

A warning for readers. This inevitably will be a long and undisciplined post.

Sonex #618, "Flyin' Matilda" went from waltzin' to flyin' this past Wednesday evening, bringing to an end almost ten years of adventure and starting a whole new adventure.

As the story goes, Rose and I moved to the US back in July of 2001 for what we expected to be a year or so as a bit of a lark. Obviously that went horribly wrong.

I learned to fly back in the late 90s and Rose and I used to enjoy taking a plane up to country towns on the weekends (look up Moorabbin Flying Services, Victoria, Australia for all your needs), but flying stopped when we got here. By 2003, we had our first son and I wanted something to do that didn't involve a computer but kept me close to our little family. I think I saw an EAA sweepstakes thing on their website somehow. I didn't know what EAA was. Had no idea who Sonex was. Had no idea what experimental aviation was. But somehow I started to dig into it. Unlike a lot of the people on this list, before all this started, I didn't know how to use a screwdriver. Drilling a hole in something required getting "a man" to do it. My wife famously called my boss to get a desk assembled when we first got here. He has never let me forget that one. I remember chasing the links on the web site and seeing pictures of people building airplanes in their garage. I couldn't comprehend it. David Koelzer, a man I have never met, Gus Schlegel, a man I have met, and various others are to blame. It was these web sites that eventually convinced me that this looked like a possibly do-able adventure.

At some point Rosemary must have taken pity on me and relented to us going to visit someone with a Sonex who happened to be Tony Spicer. We drove down to Stag Airpark just to have a look. We have a lovely picture of him holding baby Michael and lots of lovely pictures of Sonex 32, the first customer built aircraft. It really was, and probably still is, a very pretty airplane. I didn't expect to get a ride, but he took me up and kicked my arse or ass, as we would now say. I had no idea an airplane you could build in a garage could do anything like that. It beat the crap out of anything I had flown to that point.

A little bit after this, we went hunting for airports and tripped over Lake Ridge airport, a grass strip north of Raleigh and a gentleman by the name of Randy Smith. More about him later. I bought a cordless drill, a hand saw and some wood from Home Depot and badly built a tool table to hold things like Drill Presses and scotchbrite wheels. But I made it well enough to convince Rosemary that we might as well have a shot at it. We bought a kit and went to the workshop. I think Michael is still the youngest workshop participant at 8 months old at the time. The workshop was awesome, but I was just hopeless. People all around me made their little airfoil shape while I was still working out what the tools were called, but we had a lot of fun and it was just plain

interesting. I remember two things that John Monnett said during the workshop. One of them was everything would be fine if you treat each part like it was a piece of jewellery (how right he was) and the second was something about building a plane will change your life (oh, how right he was).

And so we started building an airplane in an apartment garage. The apartment complex folk never really cottoned on to that. The people living above us surely did. I alumipreped on the grass in front (yes, it does kill grass very effectively), I sprayed self etching primer on our balcony (yes, it does turn everything grey) and we beat solid rivets on the same balcony. I would walk the wing spars out of the garage and round the apartment block, onto the grass and thread them through the railing to get to the concrete I could so this on. It was insane. Slowly pieces of it began to get built. We had our share of disasters. I rebuilt the flaps twice, the elevator more than once and the vertical tail I have a complete copy still sitting up in my garage as I type. Gradually you begin to get less hopeless, get better tools and after a while you find yourself making stuff out of metal easier than you can out of cardboard. It just happens.

You become obsessed with tool catalogs. The harbor freight folk know you by name, as do Home Depot and Lowes. You suddenly know McMaster Carr, ATS, Wicks, Aircraft Spruce. You begin to care about nut plates. Yes, that cheap rivet puller from HF really will make it right through your project and beyond. You end up getting too many clecos because you can actually never have enough. And if you don't like something, you throw it away and start again. I built at least four trim tabs, not because any of them were bad, but the other three squeaked or something.

