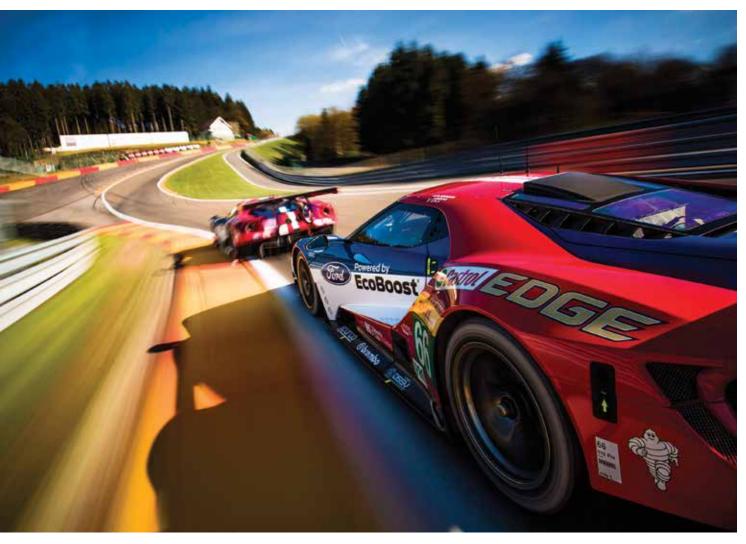


2016 Nationals THE LAST IN TEXAS









IT TOOK YEARS OF PASSION AND INNOVATION TO BUILD THIS CAR.

IT TOOK 24 HOURS AT LE MANS TO PROVE IT.

Whether on the road or on the track, every single element of the Ford GT was designed to deliver the extraordinary speed, exceptional handling and pure performance found only in purpose-built racing cars. Its carbon-fiber body and its 600-plus horsepower 3.5L EcoBoost® V6 engine are the ultimate expressions of technological innovation.

Fifty years after its original victory, the innovative balance of power and efficiency in Ford's EcoBoost engine delivered an incredible class win at the 24 Hours of Le Mans.

And the same EcoBoost technology that propels our supercar can be found in over 5 million engines that power many of our vehicles worldwide. That's just one of the ways we help drivers go further every day.

The Privilege of Partnership

EAA members are eligible for special pricing on eligible Ford Motor Company vehicles through Ford's Partner Recognition Program. To learn more about this exclusive opportunity for EAA members to save on a new Ford or Lincoln vehicle, please visit **www.eaa.org/ford**. (Ford 6T not eligible for Partner Recognition Program pricing)











CONTENTS

FEATURES

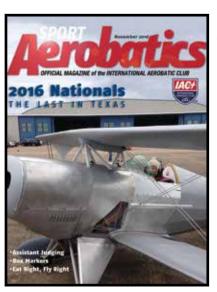
- 8 The Humble Art of Assistant Judging
 - by Eric Anderson
- 10 Inside the Last U.S. National Aerobatic Championship in Texas
- **24 Box Markers** by Andrew Davidsmeyer
- 28 Eat Right, Fly Right by Cyndi Allard



Gary DeBaun studies his sequence sheet before competing.

DEPARTMENTS

- 2 Letter From the Editor Reggie Paulk
- 3 President's Column
 Mike Heuer
- 4 Lines & Angles
- 20 Brilliance and Buffoonery
 Beth Stanton
- 30 Contest Calendar
- 31 Meet a Member Gary DeBaun
- 32 FlyMart & Classified Ads



COVER

Nationals Contest Director Gary DeBaun sits in his restored Pitts S-1 in front of the iconic blue doors of the Plyler hangar before flying his Primary sequence at Nationals. Photo by Reggie Paulk.



PUBLISHER: Mike Heuer

IAC MANAGER: Trish Deimer-Steineke

pdeimersteineke@eaa.org 920-426-6574

EDITOR: Reggie Paulk

CONTRIBUTING AUTHORS:

Cyndi Allard Brett Hahn
Eric Anderson Mike Heuer
Andrew Davidsmeyer Reggie Paulk
Gary DeBaun Beth E. Stanton

IAC CORRESPONDENCE

International Aerobatic Club, P.O. Box 3086

Oshkosh, WI 54903-3086

Tel: 920.426.6574 • Fax: 920.426.6579 E-mail: reggie.paulk@gmail.com

ADVERTISING

Vice President of Business Development: Dave Chaimson dchaimson@eaa.org

Advertising Manager:

Sue Anderson sanderson@eaa.org

MAILING: Change of address, lost or damaged magazines, back issues.

EAA-IAC Membership Services

Tel: 800.843.3612 Fax: 920.426.6761 E-mail: membership@eaa.org

EAA® and SPORT AVIATION®, the EAA Logo® and Aeronautica™ are registered trademarks and service marks of the Experimental Aircraft Association, Inc. The use of these trademarks and service marks without the permission of the Experimental Aircraft Association, Inc. is strictly prohibited. Copyright © 2015 by the International Aerobatic Club, Inc. All rights reserved.

The International Aerobatic Club, Inc. is a division of EAA and of the NAA.

A STATEMENT OF POLICY The International Aerobatic Club, Inc. cannot assume responsibility for the accuracy of the material presented by the authors of the articles in the magazine. The pages of Sport Aerobatics are offered as a clearing house of information and a forum for the exchange of opinions and ideas. The individual reader must evaluate this material for himself and use it as he sees fit. Every effort is made to present materials of wide interest that will be of help to the majority. Likewise we cannot guarantee nor endorse any product offered through our advertising. We invite constructive criticism and welcome any report of inferior merchandise obtained through our advertising so that corrective measures can be taken. Sport Aerobatics (USPS 953-560) is owned by the International Aerobatic Club, Inc., and is published monthly at EAA Aviation Center, Editorial Department, P.O. Box 3086, 3000 Poberezny Rd., Oshkosh, WI 54903-3086. Periodical Postage is paid at Oshkosh Post Office, Oshkosh, Wisconsin 54901 and other post offices. Membership rate for the International Aerobatic Club, Inc., is \$45.00 per 12-month period of which \$18.00 is for the subscription to Sport Aerobatics. Manuscripts submitted for publication become the property of the International Aerobatic Club, Inc. Photographs will be returned upon request of the author. High-resolution images are requested to assure the best quality reproduction. **POSTMASTER:** Send address changes to *Sport* Aerobatics, P.O. Box 3086, Oshkosh, WI 54903-3086. CPC 40612608



EDITOR'S LOG

BY REGGIE PAULK

Cycling Through the Seasons

The beautiful Rockies

As of this writing, I've just returned from a week at Nationals, and it was an experience I will always cherish. I was in a group photo of pilots and volunteers, and it is one of those moments that makes you sit back and think a bit. In 10 or 20 years, people will look back at that photo and see a group of people who participated in the last Nationals in Texas ... it's a sobering thought being part of history. Next year, we'll all be in Oshkosh.

And a special thankyou goes to the many volunteers who give freely of their precious time to attend our contests and keep the gears turning.

Speaking of Oshkosh, it's interesting how many people think I live there. I guess that's an easy assumption to make since the IAC is headquartered there. I've made reference to the Colorado Rockies often in my letters from

the editor, but I'm not sure I've directly talked about it. I live west of Denver, near the town of Winter Park, Colorado, The elevation at my home is approximately 8,500 feet above sea level, so my weather is usually much milder or colder than the rest of the country — depending on the time of year. During Nationals, while we were sweating the north Texas heat, it was snowing here at home. I usually have to scrape ice off my windshield beginning in late August, and we'll be able to ski by about the time you're reading this. I live in a high mountain valley, so my weather is very local. It can be a blizzard at home while Denver sits in severe clear just 50 air miles to the southeast. If you can't tell, I *love* living in the mountains! Flying here is something that leaves you in awe ...

And speaking about Nationals, I'd like to congratulate everyone who placed. I'd like to especially congratulate those who made the Unlimited power and glider teams. And a special thank-you goes to the many volunteers who give freely of their precious time to attend our contests and keep the gears turning. My hat is off to you.

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

PRESIDENT'S COLUMN



BY MIKE HEUER, IAC PRESIDENT, IAC 4

Nationals a huge success!

ONE OF THE GREATEST PLEASURES in my aerobatic career, serving as president of the IAC and the FAI Aerobatics Commission (CIVA), has been attending dozens of championships in an official capacity and having the opportunity to recognize the winners. I have had the honor to present trophies and hang medals around the necks of the best aerobatic pilots the world has ever known. It is always a thrill to share in their pride and enjoyment of winning these prestigious titles and to appreciate what it took to get there.

I have just returned from the U.S. National Aerobatic Championships in Denison, Texas, where 89 pilots competed for national titles, medals, and trophies. We flew nine categories of competition in both power and glider aerobatics, and our judges evaluated hundreds of figures during the course of the weeklong event. Aside from one day lost to bad weather, the rest of the week boasted spectacular flying conditions with cooler temperatures than we are accustomed to in north Texas that time of year, excellent visibility, and beautiful blue skies. It was a contest to remember.

