

JUNE 2019

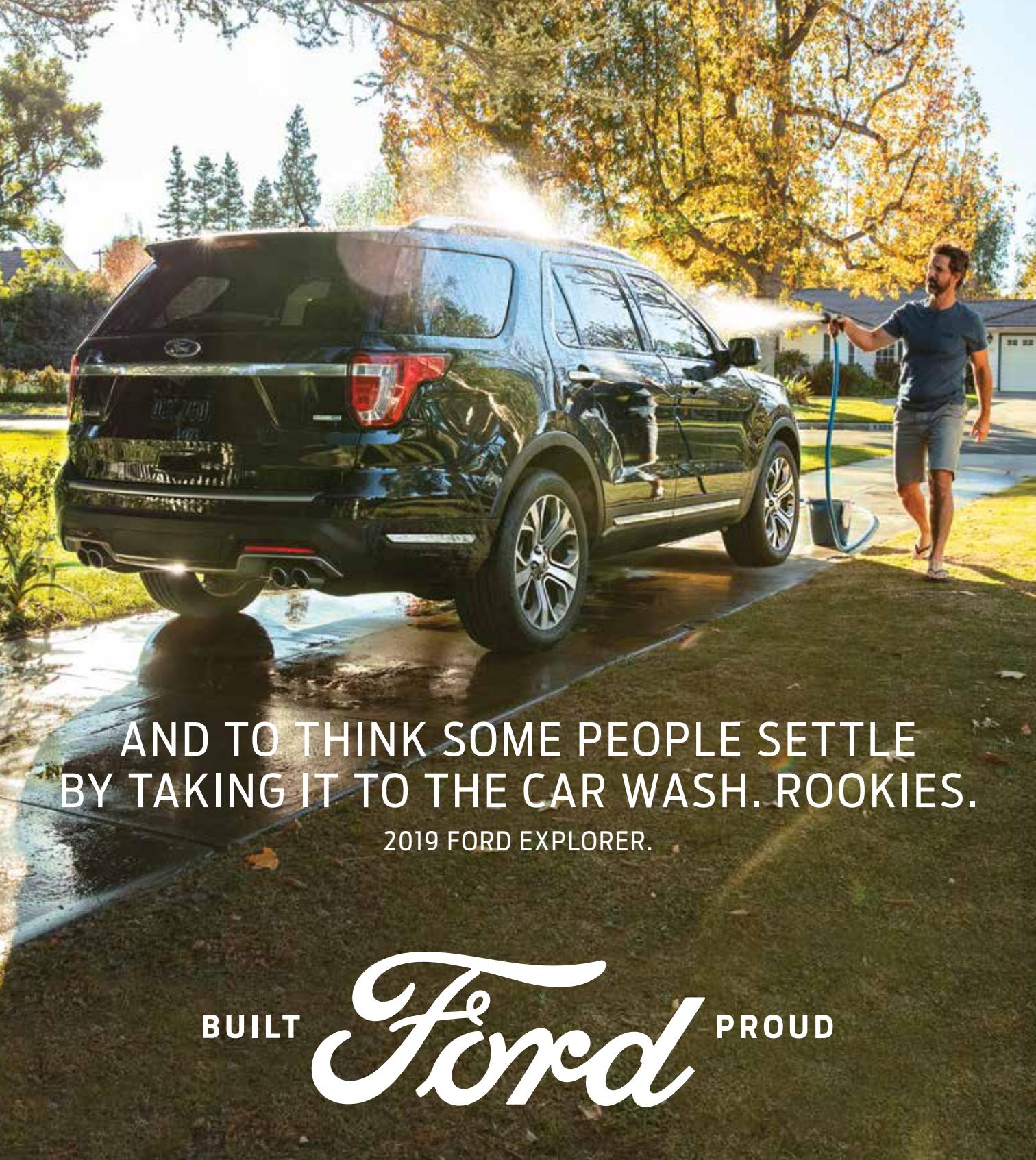
SPORT *Aerobatics*

OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB

- DEPARTING LEVEL FLIGHT
- TRANSITIONING TO A PITTS



The Basics



AND TO THINK SOME PEOPLE SETTLE
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COVER



On the cover: Charlie Sikes sets a vertical line in N80003 at the 2017 U.S. Nationals in Oshkosh, Wisconsin.

Photo by Evan Peers.

Above: Greg Howard in his Giles G-200 will perform during Monday's AirVenture air show following a flyby of various G-200, G-202, and MX aircraft.

Photo by David Schultz.

The Quiz

BY JONATHAN APFELBAUM, IAC 433983



- 1** This well-known aerobatic aircraft technically has forward-swept wings and its airfoil was designed by renowned aerodynamicist John Roncz.
- 2** How many MX5s and MX2s were built by the original MX Aircraft Co., and how many variations exist?
- 3** Where was/is the MX built?
 - a.) North Carolina
 - b.) Oregon
 - c.) Australia
 - d.) All of the above
- 4** What was the first United States military aviation display team?
- 5** What was the first U.S. Air Force aviation display team?

LOOK FOR THE ANSWERS ON PAGE 23

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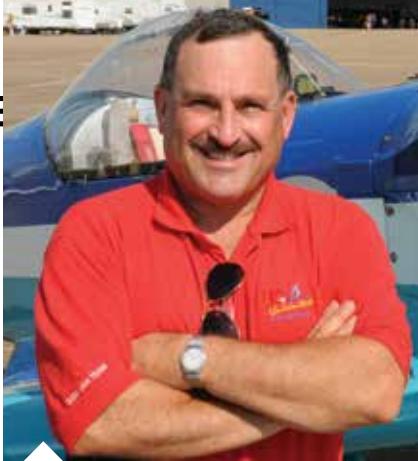
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The Business Side of IAC

BY ROBERT ARMSTRONG, IAC 6712

GREETINGS, IAC MEMBERS!

Spring is officially here, and your board of directors held its annual spring meeting in Dallas, Texas, April 30-May 1. The agenda was interesting with several reports presented that represent a direction that I am proud to see IAC going in.

First, the board of directors is all looking in the same direction — to a better future. This is reflected in the discussion and voting by board members. Earlier this year, we announced the selection of the new U.S. National Aerobatic Championships location, which was approved by a special meeting following the fall board meeting. Nationals planning is progressing at the appropriate rate, and all indications are that it will be an event to make all members proud. It is wonderful to hear reports regarding how well the event is coming together. Contest director and board member Ron Schreck is setting a stage that we hope to carry forward for many years to come. There will be several changes with this Nationals that were decided by the board. The first was my request to waive a section of the *IAC Policy & Procedures Manual* that dictates the manner of scoring. I have had input from many members, as well as input

from board members and our technical committee volunteers, concerning the methods used and the ensuing results. The board voted to use the JaSPer scoring system at the 2019 U.S. Nationals. We will continue to capture all the required information to produce the RI (ranking index) that is required to establish CIVA judge qualification. This will remove some animosity and frustration from pilots and judges alike.

The other event that occurs at Nationals and is under continuous review is the method we use for team selection. This year we will be selecting a field of Advanced pilots to compete in 2020. The board's discussion was open, and several ideas were presented. The decision was made to select a field of seven, leaving one position open. The team and team management will have the task of filling the final position and any vacancies that occur based on the needs of the team as a whole. This is not considered to be a final method for team selection, but is the first step toward finding better ways to produce a team that can work together and produce our best chance at success.

One of the hurdles that our U.S. Aerobatic Teams have is money. This is not a new issue — not much has changed from the 1990s when I first ventured into this arena. Well, there is now some action on the horizon. A board member has now started exploring the establishment of an endowment fund to help fund U.S. Aerobatic Team activities. This is not something that will be happening tomorrow, but it is a promising plan for the future.

With the separating of the rules and sequence committees, we were in need of selecting a rules committee chair as well as adopting the new *Policy & Procedures Manual* sections that describe the responsibilities of these positions. The task force that was compiling the 2019 rules earlier

this year found a number of functional and readability issues in our rulebook. A team of board members and volunteers reviewed the rulebook and created a very comprehensive report that was presented to us this spring. This group was not looking to change rules, but rather to make our rulebook work better for us. The group evaluated the language that, when incorporated into the *Policy & Procedures Manual*, will make the responsibilities and expectations for the sequence and rules committee chairs transparent.

The group's report showed how the rulebook can be adjusted to make it more user-friendly — and reduce the size. The board voted to continue this project, and the first objective will be to reduce the size. There will be a new numbering system to make navigation easier, and removing redundant wording, without changing any of the rules, will reduce the size by as many as 50 pages. This is before any rules revision.

There were other committee chair reports and changes to some committee leadership, all of which are reported in the news section of this issue.

Following the fall board meeting I had assumed the position of U.S. CIVA delegate. This was listed as an interim position, with the idea that the pilots who represent the United States in international events select a delegate that will complement the team members. To this end, the board has selected Mike Gallaway as delegate and Duncan Koerbel as alternate. These gentleman will represent the interests of the United States in CIVA meetings and events.

