526F, a Monocoupe, a Bucker Jungmeister, a Ryan ST-A, Cessna Aerobat, and an original design or two. It was the first major test of IAC's new rules and four-category system and it went very smoothly. The new "Positioning Judges" were used for the first time – or what we later called Boundary or Corner Judges. 62 competition flights took place over the two days.

Unlimited was won by Gene Soucy; Advanced by Mike Heuer; Intermediate by Jim Dees; and Sportsman by Mark Heuer.

When reading the accounts published at the time and from my memory of the contest, what stands out is the positive attitude that existed – the "can do" spirit that is so typical of Americans. Nothing was outside the realm of possibility. The commitment to safety was very strong and it was noteworthy that IAC implemented the rules on technical committees and inspections for the first time that year – inspections had not been done



Steve Morris, who served as IAC President from 1990 to 1993.
RIGHT: Chief Judge Bob Herendeen and Sam Huntington, IAC Director, brief the pilots at Fond du Lac '76.





Some of the great men in IAC in its early years (left to right): Dr. Bill McCullough, Verne Jobst, Don Taylor, Bob Herendeen, and Sam Huntington, pictured here at Fond du Lac '76.

previously – and in the years subsequent, dozens of tiny and not-so-tiny mechanical problems were uncovered which no doubt saved many lives or at the very least, a lot of trouble. IAC also introduced the requirement for a parachute – which incredibly, was controversial at the time. After a few successful bailouts, the issue never came up again. Our rules also required dual safety belts and shoulder harness for the first time, though some modifications for the first two categories were made later.

The Fond du Lac competition was also held in conjunction with the EAA Fly-In Convention just 17 miles to the north in Oshkosh. Those were the days when Fond du Lac was not needed for overflow traffic from Oshkosh so it was possible to have both events running at the same time.

After Fond du Lac was over, many of IAC's volunteers moved to the north and the first annual meeting of the IAC was held on August 7th. IAC Treasurer Tom Poberezny reported a total of \$5,358.03 in the bank and it was later reported IAC had 660 members. It was also at this meeting that the idea for a "Chapter Team Trophy" was created and introduced by Duane Cole – a trophy that was awarded in subsequent years at Fond du Lac and at the US Nationals to this day.

Nonetheless, all was still not well in the aerobatic world. Earlier that year, the IAC Officers had become aware of the fact that FAI Sporting Licenses for pilots participating in IAC events may be in jeopardy. Though IAC had its own rules and contest organization – and several regional competitions were held under its sanction – it was not recognized by NAA and FAI. Sanctioning authority in the USA was held by the Aerobatic Club of America, then a division of NAA. Rumors had circulated that FAI licenses may be revoked if

pilots participated in our events, therefore endangering their future participation on US Teams. This created a huge controversy at the time. A motion was made at the annual meeting that year to request a formal NAA ruling, in writing, so pilots had guidance. A meeting was subsequently held in Washington, DC, on September 8th, 1970 – which we will cover in more detail later.

Aside from the jurisdictional and sanctioning controversies, IAC recruitment continued unabated. At Oshkosh, IAC opened a booth in the exhibit tents (before the days of permanent buildings on the Fly-In site) and signed up 108 new members – a number that stunned all of us who worked there. In the booth working as volunteers were Bonnie Poberezny, Mike Heuer, Laurie Haedtler, Roscoe Morton, Mary Heuer, and Sandy Sanford. Also on proud display at the booth was the Nesterov Trophy, which had just been brought home by the US Aerobatic Team.

The US Team had won the Nesterov Trophy (for the top placing Team) for the first time. It was also the first time the trophy had been captured by a country other than the host nation for the World Aerobatic Championships. Igor Egorov of the Soviet Union was the new World Aerobatic Champion. Several of the US Team pilots and officials were IAC members – though there was division in the country between the two clubs, many were members of both which would help heal the wounds in the years ahead. Tom Poberezny, for example, had served as an Assistant Judge at the WAC that year. Roscoe Morton, an early member of the IAC Board, was Team Manager and Chief Delegate.

