

SPORT Aerobatics

OFFICIAL MAGAZINE of the NATIONAL AEROBATIC CLUB

September 2013

2012 Unlimited Championship



- IAC Airspace Protection
- WAC 2013
- Aircraft Control System



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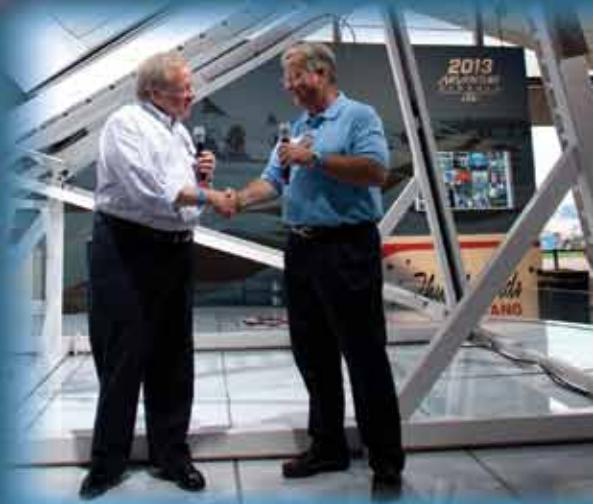
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I'm excited to be back on the team again. It's always an honor to represent the USA.

—Rob Holland

FEATURES

- 4** **IAC Airspace Protection Fund Established**
by Bruce Ballew

- 6** **2012 Unlimited Championship**
by Reggie Pauk

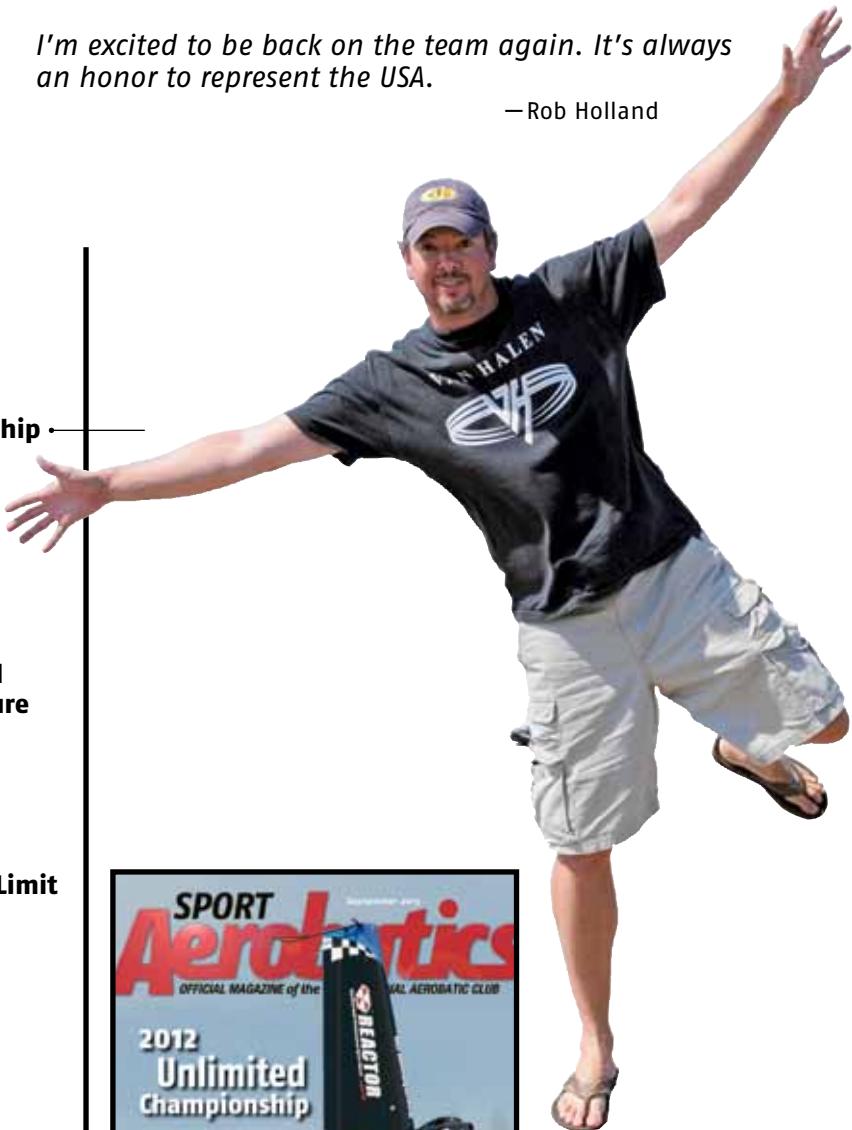
- 14** **27th WAC 2013**
by Mike Heuer

- 22** **MXS/MXS-R Aircraft Control System Inspection Procedure**
by Eric Minnis

- 31** **Greg Koontz Airshows Aerobic Instructor Scholarship Removes Age Limit**

DEPARTMENTS

- 2** / Letter From the Editor
3 / News
28 / Ask Allen
30 / Contest Calendar
32 / FlyMart & Classifieds



THE COVER

Rob Holland performing during the 2013 AirVenture airshow. Photo by DeKevin Thornton.

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REGGIE PAULK
COMMENTARY / EDITOR'S LOG

A fight worth fighting

And the excitement of championships

THIS ISSUE OF SPORT AEROBATICS has a piece regarding a new fund established by the IAC to help protect our valuable airspace from the overreach of local authorities who have an axe to grind with the flying community. When you read the story, you can't help but shake your head at the obvious frivolity of the claims against the pilot. Even

I had the privilege of having both Rob Holland and Jason Stephens on a conference call for our interviews, and the story flows directly from that phone call.

though the city clearly has no case, they've placed a massive financial burden on a member of our community. If this particular pilot were to fold and decide to walk away, the consequences to our sport would be grave. Take the time to read the story and decide for yourself if you'd like to help out. We all have something to win in this fight.

I got back from Oshkosh a few weeks ago and wanted to say hello to Larry King. If you're ever visiting the IAC building at Oshkosh, you'll see him standing next to the latest iteration of Pitts Model 12

from Jim Kimball Enterprises, answering questions and selling airplanes . . . all day . . . every day of AirVenture. In the six years I've attended, Larry has stood out there by those airplanes every year!

Speaking of AirVenture, we have a small group of dedicated volunteers who show up and make sure airplanes are parked correctly, forums begin on time, and questions are answered. Chairman Nancy Carter, Co-Chair Jordan Ashley, and our Chairmen Emeritus Jim and Jean Taylor all help make things run smoothly as the week goes by.

You'll notice I waited a bit to publish our story on the National Unlimited champions from last year's contest. I thought, with both Nationals and the WAC happening in the United States this year, it would be great to run the story closer to those events. I had the privilege of having both Rob Holland and Jason Stephens on a conference call for our interviews, and the story flows directly from that phone call. A common theme I've noticed when talking to champions and inductees alike is a constant, irrepressible drive to be better. They hold themselves to a higher standard than most folks, and achieve seemingly impossible results because of it. They are an inspiration to us all.

I'd like to wish our competitors on the U.S. World Aerobatic Team the best of luck this year at WAC. I will be there cheering you on, and look forward to seeing you all there. **IAC**



IAC's 2013 Election and Proxy Solicitation to Be Rerun

BY JIM WARD
IAC SECRETARY

An issue arose with the IAC's 2013 election and proxy solicitation that drove IAC board members, meeting at AirVenture, to vote unanimously to rerun it.

One of three boxes containing ballots and proxy cards disappeared during shipment from IAC headquarters in Wisconsin to IAC's Nominations and Ballot Certification chair in Texas. Though IAC and EAA staff and volunteers tried to locate the box, they were unsuccessful.

The IAC board met to consider how best to address this. Following some discussion, the board voted to declare the original election results invalid and directed that the election and proxy solicitation be repeated.

As a result, directors and officers normally installed at the annual membership meeting at AirVenture will instead take office immediately upon completion of the election. That's estimated to occur in mid-October, well in advance of the fall board meeting. In the interim, current directors and officers will continue to serve.

In accordance with club bylaws, the board will call a special membership meeting to choose whether to adopt the restated articles and bylaws proposed earlier this year. You'll find notice of this meeting in next month's *Sport Aerobatics* and on the IAC website.

