EMMO
GREEN YOUR LIFE

USER'S MANUAL

EMMO
Vgo Pro

CAUTIONS

This manual contains important safety, performance and service information. Read and understand it along with the information provided during the on-delivery instructions before using the product, and keep it for reference.

MENU

ABOUT EMMO

Established in 2009, Emmo Inc. is a proud Canadian venture that is focused on creating a more sustainable future by providing high quality electric bicycles. We offer a wide variety of E-bikes that are suitable for leading a greener, and more stylish, way of living. Emmo E-bikes are priced competitively with other green solutions. At Emmo, you will get the best e-bikes and also receive the best service.

RULES AND REGULATIONS

of riding an e-bike

According to Canada's Motor Vehicle Safety Regulations (*MVSR*). A qualified e-bike (defined as Power Assist Bicycle) must meet the following requirements:

- ***The e-bike must have operable pedals***
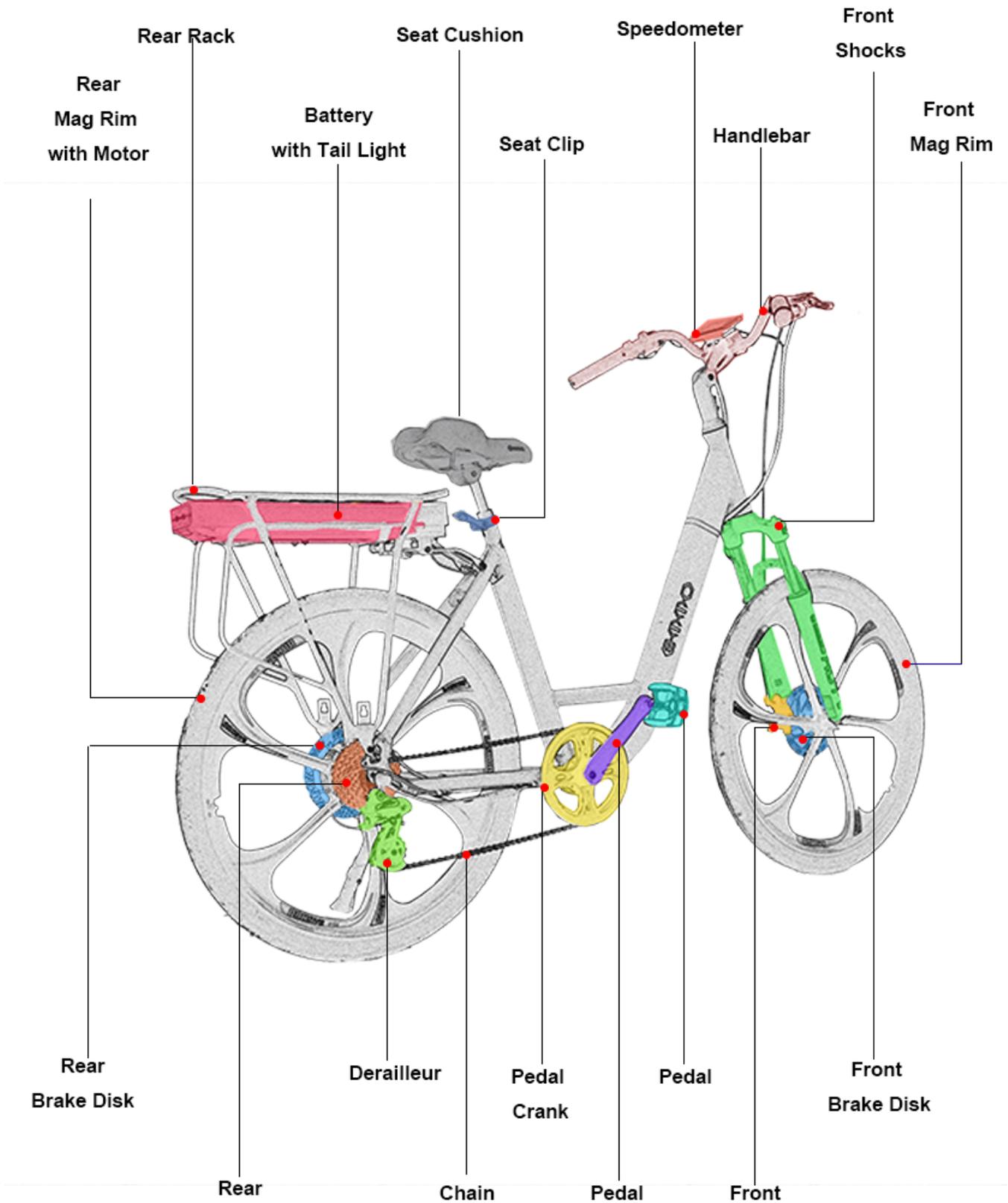- ***Upper wattage limit for the motor is 500W.***

Other requirements include a permanently affixed compliance label from the manufacturer stating that the vehicle is a power-assisted bicycle under statutory requirements in force at the time of manufacture. Currently, there is no license, no insurance, and no vehicle registration required to operate a qualified e-bike according to federal legislation. E-Bike riders share the same rights and responsibilities as other road users.

However, provinces and local municipalities have the power to restrict the use of e-bikes. Most provinces require the rider to wear a helmet. Some provinces have special requirements with regard to the age limit to operate an e-bike, the type of helmet required, even the number of wheels and wheel size. In Ontario, typically, e-bikes are generally treated the same as regular bicycles. According to the Ministry of Transportation of Ontario
(MTO), the age limit to operate an e-bike is 16 years old and above; the maximum weight of the bike is 120 kilograms (265 pounds); the bike must have a brake distance of less than 9 meters; Any modifications made to the bike's motor tocreate speeds greater than the legal speed limit are pro-hibited.

As the rules and regulations are subject to changes in different provinces and municipalities. Please check your municipal bylaw and see where you stand.

1. PARTS OVERVIEW

Rear Rack

Seat Cushion

Speedometer

Front Shocks

Rear Mag Rim with Motor

Battery with Tail Light

Seat Clip

Handlebar

Front Mag Rim

Rear Brake Disk

Derailleur

Pedal Crank

Pedal

Front Brake Disk

Rear

Chain

Pedal

Front

2. SPEEDOMETER

2.1   Electrical Parameters

✧   3.2inch IPS screen

✧   24V/36V/48V battery supply

✧   Rated operating current : 40mA

✧   Max operating current : 100mA (36V battery, with USB equipment changed)

✧   USB changing port : 5V 500mA

✧   Off leakage current < 1uA

✧   Max output current to controller : 100mA

✧   Operating temperature : -20～70℃, Storage temperature : -30～80℃

2.2.   Dimensions & Material

✧   Product shell is ABS, transparent window is made with high strength Acrylic.

✧   Dimensions : host/L92mm*W60mm*H14mm
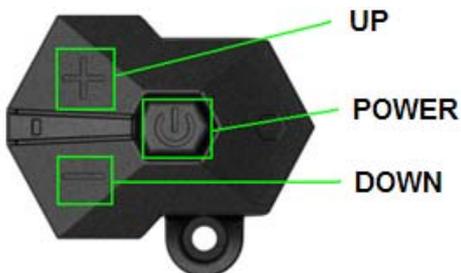
2.3 Features

✧ Suitable for low temperature，Max -20℃.

