road.cc
pedal powered

Tacx Flux Smart Trainer

★★★★★ by John Stevenson May 31 2017

Verdict: Very good direct-drive trainer and excellent value for money

Weight: 16,000g

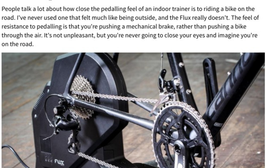


The Tacx Flux Smart is currently the closest thing there is to an inexpensive fully smart direct drive indoor trainer. It's a doddle to set up and get started, measures your power to a useful level of accuracy and consistency, and works with popular virtual riding applications such as Zwift to make indoor training less dull. It's not cheap, but it's good value compared to its competition.

It's also fairly quiet, so the family can watch TV in the next room and you won't annoy your downstairs neighbours if you live in a flat. But most importantly, it's so straightforward to use that it actually makes indoor training – dare I say it? – fun.

Feel & response

People talk a lot about how close the pedalling feel of an indoor trainer is to riding a bike on the road. I've never used one that felt much like being outside, and the Flux really doesn't. The feel of resistance to pedalling is that you're pushing a mechanical brake, rather than pushing a bike through the air. It's not unpleasant, but you're never going to close your eyes and imagine you're on the road.



It's noticeable that there's a few seconds' delay before the resistance increases when you go from one power level to the next.

Tacx claims the Flux reads your power to an accuracy of +/- 5%, but after a warm-up period it achieves better than this, tracking the readings from other power meters to within 2% or so.

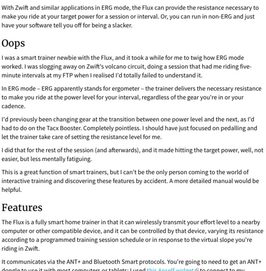
That's accuracy as good as you'll get from pretty much any power meter out on the road. It's much easier to stick to the set power for an interval with 'ERG mode' (more on this below) controlling the trainer's resistance, rather than trying to keep an eye on a computer while playing dodge-the-4WD on the open road.

You don't have to use Zwift or some other paid-for service, though. Tacx supplies a free iOS or Android app, Tacx Training, that can control the Flux. Go to the companion website ☞ and you can create workouts, though annoyingly it doesn't seem to be possible to base a workout on percentages of your FTP (functional threshold power), only on absolute power. (There's an outline for an FTP test included in our Six Weeks to Fitness training plan, here.)

The open source software Golden Cheetah ☞ can also pick up data from the Flux, when you plug an ANT+ dongle into your Mac, PC or even Linux box.

Getting started

The level of it Just Works here is impressive. Pop your bike on it, plug the Flux into the mains, an ANT+ antenna into your computer, start up your chosen training software, and away you go. Zwift quickly finds the Flux as a source of speed and power data and also, surprisingly, of cadence. Some electronic wizardry inside the unit picks up the variance in power round your pedal stroke and works out how fast you're pedalling.



Once your training software has detected the Flux, there's one more step. Tacx provides a free app for iOS and Android – Tacx Utility ☞ – that communicates with the Flux and reads power, cadence and virtual speed. It also provides calibration. You start riding, spin up to 30km/h, and then let it coast down, and then away you go.

Training with the Flux

I used the Flux with Zwift, which I'd started exploring as a training tool while testing the Tacx Booster. Tacx offers its own training software – Tacx Trainer 4 ☞ – but it only works under Windows and it's an extra €65, or €125 for the advanced version with Trainer 4 you can load films that show you famous cycling passes and race routes as you train; they're €7.40 to €69.

But I like Zwift, not least for the feeling that you're not alone, slogging away in the back room, there are thousands of other idiots round the world staring at a screen and sweating.

With Zwift and similar applications in ERG mode, the Flux can provide the resistance necessary to make you ride at your target power for a session or interval. Or, you can run in non-ERG and just have your software tell you off for being a slacker.

Oops

I was a smart trainer newbie with the Flux, and it took a while for me to twig how ERG mode worked. I was slogging away on Zwift's volcano circuit, doing a session that had me riding five-minute intervals at my FTP when I realised I'd totally failed to understand it.

In ERG mode – ERG apparently stands for ergometer – the trainer delivers the necessary resistance to make you ride at the power level for your interval, regardless of the gear you're in or your cadence.

I'd previously been changing gear at the transition between one power level and the next, as I'd had to do on the Tacx Booster. Completely pointless. I should have just focused on pedalling and let the trainer take care of setting the resistance level for me.

I did that for the rest of the session (and afterwards), and it made hitting the target power, well, not easier, but less mentally fatiguing.

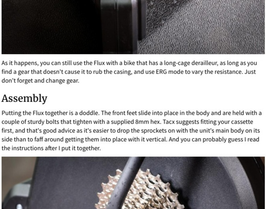
This is a great function of smart trainers, but I can't be the only person coming to the world of interactive training and discovering these features by accident. A more detailed manual would be helpful.

