FAQ - The Plug II

USAGE

1. **What is The Plug II?**
   The Plug II is an independent power supply which is operated by a bicycle hub dynamo.

2. **What isn't The Plug II?**
   The Plug II is not a battery charger. The charging functionality is made available by the respective user device. Nevertheless, devices operated with two battery cells or batteries (model AAA) usually do not support charging but only operating via the USB port.

3. **What is the difference between The Plug II Classic and The Plug II+ with PAT**
   The Plug II classic does not use the power accelerator module as the The Plug II+. Therefore the Plug II Classic is more suitable "fast riders" and smaller wheel sizes (26"), as it does not have a protection circuit as the + Version that shuts off at approx. 30km/h. The Plug II+ is recommended for riders who prefer slower speeds and bigger wheel (28"), e.g. bike travelers.

4. **How can I use The Plug II?**
   The Plug II is very easy to use. Simply plug your device's power cable into the USB port on The Plug II.

5. **What is the usage model?**
   The primary usage model is cycle touring, however any time when you are cycling you can charge your devices. The Plug II will fit most types of bike: trekking, touring, urban, mountain or even racing bikes can be suitable.

6. **Can The Plug II be used with E-Bikes?**
   Yes. I can be connected directly to an E-bike battery with up 48V.

7. **Which devices can I use with The Plug II?**
   The Plug II can be operated theoretically in combination with any device which can be operated by external USB power or can be charged by USB and operated at the same time. This should be most mobile phones, mp3 and GPS devices. We will perform at this point a selection of tested devices which will be limited mainly on Outdoor GPS devices. Due to the large number of devices it is not possible to test all devices on the market. **Please check with your device manufacturer the device functionality.**

8. **Is the charging state of my device relevant?**
   Yes. A device like a smartphone that is fully charged requires a lot less power and therefore the operating speeds are as if it needs to be operated and charged at the same time.

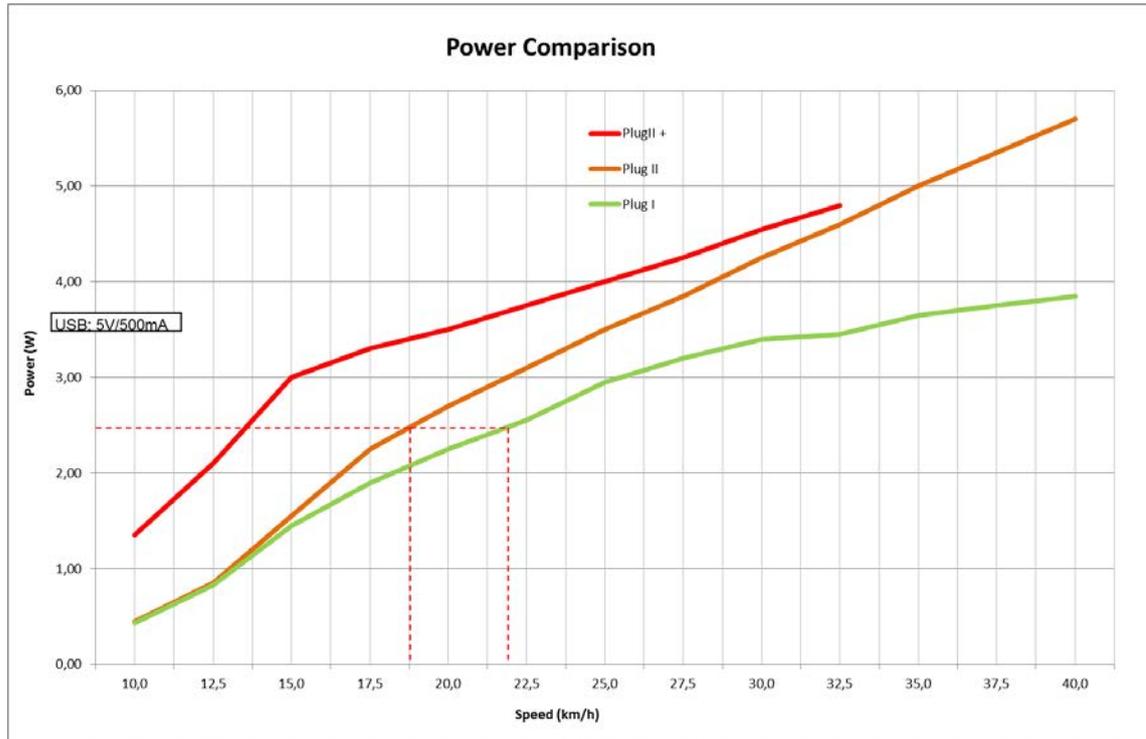9. **From what speed does The Plug II function?**
   This depends on different factors, among other things the hub dynamo used. You can expect charging to start from 10 km/h for GPS devices. An output of 5V is provided from approx. 8 km / h. The actual function depends very strongly on the connected terminal equipment and its power consumption. **Smartphones with very high power consumption require higher speeds. In tests we experiences minimum speeds of 18km/h to charge a smartphone.**