Please watch for your new ballot and proxy card in the mail, then mark and return them at your earliest convenience. Thank you. **IAC**



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IAC Airspace Protection Fund Established

Legal support

BY BRUCE BALLEW
DIRECTOR, MID-AMERICA REGION

THE IAC AIRSPACE PROTECTION FUND HAS BEEN established to help support legal efforts that affect core activities of our organization. It is becoming increasingly difficult to exercise our rights to use the airspace to safely and legally conduct aerobatic activities. Claims of excessive noise and the inability to safely integrate aerobatic activities with other lawful aviation activities seem to be the most common complaints. In fact, the FAA's own studies have concluded that noise associated with aerobatic activities is well below regulatory values, and our safety record is second to none. These are national issues and not necessarily tied to any particular locale.

Why Now?

The city of Morris, Illinois (C09), has 1) chosen to take legal action against an IAC member, 2) been unreasonable in its actions against an aerobatic practice area (APA) waiver renewal, and 3) implemented city ordinances claiming city authority to regulate the airspace above the city, which is entirely inconsistent with federal law and its obligations under the Airport Improvement Program (AIP), under which it has accepted airport funding. In early 2012, the IAC regional director and the Government Relations Committee actively engaged the city and the FAA in an effort to resolve this issue via numerous meetings with city officials and the FAA, but to no avail.

The city alleged that our IAC member was conducting aerobatic maneuvers in inappropriate airspace. The city filed a formal complaint with the FAA against the pilot. The FAA investigated the complaint and found no evidence to indicate the pilot had violated any FARs and determined that no further action was required. The city, not satisfied with the FAA's determination, then chose to file charges against the pilot

in local circuit court, citing him with having violated specific FARs.

The city has ignored the numerous efforts by the member to resolve this issue over the last 18 months, and continues to defer his court appearance. The city's delaying tactics clearly represent an effort to intimidate the pilot and IAC Chapter 1, and to leverage this action in order to force IAC Chapter 1 to walk away from the APA.

The FAA Great Lakes Region Legal Counsel has informed the city directly that city and airport officials do not have the authority to enforce FARs. The city has chosen to ignore this information and to continue to pursue the charges against the member.

Throughout, the FAA has consistently upheld the position of the member and that of IAC Chapter 1. But the FAA has failed to actively pursue this with the city. The FAA has, however, expressed its willingness to testify on behalf of the member and IAC Chapter 1. Why the FAA has not been more proactive with the city, we are unable to report.

The city has repeatedly challenged the re-issuance of the APA, claiming that the FAA did not follow proper procedures during the re-issuance process. The city filed a Consistency and Standardization Initiative (CSI) that required the FAA to confirm that the proper process was employed in the waiver's re-issuance. The FAA's investigation revealed that the process had been properly followed and upheld the re-issuance of the APA waiver. The city appealed the FAA's conclusion. And, again, the FAA upheld its initial determination.

Lastly, the city has established ordinances granting the city and airport manager authority that is clearly pre-empted by federal law. For example, city ordinances maintain that the airport manager has been granted the authority to ground any aircraft, including those engaged in any legal aviation activ-

IAC

ity that he unilaterally determines not to be appropriate. Further, the city ordinance requires that all aircraft using the airport be registered in the state of Illinois. Other inappropriate elements of city ordinance exist.

The city's plan seems to be to render its efforts against us painful enough such as to cause the member and IAC Chapter 1 to simply walk away. This must not be allowed to stand. The city must be held accountable for its egregious actions, and must not be allowed to prevail simply because we did not have the stomach for the fight, became exhausted from the effort, and simply surrendered.

With no other viable option before us, in April 2013 the member and IAC Chapter 1 filed suit in federal court against the city of Morris, Illinois, and individually against certain city officials, asserting that 1) IAC Chapter 1's members' civil rights have been violated by the city's actions and its continued efforts to postpone the member's court hearing, 2) the city has exceeded its authority by citing the member with violating FARs, and 3) the city has failed to comply with its obligations under the Airport Improvement Program. The filed federal action seeks an end to the blatant interference, and recovery from the city.

In the end, there is little doubt that the IAC member and Chapter 1 will prevail in federal court. However, we have to get there. These efforts take time and money. The outcome of this anticipated ruling will undoubtedly be used in following similar cases. And we should have no doubt there will be others.

The Fund

At its April 2013 meeting, IAC's board of directors voted to provide \$5,000 to help support the legal efforts of Chapter 1.

At the same meeting, it was decided to investigate establishing a trust-type fund that would be endowed by private donations, restricted to supporting legal actions that threaten airspace use for aerobatics and related actions. This activity is still ongoing. Any recovery awarded in the current action against the city of Morris, less expenses, would be returned to the fund.

How to Contribute

The IAC Airspace Protection Fund is in need of immediate financial support to prepare for future challenges, and to complete the current action against the City of Morris, Illinois. A number of IAC chapters and individual members have already contributed. All are encouraged to do so.

Those wishing to contribute to the IAC Airspace Protection Fund should send their donation to Trish Deimer-Steineke at International Aerobatic Club, P.O. Box 3086, Oshkosh, WI 54903-3086. The donation should note that it is designated for the IAC Airspace Protection Fund in the memo section of the check. These donations are tax-deductible.

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2012 Unlimited Championship

A tale of two champions

BY REGGIE PAULK

PHOTOS BY LAURIE ZALESKI AND LEIF CULPIN



Jason Stephens

2012 Unlimited Glider Champion

Many in the aerobatic community are unaware that we crown two Unlimited champions at nearly every Nationals contest; one for Unlimited Power and another for Unlimited Glider. We normally focus on the power champion in these pages, but this time we wanted to do something different. For this story, we had a conference call with both Jason and Rob.

Nearly everyone involved in aviation in some form or fashion has heard of Rob Holland—especially those who've been fortunate

enough to watch him fly one of his air show routines. The 2012 Nationals contest would mark Rob's second win, and garner him a spot on the coveted Unlimited World Aerobatic Championships team competing on our home turf in Texas in just a few short weeks.

Few people outside of the aerobatic and gliding communities have heard of Jason Stephens—which is pretty amazing considering he won the Unlimited Glider category for the fourth time last year. Jason did mention that he gets mistaken for Rob Holland occasionally, which he thinks is quite funny considering that Rob is quite a bit taller (and more clean-shaven) than he is.

Both men approached the Nationals with a full plate—Rob earns a living flying air shows, and Jason earns his running Estrella Sailport south of Phoenix, Arizona. For Rob, finding time to practice for Nationals had to come between one of 25 air shows he flew last year.

"It was a matter of managing my time and taking a week here and there brain dumping the air show flying and concentrating on competition flying," says Rob. "I spent a week and a half or so before Na-



Rob Holland

2012 Unlimited Power Champion

tions just getting ready for competition. I took about two and a half weeks total to fly there."

In addition to flying for the title of National Champion, Rob's main pursuit was to get onto the World Aerobatic Championships team.

"I'm excited to be back on the team again," he says. "It's always an honor to represent the USA. It's especially exciting when we have the World team in the U.S. and have the home-field advantage. I'm looking forward to practicing with the team this year. I love the fact



Holland aerobatics at AirVenture 2013

SPENCER THORNTON



Paul Jennings during his Four-Minute Free program



Paul Jennings (left) and Jason Stephens

that Nationals is right before the Worlds. What better setup than to have Nationals at the place where you're going to have the Worlds? Everything is set up and in place for us to do really well. We just need to take advantage of it."

Former National Champion Jeff Boerboon missed the opportunity to compete in 2012 and therefore his chance to be on the Unlimited team at the Worlds.

"I think Jeff not being on the team is a huge loss to our team," says Rob. "I think we have a very strong team, and we'll do well, but I've been on a lot of different teams with Jeff, starting in Advanced in 2004, and he's a great pilot. I understand he couldn't make it to Nationals, but it's a loss for the team. He was doing this stuff just as much as anyone else on the team and spent a lot of time and effort, so it's a shame he couldn't be part of the team this year."

For Jason Stephens, running a sailport is only part of his job description. Now he's also a new dad.

"I've got a boy who turned 2 in February, so that changes my lifestyle quite a bit from previous years when it was pretty easy to just drop everything and go wherever a contest was."

One goal he was unable to meet after winning at Nationals last year was to participate in the World Glider Championship held in Finland this year.

"It's been since 2007 that I've been to the Worlds," he says. "Although I did fly the World Air Games in 2009, and it was a lot of fun, I think I prefer the standard World Championships."

So how did Jason find time to fly leading up to Nationals?

"This year was fairly typical of most years before Nationals," says Jason. "You'd think working on a glider port every day, I'd have lots of practice. But as it turns out, I'm pretty busy flying with students or answering e-mails or paying bills or sweeping off the runway or whatever. I actually only got about 10 practice flights or so before Na-

tionsals, which is unfortunate. I try to cram a bunch of flights into the one or two weeks before Nationals and fly as much as I can. I do my best and see what happens. The hardest thing this year was making any time at all to practice because of my family lifestyle changes."