Briefings were held early in the morning, before sunrise, so contest time would not be wasted, and everyone was in place, ready to go, on schedule. What was also so impressive was the hard work of a team of volunteers who made the contest run like a Swiss watch. Judges and assistants, volunteer coordinators, boundary judges, scoring director, registrar — all were in place and ready to go when the demand was there. I am always amazed and appreciative of the lengths to which IAC members will go to ensure a safe and efficient competition. My thanks to all of you, who are too numerous to mention in this column.

It was an emotional time as well. This was our last year at the North Texas Regional Airport (KGYI). We have been there since 1972, with a couple of contests held elsewhere during those decades. All of us who have been going to Nationals for years have forged working and personal relationships with the local people who open their doors to us for those days in September. That said, we also look forward to bringing Nationals to our Oshkosh home in September 2017 and will do our best to offer our membership an event better than ever before. Oshkosh has facilities that are unmatched, since it is the home of the world's largest aviation event, and it has huge potential for the U.S. National Aerobatic Championships.

We will be announcing our detailed plans for the event over the next few months.

At the Nationals this year, we also selected three teams to represent the United States in the world championships next year. Our country has sent pilots to the World Aerobatic Championships in the Unlimited power category 28 times. This is an impressive record, especially when you realize these pilots are almost entirely responsible for paying their own expenses. Fundraising for the teams will continue to help offset some of their out-of-pocket expenses, and I urge you to help out when called upon.

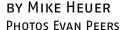
The IAC also selected the glider aerobatic teams who will compete at the World Glider Aerobatic Championships in Poland next year. U.S. participation in these championships has been sporadic over the years, and glider aerobatics in America has not yet grown to the level we see in Europe. These pilots also pay for 100 percent of their expenses, because no effective fundraising programs have yet been put in place as the IAC has focused on power aerobatics. Indeed, it is difficult to run a continuous team support program within our limited volunteer leadership group, taking into account there are teams going to world championships every year. We are working on improving that process soon.

My congratulations to our new U.S. National Aerobatic Champion, Rob Holland, who has now won the title six times in a row. Undoubtedly, Rob is one of the finest aerobatic pilots in aviation history, and it is also noteworthy that he contributes in other ways to aerobatics and aviation — as a coach and mentor, an air show pilot, and a member of our board of directors. He is a valuable colleague in addition to being a talented and skilled pilot.

My thanks to Gary DeBaun, contest director of the Nationals, who worked for many months on making our last contest in Texas a great event. He now turns his attention to Oshkosh in 2017 as he will be serving there again as head of the championships.

Finally, I congratulate our new team pilots and wish them safe and successful flying these next 11 months as they prepare for the world championships. At the same time, I ask everyone to appreciate what volunteerism makes possible.

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





U.S. Nationals Concludes in Texas

The 2016 U.S. National Aerobatic Championships came to a close at the North Texas Regional Airport (KGYI) in Denison, Texas, on Friday, September 30, and the competition was a resounding success. Altogether, 89 pilots in nine competition categories flew, both in powered aircraft and gliders. Twenty of the competitors were glider pilots, mostly from the U.S. Air Force Academy in Colorado Springs, Colorado.

The contest was held under the direction of Gary DeBaun, who devoted most of the last year to organizing the event and who was assisted by an outstanding staff of dedicated and experienced volunteers. Assistant contest director was Bob Harris, the jury was headed by Bob Meyer, and chief judges were Charlie Harrison, Lynne Stoltenberg, Hector Ramirez, and Kevin Campbell. Starters were Dennis Parks and Jon Elam.

These men and women were supported by an active staff of volunteers working in key areas, including Kathleen Moore (registration), Ellyn Robinson and Alice Johnson (volunteer coordinators), Carol Brinker (scoring director), Evan Peers and Kate DeBaun (photographers), Forrest Fox (videographer), Tim Brill (safety director), Monique Hartmann (social media director), Robbie Sturm (boundary judge coordinator), and countless other people who pitched in to staff the judging line, set up the judges stations, do technical inspections on airplanes, and so on. Jury members were Mike Heuer, Peggy Riedinger, Bill Gordon, Tom Adams, and Doug Sowder. It was International Aerobatic Club members at their best.

The new U.S. National Aerobatic Champion is Rob Holland of Nashua, New Hampshire, flying his beautiful MXS-RH. This was Rob's sixth consecutive win of the national title. He went on to win the 4-Minute Freestyle event at the end of the contest as well. Rob takes home the Mike Murphy Trophy, one of aerobatics' most prestigious awards.

U.S. National Glider Aerobatic Champion is Eric Lentz-Gauthier of Davis, California, flying an MDM Fox. This was Eric's second consecutive win of the national title, and he took home the Les Horvath Trophy.

With all of the flying going on in all of IAC's categories, team selection for three U.S. Aerobatic Teams



Mike Heuer and Rob Holland with the Mike Murphy Trophy.

was also in progress. Team pilots are selected based on their standings at Nationals. The 2016-2018 U.S. Unlimited Team is Rob Holland, Bob Freeman, Mike Ciliberti, Mike Gallaway, Mark Nowosielski, Jim Bourke, Craig Gifford, and Tim Just. For the glider teams, Eric Lentz-Gauthier and Jason Stephens were selected for the Unlimited Glider Team, and Guy Acheson and Mallory Lynch qualified for the Advanced Glider Team.

The Unlimited Team (in power) will compete at the 29th Fédération Aéronautique Internationale World Aerobatic Championships in South Africa in 2017. The championships is slated to be held at Hoedspruit, South Africa, August 16 to 26. The airfield is a joint civil-military base and is home to a South African air force helicopter unit. Hoedspruit is in Limpopo Province, about 280 miles northeast of Johannesburg.

The Glider Teams will compete in Torun, Poland, which has hosted previous world championships. Details were not available at the time of this writing, as the final bid for the event is to be reviewed by CIVA



L-R: Bob Freeman, Robbie Gibbs (Alternate Pilot), Mike Ciliberti, Mark Nowosielski, Jim Bourke, Craig Gifford, Tim Just and Rob Holland represent the U.S. Unlimited Team. Not pictured is US Team Pilot Mike Gallaway.

when it meets in November in Bucharest, Romania.

Nationals Results

The other category winners at Nationals were as follows:

Power Categories
Primary – Nick
Meyer, Grand Forks,
Nebraska (Decathlon)
Sportsman – Cory
Johnson, Dodgeville,
Wisconsin (Pitts S-1C)
Intermediate – David
Taylor, Superior, Colorado (Staudacher S600)
Advanced – Aaron
McCartan, Burt, Iowa
(S-330P)

Glider Categories
Sportsman – Merrick Isley, U.S. Air Force
Academy, Colorado
(DG1001)



Cory Johnson, Sportsman Champion.

Intermediate – Trevor Rogers, U.S. Air Force Academy, Colorado (DG1001)

Advanced – Guy Acheson, Fair Oaks, California (MDM Fox)

It should be noted that non-U.S. citizens are not eligible for national titles. But we would be remiss if we did not mention the two pilots who ranked at the top of their categories but could not claim the champion titles in those categories. Luke Penner was the top

placing pilot in Sportsman (power) and hails from La Broquerie, Manitoba, Canada. The top ranking pilot in Intermediate (glider) was Khorn Soonthonnitikul (also known as "Soon") of the U.S. Air Force Academy. He is an exchange cadet at the academy from Thailand and placed first last year in Sportsman (glider).

Complete results can be found at www.IAC.org/ Nationals. Click on "Results" on that page and you will find the results page for the event by category. Each pilot's score sheet also can be viewed by clicking on his or her results for each flight program.

Other Nationals Awards

The IAC recognizes achievement at the Nationals in various ways, and the following awards were presented at the awards ceremonies on Friday, September 30:

Highest-Placing First-Time Sportsman

Presented to the Sportsman pilot with the highest percentage of points possible who is competing for the very first time in IAC-sanctioned competition.

Mitchell Oswald, Grand Forks, North Dakota (Decathlon)

The Fred Leidig Trophy

Presented to the winner of the Intermediate (power) category.

David Taylor, Superior, Colorado (Staudacher S600)

The MT Propeller Trophy

Presented to the winner of the Advanced (power) category.

Aaron McCartan, Burt, Iowa (S-330P)



ANGLES 🖊

Grass Roots Medallion

Presented to the highest-scoring pilot in any category, measured in overall percentage, who flies an aircraft of 180 hp or less, or more than 180 hp if the 75 percent cruise speed is less than 125 mph.

Cory Johnson, Dodgeville, Wisconsin (Pitts S-1C)



Bill McLean receives the Old Buzzard Award.

Chuck Alley "Old Buzzard" Award

Presented to a pilot at Nationals who is 65 years old or greater and in honor of Chuck Alley, an IAC member who was still competing at age 85. This award can only be received once.

