

RIDGE Dual Protocol Crank-arm Power Meter Magene Dual-protocol Crank Power Meter Quick Start Guide



www.magene.cn

For information regarding crank installation and adjustment not covered in this guide, please refer to your Shimano or bicycle dealer's instruction manual.

Thank you for purchasing the RIDGE Dual Protocol Crank-arm Power Meter. Please read the instructions carefully before use and install and use the power meter in accordance with the instructions.

This manual may be updated without notice, please refer to the electronic manual downloaded from the corresponding product page of Magene Technology's official website www.magene.cn.

If you have any questions about the power meter module, please contact us.

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Notes

1. Do not spray the power meter module with high pressure water when cleaning the bicycle.

2. Please tighten the crank and pedal bolts exactly according to the instructions. Otherwise, it may cause damage to the crank or pedal.

3. Do not put the battery into fire or heat, otherwise it may cause a fire or explode.

4. The power meter module is a splash-proof design. Do not soak the power meter module in water.

5. Do not subject the crank and power meter module to severe impact, as this may cause the power meter module to detach or malfunction.

6. In temperatures below - (minus) 10°C, the CR2032 battery life will decay rapidly.

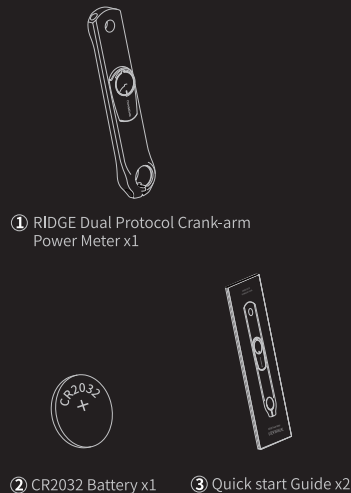
7. Use neutral detergent when washing cranks. Use of alkaline or acidic detergents or thinners may shorten the life of the sensor case.

8. The power meter module uses the 2.4G wireless communication band. The 2.4G signal environment surrounding the object or the surrounding area may cause interference to communications. If the signal connection is found to be unstable, try again in an open area.

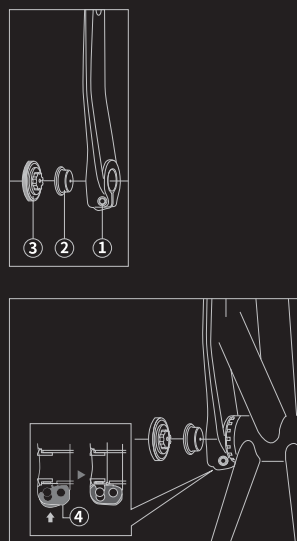
9. Do not try to remove the waterproof glue around the power meter module! This will compromise the waterproof performance of the power meter module.

10. Do not attempt to repair or modify the power meter module by yourself! This will invalidate your product warranty.

Product Contents



1. Installation



1.1 Remove the original crank

1.1.1 Please use a 5mm Allen key to loosen the 2 M6 Allen bolts on both sides of the bicycle crank joint at the above indicated position ① turning counterclockwise.

1.1.2 Use the Shimano TL-FC16/FC18 Specialist Tool ③ to loosen crank outer cover ② counterclockwise and remove.

1.1.3 Lift up the crank inner stop plate ④ and remove the left crank arm.

1.2 Installing the RIDGE crank arm power meter

1.2.1 First, open the power meter battery cover as described in section 6. of this guide (Replacing the Battery for the RIDGE Power Meter) below, remove the transparent insulation sheet, and reinstall the battery and battery cover.

1.2.2 Lift up the left crank stop plate ④ and loosen the 2 M6 Allen screws ① on the top of the crank to allow clearance for installation.

1.2.3 Put the crank into the bottom bracket of the bicycle, and move the stop plate ④ downward to reset the buckle.

1.2.4 Using the Shimano TL-FC16/FC18 Specialist Tool ③ Lock the crank outer shaft cover ② with a torque of 0.7-1.5 N·m.

1.2.5 Tighten the 2 M6 Allen bolts ① that clamp the crank arm onto the spindle with 12-14N·m torque.

Note: Please tighten the crank tightly according to the specifications, otherwise it may cause damage to the crank and power meter.

