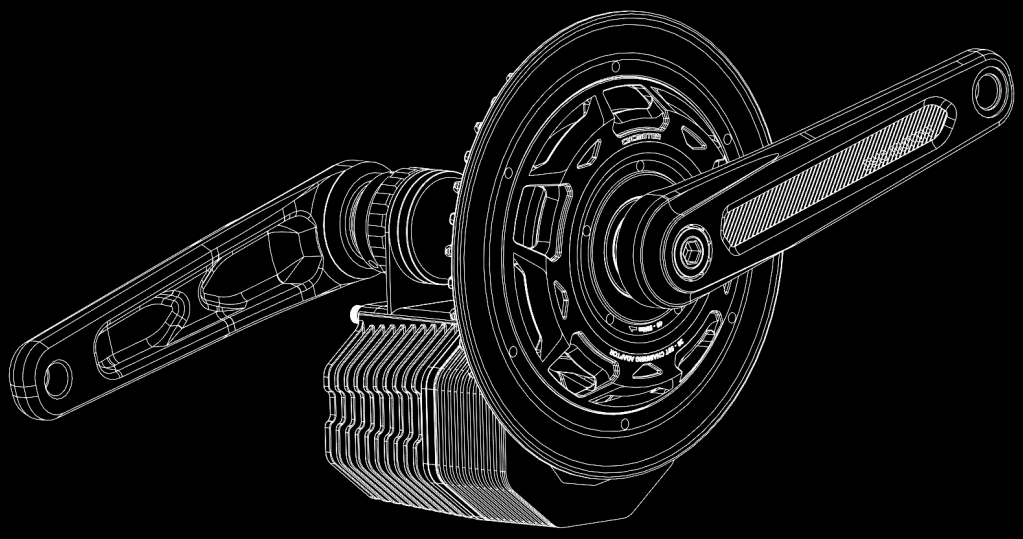

PHOTON

User Manual

CYC MOTOR
support@cycmotor.com +852 3690 8938

TABLE OF CONTENTS

SAFETY & PRECAUTION 4

General Safety 4

Before the Ride 4

Installation & Use 5

Warning ..... **Error! Bookmark not defined.**

Disclaimer 5

Warning 6

TECHNICAL SPECFICIATIONS 7

Description 7

General 7

Parts List 8

Dimensions 10

BSA Threaded 68/73/83mm Version 10

BSA Threaded 100mm Version 11

BSA Threaded 120mm Version 12

BB92 Version 13

INSTALLATION 14

Required Tools 14

Operating Notice 15

Preparing Your Frame 15

Mounting Options 15

Warning 15

Adjusting the Width of the Bottom Bracket 15

Assembly Instruction 16

Wiring & Connection 20

MOBILE APP & DISPLAY 21

Ride Control App User Guide 21

Dashboard 22

Connecting a Device 23

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Main Settings 24
General 25
Modes & Levels 26
Throttle 27
Pedal Assist 28
Peripherals Setup 29
Wheel Diameter 29
Battery 30
Selecting Power Presets 31
Selecting Unrestricted Mode 32
Default Settings Information 33
SW102 Display User Guide 34
Product Details 34
Dimensions & Materials 34
Quick Start Guide 35
Functionalities 36
Installation 40
Pin Layout 40
Certification 40
DS103 Display User Guide 41
Product Details 41
Dimensions & Materials 41
Quick Start Guide 42
Functionalities 43
Error Codes 46
Installation 46
Pin Layout 47
Certification 47

GENERAL MAINTENANCE 48

Torque Requirement for Bolts 49

WARRANTY 50

PURCHASES FROM A CYC DEALER 50

CONTACT INFORMATION 50

© 2023 CYCMOTOR LTD

DOWNLOADS..... 50

DISCLAIMER 51

PRIVACY POLICY..... 51

Information Collection and Use 51

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SAFETY & PRECAUTION

General Safety

Kindly read through the entire user manual. This manual contains important information to reduce user risk as well as instructions for this product's proper use. Do not discard the manual but keep it for reference.

Note that the user's personal safety remains the user's responsibility and that the user must contact CYCMotor Ltd or their official product dealer directly for any further guidelines or assistance.

Never interfere with the movable parts when the drive unit is connected to a power supply. This could result in serious injury if the system is accidently engaged.

This product is a powerful motor system that is dangerous for children and must be handled by an adult at all times. Small components and accessories may also present a choking hazard. Keep the motor system and accessories out of reach from children.

All components and accessories may only be replaced with identical components directly supplied by CYCMotor Ltd or an official product dealer. CYCMotor Ltd cannot be held liable for any damages as a result of using unapproved parts.

This product only complies with local, state, and federal regulations if speed limits are set accordingly. Ensure that you have set up your Photon kit according to your local, state, and federal regulations when using and registering this drive unit on a public road/area.

Before the Ride

Ensure that the drive unit chain has the proper tension. Incorrect tension could cause jamming of the system and result in injury while riding. Inspect the chain tension regularly.

Ensure that the chains are properly lubricated. Cleaning and lubricating your chain with a regular bicycle chain cleaner, is advised regularly.

When connecting a power supply, make sure that the power supply is completely connected. Faulty connection could result in a short circuit and damage the controller or batteries.

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Inspect all electrical wires and plugs for damage regularly.

Secure all wires properly. Ensure that the throttle can bet twisted freely without friction and that the throttle can return to its original position without restriction. This is to prevent any uncontrolled response of the system.

Installation & Use

Do not install anything other than the parts and accessories that came with this drive unit. Doing so could damage the product.

The drive system can be activated and deactivated by holding down the POWER button of the display.

Avoid changing the bike gear (note: this is different from the drive unit's assist level) while the drive unit is powering the bike. This may lead to excessive wear on the chain and chain rings or other gear related failure.

When changing gears, use human input only. After the gear is changed, you may accelerate again with the throttle or continue using the pedal assist system.

Take off with the appropriate assist level & bike gear.

This product is splash proof and rain proof but not **WATERPROOF**. Do not submerge it underwater.

Disclaimer

If you require any more information or have any questions about the user manual disclaimer, please feel free to contact us via email at support@cycmotor.com or call +852-3690-8938.

All the information contained in this manual is published in good faith and for general informational purposes only. CYCMOTOR LTD does not make any warranties about the completeness of this information and encourages further inquiries if needed. CYCMOTOR LTD will not be held liable for any losses and/ or damages in connection with the use of this product. **The use of this product is at own risk.**

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Please contact CYCMOTOR LTD if you are unsure about the assembly instructions or for any further assistance as CYCMOTOR LTD will be held liable for any losses and/ or damages created by the assembly.

The control unit's hardware and software are under the GPL V3 open-source license. VESC® is a trademark of Benjamin Vedder. More information can be found at www.gnu.org/licenses/gpl-3.0.html. CYCMOTOR LTD's source code can be found at www.github.com/CYC-MOTOR. Different firmware can be loaded to this controller.

Warning

Any issues with this product's performance or damages sustained to the product as a result of loading unauthorized firmware, will not be supported, or warrantied by CYCMOTOR LTD or any authorised product dealer.

Modifications of any kind is not advised. Any issues with this product's performance or damages sustained to the product as a result of modifications will not be supported or warrantied by CYCMOTOR LTD or any authorized product dealer. If the product or its components have been found to be modified, warranty of the product may be limited in the case where troubleshooting and/ or replacement may be needed.

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TECHNICAL SPECFICIATIONS

Description

This product is a high-powered electric bike (ebike) drive unit kit which includes a programmed control unit and peripherals. This product is designed to be installed as a conversion system to convert standard bicycles into electric bicycles.

General

Rated Voltage	36V – 52V
Max. RPM at Crank	>300 RPM
Rated Power	250W / 750W
Max. Torque at Crank	110 N.m.
Colour	Anodized Black
Weight of Motor Uni	3.2 kg
Total Weight with Crank set & BB	4.5 kg
Bracket Materials	7075-T6
Crank Arm Length	165mm or 175mm
Control Method	FOC
Motor Sensor	Hall & Temp. Sensor
Chain ring	34T / 38T / 42T / 50T
Compatibility	68-83mm, 100mm, 120mm BSA Threaded >121mm Pressfit (with adapter)

*Bottom brackets not specified may be compatible. Contact CYCMOTOR LTD for more information before making a purchase if your bottom bracket is not listed above.

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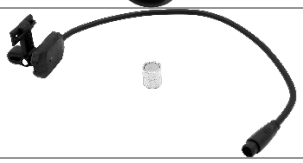
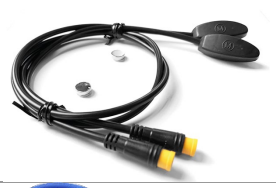
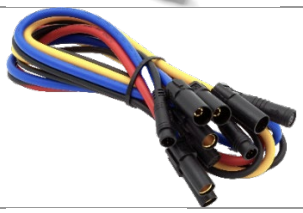
Parts List

Photon Motor Assembly	
SW102 or DS103 Display	or
Thumb Throttle	
Magnetic Bluetooth Speed Sensor	
Bottom Bracket Spacers	
(OPTIONAL) Magnetic Brake Sensors	
(OPTIONAL) Controller Extension Wires	
Mounting Support Plate	
Spindle Spacers	
BB92 to BSA adapters	

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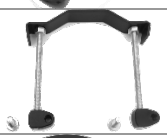
Crankarms with crankarm bolts	
Left BB Cup	
Mounting Hanger	
Retaining Lock Ring	
Spindle	
Photon Chainring Set	

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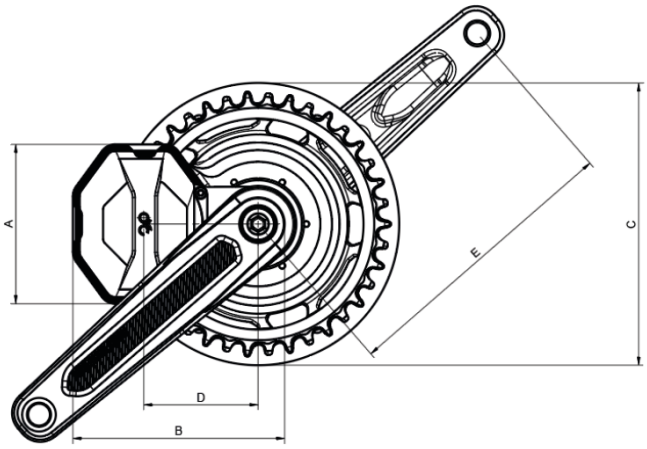
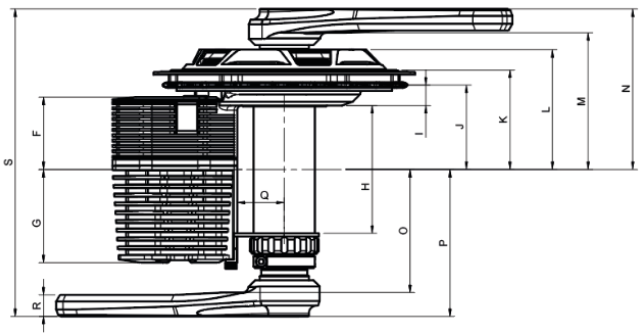
Dimensions

BSA Threaded 68/73/83mm Version

A	96mm
B	128mm
C	150mm / 170mm / 210mm
D	69 mm
E	165mm / 175mm
F	47 mm
G	60.5mm
H	83mm
I	13.3mm
J	54.8mm
K	64.6mm
L	77.8mm
M	88.9mm
N	104.4mm
O	80.1mm
P	95.6mm
Q	30.55mm
R	14mm
S	200mm





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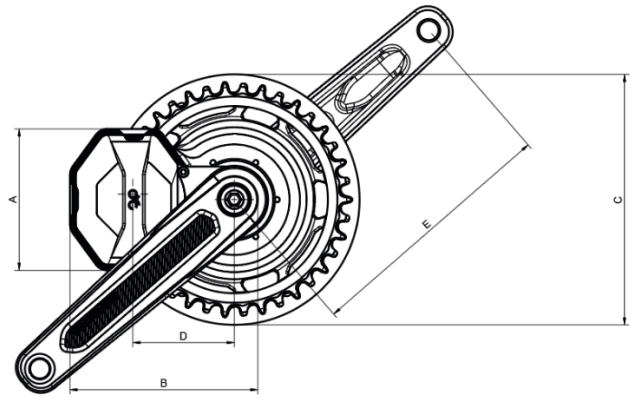
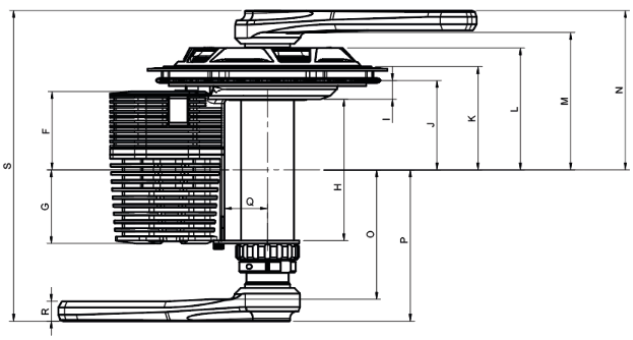
Dimensions

BSA Threaded 100mm Version

A	96mm
B	128mm
C	150mm / 170mm / 210mm
D	69mm
E	165mm / 175mm
F	55.5mm
G	52mm
H	100mm
I	13.3mm
J	63.3mm
K	73.1mm
L	86.26mm
M	97.4mm
N	112.9mm
O	91.6mm
P	107.1mm
Q	30.65mm
R	14mm
S	220mm