In 2011, Jason had no one to fly against, so he decided not to attend Nationals. For 2012, Klein Gilhoussen and Paul Jennings threw their hats into the ring.

"I think I had a real challenge in that both Klein and Paul, who are my typical competitors, have both been flying really well in the last few years," says Jason. "I think this Nationals was Klein's best contest ever. Paul had a rough first flight—which made it difficult for him. After he flew so well last time, I knew he would be really stiff competition as well. I think it was important for me to stay focused and try my best to fly as good as I could because it was going to be real competitive."

For Rob Holland, the Unlimited field also had some pretty



Rob gets ready to mount up for another contest flight.

tough competition.

"Nationals was great," says Rob. "We had quite a few people competing, with some really good talent. Goody and Rossi and those guys are always top of their game, so it was a good competition. The better they do, it forces me to be that much better. I think we all feed off each other to be the best we can be."

While practicing for Nationals in Louisiana last year, Rob ran into Aubrey Underhill, a Sportsman competitor he'd met at Nationals a couple years ago.

"He showed me this brand new Pitts he'd bought," Rob says. "He was real proud of it, as he should be. It was a beautiful airplane, and he was disappointed because he wasn't going to go to Nationals. He'd been flying a Decathlon the year before, and he hadn't had the time to practice or become one with his airplane. I said BS, you're going to Nationals. I told him, in between my practice flights I'll just jump in with you, and we'll do some

flights and get you up to speed. The only person you compete against is yourself, and as long as you're doing well and every flight's getting better, then come out to Nationals. So I jumped in with him, gave him some training, and was his safety pilot at Nationals. I think there needs to be more of that. We need to encourage people to move up and stick with it and just have fun. I mean, if all this stuff we're doing isn't fun, than what's the point?"

You'd think jumping into the front seat of a Pitts to fly as a safety pilot might disrupt the delicate mental balance an Unlimited competitor tries to maintain during Nationals.

"I don't think flying as a safety pilot affected my performance at Nationals at all," says Rob. "That's why I think we need to do more of it. I love to get into an airplane and fly. Whether it's a Cub or a glider or an MXS, I just love to fly. If you can help somebody else, give them the opportunity to get in that box and improve their skills and have

some fun too, then we should do that. I don't think it affected my flying at all. If anything, it was an advantage because I got to see that box an extra couple times. I wasn't flying, and was just sitting there, so I got the bird's-eye view. I think there should be more of that."

Our childhoods mold us into the adults we eventually become. Some of us are raised in the country; some in the city. There are a lucky few of us who are raised in Alaska. Jason Stephens is one of those lucky few.

"I was really fortunate as a kid," says Jason. "I was born and raised in Anchorage, Alaska. My dad had a Super Cub on wheels most of the time and a Helio Courier on floats. I grew up like a lot of kids up there, bombing around in the airplane with dad since I was 2 years old. That really got me hooked on aviation from day one, I'd say. When we moved to Arizona when I was 13, my dad bought the glider school that my brothers and I now run. That's when I started flying glid-

ers. I got my certificate at 16 and worked for the family business through college. After college, I was a tow pilot and instructor, giving glider rides and teaching. I got into glider aerobatics with the gentleman who started our business, Les Horvath. He has a trophy in his name at the IAC headquarters in Oshkosh. I was lucky enough to have him as my initial aerobatic instructor. I think it was my 14th birthday, and he took me up for my first aerobatic ride in a glider. I knew from that point on that I was really going to enjoy aerobatics for a long time."

After college, Jason began teaching aerobatics and giving aerobatic rides in gliders. He then began flying air shows at the EAA Copperstate fly-in and air show.

"I think for most of the years I did that, I had an 800-foot waiver," he says. "In a glider, most of the time, there's no point in going lower than that. I think my last card (low-altitude waiver) was 500 feet or something like that. I did my first air show when I was 19 or 20 and did it for several years at the Copperstate fly-in. That was really fun. I finally got into competitive aerobatic flying in 1999 at the Tequila Cup. I flew Sportsman for the first couple of years. After I got my Fox, I tried my hand at Unlimited, and I've been flying Unlimited since 2002 or so. Eventually, I got up the courage to go to Nationals, which seemed real intimidating at first. Once you go to Nationals, it's actually really fun and not as stressful and intimidating as what most new people think. They have this preconception of the Nationals being this big thing, which it is. But it's a lot more laid back and relaxed atmosphere than what a lot of new people anticipate. I still fly the Tequila Cup as often as I can, but I really enjoy flying at Nationals."

For Rob Holland, his love affair with airplanes began when his dad took him to an air show.

"I fell in love with what I saw,"

"You kind of have to sacrifice and give up everything you know in order to do it, and then hope to make a living at it someday . . ."

—Rob Holland

Rob says. "From that point on, all the model airplanes I had were hanging upside down from the ceiling. I was on a mission to become an air show pilot. I went to college for aviation. While there, I met a gentleman with a Skybolt who gave me my first aerobatic ride. That just reinforced everything I already knew, and I just had to do that. So through the years, whatever I could get my hands on, I'd go upside down in and go out and fly."

Rob followed a familiar path, towing banners, flight instructing, even a stint at commutes. But that wasn't where his passion was.

"I wanted to go upside down. I just didn't know how to make a career out of it," he says. "Then my corporate job went away, like they usually do. Mike Goulian was right down the road from me and invited me to teach at his aerobatic school. I'd built up some aerobatic experience at that point, and I thought I could do that while trying to figure out the next thing to do. I started flying in his school and learned you could fly aerobatics and have other people pay for it. That was really nice. Being involved with the school, they'd bring their students to the local competitions. That was my first taste of competition. I never set out to be a competition pilot; I wanted to be an air show pilot. But once I got the bug, I thought it was super cool. A year later, I started my own flight school and moved up to Advanced, then Intermediate. I don't recommend it, but I did. I've been competing and flying air shows ever since. For

the past 11 years, I've been flying air shows full time."

There are much easier ways to earn a living than flying air shows. For Rob, it's been a pursuit of passion.

"You kind of have to sacrifice and give up everything you know in order to do it, and then hope to make a living at it someday, which I'm finally starting to do," Rob says. "I'm sure there are some full-time air show pilots who compete, but not a lot. It's really two completely different disciplines. I think they can complement each other a little bit, but it's really two different styles of flying. People who fly air shows full-time find it hard to dedicate the kind of time to practice both. Even when you're flying air shows full-time, it's hard to find time to practice both. You're on the road trying to make a living flying air shows."

For Jason, air show flying has all but disappeared from his repertoire.

"The last air show I flew was in 2004 or 2005," he says. "It's been a number of years because it's a lot of work to take a glider out of state for an air show. When the local fly-in got rid of their air show segment, I didn't really have much interest in flying air shows. They're really fun to do but logistics, for me, are difficult. To get an aircraft to somewhere close like California or Nevada, it's kind of an ordeal. Whereas local ones, you just hook it up to a towplane and tow it for an hour to wherever you're going. At the level I was for air shows, we had a lot of fun with it, and it was a good way to promote our school



Rob Holland



COURTESY AZSOARING.COM

Jason Stephens takes off from Estrella Glider Port.

and glider flying in general. It's a nice change of pace from the airplane aerobatics a lot of people see."

Air show and competition flying aren't the only ones Rob Holland pursues these days. He's recently formed a four-ship formation aerobatic team called The 4CE aerobatic team.

"The way the team came together is kind of neat," says Rob. "You've got Matt Chapman, Jack Knutson, and Bill Stein. They're all huge talents and have been in the industry a long time. They're also great guys. What's cool is we all have our established careers and

air shows. We don't have to do a formation act. We're not depending on it to make a living. It's just an added bonus for us to do, and if we don't do it, it doesn't really matter since we still have our solo careers. The other cool thing is we all come to the game with formation aerobatic experience. Matt started out in formation aerobatics. Bill was with the Red Barons for a long time, and Jack was on a jet team. We all happened to be at a show and thought it would be cool to put together a little three-minute teaser act with a loop, a roll, and a wingover. Over the next two and a

half years, it kept expanding and morphing until we ended up being the headlining civilian team in Chicago a couple summers ago. Once that happened, we thought maybe we should market this and put it out there. It's grown into a pretty cool thing. We'll do seven or eight shows next year. I love the solo stuff and won't give any of that up, but formation aerobatics is kind of like the difference between competition and air shows. It's a totally different discipline."

As for the differences in discipline between solo and formation aerobatics, Rob is pretty clear on which is more difficult.