Nonetheless, the issue of the FAI Sporting Licenses was still hanging over our heads as we moved into September and a meeting at NAA headquarters was held that month to resolve the

issues. In attendance were IAC representatives Bob Heuer, Don Taylor, Paul Poberezny, Paul Soucy, Sam Huntington, and David Scott. ACA Board members attending were John Armstrong, Nick D'Apuzzo, Jim Hill, Charlie Hillard, Roscoe Morton, Mike Murphy, Curtis Pitts, and Dawson Ransome. It was a real "Who's Who in Aerobatics." The meeting was conducted by General Brooke Allen of NAA. Reportedly a very productive meeting, the attendees produced a letter of agreement which was to survive over a decade, until the next major flare-up in 1981.

ACA was to sanction only the Unlimited category – at all competitions held in the USA – and to continue sponsoring the US Nationals and selecting and managing the US Aerobatic Team. At that time, there was only one US Team in Unlimited. Glider and Advanced Teams were to come many years later.

The two clubs, IAC and ACA, were to produce a joint set of rules – which was successfully done in 1971 – after meeting jointly. Unlimited pilots were required to be ACA members and hold FAI Sporting Licenses. The other categories

– Sportsman through Advanced – were left to the IAC. This was a big step forward in bringing peace to the US aerobatic world that year and this treaty lasted another 11 years.

Now to some notes on things happening in the Septembers of subsequent decades ...

SEPTEMBER 1980

Sport Aerobatics magazine was replete with articles on the 10th Anniversary of IAC, including one by this author, but those who were active this year remember two things – EAA Oshkosh, Fond du Lac, and the WAC all taking place in the same month. EAA's event on August 2nd through 9th; Fond du Lac on August 10th through 16th; and WAC on August 17th through the 30th. Understandably, IAC President Carl Bury reported total exhaustion amongst those who had volunteered at all three events.

As mentioned in Part 2 of this series, Don and Gail Taylor organized the 10th World Aerobatic Championships on the EAA Fly-In site in Oshkosh that year. Altogether, 9 countries and 51 pilots participated. Not long before the beginning of the



The IAC's first five Presidents and their years of service: Bob Heuer (1970–1973); Verne Jobst (1973–1978); Carl Bury (1978–1981); Mike Heuer (1981–1990); and Steve Morris (1990–1993).



Duane Cole at Fond du Lac. RIGHT: Some of the fixtures at Fond du Lac in its early years: Rev. Jim Barney, Sam Burgess, and Harold Neumann.



event, all of the Soviet bloc countries had dropped out, citing either "technical" or "financial" reasons but most everyone believed it was retaliation for the USA's boycott of the Summer Olympics that year in Moscow. This had come about because of the Soviet invasion of Afghanistan.

Despite this blow, the event was very well run and organized under the Taylors' direction. Leo Loudenslager won the World Champion title that year with the USA winning the gold in the Team competition as well.

Fond du Lac witnessed 84 pilots competing that year with some of the faces we still see on the contest scene today, such as Giles Henderson, Tom Adams, John Morrissey, Jerry Spear, and others.

August 1980 was truly the Golden Month of *Sport Aviation* and Aerobatics. So much in so little time.

SEPTEMBER 1990

I had just left office as IAC President after nine years and it was in the September issue of *Sport Aerobatics* that Steve Morris introduced himself and wrote his first column as IAC President. In that article, he made a number of significant statements which ring true today and demonstrated the IAC culture had become well established.



IAC Board of Directors in the Fall of 1992. Front row: Mike Heuer, Jean Taylor, Steve Morris, Linda Hamer, and Brian Becker. Middle row: Louis Andrew, Dr. Eoin Harvey, Clisten Murray, and Liza Weaver. Back row: Clyde Cable, Malvern Gross, Bob Davis.



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*John Morrissey, winner of Advanced
at Fond du Lac '80.*

First was open communication with the IAC Officers and Directors. Steve published his phone and fax numbers and invited IAC members to call him at any time. Or to write letters, if they wished. These were the pre-internet, no e-mail, no fax days. When you were President in 1980 or 1990, you spent many hours each week on the telephone. Now leaders in the sport are flooded with e-mail. Though the possibility of better and quicker communication exists today, it has not reduced the workload.