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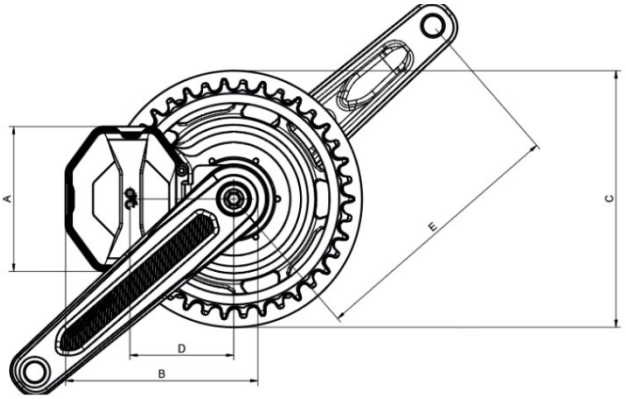
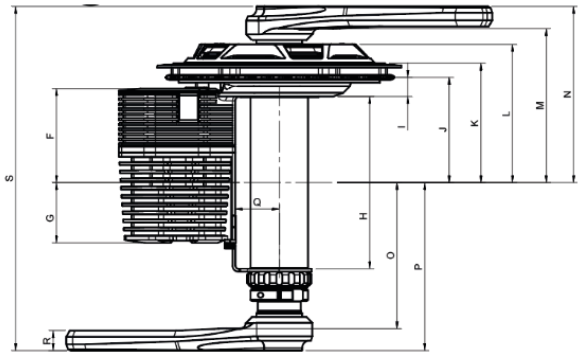
Dimensions

BSA Threaded 120mm Version

A	96mm
B	128mm
C	150mm / 170mm / 210mm
D	69mm
E	165mm / 175mm
F	65.5 mm
G	42mm
H	120mm
I	13.3mm
J	73.3mm
K	83.1mm
L	96.26mm
M	110.1mm
N	125.6mm
O	101.6mm
P	107.1mm
Q	30.65mm
R	14mm
S	230mm





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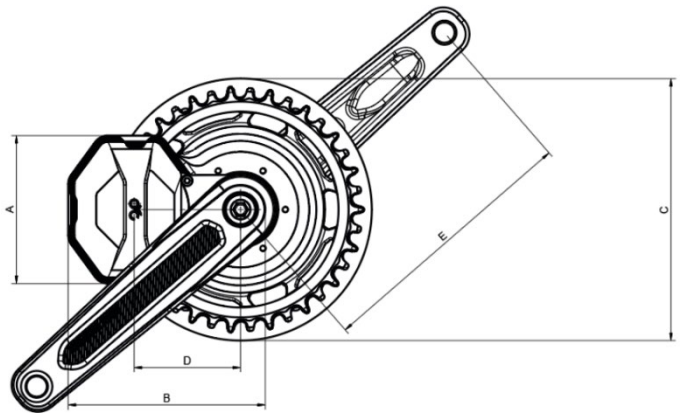
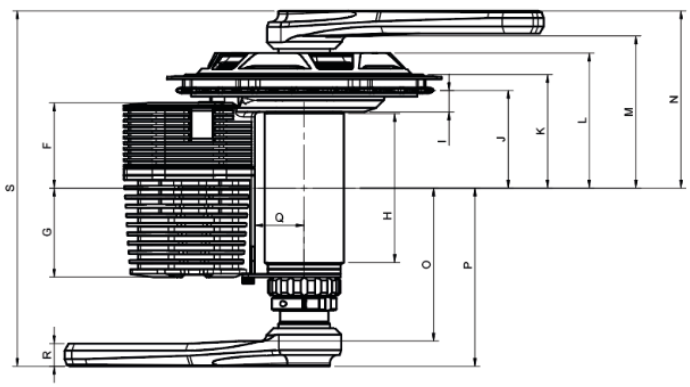
Dimensions

BB92 Version

A	96mm
B	128mm
C	150mm / 170mm / 210mm
D	69mm
E	165mm / 175mm
F	52.5mm
G	55mm
H	92mm
I	13.3mm
J	60.3mm
K	70.1mm
L	83.3mm
M	94.4mm
N	109.9mm
O	94.6mm
P	110.1mm
Q	30.55mm
R	14mm
S	220mm





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INSTALLATION

Required Tools

Hex Keys (3mm & 8mm)	
Adjustable Wrench	
Crank Puller (for disassembly)	
PressFit Bottom Bracket Removal Tools (Only for BB92 version)	
16 Notch Bottom Bracket Tool	

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Operating Notice

RIGHT-HAND and LEFT-HAND sides are determined by the bike handle; Right-hand corresponds to the right handle.

Preparing Your Frame

Before you begin, ensure that you have removed the original crankset and bottom bracket from the bicycle frame. This includes any bearings, bottom bracket from the bicycle frame. This includes any bearings, bottom bracket ups, inserts, and/or adapters that might have been fitted. Clean up any grease and/or debris from your frame's bottom bracket shell and wipe off any excess dirt from your frame around the areas where the drive unit and its peripherals will be installed.

Mounting Options

This product can be mounted in any position around the bicycle frame's bottom bracket shell that supports the drivetrain's movement without obstruction. The chainring assembly together with your bicycle chain must be able to move freely and not come into contact with other components or areas on the bicycle frame.

Warning

The motor body must be supported against either the bicycle frame or supporting structures in order to prevent the motor body from movement during use.

Adjusting the Width of the Bottom Bracket

In order for this product to fit on various different widths of bottom brackets, there are several spacers that come with the kit. These spacers are designed to provide the bottom brackets with necessary spacing between the product brackets.

Please note that the spacers can be adjusted to accommodate different chain lines as needed.

Before you begin, ensure that you have removed the original crank set and bottom bracket from your frame. This includes any bearings and/or cups that might have been fitted previously. To install your CYC kit, you will need a clean bottom bracket shell on your frame.

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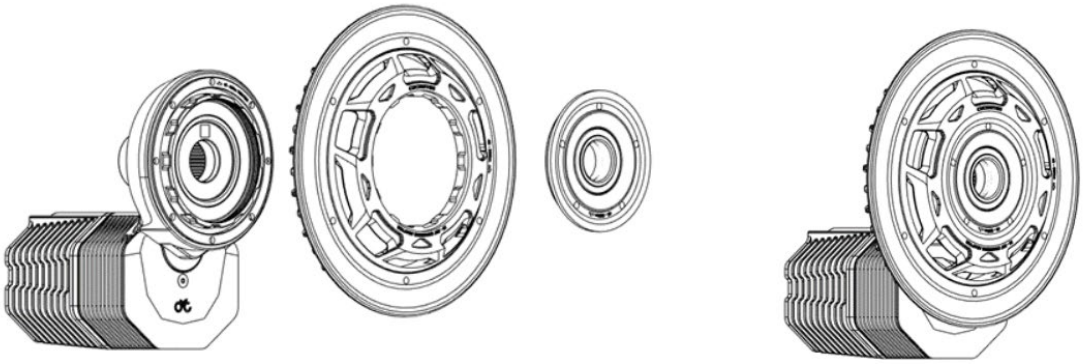
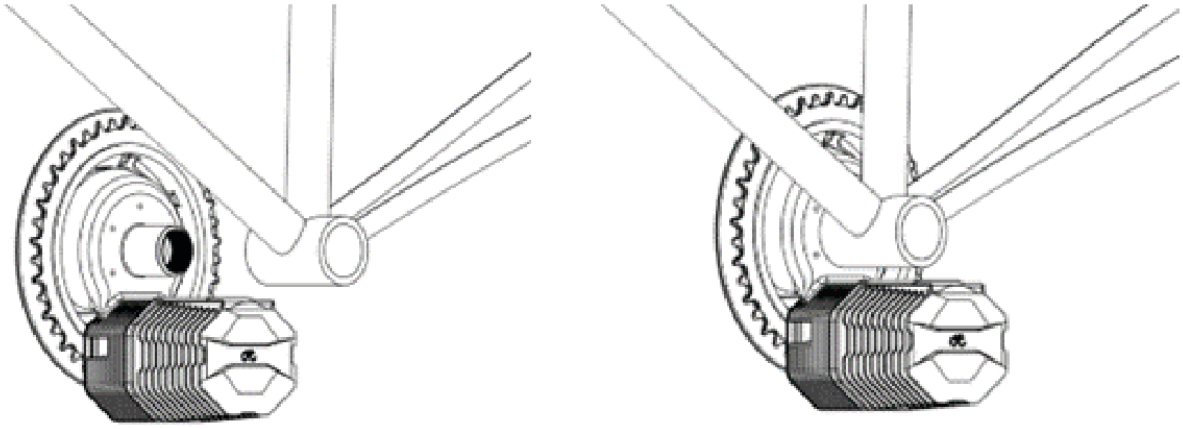
Assembly Instruction

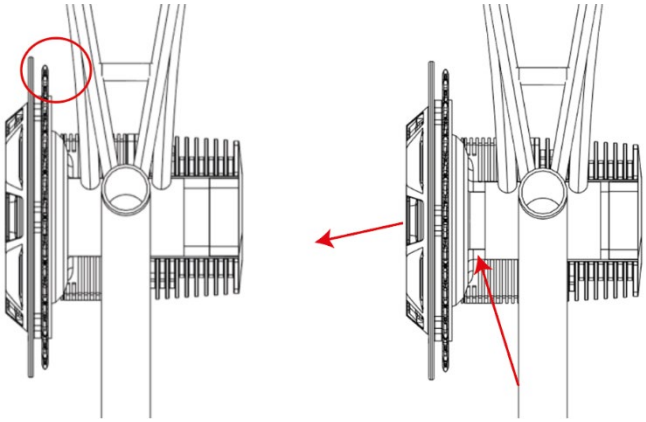
1. Install the chainring assembly to the motor unit.
2. The chainring assembly splines onto the gear of the motor unit.
3. The retaining cap can be threaded on with the provided tool. Please take note of the tightening direction.



4. Insert the motor so that the back of the motor sits closest to the drive side of the bottom bracket.
5. Ensure that the motor is mounted from the right-hand side of the bicycle frame.



6. Take note of the clearance between the chainstay of the bike and the motor unit. Sometimes the motor unit will need to be spaced out to additionally create space for the chainring and chainstay.



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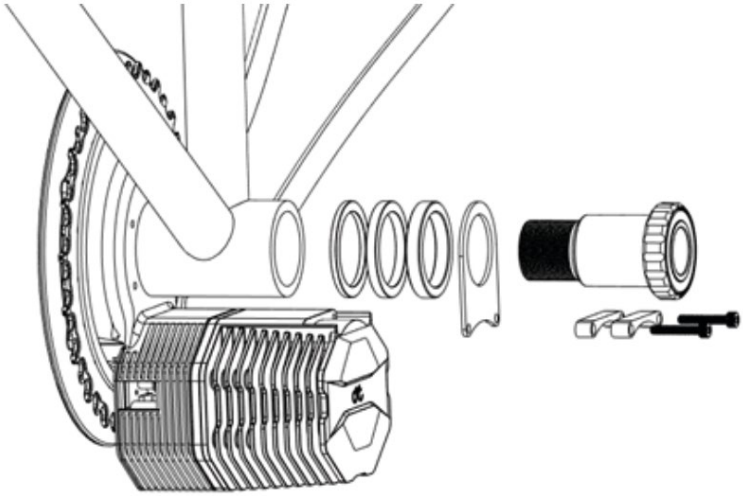
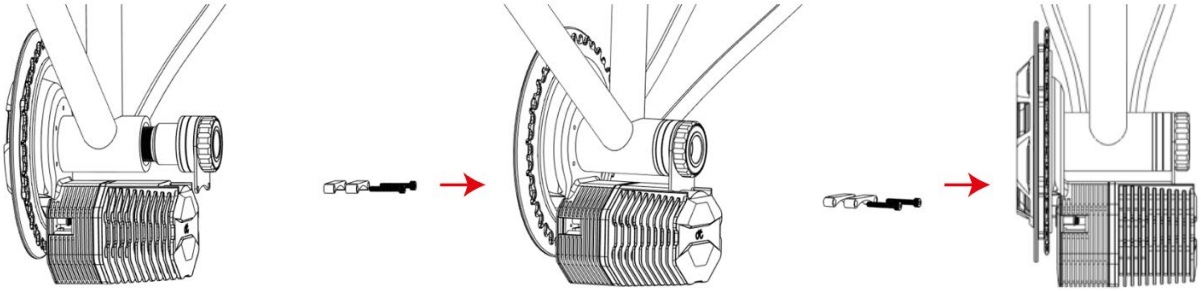
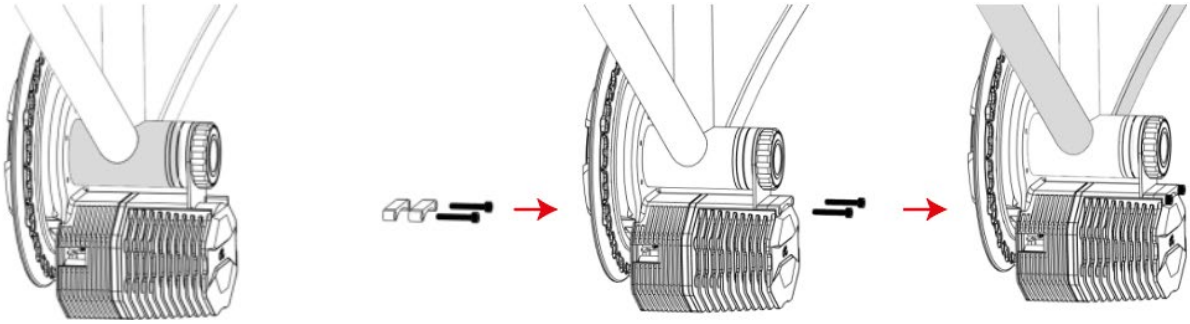
7. The Photon motor is designed for an effective BB width of 83mm. Thus, the required length needed for a 68mm or 73mm bottom bracket needs to be taken up by the provided bottom bracket spacers. You can add a 0.5mm spacer if needed to compensate for bike tolerance.