The full agenda is available on the members area of the IAC website, and the draft minutes will be posted in the future.

Fly safe! **IAC**

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

► TOP STORY

Highlights From the 2019 Spring IAC Board Meeting

BY LYNN BOWES, IAC SECRETARY, IAC 14305

THE IAC BOARD OF DIRECTORS met for the spring board meeting in Dallas, Texas, April 30-May 1, 2019. Below are the high points of the meeting. You can expect the official draft meeting minutes to be published on the IAC website soon. Please watch our Facebook page for the link.

OPEN PROGRAM AND COMMITTEE CHAIRS AND FILLING A DIRECTOR POSITION

Several open positions were filled at this meeting. Open chairs were the new rules chair and sequence chair — both of which were created when the rules committee was separated into two areas of responsibility — the safety committee chair, the Achievement Awards chair, and the webmaster. Approved and appointed are rules chair Doug Sowder and the sequence committee chair Michael Lents. Brittany Nielsen left the Achievement Awards chair position to pursue her doctorate, and two people wishing to be co-chairs stepped up. Those co-chairs of the Achievement Awards program are Dave Watson and Brittanee Lincoln. Also leaving his position after many years is DJ Molny who has been our webmaster. He is leaving that position in the capable hands of Brennon York. Keith Doyne was appointed safety chair, and he is a great addition to our programs. Thank you to all of these folks for volunteering!

During the spring board meeting, director and former IAC President Gerry Molidor offered his resignation to free up time for his work with the Phillips 66 Aerostars. Gerry was a Class IV director, one of two who are appointed by the board of directors as set out in the bylaws. After discussion, the board appointed Justin Hickson of Chapter 78 to Gerry's position. Justin has attended two board meetings as an IAC member and not only has been active in his local chapter but also has been helping with EAA AirVenture Oshkosh planning. He is welcomed by all directors, and we look forward to working with Justin.

IAC President Robert Armstrong also revisited the discussion from earlier in the year that he was appointed as the interim CIVA delegate with Debby Rihn-Harvey as the alternate delegate. He and other board members had discussed and held calls with his proposed permanent replacement in the weeks prior to the spring board meeting. The newly appointed CIVA delegate is Mike Gallaway, and the alternate delegate will be Duncan Koerbel. Both have attended CIVA meetings over the years with Duncan having attended the meeting last fall to present his request for the World

Advanced Aerobatic Championships 2022 to be held in Jean, Nevada. Both are active and respected members of the IAC and will serve us well at CIVA plenaries.



Justin Hickson, Director



Dave Watson and Brittanee Lincoln, Achievement Awards Co-Chairs



Doug Sowder, Rules Chair



Gerry Molidor (left) with the Aerostars.



Brennon York, Webmaster



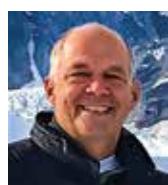
Keith Doyne, Safety Chair



Michael Lents, Sequence Chair



Mike Gallaway, CIVA Delegate



Duncan Koerbel, CIVA Alternate

2019 U.S. NATIONALS SCORING PROGRAM

President Robert Armstrong stated that our purpose at the U.S. National Aerobatic Championships is to select a champion in each category, Sportsman through Unlimited, and with that purpose in mind, he and others believe that our JaSPer scoring program can do that efficiently, simply, and accurately. We point to our regional events where the simple and effective JaSPer is used for scoring.

There was discussion that we would not get the information needed for our international judges to receive their judge rank index (RI), which is necessary for international competition judging and which ACRO provided. For the RI to be calculated, the workaround will be that the raw data be entered at a later time using ACRO for that purpose only.

After weighing the opinions of all directors, the motion was made to waive *IAC Policy & Procedures Manual* Section 222.3.2 and to use the JaSPer scoring program at the 2019 U.S. Nationals as long as we get our judges qualified for international competition by using the raw data to produce the judge rank index.

Further, there was a motion to change the language of the *P&P* to remove reference to ACRO scoring program and to use the JaSPer scoring program. Jim Bourke has agreed to do that work – thank you, Jim.

2019 U.S. NATIONALS ADVANCED TEAM SELECTION PROCESS

Doug Bartlett began the discussion by questioning what happens if a team candidate – potential or declared – has a broken airplane or a family issue that keeps them from competing or finishing at the U.S. Nationals where team selection is to take place. That person would have been a great team member but wouldn't make the team due to circumstances beyond their control.

Several scenarios were discussed, keeping the goal in mind – to field a winning team. The decision was made by motion that at the 2019 U.S. Nationals one team member slot will be left open at the end of team selection, which remains by score and rank at Nationals. The remaining team member will be determined by the vote of the team, meaning seven team members will be selected by score and one by appointment at a later date.



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RULE BOOK TASK FORCE

Jim Bourke made an excellent presentation of his work and that of his rule book task force, and he took on no small feat! His task force was Peggy Riedinger, Dave Watson, Tom Myers, and DJ Molny. The directors and officers listened to membership and believe that it is everyone's desire to make the *IAC Official Contest Rules* simpler, more concise, and clearer in meaning. To remove ambiguity and reduce the number of pages will take time, but we are confident that in handing off his work to the new Rules Committee Chair Doug Sowder, we will find the rule book in much better shape in the coming year.

LEGACY CLASSIFICATION

The final big ticket item for discussion was the suggestion of a new classification for former competitors. Mike Rinker and Debby Rihn-Harvey presented the idea of a competition classification for former Advanced and Unlimited pilots who still want to compete but in a way not to discourage lower classification pilots by competing directly with them at regional events.

These Legacy pilots will not be regular Advanced and Unlimited pilots simply wishing to move down, and the first flight always is a qualification flight. Since they will be allowed a lower floor (656 feet), they will fly the Intermediate sequences but be intermingled with the Advanced category during competition.

In the beginning, this is only a provisional classification addition meaning that after our 2019 contest season is complete, the board will gather input from the chapters that added this Legacy classification to their regularly

scheduled categories. The board will then review what worked, what didn't, and where the classification can go from here. There will be more information on this classification coming, but contest directors should be aware that they must request this be part of their sanctioning request prior to their events.

Again, please watch the IAC Facebook page for information on the draft minutes of the spring meeting published in the Governance Documents section of www.IAC.org.

Call for Rules Changes, Deadline July 1



AS AN INTERNATIONAL

AEROBATIC Club member, you are encouraged to submit your ideas for rule changes, additions, or deletions at any time. July 1, 2019, is the deadline to submit proposals for the 2020 contest year. The rules committee will meet after this deadline and publish its recommendations to the membership for comment.

The IAC board of directors will then vote on each proposal at the fall IAC board meeting.

Complete instructions and the necessary form can be found at www.IAC.org/propose-rule-change.

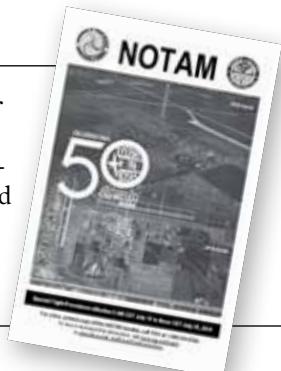


AIRVENTURE NOTAM RELEASED

THE EAA AIRVENTURE OSHKOSH 2019 notice to airmen (NOTAM) is now available for download at www.EAA.org/notam and is essential reading for pilots planning to fly to the convention. It outlines all arrival/departure procedures, radio frequencies, Wittman Regional Airport details, and much more.

Although many of the procedures are similar to previous years, there are updates in nearly every area to enhance safety, efficiency, and convenience for the thousands of airplanes expected at the World's Greatest Aviation Celebration.

The NOTAM is in effect from 6 a.m. CDT July 19 to noon CDT July 29, 2019.



AirVenture Schedule

EAA AIRVENTURE OSHKOSH GETS underway in just one month, from July 25-28, 2019, and the International Aerobatic Club will be there, front and center. The IAC Pavilion, located at show center adjacent to Boeing Square, is the headquarters for everything aerobatic, and will be open from 8 a.m. to 7 p.m. daily.

Informative and educational forums will be held during the weekdays. Seminars will take place on the deck — the Vicki Cruse Educational Pavilion — from Tuesday through Friday starting each morning at 8:30 and concluding just before the afternoon air show begins. Check out the full schedule to find the topic you are interested in on the IAC website or in the AirVenture Events Guide.

Premium aircraft parking is available for aerobatic airplanes in the grass just in front of the IAC pavilion. To register in advance, see www.IAC.org, and be sure to pay

close attention to this year's AirVenture NOTAM, including instructions for routing you to the IAC parking area.

And, don't miss the IAC's exhibition celebrating the 25th anniversary of the Giles G-200 airplane.

There's something for all. Visit <https://www.IAC.org/2019-air-venture-iac-exhibition> for complete details.

