

Red Bull Air Races '09 (part 1): It's Not Your Father's Airshow

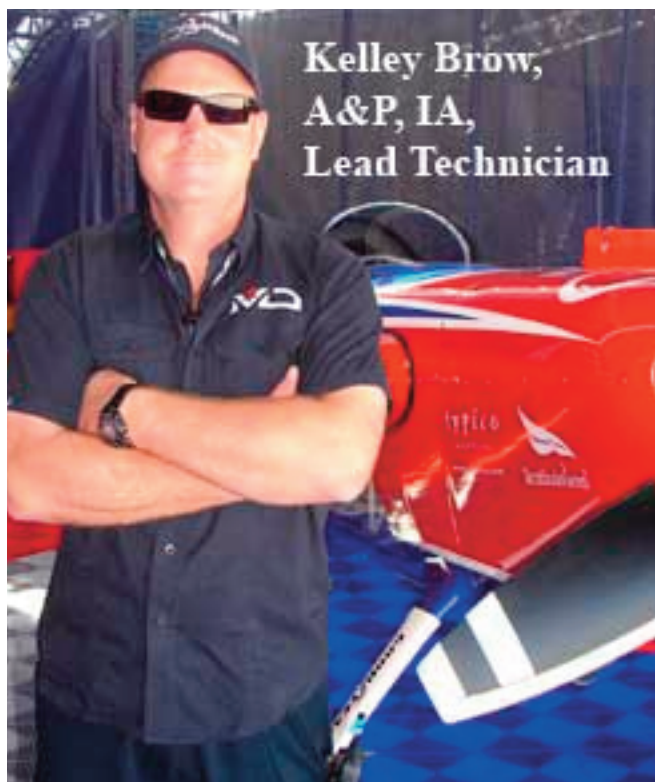
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"I doubt that 95% of the regular airshow pilots could even do this," said a seasoned technician from the States, as we watched trial runs for the Windsor/Detroit race in the Red Bull Air Race series. "They all *think* they can, but when you're down on the deck at 230mph, pulling 10Gs... it's hard to comprehend."

Apparently, that holds true for mechanics, too. I caught up with Kelley Brow (pronounced "bro") in the pits of Matthias Dolderer. He runs Kelley Aero Service in Ozark (MO), where he does restoration and rebuild work. Oh – and this year, he's full time on the Red Bull circuit.

Kelley's a pilot with glider and instrument ratings; he's been a dirt track and off-road racer (where he learned and sharpened his fabricating skills), and he still flies hang gliders now and then. He's also an A&P and IA. He never planned on being a full-time race plane mechanic. But...

Kelley liked high-G machines for a long time, and he worked with Kirby Chambliss since that pilot's Pitts days, so when Chambliss called on him to fill in for a missing crewmember, he tried it, "just for fun."



"I didn't even have a passport," he said, "and Kirby needed me in Abu Dhabi." That's how, three years ago, he got bitten by the Red Bull.

Red Bull has a 2-seat Extra 300 for media flights, and Kelley maintained that one, too. It happened to be guest-piloted by another aerobatic star, Germany's Matthias Dolderer.

Over the next two years, Kelley's talents got spread around the circuit. He worked for 2006 Red Bull Champion Chambliss in 2007 and later for Hannes Arch (Champion in 2008); he finally signed up to do this year's whole series of six races for Dolderer, who is a Red Bull rookie this year.



It's not like working in a shop.

Kelley says there are tons of differences between regular work and work on the circuit. Car racers understand that the nature of the entertainment calls for lots of all-nighters and surprise modifications. Race cars, though, are autopsied and rebuilt with every race -- in a shop. They arrive at the track in one piece, and they stay together until they're transported back to the shop. No so, airplanes. They come to the track in a box.

There are no 'breakdown' designs among the Zivko Edge 540 and the MXS-R planes that comprise the field of a dozen or so competitors. "Fortunately," Kelley says, "the Edge is pretty easy to work on and inspect. It's also easy to do routine things, like control checks."

Canadian rookie
Pete McLeod (L)
knife-edges an
air gate for
Kirby Chambliss



Kelley has made a few modifications for ease in taking the airplane apart, necessary for transoceanic transport. He's re-routed some wires and lines, but hasn't added any quick-disconnects, partly out of respect for weight but also for reliability. "Zivko designed an awesome, easy-to-maintain airplane."

It's not complicated," he says, "but you never say 'never.' Everybody makes mistakes, but it's my job not to make them. Safety is job 1."

Even so, it's "especially hard to do this work on the road." In addition to having no base of operations and having so many of his tools, fixtures, and helpers (including his wife and 17-year-old daughter) back in Missouri, Kelley says that, when racing, "everything's harder, and there's no time."

He remembered working for Hannes Arch at Abu Dhabi a year ago: "The turnaround times [between flights] get tighter as you advance through the competition. Sometimes there's just enough time to get oil and gas. Last year, Hannes couldn't even get out of his plane." The temperature was well over 100 degrees; the pilot was stuffed into a tight cockpit in the sun, covered in a multi-layer flame/G-suit. It must have been horrible for him. Kelley remembered, "I was really, really hot in only a T-shirt!"

There's no air conditioning in those suits or those airplanes, either -- and the workout pilots get when they're competing are hard for a non-competitor to comprehend.

Unlike in most other forms of competition, teams actually help each other. It's not unusual to see members of one team stay up

half the night or more to help another team. Tools get loaned (and returned!), too. Kelley says, "This is a great series; there's a great company behind it. The experience available here -- the camaraderie. We all advise, we all help each other. We want it to be a fair race, and everyone wants everyone to be running." (Of course, everyone wants to win, too.)

Emotions are always in play.

It's not that anyone succumbs to emotions; it's that they add a huge, undefinable weight to the work. "It's almost like Bubble Day at Indy... every day. I go through just about every emotion -- at just about every race." Even elation burns a lot of calories!

And there's always the uncertainty of racing. When you get right to the edge, where the margin of victory is measured in fractions of a percent, everybody's pushing as much as he can.

Michael Goulian, who flies an athletic high-precision airshow virtually every weekend

during the season (except on Red Bull dates), noted after the race, that this is largely a sport of reflexes. "You can't plan -- you just roll and pull and when you get around the 270 on the quadro, what you see is what you get. And today what you saw was a face full of pylon. You just can't salvage that..."

I noticed that Kirby Chambliss, on one of his qualifying runs, was really scorching fast through the first timed section (of four). His second segment was comparatively rough, and I wondered if maybe he came through that first gate so fast that it messed up his line for the second section. I approached him and mentioned that, "You came out of that first set of gates so fast, I didn't know if you were going to make it." Kirby, who was holding onto fastest time of the day at that time, just smiled and said, "Neither did I."

See more: www.RedBullAirRace.com

Check back at www.121five.com for more installments on what makes the Red Bull events so different -- and so good!



Crossing back into Detroit took a little longer!

