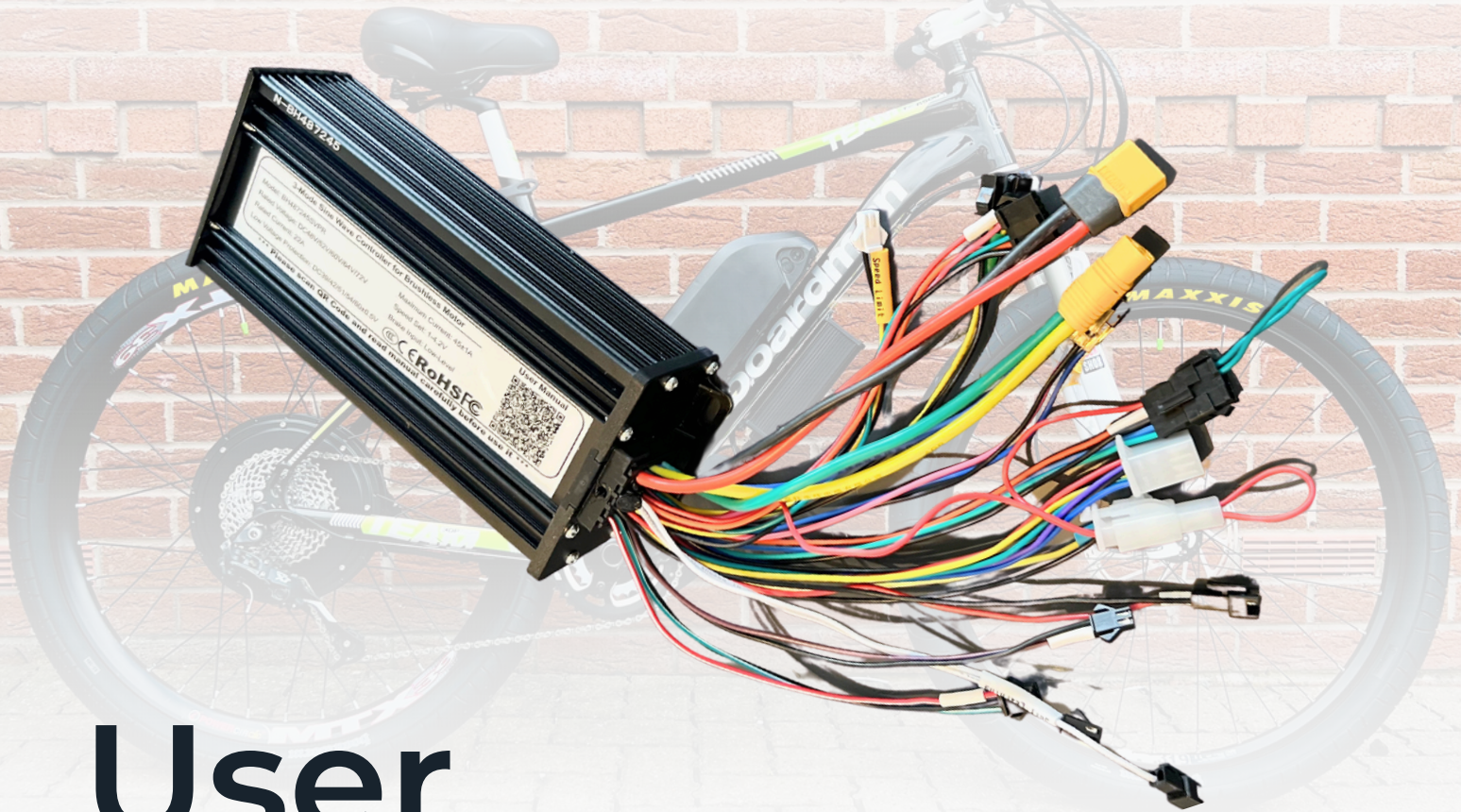




E Bike Power UK®

45A Sine Wave Controller



User HANDBOOK

E Bike Power UK LTD

www.ebikepoweruk.com

info@ebikepoweruk.com

01 SAFETY & WARNINGS



Safety Approval

- All our product are EN. ROHS & UN238.8 approved and tested.
- All our motor kits and accessories are full certified to EN standards
- To ensure the highest quality & safety