FORUM SCHEDULE UPDATE

Please note the following change since the previously published forum schedule:

- Doug Vayda from Southeast Aero will talk about the Extra line of airplanes at 11:30 a.m. on **Wednesday, July 24**.
- Michael Church will talk about how to fall with style — in a spin — on **Thursday, July 25**, at 8:30 a.m.



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ROLL WITH US!



2019 U.S. NATIONAL AEROBATIC CHAMPIONSHIPS

Info Bulletin No. 2

BY RON SCHRECK, CONTEST DIRECTOR, IAC 433751, AND DUNCAN KOERBEL, ASSISTANT CONTEST DIRECTOR, IAC 437649

OUR NATION'S AEROBATIC CHAMPIONSHIP is three months away as the aerobatic season swings into full gear. We are on track to host what we hope will be the biggest U.S. Nationals in years at Salina, Kansas.

AJ Hefel is trekking back and forth from his home base to the Salina airport to help the Salina Airport Authority survey and mark the box for this year's competition. The move to Salina will bring a much more visual box for the pilots than the Wittman Regional Airport layout — on the other hand the nearest body of water to orient oneself with is a long way away. The y-axis is lined up with Taxiway Delta, and the x-axis is right down the middle of Runway 18/36. This also will offer great viewing for our pilots, their families, and visitors. We will erect bleachers along Hangar 606 for friends, family, and fans to enjoy the flying.

The Salina Airport Authority has offered to pour permanent cement markers if we return in 2020. My thanks to AJ for making sure we are 1,000 meters by 1,000 meters well ahead of time.

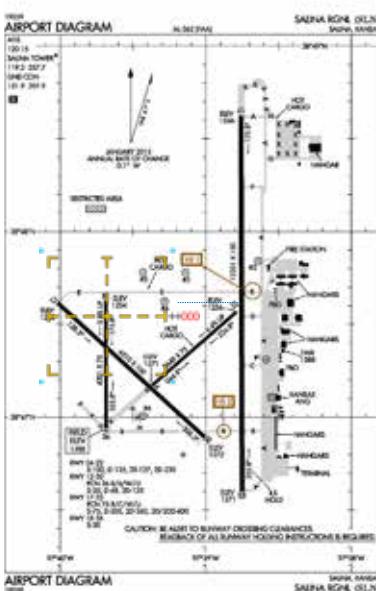
A shoutout as well for 2018 Advanced champion John Ostmeyer. John drove from Kansas City to Oshkosh to pick up our Nationals equipment, delivered it to Salina, and then drove back to Kansas City. Guess he didn't know that job came with winning first place!

I noted in my last update that coming to Nationals will make you a better pilot. Part of that is flying in front of a full panel of judges. We have volunteers for two of the chief judge positions and are working to fill out the balance of the panel. These people volunteer a full week of their time to support Nationals. I am grateful for their commitment to our sport — that's the only way the International Aerobatic Club works: our volunteers.

Some people have wondered how Salina was selected. A search committee was formed as has been previously reported by our president, Robert Armstrong. What you might not know was that there were 44 airports on the initial list. Primary considerations for hosting the U.S. Nationals included location, weather, viable airspace, airport facilities, hotel and restaurant infrastructure, and financial factors. Using IAC Chapter 12 relationships we enlisted 20 students from the MSU Denver Department of Aviation and Aerospace Science to research recent weather to provide an index of probability for flyable weather in September. Combined with initial feedback from IAC members and airport leaders' responses, the list of 44 was narrowed down to 10, five, and then three. Visits were made to the final three airports in Great Bend, Kansas; Lawrence, Kansas; and Salina. Salina was the clear winner in providing the right combination of infrastructure, airspace, and airport management support. The Salina Airport Authority and supporting community have been wonderful to work with, and we look forward to a great event.

Salina is a small city located on Interstate 70 and is about 60 percent of the size of Oshkosh. It was founded in 1858 and hosted wagon trails to Denver, cattle trails, and the Kansas Pacific Railroad. It opened the Smoky Hill Army Airfield in 1943 to support World War II; it became Schilling Air Force Base to support the Cold War as part of SAC. Salina hosts numerous Tier II hotels and restaurants; a list of lodging options can be found at www.IAC.org/nationals-2019-lodging-camping.





If you arrive via Kansas City you can visit some of the best barbecue restaurants in the United States. Think about adding this to your agenda as we hope to give you a little extra time by getting done on time or even early. If you are flying in from the south or southeast, make sure to swing low over Canton, Kansas, which is about 35 nm from SLN to check out the hot and cold water towers.

The schedule for this year is continuing to be optimized. Locked-in events and meetings are noted in the sidebar. We will update this on the website and in the next issue of *Sport Aerobatics* to round out the first plan on flights/categories. Our goal will be to fly when the sun is up and the weather is good to make sure we use everyone's time in the most efficient fashion. The first priority of our National Aerobatic Championships is to crown the winners in each category. We want *all* powered and glider competitors from Primary to Unlimited to get their flights in! For now, know that we will launch categories as best we can back to back versus calling it a day if we get done with the planned sorties.

I look forward to seeing you there! We're going to have fun! Don't miss it. **iac**

U.S. NATIONALS 2019 PRELIMINARY SCHEDULE

THURSDAY, SEPTEMBER 19

OPEN PRACTICE DAY

Time slots available on a first-come, first-served basis.

FRIDAY, SEPTEMBER 20

OFFICIAL PRACTICE DAY

Time slots can be reserved only after a competitor has paid their entry fee. Once payment for your entry fee is confirmed, you will be contacted by the box master to reserve your time slot. Please allow 24–48 hours for confirmation.

SATURDAY, SEPTEMBER 21

COMPETITION FLYING DAY

8 a.m.: Judge refresher training in the Hangar 606 second floor briefing room.

11 a.m.: Opening briefing for all competitors. First category after the briefing will be Advanced.

7:30 p.m.: Holiday Inn happy hour. Free snacks and cash bar.

SUNDAY, SEPTEMBER 22

COMPETITION FLYING DAY

7:30 p.m.: Welcome dinner.

MONDAY, SEPTEMBER 23

COMPETITION FLYING DAY

7:30 p.m.: Key volunteer group dinner at Martinelli's.

TUESDAY, SEPTEMBER 24

COMPETITION FLYING DAY

WEDNESDAY, SEPTEMBER 25

COMPETITION FLYING DAY

THURSDAY, SEPTEMBER 26

COMPETITION FLYING DAY

7:30 p.m.: Flight medal dinner at Martinelli's.

FRIDAY, SEPTEMBER 27

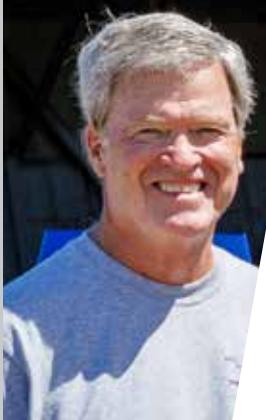
COMPETITION FLYING DAY

7:30 p.m.: Closing and awards banquet at the Rolling Hill Zoo conference center.

THE NEXT GENERATION OF AEROBATIC AIRCRAFT



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The Pull From Level Flight

A review of the basics

BY JOHN MORRISSEY, IAC 3238

WHEN HONING THE CRAFT of aerobatics, it can be helpful to occasionally revisit the basics used to create the segments of your maneuvers. One of the those basics is the pull from level flight when entering all 45-, 90-, and 135-degree lines as well as the looping segments of maneuvers in families 5, 6, and 8.

The basic premise is that any pull-up that departs level flight with even the slightest error in roll or heading will carry these errors into and throughout the maneuver. The basic skill set to be mastered is how to depart level flight "cleanly" with no roll or heading errors.

To accomplish the pull portion of the previously mentioned maneuvers, lock in to straight and level flight using aileron to control roll, fore/aft stick to control pitch, and rudder to control heading.

A word is now in order about the yaw that occurs during the pull. Due to gyroscopic force, the nose of your aircraft (if you have an American engine) will yaw to the right during all pulls.

This is not a typo.

When you learned to fly you were taught to control the left-turning tendency of your aircraft during a climb with right (correct) rudder; therefore, when one begins to explore all attitude flight during aerobatic training, your muscle memory will use right rudder during the pull-up. I have watched this during 41 years of aerobatic training. The more the nose yaws to the right due to incorrect right rudder, coupled with gyroscopic right yaw,

the more left aileron (the wrong control) will be used by the pilot to stop the right yaw. I have witnessed aircraft rolling as much as 90 degrees left during the 90 degrees of pitch to vertical flight for the hammerhead.