✧ High-contrast 3.2inch IPS colorful matrix screen.

✧ Ergonomic external button design, easy to operate.

✧ **Speed display :** AVG SPEED, MAX SPEED, SPEED(Real-time).

✧ **Kilometer / Mile :** Can be set according to customers' habits.

✧ **Smart battery indicator :** Provide a reliable battery indicator.

✧ **9-level Assist :** 3-level/5-level/9-level optional.

✧ **Mileage indicator :** Odometer/Trip distance/ Clock/ Riding time.

✧ **Power indicator :** real time power indicator, digital or analog.

✧ **Battery information**（needs to be supported by battery communication）

✧ **DST indicator**（**needs to be supported by battery communication**）

✧ **Speed limit value indicator**

✧ **Error code indicator.**

✧ Light sensor（Optional ）

✧ **Software upgraded :** Software can be upgraded through UART.

✧ **USB charging port :** 5V/500mA

2.4．Display explanation

Clock

Front Light

Power loop

Speed Scale

Power indicator

Power Scale

Mileage

Switchover area

Battery

Brake Signal

Speed value

Power

Assist level

Time

12:38 AM   48.2 V

20   25
15   KM/H   30
10   35
5   **12.5**   40
0   492 W   45
0×100w   3   10
2   8
4   6

TRIP   TIME
53.9 KM   00:02:23

Intelligent

2.5 Functional Description

UP

POWER

DOWN

- **1 Power On/Off**

Press and hold Power button for 1 second can turn on/off the display. The Display can automatically shut down when there is no operate & ride for X minutes（X could be 0~9）.

*If the display has been set password power on, you need to input the right password before start.

- **2 Assist level**

Short press UP/DOWN button can change the assist level. Available assist levels can be set in the advanced setting. There are 5 assist levels by default.

- **3 Speed & Mileage mode switch**

Short press POWER button can change betweenthe speed and mileage info, TRIP➜ODO→RANGE➜TRIP➜TIME➜MAX SPEED➜AVG SPEED
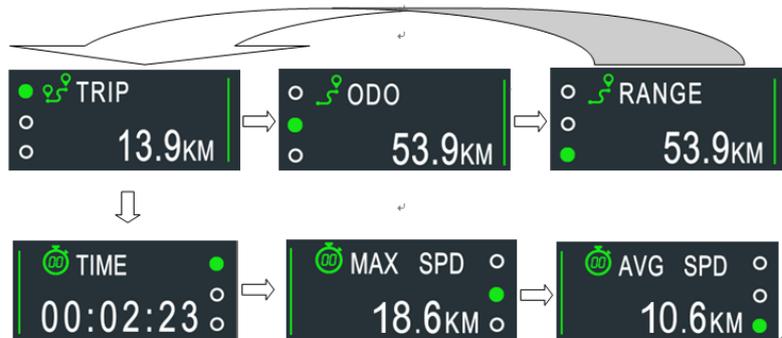
**If there is no operation for 5 seconds, display will return Speed (Real-Time) display automatically.

- **4 Headlight/backlight On/Off**

Press and hold UP button for 1 second can turn on/off the headlight, and the screen will switch to the corresponding mode.

*Although the motor does not work when the battery voltage is low, The headlight can still work for a while.

Daytime mode   night mode

- **5 Walking mode (6km/h)**

Press and hold DOWN button can get into walking mode, quit the mode when the button is released.

* This feature needs to be supported by controller.

- **6 Temporary data clearance**

Press and hold UP & DOWN buttons together for 1 second can reset several temporary data, temporary data include **AVG Speed / MAX Speed / Trip / Time**.

* These temporary data can't be erased by powering off.

2.6 Parameter setting

Double press POWER button (press interval less than 0.3 second) can get into setting menu, press UP/DOWN buttons to change the parameter setting, press POWER button can switch to next item. Double press POWER button will exit from the setting menu.

* Display will automatically quit menu when there is no operation for 30 seconds.

* For safety reasons, display can't get into MENU when riding.

* Display will quit MENU when start riding.

The order of parameters are as follow.
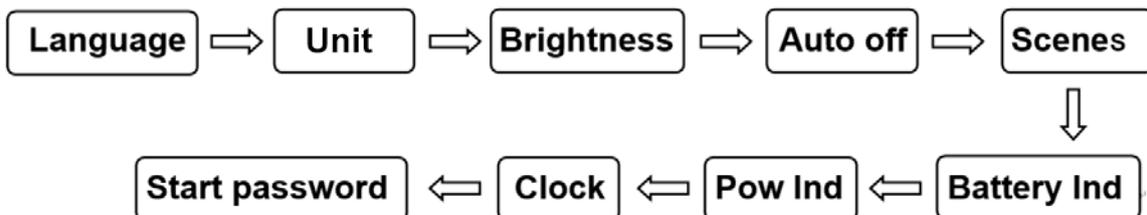
2.6.1 **Language**：Default EN, Unadjustable

2.6.2 **System unit**: Press Up / Down button to switch between Metric / Imperial.

2.6.3 **Brightness** : Press Up / Down button to change the brightness of the backlight, ۱ is the dimmest，۱۱۱۱۱ is the brightest.

2.6.4 **Auto off :** Press UP/DOWN button to change the auto power off time, from 1 to 9, the number represent time (in minutes) to shutdown, default value is 5 minutes.

2.6.5 Scenes : Press UP/DOWN button to change the scenes, Digital / Analog（default）.
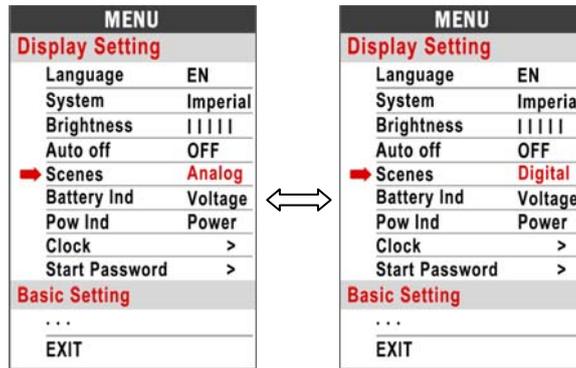
2.6.6 Battery Ind : Press UP/DOWN button to change the battery indicator, Voltage / Percentage / OFF.