Bill McLean, Daleville, Alabama, 75 years old (RV-4), 3rd Place Overall in Sportsman

Chapter Team Trophy

Presented to the chapter whose top three pilots achieve the highest overall percentage.

Chapter 78, Minneapolis, Minnesota

Note: Chapter 78 had 12 pilots competing at Nationals.

Safety Award

The Safety Award winner is chosen by the contest director and is presented to an individual who displays a personal commitment to safety at the Nationals.

Tim Brill, Reno, Nevada

Note: Tim Brill also serves as IAC's safety chairman.



Luke Penner receives the Goodrich Trophy.

The Goodrich Trophy

Presented to the highest-scoring non-U.S. citizen in the highest category flown at Nationals.

Luke Penner, La Broquerie, Manitoba, Canada (Pitts S-2B), 1st Place in Sportsman

The John Serafin Trophy

Awarded to the glider pilot with the highest percentage of points possible in the Free Program. It is open to all glider categories.

Trevor Rogers, U.S. Air Force Academy, Colorado (DG1001), Intermediate Glider

Note: Free Programs were not flown in Glider Advanced or Unlimited categories this year. Only Free Knowns and Unknowns were flown as these were team selection categories.

The Bob Schnuerle Trophy

Presented to the winner of the Unlimited 4-Minute Freestyle.

Rob Holland, Nashua, New Hampshire (MXS-RH)

IAC President's Awards

IAC President's Awards were presented to a number of well-deserving individuals at the awards ceremonies and banquet held at the conclusion of the Nationals. These individuals were as follows:

Mike Plyler, Sherman, Texas — A competitor in the Intermediate category, Mike is a local businessman who owns one of the large hangars at the airport, which is the home of many of the aerobatic aircraft that are competing that week. He has provided this hangar space for many years and offered his cooperation in countless ways toward making the Nationals a success. In recent years, Mike has provided hookups for the camping trailers and RVs that are parked nearby and which provide housing and rest areas for pilots and chapter members.

IAC Chapter 24, The Lone Star Aerobatic Club — One of IAC's oldest chapters, many of its members compete in the Nationals, and this chapter has been a frequent winner of the Chapter Team Trophy. Aside from that, chapter members have provided their volunteer help in setting up for the Nationals, particularly the aerobatic box, and provided other material and logistical support.

Doug Lovell, Broomfield, Colorado — Recently retired from the IAC board of directors, Doug's expertise in computer programming and IT have made him a key part of our team of members who collaborate on bringing contest scoring, the contest database, webpages, preregistration for contests, and other internet services to the members. Without Doug's hard work and hours of devotion to IT projects, we would not be able to offer what we do today.

Wayne Roberts, Grenada, Mississippi — Until early September, Wayne served as vice chair of the IAC Government Relations Committee and as such is one of our leading experts on FARs, aerobatic practice areas (APAs), and contest waivers. He has assisted countless members over the years in procuring APAs and waivers. Wayne has an extensive knowledge of the regulations and FAA handbooks. He retired from the committee but not IAC and will continue to be one of our most valuable and trusted members. Wayne also has worked most recently on the ADS-B "out" issue with aerobatic aircraft.



Mike Heuer presenting Anna McKinney with the President's Award.

Anna McKinney, Denison, Texas — Anna is president of the Denison Chamber of Commerce. While chambers are often involved in bringing events to their communities and assisting them, Anna has gone above and beyond what would normally be expected and has given her chamber's financial and logistical support to the Nationals for more than 30 years. She is one of Denison's greatest assets.

The Humble Art of Assistant Judging

Heard but not seen

BY ERIC ANDERSON IAC 436341, Chapter 58

Assisting judging (formerly known as "calling") is arguably the best of all contest volunteer jobs. While the judge must concentrate on errors and penalties, and the recorder must keep busy listening and writing, the assistant is free to just watch and talk. He or she has an ideal classroom seat from which to learn both how to judge and how to fool the judges, if such a thing is possible.

Despite the title, assisting is not judging. It is its own art that, if done right, makes judging better, benefiting both judge and competitor. Like black-clad Kabuki stagehands who are always there but mostly unseen, assistants talk but are not consciously heard. If chosen correctly, the assistant's words convey an ideal image of the flown figure while demanding as little of the judge's mental processing as possible.

Wes Liu is the current chairman of the IAC Judges Program. A few months back he had a discussion with Dave Taylor, a competitor and judge who in a prior life served as a Navy squadron commander flying F-18s. Dave thought that the task of comment recording could benefit from some standard combat-style brevity. Wes ran with the idea and wrote about his solution in "A-Form Chicken Scratches" (*Sport Aerobatics*, May 2016).

Simple and brilliant. Unfortunately, not every brand-new contest competitor is going the have the chance to spend much time with the shorthand before his or her first time on the judging line as a recorder. (If I am ever crowned king, I will have Wes' shorthand laminated to every

CL	Climbing	VR	Varoed rate
D-	Descending	OR	Opened radius,
+	Positive up		as in "closed
-	Negative up**		radius at 2
+	Posiive down		o'clock" or CR@:
-	Negative down	00	"Ovalled" corner
EH	Exit high		as in "ovalled
DLW	Dragging left		corner 2'
	wing (add + or	F0	Flew over
	- for up or down)	TQ	Torqued
-45	Shallow 45	OVR	Over rotated
+45	Steep 45	UR	Under rotated
+R	Long after roll	AFT	After
-R	Short after roll	LOW	Competitor
PTL	Pinch to line		appears to be
F@3	Flat at 3 o'clock		flying too low
	(or whatever	LOW-L	OW Competitor
	o'clock the		appears to be
	competitor is		flying very,
	flat at)		ery low

Wes Liu's form of shorthand.

contest clipboard.)

Since assistant judge is a volunteer position generally filled by experienced contest-goers, there is a greater chance that some standardization could take hold. Any guidance can be studied before a contest. Wes thought of this, too, and posted a PowerPoint presentation on the subject on YouTube (search "Reading and Speaking Aresti"). Within that presentation, as well as others Wes has posted, are videos of nicely flown figures called properly by assistant judges. So Wes' work is a basis for this article. And to that I have added the results of a discussion I started on the IAC Exploder seeking a portrait of the ideal assistant. (If you can figure out the vagaries of the Exploder, it's worth finding our exchange on assistant judging. It was lively, detailed, and contained enough meat that even experienced judges might find some insight.)

What is an assistant judge? The contest rules say that he is "responsible for helping the judge determine the proper sequence of figures, direction of flight, and other duties deemed necessary by the judge." By necessity that's a little vague. Let's make clear what a judge isn't. Assistants are (to repeat) not judges. As John Fellenzer, judge and Unlimited competitor, puts it, "Sounds harsh, but the judge needs to be consistent with the grades. The best way for that to occur is if the judge makes his own choices — otherwise it becomes a grade by committee. So if the judge asks, then by all means help; otherwise, it really should be up to the judge to make the call. Even comments like "nice figure," "ooooh," and "aaaah" can — for me be a slight detractor."

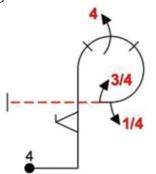
Nick Buckenham agrees: "[I] would never ask my caller to pass judgement on long/short, steep/shallow, radius consistency, etc. — that's my job, my reputation, my responsibility to deliver."

This comes back to the Kabuki stagehand thing. Any subjective comments bias the judge's own sense of what she sees. That wastes brain-processing power. Volunteers on the line have the good fortune of front-row seats to watch the greatest pilots in the country at their best (or, alas, at their worst), and in either case it is hard not to react. But unless the judge solicits that input, it probably is not helpful. We call only what the "flimsy" says our judge should see with as few words as possible at the moment when the information is most useful. She may be speaking to the recorder at the same time. No matter. Deciding how to divide her attention is her problem. Ours is to keep calling the figure regardless of what transpires in the chairs next to us.

The "end of figure" (some suggest "next!") call is the most useful statement that the assistant makes. In the advanced categories especially, it is often not possible by observation alone to know when one figure has stopped and the next figure has begun. The call keeps the recorder in the loop as well. One of the more lively discussions on the Exploder was whether the use of common acro nicknames (e.g., "Cuban," "humpty") was preferred over dividing the figure into elements, as in "pull vertical, pull half-loop to vertical down." Respondents were in disagreement here, though slightly more preferred to start the call with the nickname — if one exists — and then, especially for complex figures, to call it piece by piece.

This prepares the brain for what's coming. How is this supposed to sound? Let's start with something simple: "Figure 1, loop ... end of figure." If they were all like that, there would be little need for an assistant. More complex:

"P-loop. Pull vertical, half positive snap up, pull three-quarter loop with four-point roll at top. Quarter roll, opposite three-quarter roll. Exit left inverted ... end of figure."



