# PowerTap P1 Pedals

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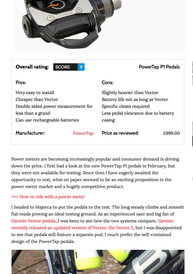
40 shares

**Ahead of their release Oliver Bridgewood tests the new PowerTap P1 pedals on the stunning roads and climbs of Majorca**



| Overall rating: | 80/100 | PowerTap P1 Pedals |
|---|---|---|
| **Pros:** | | **Cons:** |
| Very easy to install | | Slightly heavier than Vector |
| Cheaper than Vector | | Battery life not as long as Vector |
| Double sided power measurement for less than a ghost | | Specific cleats required |
| Can use rechargeable batteries | | Less pedal clearance due to battery casing |
| **Manufacturer:** | PowerTap | **Price as reviewed:** £999.00 |

Power meters are becoming increasingly popular and consumer demand is driving down the price. I first had a look at the new PowerTap P1 pedals in February, but they were not available for testing. More than 5 have eagerly awaited the opportunity to test, what on paper seemed to be an exciting proposition in the power meter market and a highly competitive product.

>>> How to ride with a power meter

I headed to Majorca to put the pedals to the test. The long steady climbs and smooth flat roads would give an ideal testing ground. As an experienced user and big fan of Garmin Vector pedals, I was keen to see how the two systems compare. Garmin recently released an updated version of Vector, the Vector 2, but I was disappointed to see that pedals still feature a separate pod. I much prefer the self-contained design of the PowerTap pedals.

Limited Tee pedals on a R&D Zone Trooks XLR83

The retail price for the P1 is expected to be £999, making it considerably cheaper than the £1199 Garmin Vectors. The single sided Vector S is available for around £800 but testing suggests that for £200 more you can get double sided measurement with their system.

## Installation

Installation of the pedals is very simple. You screw screw them in and do not have to worry about specific torque settings or installation angles. This is a huge advantage for Vector, which requires a torque wrench, 30mm crow foot adapter and a bit of fidgeting.

>>> Review of Stages Power Meter

When you tighten the Garmin pedals, the pods have a tendency to move out of position, which can be a bit of a fiddle. By comparison the P1 pedals are much more stable and easier to set through Wahoo bikes. Useful if you are swapping between race, training or TT bikes. It just requires an Allen key, the same as any normal pedal

## Calibration

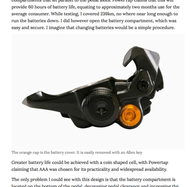
Calibration is necessary every time you use the P1 pedals. This is similar to using a set of wedge pedals and requires around 5 spins. It just takes one level at zero. In practice this was quick and easy.

The procedure involves setting off on your ride, getting to the end of the street, stopping, unclipping and setting the manual zero on the PowerTap Joule GPS computer. I was also able to do the same with my Garmin Edge 800, through pressing 'calibrate' after unclipping.

I tested the unit with both my Garmin and a PowerTap Joule computer

Cleat currently requires a similar procedure with the addition of back pedalling for several seconds, once you get going. With regards to calibration, both systems appear to work equally well, although I look forward to future systems that can calibrate automatically.

## Cleats

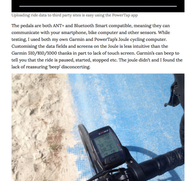


More universal cleats would be beneficial

The single sided cleats are Look style, which are specifically designed for use with these pedals. Although very similar to Look Keo, they are subtly different. I tried my Garmin cleats but I was still clipping in and out. I found that the fly/engagement was not optimal. The cleats are not expensive, it just means that use of Look cleats isn't ideal. By comparison, Look cleats work well in Vector pedals.

## Weight

The PowerTap P1 pedals reportedly weigh 358g a pair. To put that into context, a pair of Dura-Ace pedals weigh 350g and Garmin Vector pedals and pods hit the scales at 355g. So there is a slight weight penalty. Although this my dramatic the consumerate weight wonsters out there, I found the slight increase over Vector to be barely noticeable, even when climbing.