8. When inserting the left BB cup with spacers, please ensure that the A-frame support is added to the left BB cup first so that it sits against the tool side of the BB cup. Then place the A-frame in the cutout of the motor housing while inserting the left BB cup into the bottom bracket. Tighten by hand only. If done correctly, the A-frame support should be flush with the cutout of the motor body.



9. Place the 8mm & 9mm spacers in the remaining open space of the motor cover and thread the two M4 screws through them and into the body. Securely tighten these screws.



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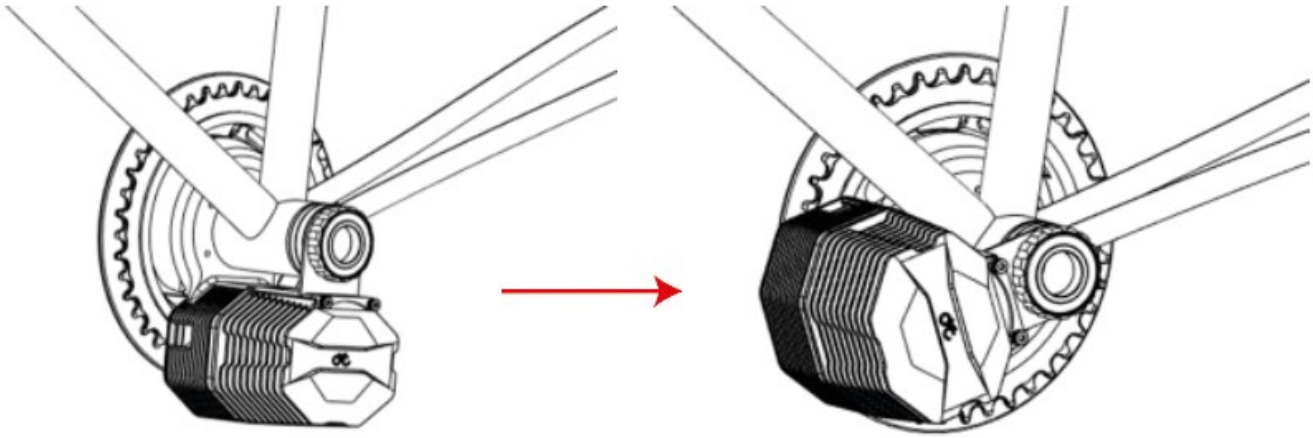
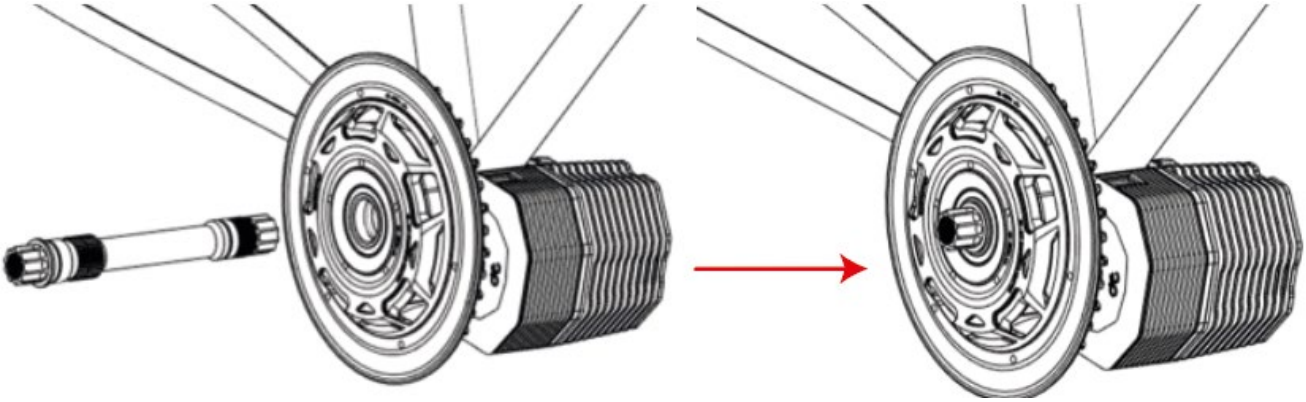
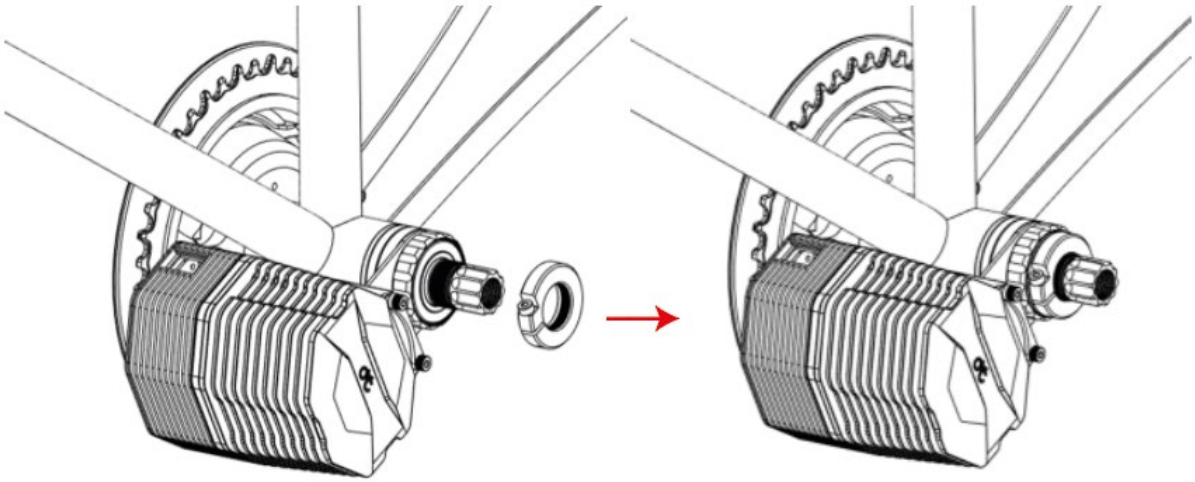
10. Pivot the motor up and securely tighten the BB cup of the motor system. Add the mounting support plate to protect the frame if needed.



11. Take the spindle and insert it through the motor assembly until the step on the shaft is in contact with the motor. We recommend adding grease on the bearing to have better waterproofing.



12. Thread the lock ring onto the spindle, with step on the lock ring facing towards the bike. Tighten by hand and then tighten the screw on the lock ring.
13. Ensure that the spindle can rotate freely.



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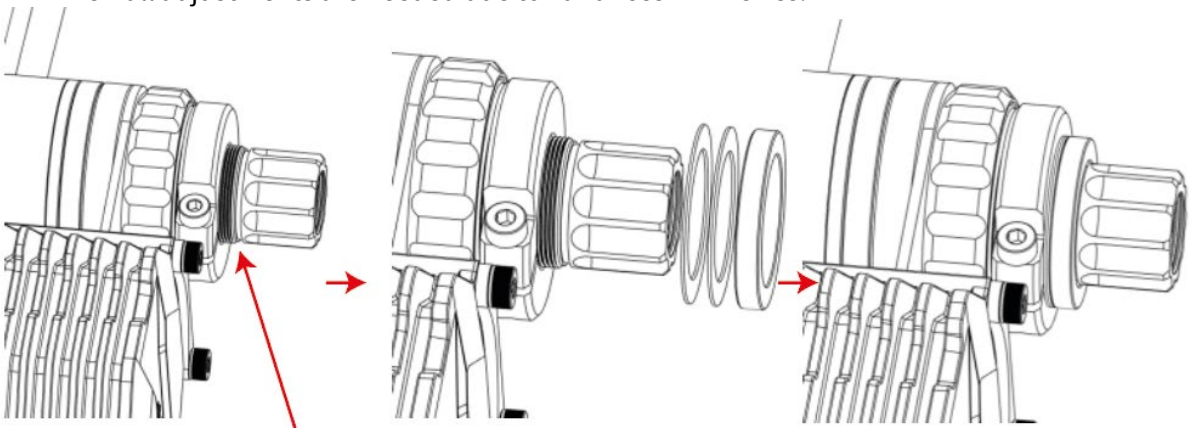
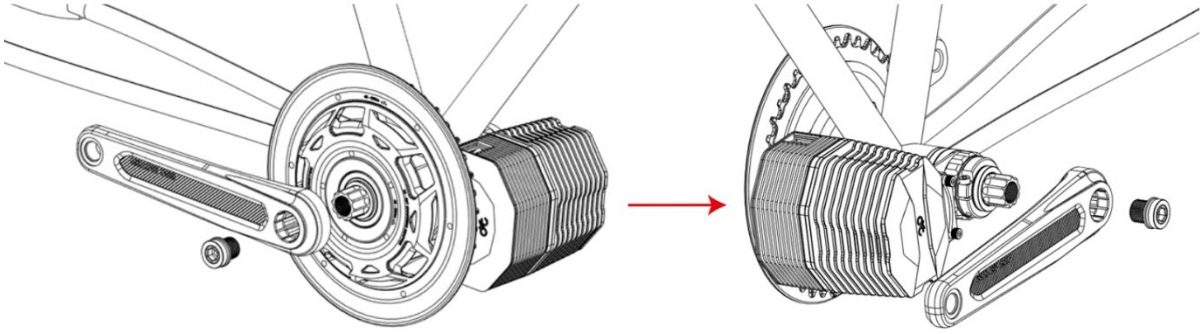
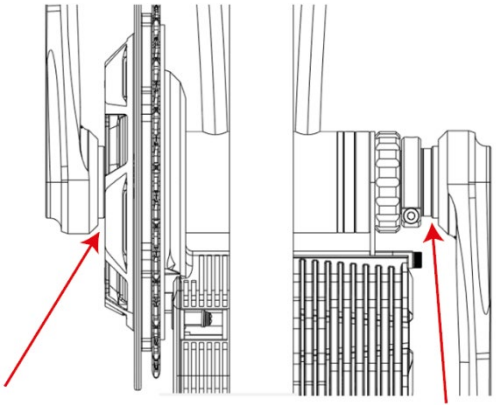
14. Add spindle spacers up to the indicated line. We can provide recommended sizes, but small adjustments are needed due to variances in BB sizes.



15. Install the crankarms and crankarm bolts and tighten accordingly.



16. When tightening the crankarms, ensure that the cranks touch the step of the spindle of the drive side and the spindle spacers on the non-drive side so that there is no remaining gap.



Spacer Information

BB Version	Q Factor	Chainline	Spacer on Left	Spacer on Right	Centre Offset
BSA68	200	50.3	5+7	3	-0.1
BSA73	200	49.8	3+7	0	-0.6
BSA83	200	54.8	0	0	4.4
BB92	220	59.3	3+3	0	0.1
BSA100	220	63.3	0	0	2.9
BSA120	230	73.3	0	0	7.4

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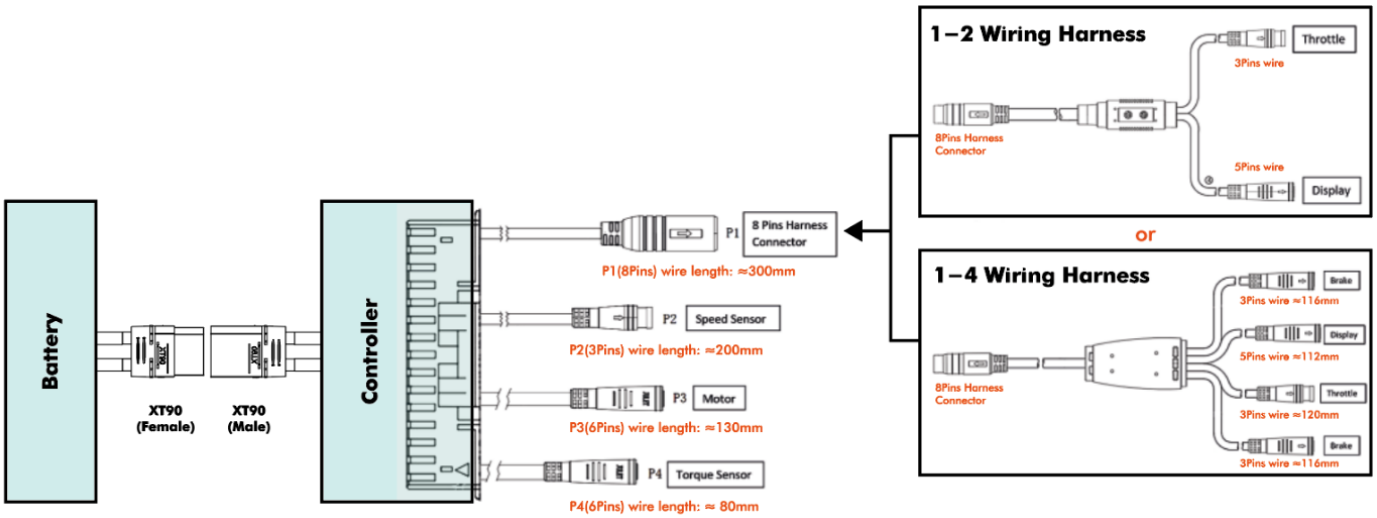
Wiring & Connection

Connect your controller to the following connectors as per below:

1. Connect the peripheral connector (P1) to the 1-2 or 1-4 wiring harness
2. Connect P2 to the speed sensor

For brake sensors:

Please note if you purchased brake sensors separately, you will need to enable them on the CYC Ride Control app. If you purchased brake sensors from another supplier, please ensure that the connectors match. A pin-layout may be requested at support@cycmotor.com



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MOBILE APP & DISPLAY

Ride Control App User Guide

Monitor & customize your e-bike riding experience for all CYCMOTOR mid-drive systems. Use it as a secondary dashboard, settings set-up, or both. Unleash all the possibilities of e-bike customization at your fingertips.

