



GENERAL AVIATION IN EUROPE IS BOTH INSPIRING AND FRIGHTENING

News / Events / Festivals



Friedrichshafen, nestled on the banks of Lake Constance in southern Germany, is no stranger to aviation innovations. This picturesque town is best known as the birthplace of the Zeppelin, a huge flying ship that once promised to revolutionize air travel. While the future of trans-Atlantic air travel turned out to be both less glamorous and more practical than Count Zeppelin imagined (I'm writing, as I return home, on an iPad connected to WiFi at 36,000 ft. over Greenland, after all), the city retains a reputation as the place to see exciting aviation ideas in action.

Last week it showed why in hosting the annual AERO show, a weeklong gathering of pilots and aviation enthusiasts from across Europe. What was once a regional exhibition of ultralights and gliders has grown into the premier general aviation show in Europe. It boasts a diverse and interesting mix of airplanes, with a focus on emerging technology.

For a crass American, this is a very civilized show, held in a beautiful convention center with great coffee and lively beer gardens. Oshkosh this isn't. Beyond these mundane differences, though, AERO offers a fascinating lesson for US pilots. If all you've heard is how awful things are for

private pilots in Europe, let me offer a more complete – although not entirely rosy – portrait.

1. Electric airplanes are coming. Yes, and free beer tomorrow, you may say. Well, electric aviation may be a bit of a sideshow in the US, but it is clearly the future of light aviation in Europe. Faced with expensive (sometimes nonexistent) fuel and ever tighter environmental rules, there's little choice. Engineering giant Siemens had a large presence at the show, displaying a Pipistrel with a hybrid Rotax/electric propulsion system and a stunning Extra 330 aerobatic airplane with a fully electric front end. The battery life is severely limited for now, but it's probably enough for an aerobatic routine (the idea with an Extra) and a one-hour training flight can't be that far off.

[Magnus at Aero](#)

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Siemens had a major presence at AERO, including the Magnus eFusion.

One intriguing possibility, at least in the US, is that electric airplanes could sneak past diesel as the “next generation solution” for avgas's eventual disappearance. Diesel engines are far more proven, but they've been slow to gain traction in the US, where 100LL remains available and relatively inexpensive (no, \$5.75/gallon is not outrageous). Retrofits from Continental are pricey, and the operating economics simply aren't persuasive enough to justify the initial outlay.

Electric, on the other hand, could offer a more dramatic change. One concept on display at AERO that's particularly interesting is an electric ultralight with a quick-swap battery. With this, a flight instructor could walk out to the airplane with a battery for the next lesson, then bring it back in to charge while the next instructor takes another battery to the airplane. Developments like this, which will benefit from the billions of dollars being invested in electric cars right now, just might make electric a reality for flight schools. For your King Air? Probably not yet.

2. A focus on recreation. One reason electric airplanes get so much attention at Friedrichshafen is that GA fulfills a very different mission across the pond. Piston airplanes are for fun, and very little attempt is made to justify their worth based on utility or travel plans. Few European pilots have an instrument rating (less than 10% by some measures) and night flying is likewise rare. Maybe the 120 mph autobahns and the shorter distances between cities make airplanes less essential, maybe the aforementioned high price of fuel makes it uneconomical, but the result is an industry that's quite focused on fun flying. This may be disappointing to some American pilots, but it's also refreshing in a way.

Because of this recreational focus, and because of less stringent microlight laws below certain

weights, a small but active sport airplane industry has emerged. It's filled with companies Americans have never heard of and sometimes-odd designs. A single exhibit hall at AERO showed off a wide array of gyrocopters (including one for medevac use), an L-39 fighter knockoff made entirely from carbon fiber, and the fascinating, all-electric Volocopter. I don't need to fly all of these strange creations, but the creativeness and hustle of these small firms is more than a little inspiring.

[Blackwing](#)

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The Blackwing is one of many sleek two place European designs.

3. European airplanes have more style. No offense to Cessna or Piper – I consider the 172 to be the best airplane ever made – but some European airplanes make traditional US designs look like flying bricks. With their sleek canopies and swept wing tips, there's clearly an emphasis on aesthetics in addition to aerodynamics. Sure, those low drag details serve a practical purpose when weight is limited and fuel efficiency is paramount, but I also detected a lot of pride in their "ramp presence," as the salesmen say. What should we expect, though, from the people who invented the Porsche 911 and the BMW M3?

Are US manufacturers wrong? Actually, I don't think so. As sexy as those two-seat airplanes from Eastern Europe look, they aren't all that practical for Americans. For one, they're small on the inside: two healthy pilots from Texas wouldn't last long in the cockpit. Secondly, some models had a worrying lack of detail when it came to discussions about maintenance (remove the entire cowl for a borescope?). All airplanes are compromises, and I suspect our priorities are just different.

4. Certification reform is the topic du jour. At the same time we debate the merits of an overhaul to the FAA's Part 23 certification process, Europeans are grappling with a major update to EASA's CS-23 rule. This is not accidental: one of the major goals of the reform movement is to synchronize international standards and procedures. Hopefully this makes it less expensive for new airplane designs to become reality, no matter where they are made.

As with any change, though, it's not as simple as changing the rules and moving on. At a panel discussion about the proposed CS-23 changes, pilots simultaneously applauded and criticized EASA. They seem to be making a genuinely good faith effort to knock down barriers, but the process has been long, confusing and just a touch opaque. As Ian Seager, publisher of the UK's *Flyemagazine* observed, getting 28 different national aviation regulators to agree is almost impossible. It was almost enough to make me appreciate the FAA. Almost.

ADS-B radar

Image not found or type unknown

ADS-B weather is just a dream in Europe.

5. We take a lot for granted in the US. Before you tell me to move to Europe, let me assure you that AERO also reinforces just how good we have it in the US. We talk about the free Air Traffic Control services a lot, and pilots will often grudgingly admit that the free ADS-B datalink weather is nice. Both are truly special – I spoke to many pilots who would dearly love ADS-B weather in their airplanes. One luxury I hadn't considered was pilot-controlled lighting. This is an afterthought for most American pilots, available at even the quietest country airports, but it has only recently become legal in the UK. It's still exceedingly rare.

The FAA is bureaucratic, Congress pours fuel on the fire, and too many municipalities try to close general aviation airports. Having said that, there's a reason European pilots come to the US for training, experience building and fun flying vacations. We've simply got the best aviation system in the world. Admit that next time you feel frustrated by the length of the FARs.

A German proverb cautions that *wer rastet, der rostet*: "He who rests grows rusty." To me, it's an appropriate reminder that, while the United States has enormous advantages for private pilots compared to Europe, such advantages are not pre-ordained. That means we must fight unnecessary regulations, but it also means our industry needs to keep its eyes on the future, not the glory days. We could take a cue from the scrappy, creative companies at AERO, who, though faced with often overwhelming government limitations, churn out sexy, efficient airplanes... And put on a great show.

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