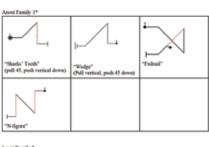
However, with judges who have more international experience, there was a clear desire to keep the call lineby-curve-by-roll and save the nicknames for the banquet. Some judges want help counting points in rolls, canopy orientation in slides, etc. Most do not. In the spirit of not getting in the way, the safe thing to do is to stay silent unless asked. But be prepared for, "Did you see any points in that roll?" What if you make a major mistake on the call? Let's say you misread the previous figure as starting inverted from left to right and ending at the dot with the "4" above. The judge gets lost as soon as the figure starts and takes his eyes off the flight to scan his B form.

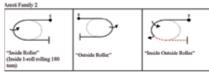
You realize your screw-up during the four-point. Do you cover by properly calling the figure and helpfully stating that you saw a nice round three-quarter loop with four strong points as the judge gets his "SA" back? Doing so would compound one mistake with an even bigger one by trying to be the judge yourself. Correct the call if you can and let the judge decide if he saw everything or, more likely, average the figure. Either way, it is water under the bridge. Press on. The final call with the conclusion of the last figure is, "End of figure, end of sequence." This lets the recorder know that he is free to ask for clarification where needed and to expect a presentation score.

I mentioned that some judges find it helpful to start each call with the closest nickname for the upcoming figure. Some names are universally agreed on (in North America at least), while others aren't. The nicknames that I think I know are below, but if the name escapes you, don't panic. "Pull-push-push laydown humpty" paints a nice initial picture. But "pull to 45, push one half-loop to 45 down, push exit left, inverted" works every bit as well and as we now know, many judges prefer it. Each of the examples below is just one of potentially dozens of variations for a given name. There is also infinite potential for confusion until clarity comes with each element call.

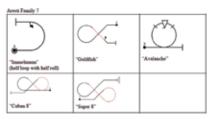
The workflow for the assistant judge can be summed up in four steps:

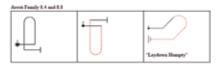
1. State the beginning of the













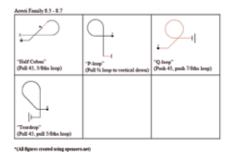


figure.

- 2. State the name of the whole figure, if appropriate, and if desired by the judge.
- 3. Call the elements of the figure in their proper order just prior to their execution.
- 4. Call the figure end, exit direction ("left," "right," "Y-axis"), and exit attitude.





One giant spark of talent all in one place!

This photo was taken from the ramp in front of the Plyler hangar. The storm was about 50 miles to the south, over Dallas-Ft. Worth. Gary DeBaun, his wife Chrissy and his daugther Kate are sitting in the golf carts at the bottom of the photo



(Left to right) Rob Holland practices his routine as 1990 World Champion. Coco Bessiere, IAC Safety Chair Tim Brill, Unlimited Team pilot and IAC Director Tim Just and Bob Myer, Chairman of the Jury, look on.

Former Unlimited champion Debby Rihn-Harvey gets ready to fly her Super Decathlon in Sportsman. Unlimited pilot Mike Rinker (in cowboy hat) flew Debby's airplane in Sportsman as well. Mike brought his Grumman Goose to the contest and got Debby her multiengine seaplane rating for good measure. Starter Dennis Parks is at her wingtip.







Extra 300 and an Edge 540.



Yuichi Takigi



Yuichi Takagi's Unlimited sequence card looks intimidating in his Pitts S-2S.





Paul Langer (with water bottle) flew his 1971 Stephen's Akro, thought to be the only one flying, to a third place finish in Intermediate! The Stephen's Akro was originally flown by Leo Loudenslager in the early 70's, and would later become the Laser. The monoplanes that dominate the competition scene today all owe a bit of their heritage to this airplane.

Contest Results: Intermediate Power US Nationals Championship 2016, KGYI, 9/24 - 9/30 2016 Ranked by scores								
Rank	Pilot	Aeroplane	Registration				Totals	0/all %
1	David Taylor	Staudacher S600	N-27KJ	1475.40	1723.00	1483.31	4681.71	82.862
2	Tom Rhodes, Jr.	CAP 232	N-232LR	1467.11	1708.73	1430.63	4606.47	81.530
3	Paul Langer	Stephens Akro	N-100SE	1503.47	1638.08	1408.15	4549.70	80.526
4	Stan Burks	DR107	N-105DR	1493.34	1667.47	1385.48	4546.28	80.465
5	Justin Hickson	PItts S2B	N-79A	1480.01	1632.03	1415.00	4527.04	80.125
6	Erick McDaniel	Extra 200	N-811PM	1469.69	1669.66	1376.72	4516.07	79.930
7	Chris Magon	Extra 300SX	N-65EX	1424.17	1636.75	1427.40	4488.33	79.439
8	Stephen Fiegel	Extra 300L	N-703KC	1481.24	1661.00	1345.72	4487.95	79.433
9	Bill Gordon	Pitts S2B	N-5310S	1423.77	1637.16	1385.37	4446.30	78.695
10	Mike Plyler	Staudacher S300	N-892M	1124.63	1759.58	1463.17	4347.38	76.945
11	David Prather	Pitts S1C	N-440JK	1499.26	1600.61	1108.34	4208.21	74.482
12	Wm. Barnard	Extra 300L	N-444TM	582.17	1642.61	1293.51	3518.29	62.271



The United States Air Force Glider Aerobatic Team top row (left to right): Capt. Brian Ross, Capt. Garrett Nikiforoff, Capt. Kyle Smith, Khornwitpong Soonthonnitikul, Reagan Moore, Taylor Marshall, Chris Masi, Trevor Rogers, Connor Watson, Coach Mark Matticola, 1st Lt. Nick Bode. Bottom row (left to right) Josh Holden, Kaitlyn Brown, Matt Correa, Merrick Isley, Ben Hook, Abraham Gygax.



Above: The Advanced and Unlimited aerobatic teams left to right: Guy Acheson, Mallory Lynch (Advanced Team), Eric Lentz-Gauthier, Jason Stephens (Unlimited Team). Congratulations guys!







A. Contest Director Gary DeBaun (right) gets some lastminute pointers from Unlimited pilot Joe Brinker before flying to the highest score on the first flight.

- B. Gary climbs into his restored Pitts S-1.
- C. Gary's wife, Chrissy, gives moral support while he waits for the starter.
- D. Tim Brill (left) and Tom Adams (right) give a pep talk to Gary before he blasts off.

Contest Results: Primary US Nationals Championship 2016, KGYI, 9/24 - 9/30 2016 Ranked by scores Rank Dilot Aeroplane Registration Totals

Natived by Scores								
Rank	Pilot	Aeroplane	Registration				Totals	0/all %
1	Nick Meyer	8KCAB	N-318JR	475.89	477.60	449.55	1403.05	83.515
2	Michael Vandermeulen	8KCAB	N-318JR	462.40	466.79	469.01	1398.20	83.226
3	Alex Tally	8KCAB	N-318JR	446.99	471.24	433.68	1351.91	80.471
4	Alex Hunt	8KCAB	N-318JR	425.32	454.46	436.10	1315.89	78.327
5	Gary DeBaun	Pitts S1S	N-262PD	465.96	390.35	457.19	1313.51	78.185
6	Douglas Evans	Pitts S1C	N-591P	473.48	444.00	362.25	1279.73	76.174

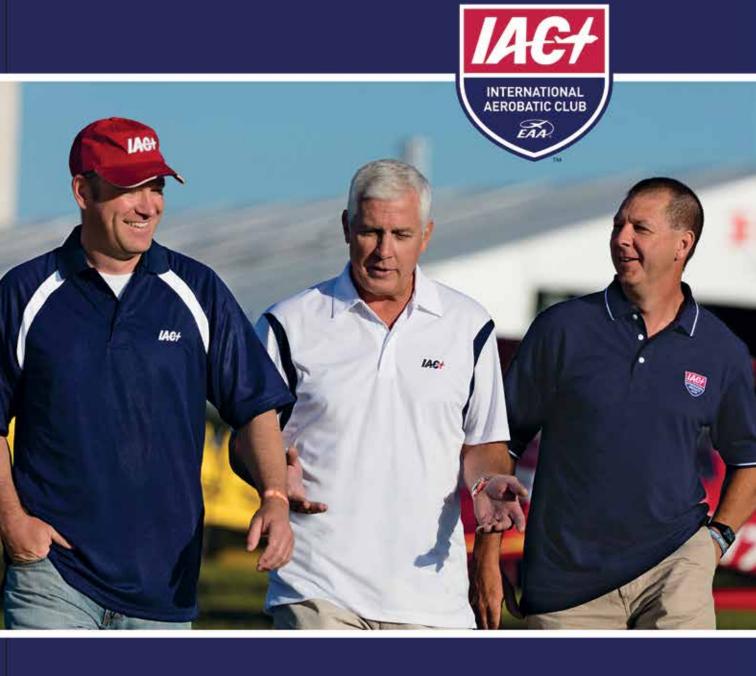
Contest Director: Gary DeBaun (USA), Contest Chief Judge: Charlie Harrison, Scoring Director: Carol Brinker (USA), Flight Director: Dennis Parks (USA).