The mobile app is not the only way to customize your system. The controller is also programmable via the included display-integrated for your convenience.

This platform is your go-to station for your CYCMOTOR kit and X-Series controllers.

FEATURES:

- Bluetooth connectivity
- Complete with torque sensor configuration
- Compatible with CYC X-Series controllers
- Real-time dashboard for all your motor & riding information
- Fully customizable parameters for pedal assist, throttle & gear preferences

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Dashboard

Warning icon to check error codes & clear faults

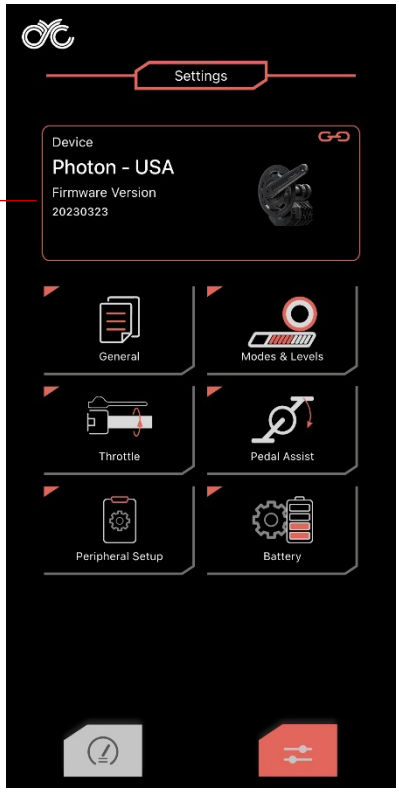
Brake sensor indicator
COMING SOON

Bluetooth icon to connect to your device

Instantly change between **STREET** & **RACE** mode

Change between your **DASHBOARD** & **SETTINGS** page

Firmware version for reference



ALL PARAMETERS SHOW REAL-TIME INFORMATION

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Connecting a Device

Step #1:

Open the app and tap the Search button at the bottom of the screen. Kindly ensure your phone's Bluetooth is enabled. (Please keep close to the motor while connecting)

Step #2:

Available devices will then be listed, select your kit and it will begin connecting to the controller. (Please note signal strength)

Step #3:

Once connected, the CONNECT icon will change stating you are connected & can select again to disconnect.

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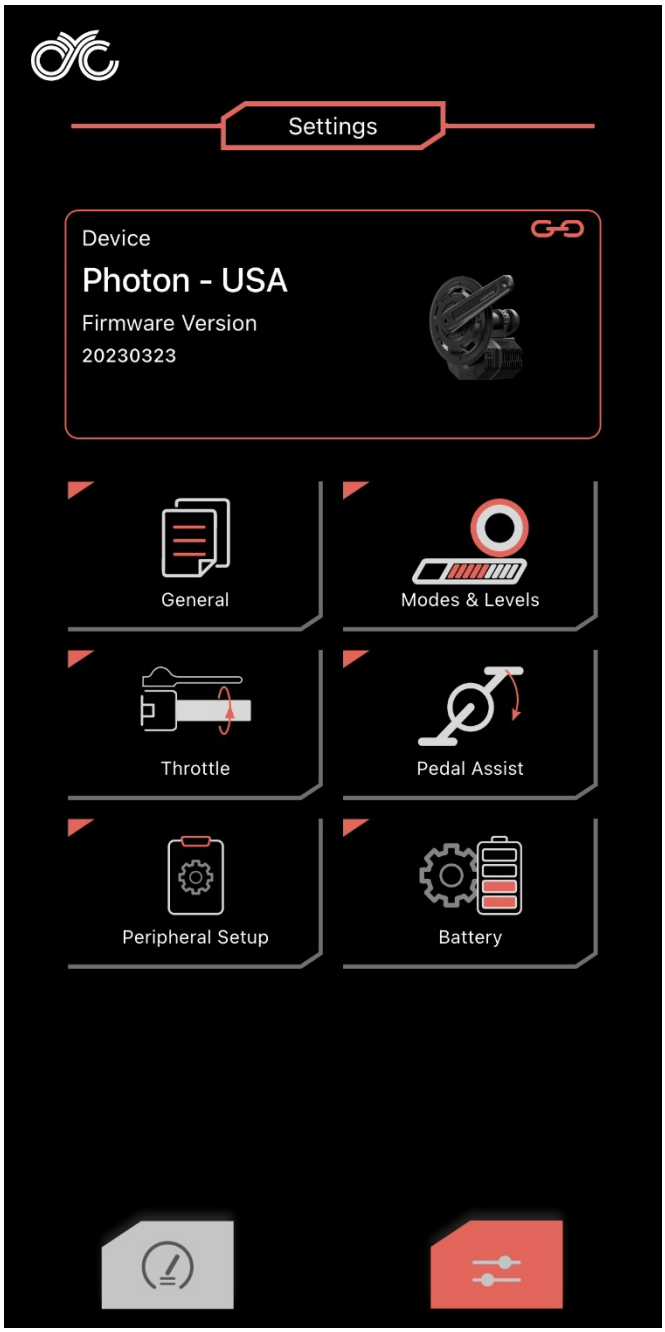
Main Settings



The settings page allows you to navigate through different parameter categories. There are six different categories with each providing a set of adjustable parameters or readings from your ebike system.

IMPORTANT

Save all new changes in parameters to flash or risk losing progress after a restart. Note to save after every change in value.

To save to flash, tap the ‘Save’ button in the upper righthand corner. “Save successful’ message will appear upon completion.

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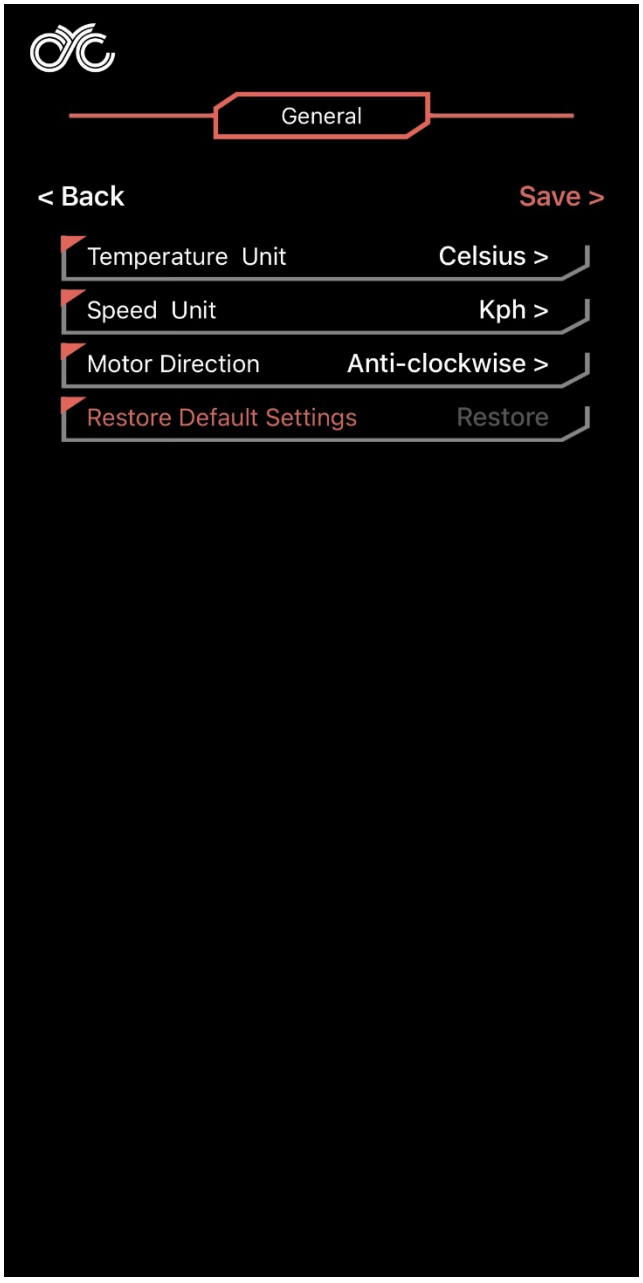
General



Temperature Unit

Set your units to display in degree Celsius (°C) or Fahrenheit (°F)

Speed Unit

Set the speed unit to miles or kilometres

Motor Direction

This setting is for users who'd want to switch the direction to where the motor is facing. Please note that this is reserved for specific uses only.

WARNING: Do not change this setting is using the motor in its default position. Contact CYC for assistance.

Restore Default Settings

Restore to factory/default settings.

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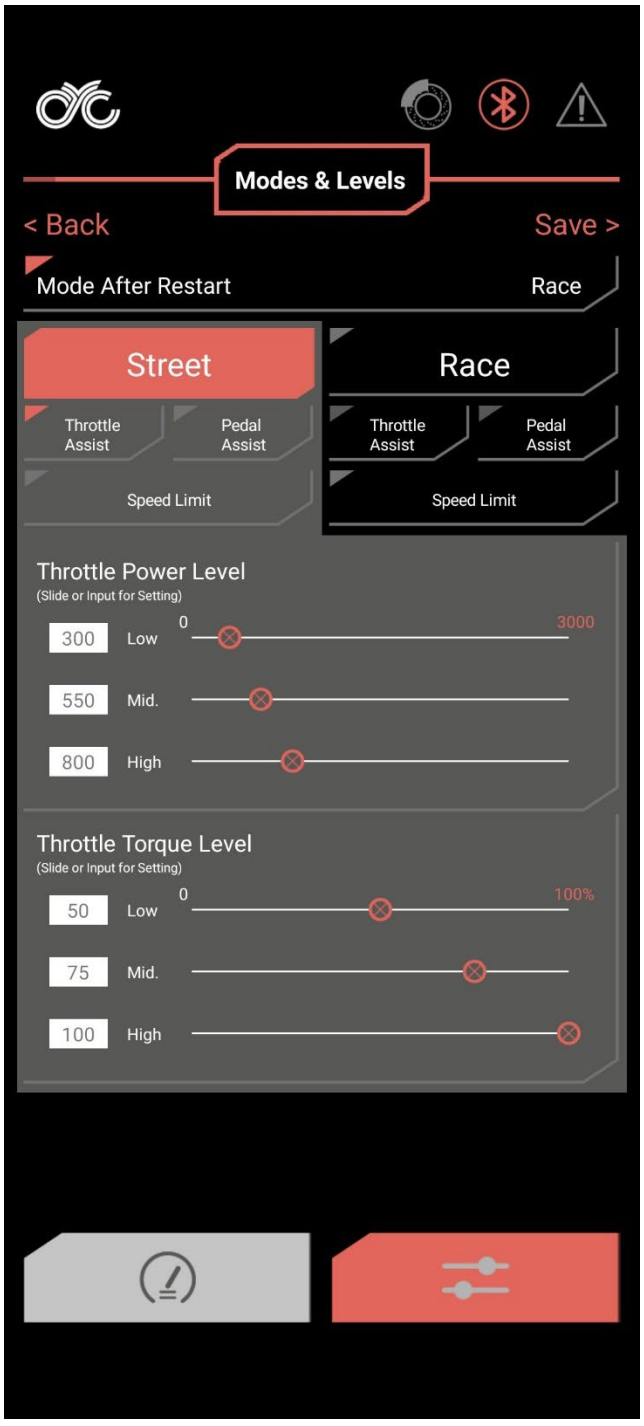
Modes & Levels



Race & Street Mode

You can set the throttle & PAS output independently for both modes.

Race Mode Throttle & PAS

Race Mode is your “boost” or “full power” mode and has parameters set for reaching closer to the system’s full capabilities. You can adjust these to your own preference within the capabilities of your controller. The default setting in Race Mode is 3000W & 100 km/hr.

Street Mode Throttle & PAS

Street Mode is intended to be set to your region’s legal limits. You can adjust these to your own preference or to your region’s legal limits. You can adjust these to your own preference or to your region’s legal limits. The default setting in Street Mode is 750W & 25Km/hr.