2. Connecting the Power Meter

RIDGE is a Bluetooth and ANT+ dual-protocol power meter that is compatible with ANT+ and Bluetooth devices that support the standardized power meter protocol. Using this protocol the power meter's measured data can be viewed and recorded.

Typically, most bike computers can search for and add power meter equipment in the settings through the settings>sensors>new sensor>power meter.

Note: When searching for the RIDGE power meter, step on the pedal connected to the power meter crank so that the power meter can detect the torque therefore waking up the power meter from sleep mode, start the Bluetooth or ANT+ signal broadcast and wait for a device to connect.



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Note: If there are multiple power meters in the current environment, you need to identify your power meter by ANT+ ID. For ANT+ ID, please refer to the ANT+ ID of the crank on the product packaging or on the surface of the RIDGE power meter.

For detailed connection instructions, please refer to the instruction manual of your bicycle computer or smart watch.

3. Using the RIDGE Power Meter

Fully understanding the standby, wake-up, ANT+ and Bluetooth broadcast logic of the RIDGE power meter can help you make better use of your power meter.

3.1 Standby and Wake-up

3.1.1 Working Status

After the power meter crank is left for a long time it will enter sleep mode. Rotate the crankset to wake the power meter and begin broadcast of ANT+ and Bluetooth, allowing the devices to connect.

3.1.2 Standby Mode

After 10 seconds of inactivity, the crank will enter a low-power consumption standby mode.

3.2 ANT+ Broadcast

3.2.1 Working Status

When the sensor is in use, the ANT+ signal is continually broadcast allowing devices to connect.

3.2.2 Standby Mode

After 5 minutes of inactivity, the sensor enters standby mode and the ANT+ signal stops broadcasting.

3.3 Bluetooth Broadcast

3.3.1 Working Status

When the sensor is woken up, it will attempt to connect for 30 seconds. If no connection is made, the radio will stop broadcasting and the sensor must be woken up again. If the connected phone or bicycle computer leaves the range of the power meter, the power meter will attempt to reconnect for 30 seconds. If the connection is not successful, the Bluetooth radio stops broadcasting and the sensor must be woken up again.

3.3.2 Standby Mode

Standby state: When the sensor enters the standby state, Bluetooth will still remain connected. During this time if the connected phone or bicycle computer leaves the range of the power meter, the power meter will again broadcast for 30 seconds to wait for a connection. If the connection is not successful, the Bluetooth radio stops broadcasting and the sensor must be woken up again.

4. Calibrating the Power Meter

Zero-point calibration will calibrate the power meter to 0 power when at rest.

If the following situations arise, a zero-point calibration must be performed to ensure the accuracy of the power meter data:

• Reinstalling the RIDGE power meter or connected pedal.

• The power meter experiences a large temperature change.

·After the power meter has experienced a substantial impact of the crankset.

·After sitting unused for a long time.

Note: When using any method to perform a zero-point calibration, it is important that feet are kept off the pedals, and the power meter crank (left side crank arm) is pointing down to the ground (left side crank arm in the 6 o'clock position).

Note: Allow the crankset and power meter to reach ambient temperature before performing a zero-point calibration.

4.1 Using an ANT+ Device to Calibrate the Power Meter

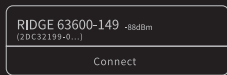
Most ANT+ bicycle computers or smart watches offer the ability to zero-point calibrate a connected ANT+ power meter. This option is usually found in the settings under Settings > Sensors > **select your power meter** > Calibrate.

For detailed instructions on how to use your ANT+ device to zero-point calibrate your sensor, please refer to your device's user manual.

4.2 Using the Magene Utility App to Calibrate the RIDGE Power Meter

First, install the Magene Utility App to your Android/iOS device.

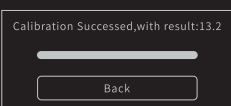
Please visit www.magene.cn to download the app to your device by scanning the QR code on the website.



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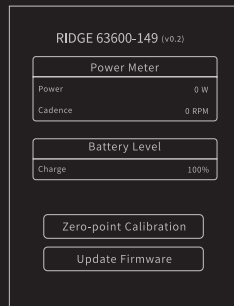
4.2.1 After opening the Magene Utility app, the pair device page will appear ①.