Judges: Liza Weaver, Bill Barnard, Sandy Langworth, Mark Matticola, Tom Rhodes.

Judges Assistants: Steve Johnson, Steve Grohsmeyer, Brent Smith, Laura Barnard, Mallory Lynch, Chris Magon, Erick Mc-Daniel, Brian Ross.

Jury members: Bob Meyer (USA), Mike Heuer (USA), Peggy Riedinger (USA), Bill Gordon (USA).

Other key staff: Safety Director, Tim Brill, Registrar – Kathleen Moore, VC – Ellyn Robinson, Social Media – Monique Hartmann, Medical Dir. – Hector Ramirez, Chief Tec – Joe Brinker, Videographer – Forrest Fox.



WALK THE TALK

LOOK THE PART IN IAC UNLIMITED COLLECTION AEROBATIC APPAREL

UNIMITED COLLECTION POLOS WORN HERE BY REGGIE PAULK, GERRY MOLIDOR AND BOB HART. GET THEM AND MORE AT WWW.IAC.ORG STORE.



BRILLIANCE AND BUFFOONERY BY BETH E. STANTON

Aced It

For Cade Boeger, happiness is aerobatics

Cade Boeger has always loved teaching people how to fly. He thinks there's no better way to really learn a subject than to find new and interesting ways to teach it to a dozen different types of learners. "The intrinsic reward of watching the light bulb come on and seeing a student pick up a new concept is a paycheck in and of itself," he said.

He most enjoys flight instruction when he teaches the real "stick and rudder" portions of flight training. Cade graduated from the San Jose State aeronautics program with a degree in aviation and A&P. He is a CFI-I and MEI with 7,600 hours and has flown first officer in a Jetstream 32 and captain in a Dornier 328 jet, a Canadair CL-65, and a Citation X. Becoming an ag pilot in 2011 was a turning point in his career. During the first six weeks of his first season, he logged 278 hours (most of it below 50 feet), with nearly 2,000 takeoffs and landings on short, narrow, and rough strips. Never in his life did he learn so much, so quickly. "After that, I was forever wrecked for 'normal' GA recreational flying," he said, laughing.

About that same time he bought a '46 7AC Champ and began doing tailwheel training and endorsements. "Instead of keeping one eye on the syllabus and one on the PTS, I had to keep both eyes on the student and another on the runway edge lights!" He was finally training the way he wanted, flying aircraft he truly enjoyed. He came to a realization. "There is a whole segment of the pilot population that isn't satisfied with renting the local FBO's Skyhawk and going 30 miles up the valley for the proverbial \$100 hamburger. They want to engage in sport flying. They want a challenge, and even a thrill, whether it's a tailwheel endorsement to open up a whole new world of exciting aircraft or taking a basic aerobatics course — unusual attitude recoveries or spin training. I knew that this was where I wanted to migrate my flight-training focus."

As a young man, aerobatics for Cade was like expensive champagne that he couldn't afford. "If someone had a little they could share, that was amazing, but it always came in little sips." In the early 1990s, as a new private pilot, he would make annual pilgrim-



Cade Boeger.

ages in the spring to Vern Dallman's Ala Doble Ranch in Esparto, California. Vern held an aerobatic safety seminar there that doubled as a fundraiser for the local fire department. For a pilot with aerobatic stars in his eyes, it was heaven. Cade described it: "There were only maybe 300 people total at his little private strip, but the greats used it as a preseason tune-up. Eddie Andreini, Julie Clark, Sean Tucker, Wayne Handley, Bob Herendeen, and more. Amelia Reed in her C-150 blew my mind, making low, inverted passes in the very model of plane I had trained in and hadn't taken past 60 degrees of bank! Wayne Handley's Raven, though ... that was the ultimate machine!"



Cade and coach Dave Watson.



Last year, Cade decided it was time to get serious about exploring the world of aerobatics. He searched the IAC website for a West Coast contest he could investigate. On Labor Day weekend, Cade and his family flew into Delano, California (KDLO), to check out the IAC 26 Happiness Is Delano contest. The logos for the contest, designed by Margo Chase, have an "aces high" theme because a casino is located at the airport. Cade's family ranch in northern California is named Aces High Ranch. His flight school is Aces High Aero. Cade said, "It was so weird showing up at Delano and seeing the logo and the shirts." He laughed. "It felt like a higher power was at work. What are the chances of that?"

After being invited to the Northern California Chapter meetings and getting on the email list, Cade was excited about getting involved with the group. A newborn son put a pause on Cade's aerobatic ambitions, but he eventually made it to an IAC 38 chapter meeting in March 2016. There he was introduced (as many have been) to coach Dave Watson. Cade said, "I was immediately put at ease by his confidence and knowledge as he showed me around the aircraft, and we talked about our flight goals. I was pretty damn near gleeful as I flew home that night, for I had finally



Dream mission accomplished!

found the path that would lead me to a goal I had desired for over two decades. I was going to be a competition aerobatic pilot!"

Rookie Again

Cade explained, "There are two things I've been very aware of and tried to avoid as an instructor. One is complacency, and the other is lack of empathy. Over time, I have found that the best way to empathize with a student is to become one again yourself. Learn a new skill. Feel the frustration of failure and incompetence and the joy of progress and success through effort. Reliving the learning process makes it a lot easier to say 'right rudder' to your student for the 1,000th time, with the same tone of voice as the first. As my wife likes to say, 'School is never out for the pro." Cade summed up his first acro lesson as "behind the plane, overthinking, overcontrolling, and underperforming." After two flights with Dave digging deep in his bag of educational tricks for something that would get through to him, they called it a draw. "I was sweaty and scrambled, but with my first real acro training session complete I was truly ecstatic that I was on my way."

During his second lesson in the Super D, Cade struggled to put the elements of an aileron roll into a



Nineteen-year-old Cade and Wayne Handley's Raven.

recognizable maneuver. "Being an instructor makes receiving flight training a little bit of a different ball game. You notice the little details of the techniques and styles that the person who is teaching you uses to get the insights transferred. Watching Dave use six different techniques to try to get across the concept of the competition roll to me was a lot of fun. He would say, 'Okay, try it again,' and I would fly straight ahead for several seconds, trying to muster the bandwidth needed to make my hands and feet all work in concert."

"I'll admit that disappointment of not having a third flight was tempered a bit by the knowledge that the day-one results would stand and I had just won my first aerobatic competition. I was grinning from ear to ear and would find that it took quite some time for that smile to subside."

First Contest

After a handful of training flights, Cade signed up for his first competition, Chapter 77's inaugural Corvallis, Corkscrew contest in Corvallis Oregon. For the next three weeks, he "ate, slept, and dreamt" the Primary sequence. During his practice flight, he left a roll out of his sequence. As he climbed for another try, he mentally beat himself up over the mistake. He said, ruefully, "Here I was, corkscrewing it up during my first practice flight in a box!" He tried to laugh it off and explained to safety pilot Dave that they just had the one glitch for the mission. "Despite the attempt at levity,



One happy family.

I was rattled. It really bothered me that I could make that kind of mistake after so many walk-throughs, chair flying sessions, and even painting a practice box in my carport and flying it dozens of times! Adrenaline can do funny things to your brain function."

Cade was flying a borrowed Super D at the contest. "I began to get a look at the awesome culture of the IAC membership. Here these guys had spent their time and money on preparing their aircraft and themselves for this contest, and they were willing to loan it to me — having never even met me before — so I could go fly against them. Amazing! Everyone I spoke to went out of their way to help me out. They asked about my gear, my family, my flight experience, and were happy to share tips and tricks with a first-time newbie competitor." Afterward, the group adjourned for dinner and drinks. "That evening I learned that one of the best parts of traveling to a contest with friends is the post-flight gatherings. We stayed until closing, swapping flight stories, photos, and quality-checking the local brew selections." Despite a solid case of nerves for what was coming in the morning, when he returned to the hotel, he fell fast asleep.

When the flight order was called on the contest morning, Cade was the first pilot to fly. "My excitement was elevated to levels I hadn't felt in quite a while. Thinking it over, I was glad to be going first. I always like to get nerve-wracking things done quickly, before there is time to stew over them too much."

Cade flew a clean Primary sequence. He described his elation. "Dave slapped me on the shoulder and said 'nice job!' I could feel the relief surge through me as I knew the possibility of a total pooch-screw was done for this round. What a rush! I remembered what it was like playing high school sports again. I felt the rush of competition, and even better, the euphoric glow of a job well done. I was already looking forward to the next flight. I crossed over the runway and entered the downwind. I keyed the mic and suddenly realized that adrenaline has another odd effect on the body. I could barely make the proper words to an-

nounce my position! Not since I was a student pilot have I made such a stumbling, incoherent pattern announcement. Who cared? I was happy, and we landed and cleared."