| Voltage | Percentage | OFF |

2.6.7 Pow Ind : Press UP/DOWN button to change the Power indicator, Power / Current.

    * This data represent power output of the battery (not motor).
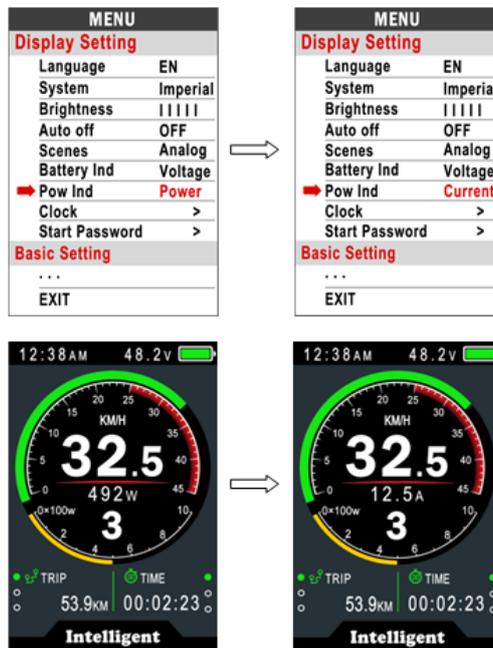
2.6.8 Clock : Clock setting, press POWER button get into the clock setting menu, press UP/DOWN button to set Year/Month/Day/Hour/Min/Sec.
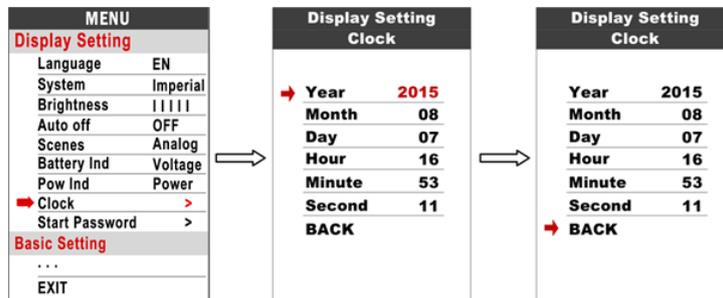
2.6.9 Start password : Press POWER button get into the password setting menu. If you turn it on, you must input right password before powering it on. To set the password, press UP/DOWN to change the number and press POWER to switch to the next digit.

Start Input Password	Start Input Password	Start Input Password	Start Input Password
BACK	BACK	BACK	BACK
➡ Start input OFF	➡ Start input ON	Start input ON	Start input ON
Setting Password	Setting Password	➡ Setting Password	➡ Setting Password
0 0 0 0	0 0 0 0	1 0 0 0	1 2 3 4
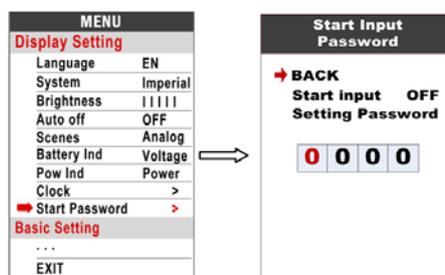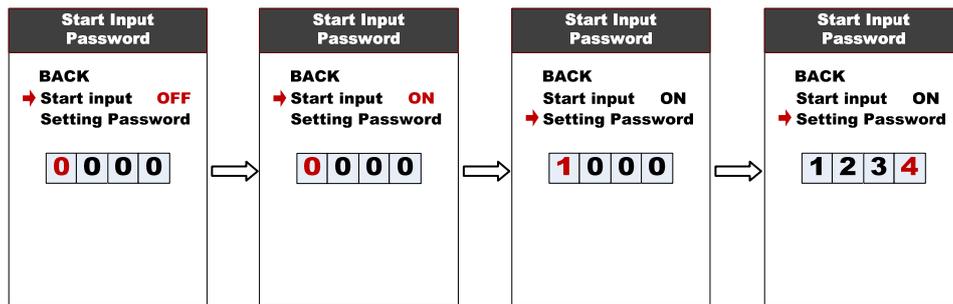
You need to input the correct password within 30 seconds, the display will power off automatically if the password is wrong.

0 0 0 0
Input Password 30s

1 2 3 4
Input Password 10s

12:38AM   48.2v
KM/H
32.5
492w
3
TRIP   TIME
53.9KM 00:02:23
Intelligent

Basic Setting

Wheel ⟹ Battery ⟹ USB Port ⟹ Light sensor
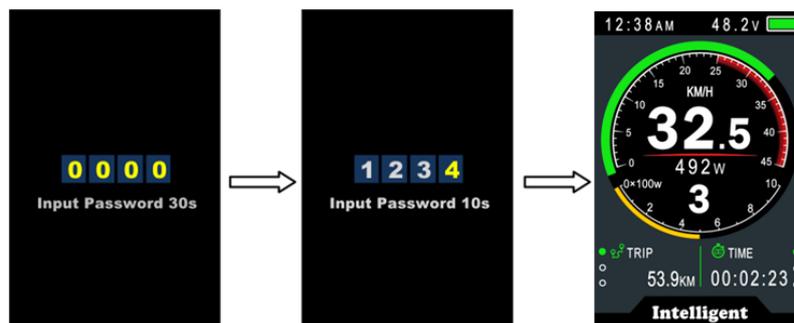
Information ⟸ Factor setting ⟸ Advance setting
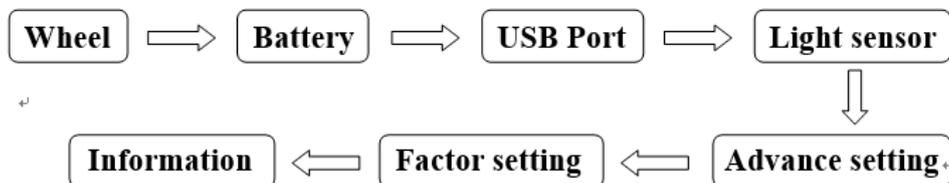
*Press DOWN button to move the red arrow to ➡ Wheel , press POWER button can show all items of the Basic Setting.

2.6.10 Wheel : Press UP/DOWN can change the wheel setting, optional wheel diameter is 16/18/20/22/24/26/27/27.5/28/29 inch.

MENU	
Display Setting	
Language	EN
System	Imperial
...	
Basic Setting	
➡ Wheel	16inch
Battery	36V
USB Port	ON
Light sensor	>
Advance setting	>
Factory setting	>
Informations	>
EXIT	