"During the formation act, I'll pull 6g's on the airplane, whereas during my solo routine, I'll pull 11-13g's. But I'm more tired after the formation act. It's a lot of concentration, a lot of teamwork, and a lot of discipline. A huge part of it is trusting the people you're with and having them trust you. Once you bring another person into the mix, it changes the whole dynamic. There's a lot more to pay attention to, but it's a whole lot of fun."

Jason's experience with powered aerobatics is limited to an O-320-powered RV-4 his dad built.

"It's really set up for going places, so it's got a lot of junk in it," Jason says. "It's got a fixed-pitch propeller and is still mostly bare aluminum. I'm painting bits and pieces like fairings and finally got the cowling painted up. A lot of days, I commute to work from Tucson to our sailport. It's a great little machine. Someday, I would really like to get a dedicated aerobatic airplane like a Yak-55. One of my buddies keeps making noises about getting an Extra 300 and basing it at the school, so maybe I can just mooch off him. I'd love to compete in both power and glider at the same time. It's challenging to fly Intermediate or Advanced power and a glider category. It's double the programs to memorize and practice. It's tough, but if it's

what you like doing, then you find a way to do it. It's what I want to do someday when I grow up."

When asked about how to grow the sport of competitive glider aerobatics—especially at Nationals—Jason gives his take.

"I think for the next several years, it's going to be a big challenge increasing the number of contestants in the glider category," he says. "It's good to see guys like Ponzo and Lukas coming to Nationals again. Hopefully, we'll get Rafa and some of the other guys coming regularly. We could use some consistency at the Nationals. It's also important that people who come to the contest are actually flying well and safely and not being a hindrance to the contest. I think we've been able to do that pretty successfully the last several years. The great facility we have in Texas really helps with that. Having a separate takeoff and landing area just for gliders works really

well. Hopefully the economy will turn around, and more people will fly their gliders at a contest.

Both Rob and Jason acknowledge they didn't get where they are on their own. For Rob, Nationals almost didn't happen last year because of a confluence of mechanical issues that came up.

"I'd like to throw in a special thank-you to the Coleman family for putting me up in their place to practice for Nationals," Rob says. "The Friday before Nationals, I lost my radio, slip start, magneto, and prop governor at the exact same time. Four o'clock on Friday afternoon is the worst time to have anything go wrong. It was only through their help that I was able to get parts. They sent people flying around the country to get all the parts up to me and get the plane ready in time for Nationals. I couldn't have done it without their help."

Jason chimed in with Rob:
"Our flying was facilitated by

opportunities created by others in some form or fashion. I think that reinforces the need to be there for new people, either at contests or prior to contests. We need to be good ambassadors for aviation and aerobatics all the time. I think we have a habit of thinking we do it all on our own. It's easy to forget the importance of having one of these people who has helped us along the way."

As Rob Holland says, "You hear it all the time, 'You're so lucky to be in such and such a position.' I admit I am, but it's amazing how the harder you work, the luckier you end up getting."

That's pretty well said from the man who not only won the Unlimited Power category at Nationals in 2012, but also was awarded the Art Scholl Award for Showmanship at the 2012 ICAS convention—the highest honors among the competition and air show crowds, respectively.

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... the engine failed at low altitude and the accident investigators said that my fundamentals saved me. Thanks my friend. -Maynard H.

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A preview

BY MIKE HEUER,
IAC 4, U.S. DELEGATE TO CIVA

When this issue of *Sport Aerobatics* hits members' mailboxes, the 27th FAI World Aerobatic Championships will only be a few weeks away. For the first time since 2003, the event is to be held in the United States, and indications are that participation will be very strong. Let's review some background information, preview what will be happening, and add some speculation as to what to expect. It goes without saying that IAC members are invited and encouraged to come and pitch in and help make it a success. Without you, we couldn't do it.

HOW WE WERE SELECTED

At its plenary meeting in

Kraków, Poland, in November 2011, the FAI Aerobatics Commission, otherwise known by the acronym "CIVA" (standing for its French name, Commission Internationale de Voltige Aérienne), selected the United States to host the Championships. The vote was overwhelming, showing CIVA's confidence in America's ability to organize a first-rate competition. IAC's membership had displayed its can-do attitude, organizational abilities, and friendly approach when we hosted the WAC in 2003 in Lakeland, Florida, and the World Advanced Aerobatic Championships in Pendleton, Oregon, in 2008. There is an enormous amount of aerobatic experience in our country, and this is

well-recognized internationally.

Our bid in 2011 was originally for the event to be held at the Jean Airport in Las Vegas, Nevada. But in a strange twist of events, the airport authorities informed us in February 2012 that Jean was off the table—they didn't want any sport flying at what is advertised as a sport aviation airport as it might have a "significant impact" on sport aviation businesses based at the airport. This was stunning news. This meant we had to go back to CIVA with a new plan at the 2012 meeting.

THE CONTEST SITE

Since then, a legal entity (WAC2013 Inc.) was created and

a new site selected—and as you all know, that contest site is the North Texas Regional Airport (KGYI) in Sherman-Denison, Texas. That airport—previously Perrin Air Force Base (which closed in 1971) and then Grayson County Airport—has been host to the U.S. National Aerobatic Championships since 1972 with the exception of a couple of years where it was held elsewhere. It is a magnificent contest site.

Contest dates were set in October, as dates prior to the U.S. Nationals this year in September were not practical due to heat. Hopefully, the weather and wind will cooperate in October, and temperatures will be much more pleasant for contest participants.

The 2013 U.S. Nationals will be a proving ground just prior to WAC for several key areas of the competition, and the following is a summary of what's planned or in place:

A relocated box. The box had to be shifted this year due to FAA requirements. This was because the FAA would not permit box markings to be affixed to active runways and taxiways. That has been accomplished; the "CIVA-standard" box markings have been created and installed, and the Lone Star regional contest held in June provided the first opportunity to try it out. One Unlimited pilot remarked to me, "It's arguably the best box in the country." With the runways providing excellent orientation for pilots, the box will be a popular one with the teams.

New radios. Excellent communications between the chief judge's station, the boundary judges, and the contest staff is essential. New radios will be in use and should represent a big improvement over equipment previously used at Nationals.

South judges position. For the first time, a south judging position will be in use and tried at the Nationals. This station is necessary

because of the stringent CIVA rules on wind limits. Unlike IAC rules, which are fairly lax on wind, CIVA has strict headwind, tailwind, and crosswind component limits, and these must be strictly observed. Thus, when the wind favors an east-west operation, the judging position will be available and ready.

Other media. As with just about everything these days, Twitter and Facebook will be used extensively during the event. WAC2013 is the official Twitter address, and announcements will be tweeted out throughout the day. Our

The 2013 U.S. Nationals will be a proving ground just prior to WAC for several key areas of the competition . . .

wind observer, Doug Sowder, will be tweeting the wind measurements at WACWind. I will also be blogging at the event with daily news—my "Lines & Angles" column is now featured on the WAC website (WAC2013.com/category/lines-angles)—and tweeting at Mike_Heuer.

Upgraded boundary sighting devices. Sighting devices previously used at Nationals will be upgraded, and all four corners of the box will be guarded—in accordance with CIVA rules that require boundary judges to be stationed at all corners. Box "outs" have to be confirmed by two boundary judges to be valid.

CONTEST OFFICIALS

The contest director will be Chris Rudd. Chris has long experience as a contest director at major competitions both regional and national; served as an FAI judge at

the 2012 FAI World Yak-52 Aerobatic Championships in Russia, as an assistant judge at WAC 2009 in Silverstone, Great Britain, and at WAAC 2010 in Radom, Poland; and has been involved in IAC activities for many years.

Assisting Chris as assistant contest director for infrastructure is Lorrie Penner. Lorrie is truly a workaholic and is involved in all sorts of IAC activities and programs. She has incredible administrative talent and provides that support to the rest of the staff—and keeps the organization moving when it comes to the hundreds of logistical and administrative details that go into these events.

The contest office will be well staffed as well—with Lynn Bowes and Kathleen Moore working in registration. Lynn has been in almost daily contact with pilots, team managers, national air sports organizations, and frequently with me as well. She has dedicated herself, as well as her office, to the best service we can possibly provide those coming from overseas to compete and to make it a pleasant experience. Kathleen has been a fixture at Nationals for years, having served as our registrar there. She has intimate knowledge of the contest site, local facilities, and the people involved. Her experience will be a real asset. These ladies are responsible for processing all the entries as they have arrived over the past few months and will be logging in all team members on their arrival, checking documents and paperwork, and assisting in a million different ways.

Scoring will be handled by Carol Brinker. As at Nationals, the ACRO scoring program will be in use. She will be the one uploading scores to the web (www.CIVA-Results.com), printing grade summary sheets for the pilots to review, and entering the thousands of marks that will be assigned by the panel of 10



French Army Aerobatic Team (EVA).