Warnings

- Please abide by your local E-Bike Laws.
- Not subtitle for children under the age of 14
- Ensure your battery is OFF, when connecting your battery.
- Always wear the correct safety equipment, for example helmet, High visibility vest, belt, jacket or bright clothing. Grooves, Suitable footwear. kevlar pants, jacket coat.
- Use lights to help with visibility and others to see you.
- Some of our kits are for off road use only.
- Have respect for others around you.
- Maintain regular checks to your bike to ensure all components are functioning correctly & safely. If you have any doubts please consult a professional.
- Suitable for 48V 52V 60V 72V
- If your running 60V or 72V we recommend not to use a controller bag as the controller will become very hot.
- Keep the phase cable away from any other cables as these can get hot.
- When using the self learning, Please remove your chain or ensure you pedals can spin freely.

Disclaimer

- E Bike Power UK LTD do not take any liability to any damage caused to you, others or your bicycle.



02 FUNCTIONS

What is Sine Wave?

- 100% Sine Wave Technology.
- A pure sine wave inverter is an electronic device that converts direct current (DC) to alternating current (AC). A sine wave is a continuous wave that describes a smooth repetitive oscillation. Conventional AC power is produced by rotating machines and is mathematically described as a sine wave
- More efficient.
- Smoother power delivery & throttle response.
- Runs cooler.

Amp Function

- The maximum controller amps are 45 line amps, This can be adjusted to suit your batteries BMS
- For example, If your batteries BMS is 30 amps, we would recommend setting the amps to 28.
- We always recommend to set the amps around 1-2% lower than your rated battery amps.
- UKC1 display, The amp settings are found in the "Advanced settings" 1801 is the password. please see our UKC1 user manual for any more information.
- SW900 display, The amp settings are P14, please see our SW900 user manual for any more information.

Remote Key

- Remote key is designed to limit the bikes speed to around 15.5 MPH or 25 KPH.
- The receiver need to be connected to the controller in order for this function to work.
- Please note this speed setting can not be changed by you, its pre programed by the manufacturer.
- Please note the speed will differ depending on your motors RPM per volt. As many motor manufacturers have different speed motors despite the rated wattage.

Regen

- When paired with a UKC1 display you can activate regen, This will add charge to your battery & slow you down.
- Please note, this functions is only recommend for batteries that can support Regen.
- If your battery will not support regen, Please turn the ABS level to 0
- ABS setting on the display is how you adjust how much charge you would like to add.
- ABS 1, 10%, ABS 2. 20%, ABS 3. we do not recommend, this can harm the motor.

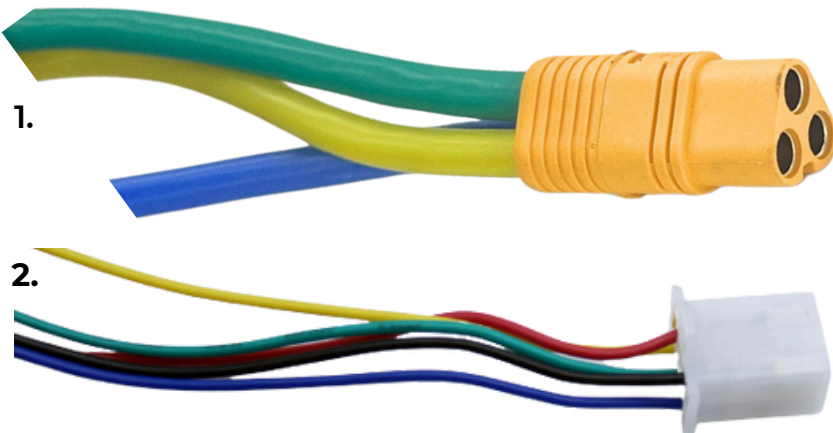
03 FEATURES



1. Power Supply Plug (Power input to Controller): Yellow XT60 Male Plug
Controller Side Definition
Yellow XT60 Male Power Input Connector
Red (Positive) Positive Pole
Black (Negative) Negative Pole