So, back to the pull. Assuming we are exactly straight and level with no heading error, begin the pull-up by looking straight ahead while deep focusing on the distant horizon. During the pull in a Pitts, keep the top wing parallel to the horizon for the first 20 degrees of pull with aileron. Maintain your heading by blocking the right yaw with left rudder. For monoplanes, keep the horizon level in the windscreens with aileron while maintaining heading with left rudder. This will ensure the pull-up gets started with no roll or heading error. Now remember, once the pull-up stops and the desired line is reached, the right gyroscopic yaw stops. At that point you will have to block the left-turning tendency with right rudder. That transition must be developed to be an automatic default skill set.

After the nose reaches a point about 20 degrees above the horizon there is no longer any useful information available to the pilot when looking straight ahead. All one can really tell at this point is whether it is day or night, clear or cloudy.

It is at this point that one of the basic rules of aerobatics comes into focus: Any time you can determine pitch, bank, and heading by looking down the centerline of your aircraft, use it.

So, as you transit approximately 20 degrees of pull, slowly turn your head 90 degrees to the left or right and establish a focal point and sight picture perpendicular to your flight path. You can choose either side. I look left as that is the direction of a hammerhead. Do not rapidly turn your head 90 degrees back and forth. This will put undue grinding on your cervical vertebrae and can lead to vertigo as well. Pick the sight picture on one side and stick with it.

You must learn to control roll, pitch, and heading at and beyond approximately 20 degrees of pull through approximately 110



Sighting device

degrees of pull by focusing 90 degrees to flight path. Do so, while controlling heading with rudder, by focusing on the distant horizon and adjust the wings to an angle appropriate for the maneuver that will look like 90 or 45 degrees to the judges. Your trainer will tell you when you are at these points.

Commit those sight pictures to memory.

The aileron will still control roll necessary to make your wing(s) parallel to the ground in a 45-degree line and parallel to the desired axis in a 90-degree line. Right rudder is used to control your heading when the pitching moment stops as you reach the 45- or 90-degree lines. When on the 90-degree upline, use your right rudder to block the left wing from dropping below the aim point on the horizon. Your trainer will tell you when the 90-degree line up (and down) looks vertical to the judges. Again, commit that sight picture to memory. As you continue up the 45- or 90-degree lines, right rudder will be required to block the nose from yawing left. Once the line has been established, the gyroscope no longer has a vote and you will need to block left yaw with right rudder.

A useful exercise to set, or reset, your muscle memory during a pull-up is the 45 up/down exercise. From straight and level with competition power over a straight road, make a 4g pull to 45 using the procedure previously mentioned. Hold the 45 line until you make a brisk push to level flight that will

Correction: How to Ground Loop Your Taildragger

THE INTERNATIONAL AEROBATIC CLUB has discovered that the “How to Ground Loop Your Taildragger” article (*Sport Aerobatics*, March 2019) has come full circle. It turns out that the original author is IAC member and former Canadian Unlimited Aerobatic Champion Lloyd Beaule, IAC 440260, who lives in Calgary, Alberta, Canada. The article was originally published 20 years ago and was recently picked up by the International Swift Association, which passed it to IAC member Wes Liu. It was then published in *Sport Aerobatics* and read by Lloyd, the original author. Lloyd is retired from competition but continues to teach aerobatics and tailwheel skills in Canada.

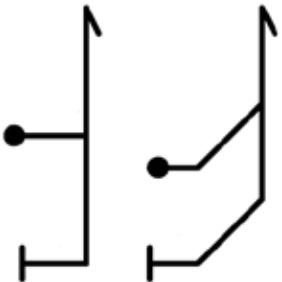
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Congratulations Susan Bell!
1st place - Sportsman Category
2018 U.S. National Aerobatic Championships

Family 5



produce an airspeed approximately 5 mph/knots above your 1g power-off stalling speed. Hold the level line on top for two seconds and push down to a 45-degree line. Hold it for about four seconds and make a 4g pull to level flight. Your exit altitude and speed should be the same as your entry altitude and speed. Use your rudder to block the nose from leaving the desired flight path over the road. You will notice that left rudder is needed during the pulls to and from the 45-degree lines, and right rudder is needed during the push to level flight and the following push down to the 45-degree line due to gyroscopic effect. One of the goals here is to create the rudder muscle memory you will need as you progress up through your categories of aerobatic competition. The other goal is to establish accurate 45-degree lines.

As you get further into perfecting the techniques for your pull-up you will learn there are two different techniques to be employed.

One is a pull-up from a level geometric plane to another geometric plane. The short nomenclature for this is a plane to plane pull. An example is the pull from a level plane to a 45-degree plane.

The other is a plane to radius pull, for instance from a level plane to a loop or a segment of a loop. These pulls use the same basic procedures but differing techniques.

In a plane to radius pull, the pitch rate decreases as the pull continues in order to maintain a sustainable/

constant radius (i.e., a loop). In looping maneuvers a constant radius must be maintained. Pitch rate is greatest when speed is greatest and least when speed is least.

In a loop your sight picture will change from the left, or right, lateral wing/horizon point at approximately 110 degrees of pull (20 degrees past the vertical) when we revert to rule one – tilt your head straight back to view the horizon down the centerline of the aircraft to obtain pitch, bank, and heading information. When you make this change in sight picture location, turn your head slowly straight forward and then tilt it back as far as possible to see the horizon down the centerline of the aircraft. Remember, no rapid movements of the head during this transition.

In a plane-to-plane pull, the pitch rate increases as speed decreases to produce the most energy/speed available at the beginning of the 45- or 90-degree line.

In both of these pulls, the rudder, aileron, and longitudinal stick basics apply.

Remember, in all pulls (and pushes) the rudder is used only to block the nose from deviating from desired heading.

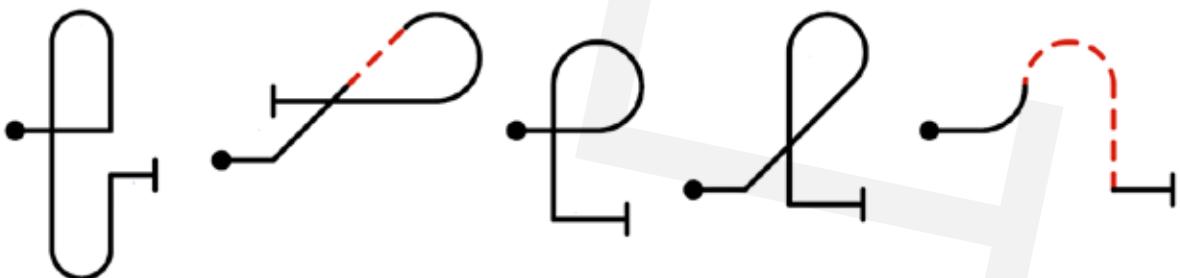
Developing this skill will not only enhance accuracy, and therefore the score of your maneuvers, but also help reduce drag due to flight in a yawed condition.

Drag is the enemy of speed. And speed is energy. **IAGT**

Family 6



Family 8



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2019 IAC Contest Season Calendar

DATES	HOST CHAPTER	NAME	REGION	LOCATION	AIRPORT
Mar. 28, 2019	89	Snowbird Classic	Southeast	Florida	X35
Mar. 29, 2019	25	Early Bird 2019	South Central	Texas	26R
April 12, 2019	36	Hammerhead Round Up	Southwest	California	Lo8
April 19, 2019	19	Mason-Dixon Clash	Northeast	Virginia	KFVX
May 3, 2019	23	Sebring 79	Southeast	Florida	KSEF
May 3, 2019	49	Duel in the Desert	Southwest	California	KAPV
May 3, 2019	24	Lone Star Aerobatic Contest	South Central	Texas	KBKD
May 18, 2019	61	Giles Henderson Memorial Challenge	Mid America	Illinois	KSLO
May 31, 2019	38	Coalinga Western Showdown	Southwest	California	C80
June 1, 2019	12	Ben Lowell Aerial Confrontation	South Central	Colorado	KAFF
June 6, 2019	3	Mark Fullerton Memorial 2019 Bear Creek Bash	Southeast	Georgia	KRMG
June 8, 2019	AC7	Killam Aerobatic Contest	Northwest	Alberta, Canada	CEK6
June 14, 2019	67	Apple Cup	Northwest	Washington	KEPH
June 14, 2019	58	Wildwoods Acroblast!	Northeast	New Jersey	KWWD
June 22, 2019	80	Midwest Aerobatic Championships	South Central	Nebraska	KSWT
July 12, 2019	35	Green Mountain Aerobatic Contest	Northeast	Vermont	KVSF
July 12, 2019	77	The Corvallis Corkscrew	Northwest	Oregon	KCVO
July 13, 2019	12	High Planes HotPoxia Fest	South Central	Colorado	KFMM
July 13, 2019	88	Michigan Aerobic Open	Mid America	Michigan	3CM
Aug. 3, 2019	78	Doug Yost Challenge	Mid America	Iowa	KSPW
Aug. 9, 2019	67	Can-Am Championship	Northwest	Montana	KCTB
Aug. 16, 2019	52	Kathy Jaffe Challenge	Northeast	New Jersey	KVAY
Aug. 16, 2019	AC3	Canadian National Aerobatic Championships	Mid America	Ontario	CNY3
Aug. 31, 2019	AC7	Rocky Mountain House Contest	Northwest	Alberta, Canada	CYRM
Sep. 6, 2019	67	Apple Turnover	Northwest	Washington	KEPH
Sep. 7, 2019	11	James K. Polk Open Invitational	Northeast	Virginia	KHWY
Sep. 21, 2019	-	U.S. National Aerobatic Championships	National	Kansas	KSLN
Oct. 5, 2019	5	The Clyde Cable Rocky Mountain Aerobatic Contest	South Central	Colorado	KLAA
Oct. 11, 2019	36	Akfifest	Southwest	California	Lo8
Oct. 11, 2019	19	Mason-Dixon Shoot Out	Northeast	Virginia	KFVX
Oct. 18, 2019	107	Texas Hill Country Hammerfest	South Central	Texas	KAQO
Oct. 19, 2019	12	Las Vegas IAC West Open Championship	South Central	Nevada	ol7
Nov. 1, 2019	23	Sebring 80	Southeast	Florida	KSEF
Nov. 1, 2019	26	Foxy Figures	Southwest	California	KWFJ
Nov. 15, 2019	62	Tequila Cup	Southwest	Arizona	KAVQ