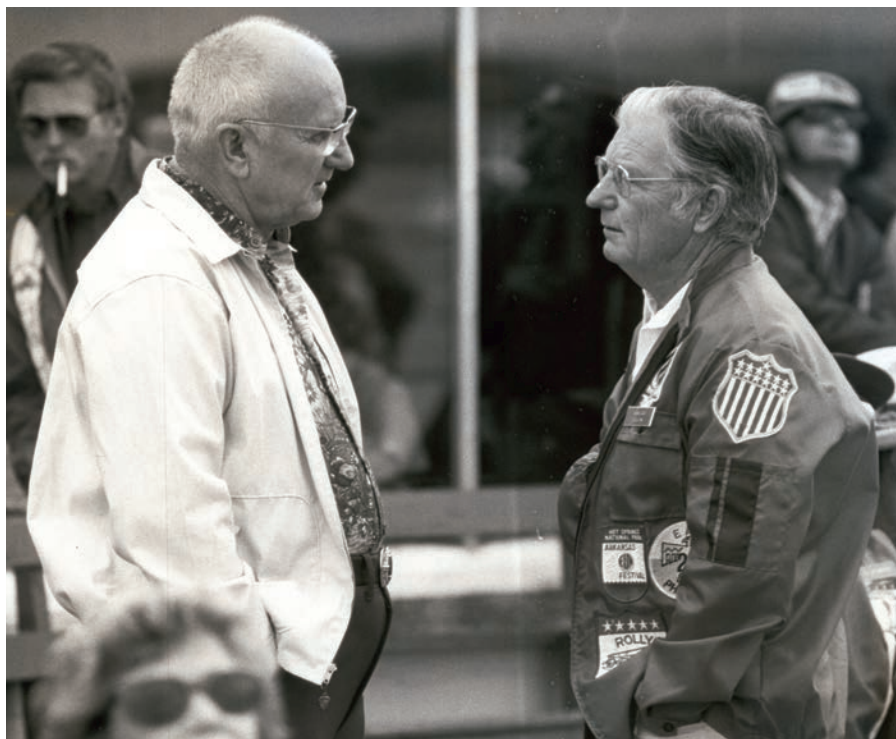
In the previous decade, IAC had grown considerably. At the time I assumed office as President, we were just under 3,000 members and by September 1990, the membership rolls numbered 5,200.

Steve also committed himself to serving the "grass roots" members – another key feature of the IAC culture – and invited all to participate. Steve said, "We should be proud of the IAC, and all that has been accomplished through it, and eager to share the experience with others." He also committed himself to seeking out and helping those who were not "competition pilots" but who enjoyed aerobatics. This is a quest that continues today – the desire on the part of the IAC leadership to be all-inclusive and to bring the joys of aerobatic flying, and its benefits, to those who do not fly competition. Finally, Steve committed himself to safety, something that every IAC President has done. That commitment is so deeply embedded in all of us, it is hard to imagine anything else having a higher priority.

SEPTEMBER 2000

During the summer and fall of 2000, there was a heavy emphasis in our magazine on technical safety issues. Excerpts from various volumes of the "Tech Tips" manuals that had been published by IAC beginning in the 1980's were published and the lessons learned still resonate today.

Sam Burgess, IAC #23, wrote of the moral obligation of IAC members to report mechanical difficulties to the IAC's Technical Safety Chairman. Sam wrote, "We should feel this moral



Curtis Pitts and Duane Cole share a moment at Fond du Lac '76.

obligation even more so than any other flying organization when we consider the extra hard use our aircraft are subjected to and the proximity to the ground in which we operate." Sam went on to say how everyone would be very happy to know of problems other members had.

With the recent loss of friends due to suspected mechanical problems – some still under investigation – I cannot imagine anything more true today. I was also struck by a list of problems that IAC member Doug Partl (IAC #17987) enumerated in an article in the magazine documenting results of his technical inspections over a ten-year period. Over the years, Doug had

noted maps, note paper, screws, nuts, washers, gloves (always only one), instruments, miscellaneous tools, pens and pencils, and tons of loose change in fuselages. On the structure, loose wheel pants, missing access panels, loose rod-ends, loose flying wires, worn tailwheel linkages, worn tires, broken and loose exhaust pipes, fuel leaks, and worn motor mounts. And missing paperwork.