MENU	
Display Setting	
Language	EN
System	Imperial
...	
Basic Setting	
➡ Wheel	29inch
Battery	36V
USB Port	ON
Light sensor	>
Advance setting	>
Factory setting	>
Informations	>
EXIT	
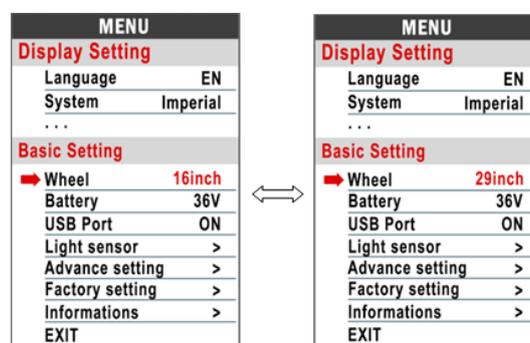
2.6.11 Battery: Press UP/DOWN will change battery voltage setting, optional value is 24V/36V/48V/UBE，UBE means user define value.
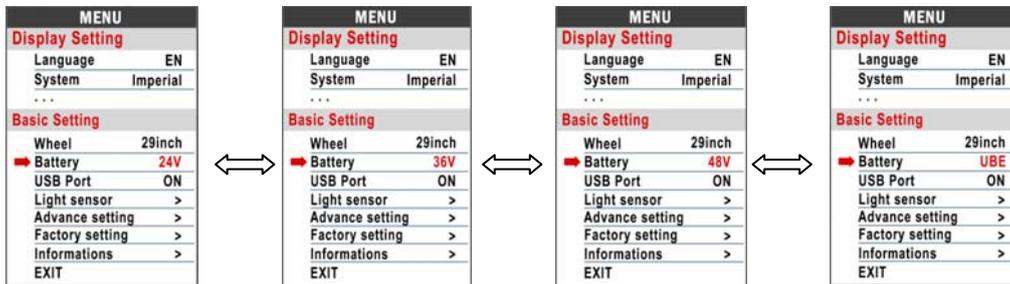
2.6.12 USB port:Press UP/DOWN button to change the setting. OFF means no power on the USB port when the bike is off.
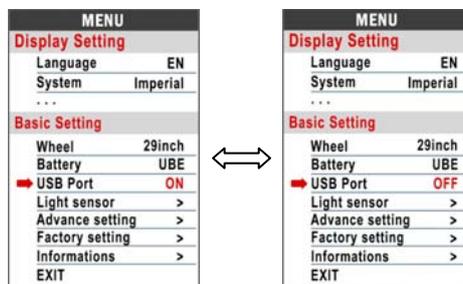
2.6.13 Light sensor (Optional): Press the UP/DOWN button to turn ON/OFF the sensor. Press the POWER button to switch to sensitivity setting. You can change between **HI/MID/LO.**
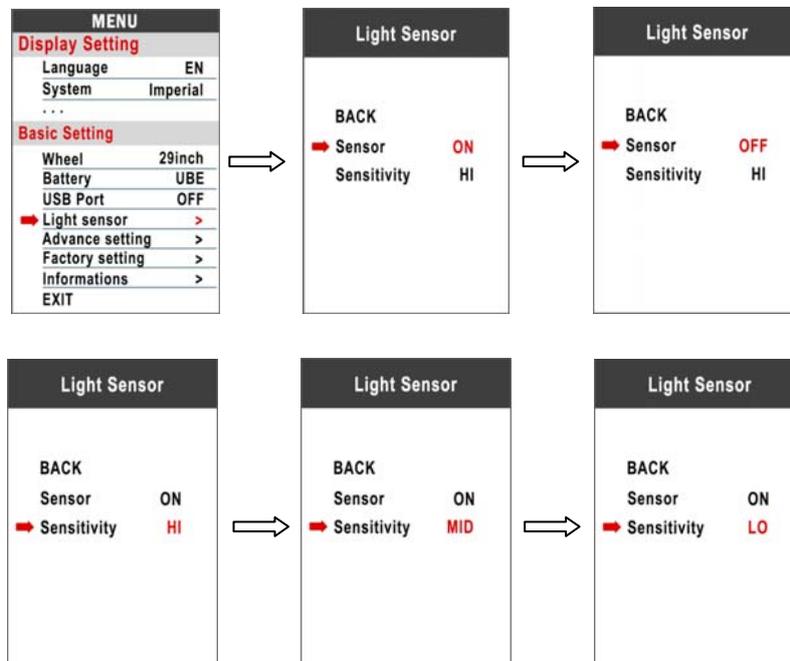
2.6.14 Advance setting : Press POWER button can get into the advance setting menu, default password is '1919'.
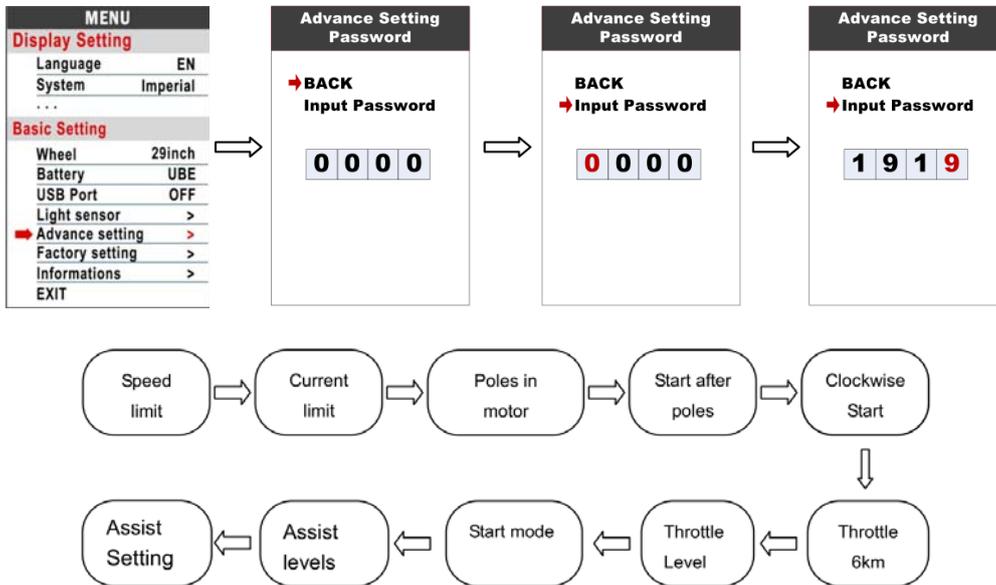
2.6.15 Speed limit : Press UP/DOWN will change the speed limit.
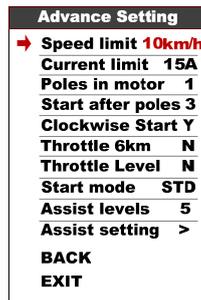
2.6.16 Current limit : Press UP/DOWN will change current limit, range 6A~50A. Default value is 15A.
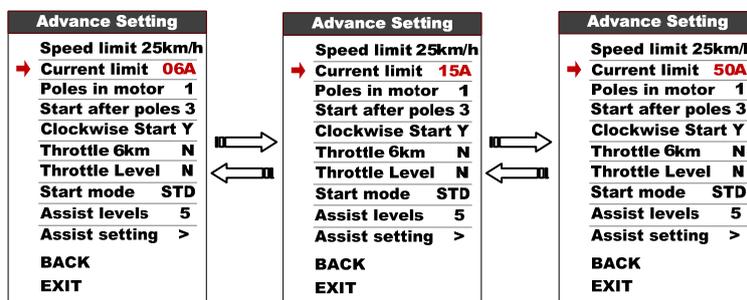
*Speed limit and current limit are restricted by controller and motor.

2.6.17 Poles in motor : Magnetic poles inside the motor, press UP/DOWN will change pole number, range 1~6. Default value is 1.

Advance Setting	Advance Setting	Advance Setting
Speed limit 25km/h	Speed limit 25km/h	Speed limit 25km/h
Current limit 15A	Current limit 15A	Current limit 15A
➡ Poles in motor 0	➡ Poles in motor 1	➡ Poles in motor 10
Start after poles 3	Start after poles 3	Start after poles 3
Clockwise Start Y	Clockwise Start Y	Clockwise Start Y
Throttle 6km N	Throttle 6km N	Throttle 6km N
Throttle Level N	Throttle Level N	Throttle Level N
Start mode STD	Start mode STD	Start mode STD
Assist levels 5	Assist levels 5	Assist levels 5
Assist setting >	Assist setting >	Assist setting >
BACK	BACK	BACK
EXIT	EXIT	EXIT

2.6.18 Start after poles : How many poles (speed sensor) need to be detected by controller before starting motor. Default value is 3.