10. **My The Plug II+ shuts off if I ride above approx. 30km/h**
    Due to the power acceleration of the Plug II+ we have a protection circuit integrated which shuts off The Plug II+ to avoid damage to your device. This speed relevant threshold can vary depending on the charging state of your device. As the protection mechanism is temperature sensitive it can take some time at lower speeds until The Plug II+ restarts. This can happen e.g. on higher speed downhill runs.

11. **How much power does The Plug provide?**
    Yes. The gain in power depends on the speed you ride. See the chart below for details.

Power Comparison

12. Am I able to just charge a device?
Yes. For the "charging only" process of devices we recommend to switch the device off to achieve a quicker charging process. The charging speed depends on your device and its battery.

13. Can I operate The Plug II together with a lighting system?
Yes, if The Plug II is connected parallel with the light. When using a light at the same time as charging, the light output will be lower and the charge time will be longer. Hence, we recommend an "either or" operation.

14. Can I switch off The Plug II?
No. The Plug II does not consume any energy if there is no device connected, apart from powering the LED.

15. What does it mean when the green LED is on?
The green LED indicates, there is enough power generated to power the USB port and the device. If there is no device plugged in, the LED is always on.

16. What does it mean when the green LED flashes?
The Plug II checks in certain intervals the generated power. If this device consumes too much power so that the required 5V are not constant, it shuts off and tries again a few moments later.

17. Can I operate The Plug II incorrectly and damage my device?
No, unless your device requires other specifications than USB.

18. Is The Plug II waterproof or protected against spray waters?
The Plug II's electronics are waterproof. The USB port is spray proof and therefore protected against humidity. **High pressure cleaners are absolutely not to be used near The Plug II.**

19. How is the water protection if a device is plugged in?
Currently no seal is given when a device is plugged in. This is the same status as with the USB connector to your device.

20. Can I use The Plug II with an iPhone or smartphone?
Yes, the operation of an iPhone does not need a special cable. The exact functionality of a smartphone depends on your device. You cannot use an iPad.

21. Is there a buffer battery.
A external battery is currently under development.

22. Is The Plug II theft protected?
Yes. Because The Plug II is bolted to the bike, it cannot be taken of easily.

ASSEMBLY

23. In which bicycles can I install The Plug II?

In almost every bicycle with 1 1/8" stem and a hole in the fork crown to route the cable.

24. Can I carry out the assembly myself?

Yes, with a little bit of craft talent and the tools according to the installation instructions this should be no problem.

25. Is there a special star fangled nut available?

Yes. The headset expander has a cable tunnel to route the cable inside the steer tube.

26. Do I need special tools to fit The Plug II?

No. Please also see our video tutorial on YouTube on the removal of the star fangled nut.

27. Can I still adjust the headset easily?

Yes, you can adjust the headset as normal.