In this 40th Anniversary year, it may be time to re-dedicate ourselves to not only flying safely but technical safety and the free flow of information as well. In the internet age, it couldn't be easier.

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Starting in Portugal

MIGUEL LARRAGA WAS MY first student from Spain. He came to Sky Country Lodge at Ashville, Alabama, in early 2009 to prepare for his first contest. As you might have read in a recent article here, Miguel did quite well in Spain and Portugal, winning two contests and scoring very well in a third.



LEFT TO RIGHT: Pedro Dias, the author, and Helder Guerreiro.

Of course, the reason is because Super Decathlons like Miguel's aren't all that common. His run of success ran a flag up the pole. Suddenly the aerobatic trainer was in the spotlight, and I've been training pilots from Spain ever since. The attention caught the eye of two gentlemen in Portugal, and before Miguel could clearly think it through they had offered him more money for his Super D than he could refuse. Miguel took the money and bought a CAP 232. (More to say on that another day!) And it was off to Portugal with the Decathlon.

Networking is the life's blood of a business like mine. A website and some word of mouth comprise the only affordable ad campaign. And it was by such networking I soon got an e-mail from Pedro Dias. Pedro and his partner Helder Guerreiro are two pilots from Portugal who want to start an aerobatic school called Sky Pro in their country. Now, if you were in the United States, you would simply declare yourself an expert in the field, hang up a shingle bragging to that effect, and your place would be, as far as our FAA is concerned, an aerobatic school. In Portugal it doesn't work just like that.

My first contact with Pedro was a bit confusing. The usual language barrier problems were just a part of it. He kept asking about my aerobatic license and aerobatic teaching certificates. All I

could really offer was my air show "Statement of Aerobatic Competency" card. What was going on was he had to first get me approved to fly aerobatics in Portugal. I tried to explain to him that we weren't going to fly any low-level stuff, but he kept pressing for my whole resume of aerobatic experience. So I poured the entire mess on him.

What I finally learned was completely unexpected. The Portuguese version of our FAA, known as *Instituto Nacional de Aviação Civil* (INAC), makes our system of regulation look like a walk through the park. They have an intricate and complex system of rules that make getting a pilot's license tricky business. Importing a straightforward airplane like a Super Decathlon is like trying to reinvent aviation itself. (Don't even consider registering a homebuilt unless you're ready to build it again for them!) They require a sign-off to fly each and every different type of airplane you fly (Cessna 150, Cessna 152, etc.), and you can't fly aerobatics without an aerobatic license! So Pedro's first hurdle to getting me there was to convince the INAC that I qualified for a Portuguese aerobatic license.

I soon realized that these two entrepreneurs were attempting to establish the first-ever aerobatic school in Portugal. With the atmosphere of strict government control on aviation,

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Some Portuguese countryside, as seen from my Santarem hotel room.



Talking with the students. (It's cold!)



A hangar at a light sport airport.

this has to be considered a heroic undertaking. But an undertaking it became, and soon I found myself meeting Pedro at the Lisbon airport.

Pedro and I drove up along the Tejo River to a small town called Santarem. Typical of most places outside our borders, the Portuguese are very frugal with space, so we passed many miles of agriculture and then small towns seemingly crammed with buildings in a small area. Apartment living is the norm for all but farmers, and very few live in sprawling complexes like our opulent homes with huge lawns. But this economy of space could be deceptive to a typical Yankee; these people enjoy a very high standard of living. They just don't take the luxury to waste their resources as we do. It's a great place to live.

