

Building the ultimate machine

A comfortable and reliable road bike intended for long days in the saddle is a thing that is as unique as the needs of the rider. For the lucky few such a machine is utterly bespoke, possibly built of a precious metal and will be the bike that lasts a lifetime. For the rest of us, we will endure with something bought off the peg and tweaked to meet our individual needs.

In my case the ultimate riding machine looks a lot like the bike below.



The dream machine is the [Curve Belgie Spirit](#), titanium frame, top end fitout. With 11-40 + compact crank, this is a bike intended to go far with ease and there is unlikely to be any hill that would cause concern. I must have one.

But until then, and for much less than the price of just the Curve wheels alone, let's examine the evolution of the current ride, the impressively named [2016 Giant Defy Advanced Pro 1](#).



The Defy has been around for a long time, is acknowledged as a comfortable and competent ride, fitting into the category of a fondo/endurance bike. This means a relaxed and more comfortable ride compared to a bike intended for racing, with increased compliance owing to the shape and size of the chainstays and “d-fuse” seat post whose shape is intended to flex and absorb vibration. Additionally, and quite obviously, the shape auto aligns with the frame ensuring the seat is perfectly facing forward every time. I know this because of the decals adorning much of the bike proclaiming the engineering feats concealed within the design.

Sarcasm aside, I can assure you this is a much better place for a long day in the saddle than my Orbea which is built to go fast and has no concerns for personal comfort. The Defy ride is compliant, stable and the handling confident. So the chassis gets a tick for being fit for purpose.

In the Advanced Pro specification this bike has hydraulic disc brakes and electronic drivetrain which I specifically wanted. The braking of course implies suitability to long descents owing to better brake modulation and low effort to operate, plus better heat management and fade resistance than rim brakes. And the electronic drivetrain provides reliable shifting at the push of a button. In addition, this bike has carbon wheels which with disc brakes suggests a good combination for climbing and descending. The drivetrain also has the fairly standard combination of compact crankset and 11-28 gearing suggesting total domination of every hill in sight.

On paper it seems like a really good combination, but in practice much was altered as flaws appeared and circumstances changed. Here’s what happened.

Seat and bike fit

Everyone knows to be truly comfortable on a bike, you must have the saddle that works for you. On my first time out, Franks Ride as it happens, I did not. Misery was the outcome and I bailed after 50km or so. Thus the fizik Antares seat now adorns this bike, exactly the same seat as on all my bikes.

In addition, a proper bike fit is essential to ensure you are properly aligned to the machine. As well as the usual position tweaks, the bike fit identified the need for a shorter stem which I subsequently installed and was rewarded by the absence of pain in my neck and shoulders.

These changes have contributed to make the bike effortlessly comfortable for hours on end. If you have health insurance, there are physios who do this and you can then claim it back on your health insurance for the win. In my case this was extremely effective.

Wheels and tires

This was the next crack to appear in a manner of speaking. On the 2016 Esk at night, the one that was legendarily hot, the rear tire exploded, emitting a report that scared the birds for miles around. At the side of the road on this insanely hot afternoon, I struggled to replace the tire for possibly an hour. Really.

These wheels are tubeless ready which means they have high sidewalls and deep grooves for the bead to ensure integrity of the seal of the tire with the rim. They are I later learned notoriously difficult to get a tire off and even worse to get it back on. The tire when inflated requires a lot of pressure to properly reseal the bead, not a thing easily done at the side of the road. Some folks with these wheels have sensibly replaced the rims with Archetypes. I took the other route and replaced the tires with Continental Gatorhardshells which are famously puncture resistant. Eventually the tires will fail and I will face the same issue, but at that point I am going tubeless which should solve the problem altogether.

Tires are 28mm which has improved the comfort yet again with the option to go wider if I wish.

Brakes

Hydraulic disc brakes, perfect right?? The bike was originally fitted with 140mm rotors and resin pads which are perfectly fine on the flat. However, in the hills these have proven an unsuitable combination given resin pad fade resistance is not great and in fact I cooked the rear rotor on one particularly brutal descent where the smell of burning brakes was quite evident. I've upgraded the brakes with bigger rotors and metal pads which has transformed the braking performance. Descents are now accomplished much faster than previously, I suspect owing to the confidence of knowing the bike will respond instantly and decisively to the brakes. Excellent.

Gearing

Compact gearing and 11-28 is the standard, intended to cover most requirements for most riders. But for those of us who have less power, weigh more, want to climb bigger hills, this is insufficient. I have changed the rear gearing to 11-34 and [installed an oval 34 tooth chainring](#) on the front. The oval chainring is said to provide a more even application of power compared to a round chainring and is suited to climbing. I have a frankencrank (non standard 34-52) owing to #reasons and so I thought I'd give the oval chainring a go since I had to buy a chainring with 34 teeth anyway.

Positives, easy to fit, works as intended. Negatives, doesn't change as cleanly as the Shimano chainring under some conditions. It's manageable if you pay attention. Does it improve the effort required on hills? Don't know. It certainly helped going from 36 to 34 at the front though.

The biggest change was going to 11-34 at the back. This has changed my life but also required changing the rear derailleur and the whole exercise was expensive owing to di2, but totally worth it. Now instead of grinding up hills, I can spin easily, and I can accommodate up to a 40 tooth gear on the back if needed.

The brain

The last part of this story and what ties it all together is [the di2 firmware upgrade](#). When Shimano released the latest iteration of their drivetrain products, they also added some automated shifting modes via software updates. I've updated the battery which is apparently where the smarts live and activated the semi auto shifting. This permits changing gears from the one lever which handles both front and rear chainrings simultaneously. It provides the functionality of a virtual 1x drivetrain. I did this before making the other changes so I've been using it for quite some time. It may sound a bit over the top, but I like it a lot. I haven't gone full nerd and added the wireless compatibility, that might be going just a bit too far.

Some might say that batteries portend being stranded when they inexplicably go flat. While I have heard tales of this happening, and particularly in cold weather, there is a limp home mode and you'll find its much the same situation as if you have a cable break without a replacement handy. It's a risk well worth taking. The di2 battery is a beast of a thing and I charge it once a month whether it needs it or not. And it never does.

Final words

Customization of your ride is another enjoyable aspect of our pastime and there are unlimited options to suit your needs. Everyone's mileage will vary in according to individual requirements and the solutions applied, but the principles remain the same. I've made my decisions for the reasons mentioned and am pleased with the results. The bike fits better, goes where I want easier and more comfortably than before and most importantly stops confidently.

With an application of money the mighty Defy is now at a point where I have overcome the shortcomings and it's a good place to be. But is it as good as the Belgie Spirit?? I wonder...