Over the years, we have met/communicated with a pile of interesting people, building or not. Jim Cunningham, Brad Strand, Jack Lockamy, Wayne Andrews, Wayne Daniels and 7th Heaven (a great place to stay if you are going to Airventure), Terry Holek, who just flew - he and his wife Melanie started this journey at a similar time... and many many others. Bruce Harrington provided a lot of advice and indeed a lip for the fuel tank. Gus provided the basis for wing tip lights and a start in fiberglass. Various people with websites that I have never met like Jeff Schultz and Michael Hilderbrand contributed a lot by simply having that information there. Rob Frost, Peter Schalkwyk and Michael Crowder all contributed either advice or physical chattels in the form of gear leg bending jigs and the like. I have Kip Laurie's larger tail wheel fixture. Then there were the Australians. Lynn Jarvis from South Australia, where my family comes from, flew the first Sonex in Australia. Stuart Trist, Doug McLean, Tony Richardson and others with funny accents. I would have left out lots of significant others from down through the years.

Eventually we move out of the apartment and apparently I change tenses. We moved into a house with a larger garage. And then I got a little distracted. There was about two years where I didn't make material progress on the airplane.

Life just got in the way. Eventually we got back on track. In 2007 we bought avionics and a 3300, which of course are now in the "brand new" 618. The airplane has an unusual electrical system, parts of which were a proof of concept for some electric airplane stuff – not a circuit breaker in site. It has had two different windscreens due to paint getting on the first one, but we managed to fit the original style canopy, fresh from its 2003 vintage box without a single crack (yes, you nay sayers, it can be done). This of course got paint on it too but Rosemary carefully scrubbed it clean by hand. Other areas of over-complication that I managed to waste time on were the brakes. I fitted hydraulic brakes (Tracy O'Brien) with RV7 pedals retrofitted to the Sonex rudder setup, breaking all the rules. I had a LOT of help with this, but it was amazing how this sucked up time. I stole an idea that I liked from Drew Waterworth for the throttle but this was crazy by the time it was complete. Drew's aircraft used the Sonex dial-a-trim system. Mine did not. Mounting the throttle lower and on the side wall in front of the trim required it to be canted over so many degrees so that you can easily reach the trim. I wasted weeks of time getting that just right. The point of all of this is that every builder does things to make their airplane unique. They might not make it better necessarily but it personalizes the plane. It becomes yours.

With the airplane essentially complete, for some reason I got it into my head I should paint it. This was a truly ambitious but utterly rubbish idea. It was easily the hardest thing to do on the whole project. It literally took a year to paint it and it was horrendous. We had some quality issues with the vendor and in addition, it is just plain difficult to do in your garage, but by the end, we had it together and we survived. Like all things, once you have built the plane, now you should really start again, because you know what you are doing. Rosemary's laundry sink and scales, let's just say they aren't the same color. But ultimately, it was sort of worthwhile.

Once the airplane is notionally complete, there are a number of milestones that follow. First you have to move it. My technical counselor, Randy Smith, was the manager of logistics here, but Rose and I will always remember driving behind it, being totally freaked out. Another milestone was missing the airplane not being in the garage. After walking past it every day, the entire family felt a sense of loss when it was no longer there.

The next major milestone is engine start. Suddenly this inanimate object that you worked on is alive and slightly scary. I was unprepared for this. Standing on the brakes with the airplane tied to a golf cart, running up to full power, also scary.

Next, after a whole pile of crap, is airworthiness inspection. Before that, for us in between was yet another move, pulling it apart and putting it back together again. Paperwork and preparation. Finally you have little choice but to get into it and go fly it. Well, provided you can. I had to get a BFR and a tailwheel endorsement. This was a mini-adventure by itself as I had flown only a little since being in the country. I had a great time flying with

FlightGest out of RDU in C172s to get back in the swing of controlled airspace and general stuff. Michael Crowder sent me to Rob Walls (Sanford, NC) who threw me all over the sky in a Super Decathlon and made me a much better pilot. Flying a tailwheel is really just awesome and he comes highly recommended.

In addition, I had the good fortune of going to Oshkosh and doing some of that transition training you have been hearing about with Joe Norris at the Sonex Factory. For folks preparing to fly their own aircraft, I highly recommend it.