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Photo by Art Eichmann





MISS AMERICA

Originally built as an S-1S by George Stock in 1976 – and after new wings, fuselage, and engine, then sitting idle for several years – Renee Brilhante, IAC 436022, bought and brought what is now an S-1D back to life in the Sportsman category at Chapter 89's Snowbird Classic contest this March in Dunnellon, Florida.





A Pitts Transition

BY MICHAEL WYNN, IAC 437625

I SHOULD START OUT by saying that I am a semi-elderly, low-time pilot and am very susceptible to airsickness. You might well ask why I want to fly a Pitts at all. I guess it all started when I was flight testing the RV-8 that I spent 10 years building. Aerobatic flight during initial flight testing is required if you ever want the aircraft to be able to do aerobatics in its lifetime. Since the last time I had done any aerobatics was back in the late 1970s (and I have vivid memories of the vertigo lasting days) I took myself down to Sean D. Tucker's school in King City, Tutima Academy of Aviation Safety, and signed up for the aerobatic performance training course. I got through about four days before I was so dizzy I couldn't really function. About a month later, the spinning having stopped, I was (sort of) ready to do the aerobatic flight testing in my RV-8.

After a few basic loops and rolls, I started expanding the envelope. I clearly remember being on the downline of my first successful hammerhead with this giant stick-eating grin on my face. I was hooked. It didn't take too long to figure out that having built my RV-8 as a cross-country machine, it was too heavy for any sort of serious aerobatics — not to mention missing inverted fuel and oil.

My friend Aaron and I started looking for an aerobatic biplane. He really wanted an Eagle, and we looked at several. We never really found a good one at a price we could afford. I was up visiting a friend in Coeur d'Alene, Idaho, last New Year's. I had seen an ad in Barnstormers for an S-1 in Spokane and thought I would go see it just for the heck of it. It was love at first sight. After a few weeks of head scratching and rationalizations, I bought the plane. It was ferried down to me once the weather in the Northwest cleared, and there I was, proud owner of a black and silver, 1977 factory-built S-1S Pitts. Then the question became how to learn to fly it without damaging the airframe or my frail old body.

I had spent three days the previous October with Budd Davisson in Scottsdale flying his S-2A in preparation for the Eagle we were hoping to find. My first thought was to go back there for a week and learn from the best. Budd has something like 6,000 hours instructing in the Pitts. If you ever have a chance to work with him, you will discover he is an encyclopedia of knowledge on the Pitts (and almost any airplane for that matter). He is also a very exacting taskmaster. The first and most important lesson he teaches is that





you have to be in complete control of the aircraft at all times. Those of us trained in Cessnas and Pipers are used to a forgiving airframe that really allows you to have sloppy stick and rudder skills. The Pitts is not like that. As Budd would say, it will do what you tell it to do — exactly what you tell it to do, and it will continue doing what you just told it to do until you tell it to do something different.

The first lesson was just flying around, doing turns and stalls and all those maneuvers one does to get used to a new airplane. I quickly learned that the airplane responds promptly to all control inputs. Any change in the throttle affects the yaw. Any roll input affects the yaw. Any pitch change affects the yaw. There were a lot of admonishments to feel my butt, look at the airspeed, and check my altitude.

The place most new Pitts pilots get in trouble is with landings. The airplane has a reputation for being very squirrely on the ground. Budd says that the airplane is not the least bit squirrely — but there are a lot of squirrely pilots trying to fly it. Among the really important Buddisms is that you have to fly a consistent approach to get a consistent landing. If you are 100 feet high when you start your turn in (that's a 10-story building high), you will either land long, land fast, or have to make a slipping correction somewhere during the time you should be setting up to land. So, downwind at *exactly* 1,000 feet AGL. Maintain 90 mph — *exactly* 90 mph. You pull the throttle abeam the numbers and start your turn. Keep the nose in the right spot to keep the speed at exactly 90 mph. Drop the outside wing for a moment to check final for unexpected traffic, and roll back into the turn.

Another important lesson I learned here is that of conservation of energy. At 1,000 feet and 90 mph you have a finite and consistent combination of kinetic and potential energy. As you pull the throttle and roll in, you start

converting the potential energy of altitude into the kinetic energy of velocity (mass staying constant). If you make unnecessary control inputs, are not coordinated, or are at all cross controlled, you quickly dissipate a substantial amount of your energy and end up short of the runway. Since every landing is practiced as a power-off landing (and simulates a loss of power situation), conservation of energy is crucial to consistent and safe landings.

Something I had never thought about before is that the Pitts (most models, anyway) has a symmetrical airfoil. That means that to generate lift, you need a positive incidence to the relative wind. If you lose the incidence, the lift stops — promptly. Where this is important is in the round-out and flare. You are coming down at a pretty steep angle in the S-2s. Once you start the round-out, you can hold the pitch up; you can increase the pitch, but you cannot ever decrease the pitch. If you do so and get past the point of positive incidence, the plane drops like a rock. So the technique is to gently round out to approximately a three-point attitude and then just hold the pitch angle and wait for the plane to settle. You can give a little more pitch to slow your descent just before touchdown but only if you are pretty close to the runway.

Another challenge in the landing for those of us used to conventional aircraft is that you can't see much of anything over the nose. You have to learn to watch both sides of the runway as they come up on the sides of the cowl, forward of the lower wing at first and then behind the wing after the flare. From those observations, you need to be sure you are centered on the runway and don't have either lateral drift or misalignment with the centerline. Budd teaches this first in taxi practice (harder than you might think) and then with the bounce and go. Basically, he has you fly the approach right to touchdown and then immediately give full throttle and go do it again.

The next really interesting challenge in the Pitts is the rollout. The airplane is *very* sensitive to rudder input while rolling along at speed. Once again, I had to learn to have very light feet. Budd's admonishment is to put in a





little control and then get off the pedal immediately, reevaluate, and respond appropriately. My tendency was to stay on the rudder way too long. That habit was difficult to unlearn. The trick here is calm, consistent, quick, minor corrections. The landing ends when the plane is stopped.

After five days and 10 flights with Budd, I had to go home as he had another student coming in. We had a debriefing to determine if I was ready to fly my S-1. I didn't think so, and neither did Budd. You are close, he said, but need more work. A good and honest assessment. Leaving one's ego at home is crucial to safety in flying this aircraft.

After returning to my home near Livermore, I tried to sort out how to proceed. Getting another week off work to go back to Scottsdale was not in the cards so I contacted the folks back at the Tutima Academy. They were more than accommodating. I started flying my RV-8 down once a week for two-a-day sessions with Yuichi Takagi. Yuichi is a fine aerobatic pilot and a very patient and encouraging instructor. Chelsea Stein Engberg, Tutima's chief operating officer, was pretty adamant that I review spin recovery in addition to the fine art of landing and departing. That made really good sense considering how quickly you can get an S-1 twisted up. So, in addition to lots of trips around the

pattern, we reviewed upright and inverted spins — where did I put that Dramamine?

The nice thing about flight training in King City is that the airport is not busy and is not towered. Yuichi and I could do 12 landings in 0.8 hours routinely. We landed with right-hand approaches, left-hand approaches, and straight-in approaches. The technique he teaches is very similar to Budd's. Pull the throttle abeam the numbers and turn in. Watch the airspeed. An added idea that Yuichi teaches is the aiming point. Aim the aircraft at a point about 30 feet in front of the runway threshold. At that point, you should be aligned straight down the runway and ready for your round-out. Once there, set the pitch attitude and wait for the aircraft to settle. On rollout, the key remains light feet that are constantly moving.