Advance Setting	Advance Setting	Advance Setting
Speed limit 25km/h	Speed limit 25km/h	Speed limit 25km/h
Current limit 15A	Current limit 15A	Current limit 15A
Poles in motor 1	Poles in motor 1	Poles in motor 1
➡ Start after poles 1	➡ Start after poles 2	➡ Start after poles 3
Clockwise Start Y	Clockwise Start Y	Clockwise Start Y
Throttle 6km N	Throttle 6km N	Throttle 6km N
Throttle Level N	Throttle Level N	Throttle Level N
Start mode STD	Start mode STD	Start mode STD
Assist levels 5	Assist levels 5	Assist levels 5
Assist setting >	Assist setting >	Assist setting >
BACK	BACK	BACK
EXIT	EXIT	EXIT

2.6.19 Clockwise start : This parameter represent speed sensor turning direction, default value is Y (forward).

Advance Setting	Advance Setting
Speed limit 25km/h	Speed limit 25km/h
Current limit 15A	Current limit 15A
Poles in motor 1	Poles in motor 1
Start after poles 3	Start after poles 3
➡ Clockwise Start Y	➡ Clockwise Start N
Throttle 6km N	Throttle 6km N
Throttle Level N	Throttle Level N
Start mode STD	Start mode STD
Assist levels 5	Assist levels 5
Assist setting >	Assist setting >
BACK	BACK
EXIT	EXIT

2.6.20 Throttle 6KM : this parameter can set the throttle function, N represent max speed, Y represent 6km/h.
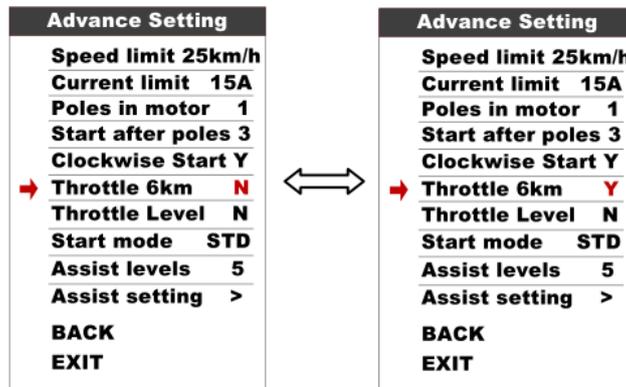
2.6.21 Throttle Level : This parameter is only valid when Throttle 6KM is set as N, Press UP/DOWN will change Y/N, N represent Throttle start max speed, Y represent throttle's speed is related to the assist level.
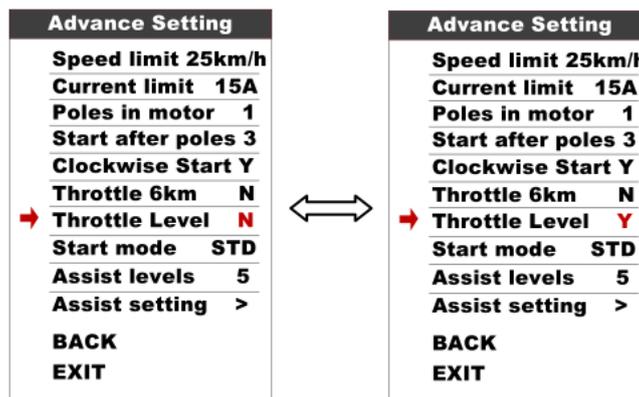
2.6.22 Start mode : Pow/ECO/STD(default) represent Power/ECO/Standard, Power mode means use maximum current when speed up, ECO mode means use minimum current.

*This function is optional, may not supported by the system.

2.6.23 Assist levels : This parameter can customize assist levels, options are 3/5/9/UBE, UBE represent factory default settings.

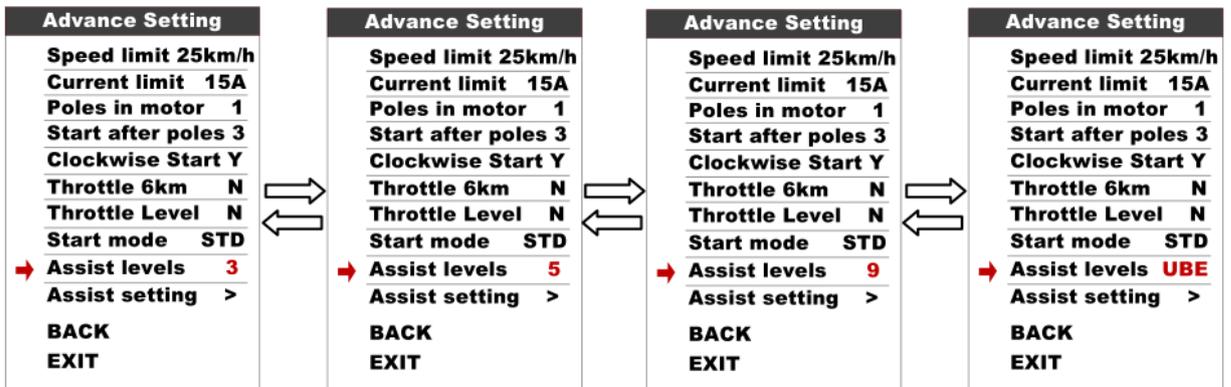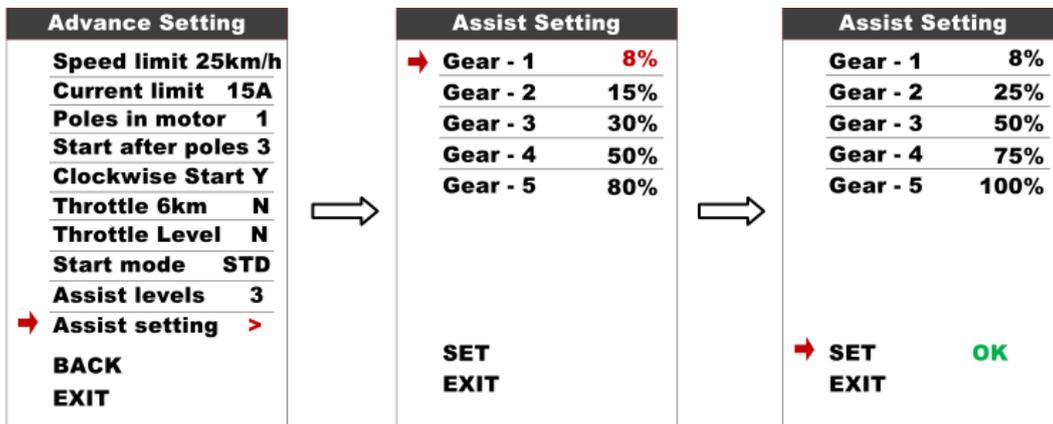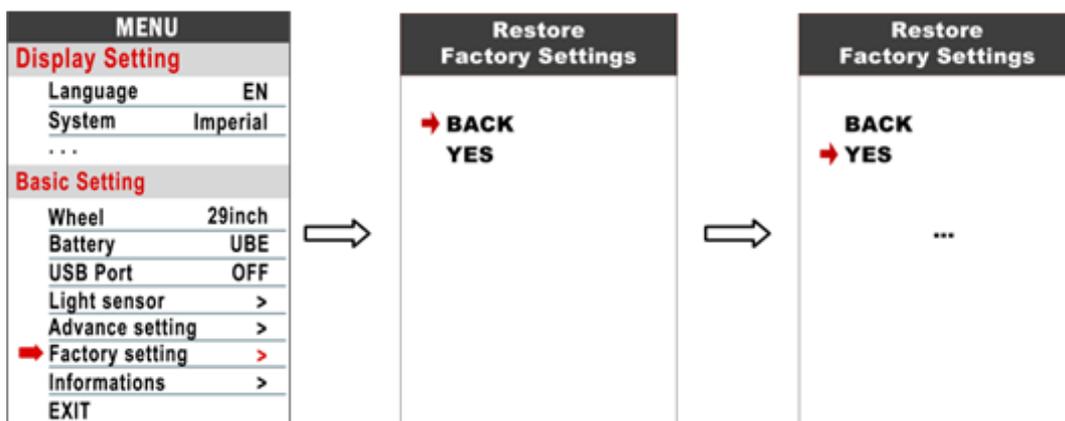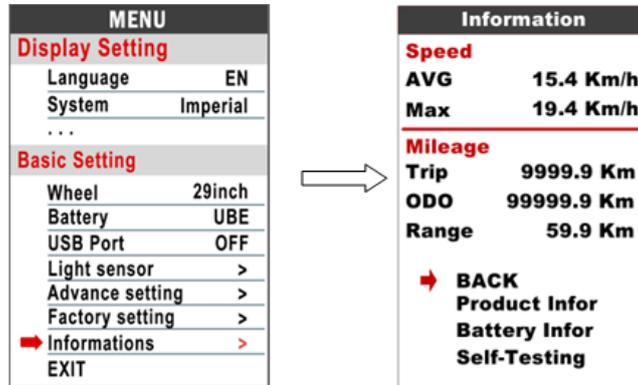| Advance Setting	Advance Setting	Advance Setting	Advance Setting
Speed limit 25km/h	Speed limit 25km/h	Speed limit 25km/h	Speed limit 25km/h
Current limit 15A	Current limit 15A	Current limit 15A	Current limit 15A
Poles in motor 1	Poles in motor 1	Poles in motor 1	Poles in motor 1
Start after poles 3	Start after poles 3	Start after poles 3	Start after poles 3
Clockwise Start Y	Clockwise Start Y	Clockwise Start Y	Clockwise Start Y
Throttle 6km N	Throttle 6km N	Throttle 6km N	Throttle 6km N
Throttle Level N	Throttle Level N	Throttle Level N	Throttle Level N
Start mode STD	Start mode STD	Start mode STD	Start mode STD
➡ Assist levels 3	➡ Assist levels 5	➡ Assist levels 9	➡ Assist levels UBE
Assist setting >	Assist setting >	Assist setting >	Assist setting >
BACK	BACK	BACK	BACK
EXIT	EXIT	EXIT	EXIT

