

Framed!

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It all started with a beautifully shot short film doing the rounds on the Internet in early 2014. It was made by Swiss company, Filme von Draussen and was about 10 things every mountain biker should do in their lifetime.
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Number 1 was build a bike. It was really build up a bike from a store-bought frame.

I decided to take it one step further and build a bespoke frame from scratch by working out the design, selecting the tubing and seeing it slowly evolve into the perfect machine. The build became a very therapeutic winter project for someone who usually leaves allbut the most basic bike maintenance, to the local bike shop. There aren't many frame builders in New Zealand.

There may not be many, but I didn't have to look far. I have an old friend who operates from his workshop just round the corner in Lynmore, Rotorua. Jeff Anderson started building Jeffson bikes 33 years ago. He was born in Pahiataua and raised in Whanganui. He moved to Rotorua in 2001, where his reputation as a frame-builder has continued to grow. Jeffson road, track and mountain bike frames are all defined by simplicity, with clean, elegant lines and clever, subtle design flourishes. Jeff was also a pioneer of the singlespeed mountain bike scene in New Zealand.

One of Jeff's early track frames carried Karen Holliday to a win in the 1990 UCI World Championships points race in Maebashi, Japan: "I built that frame in my shed in Whanganui," says Jeff, with a broad grin. The bike, complete with world championships rainbow stripes, is now in the New Zealand Sports Hall of Fame in Dunedin.

"I love building in steel," Jeff says. "It's like an art form to me and, well, steel is real."

When Jeff started building bikes he didn't think it would be a career: "It was only my second job and I thought it would do for a while". In fact, it was the start of a lifelong passion. "Building frames is addictive and I would like to share my passion with others through workshops where I can teach them how to build their own frames." I

would give Jeff just that, an opportunity to teach me. I wasn't going to be just a customer or an observer of the process. Jeff would generously donate his time as a builder and teacher while I'd be his apprentice, learning some of the secrets of frame building.

"The coolest aspect of building bikes is each frame is an individual design for each customer. That's very exciting."

I already had a few mountain bikes. So Jeff suggested we build something else.

We struggled to define what this would be. My bike would be a hybrid - for tarmac, mud, gravel, easy trails and commuting into town.





It would have the classic triangle of a road bike and 29er wheels, but with more clearance, front and back, for beefier, treaded, cross-style tyres.

I also insisted on disc brakes, something I wouldn't do without on any bike these days. The bike would be geared, but easy to convert to a singlespeed or even a fixie. Nick described it as a 'Frankenstein'.

"When it comes to building a bike for an individual customer a lot of what I do is by feel, sight and experience."

The first step was a fitting to match the frame to my body. Jeff had already done a draft design based on a rough guesstimate of my height so when I climbed onto his sizing frame (in my riding shoes, this is very important) it was really just to confirm what his experienced eye had already told him. For Jeff, this initial sizing is about general parameters. I was comfortably in the 'medium' range. The tweaking and fine-tuning, to accurately accommodate more specific things like torso length and inside leg measurement, would come with setting the handlebar angle and seat height.

"I use the same methods and techniques frame builders used 100 years ago."

The frame design was on paper and confirmed with a fitting. A decision on a sloping top tube, rather than a horizontal one, was made. My head was already exploding with excitement and anticipation and yet, it all still seemed abstract.

Not for long though, as Jeff and I started cutting all the tubing to length. Jeff uses Italian-made, double-buttet Columbus Zona tubing. This is strong, light and won't set your credit card on fire. As Jeff says, a custom frame doesn't have to be super-expensive and only for 1% of the biking population.

The next step was mitreing the ends of the tubing on a lathe, using tools specifically designed for cutting out the precise, semi-circles

necessary to form a snug embrace from tube to tube.

"Getting welds just right, just how I want them, has taken me all my life."

"They are so important - and what a lot of the hand crafting of a frame is all about."

Next, we set the tubing in a jig and adjusted the angles and tube lengths of this particular design. As we assembled the frame, Jeff made a couple of micro-adjustments using a grinder. The first stage of braze filleting (welding with bronze) is called tacking. Tube ends are coated with flux which looks like Rotorua mud and is applied with a spatula. Once heated with an oxyacetylene torch, the flux hardens to a crust that protects the tube when the bronze is applied. At this point the frame is connected together well enough to take out of the jig. If the frame isn't quite right, the joins can still be broken and readjusted. There was no need for this with my frame - it was perfect. Now is when the real business began. The final braze filleting in a stand.

I had to ride this bike, so I wasn't going to trust some brand new 'apprentice' to do this so Jeff did most of the work...but not all of it... When it was my turn he carefully explained everything before letting me loose with the torch. Then he quietly talked me through the process, over the hiss of oxyacetylene, occasionally jumping in to steady my hand. Jeff is a very patient teacher. I fillet brazed the seat and down tubes to the bottom bracket and the rear triangle to the main frame.

It was an intensely satisfying experience. The iridescent colours of the flame, the flux bubbling and the bronze melting to a golden, honey-like texture.

It's a subtle process to apply just the right amount of heat, then pull back the flame, wait, and start again. I also used rods of 24% silver to braze on the cable runners.



Silver has a significantly lower melting point than bronze and the torch was set no higher than the flame on a kitchen gas hob. All the welds were filed to tidy them up and the frame was sandblasted. Then we polished it to a high sheen before a clear coat was applied to protect it. No paint, just raw, to show the work.

With the frame complete, it was time to decide on the running gear. One of the real pleasures about this sort of personal build, rather than an off-the-shelf frame, was the time it took. There were always opportunities to discuss our options. The original intention was to build a cyclocross-style bike with drop bars. The more we talked, the more Jeff listened. He realised that my main use for the bike would be commuting and that flat bars would provide a more comfortable and relaxed ride. Changing from drops to flats only required a few tweaks of the geometry of the set-up. There was a practical reason for flat bars, too. My ten-year old, firstgeneration Santa Cruz Blur is a bike I can say I genuinely love. I'll never sell the frame, but it hasn't had much use over the last couple of years and the running gear was as good as new. Adapting the brake and gear levers to drop bars was possible, but also a time-consuming mind game. So The Blur became the donor - and the frame went straight to the poolroom.

With drive train and brakes sorted, I made a deal with Jeff for the forks off the Blur in return for a wheel set build. And there it was, another change of mind.

While recycling is good, a bike has to look right and as the build-up continued, we decided the colour palette would be polished

silver and black. For Jeff the red on the DT Swiss hubs off the Blur wouldn't match, so others were ordered. Rotorua's Wide Open Distributors are an important part of our local bike community, and Matt Whittaker and his team were enthusiastic supporters of the build so they supplied the POC helmet I'm wearing in the riding photo. It's a mountain bike helmet, to underline the fusion nature of the whole project.

"Creating a dream bike for a customer, that fits them as perfectly as a glove, actually better than a glove, is incredibly satisfying. It's something they'll use for a long time."

My first ride was from home in Lynmore on tar seal and concrete sidewalks, then off-road on hard-packed pumice round Sulphur Point and back onto the roads in town for a latte at Zippy Central. The best glove, ever? You bet and a dream to pedal from the first moment I hooked a leg over it.

That ride, and the whole build process is an experience I'll never forget.

They say that it's not the destination but the journey that counts. In this case it was both and I felt a mix of elation and a hint of sadness when it was all over.

The Frankenjeffs Simpson, handmade in Rotorua, is a bike that I'll own forever.

It really is personal.

Check out Jeff's website for more information: www.kiwibikes.co.nz