Back to the event itself. We got our airworthiness Friday week ago and prepared the airplane for flight for the next day. At about midday, we ran down runway 06 at Oxford Henderson, but I felt a large vibration and aborted the takeoff. Back at the ramp we found the wheel pant had separated down the seam and the gear leg fairing had been pulled clean off the fuselage. We stripped the pants off and tried again and found we had a huge wheel shimmy event at around 40 mph, the violence of which was amazing – those titanium gear legs can take some punishment. We tried one more time but we called it quits and pulled the wheel off. Eventually we found that the inner tube inside the wheel had caught some glue or something from where the manufacturer had put the balance weight in and not seated correctly so it was asymmetric within the tire. Mark Cassada helped us out with this and we came out the next day and ran up and down the runway – no more shimmy.

So it was the past Wednesday I sat at the end of the runway, pushed the throttle forward and ran down runway 24. It climbed into the air and just kept on going. I climbed it up, hit maximum CHT on one of the cylinders and levelled off, made sure it would fly slowly, that I could deploy flaps and fly slowly. I dropped down to pattern height, kept it close and landed. It was super nice to fly and a super easy to land and crazy easy to handle on the ground. It was brilliant. People who have more time on the airplane can comment better than me, but to use a phrase I am think of trademarking, "what a sweetheart of an airplane". Building and flying it is liking having a child, except the only diaper you need to change is your own. It is an experience you will never forget.

So, we get to the stage where we have to thank some more people and hopefully embarrass them.

I have to mention this Randy Smith character again. I don't know what other technical counselors are like. I have only known him. He has fixed bad drilling, dents, got me amazing tools to rivet the wing with, stared over my aircraft as if it was his own. He has shared his extensive knowledge and helped me along the entire time and was there at first flight. Experience counts folks. He and his wife have become dear family friends. Get a technical counselor – it makes a difference.

My hangar mate Mark was there for the initial flight attempt and spent his

precious time helping us through the tire issue we had and getting us set up for another attempt. We are very grateful to him and his fellow pilot partner in crime Rhonda.

Now to embarrass a few folk with links to the Sonex Factory which following various misadventures, we have had the privilege to get to know. Jeremy's Australian accent impersonation is getting pretty darn good. He is "Strong, Like Bull". And the Onex is an awesome little plane. One day, I so want to build one of these. John Monnett is a force of nature, a true experimental aviation pioneer and just a hell of a lot of fun to be around. It is a privilege to have sat in a car with him while he drove like a European rally driver, causing the case I was clutching to strike me in the face, leaving an imprint of an eye ball on the inside of my glasses (literally). He is smart as hell. Betty Monnett is the only woman who can contain such elemental forces and is just an amazing person. I have to mention Kerry Fores. If I don't I won't get my monthly check from him. He builds excellent planes that I have almost been sick in. Also, he is one of the best writers of hilarious material that I know. He is available for speaking tours. And weddings. Heather Zahner somehow contains the creative chaos through a single steely stare and Mark Schaible just oozes competence and calm. Joe Norris makes for an excellent flight instructor, even though he is a whole lot more than that. And there are many other amazing people like Drew Waterworth and a pile of people called Brian who do amazing things. Not in the building but lurking in the background like a mysterious force is Pete Buck. I will always remember the first time I spoke to him on the phone about an electric matter of sorts. By the end of the conversation, I was exhausted and he knew more about the topic than I did, whatever I was discussing. I have never met a smarter person and I doubt I ever will. Thank heavens these people are in the world.

So why am I telling you all of this and why am I saying nice things about all these people? Building is one thing, but it drags you into a world of amazing people you otherwise wouldn't get to know. For us, it started with Tony Spicer.

For those thinking you can't do this, we are living proof you can. For those thinking whether you want to do this, we are also living proof you do.

Happy Flying All.

Andrew Pearce + Rosemary Ros (+Michael + Matthew)

"Flyin' Matilda"
Sonex #618
Phase I Flight Test