Features

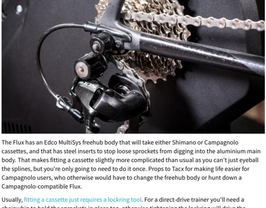
The Flux is a fully smart home trainer in that it can wirelessly transmit your effort level to a nearby computer or other compatible device, and it can be controlled by that device, varying its resistance according to a programmed training session schedule or in response to the virtual slope you're riding in Zwift.

It communicates via the ANT+ and Bluetooth Smart protocols. You're going to need to get an ANT+ dongle to use it with most computers or tablets; I used this Ansulf widget ☞ to connect to my laptop; it works fine and costs just £11. A couple of LEDs on the side of the unit tell you when it's established communication via ANT+ or Bluetooth.

The business end of the Flux is an electromagnetic brake that varies the resistance, and a 7kg flywheel to smooth the pedalling feel. The brake is capable of providing a lot of resistance: you'll need to put out 1,500 watts to overcome its maximum setting. Used with Zwift, it simulates a slope of up to 10% if you're masochistic enough to use Zwift's full gradient simulation setting. Unlike some high-end indoor trainers the Flux doesn't have a motor to turn the flywheel and simulate descending.



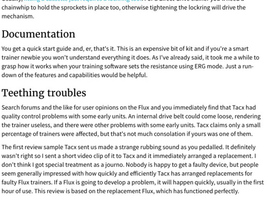
The only major gotcha with the Flux is that you can't use it with a long arm rear derailleur. In some gears, the bottom of the derailleur will catch on the body of the unit, close to where the legs attach. I honestly don't know how much to criticise Tacx for this. On the one hand, most Flux buyers are likely to be training for racing of some sort and aren't going to be using bikes with 32-tooth big sprockets. On the other hand, it seems a daft limitation when it would have been so easy to avoid, and it shuts out riders who use low gears for very hilly terrain.



As it happens, you can still use the Flux with a bike that has a long-cage derailleur, as long as you find a gear that doesn't cause it to rub the casing, and use ERG mode to vary the resistance. Just don't forget and change gear.

Assembly

Putting the Flux together is a doddle. The front feet slide into place in the body and are held with a couple of sturdy bolts that tighten with a supplied 8mm hex. Tacx suggests fitting your cassette first, and that's good advice as it's easier to drop the sprockets on with the unit's main body on its side than to faff around getting them into place with it vertical. And you can probably guess I read the instructions after I put it together.



The Flux has an Edco MultiSys freehub body that will take either Shimano or Campagnolo cassettes, and that has steel inserts to stop loose sprockets from digging into the aluminium main body. That makes fitting a cassette slightly more complicated than usual as you can't just eyeball the splines, but you're only going to need to do it once. Props to Tacx for making life easier for Campagnolo users, who otherwise would have to change the freehub body or hunt down a Campagnolo-compatible Flux.

Usually, fitting a cassette just requires a locking tool. For a direct-drive trainer you'll need a chainwhip to hold the sprockets in place too, otherwise tightening the lockring will drive the mechanism.

Documentation

You get a quick start guide and, er, that's it. This is an expensive bit of kit and if you're a smart trainer newbie you won't understand everything it does. As I've already said, it took me a while to grasp how it works when your training software sets the resistance using ERG mode. Just a run-down of the features and capabilities would be helpful.

Teething troubles

Search forums and the like for user opinions on the Flux and you immediately find that Tacx had quality control problems with some early units. An internal drive belt could come loose, rendering the trainer useless, and there were other problems with some early units. Tacx claims only a small percentage of trainers were affected, but that's not much consolation if yours was one of them.

The first review sample Tacx sent us made a strange rubbing sound as you pedalled. It definitely wasn't right so I sent a short video clip of it to Tacx and it immediately arranged a replacement. I don't think I got special treatment as a journo. Nobody is happy to get a faulty device, but people seem generally impressed with how quickly and efficiently Tacx has arranged replacements for faulty Flux trainers. If a Flux is going to develop a problem, it will happen quickly, usually in the first hour of use. This review is based on the replacement Flux, which has functioned perfectly.

Conclusion

It is a heck of a lot of money for an indoor trainer, even a fully smart one. The cheapest controllable trainer Tacx offers is the Flow Smart, but this tyre-driven unit doesn't offer the accuracy of the Flux, or the 1,500-watt resistance. The Flux offers a lot more for your money.

That makes it a very tempting option if you want to take the quality of your training up a notch. It's dead easy to set up, reads power accurately and I can't emphasise enough how much easier it is to train at a particular power level with ERG mode doing the thinking for you.

Verdict

Very good direct-drive trainer and excellent value for money