After eight sessions with Yuichi, I was consistently putting the aircraft down correctly — or at least clearly recognizing when the setup was wrong and I needed to go around. Having run out of money, I decided it was time to fly my S-1. Ken Erickson, another longtime instructor at Tutima, made the observation that no matter how much time I put in S-2s, the S-1 is still a different airplane and I was going to have to sort that out on my own.

I had done several sessions of taxi practice in my S-1 so I understood how the rudders felt, how to start the engine, and just how loud it is in the cockpit. I waited for an early morning, no other traffic in the pattern, cool temperature, calm wind. Strapped myself in and started up. Taxiing out to the ramp reminded me of the first time I flew my RV-8. I was all by myself, with no one there to bail me out. Good thing the instruments monitor oil pressure and not blood pressure. After runup and final discussion with myself about emergency procedures, I pulled out to the center of the runway and sat for a minute. I looked



carefully at the sight picture for three-point attitude and where the edges of the runway were. Gave it the throttle and off I went.

The takeoff was pretty routine. Budd's S-2A and especially Yuichi's S-2C with bigger engines and constant-speed props have pretty significant acceleration. Even with the fixed-pitch prop, the S-1 is so light that it gets moving and off the ground quite quickly. I climbed out at 100 mph and flew over to our aerobatic practice area. I started with gentle turns, some Dutch rolls, and just feeling out the airplane. Compared to the S-2C I was in the week before, the controls are very light and very well balanced. Lots of rudder authority and a predictably constant requirement for rudder input. Stalls were very straightforward — 62 mph, exactly what the pilot's operating handbook states. A little buffet and then the left wing drops but not violently. I worked with throttle settings to figure out where I needed to be in the pattern and then did several practice approaches at 4,000 feet. So far, so good.

Back to Livermore Airport to see if I could get it down on the ground. I did three low approaches, just practicing getting airspeed and throttle setting right. A couple of things became immediately obvious. First, the visibility in the S-1S is substantially better than you get in the front seat of an S-2. Second, with the fixed-pitch prop, it glides much better and at a much shallower angle. In the S-2 models, once the throttle is pulled and the constant-speed prop is acting as an airbrake, you are going down pretty steeply. In the S-1, it was a lot more like the glide angle in my RV-8. I could see the runway really well right up until round-out. At this point I planned a couple of bounce-and-goes. The first time I misestimated my height off the runway and bounced pretty good. The second time it came down pretty smoothly so I thought I would ride it out.

I have heard it said that the first 100 feet after touchdown are smooth. It's the deceleration from 70 mph down to 15 mph that gets your attention. I think I can attest to the veracity of that observation. After deciding to keep it down on that second landing, I found myself weaving back and forth some until I remembered Budd's admonition to get off the rudder quickly. Fortunately, I slowed down successfully and was able to get back to the hangar without damaging the airplane or having a stroke.

Since then, I have been flying three days a week. I go up first thing in the morning when the air is cool and still. I do six stop-and-goes (touch-and-goes leave out the really fun part of slowing down) and then head out to the practice area to work on aerobatics.

My S-1 Pitts is unquestionably the most fun airplane to fly I have ever been in. It loops and rolls effortlessly. Budd was absolutely right: It does exactly what you ask it. No more, no less. With the help of some really good instructors, I'm now a Pitts pilot. If I can fly it, probably pretty much anyone can. **IAC**

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SUN 'n FUN

Aerobatic HQ Report

BY EDDIE AND BIRDIE SAURENMAN, SUN 'N FUN AEROBATIC CHAIRMAN/CO-CHAIR, IAC 25837

THE 2019 SUN 'N FUN International Fly-In & Expo Aerobatic Headquarters was a great success with lots of planes and interesting discussions about the sport, its history, its present, and its future. Among the many aircraft that were displayed were aerobatic sailplanes, monoplanes, and biplanes.

We had the pleasure of having Laura Radigan, IAC 439206, display her SZD-59 Acro glider all week. Laura will be representing the United States in the 22nd Fédération Aéronautique Internationale World Glider Aerobatic Championships set to start July 18, 2019, in Romania. She'll be flying an MDM-1 Fox glider compliments of the Polish national aerobatic team,

followed by the U.S. National Aerobatic Championships in Salina, Kansas, in September flying her SZD-59, and then followed by the Tequila Cup in Arizona in Jason Stephens' MDM-1 Fox. We all wish Laura the best of luck!

Greg Koontz Airshows displayed its Super Decathlon when not flying the air show with Greg, IAC 20242, and crew chief, Fred, answering many questions from those in attendance.

The Lucas Oil Pitts S1-11B, owned by Mike Wiskus, was on display throughout the week. Mike has an excellent graphic book for young aviation enthusiasts on aerobatic sports and his "stunt" plane. He





April 2-7, 2019

generously donated copies of the book to the Aerobatic HQ, which were distributed and enjoyed by many kids in attendance.

Charlie and Bonnie Wolff had their Velox at the HQ, and Jack Warrington had his Pitts Model 12 displayed all week as well. Curtis and Cary Cumberland flew in their airplanes, a Pitts S-1S and Christen Eagle, respectively, and were able to stay several days before weather beckoned an early return.

Throughout the week, several day-trippers parked their aerobatic aircraft at the Aerobatic HQ while enjoying the event.

The SUN 'n FUN 2019 Aerobatic HQ volunteers were Linn "Shark Bite" Walters, Roy "Bunk" Chase, Brad Gehr, and Jim Alsip (who flew in his Super Decathlon) along with Chairman Eddie Saurenman; Co-Chair Birdie Saurenman, IAC 25837; and their daughter, Hanna. Hanna designed and created a set of new aluminum exhibit posters depicting Bevo Howard, Betty Skelton, Curtis Pitts, Vertigo Airshows, Robert Armstrong, Manfred Radius, and Jim and Jean Taylor. Linn and Bunk are longtime volunteers at the Aerobatic HQ. Linn earned his commemorative pin for 45 consecutive years of volunteering at SUN 'n FUN!

A highlight of this year's Aerobatic HQ was Jean accepting the Chairman's Award presented to herself and her late husband, Jim, having been nominated by their peers for their contributions in making the SUN 'n FUN International Fly-In &

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The Quiz Answers

1

The Zivko Aeronautics Edge 540 has a forward-swept wing from an engineering perspective. The straight leading edge was an intentional design suggestion by the late Tom Jones, who thought it would present better to judges.

2

Fourteen MXSs and 12 MX2s were built between 2006 and 2011. MXS stands for MX Single. The MXS-R is the racer version, and it had the option of installing different wingtips. The MXS-RH was built for Rob Holland, and it has a bigger rudder. The MX2 is a two-seater.

3

All of the individual aircraft composite parts are still today manufactured in Oregon by Composite Unlimited. The old MX Aircraft Co. used to assemble all the individual parts in North Carolina. The New MX Aircraft Co. does exactly the same, but instead it is finishing the aircraft either as a completed airworthy aircraft or as a kit in its factory facilities located in Perth, Australia.

4

The first U.S. military aerobatic team was created in 1927 and was called the Three Musketeers. They flew Boeing PW-9 fighters, and their first major event was the National Air Races held September 8–16, 1928, at Mines Field (now Los Angeles International Airport). Unfortunately, during a demonstration Lt. John J. Williams crashed. He was replaced by Charles Lindbergh for the remainder of the Air Race air shows. The team was disbanded in 1928 following several mishaps.



Boeing PW-9. Circa 1920s. The Aviation History Online Museum.

5

The Red Devils demonstration team was based in Nevada at the Las Vegas Air Force Base, which is now Nellis Air Force Base. Flying P-51 Mustangs, the team was in existence for less than a year in 1949. Maj. John England, who died in a crash in 1954 and for whom England Air Force Base was named, was team leader along with Lt. Gabriel Bartholomew, Lt. Leon Pagan, Capt. Joe Joiner, and Lt. James Putnam.



April 2-7, 2019

Expo possible year after year. The award was presented by Harley Richards, chairman of the board. Many of Jim and Jean's friends and family were in attendance. Jim was, no doubt, there in spirit forever holding Jean's hand. Jim and Jean are the founders of the Aerobatic Center at SUN 'n FUN, helming the HQ for 27 years.

Our SUN 'n FUN Aerobatic HQ plans for expansion next year are already in the works, including a stop on the youth tour with local school groups, special presentations by pilots and aerobatic planes, and much more. It looks to be a fantastic year for the Aerobatic HQ. Be sure to mark your calendars for March 31-April 5, 2020, and make plans to park your aircraft at the SUN 'n FUN Aerobatic HQ! Follow us on Facebook at SNF Aerobatic HQ, or contact us at SNFAerobicHQ@gmail.com. **IACI**



A youth tour learning about Laura Radigan's SZD-59 aerobatic glider.



Biplane brothers: Curtis and Cary Cumberland's Pitts S-1s and Christen Eagle.