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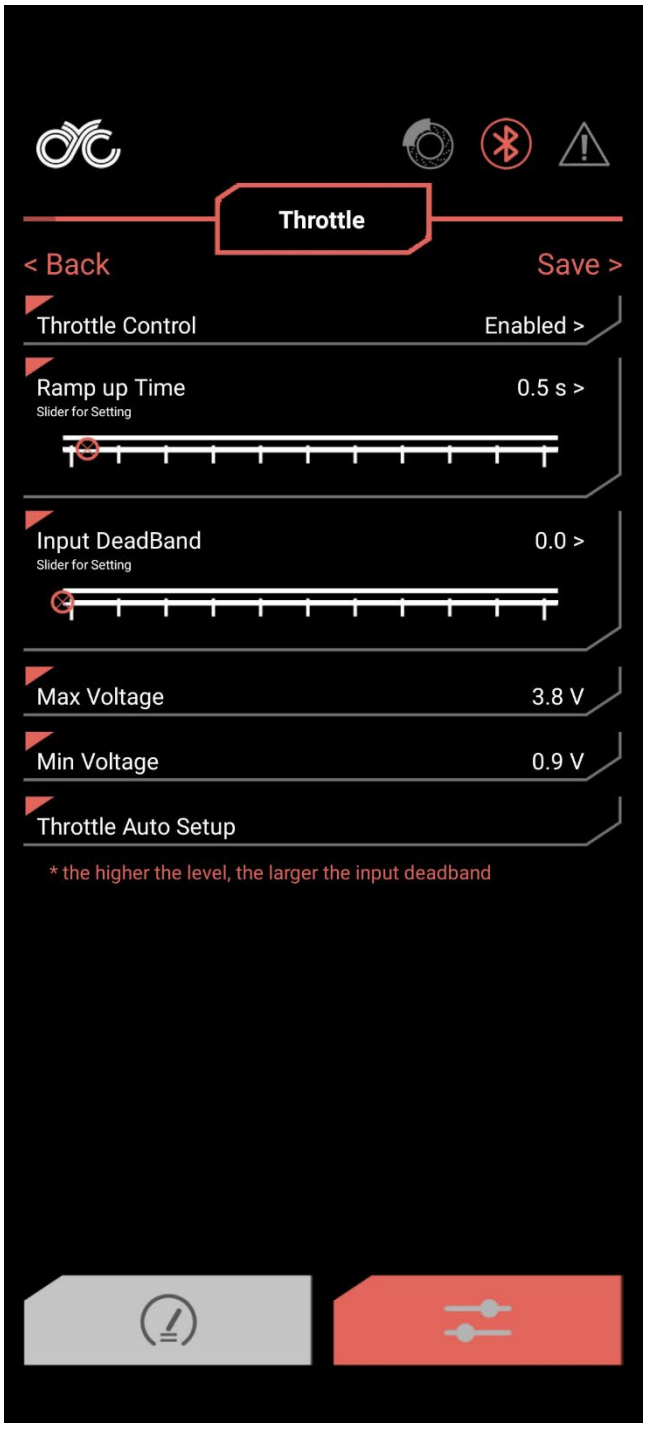
Throttle



Ramp Up Time

This is the time it takes for the motor to achieve the required input. For example, if you open the throttle fully, it will take 250ms (by default) before the motor gives you full power. It will gradually ramp up to full power within the set time. We recommend not setting this below 150ms.

Input DeadBand

This value pertains to opening the throttle when it's completely closed. This is the amount of throttle can be moved from the zero position without generating a response from the motor. If this value is set lower, your throttle will engage quicker and vice versa.

Max Voltage

This value should be the same as the Throttle Voltage Reading when the throttle is closed and sets the output when it is not active.

Min Voltage

This is the output of the throttle when opened fully and is pre-set when purchased. This does not need any change with CYC supplied throttles.

Throttle Auto Setup

For using your own throttle, this will automatically setup the min and max voltage accordingly. Follow the steps prompted on the screen to set up.

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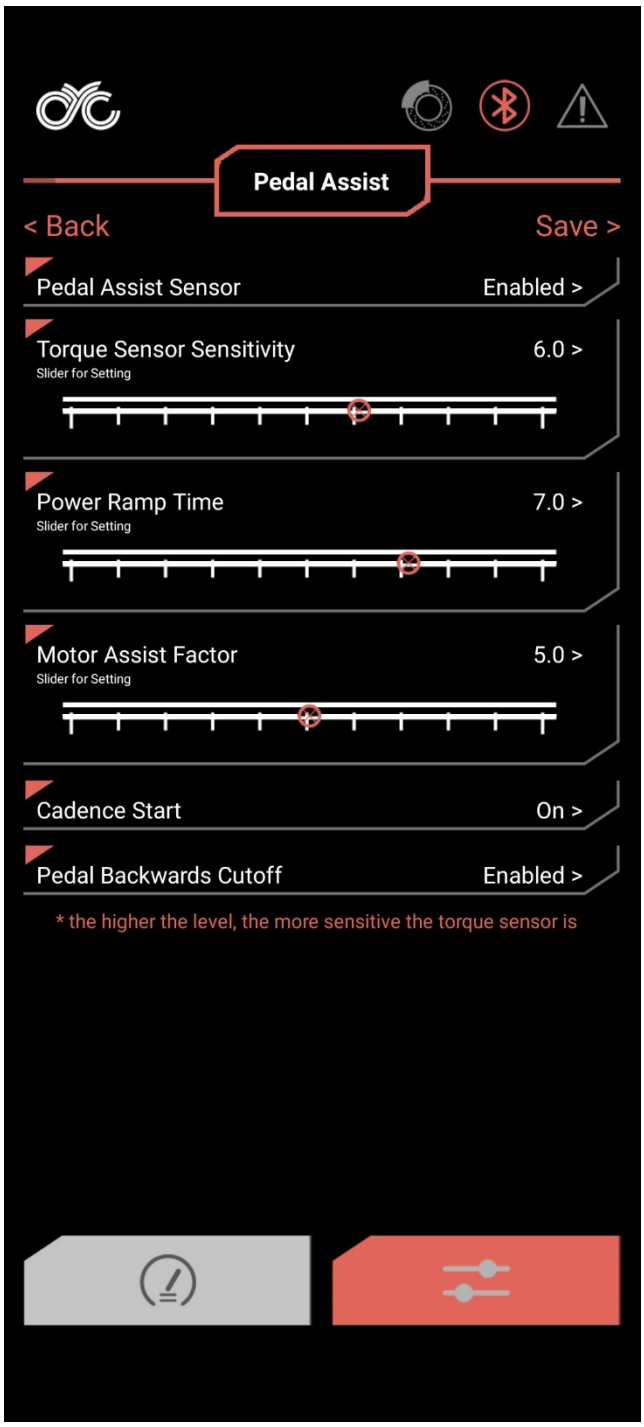
Pedal Assist



Pedal Assist Sensor

Enable or disable pedal assist.

Torque Sensor Sensitivity

This value pertains to activating pedal assist when it's completely off. This is the amount of pedal force required to activate the pedal assist. If this value is set higher, your pedal assist will engage with less force and vice versa.

Power Ramp Time

The amount of time it takes to reach the desired input. This is the responsiveness of the motor.

Motor Assist Factor

This value pertains to how hard you need to pedal to get full power.

Cadence Start

This feature allows for a cadence-free pull away. i.e., only torque (40N.m.) is required to activate pedal assist.

Pedal Backwards Cutoff

This feature allows you to cut motor power when you pedal backwards.

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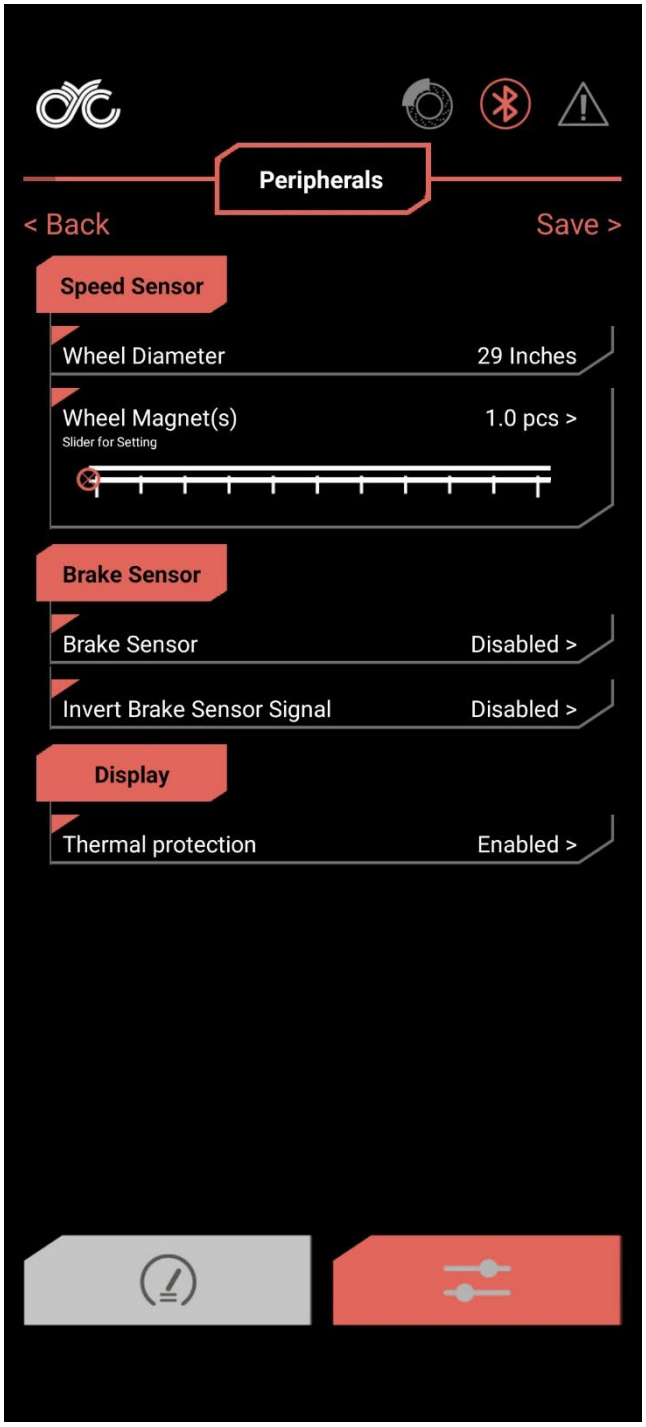
Peripherals Setup



Wheel Diameter

The wheel diameter can be measured or be calculated. We advise that this number must be calibrated so that vehicle speed within the app matches display speed.

Wheel Magnet

This is the number of magnets in the wheel that is communicating with the speed sensor. For more accurate vehicle speed limiting and measurement, we advise to add more magnets to the wheel.

Brake Sensor

Enable/Disable brake sensors.

Invert Brake Sensor Signal

If you are using brake sensors from a different supplier, you can use this feature to set up your brake sensors as needed.

WARNING: Please contact your authorized dealer or CYC support if you're setting up third-party peripherals.

Thermal Protection

This is an advanced feature and requires a password from CYC to change. This allows you to disable your motor temperature sensor. Contact us for more details and password for this feature.

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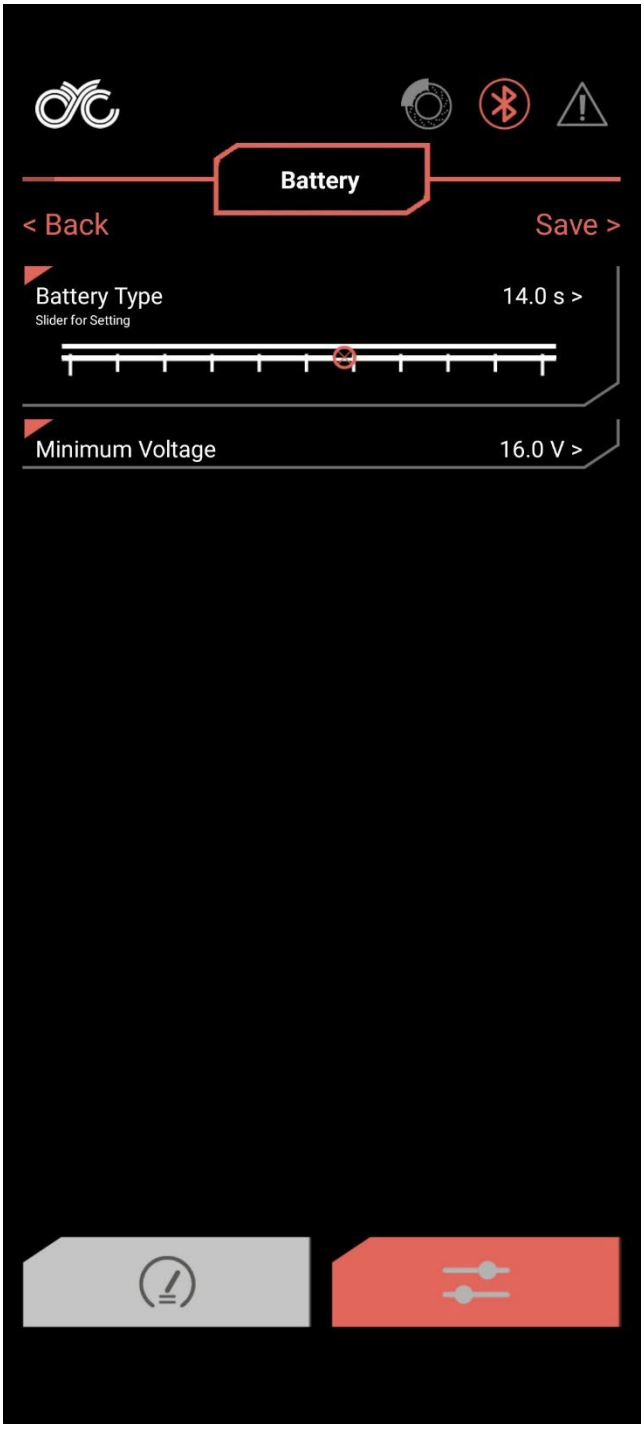
Battery



Battery Type / Series of Cells

10s = 36V, 14s=52V, 20s=72V

Minimum Voltage

The value the controller will fault when connecting too low a voltage to the system. This setting can be used to protect your battery if too much voltage sag is detected.