2.6.24 Assist Setting : This parameter can customize assist ratio.

Advance Setting	Assist Setting	Assist Setting
Speed limit 25km/h	➡ Gear - 1 8%	Gear - 1 8%
Current limit 15A	Gear - 2 15%	Gear - 2 25%
Poles in motor 1	Gear - 3 30%	Gear - 3 50%
Start after poles 3	Gear - 4 50%	Gear - 4 75%
Clockwise Start Y	Gear - 5 80%	Gear - 5 100%
Throttle 6km N		
Throttle Level N		
Start mode STD		
Assist levels 3		
➡ Assist setting >		➡ SET OK
BACK	SET	
EXIT	EXIT	EXIT

2.6.25 Factory setting : Press POWER button to enter Restore Factory Settings, set YES will restore all parameters to factory default values.

MENU	Restore Factory Settings	Restore Factory Settings
Display Setting		
Language EN		
System Imperial	➡ BACK	BACK
. . .	YES	➡ YES
Basic Setting		
Wheel 29inch		
Battery UBE		...
USB Port OFF		
Light sensor >		
Advance setting >		
➡ Factory setting >		
Informations >		
EXIT		

2.6.26 Information : Show information of the E-bike.

MENU	
Display Setting	
Language	EN
System	Imperial
...	
Basic Setting	
Wheel	29inch
Battery	UBE
USB Port	OFF
Light sensor	>
Advance setting	>
Factory setting	>
➡ Informations	>
EXIT	

Information	
Speed	
AVG	15.4 Km/h
Max	19.4 Km/h
Mileage	
Trip	9999.9 Km
ODO	99999.9 Km
Range	59.9 Km
➡ BACK	
Product Infor	
Battery Infor	
Self-Testing	

2.6.27 Product info : Get into this item can show hardware version software version…

Information	
Speed	
AVG	15.4 Km/h
Max	15.4 Km/h
Mileage	
Trip	9999.9 Km
ODO	99999.9 Km
Range	59.9 Km
BACK	
➡ Product Infor	
Battery Infor	
Self-Testing	

Product Information	
Version	
Hardware ver.	2.0
Software ver.	1.0K-V1
Product Information	
Date	
Serial No	
➡ EXIT	

2.6.28 Battery info : Get into this item can show all information of battery, including　Voltage, Capacity, Cycle times, Health, Temperature of battery, Remaining Capacity, Full Charge Capacity, Initial Capacity，Max Charge Times.

Information	
Speed	
AVG	15.4 Km/h
Max	32.4 Km/h
Mileage	
Trip	9999.9 Km
ODO	99999.9 Km
Range	59.9 Km
BACK	
Product Infor	
➡ Battery Infor	
Self-Testing	

Battery Information	
Voltage	42.0V
Capacity	100%
Cycle times	5
Health	95%
Temperature	35 ℃
Remaining Capacity	11400mAh
Full Charge Capacity	11400mAh
➡ NEXT PAGE	
EXIT	

Battery Information	
Initial Capacity	12000mAh
Max Charge Times	100 h
➡ EXIT	

*These information needs to be supported by battery.

2.7．Error Code define

850C can show warning message, ⚠ icon shows on the screen, and show error code at the bottom of the screen, error code from 01~25, definition see the table below.

