

# ARTS & CRAFT



## FROM BALSAM WOOD MODELS TO A RADIAL KITFOX

Words Paul Chernikeeff

*Before kids were glued to the internet, some of us were glued to balsa wood. Quite literally – in the mid-1970s, my sticky fingers were assembling balsa wood aviation models, one after another. One day, I'd grow up and take on a bigger challenge.*

Me, with my pride and joy in Tyabb  
– 19-1578. The smile says it all.  
Credit: Paul Chernikeeff

The first of my projects were control line models. By the late 90s, more sophisticated RC models were up to half scale in size, mostly powered by my own engine designs. The aircraft models that caught my eye, back then, were curvaceous golden era Gee Bee racers of the 1930s. I reckon I built all of them. The lines and curves on those golden era beauties were an outlandish style.

Skip forward a few years (okay, maybe 20), my enthusiastic model airplane building had somehow made way to me manufacturing radial aircraft engines under the banner of Rotec Engineering. I still don't know how that happened, to be honest. My focus had shifted. After a few years of building Rotec radial engines, I found myself promoting our wares in the USA at EAA Oshkosh in 2002, when I first came across a sweet blue and cream Kitfox powered by one of our R2800 radials. It looked sharp, turning heads and glistening. I even got a chance to take her up with the owner during the show. It sealed the deal, a flame was flickering within me.

On my return home to Oz, I set about seeing if I couldn't hunt down a Kitfox of my own, one that I could use as a base for my own project, Rotec R2800-powered of course. I recalled a customer had visited us a few months earlier seeking information about an R2800 for a Kitfox. I still had his number. I called to see if I could reverse things on him – rather than him buying my engine, I may buy his Kitfox.



The R2800 packs some punch, but it is perfect for this ol' girl.  
Credit: Paul Chernikeeff

We arranged to meet at his home garage in Carnegie, Victoria, where he had this Kitfox project. I arrived and was instantly underwhelmed. Where's the rest of it? There was a rusty steel frame and a wing kit. No doors, brakes, wheels, transparencies, no cowls, nothing... "I'll take it". It was pure madness and I paid way too much, but it was time to get to work.

I decided if I have to make everything, I may as well make things how I like them. I called upon my past influences of those early 30s racers and those curved lines. I didn't make any changes to the main Kitfox structure, but the overall shape and fairings were completely re-styled. I was shooting for a poor man's mono coupe: the tail feathers, rounded wing tips, lots of custom root fairings, big fat leg fairings, blistered bump cowl and cartoon-like wheel spats. These were the features I loved.

**“During ground-run testing, she popped into the air about 20 feet. This girl wants to fly.”**

Custom parts were mostly made of composites. I used the exact same techniques I had developed building my RC models decades earlier. In fact, most if not all my technical skills – in one way or another – stem back to those early days of RC modelling. I'm grateful for the lessons learnt, despite the gluey mess.

I made steady progress in my evenings, building most of the plane within a year. Still in bare bones, but mechanically done, life got in the way and my wife started spawning little humans. My brother and then business partner had left Rotec to go get himself a “proper job”. Rotec was restructured, I built a new shop at the Tyabb airport...so much was happening all at once and the poor, old Kitfox was ignored for years.

Things were finally settling in 2016 for me. The Kitfox, now located at the new shop, was ready for one big final push. I spent most of 2016 and first part of 2017 covering and painting parts. I'd had some time to think, ideas were still coming to me, I had added a bump cowl and few other small details – all worth it, but it was hard to see the finish line.



From top: Finalising the cowl pattern with my template; Sanding the rudder framing; and the Kitfox remains, at pick-up. Credit: Paul Chernikeeff

In mid-2017, she was all painted and ready for final assembly. When you have a dream coming together in front of you, the excitement is real. The careful pre-fitting and planning pays off, and it happens suddenly. I couldn't stop staring at her – I still can't, today!

The black and silver paint scheme came to me late in the piece, inspired from Franklin's Flying Circus. I'd seen them several times at Oshkosh over the years. Sitting in the middle of my shop, with her glossy black and metallic silver paint glistening under the artificial shop lights. The feeling of satisfaction I felt right then



The shape was influenced by curvaceous Gee Bee racers of the 1930s.

was hard to describe. It felt like I'd created an object of art more than an aeroplane. I was so proud it didn't bother me if it never even flew.

During ground-run testing, she popped into the air about 20 feet. This girl wants to fly – I thought I was hardly moving. I set her back down safely and calmed my excitement with a beer.

By October 2017, I had been waiting for the grass runways to dry out at Tyabb. On a perfectly calm, blue day, I thought 'Paul, you've run out of excuses....Go!'

**“I orbited above the field, round and round for about 40 mins or so – things were feeling good, except that I knew I had to land this beast.”**

With the hearty R2800 radial warmed up and running like a top, I lined up 17 on the grass. No sooner had I started rolling and I was airborne, climbing like the preverbal rocket. The Rotec R2800 has tonnes of power for the light weight Kitfox. Mine has the full length, under cambered wings with lift to burn – it was great! Before I could blink, I was at 3,000 feet above the airfield, engine hardly working at just 18" Hg and 85 knots speed. I orbited above the field, round and round for about 40 mins or so – things were feeling good, except that I knew I had to land this beast.

She may look cute and friendly, but this Kitfox is a short-coupled tail-dragger with a high nose angle and a big radial engine out front (well, big for a Kitfox). This airframe was designed around a Rotax 582 engine in its day.

I was getting ready for a cat fight on touch down...but it was a non-event. The leaf spring landing gear made for nice a cushioned landing – test flight done and dusted! I took her out two more times that day. Fast forward today and I now have 110 hours up and I just love this little aeroplane, she's been a delight from day one. I have received some crazy offers to let her go, but this one's a keeper – hopefully I can share her at some air shows very soon.



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