COURTESY MIKE HEUER

FAI judges during the course of the competition. Carol will also be serving as the scoring director for the U.S. Nationals in September so she will be thoroughly prepared and ready to run ACRO at WAC.

There are many other volunteers—and it's difficult to mention one with risk of failing to credit another. Bruce Ballew is the WAC's treasurer and has been tracking the bank transfers as they arrive from teams. He also oversees the budget and during the contest will be assisting in the air traffic control tower. Ellyn Robinson is organizing the opening and closing ceremonies. Patty Anderson is working on sponsorships and will be assistant volunteer coordinator on-site. Joy McKinney will be the volunteer coordinator. Lionel Figueroa occupies the key position of communications chairman. MaryBeth Rudd is in charge of hotel, food, and refreshment coordination. Tom Adams is helping to secure rental aircraft for pilots coming from overseas and who are unable to ship their own aircraft. When the contest starts, Tom will be on the line as chief starter—a

role he played at the AWAC in Pendleton in 2008. Wayne Roberts has been working with the government authorities on our airspace waivers and pilot certifications.

On the local side of the organization, these contests would not be possible without the cooperation of the folks who live and work in the area. Helen Johnson has been the Chamber of Commerce liaison with the community and talks to three area Chambers on our behalf. Whether it's national flags, catering, or the demonstration rodeo that will be put on for the participants, Helen has been there.

And on and on . . . there are many others . . . sorry if I missed you.

The IAC's strength has always been based on the hard work of its members. Though WAC is not an IAC-organized competition, it is IAC's members who are doing the work. By the time opening ceremonies take place on the evening of October 9, thousands of hours of volunteer work will have been expended, and it is in that detailed pre-contest preparation where the success of WAC will lie.

CIVA OFFICIALS

As a part of sanction, CIVA provides numerous Championships officials for the competition. They were either elected at the CIVA meeting in November or selected by the CIVA Judging Subcommittee (JSC). Officials elected are the chief judge and members of the international jury. Judges are selected by the JSC based on the judging analysis generated at past competitions. CIVA pays travel allowances for these officials to attend, which comes out of sanction fees paid by the organizer.

Usually, seven of the 10 judges already have experience at past FAI Aerobatic Championships. From these Championships, the judging analysis (which is a module within ACRO) provides "rank index" (RI) data on each judge. In other words, a number is assigned to each judge based on how he or she ranked the pilots in relation to the other judges. This system assumes that the majority "gets it right," and if a judge is close to agreement with the rest of the panel, then he or she receives a very good "RI." All

of this data is compiled in a CIVA Judges Performance Database and used by the JSC in its selection. To keep the doors open for new judges, the remaining three positions can be filled by judges who have not had previous FAI experience but can provide data from national competitions along with their applications.

The system has worked well, and an excellent panel of judges—which includes a full board of 10 judges and 10 assistants allowed by the rules—will be in place in Texas. Most have considerable experience at FAI Championships. Chief Judge John Gaillard of South Africa, for example, was chief judge of the 1996 WAC in Oklahoma City and has served as chief judge at more FAI Championships than any other person in our 50-plus year history. He will be assisted by IAC Rules Chairman Brian Howard, who is also on the JSC.

Veteran judges include people like Francis Itier of France. Francis has been judging Unlimited competitions at the world level as well as in France for decades. His superb record of performance speaks for itself. The others are well-qualified and truly make up an international panel—hailing from France, Russia, Great Britain, the United States, Lithuania, South Africa, Finland, and Ukraine.

As an aside, readers will note that there are two judges from France and two judges from Russia, but only one from other countries, including the United States. CIVA's selection process allows up to two judges from the same country. It should be remembered that judges are regarded as "international officials" in FAI's Sporting Code and therefore do not represent their country at these competitions. In the past, they have even been prohibited from wearing any sort of national identification. Their selection is performance-based, and if they were guilty of national bias, it would show up in

their analysis and their RI's would suffer, thereby precluding their selection to the judging panel. Years ago, judges were considered members of teams, but no longer. In the end, the best judges are selected for the panel.

Judges have a tough job at WAC. Unlike domestic competitions where judging panels are often swapped when categories are changed, these people will be in place all day every day for the duration of the Championships. And it goes without saying that judging and evaluating Unlimited category flying is a very tough job. So when you are eating dinner at night and the judges drag in from the line and look like they've been run over by a truck, you'll understand.

The other CIVA officials are the members of the international jury. In recent years, the jury was reduced to only three in size. This year, the jury will be chaired by CIVA President Lars-Göran Arvidsson of Sweden. Mr. Arvidsson chaired the 2004 World Advanced Aerobatic Championships in Sweden, served on many juries through the years, and has been his country's delegate to CIVA for more than a decade. His colleagues on the jury include Alan Cassidy of Great Britain and me, Mike Heuer, of the United States.

Alan is well-known to IAC members as the author of the Vizio/Aresti software used to compose sequences and produce contest forms. He is an aerobatic instructor, former British National Champion, owner of an aerobatic school, author of a book on aerobatics, current chairman of the British Aerobatic Association, and former delegate to CIVA and one of its vice presidents. Alan has a huge base of experience in all aspects of aerobatics.

Mike Heuer was president of CIVA for 26 years, served on more international juries than any other person, was IAC's president for nine years and one of its founding



The flag of the International Air Sports Federation.



Nesterov, taken in 1972 in USA.

members (holding IAC membership No. 4), and flew competition himself up through Advanced over a 24-year period. He is America's delegate to CIVA—a position he has occupied since 1984—and is currently the CIVA Rules Subcommittee chairman. He was inducted into the Aerobatics Hall of Fame in 2001.

WAC is very fortunate to have such a huge pool of experience, talent, and skills available for this year's Championships—all of whom will contribute to its success.

THE PILOTS

As of this writing, the final deadline of August 31 for late entries has not yet passed. But if projections hold up, we may have as many as 65 pilots from 17 countries present in Texas. This is very good news as WAC and the Unlimited category have suffered from some shrinkage—or at least the appearance of it—in recent years. Last year's European Aerobatic Championships, a venue for most of the Unlimited pilots who fly at WAC, was poorly attended with just more than 30 pilots. At the last WAC in Italy in 2011, there were only 51 pilots (including normal entries and "hors concours" pilots).

Since the competition survives mostly on the basis of entry fees, it is always a risk until those final fees appear in the contest's bank account. The response has been excellent and actually a bit surprising in view of the fact the contest is not being held in Europe. Past World Aerobatic Championships held in North America have typically been smaller than European-based contests. This has been a very pleasing development.

For the latest list of countries and pilots, please go to WAC2013.com/pilots-teams. This list is being updated periodically.

As expected, the largest teams will be from Russia, France, and

the United States. That said, some of the other countries are also sending good-sized teams as well—Australia and Great Britain have entered five pilots, and several countries have teams of three pilots. I am personally pleased to see Canada back on the scene with three pilots, as it has been absent from the WAC in recent years.

The competition will be fierce. Returning to defend his World Champion title will be Mikhail Mamistov of Russia, the current holder of the Aresti Cup. An incredible pilot, he won the World

helps bring attention to our sport.

The team titles are highly coveted as well, and France and Russia will be the strongest contenders. At the EAC in 2012, the French came out victorious in the team competition, and at WAC 2011, it was the Russians. Both teams have considerable depth, though we do see new pilots introduced onto the teams from time to time. This year, Anton Berkutov will be new to the Russian Unlimited Team. Anton won the World Advanced title last year in Hungary and now has graduated to his country's Unlimited team. On the French team, Francois Rallet is new, though he has flown as a "warm-up" pilot at previous Unlimited competitions. Rallet is one of several French air force pilots on the team. France is the only country in the world that sends pilots to FAI World Championships from its active military. All are fighter pilots.

On the American team, new members include Hector Ramirez and Brent Hunter. Under new CIVA rules that took effect in 2013, teams can now consist of up to 12 pilots with a maximum of eight from one gender. This put Hector and Brent on the team. The U.S. team also has tremendous depth with Robert Armstrong and Debby Rihn-Harvey having the most WAC experience. The other pilots have also been there many times before.

Though the Americans have not won the individual World Champion title since 1988, when Henry Haigh won the Aresti Cup in Red Deer, Alberta, Canada, they will be strong competitors as they will be well-practiced, coached, and on familiar terrain. All of them have flown many sequences in the skies over the airport in Sherman-Denison. Rob Holland, the current U.S. National Champion, is widely regarded as one of the most talented aerobatic pilots in the world and won the

But if projections hold up, we may have as many as 65 pilots from 17 countries present in Texas.