For Cade's second flight, the order was reversed and he was the last pilot to fly. He described the wait. "As I killed time waiting my turn, I studiously ignored what was going on with my competitors' flights. I was becoming aware that this aerobatic competition thing was primarily a competition with yourself. I felt like watching the other guys fly had no bearing upon what I wanted to do on my second flight, and could only serve as a distraction. Instead I walked through the sequence on the ramp several more times, visualizing myself correcting errors I had made from the first flight, and trying my best to program myself for success." He felt more relaxed this time and had a great flight, although he noted, "I was still able to mangle the pattern announcement in hilarious fashion."

Cade's wife and five kids showed up early on the second day, driving in from Redmond, Oregon, with her parents to watch him fly. He had placed second in the first flight and first in the second, for a first-place overall standing. Due to low ceilings, a third flight did not happen that day. When the announcement was finally made that the contest was called, Cade's wife threw her arms around him and congratulated him with a big hug and kiss. "I'll admit that disappointment of not having a third flight was tempered a bit by the knowledge that the day-one results would stand and I had just won my first aerobatic competition. I was grinning from ear to ear and would find that it took quite some time for that smile to subside."

A beautiful awards banquet that evening was the icing on the cake for Cade. Having his whole family there made it even more special. Two clinkies (medals) and a first overall trophy now reside in his office. Cade said, "I have taken down an oversized planning map I had on the wall because I want to make room for all the goodies I plan to acquire over the next 50 years of aerobatic competition." The hook was set deep in Corvallis. "I feel really grateful to have run into such an awesome group of folks as IAC 38. I want to say a special thanks to Dave Watson for imparting some small piece of his vast aerobatic wisdom into my brain. I'm looking forward to him hammering more aerobatic knowledge into me in the near future. I also want to thank my sweet wife, Melissa, for always pushing me in the direction of my dreams."

Special Pitts

Cade doesn't have a specific first memory around the Pitts Special, but ever since he was young, the iconic plane has loomed large in his imagination. He said, "My wife still has love letters from when we were dating in college, and the hearts and X's and O's were always drawn by an easily recognizable Pitts with its smoke on." Fittingly, her wedding gift to him was four days in Arizona flying with Budd Davisson in his Pitts S-2A, N8PB. "One of the things I learned there is that there are Pitts Specials, and there are other airplanes, and the two should not be confused. I had a great time, and that planted a seed to one day instruct in these marvelous aircraft."

Mission Accomplished

The IAC mission statement reads, "The IAC is dedicated to promoting and enhancing the safety and enjoyment of sport aerobatics. Membership gives you the opportunity to learn about the sport, improve your flying skills, and meet and compete with some of the most talented aviators in the country."

Cade's aerobatic passion and dream just needed a little guidance. Not only is he well on his way as an enthusiastic competitor, he'll also further the sport by teaching aerobatics and inspiring another generation of eager pilots. As we all continue to do our part at the grassroots level and support people like Cade, the future of our sport looks very bright indeed.

At the time of this writing, Cade was flying at the 2016 Happiness Is Delano contest. He scored first place in all three Primary flights, winning overall with 83.63 percent, and received the Grass Roots Award.



Box Markers

A new product

BY ANDREW DAVIDSMEYER

I SAW AN AEROBATIC BOX FOR the first time on a hot afternoon in northern Illinois. The heat inside of the Super Decathlon was unforgiving. I looked down as I passed through 2,200 feet AGL and couldn't believe that the four pinpricks of white material in the browning cornfields and sun-bleached grass of the airport grounds was actually a kilometer by a kilometer. I struggled to make out the white T, L, and X shapes.

Family and friends were going to watch me fly competitively for the first time. I felt like I finally made it to a place I belonged. But I was horrified of the idea that I would have to somehow fly my whole sequence in a shoebox with barely visible dimensions. I was absolutely certain I was never going to find my place inside the box once I dove in, and there was certainly no way I could score well while I was this scared.

I started flying aerobatics with

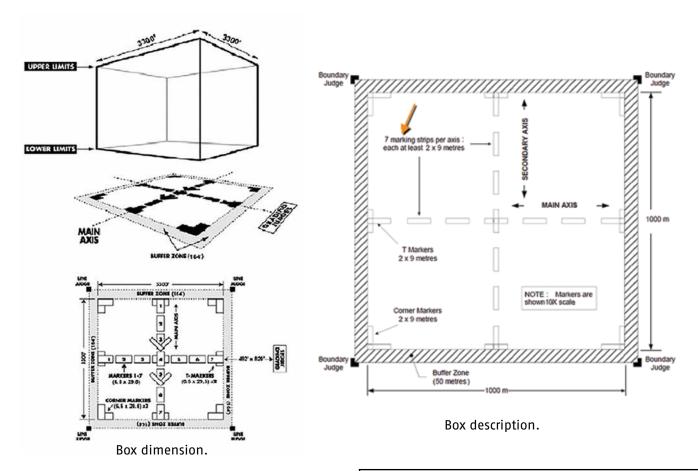




the University of North Dakota (UND) Aerobatics Team, which is where I got my first taste — and love — of aerobatics. Today I work for Tarps Manufacturing, a subsidiary of Illinois Road Contractors, which has been a family-owned business in west central Illinois for more than 90 years. At Tarps, we specialize in construction tarps, agricultural tarps, and trucking tarps, and we do custom work as it comes to us. I love my job, but as many pilots do, I daydream constantly about competition aerobatics, which means I dream about the box as well. One day, while working with the fire-retardant white nylon (that we use to make construction tarps for building projects all over the country), I decided that this would serve well as box marker material. I figured since we can make them to any size, we can make standardized box markers. This thought led me to the next question: What is the size of the standard-regulation box marker?

Box markers are rarely something to which anyone gives much thought, unless the marker is out of place, you're new to flying, or you have to set them up. Still, even though most pilots give them very little thought between flights and seasons, they can make or break a contest and can have a dramatic impact on training.

The International Aerobatic Club has specific rules on how big the box is, but no specific rules on actual box marker sizes. Each IAC chapter uses various schemes to make box



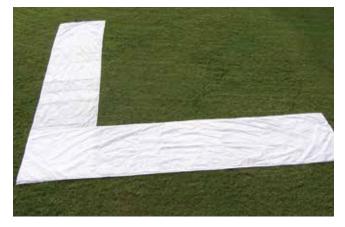
markers. Some use pop-up tents, Tyvek house wrap, shipping tarps, or pretty much whatever the chapter can get its hands on. I believe that the amount of standardization and consistency in a box can have a direct impact on contest performance confusion in an individual's confidence during flights: To that end, I set out to standardize the box markers the best that I can.

I asked around to all my aerobatic friends and reached out to the IAC. Everyone was tremendously helpful, but the answer was either "I don't know," or there simply is no standard size. After some more digging and a conversation with IAC President Michael Heuer. I found that most of the rules we use to govern the IAC are derived from CIVA (Commission Internationale de Voltige Aerienne), one of the FAI's (Fédération Aéronautique Internationale's) air sports commissions, which governs aerobatics internationally and in particular the World Aerobatic Championships in all categories — including the box and the box markers. For them, a regulation box contains far more markers than a traditional IAC box, but the marker panel is 2 meters by 9 meters, or 6-1/2 feet by 29-1/2 feet. Each panel can be used to make any part of the box, from a center X to an outer T or corner L.

So we made two panels to create a single box marker that met those exact specifications. I was given my company's blessing to test it just in time for the Chapter 78 contest in Spencer, Iowa. From the standpoint of testing











a new product, I could not have had a better place to start. It has brandnew pilots competing in Primary, seasoned Advanced pilots, veteran judges and contest directors, and even collegiate pilots.

I contacted the contest director, Justin Hickson, to see if it would be all right to test my box marker at his contest. He happily obliged. Chapter 78, as with many chapters, has resourcefully used what it had available. In this case, it was Tyvek house wrap. Members pushed tent stakes through the material and into the ground. They even glued the Tyvek to PVC pipe so that it could scroll out. As innovative as this was, they all agreed that a constant need to tape and repair the Tyvek after several tent stakes went through it — and the clumsy, time-consuming nature of the scrolling method — made the Tyvek less than ideal.

Tyvek house wrap is made to be a weather barrier around housing projects. On the other hand, the Tarps-made panels are hemmed

around the edges with 1-1/2-inch webbing in the hems. Every 24 inches along the perimeter, there are brass grommets so tent stakes can hold the panel down. The fabric is pliable but still relatively heavy, making it easy to roll on itself. Two panels can be rolled into a roll like a sleeping bag and hauled away and stored easily. They are box markers.