4.2.2 Rotate the cranks to awaken the device. After the app discovers the device, tap the device name to connect ②.

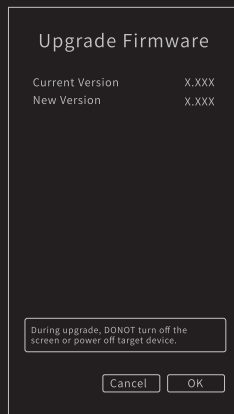
4.2.3 After the device is connected, the Device Status page is displayed. This allows real-time display of the device's power and cadence data ③.

4.2.4 Select "Zero-point Calibration" and await confirmation of calibration ③, if calibration fails, try again.

5. Upgrading the Power Meter's Firmware with the Magene Utility App



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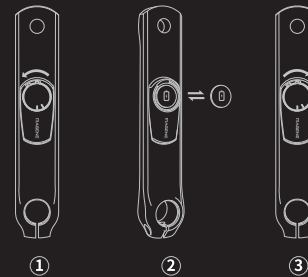
②

5.0.1 When the Magene Utility App connects to the RIDGE power meter, you will be notified if a firmware update is available. Select "Update Firmware" to view update details ①.

5.0.2 The firmware update page will display the current firmware version, the latest version available and the contents of the update. ② Click OK to begin the upgrade and await confirmation of the successful upgrade.

Note: During firmware updates, please ensure all devices have sufficient power, the Bluetooth connection is stable and do not switch the app to the system background.

6. Replacing the RIDGE Battery



6.0.1 When you discover the power meter is unable to make connections to any device the battery may be exhausted. Try replacing the battery at this time.

6.0.2 Rotate the battery cover counter-clockwise to the unlocked position to open the battery compartment ①.

6.0.3 Remove the depleted CR2032 battery noting the orientation. ② Install the new battery in the same orientation with the positive pole inside the battery cover.

6.0.4 Reinstall the battery cover by pressing tight and rotating clockwise until the cover reaches the locked position ③.

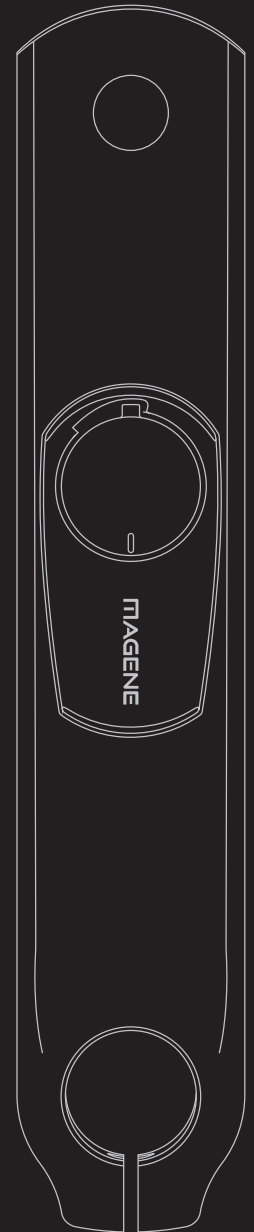
Note: Please ensure the battery cover is lined up in the correct orientation before pressing and turning, failure to do so may cause damage.

Note: Please keep used batteries in a safe place, or dispose of them in specially designated battery recycling depositories.

Note: Do not attempt to disassemble the batteries.

7. Product Specifications

- Power Accuracy: $\pm 1.5\%$
- Weight: 14g
- Power Supply: CR2032 battery
- Working Life: Approx 400 working hours.
- Wireless Interface: Bluetooth Smart 4.2, ANT+
- Waterproofing: IP67 Splash Resistance
- Power Range: 0 – 3000 Watts
- Cadence Range: 20 – 240 rpm
- External Cadence Sensor Magnets: None
- Unit Thickness: 7.2mm
- Operating Temperature: -10°C to 50°C
- Requires Zero-Point Calibration: Yes



FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

RF warning:

The device has been evaluated to meet general RF exposure requirement. The device can be used without restriction.