Championships in Burgos, Spain, in 2001 and in Foligno, Italy, in 2011 and is also the current European Aerobatic Champion. He knows his way around the cockpit of the Sukhoi Su-26. Mikhail is well-respected in the international aerobatics community as calm, professional, and courteous and has contributed helpful ideas and comments to CIVA on improving competition.

Defending her Women's World Champion title will be Svetlana Kapinina of Russia. Svetlana was first seen by this author on the world scene in Oklahoma City in 1996. Now one of the most famous aerobatic pilots of all time, she is always enjoyable to see and talk to during one of these competitions. Svetlana is also a magnet for the press and the photographers, which

Gold Medal in the Final Freestyle (known as the “Four Minute”) in Italy in 2011. The fact is, many of the pilots are capable of winning the World Championships on any given day—but it sometimes comes down to luck, the weather, and how you feel when you climb into the cockpit. But this is what makes competition interesting—if it was all pre-determined, it would be pretty boring.

WAC will be an exciting competition up to the end, and no one ever takes anything for granted, except that there will be surprises along the way.

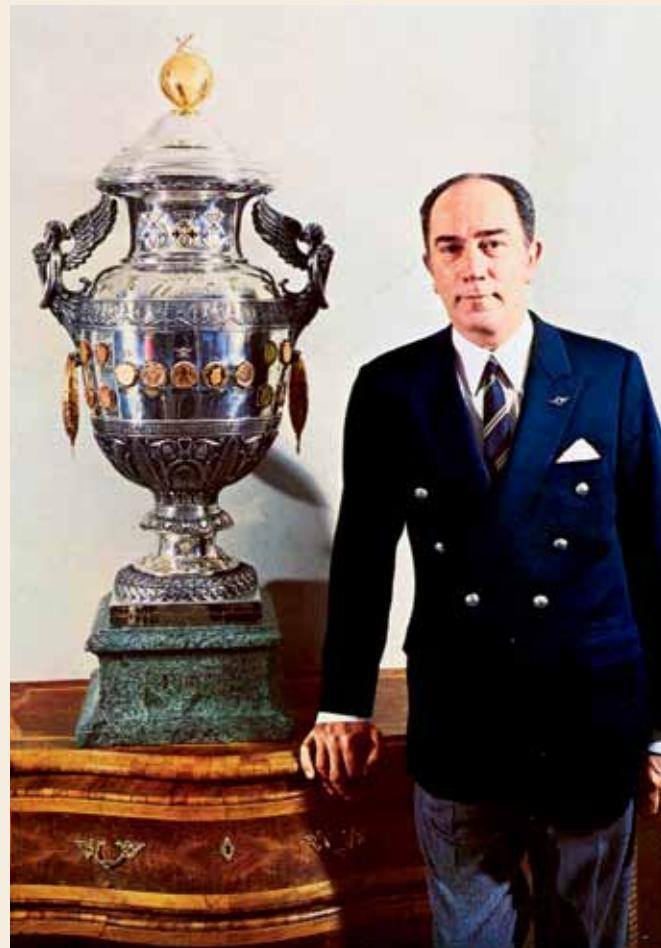
THE AIRCRAFT

We all enjoy the hardware. There will be the usual aircraft there—Extras, Sukhois, CAPs, Edges, MXs, and Xtremes, so nothing unusual to report. They are colorful, beautiful aircraft and in the hands of skilled pilots wonderful to watch. What I have noted is the proliferation of more complex, intricate, and beautiful paint schemes on these aircraft from years past. Also more sponsor logos appearing, which is good news for the pilots who are supported in this way.

As previously mentioned, Tom Adams has been helping pilots who request assistance on finding rental aircraft. Not everyone has the time or the funds to ship their aircraft to the United States. If flying N-registered aircraft, pilots must have a U.S. pilot certificate, and this is where Wayne Roberts has assisted. It’s a longer process than it was back in the 1990s when just a few minutes were required at the local FSDO. Our thanks to those pilots who have been willing to share their aircraft and which has helped make it possible for this competition to be as large as it is and financially viable. Remember, “Pay it forward.”

THE RULES

WAC will be conducted under FAI Sporting Code, General Section, and Section 6, Part 1. Part 1



Jose Aresti with Cup.

is for powered aerobatics and includes Unlimited, Advanced, and Yak-52 Championships. If you are coming and planning to volunteer at WAC, I would suggest downloading Section 6 at www.FAI.org/civa-documents. It’s available in PDF at the bottom of that page. Click on “Sporting Code” and the various parts appear. Section 6 is commonly known as “CIVA Rules.”

For those more familiar with IAC rules, there are many differences. While it might seem that a WAC is like any other contest, only bigger and with international pilots, they are much more complex. There are many examples in the rules, but what occupies a great deal of the organizer’s time are the arrangements for food and lodging for all team members and officials. The entry fees that are paid by pilots and/or teams largely go to

hotel and food costs, but also included is all the fuel and oil a pilot will require for his aircraft.

Here are some other differences:

The board of judges. Quite a large contingent of officials, it includes the chief judge and his assistants (usually two or three), the 10 judges, and 10 assistant judges. Recorders are not used by most judges at WAC and are optional. American judges frequently use them since it is common practice in IAC contests. All these officials’ travel costs are paid by CIVA—to ensure the best people are there to staff the event. Though the sanction fees are paid by organizers to CIVA, ultimately this comes from the entry fees that pilots pay. Thus, the pilots are really the ones paying these costs and thus expect the very best in those who judge and oversee the event.



2012 USA Team.

Weather requirements. Though contest flight programs can be flown with an “optional break” when the cloud base is lower than the upper limit of the box, there are also strict wind limitations. A maximum headwind component of 12 meters per second (23.3 knots) is prescribed. A crosswind component limit of 8 meters per second must be observed (15.6 knots), and a tailwind of only 3 meters per second (5.8 knots) is permitted. Wind observations will be made by balloon ascent and theodolite, and the components calculated by the observer (Doug Sowder). These observations are taken at 30-minute intervals, though this is usually relaxed by the jury if the weather is stable. The wind will be transmitted on Twitter (WACWind) and posted on a bulletin board on the flight-line. Wind observations are al-

ways closely scrutinized by pilots, team managers, and coaches.

Box markings. Though many boxes are “CIVA-like” in their appearance, the rules require several markers along both axes of the box and on the corners and of a prescribed size. This always takes a lot of effort and work on the part of organizers, but a well-marked box, in accordance with the rules, is always expected by pilots.

Boundary judges. In past years, these judges have been called line judges in CIVA rules, and you will still hear people use that term. But their duties are the same as at any contest—calling in “outs” to the chief judge by radio. At WAC, however, there is an important difference. All four corners of the box are guarded. The boundary judges diagonal from each other share the same radio frequency. The other two are on a different frequency.

When “outs” are called in on the same boundary, these calls will be on different frequencies. Both boundary judges must agree on the “out” for it to stand. Written records are also kept at the corner, and the chief judge’s station as is the case in IAC contests. It is a real challenge for the volunteer coordinator to staff these positions throughout the day for the two-week period, and we will be relying on IAC volunteers to help, just as we did at Lakeland in 2003 and Pendleton in 2008.

Videos of flights. Though this will be invisible to those who are not out on the judging line, all flights are videotaped. These tapes can be used to resolve protests and by the chief judge to conduct video conferences when necessary and in accordance with the rules. CIVA rules are much different regarding zeros as there are actually two

types—hard zero (HZ) and perception zero (PZ). I will leave it to you for a closer reading of the rules to explain the differences, but the rules regarding zeros are designed to achieve the maximum level of fairness to pilots and to ensure the judge receives a proper RI as well.

Opening and closing ceremonies. FAI is 108 years old this year, and like the Olympics, certain traditions are maintained. These traditions include the ceremonies that open and close the event and the presentation of awards at the end. Opening ceremonies this year at WAC will be located at the airport. It will include an air show and a parade of nations. The Championships will be opened officially by CIVA President Arvidsson. Opening will also feature a brief speech by NAA President Jonathan Gaffney, who will come to the contest from Washington, D.C. Closing ceremonies will be at The Pal-

zzo in Denison. Dinner will be served and the awards ceremonies will begin—the culmination of months and years of effort by WAC volunteers, CIVA officials, pilots, and teams. It will be a wonderful evening marked by more speeches but mostly by the tribute we will pay to these talented and skilled competitors when they are presented their medals and trophies. Flags will be presented and national anthems played—something not to be missed.

In summary, the 27th FAI World Aerobatic Championships will continue the half-century-old tradition of competitions that began in Bratislava, Czechoslovakia, in 1960. It is uncertain when another WAC will come to the United States, so for every serious aerobatic aficionado, this one should be on your calendar.