Aviation appeared to be no different. With fuel being the equivalent of about \$16/gallon, these pilots appreciate every minute in the sky. Pedro had a full list of students readied for my arrival, and it was my job to produce their school's first round of graduates to qualify for the Portuguese aerobatic certification. The task was to prove out our curriculum for the INAC so the school could eventually be approved to issue the certificates themselves. Teaching can only go as well as the learning, and these guys made it a breeze. Except for a few glitches with the language, the lessons went along smoothly. (Did you know that the English word "pull" sounds very much like the Portuguese word for "push"? Think about that one for a minute!)

One language glitch came with a student who was a pilot licensed to fly in their equivalent to light-sport aircraft and had never flown anything but a Rotax-equipped plane. He seemed to be struggling a lot with my Southern English, but the ground school went by okay. In the plane, though, the attention needed to interpret my slang-filled English overloaded the task of figuring out a new airplane with a Lycoming powerplant. A request to reduce the prop rpm on climb-out resulted in the mixture control being pulled to idle cut-off. I soon found that talking faster with a panicked voice wasn't a good way to explain what I needed him to do right then. (The old joke is true. We tend to think talking louder will make us understood!) Before we reached the quickly rising ground, I was in the front seat with him pushing on that red knob. No harm done.

I was able to graduate eight pilots on that first visit. I have since returned and completed another batch. I flew with two licensed aerobatic pilots (who originally trained elsewhere) on my second trip and worked to get them approved to instruct for the school. The INAC hasn't bought into that yet



Lino Goncalves on left, two unidentified local instructors and Goncalo Matias on right.

because they aren't certified instructors. I'll be going back soon to hopefully tie up the loose ends and complete the task of getting Portugal's first-ever aerobatic school working on its own.

The idea of requiring instruction before flying aerobatics doesn't scare me so much. It does make some wince. But rather than put it in the hands of more bureaucracy, I would like to see organizations like the International Aerobatic Club or the Society



of Aviation and Flight Educators have an approved program offering recognized credentials for aerobatics. It would surely improve safety, which couldn't hurt our reputation or our insurance rates. In that regard, the NAFI Master Instructor-Aerobatics program is moving in the right direction to legitimize aerobatic training in the United States. **IAC**

Greg Koontz has been in sport aerobatics since 1971, flies air shows, is an aerobatic competency evaluator, operates Sky Country Lodge aerobatic school, and is a NAFI Master Instructor-Aerobatics. Visit www.GKairshows.com. Please send your stories, comments, and ideas to Greg@GKairshows.com.



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Bob Hart	3019 N Ringwood Rd, McHenry, IL 60050-1324		
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GLIDER AEROBATICS

Klein Gilhousen	599 High Tower Road, Bozeman, MT 59718	406/586-2517	kleing@qualcomm.com
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Darren_Pleasance@mckinsey.com			
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HALL OF FAME

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Mike Heuer	4547 West Woodlawn Circle; Collierville, TN 38017	901/850-1301	mike@mheuer.com
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ICAS LIAISON

Bob Davis	N1561 Linn Road; Lake Geneva, WI 53147	262/248-6364	bdavis74@charter.net
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JanSport Heavyweight tee – 100% cotton
– "Still Inverted after 40 years" – comes in
green or cobalt blue. **All sizes \$16.99**

726583680	2051	SM
	3051	MD
	4051	LG
	5051	XL
	6051	2X

Combo 100% cotton pre-
shrunk t-shirt – Silk screen
in kelly green "Top of the
Loop to ya" – Hat IAC logo.
All sizes \$24.99

726584340	2100	SM
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	5100	XL
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**JanSport Newport
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All sizes \$39.99

726583790	2040	SM
	3040	MD
	4040	LG
	5040	XL

JanSport Luna Tee –
100% Cotton Slub Jer-
sey – "This Angel Has
Wings" IAC Logo.
All sizes \$22.99

726583840	2093	SM
	3093	MD
	4093	LG
	5093	XL





JanSport Long Sleeve Tee -
100% cotton jersey - "Living
on the Edge" - IAC logo -
comes in black or white.
All sizes \$22.99