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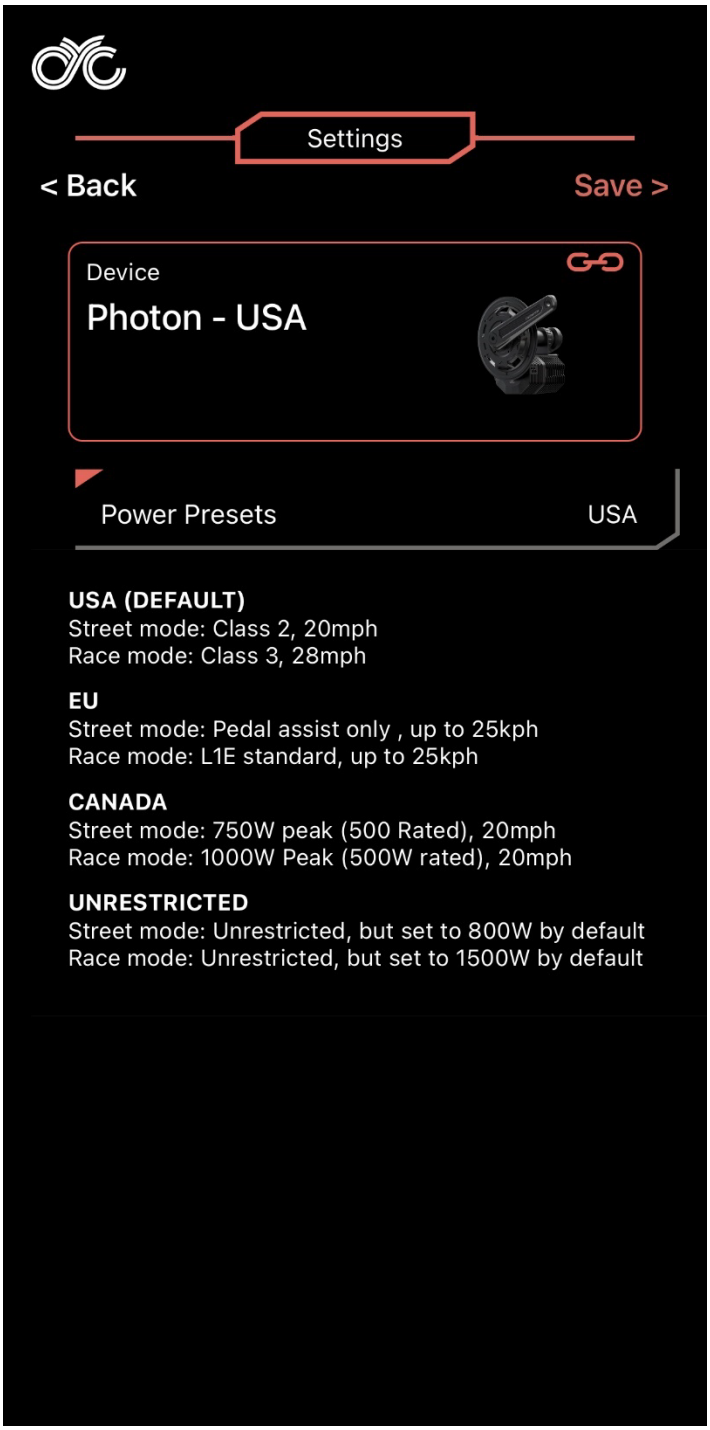
Selecting Power Presets



Step #1:

Go to the SETTINGS page in the app.

Step #2:

Press ‘Power Presets’ and a drop-down menu will appear. Select different presets based on region or select the UNRESTRICTED mode to unlock the full capabilities of the kit.

Press ‘Power Presets’ and select between different legal settings or unlock the full power of the kit with UNRESTRICTED mode.

WARNING: Entering UNRESTRICTED mode causes your kit to be for off-road use only and may not adhere to your region’s ebike limits for on-road/public road use. We recommend you to familiarize yourself with your region’s legal limits.

Step #3:

Save your settings to avoid losing progress.

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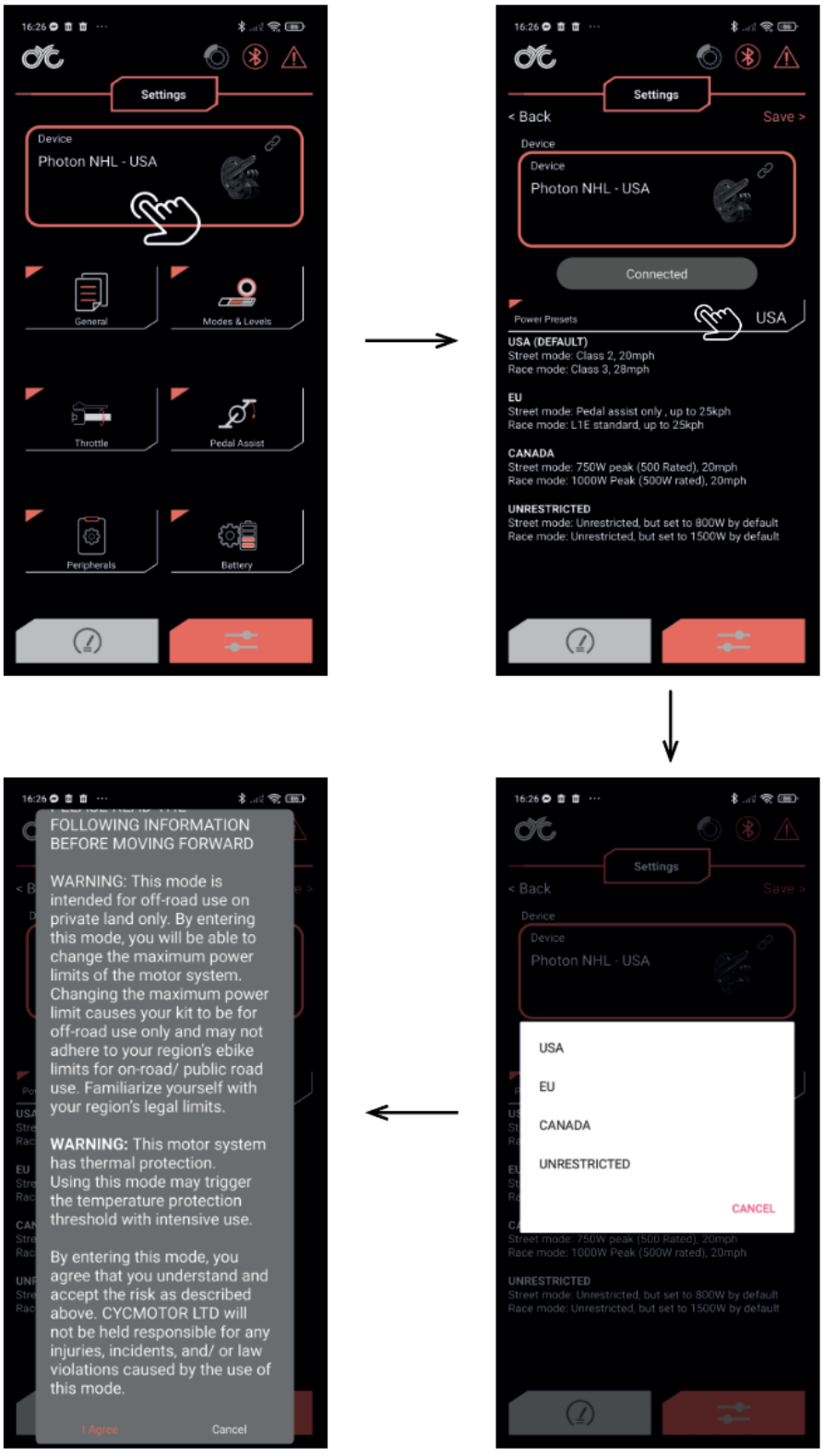
Selecting Unrestricted Mode



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Default Settings Information

Peak Limit & Default Settings	USA	Canada	EU	UNRESTRICTED
Street PAS	**1200W** Low 300W, 50% torque Mid 550W, 75% torque High 800W, 100% torque	**1000W** Low 300W, 50% torque Mid 550W, 75% torque High 750W, 100% torque	**750W** Low 300W, 50% torque Mid 550W, 75% torque High 750W, 100% torque	**2000W** Low 300W, 50% torque Mid 550W, 75% torque High 800W, 100% torque
Street Throttle	**1200W** Low 300W, 50% torque Mid 550W, 75% torque High 800W, 100% torque	**1000W** Low 300W, 50% torque Mid 550W, 75% torque High 750W, 100% torque	Disabled	**2000W** Low 300W, 50% torque Mid 550W, 75% torque High 800W, 100% torque
Street Speed Limit	**32kph**	**32kph**	**25kph**	**100kph**
Race PAS	**1200W** Low 500W, 50% torque Mid 850W, 75% torque High 1200W, 100% torque	**1000W** Low 300W, 50% torque Mid 750W, 75% torque High 1000W, 100% torque	**1000W** Low 300W, 50% torque Mid 750W, 75% torque High 1000W, 100% torque	**2000W** Low 500W, 50% torque Mid 1000W, 75% torque High 1500W, 100% torque
Race Throttle	**1200W** Low 300W, 50% torque Mid 850W, 75% torque High 1200W, 100% torque	**1000W** Low 300W, 50% torque Mid 750W, 75% torque High 1000W, 100% torque	**1000W** Low 300W, 50% torque Mid 750W, 75% torque High 1000W, 100% torque	**2000W** Low 500W, 50% torque Mid 1000W, 75% torque High 1500W, 100% torque
Race Speed Limit	**45kph**	**32kph**	**25kph**	**100kph**

Please note that the Maximum Power Level MUST be changed in the CYC Ride Control App to match your battery's specifications. Follow the guidelines below:

Battery Voltage	BMS	Motor Power Limit
52V	50A	2500W
52V	40A	2000W
52V	30A	1500W
48V	50A	2400W
48V	40A	1900W
48V	30A	1400W
36V	40A	1400W
36V	30A	1000W
36V	20A	700W

*Failure to set power settings correctly through the CYC Ride Control App may cause damage to your battery and/or motor.

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SW102 Display User Guide

Product Details

Product Name

Intelligent OLED display, model: SW102

Firmware: CYCMotor Ltd specific firmware

Features

- Minimalist design and process
- High brightness, high contrast 1.3-inch monochromatic OLED screen
- Excellent outdoor design with IP65 waterproof rating

Dimensions & Materials

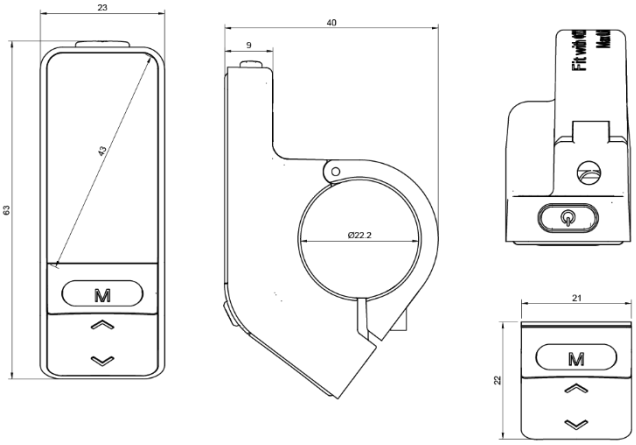
Materials

Product shell – ABS + PC plastic

Transparent window – 2.5D Tempered glass

Dimensions

L 23mm x W 40mm x H 63mm



Electrical Specifications

- Power supply: DC 36V / 48V / 52V
- Rated current: 12mA
- Shutdown leakage current: <1uA
- Screen specification: 1/3” OLED (64*128 dots)
- Communication method: UART (default)
- Operating temperature: -20°C ~ 80°C
- Storage temperature: -30°C ~ 80°C
- Waterproof level: IP65

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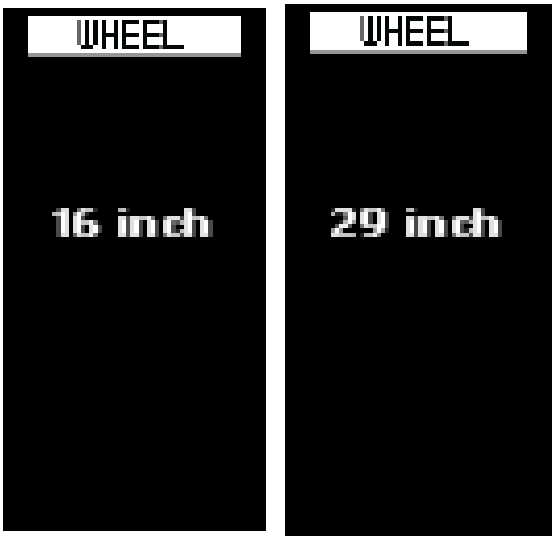
Quick Start Guide

After unboxing and installing your CYC motor system, there are two main things you need to set up.

1. Change your Battery No. setting according to your rated voltage.
    a. Within 15 seconds of turning on your display, long press the MENU button to enter

the settings functions. Press UP/DOWN to navigate the settings page & MENU to select.