Plan to attend—but also support the event through your donations and volunteer your time. See you there!

IAC

Important Websites and Addresses

WAC 2013 official website: www.WAC2013.com

CIVA official website: www.FAI.org/aerobatics

CIVA official results: www.CIVA-Results.com

WAC on Twitter: WAC2013

WAC weather observations on Twitter: WACWind

Mike Heuer's WAC journal: WAC2013.com/category/lines-angles

Mike Heuer on Twitter: Mike_Heuer

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MXS/MXS-R Aircraft Control System Inspection Procedure

Determining a condition

BY ERIC MINNIS
BULLY AEROPLANE WORKS
(CONTACT INFO 336-263-8558)

Background

This inspection procedure is being released to assist owners and mechanics in determining the condition of the control stick assembly (torque tube) as installed in MXS and MXS-R experimental aircraft. The MX2 control system is of a different design, and this inspection procedure does not apply.

Overview

The MXS/MXS-R aircraft control system is very robust when installed in accordance with MX Aircraft design drawings; however,

the assembly is intolerant of material substitution, misalignment, and incorrect assembly. The torque tube is complex and should not be disassembled without guidance from a qualified mechanic with specific experience and drawings for the assembly.

The torque tube consists of a welded steel (4130) assembly that controls the elevator and ailerons via a system of pushrods. (A small number of MXS/MXS-R aircraft were equipped with a carbon fiber torque tube. This same inspection applies to those aircraft.) The

torque tube is sandwiched between two large bearings. The aft bearing is attached to the rear spar carry through. The forward bearing assembly is attached to structural carbon fiber "L" brackets using standard aircraft hardware. A forward bearing support plate is bolted to the forward bearing assembly and provides clamping load between the forward and aft bearings. This support is made of a material with the trade name FR4. FR4 is a glass-reinforced epoxy laminate that was specifically selected for this application.



Any use of incorrect materials, incorrect bearing assembly, or misalignment could cause the torque tube to fail.

The control system is designed to have a substantial amount of pre-load on this assembly, ensuring the torque tube remains properly engaged between the forward and aft torque tube bearings. Construction of the forward and aft support structure is critical to proper operation and security of the assembly. Pre-load of the bearing support plate is critical to proper operation and security.

Any use of incorrect materials, incorrect bearing assembly, or misalignment could cause the torque tube to fail.

Inspection Procedure

Remove the glare shield, seat, and control stick boot (if installed) to gain access to the torque tube assembly, elevator pushrods, and elevator idler.

Inspect the rear torque tube bearing and housing for condition of attach hardware, obvious visual damage, and security. No play should exist in any direction.

Inspect the control stick for freedom of movement, binding, and correct operation of aileron control system stops. The control stick should not make contact with the airframe.

Inspect the forward torque tube bearing to ensure the following: Carbon fiber structural brackets are installed and securely bonded to the fuselage structure. If these brackets are made of aluminum they **must be replaced** before any further aerobatic flight.

Forward bearing support plate is securely attached to the bearing housing and carbon fiber structural brackets and is constructed

of 1/4-inch thick FR4. If a substitute material has been used, the support **must be replaced** prior to any aerobatic flight.

The forward bearing support plate should have approximately 0.125 of pre-load as measured in the center of the assembly.

Verify that no movement exists between the bearing housings, forward bearing support plate, or carbon fiber structural brackets.

Move the control stick to each extreme while an assistant applies resistance to the elevator and ailerons. Verify no movement exists between the carbon fiber structural brackets, forward or aft torque tube bearings, or forward bearing support plate. A properly installed torque tube assembly should have no slop in any direction when pressure is applied to the elevator and ailerons.

Move the control stick to the full left then full right deflection and check the following at each extreme:

Verify that the forward elevator pushrod rod end bearings have some rotational movement and that they do not bind in extreme left or right stick deflection. If either rod end bearing binds, inspect the bearing for damage and crushing of the bearing cage. Replace any rod end bearing that is found damaged.

If any of the above inspection criteria reveals a nonconformance, do not fly the aircraft. Failure of the torque tube assembly will render the aircraft without pitch and roll control.

Feel free to contact us if you have any questions or need assistance accomplishing the inspection. **IAC**

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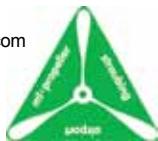
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Custom built to fit the person

The flying season is always my busiest. Pilots need to get their parachutes inspected and packed, and of course they need them back yesterday. The problem is all the days before yesterday are your responsibility. How you take care of your expensive life preserver could determine how quickly you get your parachute back. With proper TLC your parachute will only require a 180-day repack and the occasional replacing of rubber bands, worn elastic keepers, and the pack closing loop(s).

What I'd like to review is some of the many steps you should take so your parachute rigger doesn't have to ground your parachute for needless and possibly expensive repairs. Keep in mind many parachute riggers do not have the necessary sewing machines or the material to do extensive repairs and would have to send them back to the factory or a rigger like myself that has way too many sewing machines and specialized tools.

The number one problem I see over and over is your parachute harness so far out of adjustment that you could **easily fall out of it**. "I don't want you to end up the fall guy when all it takes is a few simple adjustments to prevent this." This is something you need to discuss with your parachute rigger or some other knowledgeable person before your next flight. You could also send me a picture of yourself with your parachute on, and I can probably tell by the photo if it's properly adjusted. I guarantee you there are no second chances here.

Many of you have never seen your rigger. You just box your parachute up and send it off, and like magic it reappears with a new inspection date on it. Your rigger needs to know how tall you are and how much you weigh, so he or she can adjust your parachute harness to fit you properly.

Don't assume it's ready to put on and go flying. I've mentioned this before, but it's worth repeating. Most riggers are very familiar with sky-diving parachutes that have very few or no adjustments on them. They're custom built to fit that person when he or she purchased it. Now, in comes your parachute with as many as seven adjustments. Unless it's been properly adjusted beforehand, there's a good chance it'll be returned to you with a current repack and out of adjustment.

A simple trick I do is hand tack the webbing in place when I receive your parachute based on the information you gave me about your height and weight. This

way the webbing can't slip (see photo No. 1). The parachute in this photo happens to be a Mini Softie. By leaving about 3-4 inches below the metal three-bar slide, this parachute will comfortably fit someone from about 5-feet-5-inches to 6-feet tall. This is a simple solution that your rigger can do (on any parachute), and it can be easily removed, if necessary. When properly adjusted the three-bar slide should be located in the small of your shoulder. Also, if your parachute is out of

Photo 1



adjustment, you may not be able to reach the steering system assuming you haven't fallen out.

Believe me, all webbing will slip through its adjusters over time (see photo No. 2). I suggest you go back and reread the February 2012 *Sport Aerobatics* article titled "Mid Air Collision." Then please make doubly sure your parachute harness is adjusted properly.

The second problem I see is the failure to protect your parachute harness/container from wear and tear that can lead to potentially expensive repairs. The problem is the back and/or bottom of your parachute container rubbing on your **hard** seat. In less than one repack cycle, of 180 days, you'll notice the container material has scuff marks on it. Then you'll start to see the outline of your rip cord cable and pins showing through the material. Over time the material will show a lot of wear and tear. If it's bad enough, that

area will need to be repaired. There is a simple solution that I've been preaching for years that you can do for little or no out-of-pocket expense. You need to pad your seat back, bottom, or both with something like a piece of carpet remnant. All you need is a little bit of padding and cushioning material to protect your parachute from excessive wear.

Thinking about it and saying I'll get to it soon is not good enough. You should make sure this has been done before your next flight. Many pilots say they don't have a problem because their seat back or bottom is smooth. That's not the problem. The problem is it's **hard**. If you have an aluminum seat it compounds the problem. It'll start turning your container black after the first flight. If you don't believe me, just rub your hand back and forth a few times on your aluminum seat and it'll soon be black.

While I'm on the subject of seats, some aircraft have fancy cushions on the seat back or bottom. Many pilots need to remove those cushions so they and their parachute can fit in their aircraft, preferably at the same time. This can create a whole new problem. You may still have to pad the area where the cushion has been removed as I mentioned above, but you may have exposed yourself to a new problem. It's that wonderful stuff we all can't live without. I receive several parachutes a year that look like a cat has scratched the container material. It's typically two inches wide and runs the length or width of your container. It's not your cat; it's the Velcro. If you remove a cushion and do not pad the seat, you may have exposed your parachute container to the scratchy part of the Velcro called the hook. If you still don't want to pad your seat, you at least need to put the mating portion of Velcro called the pile on top of the hook.