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	4093	LG
	5093	XL
	6093	2X

**Combo Cap green tea & t-shirt
turquoise "IAC Aerobatics."**
All sizes \$24.99

726584290	2051	SM
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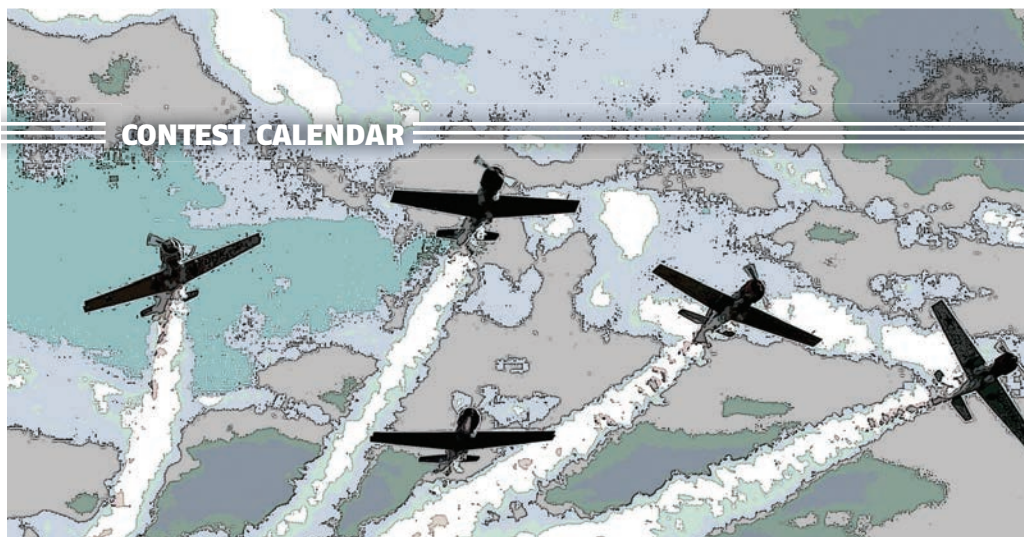
Kids 100% cotton -
color airplanes "aero-
batics." **All sizes \$12.99**

726584403	2093	2T
	3093	3T
	5093	4T
	8093	5/6T



Kids 100% cotton - pink
bird in shimmer ink -
"aerobatics chick."
All sizes \$14.99

726584453	2100	2T
	3100	3T
	5100	4T



Mark your calendars for these upcoming events. A complete list and the latest calendar are at www.IAC.org.

And if you're hosting a contest, let the world know by posting it there!

// East Coast Aerobatic Contest (Northeast)

Friday, September 3 – Sunday, September 5, 2010

Location: Warrenton-Fauquier Airport (KHWY): Midland, VA

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

// "Apple Turnover" (Northwest)

Friday, September 10 – Saturday, September 11, 2010

Location: Ephrata Municipal Airport (KEPH): Ephrata, WA

Tel: 425-985-9469 • **E-Mail:** JRiedinger@perkinscoie.com

Website: www.AppleTOver.com

// U. S. National Aerobatic Championships (US Nationals)

Sunday, September 19 – Friday, September 24, 2010

Location: North Texas Regional Airport (KGYI): Sherman/Denison, TX

Tel: (914) 456-1594 • **E-Mail:** doug@wbreeze.com

Website: www.iacusn.org/USN2010/

// Mason Dixon Clash (Northeast)

Friday, October 8 – Saturday, October 9, 2010

Location: Farmville (KFVX): Farmville, VA

E-Mail: RandTAviation@ec.rr.com

// Rocky Mountain Invitational Aerobatic Contest (South Central)

Saturday, October 9 – Sunday, October 10, 2010

Location: Lamar Municipal Airport (KLAA): Lamar, CO

Tel: 303-648-0130 • **E-Mail:** JamieTreat@q.com

Website: www.IAC5.ORG

// The Borrego Akrofest (Southwest)

Friday, October 15 – Saturday, October 16, 2010

Location: Borrego (Lo8): Borrego, CA

Tel: 619-417-0839 • **E-Mail:** CErickson@allwaysair.com

Website: www.iac36.org

// Tequila Cup (Southwest)

Friday, November 12 – Saturday, November 13, 2010

Location: Marana NW Regional Airport (AVQ): Marana, AZ

Tel: 603-860-4456 • **E-Mail:** tequilacup@gmail.com

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RYAN BIRR
COLUMNS / INSURANCE



IAC Insurance Program

NATIONALS ARE UPON US, and as we have for the past two years, Northwest Insurance Group Inc. will have a presence. In addition to supplying the Unlimited trophies, we'll be a major sponsor. There are so many contests during the season we simply can't attend them all, but we know the flying that takes place all season is in preparation for this great event. We get to hear from you about so many fantastic events, and each one is absolutely unique.