The marker was an instant success from the contest volunteers that worked with it. From the air. the praise was equally high. Aaron McCartan, Mike Lents, and Craig Giffords were among the pilots there that day who praised their high visibility, consistency, and precision. They loved the markers so much that they purchased another 16 panels. When paired with the two panels I gave them, that's enough for an entire box worth of markers! And as icing on the cake, several individuals asked about ordering their own for individual practicing and even some custom panels.

As a representative of Tarps Manufacturing, I was thrilled that our product was doing so well. As a pilot and member of the IAC, I was proud that I could provide these panels. My hope is that more chapters will consider these markers, if not just for their ease of use and high visibility, then for their consistency around the IAC. I also hope that if individuals wish to purchase these panels that they get meaningful training from them.

These panels can be ordered from my company in the "Standard Regulation Sized Panel" of 29-1/2 feet by 6-1/2 feet, or because there is no regulation that specifies shapes or sizes, they can be ordered as one particular piece or in any size desired.

These markers are consistent. highly visible, and easy to use and store. They're box markers, not another product that mimics box markers. They may not stop you from blowing out of the box, and the box may never look big enough to contain anything other than shoes, but at least you'll know where you are, where the box is, and how to get back in. IAC



We have all your IAC merchandise needs right here in one convenient place. Shop Now at EAA.org/Shop!



\$48.99



Eat Right, Fly Right

How good eating habits can help you fly better and fly longer

BY CYNDI ALLARD, M.ED.

hen my fiancé suggested that we make EAA AirVenture Oshkosh our vacation this year, I have to say I was not impressed. Now I'm a convert, and it is because of the aerobatic displays. While he talks about pistons, airflow, and turbochargers (things that mean nothing to me), I've started to entertain my dinner guests with stories of spins, rolls, loops, and stalls ... you guys rock! I've even met and had a conversation with our local wing walker, and I've started poring over the air show calendar for next year and making plans.

But I got to thinking, how on earth do you guys do it? I don't mean the physics of putting the airplane through the maneuvers, but as a health coach and personal trainer, I became curious about what you do to prepare your body to take the *g*-loading and the extreme accelerations that you experience during these maneuvers.

I will be talking about fitness and physical training in another article. In this article, I will cover how the diet affects the body and how you can better prepare for an aerobatic flight as well as some easy ways to "think healthy" when

choosing what to eat. To put it simply, you want to keep more oxygen in the blood to avoid cerebral hypoxia (loss of oxygen in the brain caused by reduced blood flow to that organ), which is one of the greatest dangers you face. So how does nutrition help to offset this effect caused by your extreme aerobatic maneuvers?

You want to avoid "glycemic plunges" because a drop in blood sugar makes you very sensitive to g-loading. It is safest to stick to several small meals since larger meals cause your blood to pool in your stomach, making it less available throughout your body. Each meal should include a protein and a carb. Examples include chicken and brown rice, salmon and quinoa, and sliced apples with almond butter. The carbohydrates will give you energy and fuel, while the protein slows down the digestion. What you are looking for is consistent blood sugar levels.

You might hear that top air show performers "carb load" right before a performance, having such things as pan-



cakes and syrup or high-sugar energy bars. Remember, they are in the air for a short time. The quick release of simple carbs into their system gives them extreme alertness and energy, but their blood sugar will fall within an hour or less. By that time, they are on the ground. I am sure they have this down to precision timing. For the rest of us, it is better to stick to well-balanced small meals spaced two to three hours apart on a day that we will be flying.

Of course, overall fitness is something to practice every day to bring out the best in you. Eating high-quality food on a daily basis will make a significant difference in your ability to withstand the effects of aging and increase the time you can keep flying safely. Diet is directly linked to mental alertness and reaction time. Start with being conscious of what you put in your mouth every day. This does not mean you have to live on celery and water. Quite the opposite. Real, whole food that is nutrient dense is delicious and anything but boring.

Here are 10 simple things to keep in mind when making healthy choices:

- 1) Choose real food, which is often found on the perimeter of the grocery store. Think about it. What is on the perimeter? Dairy; fish, meat, or chicken; and vegetables and fruit. The stuff in the middle, the stuff in boxes, probably is loaded with sodium or sugar or both.
- 2) Choose one ingredient and add spices and different ways of cooking it. Focusing on bringing out the flavor of one main ingredient is a much simpler way of eating. Simpler often equals healthier. For instance, if you start with chicken and add ginger and other spices, then add some brown rice and a vegetable such as asparagus or broccoli. Keep it simple.

- 3) In the grocery store, buy meat at the butcher section, fish at the seafood counter, and the grains at the bulk food center. This is where you will get the best quality. Do not choose those that are pre-made or added to. Get plain salmon, not salmon rolls that have a lot of additives and fat added, for instance.
- 4) Buy organic when prices are not outrageous. Buy local when it is available. Berries are one of the best things you can eat. They are great when added to yogurt, oatmeal, or salads. Blueberries make a great munchie snack. They also keep your blood sugar levels even. However, their thin skins soak up pesticides, so if you have to pick one thing to buy organic, make it berries.
- 5) Only buy food that you can pronounce. If it sounds like a chemical, it probably is. Your body has trouble recognizing substances that alter the chemistry of natural food, which can cause digestive issues as well as fat stores and possibly more serious diseases. Did you know that there are some "diet" foods that our body sees as having the same chemical breakdown as plastic? These chemicals get stored in our organs and fat.
- 6) Avoid the white stuff—white flour, white sugar, and white pasta. There is not much nutritional value in any of these. This is the stuff that gives you instant energy, spikes your blood sugar levels, and then crashes. This sets you up for a vicious cycle. These are not healthy for someone who wants to tolerate high g-loads and fast acceleration in the air.
- 7) Eat more things that grow from a plant. Research has shown that eating more vegetables, beans, and things that grow from a seed are good for the heart. Your cardio system is the head honcho when it comes to overall fitness, so any foods that promote a healthy heart are worth stocking up on.

- 8) Eat at home more often. When Sean D. Tucker is on the road, we are told that he gets a hotel room with a kitchen so he can cook his own food. Preparing your own food allows you more control over what you are putting in your mouth. Many of my clients lose considerable weight just by making this one change in their lifestyle.
- 9) Increase flavor with herbs and spices instead of sauces, sugar, butter, and salt. This means if you buy frozen vegetables, don't get the ones in sauces. Explore the power of spices to flavor your food. They often have great health qualities without the downsides that sugar, butter, and salt have.
- 10) Slow down and enjoy your food. The opposite of fast food is exactly this. Be conscious and in the moment when you are eating. This means eating with a purpose and enjoying each bite. Don't eat in your car or on the run. Think slow food, slow eating, and enjoy!

Being a pilot has a fitness element to it. Being a fit pilot is important, and being a fit aerobatic pilot is even more important as there is a definite athletic component to your craft. Eating healthy and remaining fit will increase your tolerance to the physiological effects of aerobatics as well as increase your ability to think quickly and react quickly when your life depends on it. IAC

Cyndi Allard, M.Ed., is a health coach and personal trainer certified by the American Council on Exercise, and she is the founder of Fit 2 Fly, an organization dedicated to helping pilots stay fit and keep flying. For more information, visit www.Fit2Fly.org or contact Cyndi via her Facebook page at www.Facebook.com/ cyndi.fit2fly.

CONTEST CALENDAR



Mark your calendars for these upcoming contests. For a complete list of contests and for the most up-to-date calendar, visit www.IAC.org. If your chapter is hosting a contest, be sure to let the world know by posting your event on the IAC website.

Sebring Fall (Southeast)

Thursday, November 3 – Saturday, November 5, 2016

Practice/Registration: Saturday, October 29 - Wednesday, November 2

Rain/Weather: Sunday, November 6

Glider Categories: Sportsman through Unlimited

Power: Primary through Unlimited Location: Sebring Regional Airport (SEF): Sebring, FL

Region: Southeast

Contest Director: Don Hartmann

Phone: 561-644-1312

E-Mail: donchartmann@yahoo.com

Tequila Cup (Southwest)

Thursday, November 3 - Saturday, November 5, 2016

Practice/Registration: Tuesday, November 1 - Thursday, November 3

Glider Categories: Sportsman through Unlimited

Power: Primary through Unlimited Location: Marana Regional Airport (AVQ): Marana, Arizona

Region: Southwest

Contest Director: Mark Matticola Phone: 719-440-1965

E-Mail: mark.matticola.1@us.af.mil

Don't Miss Out on an IAC Content Get it delivered to your inbox!