Error Code	Error description	Handle
01	Communication Error	Check the cable connection
21	Current protection	Check controller.
22	Throttle error	Check turn to connect.
23	three-phase power error	Check three-phase power line connection
24	Hall error	Check the hall connection
25	Brake error	Check the brake connection.
26-99	Reserved	Please contact the manufacturer for error definitions

2.8．Assembly instructions

Please pay attention to the screw's torque value, damaged caused by excessive torque is not within the scope of the warranty.
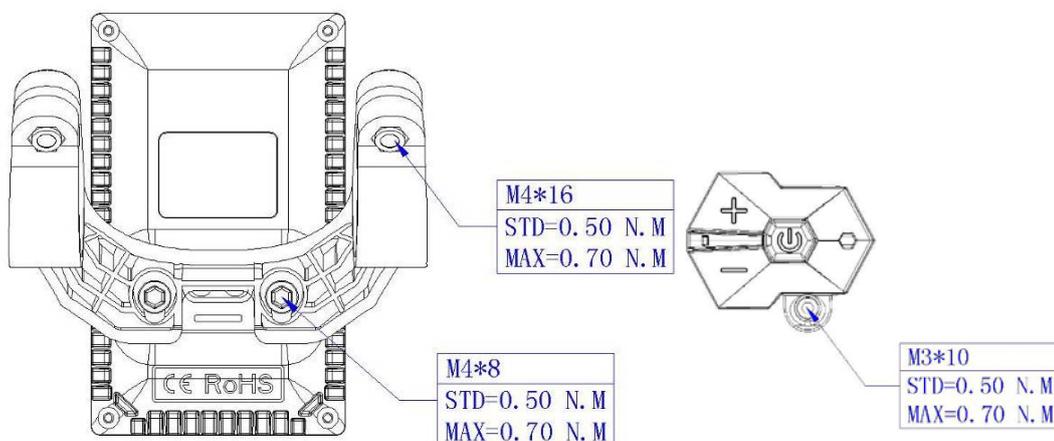
There are 2 directions for the clamp installation, forward or backward.

Clamps suit for 3 size of handlebar, 31.8mm, 25.4mm, 22.2mm, there are transfer rings for 25.4mm and 22.2mm, transfer ring must be assembled with the special directions, pay attention to the green arrow below.
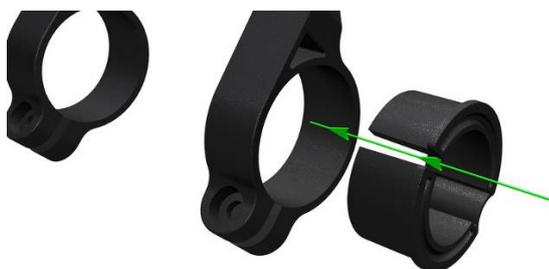
2.8. Connector descriptions

(1) RED
(2) BLUE
(3) BLACK
(4) GREEN
(5) YELLOW
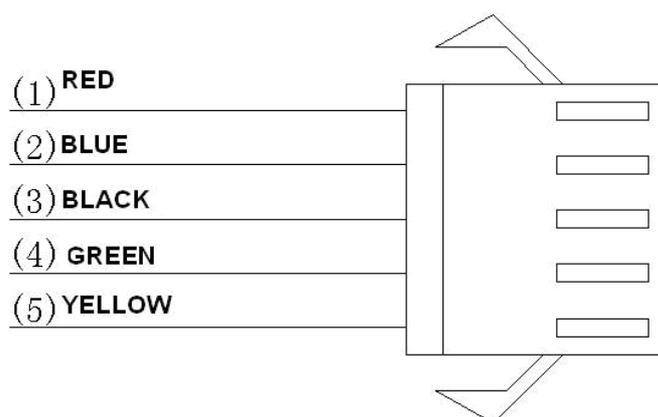
1、 Red wire :   Anode(24v/36v/48V)
2、 Blue wire :   Power cord to the controller
3、 Black wire :   GND
4、 Green wire :   RxD (controller -> display)

5、 Yellow wire : TxD (display -> controller)

2.9. Assist level instructions

Assist level can be customized, the highest level is 9, common used assist level see the table below:

3 level	5 level	9 level	
0	0	0	No power assist
	1	1	
		2	
1	2	3	
		4	
	3	5	
2		6	
	4	7	
		8	
3	5	9	

2.10. Certification

CE / IP65 (water proof) / ROHS.

3.GEAR SHIFTER

Pushing the upper lever
to raise the gear lever
(smaller numbers).
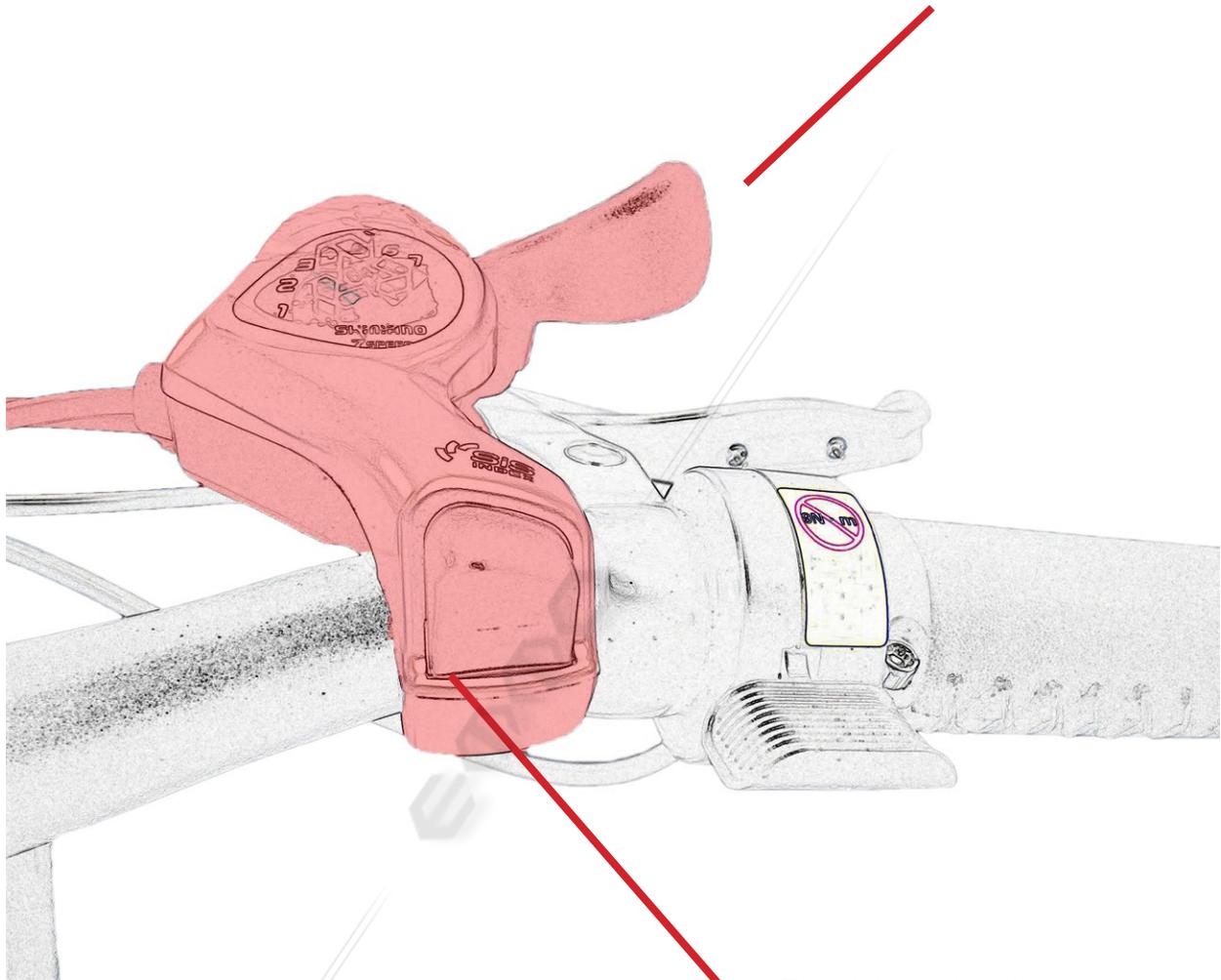
Pushing the button to
lower the gear lever
(bigger numbers).