2. Change your Wheel setting according to your bike's wheel size.

3. Now you can set things up like your temperature and speed unit as well as your brightness level.

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Functionalities

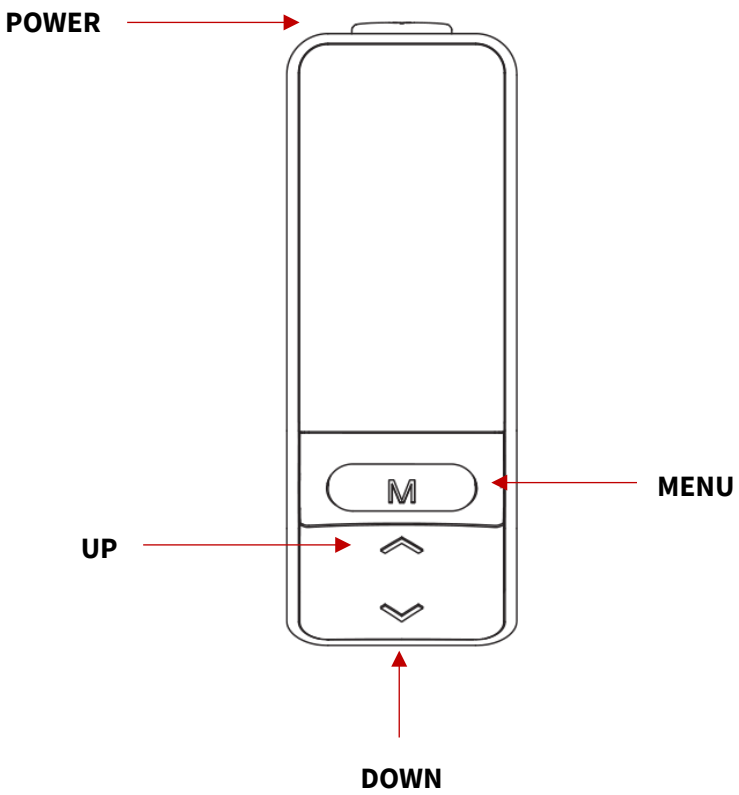
Power On/Off

Press and hold the POWER button for 2 seconds to turn the display on/off. The display will automatically shut down when there is no operation for a period of time.

Navigation

1. POWER
2. MENU
3. UP
4. DOWN

The MENU button is used to go into your settings page & clear data page. It is also used to enter and select a setting or function & finally, it's also used to switch between the various main dashboard information.



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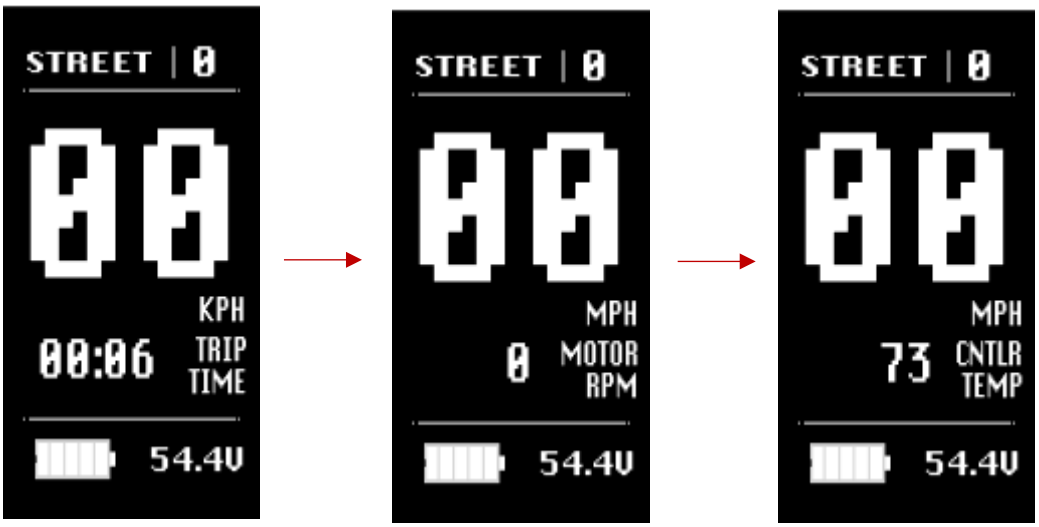
Switch Dashboard

Switch the main dashboard to display different information by pressing the MENU button.



Assist Level Operating

Press the UP/DOWN button to change the assist level between level 1, 2, and 3. Please note that “OFF” means no motor assistance will be given.

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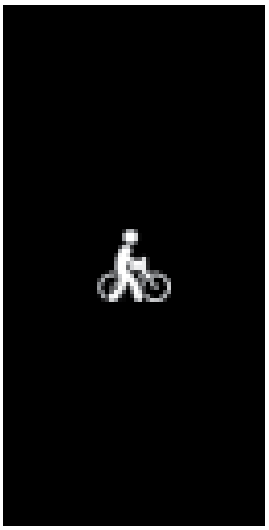
Walk Assist

Long press the DOWN button to activate walk assist. Note that it takes 3 seconds to activate & will deactivate immediately when the button is released.

Walk assist can only be activated if you are in assist level 1, 2, or 3.



Settings

Long press the MENU button within 15 seconds of switching on the display to enter the “Settings” page. Note that once the system has been activated for longer than 15 seconds, you will need to restart the motor system to enter the settings menu.

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Clean Trip Data

Wait 15 seconds after starting up the motor system to be able to enter the “Clean Data” menu. Long press the MENU button to clear previous trip data. Please note that the trip data does not automatically clear once you restart the motor system. This is a manual process.

Error Codes

In certain circumstances, an error code may appear on your display. Contact us for assistance.

Error Code on SW102 Display	Error Code on App
1	Controller Over Voltage
2	Controller Under Voltage
4	Controller Internal Error 1
5	Controller Over Temperature
6	Motor Over Temperature
9	Controller Internal Error 10
10	Controller Internal Error 2
14	Controller Internal Error 3
15	Controller Internal Error 4
16	Controller Internal Error 5
17	Controller Internal Error 6
18	Controller Internal Error 7
23	Controller Internal Error 8
24	Controller Internal Error 9
26	Hall Sensor Error
28	Throttle Error
29	Speed Sensor Error

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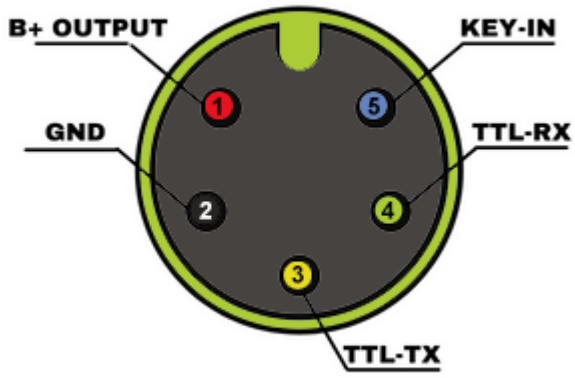
Installation

Open the display lock clip, set the display in the left handlebar (standard handlebar size Φ22.2). Adjust it in place and tighten the screw accordingly.

Note: Damage caused by excessive torque is not covered by warranty.

Pin Layout



Male 5-Pin Connector

1. Red Wire: Anode (36V to 72V)
2. Black Wire: GND
3. Yellow Wire: TxD (display -> controller)
4. Green Wire: RxD (controller -> display)
5. Blue wire: Power cord to the controller

Certification

CE / IP65 (waterproof) / ROHS

Be sure to contact us if further assistance is needed. Thank you!

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DS103 Display User Guide

Product Details

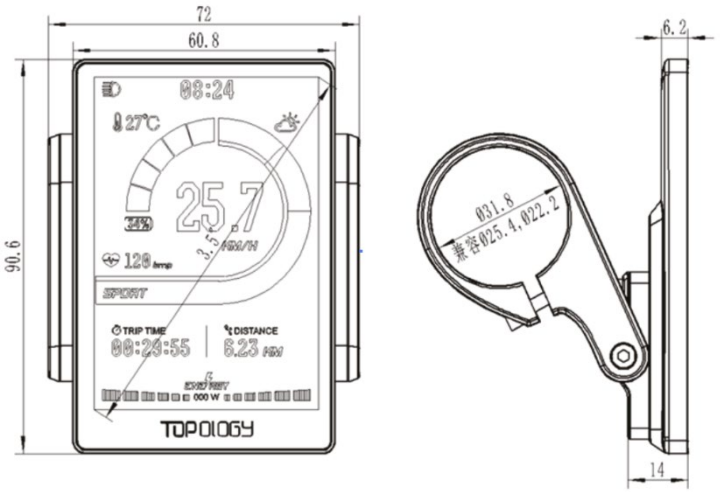
Intelligent LCD display, model: DS103

Firmware: CYCMotor Ltd specific firmware

Features

- Simple and lightweight, separate installation bracket design
- High brightness, high contrast 3.5 coloured TFT screen
- Clock function (clock is on when the display shutdown)
- Excellent outdoor design with IP65 level waterproof
- Micro USB serial communication port, convenient maintenance services

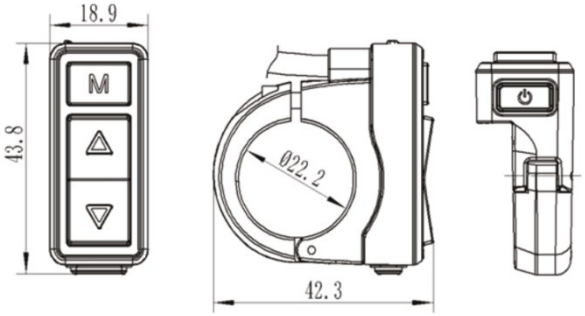
Dimensions & Materials



Materials

Product shell – ABS + PC plastic

Transparent window – Tempered glass



Dimensions

L 72mm x W 14mm x H 90.6mm

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Electrical Specifications

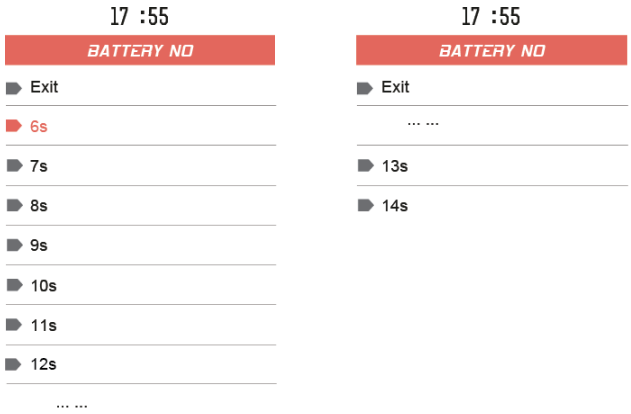
- Power supply: DC 24V/ 36V/ 48V/ 52V
- Rated current: 30mA/36V
- Shutdown leakage current: <1uA
- Screen specification: 3.5” coloured TFT (480*320 pixels)
- Communication method: UART (default)
- Operating temperature: -20°C ~ 60°C
- Storage temperature: -30°C~80°C
- Waterproof level: IP65

Quick Start Guide

After unboxing and installing your CYC motor system, there are two main things you need to set up.

1. Change your Battery No. settings according to your rated voltage.

Within 15 seconds of turning on your display, long press the MENU button to enter the settings functions. Press UP/DOWN to navigate the settings page & MENU to select.



6s = 22.2V	9s = 33.3V	12s = 44.4 V
7s = 25.9V	10s = 36V	13s = 48V
8s = 29.6V	11s = 40.7V	14s = 52V

Please note that 6s is not compatible with the CYC systems. This will be removed in future batches. Our apologies for the confusion.

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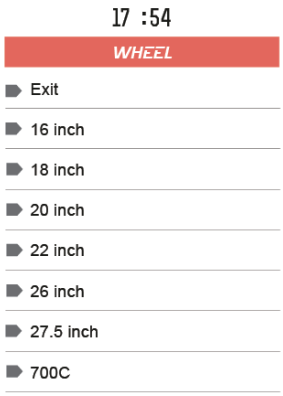
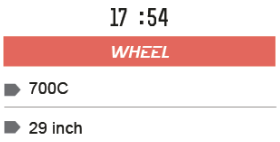
2. Change your Wheel settings according to your bike's wheel size.





You can now set up parameters like temperature and the speed unit as well as the brightness level!

Functionalities

Press and hold the POWER button for 3 seconds to turn the display on/ off.

Navigation

The MENU button is used to go into your main settings page & your clear data page. It is also used to enter and select a setting or function.

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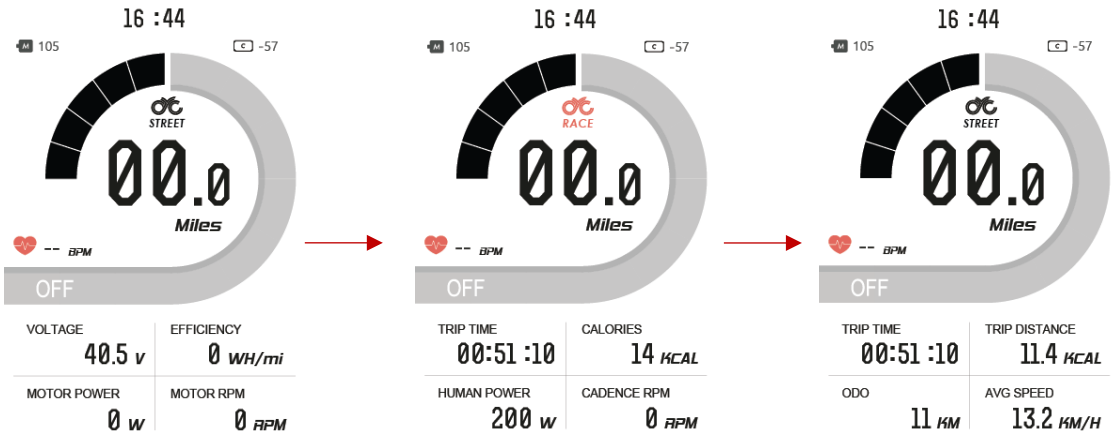
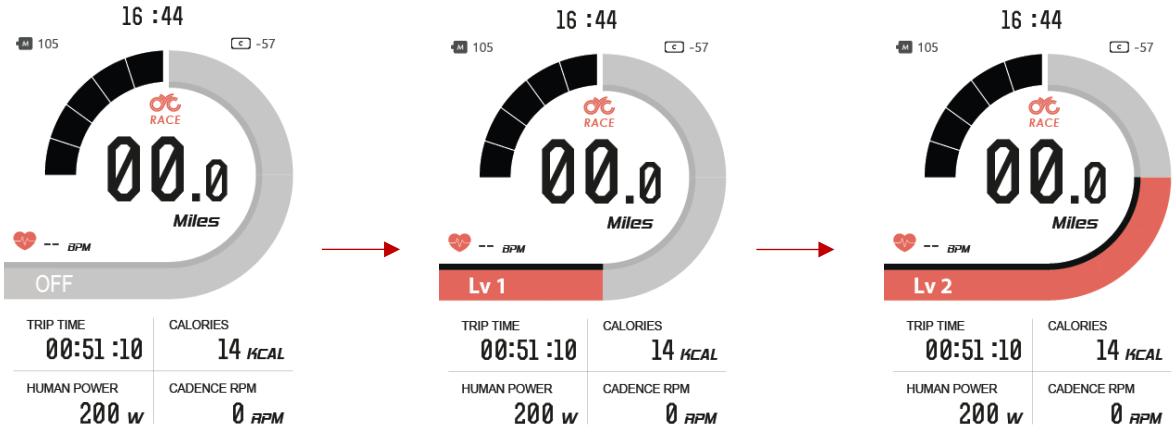
Switch Dashboard

Switch the main dashboard to display different information by pressing the MODE button.