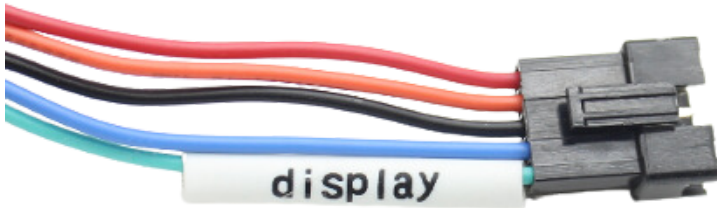
2. Motor Cable Plugs (3-Phase + hall sensor):
 - (1). Motor 3-Phase Plug: "O" rings, use yellow "O" ring connection box
Controller Side Definition
3-"O" Rings Motor 3-Phase Connector
Yellow Motor Phase-A
Green Motor Phase-B
Blue Motor Phase-C
 - (2). Motor hall sensor Plug: White DJ7061-2.8-21 Female Plug
Controller Side Definition
DJ7061-2.8-21 Female Motor Hall Sensor Connector
Red 5V+ Positive
Black Negative
Yellow Hall Sensor Signal
Green Hall Sensor Signal
Blue Hall Sensor SignalIf you want motor rotate as reverse direction with original speed, then just exchange two wires of phase and hall sensor wires:
3-Phase Wire: exchange Yellow and Blue
Hall Sensor Wire: exchange Yellow and Green



04 FEATURES



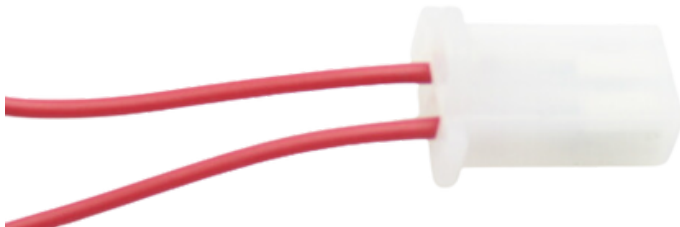
- 3. LCD DISPLAY PLUG: BLACK SM-5A MALE PLUG
- CONTROLLER SIDE DEFINITION
- BLACK SM-5A MALE LCD DISPLAY CONNECTOR
- RED POWER INPUT POSITIVE
- PINK ELECTRIC LOCK
- BLACK NEGATIVE
- BLUE TXD
- GREEN RXD



IF YOU DON'T WANT TO USE (OR DON'T HAVE) LCD DISPLAY, JUST PLUG THE JUMPER CONNECTOR AS FOLLOW PHOTO (CONNECT RED AND ORANGE):



- 4. ELECTRIC LOCK PLUG: WHITE 2.8B-2 FEMALE PLUG
- CONTROLLER SIDE DEFINITION
- WHITE 2.8B-2 FEMALE ELECTRIC LOCK CONNECTOR
- RED
- RED



IF YOU USE YOUR OWN THROTTLE WITHOUT KEY SWITCH LOCK, THEN PLEASE JUST CONNECT JUMPER PLUG AS FOLLOW PHOTO, OTHERWISE CONTROLLER WILL HAVE NO POWER:



05 FEATURES



5. THROTTLE PLUG: BLACK SM-3Y FEMALE PLUG
CONTROLLER SIDE DEFINITION
BLACK SM-3Y FEMALE THROTTLE CONNECTOR
DARK RED POSITIVE
BLACK NEGATIVE
GREEN(SIGNAL) HALL SENSOR SIGNAL



6. BRAKE LEVERS PLUGS: 2 X BLACK SM-2Y FEMALE PLUGS
CONTROLLER SIDE DEFINITION
2X BLACK SM-2Y FEMALE BRAKE CONNECTOR
BLACK NEGATIVE
YELLOW SIGNAL



7. PAS PLUG: BLACK SM-3A MALE PLUG
CONTROLLER SIDE DEFINITION
BLACK SM-3A MALE PAS CONNECTOR
PINK POSITIVE
BLACK NEGATIVE
BLUE(SIGNAL) HALL SENSOR SIGNAL



