
Oshkosh Bound

By Joe Caravella, Jr.

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After attending 'The World's Greatest Aviation Celebration' for only 3 years, I've learned that a great cross-section of humanity joins the party. Whether an earthbound air show fan, a pilot landing at Wittman Regional, a homebuilt enthusiast, a forum presenter or an exhibitor; there is something there for everyone. The same thing applies for those of us who dream of flying cars and roadable aircraft. In the sub-culture of roadable aircraft enthusiasts, there is also a great cross-section of history, ideas, presentations, attempts and works in progress. This is my story of Oshkosh.

Inspiration and Passion

After earning 2 aerospace degrees from Purdue University, 10 years of working in rocket science at Rocketdyne and 18 years since my last hour as pilot in command, I decided it was time to return to my passion for aviation. In 1991, after facing the irony of a speeding ticket from an airborne speed trap, I was inspired with a revolutionary idea for a flying car. In 2006, I quit my job to dedicate all of my time to the development of my now dusty idea and its application. Having freed myself from the shackles of a 9-to-5 job, I planned a month-long, round-the-country, reconnect-with-old-friends road trip scheduled around a weeklong stay in Camp Scholler at EAA's AirVenture in Oshkosh, Wisconsin.

Year One: The Fire Hose

My plan for the week was to attend as many forums and workshops as possible on the smallest budget. The AirVenture website was very useful in planning my campaign. I created a spreadsheet of the forums I wanted to attend, and was disappointed to see so many overlaps. Lesson learned: Prioritize what you want to see and do. Luckily many of the workshops were offered more than once. I arrived 7:00 am Monday morning. I checked in at Camp Scholler with a trunk full of food and a cooler full of left-overs and then raced off to the first 8:30 am forum of the show.

A week later I came up for air after filling every waking moment. I didn't sit at the flight line at all. I didn't visit more than a handful of the visiting aircraft. I did however TIG weld, gas weld, make a composite panel, build a wood wing rib and rivet a wing spar. I also attended every forum on flying cars and a host of others that refreshed my aerodynamic schooling. In the brief moments between forums I marched double time through every exhibitor area. It was no small feat due to the vast exhibit areas. This was a crash course in Oshkosh, a very full week, drinking from the fire hose of experimental aircraft knowledge.

Wow! This show is big! I couldn't have imagined camping with 38,000 aviation fans. I couldn't have imagined the expanse of the field or it being blanketed by over 10,000 aircraft of every shape and size. I couldn't have imagined attending an event with more than 500,000 other fans.

Year Two: Exhibiting

Successful bench scale testing of my revolutionary idea showed that it is not applicable to flying cars. So, I had to make a decision in November of 2007; patent the idea for other applications or start a new roadable aircraft design from scratch. I chose the latter and after 2 months of conceptual brain storming and 2 months of preliminary design had a plan to move forward. I believe the design concept I came up with provides an exciting, affordable, kit-built vehicle. Having seen the attention paid to Terrafugia and wanting to capitalize on the growing public interest, it seemed like a good idea to bring a prototype to AirVenture 2008. The EAA Chapter 1 Design Group provided a great forum for presenting my design concept at an early stage.

The next phase of the adventure was taking a rudimentary CAD representation (in Excel) and turning it into a full-scale vehicle. In March 2008, I applied to be an exhibitor with the intention of displaying a prototype. It quickly became apparent that I would not be able to build a flight worthy vehicle from scratch in 4 months no matter how 'simple' the design. Having already committed to being an exhibitor, the prototype became a mock-up in order to meet the schedule. The mock-up would not be flight worthy, not have control surfaces or linkages, would use 2 bolts per joint instead of 2 dozen rivets and use commercial instead of aircraft hardware. Still, I was doing detail design work in parallel with all phases of construction. It was another crash course — this time in some of the details of aircraft design. Lesson learned: Get a solid modeling CAD program.



Thank goodness for the volunteer support of family and friends to lift heavy items, provide extra hands and do detail fabrication. We all worked to the last minute. The result was worth all the hard work. Exhibiting at Oshkosh is exhilarating, even if you aren't flying yet. You will have the largest aviation

design review board ever! I had the pleasure of talking to hundreds of pilots, home builders and spectators about my design. I heard candid feedback and gathered many great ideas to improve my design. My exhibit was staffed with my family and friends. We had a great time at the show.



Year Three: Presenting

According to the plan shared with the world in 2008, the prototype was in the midst of design and fabrication. Therefore we did not exhibit at AirVenture 2009. However I had the honor of being selected to present an educational and entertaining forum titled 'Affordable Roadable Aircraft Design.' The highlight of the trip was having my forum billed in AirVenture Today as the 'must see forum' for my time slot!

It was nice to see both new and familiar faces in the forum audience. The continued interest of roadable aircraft enthusiasts from year to year highlights the dedication of those interested in making 'flying cars' a reality. It is also important to develop new interest in the concept and improve public perception of

roadable aircraft. We need to show that these vehicles will be real, affordable and practical so the public will welcome a future where more people will fly their own airplane on a daily basis.

This was also year of learning where I stand in the EAA community. As a lifetime member, prior exhibitor and current advertiser I was treated very well by the EAA and AirVenture. I made many excellent contacts in EAA staff, AirVenture volunteers, Homebuilders Council and other exhibitors. There is a wealth of knowledge and support to assist in making anyone's homebuilt project successful.

Year Four: Driving My Roadable Aircraft to Oshkosh!

Let me add my voice to the chorus that says "if you haven't been, GO!" Make it a priority. You will enjoy it immensely. I have found that, without exception, every EAA volunteer and staff member will go out of their way to help you enjoy AirVenture.

Someday I'm going to attend this show, relax and enjoy myself, but not next year. I'm now gathering hardware, fabricating parts and finalizing the stress analysis of the prototype Caravellair. I plan to drive it to AirVenture 2010!

Hope to see you there!

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