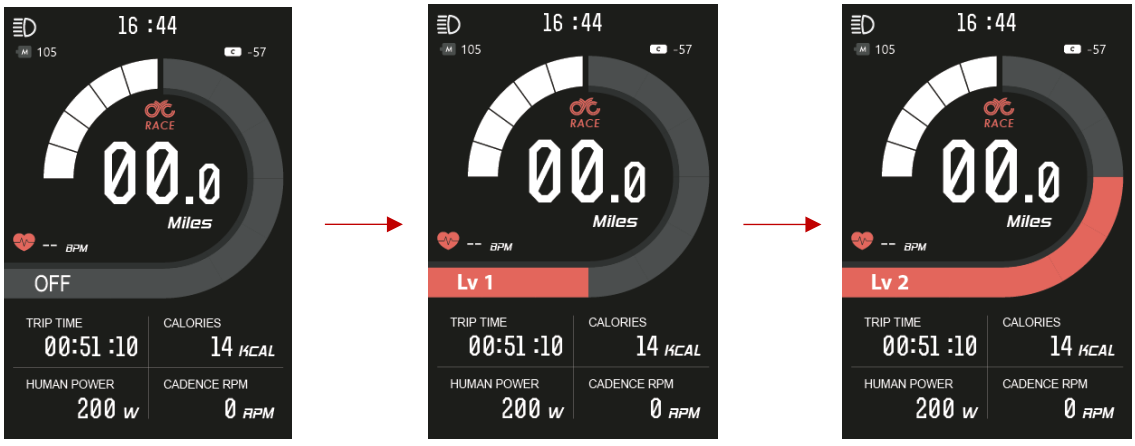
Assist Level Operating

Press the UP/DOWN button to change the assist level between level 1, 2, and 3. Note that “OFF” means no motor assistance will be given.



Dark & Light Themed Dashboard

Long press the UP button to switch between the light and dark themed dashboards.



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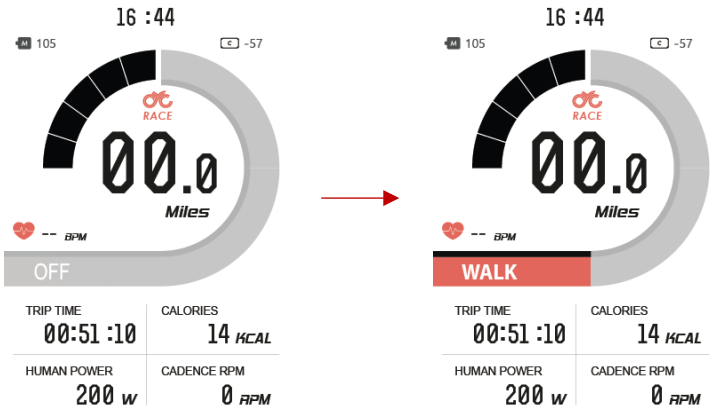
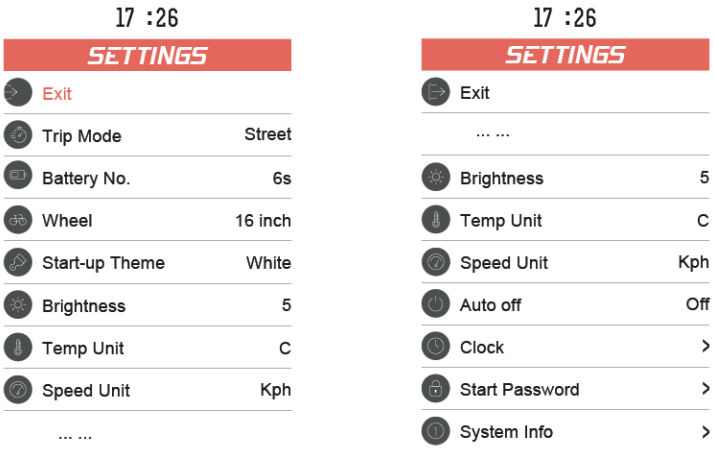
Walk Assist

Hold in the DOWN button to activate walk assist. Please note it takes 3 seconds to activate & will deactivate immediately when the button is released.



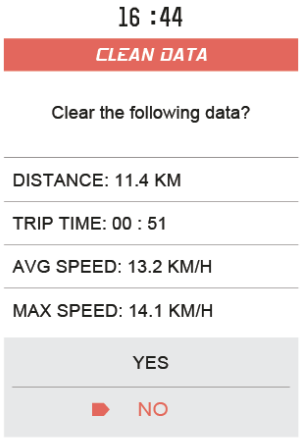
Settings

Long press the MODE button within 15 seconds of switching on the display to enter the “Settings” page. Please note that once the system has been activated for longer than 15 seconds, the motor system will require a restart to enter the settings menu.



Clean Trip Data

Wait 15 seconds after starting up the motor system to enter the “Clean Data” menu. Long press the MODE button to clear previous trip data. Please note that trip data does not automatically clear once the motor system is restarted. It is a manual process.



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Error Codes

In certain circumstances, an error code may appear on your display. Contact us for assistance.

Error Code on App & DS103 Display
Controller Over Voltage
Controller Under Voltage
Controller Over Temperature
Hall Sensor Error
Throttle Error
Speed Sensor Error
Controller Internal Error 1
Controller Internal Error 2
Controller Internal Error 3
Controller Internal Error 4
Controller Internal Error 5
Controller Internal Error 6
Controller Internal Error 7
Controller Internal Error 8
Controller Internal Error 9
Controller Internal Error 10

Installation

1. Determine if you need to select the corresponding mounting clamp and rubber clip ring according to the diameter of your handlebar (Applicable handlebar specifications: Φ22.2; Φ25.4; Φ31.8).
2. Open the display lock clamp and insert the rubber clip (if applicable) into the correct position of the lock clamp.
3. Set the rubber ring in the bracket (if applicable) then assemble on the middle of the handlebar. You can adjust the angle of the display to make the display screen more visible when riding. After fixing the angle, tighten the screws. The tightening torque is 1N.m.
4. Open lock ring of the switch and set in the appropriate position on the left side of the handlebar. Adjust the angle and position of the switch as needed in order to ensure the switch can be operated easily.
5. Fix and tighten the handlebar fixing screw with the M3 Hex wrench (locking torque is 0.8N.m.)

Note: Damage caused by excessive torque is not covered by warranty.

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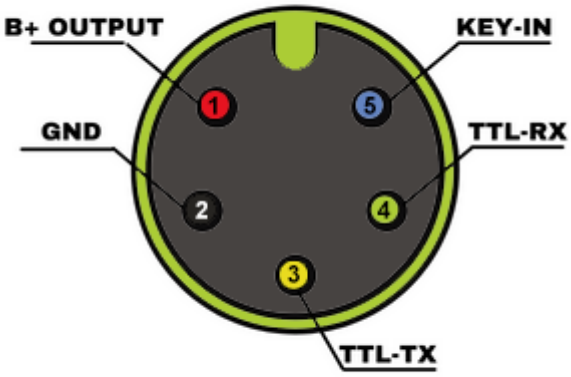
Compatibility

The clamps are suitable for 3x different handlebar sizes: 31.8mm, 25.4mm & 22.2mm.

Pin Layout



Male 5-Pin Connector

1. Red Wire: Anode (36V to 72V)
2. Black Wire: GND
3. Yellow Wire: TxD (display -> controller)
4. Green Wire: RxD (controller -> display)
5. Blue wire: Power cord to the controller

Certification

CE / IP65 (waterproof) / ROHS

Be sure to contact us if further assistance is needed. Thank you!

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GENERAL MAINTENANCE

You are advised to regularly maintain, clean, and check the status of the bike and motor system as dirt will accumulate throughout the rides and additional strain will be taken by the drivetrain due to the powerful motor system. We recommend that users should inspect the bike and motor condition before and after each ride.

Disconnect all power supplies from the drive unit before starting any work (e.g., inspection, repair of the bike, maintenance work etc,) on the bike, transportation, or storage. Unintentional activation of the drive could lead to serious damage or injury.

Never reach into the chains, gears, or any moving parts while the bike is still in operation.

As the drive unit can get hot after use, be sure to give it some time to cool down before performing any maintenance.

Store the bike in a cool and dry place, sheltered from direct sunlight and potential rain.

Do not attempt to disassemble or modify the drive unit. The drive unit may only be repaired and maintained by qualified experts and only replaced with original spare parts. This will ensure that the safety/warranty of the drive unit is maintained.

The active moving parts (e.g., chain, gear, speed reducer etc.) should be regularly lubricated to maintain desired performance. In case of any abnormal activity, stop using the drive unit immediately and contact your CYC dealer.

Do not attempt to replace the product parts with the parts that have been found at a local bicycle store as the materials used in the drive unit are specifically designed for their purposes.

All bolts, nuts and screws are required to be tightened to the correct torque, if there is anything loose, stay off the bike. Torque specifications for each bolt and nut is provided.

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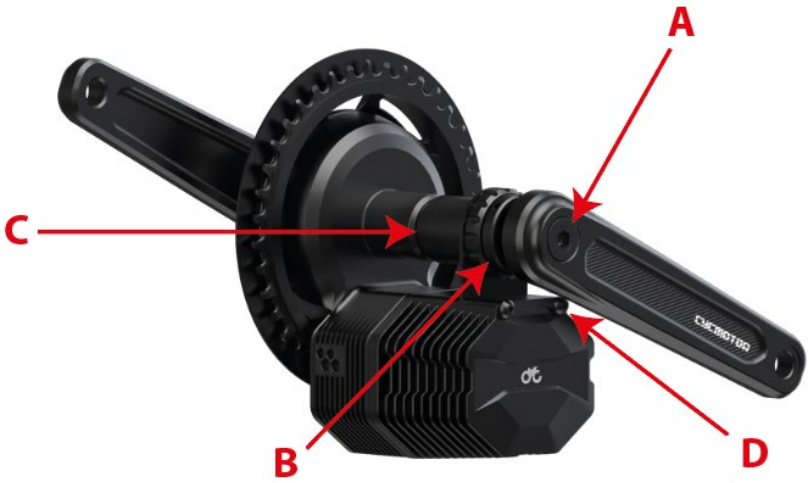
Torque Requirement for Bolts



Listing	Component Name	Torque Requirement
A	Crank Arm Bolts	27 – 32 N.m.
B	Lockring	Tighten by hand
C	Left BB Cup	40 – 50 N.m.
D	A-Frame Bolts	5 N.m.

Bolt Specifications	Component Name	Quantity
M15*1.0*15L	Crank Arm Bolts	2
M4*25 Hex Socket Head	A-Frame Bolts	3

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WARRANTY

This product has a 2-year warranty period. Man-made failures are excluded from warranty. Terms and conditions apply. Please visit www.cycmotor.com/refund-and-return-policy for more information.

For any queries or complaints, please contact us directly at support@cycmotor.com or visit our online store for replacement parts at www.cycmotor.com/shop.

PURCHASES FROM A CYC DEALER

CYC authorized dealers may have different terms and conditions. If you are experiencing any issues with your item/s and did not purchase the kit directly from us, kindly consult the appropriate dealer for assistance.

CONTACT INFORMATION

For customer support, including shipping, quotes, tax, and sales -> support@cycmotor.com

For technical assistance, including build assistance, recommendations, troubleshooting, and product related queries -> technical_support@cycmotor.com.

Office Hours

Monday to Friday

9AM – 6PM (Hong Kong Time HKT)

+852 3690 8938

DOWNLOADS

Kindly download the display & mobile app user manuals in our Downloads page (www.cycmotor.com/cycmotor-downloads) or scan the QR code. All materials listed below are freely available to download on our website.

What's included:

- Instruction Cards
- User Manuals
- CYC Mobile App User Guides
- 1:1 printouts for mounting reference

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DISCLAIMER

The electric bicycle system described in this user manual is designed for use only with compatible electric bicycles. It is important to read and understand this manual before using the system.

The manufacturer of this electric bicycle system shall not be liable for any direct, indirect, incidental, or consequential damages arising from the use or misuse of this system. Users assume all risks associated with the use of this system and are solely responsible for their safety while riding their electric bicycle.

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