If the IAC doesn't yet have your e-mail address, you're missing out on a valuable part of your membership. In The Loop, our e-newsletter packed full of essential information and interesting stories, will be e-mailed to you every month. You also can update your address, phone number, and more, all in one convenient place. Do it all right here:

https://secure.eaa.org/apps/joinrenew/address.aspx

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION (Required by 39 U.S.C. 3685). 1. Title of Publication: Sport Aerobatics. 2. Publication No.: 0953-560. 3. Filing Date: 10/1/15. 4. Issue Frequency: Monthly. 5. No. of Issues Published Annually: 12. 6. Annual Subscription Price: \$18.00 in U.S. 7. Known Office of Publication: EAA, 3000 Poberezny Road, P.O. Box 3086, Oshkosh, WI 54903-3086. Contact Person: Randy Halberg, Telephone: 920-426-6572. 8. Headquarters or General Business Office of the Publisher: Same address as above. 9. Publisher: Jack Pelton, EAA, 3000 Poberezny Road, P.O. Box 3086, Oshkosh, WI 54903-3086. Editor: Reggie Paulk, c/o EAA, 3000 Poberezny Road, P.O.Box 3086, Oshkosh, WI 54903-3086. Managing Editor: None. 10. Owner: International Aerobatic Club, 3000 Poberezny Road, P.O. Box 3086, Oshkosh, WI 54903-3086. 11. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amounts of bonds, mortgages, or other securities: None. 12. Tax Status: Has Not Changed During Preceding 12 Months. 13. Publication Title: Sport Aerobatics. 14. Issue date for circulation data below: October 2016. 15. Extent and Nature of Circulation (Average No. Copies Each Issue During Preceding 12 Months/ No. Copies of Single Issue Published Nearest to Filing Date): a. Total No. of Copies Printed (4501/4572) b. Paid Circulation (By Mail and Outside the Mail): 1. Mailed Outside-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies) (3458/3732). 2. Mailed In-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies) (o/o). 3. Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS (435/452). 4. Paid Distribution by Other Classes of Mail Through the USPS (e.g., First-Class Mail) (13/16). c. Total Paid Distribution (Sum of 15b (1), (2), (3), and (4)) (3906/4200). d. Free or Nominal Rate Distribution (By Mail and Outside the Mail): 1. Free or Nominal Rate Outside-County Copies Included on PS Form 3541 (0/0). 2. Free or Nominal Rate In-County Copies Included on PS Form 3541 (0/0). 3. Free or Nominal Rate Copies Mailed at Other Classes Through the USPS (e.g. First-Class Mail) (o/o). 4. Free or Nominal Rate Distribution Outside the Mail (Carriers or other means) (o/o). e. Total Free or Nominal Rate Distribution (Sum of 15d (1), (2), (3), and (4) (0/0). f. Total Distribution (Sum of 15c and 15e) (3906/4200). g. Copies Not Distributed (See Instructions to Publishers #4 (page 3)) (595/372). h. Total (Sum of 15f and g) (4501/4572). i. Percent Paid (15c divided by 15f times 100) (100/100). 16. Publication of Statement of Ownership: Publication required. Will be printed in the October 2016 issue of this publication. 17. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties). Manager: Patricia Deimer-Steineke, 10/1/2015. PS Form 3526, July 2014.

MEET A MEMBER

BY BRETT HAHN



Kathy Howell

Kathy Howell, IAC Chapter 26 Major Achievement Award Winner AirVenture 2016

Kathy Howell, EAA 847137 and IAC 433829, holds dual roles, serving as the vice president and secretary of IAC Chapter 26 for the past seven years. She volunteers as a registrar and contest coordinator while mentoring the next generation of chapter volunteers.

Kathy single-handedly created the infrastructure for, started, and managed the first Young Eagles event for IAC Chapter 26. She spearheaded an effort to help

her chapter reach out to the City of Delano to create a positive relationship. Kathy helped put on Aerobatics Judges' Camps, which include actual flight exercises for participating judges. She is an award-winning Advanced aerobatic pilot, as well as a NASA engineer and flight test coordinator.

"Kathy is the go-to person at IAC Chapter 26 and has dragged our chapter kicking and screaming into meticulously planned and expertly executed chapter events," said Tim Just, IAC Chapter 26 president.





FLYMART



Located At Lee Airport Annapolis, Maryland

Aerobatics & Spin Training

Pitts Sighting Devices BILL FINAGIN

Hangar 410-956-0047 Fax 410-263-4693

Home 410-263-2740 E-mail wbfinagin@cs.com

* AcroBelt *

5-Point Ratchet Seatbelt System Customized To Fit Your Aircraft Details at:

www.SilverParachutes.com plus

- . Largest Dealer for Softie Parachutes
- · Great Deals on New & Used Parachutes
- S.M.A.K. PAK™ Parachute Survival Kits
- Bailout Safety Seminars Worldwide

Silver Parachute Sales & Service Phone: 209-532-7070 Email: Allen@SilverParachutes.com **CLASSIFIEDS**

AIRCRAFT

2000 Sukhoi SU 31 for sale, Very low hours The best one in the world! Please call Pete Shepley for details and price:520-906-0770



Sharp Pilots Need Sharp Vision



LuxVite Naturals Vision Protect™ is created by an eye surgeon and pilot to promote eye health with ingredients for macular protection.

www.LuxvitePilot.com 855-LUX-VITE (855-589-8483)

Special offer: Buy one get one free with coupon code DOCTOR2015



www.experimentalexhaust.com

SMOKE SYSTEMS & OIL

419-360-7414 WWW.SMOKE-SYSTEM-HELPER.COM

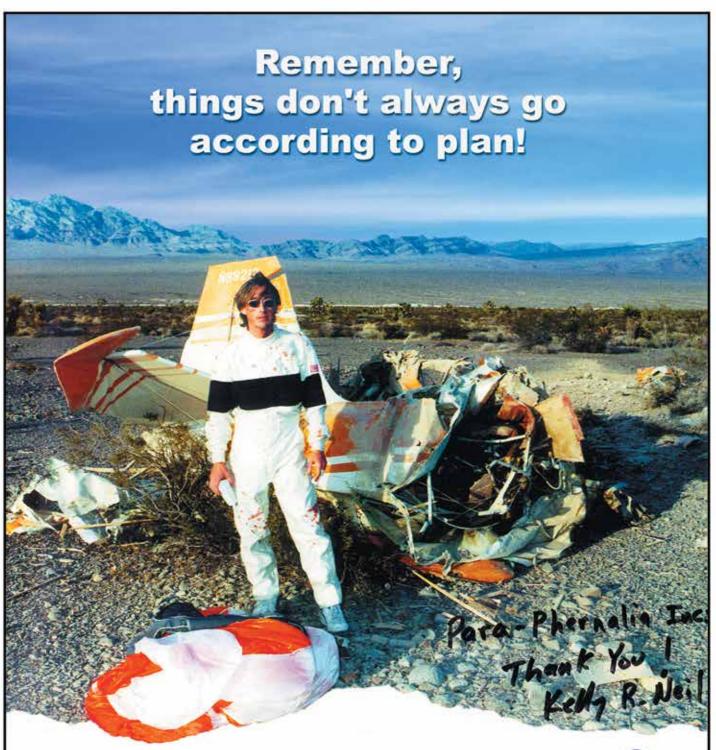


Stay connected with IAC's member benefits, and the world of aerobatics on the web, in our e-newsletter!

To subscribe: www.EAA.org/newsletters

ADVERTISERS' INDEX

ADVERTISER	PAGE	WEBSITE/EMAIL	PHONE
Dent-Air, Ltd	. 32	www.WBFinagin@cs.com	.410-263-2740
EAA/Falcon Insurance	BC	. www.eaalowerrates.com	866-647-4322
Experimental Exhaust	32	.www.experimentalexhaust.com	-888-283-3775
Ford Motor Company	. IFC	www.Ford.com	800-392-3673
Harvey & Rihn Aviation Inc	. 31	www.HarveyRihn.com	. 281-471-1675
IAC In The Loop	. 32	www.IAC.org	
IAC Merchandise	. 19 & 27	www.eaa.org/shopIAC	800-JOIN-EAA
LuxVite Naturals Vision Protect	. 32	www.luxvitepilot.com	355-589-8483
Para-Phernalia	. IBC	www.SoftieParachutes.com	360-435-7220
Plus 5 Aviation, LLC	. 25	www.Airbum.com	.602-971-3991
Silver Parachute	. 32	www.SilverParachutes.com	209-532-7070
Smoke Systems	32	.www.smoke-system-helper.com	419-360-7414
TransWorld Aero	23	.www.transworldaero.com	661-206-8301



At Para-Phernalia we are very proud that Softie parachutes were instrumental in saving four lives in 1999.



Toll Free: 800-877-9584

Intl: 360-435-7220 Fax: 360-435-7272

www.softieparachutes.com





Introducing the EAA & IAC aircraft insurance plan with all of the special coverage IAC Members require for recreational aerobatics, aerobatic competition and practice, airshow performances and aerobatic flight schools. When you insure your airplane with the EAA Aircraft Insurance Plan you are supporting IAC.

Get your quote at **EAALowerRates.com** or call us toll-free at 866-647-4322.

Aircraft
Insurance

Standard Category | Vintage | Aerobatics | LSA | Homebuilts | Warbirds | Sea Planes | Powered Parachutes & Trikes | Gliders | Helicopters