As we approach the final six months of our three-year contract with the International Aerobatic Club (IAC), we have learned so many things about your distinctive population of pilots and aircraft. We work with many types of aviation accounts in the United States, and the members of the IAC have one of the tightest networks we have ever experienced. You teach and coach each other; you buy and sell aircraft from each other; you help each other build and maintain aircraft; and ultimately, you compete against each other. It's simply amazing how much you communicate with each other at contests, through *Sport Aerobatics*, and with other tools like the Exploder, not to mention the hangar talk.

We, of course, have been the beneficiary of your network. Through your experience and referrals, we have been able to dramatically grow our list of IAC clientele and thereby are able to give back to the IAC. You have brought us your own aircraft, but you have also brought us your friends, your mechanics, and your fixed base operators; you all have been incredibly generous and extremely supportive of Northwest Insurance Group Inc., and we can't tell you enough how much we appreciate the support and camaraderie that we have experienced from and with you over the past two and a half years.

Nonetheless, we are human. We attempt to run a high-quality business and provide the best service and best practices for all our clients, but we certainly aren't immune to problems or mistakes. As our IAC customer population grows, we unfortunately drop the ball once in a while. We hate that we can't get every new quote or renewal absolutely perfect, but it occasionally happens when dealing with large numbers. We appreciate your business, and we love working with and for the IAC, but

when stuff happens, the buck ultimately stops with us.

The current economic situation is eroding insurance company profits, which generally is beginning to force premiums up. We have new competitors in the industry this year, and all aircraft owners are looking for better value and pricing for their aircraft insurance packages. The single policy form and pricing that we have been able to provide for the past two years isn't as stable as it was. We are now looking to every alternative market for insurance options for all our IAC accounts. This is our job,

**Thank you
again . . . we
are looking
forward to
many more
years of
working
with you.**

of course, but the effort sometimes gives the appearance that we are slow since this process requires extra time to adequately accomplish.

Additionally, to keep with our desires and obligations to support the IAC and membership, we are looking for more ways to repackage our product to save costs. We have gone to recycled paper, moved to a paperless filing system internally, changed our mailing system, and are looking to move to electronic policies later this year for those of you who wouldn't mind receiving e-policies instead of paper policies. We feel these are ways that we can all help contribute, albeit somewhat minimally, to environmental efforts overall.

First and foremost, though, is our desire to continue to provide you superior insurance products and services. Through your network, as you talk about the best ways to fly and maintain your aircraft, please include us and help us understand the best way to provide you with services and what products are important to you. Whether for aircraft insurance or pilot life insurance...we are listening to you.

Thank you again, members of IAC, we are looking forward to many more years of working with you. **IAC**



Thank You from Ford and EAA Together We Care!



The partnership between EAA and Ford spans more than a decade and continues to grow. The cornerstone of our relationship is our mutual goal of providing value to you ... the EAA member.

EAA is pleased that Ford enhanced the AirVenture experience with the opening day Chicago concert, the nightly Fly-In Movie Theater, and the Living Legends Autograph Sessions at Ford Hangar. Members could also enjoy cars from all eras in the Cruisin' Legends display, the "hands free" Active Park Assist demo, the latest in automotive technology, and riding in a Model T, Fusion Hybrid and Taurus SHO.

The culmination this year was the national unveiling of the 2011 Explorer (AirVenture style) via Erickson Air-Crane helicopter.

It was a fantastic AirVenture 2010! We look forward to our relationship continuing to provide more value for you next year.

Edsel B. Ford II
Board Director, Ford Motor Co.

Tom Poberezny
President, EAA

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