Three longstanding volunteers at the Aerobatic HQ: Shark Bite (left) and Bunk (right) with Jean Taylor.



Cool shade, lemonade, and aerobatic chats!



SNF Aerobatic HQ chairs Eddie and Birdie Saurenman with their daughter Hanna and Jean Taylor. Hanna created the posters, including one honoring Jim and Jean Taylor.

Jack Warrington's Pitts Model 12, *Lady in Red*, was on display all week.



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2019 IAC Elections

Candidates for officer and director positions

VOTING ENDS MONDAY, JULY 22, 2019

THE INTERNATIONAL AEROBATIC CLUB board of directors invites members to vote in the 2019 election for club officers and directors. Balloting closes on Tuesday, July 23, at 6 p.m. CDT. Ballots must be received before closing to be counted.

► CANDIDATE PROFILES

DOUG BARTLETT FOR VICE PRESIDENT



I am running for the position of International Aerobatic Club vice president, and I am asking for your support and your vote.

I joined the IAC in 2003 and started competing that same year. While working my way up the competition ladder from Sportsman to Unlimited, I served as the contest director for several regional contests as well as for the U.S. National Aerobic Championships in Texas. I was the president and treasurer of IAC Chapter 1 in Chicago for a number of years. In 2006, I was elected to serve as the IAC treasurer and held that position until I was appointed to be the president following the untimely passing of IAC's then-president Vicki Cruse. I served in that capacity for the next three years.

My airplane is a Sukhoi 29. I flew this in one competition last year at Salem. Currently, I am building an RV-14 that I intend to fly at the Sportsman level in 2021. As a national judge, I served on

Cast your vote using the secure online ballot at www.IAC.org (member login required). The ballot certification committee will tally the election results and announce the election outcome at the annual general meeting at EAA AirVenture Oshkosh on Friday, July 26, 2018.

the line at last year's U.S. National Aerobic Championships in Oshkosh. Also, I enjoyed the opportunity of training aerobatic pilots at the Primary through Intermediate levels.

I was appointed by the board of directors last year as the vice president of the IAC to support and assist Robert Armstrong in his first year as the IAC president. With that first year complete, I now am asking for the membership's support that I may remain in that role of vice president. It is important to continue supporting Robert and the entire board of directors in their goals of getting as many aerobatic airplanes back in the air as possible and simplifying the IAC.

I believe in gathering a strong team for support when it comes to moving the IAC forward. That was my goal when I assumed the IAC presidency in 2009, and it's one of my goals now as vice president. It also is my opinion that the IAC needs to grow the base of its membership by concentrating on grassroots aerobatics and providing a solid support structure for aerobatic enthusiasts and pilots at all levels. Much work has recently been done in this area, and with your help, I look ahead to continuing forward in this process.

BOB HART FOR TREASURER



Hi, my name is Bob Hart, and I would like to again introduce myself as a candidate in the upcoming IAC board of director elections.

I am currently concluding my latest term as the IAC national treasurer. It has been an honor and privilege to serve the membership of such a distinguished organization. While my principle responsibilities have been to manage and account for IAC finances, I have found myself active in numerous other endeavors as an IAC officer. Membership, merchandising, program administration, and interaction with appropriate EAA support functions are also areas I've been routinely involved with. Most recently, I have spent considerable time reformulating our IAC financial analytic tools to integrate with a newly updated EAA finance platform.

My aerobatic roots date back to the 1980s flying Decathlons and Citabrias. I spent much of the mid-'90s building a Pitts S-1C that I flew in mid-America regional contests. In 2003, I purchased and began flying an Extra 230. Additionally, I have spent several thousand hours in many other general aviation aircraft when not working my day job flying for a major airline. I have been an invited guest speaker at EAA AirVenture Oshkosh and have presented at numerous FAA WINGS programs on topics including aerobatics and stall/spin awareness. My family and I consider time spent at the airport to be our primary social outlet. My wife, Kori, and I have been heavily invested in the IAC and our daughters, Megan and Kaylin, grew up around the organization, running scores at contests when they were very young. Last year they were present all week at AirVenture, working for IAC by helping to run the IAC Pavilion and social media efforts. Clearly, sport aviation and aerobatics have been a way of life for our family.

I continue to dedicate myself to grassroots and recreational aerobatics. I believe most strongly in those efforts designed to support aerobatic interests at the basic levels promoting our sport. Additionally, as part of the current leadership team, I am dedicated to finding ways to improve IAC and bring additional value to our members. New marketing,

branding, programs, and facility improvements are but a few examples of work I have participated in to elevate our organization going forward. My focus now will be to provide a solid platform for the future of IAC with the next generation in mind.

Thank you for your consideration.

BRUCE BALLEW FOR DIRECTOR



I'm Bruce Ballew, and I'm running for re-election to the IAC board of directors. I've been a director for several years now. I've been participating in aerobatics for nearly 20 years, compete in the Advanced category, and currently own an Extra 300L (although I was a Pitts guy until a year ago). I'm a corporate pilot in the St. Louis area for a Fortune 100 company.

While on the IAC board, in addition to the routine governance duties, I've been heavily involved with the government relations

committee and am the current chair. My duties with this committee include maintaining contact with the FAA regarding aerobatic practice area (APA) and aerobatic contest box (ACB) waivers and the regulations that govern them. I am also the contact for our members who have questions regarding APAs/ACBs or are having trouble getting these waivers issued from the FSDOs. I'm an industry member of the FAA's Equip 2020 Working Group to make sure our members have a voice in the implementation of ADS-B Out and that issues related to aerobatics are considered.

I'd like to continue as your IAC board member and would appreciate your vote.

JIM BOURKE FOR DIRECTOR



I would be delighted to continue to serve as IAC director. Thank you for your vote.

My love of aerobatics is lifelong, beginning as a young child delivering airplanes with my father, an aircraft broker. As an adult, after a four-year stint in the Air Force, I turned my aviation passion toward RC model planes. I founded the world's most popular website for RC modeling,

RCGroups.com, in 1996 and am the owner of Knife Edge Software, the makers of the RealFlight RC flight simulator and other flight simulation products.

I enjoy serving the IAC in many areas. Besides being a board member, I am also the IAC's membership chair, and therefore tasked with increasing our membership rolls. I am a national judge, a frequent juror,

and a coach. I've served the IAC on rules-related issues and also as safety chair. I've worked closely with Bruce Ballew on government relations issues and have assisted several chapters with attaining or keeping aerobatic practice areas. I am proud to serve my country as a member of the U.S. Unlimited Aerobatic Team.

I believe that flying aerobatics is perfectly approachable with the right training, and I've made it my mission to share what I learn. I offer free critique of aerobatic videos on my YouTube channel and stay in regular communication with dozens of pilots throughout the contest season. There is no reason this sport cannot grow if we all pitch in and help each other out. To me, a healthy IAC provides something for everyone. If you have any questions or thoughts for me, please email me at jtbourke@gmail.com. I look forward to hearing from you!

PEGGY RIEDINGER FOR DIRECTOR



I have enjoyed serving the IAC as a director for the past two years, and would be happy to continue in this role. The IAC has many exciting projects going on, and I am looking forward to helping us move into the future.

I'm not a typical director in that I'm not a pilot. I am an active volunteer, have served as judge or chief judge at 55 contests across the United States, and have been assistant U.S. judge at four world championships. I have also been chief judge at the U.S. Nationals three times and am looking forward to being the Intermediate chief judge this year at the new venue in Salina, Kansas. Last year I had the opportunity to judge at the British Nationals, and this summer I am honored to be judging at the European Advanced Aerobatic Championships in Poland.

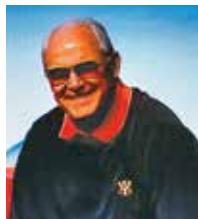
As a director, I serve on the Policy and Procedures Working Group and the Rule Book Task Force. I am also the new chapter relations chair.

I enjoyed meeting many of you last summer at AirVenture – I'll be attending again this year. Looking forward to seeing you there.

On the local level, I have been the president of Washington State's IAC Chapter 67 for more than five years. We are an active chapter that hosts two contests and two aerobatic camps, plus several practice days each year in Ephrata, Washington, as well as teaming up with AC7 from Alberta to host the Can-Am Championship in Cut Bank, Montana. We also represent the IAC in the Northwest by having a presence at the Arlington Fly-In each year.

If re-elected to the board of directors I will continue to be an advocate for volunteers. We know that contests don't happen without volunteers. Whether you are a chief judge or someone who runs into town to pick up lunches and bottles of water, all volunteers are important and should be valued. I continue to stand for all those significant others and spouses who support their pilots by volunteering.

TOM RHODES FOR DIRECTOR



I am a candidate for the IAC board of directors and am asking for your support and vote.

I grew up in Dallas, Texas, graduated from Virginia Military Institute in 1968, went into the Marine Corps and flew as a RIO in F-4 Phantoms. I returned to Dallas in 1973 and went into the real estate business. Suzy

and I have five children and 10 grandchildren.