06 FEATURES



8. SPEED LIMIT PLUG: WHITE SM-4Y FEMALE PLUG
CONTROLLER SIDE DEFINITION

WHITE SM-2Y FEMALE SPEED LIMIT JUMPER/SWITCH CONNECTOR

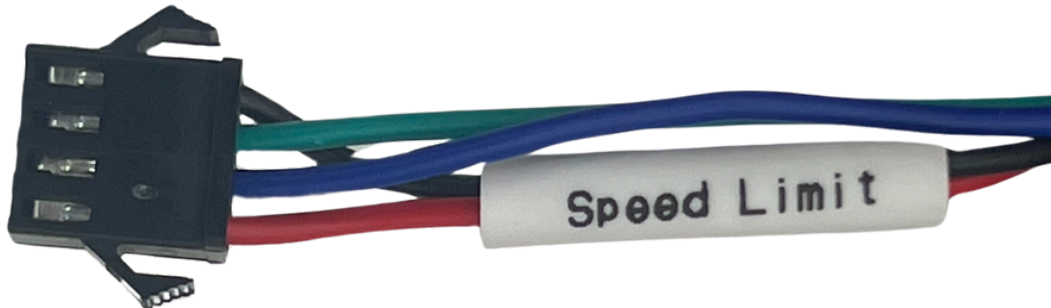
RED POSITIVE 5V

BLACK NEGATIVE

GREEN SPEED CIRCUIT

BLUE SPEED CIRCUIT

(1). WITHOUT TRANSMITTER PLUG/SWITCH: NO SPEED LIMIT WILL BE ACTIVE



TRANSMITTER RECEIVER

2 X KEY FOBS

ON" ACTIVATES THE SPEED LIMIT FUNCTION

OFF" DE ACTIVATES THE SPEED LIMIT FUNCTION

IF YOUR KEY IS NOT SHOWING A RED LIGHT WHEN PRESSED,
PLEASE CHANGE THE BATTERY

THE SPEED LIMIT FUNCTION WILL LIMIT YOUR SPEED TO 15.5MPH OR 25KPH ON THROTTLE
AND PEDAL ASSIST

PLEASE NOTE, THE SPEED WILL DIFFER DEPENDING ON YOUR MOTOR RPM PER VOLT



07 FEATURES



9. REVERSE PLUG: BLACK SM-2Y FEMALE PLUG
CONTROLLER SIDE DEFINITION
BLACK SM-2Y FEMALE REVERSE CONNECTOR
BLACK
BROWN

(1). WITHOUT JUMPER PLUG/SWITCH: NORMAL FORWARD ROTATE



(2). WITH JUMPER PLUG CONNECTED: REVERSE FUNCTION IS ACTIVATED (REVERSE ROTATE AT SLOW SPEED)



(3). WITH SWITCH (SWITCH ON/OFF):

SWITCH ON: REVERSE FUNCTION IS ACTIVATED (REVERSE ROTATE AT SLOW SPEED)



(HANDLEBAR SWITCH IS SOLD SEPARATELY)



SWITCH OFF: STOP REVERSE FUNCTION (NORMAL FORWARD ROTATE)



08 FEATURES



10. HEADLIGHT PLUG: BLACK SM-2A MALE PLUG
CONTROLLER SIDE DEFINITION
BLACK SM-2A MALE HEADLIGHT CONNECTOR
RED YOUR HEADLIGHT POSITIVE WIRE +
BLACK YOUR HEADLIGHT NEGATIVE WIRE -



YOU WILL NEED TO ADD A SWITCH IN THIS CIRCUIT IF YOU WANT TO TURN THE LIGHT ON & OFF MANUALLY

11. CRUISE PLUG: WHITE SM-2Y FEMALE PLUG
CONTROLLER SIDE DEFINITION
WHITE SM-2Y FEMALE CRUISE CONNECTOR
BLACK
YELLOW

(1). WITHOUT JUMPER PLUG/SWITCH: WITHOUT CRUISE FUNCTION



(2). WITH JUMPER PLUG CONNECTED: CRUISE FUNCTION IS ACTIVATED (IF YOU KEEP THROTTLE AT DEFINITE FIXED SPEED 6 SECONDS WILL ACTIVATE CRUISE FUNCTION)