The pedals at the base of Sa Calobra. Clipp up, i couldn't fault the pedals, only my own power output

At present the Joule computer only displays right/left power as a percentage, however, the pedals have the hardware and potential to provide much more information. The pedals feature an innovative sensor that PowerTap is calling a 'Multiple Strip'. The sensor is a ring of 20 little magnets around the pedal spindle.

Combined with the eight separate strain gauges and accelerometers, the Multiple Ring offers huge potential, as it can measure the application of force though out the entire pedal stroke. This would help riders look at dead spots and pedalling efficiency. In addition, it is potentially a hugely powerful tool for bike fitters and physiologists as it enables greater analysis of the ankle flexion.

Some riders use their ankles as levers to gain additional power, where other riders maintain a flat foot throughout the pedal cycle. You would also be able to analyse how much time is spent in and out of the saddle, and difference in efficiency.

Although these metrics can currently be measured, PowerTap does not currently have a way to display it. PowerTap is working on it and it should be ready shortly after the launch of the P1 pedals.

## Battery life

Power is provided by two AAA batteries, one in each pedal located within compartments that sit parallel to the pedal axles. PowerTap claims that this will provide 60 hours of battery life, equating to approximately two months use for the average consumer. While testing, I covered 208km, no where near long enough to run the batteries down. I did however open the battery compartment, which was easy and secure. I imagine that changing batteries would be a simple procedure.

The orange cap is the battery cover. It is easily removed with an Allen key

Greater battery life could be achieved with a coin shaped cell, with PowerTap claiming that this is a priority for practicality and widespread availability.

The only problem I could see with this design is that the battery compartment is located on the bottom of the pedal, decreasing pedal clearance and increasing the risk of grounding a pedal when cornering in a race.

## Connectivity




Uploading ride data to third party sites is easy using the PowerTap app

The pedals are both ANT+ and Bluetooth Smart compatible, meaning they can communicate with your smartphone, bike computer and other sensors. While testing, I used both my own Garmin and PowerTap's Joule cycling computer. Customising the data fields and screens on the Joule is less intuitive than the Garmin 510/810/1000 thanks in part to lack of touch screen. Garmin's can beep to tell you that the ride is paused, started, stopped etc. The Joule didn't and I found the lack of reassuring 'beep' disconcerting.



Customising data fields on the Joule was not as user friendly as a touch screen Garmin, but the unit worked very well with the Joule

Once you have downloaded the appropriate smart phone app, uploading your rides to Strava, Training Peaks and a whole host of other sites is pretty easy. My slightly antiquated iPhone 4S kept struggling, with the app frequently crashing, but users of iPhone 5s and 6s had no such issues. On balance I would not be swayed from using my Garmin Head unit.

## Data recording

The first thing I should point out is that I found data recording to be consistent with other power meters I have used. Post ride analysis of my power, indicated that there were no spikes or dropouts in power measurement. Temperature also appears to have no effect on measurement in cold conditions. I went for a pre-breakfast ride at 7am when it was 9°C. During the day, temperatures peaked around 20°C, with no discernible difference in measurement.



Temperatures didn't appear to affect measurement, even when 20°C at Alcudia beach

## Durability

First impressions were very positive. The pedals are very sturdy and I wasn't worried about potential damage being caused from clipping or crashing. Outwardly, the pedal bodies appear more robust than that of Garmin Vector. PowerTap informed me that their testing has involved setting up a test rider in protective clothing and getting him to deliberately clip the pedals at speed.

Despite carving chunks off the body, the pedals continued to function perfectly. In the short time available, I doused my test pair in energy drink and sea water, but they held up perfectly, with no problems. But, in order to properly establish the pedals durability, longer term testing will be required.

For more information, head over to PowerTap. UK distribution will be through Wiggle, with availability expected in June 2015.

## Verdict

A superb power meter, with firm impressions suggesting it to be the most cost effective, accurate double sided measurement system in the UK. A no brainer practical power meter to swap between race and training bikes.

## Details

**Weight:** 437g **Distributor:** www.pedalpp.com