I started flying on January 19, 1966. I know this date because I was 21. My dad told me at a young age if I did not smoke before I was 21 he would give me \$500. I didn't smoke, and with this \$500 and \$300 I had saved from mowing yards, I took flying lessons at Love Field here in Dallas.

Later, I learned that some pilots were killed in airplanes when they entered a spin and did not recover. I thought I had better learn what spins were about. I signed up for a spin training course in Gene Soucy's program. On our first flight the instructor covered stalls and spin recovery. At the end of the flight the instructor asked me if I would like to go upside down in this CAP 10. I said okay. Afterward, we did a couple of loops and rolls, and it was magical. I was hooked. I extended my spin training to Gene's aerobatic course, and that's how it all started of these times.

I started flying contests in a clipped wing Cub I had restored and later moved up in horsepower to a Pitts. At a contest in Waco, Texas, I watched

a group of glider pilots compete. Wow, how cool is this, and I started flying aerobatic gliders. I made the U.S. Glider Aerobatic Team and competed in the world championships in Spain. I have fond memories of those times.

Ron Schreck and Debby Rihn-Harvey spoke of this in their bios last year, and I hear the same thing from many of the pilots who have competed for many years and that is, "What happened to the fun times that we used to have at contests?" I believe that we can return to those times with your input and suggestions.

Also, we need to pass on to our members how important it is to become mentors to the younger pilots and members during their journey in our sport. Ron mentioned one out of three first-time competitors never return to fly another contest – that is our fault and not good.

There are presently 4,035 members in the IAC and only about 12 percent of those members are pilots who compete in contests. What a surprise to me! It means we need to be respectful and attentive to the other 88 percent of our members' needs, interests, and experiences in the IAC.

We are very fortunate to be in a sport that encourages each of us to help each other even those who are in direct competition. We are lucky there are so many mentors in our sport who we can turn to for advice and help. I have certainly taken full advantage of this over the years and have made long-lasting friendships.

We have an outstanding board, and I only hope that I can contribute to it.

Thanks for your time. **IAC**



A selection of posts from the aerobic web.

**#IAC #Aerobatics
#SportAerobatics #WingWag**



@kaitlyn.gallegos.7 > Ladies Love Taildraggers: Got to try something new yesterday! Aerobatics in a Yak 52! Check out the video at <https://youtu.be/me6DdN.JmAuE>.

@Kaitlyn G7X: My Explorer Post, Post 120, was given an amazing opportunity by the local International Aerobatic Club Chapter 36, San Diego Hammerheads, to go aerobatic flying. I had the amazing opportunity to go flying in the Yak 52 with Miko and had an amazing time flying the maneuvers! I'm hooked on aerobatics now!

@lisa.kienholz > IAC Chapter 36 San Diego Hammerheads: A wonderful thing you've done here Pawel Miko!

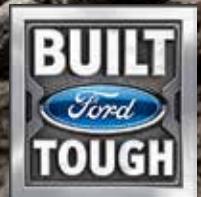
@pawel.mikolajewski.3: It was such an awesome day! For the record, this 18-year-old 70-hour pilot could easily fly Sportsman tomorrow and do well. Watch her. She is going places.

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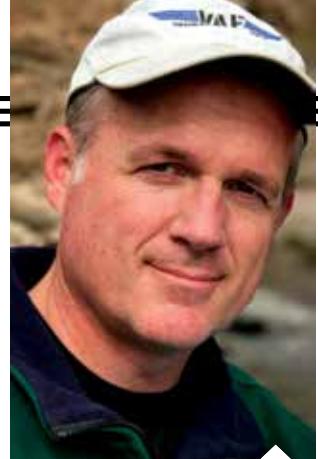
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Karl Gashler

BY GARY DEBAUN, IAC 4145

IAC 438689

Nickname: "Gash"

Occupation: Captain at Southwest Airlines/airport bum

Chapter Affiliation: 62

GD: KARL, GROWING UP IN CENTRAL WISCONSIN YOU SPENT SOME TIME WATCHING THE 1986 U.S. UNLIMITED AEROBATIC TEAM DURING ITS CAMPS AT YOUR LOCAL AIRPORT. WAS THAT THE CATALYST FOR YOUR INTEREST IN AVIATION/AEROBATICS?

KG: That was a big part of it, but it even goes a little further back. One day in the early '80s when I was a teenager hanging out in the FBO, Tom Poberezny stopped in with somebody's two-seat Christen Eagle. He saw me and said, "Hey, I have an extra seat, do you want to go fly?" For me, it was like the Coke commercial where Mean Joe Greene throws the kid his game jersey. Tom asked if it was all right to do a full-up practice, and of course I said yes! That was the day I decided to do whatever it took to get off the dairy farm and fly for a living. That experience really changed my life.

GD: YOU SPENT 21 YEARS IN THE U.S. AIR FORCE AS AN F-16 PILOT. TELL US ABOUT THAT EXPERIENCE. DID YOU SEE ANY COMBAT TIME, AND IF SO, HOW DID IT RELATE TO YOUR AEROBATIC EXPERIENCE IN THE BOX?

KG: Flying fighters was a dream come true for this small-town cheesehead. I got to see the world, rescue damsels in distress, and do some catastrophic landscaping. I did see combat in Southwest Asia. I am often asked about this, and I tell people that almost nothing from flying fighters carries over to sport aerobatics. However, the one exception is mental training. Fighter pilots learn how to organize, visualize, execute, and debrief. It's part of a "no-slack" culture where you are expected to suck less each time you fly. The pattern is repetitive and time-consuming, but it works.



"YOU CAN'T BE THAT KID STANDING AT THE TOP OF THE WATERSLIDE OVERTHINKING IT. JUST GO DOWN THE CHUTE."



GD: WHEN WAS YOUR FIRST AERO-BATIC CONTEST? WHAT DID YOU FLY, AND HOW DID IT GO?

KG: My first contest was in April 2017 at Borrego Springs, California, flying my Van's RV-8 in Sportsman. At that contest, I won second place overall, Best First-Time Sportsman and the Grassroots Award. That year I went on to win the Sportsman Southwest Region Championship Series and first place in the California Point Series.

GD: YOU CURRENTLY OWN/FLY A BEAUTIFUL EXTRA 330 SO I WON'T ASK ABOUT UPGRADING. WHAT ARE YOUR GOALS IN SPORT AEROBAT-ICS? ARE YOU PLANNING ON COMING TO THE U.S. NATIONAL AEROBATIC CHAMPIONSHIPS THIS YEAR?

KG: Yes, I will be at Nationals. My long-term goal is to remember the names of everyone I meet over the years and to make many good friends. In the short-term, since things are going well in Intermediate, I am working on moving up to Advanced.

GD: AT THE BORREGO CONTEST THIS YEAR YOU CAME IN SECOND, LETTING A 73-YEAR-OLD DUDE FLYING A GREAT LAKES BEAT YOU — HOW DID THAT HAPPEN? (NOT TAKING ANYTHING AWAY FROM HOWARD.)

KG: I have a ton of respect for Howard, and I always enjoy chatting with him and learning from an aerobatic legend. I will never forget the best advice he gave me, "Always enjoy the journey." So true.

GD: WHO IN THE SPORT HAS BEEN AN INSPIRATION TO YOU, OR HELPED YOU ALONG THE WAY?

KG: My biggest inspiration is Hiroyasu Endo. Endo uses his precious free time to travel from his home in Japan to several IAC contests in the United States. With zero opportunity to fly aerobatics in Japan, often the only chance he gets to practice is on location the day before a contest. He flies Unlimited and usually dominates the category. Endo is one of the most amazing pilots I know.

GD: DO YOU HAVE A FAVORITE FIGURE YOU LIKE TO FLY?

KG: Outside snaps. Just kidding. I don't know if I have a favorite yet, but I get a lot of satisfaction from doing good rolling turns. There are many moving parts, so the payback is sweeter when the simultaneous head patting and belly rubbing are done just right.

GD: WHAT ADVICE WOULD YOU GIVE TO NEW PILOTS JUST GETTING INTO THE SPORT?

KG: You can't be that kid standing at the top of the waterslide overthinking it. Just go down the chute.

GD: IS THERE ANYTHING YOU WOULD LIKE TO SEE CHANGED IN THE IAC?

KG: Well, it would be pretty cool if score sheets were electronic on an iPad. It would save a lot of score entry work and errors. An iPad also won't blow away when a wind gust hits the judges line. A smart volunteer could write an app, and then recorders would just load it on their personal devices. Upload the score data to the cloud, and it's done in a snap.

GD: DO YOU HAVE ANY OTHER HOBBIES OUTSIDE AVIATION?

KG: I like long walks on the beach, sushi dinners, and the listening to the soothing sounds of the Foo Fighters. **IAC!**



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