(3). WITH SWITCH (SWITCH ON/OFF):

SWITCH ON: CRUISE FUNCTION IS ACTIVATED (IF YOU KEEP THROTTLE AT DEFINITE FIXED SPEED 6 SECONDS WILL ACTIVATE CRUISE FUNCTION)



SWITCH OFF: DEACTIVE CRUISE FUNCTION (WITHOUT CRUISE FUNCTION)



09 FEATURES



12. SELF-LEARNING PLUGS: WHITE SM-2A MALE PLUG AND SM-2Y FEMALE PLUG
CONTROLLER SIDE DEFINITION

WHITE SM-2A MALE SELF-LEARNING CONNECTOR

WHITE SM-2Y FEMALE

WHITE + WHITE

(1). CONNECTED: ACTIVE SELF-LEARNING

WARNING. BEFORE YOU USE THIS FUNCTION, PLEASE LIFT YOUR MOTOR WHEEL OFF GROUND OR PLACE YOUR BIKE UPSIDE DOWN & ENSURE THE PEDELS CAN SPIN FREELY (VERY IMPORTANT)



(2). TO ENTER SELF LEARN MODE, YOU WILL NEED TO CONNECT THE TWO WHITE WIRES FOR 5 SECONDS, THEN DISCONNECT, SELF LEARN WILL PAIR THE MOTOR TO THE CONTROLLER.

(3). THIS WILL ALSO DETERMINE YOUR MOTOR DIRECTION.

IF YOUR MOTOR IS GOING THE WRONG WAY, PLEASE REPEAT THIS PROCESS ANY YOUR MOTOR WILL SPIN THE OTHER WAY.

BEFORE YOU CONNECT MOTOR WITH CONTROLLER, PLEASE BE SURE THESE TWO PLUGS ARE DISCONNECTED



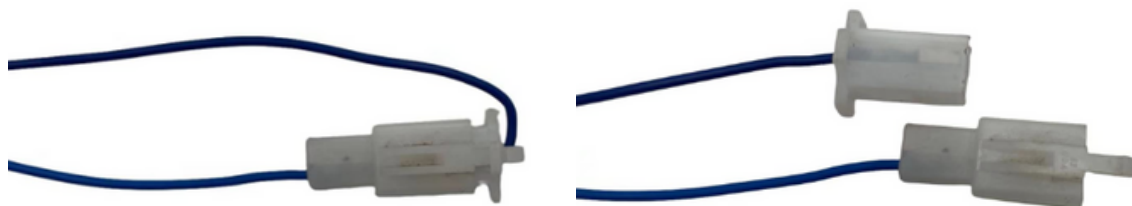
13. START MODE PLUG: WHITE 2.8B-2 MALE AND FEMALE PLUGS

CONTROLLER SIDE DEFINITION

WHITE 2.8B-2 MALE START MODE

WHITE 2.8B-2 FEMALE

(1). CONNECTED: SOFT START, THE MOTOR WILL START SMOOTHLY



(2). DISCONNECTED: FAST START, THE MOTOR WILL START FAST

10 FEATURES



- 14. ALARM PLUG: BLACK SM-6Y FEMALE PLUG
- CONTROLLER SIDE DEFINITION
- BLACK SM-6Y FEMALE ALARM CONNECTOR
- RED POWER POSITIVE (+)
- PINK WHEEL MOVEMENT ALARM
- GREEN ALARM SIGNAL
- ORANGE ELECTRIC LOCK
- BLACK POWER NEGATIVE (-)



(1) THE ALARM IS SOLD SEPARATELY
THE ALARM WHEN ACTIVATED WILL SOUND IF THE BIKE IS MOVE OR THE WHEELS ARE TURNED

Help & Contact

- We truly hope this manual helps, If you feel we need to add any additional information please contact us via email at info@ebikepoweruk.com
- Thank you & ride safe.