Your parachute is also not a place for your pet to sleep on. I receive parachutes with animal hair on them from improper storage all too frequently. I've also had them arrive with mouse droppings on them. Most of us fortunately or unfortunately live close to a Kmart or similar store where you can purchase an inexpensive plastic box with a snap-on lid to protect your parachute. With proper care your parachute will last you the twenty years' service life that most manufacturers want on their equipment.

In my July column and at the beginning of this column I mentioned leg and chest straps missing the elastic keepers and the potential problems they can cause. Remember, at a minimum your parachute rigger should have extra replacement elastic keepers, pack closing loops, and rubber bands on hand to replace the ones that have gone missing or wear out. If they don't have these basic items, it may be time to find a new rigger.

Until my next column, I'll leave my computer on to receive your questions. Fly safely and blue skies. **IAC**

Photo 2



CONTEST CALENDAR

Mark your calendars for these upcoming contests. For a complete list of contests and for the most up-to-date contest 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.

Canadian Western Aerobatic Championships

Friday, September 6 – Saturday, September 7, 2013
Practice/Registration: Thursday, September 5
Rain/Weather: Sunday, September 8
Power: Primary through Unlimited
Location: Rocky Mountain House Airport (YRM): Rocky Mountain House, Alberta
Region: Northwest
Contest Director: Dave Barbet
Contact Information: Primary Phone: (403) 875-3467
E-Mail: dbarbet@telus.net
Website: www.aerobaticscanada.org

Ace's High Aerobic Contest

Saturday, September 7 – Sunday, September 8, 2013
Practice/Registration: Friday, September 6
Power: Primary through Unlimited
Location: Newton City Airport (EWK), Newton, Kansas
Region: South Central
Contest Director: Ross Schoneboom
Contact Information: Primary Phone: 316-648-5057
E-Mail: schoneboommr@prodigy.net
Website: www.iac119.webs.com/

East Coast Aerobic Contest

Saturday, September 7 – Sunday, September 8, 2013
Practice/Registration: Friday, September 6
Power: Primary through Unlimited
Location: Warrenton-Fauquier Airport (HWY), Midland, VA
Region: Northeast
Contest Director: Scott Francis
Contact Information: Primary Phone: 703-618-4132
E-Mail: s.francis@ieee.org

NorAm Team Championship

Friday, September 13 – Saturday, September 14, 2013
Practice/Registration: Thursday, September 12
Rain/Weather: Sunday, September 15
Power: Primary through Unlimited
Location: Ephrata Municipal Airport (EPH), Ephrata, WA
Region: Northwest
Contest Director: Jerry Riedinger and Emma Stewart
Contact Information: Primary Phone: 425-985-9469
E-Mail: JRiedinger@perkinscoie.com
Website: <http://www.iac67.org/>

Rocky Mountain "Oyster" Invitational

Saturday, September 14 – Sunday, September 15, 2013
Practice/Registration: Friday, September 13
Glider Categories: Sportsman Intermediate
Power: Primary through Unlimited
Location: Lamar Municipal Airport (KLAA), Lamar, Colorado
Region: South Central
Contest Director: Jamie S. treat
Contact Information: Primary Phone: 303-304-7937
E-Mail: JamieTreat@q.com
Website: <http://www.iac5.org>

2013 US National Aerobatic Championship

Sunday, September 22 – Friday, September 27, 2013
Practice/Registration: Saturday, September 21
Rain/Weather: Saturday, September 28
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: North Texas Regional Airport (KGYI), Sherman, TX
Region: Mid-America
Contest Director: John Smutny
Contact Information: Primary Phone: 206-399-7097
E-Mail: usnationalscd@gmail.com
Website: <http://nationals.iac.org/>

27th FAI World Aerobatic Championships

Wednesday, October 9 – Sunday, October 20, 2013
Practice/Registration: Tuesday, October 1 – Tuesday, October 8
Power Categories: Unlimited
Location: North Texas Regional (GYI), Sherman, TX
Region: South Central
Contest Director: Chris Rudd
Contact Information: Primary Phone: 850-766-3756
E-Mail: waccd2013@gmail.com
Website: wac2013.com

Borrego Springs Akrofest

Thursday, October 10 – Sunday, October 13, 2013
Practice/Registration: Thursday, October 10
Rain/Weather: Sunday, October 13
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Borrego Valley Airport (Lo8): Borrego Springs
Region: Southwest
Contest Director: Gray Brandt
Contact Information: Primary Phone: 970948016
E-Mail: graybrandt@yahoo.com
Website: www.iac36.org

Blue Ridge Hammerfest

Friday, October 18 – Saturday, October 19, 2013
Practice/Registration: Thursday, October 17
Rain/Weather: Sunday, October 20
Power: Primary through Unlimited
Location: Foothills Regional Airport (MRN): Morganton, NC
Region: Northeast
Contest Director: Brandon NeSmith
Contact Information: Primary Phone: 828-719-0391
E-Mail: brandan@tablerockaviation.com

Sebring Aerobatic Championships

Friday, November 1 – Saturday, November 2, 2013
Practice/Registration: Saturday, October 26 – Thursday, October 31
Power: Primary through Unlimited
Location: Sebring regional (SEF), Sebring, FL.
Region: Southeast
Contest Director: mike mays
Contact Information: Primary Phone: 561-313-8503
E-Mail: soaerobatics@aol.com
Website: www.iac23.com

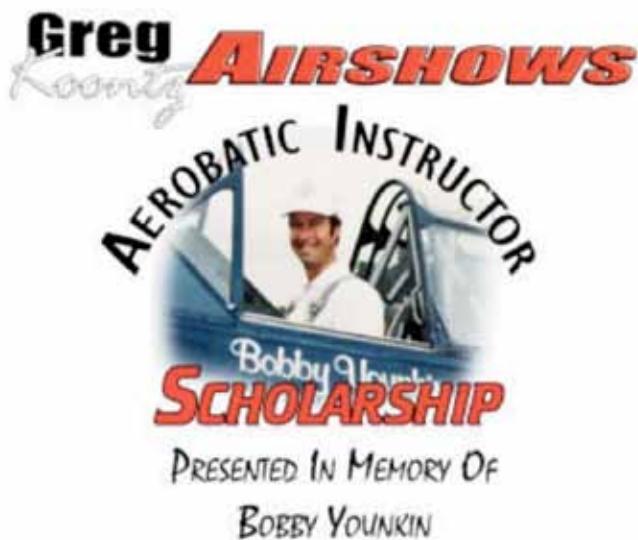
Tequila Cup

Friday, November 8 – Saturday, November 9, 2013
Practice/Registration: Thursday, November 7
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Marana Northwest Regional Airport (AVQ), Marana, AZ
Region: Southwest
Contest Director: Jim Ward
Contact Information: Primary Phone: 603-860-4456
E-Mail: cd@tequilacup.org
Website: www.tequilacup.org

Greg Koontz Airshows

Aerobatic Instructor Scholarship

Removes Age Limit



The inaugural Aerobatic Flight Instructor Scholarship was presented at the IAC membership gathering Friday night at AirVenture. Honored with being the first recipient was Alexander Sachs of Oregon, Wisconsin. Alex is a certificated flight instructor currently enrolled in the University of North Dakota's aeronautics program and is expecting to earn his bachelor's degree in May of 2014. He pursues aerobatics by participating in competition aerobatics with the UND IAC Collegiate National Championship aerobatic team. Alex recently placed third in the mid-America region for the Primary category.

"I had no idea how tough it was going to be to choose a winner for this scholarship," says Greg Koontz. "I was given the completed applications, less their identities, to review."

The biggest problem was most candidates just didn't get the "instructor" side of this offering. It is not an aerobatic course, per say, that's being awarded; it is a course to learn to teach aerobatics. Some aerobatic experience is expected. Most thought they were going to learn their first aerobatics. This eliminated

about 75 percent of the applicants right away. The other limiting factor was the age limit of 25. We found that most young people are busy with their education, and if they are in need of financial help, they probably are not financially ready to be active in aerobatics at this point. The number of certificated flight instructors under age 25 with some aerobatic experience was smaller than expected.

The purpose of this scholarship is to offer, without prejudice, financial help to a deserving individual to promote well-trained aerobatic instructors. "I believe we did this," continues Greg, "but my desire to focus only on young up-and-coming individuals might have narrowed the field a bit too much. Reviewing the responses and comments we received last year showed us there are many well-qualified individuals who need help obtaining this kind of training."

The scholarship will continue to focus on those who show an effort to pursue aerobatics and who, because of their personal situation, need financial help. Continuing forward, the Greg Koontz AirShows Aerobatic Instructor Scholarship will be offered to certificated flight instructors of all ages. We want to encourage anyone who wanted to apply last year, but was over 25 years old, to submit an application this year. All applications will be considered.

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