4. THUMB THROTTLE

Gently pushing the throttle lever downwards to accelerate.

5. SAFETY INSTRUCTIONS

To ensure the safety of you and others,

- Do not ride after you take medications which may affect your riding ability, drink alcohol, or when you are unwell.
- Please make sure you are familiar with your local bylaw regarding e-bikes.
- Check the road conditions and weather conditions, so as to actively avoid danger.
- Wear necessary protective equipment, such as an helmet, if required by local bylaw.
- Perform a basic inspection of the bike before the ride:

1.Battery strength: *make sure that you have enough charge for the trip.*

2.Tire pressure: *on the casing side of the tire you will find the minimum and maximum pressure that applies to the tire. Insuffi-cient tire pressure will affect the performance of your bike.*

3.Brakes: *check and make sure both brakes are in good working condition.*

4.Lights/signals: *make sure that headlight, signal lights, tail light and brake light are working well. Make sure you have a working rear reflector/ tail light if you need to ride the bike at night.*

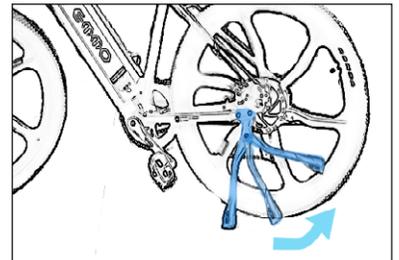---

6. HOW TO RIDE THE BIKE

- Sit on the bike. Put on the helmet or any protective equipment required.
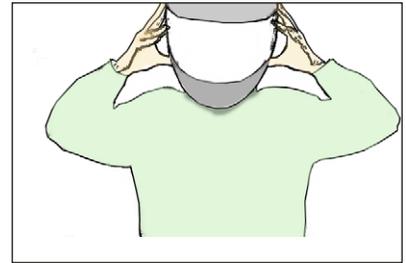
- With your feet still on the floor, turn the bike on (refer to page 10).
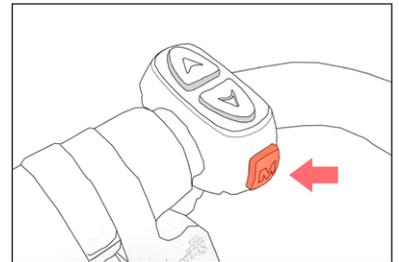
- Before you start off, kick the side kick-stand up.

- When you are ready, start pedalling or turn the throttle. (NB: You don't have to pedal to start the bike.)
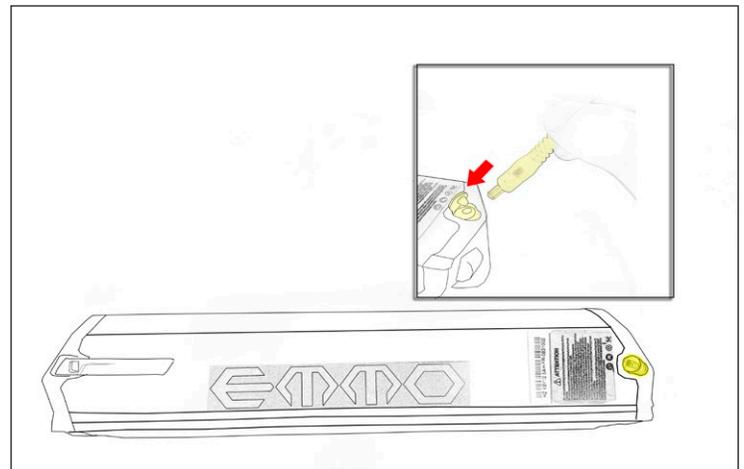
7. HOW TO CHARGE

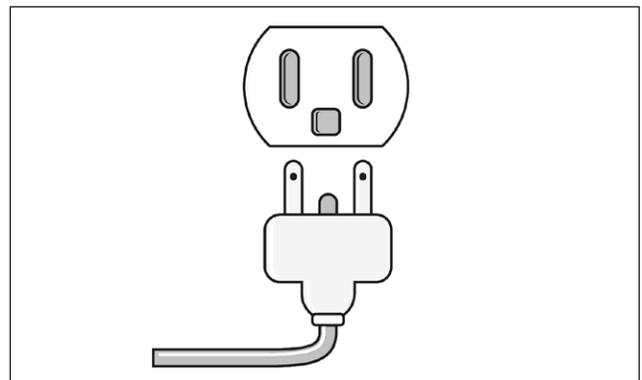**The charger is separated into two different parts:**

1. A cable with one end that goes into a 110V power outlet, and the other end that goes into the charger box itself.

2. The charger box with a cable that plugs into the bike.

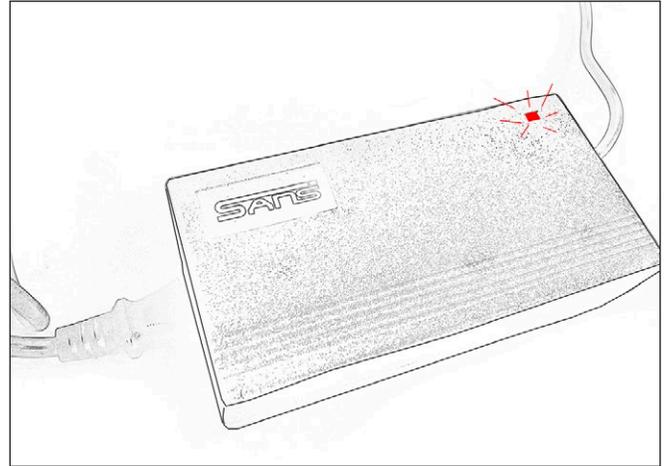**Step 1.** Take the cable from the charger box and plug it into the charging port on the battery.

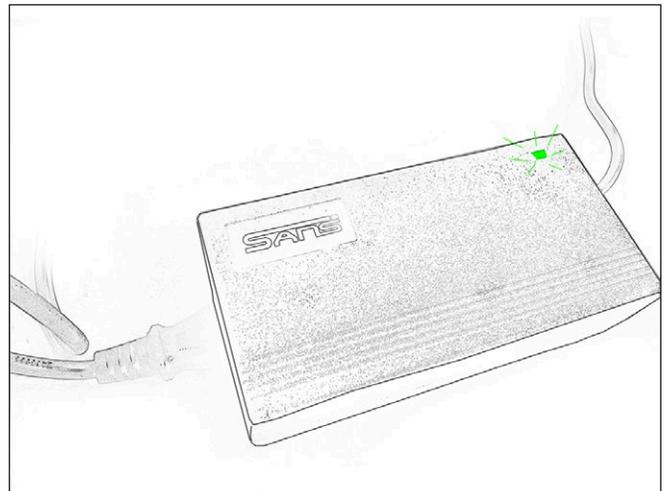**Step 2.** Plug the the charger into a regular 110V outlet.

7. HOW TO CHARGE

Step 3. Make sure the indicator on the charger turns red (red indicator means it is charging, green indicator means the battery is fully charged.)
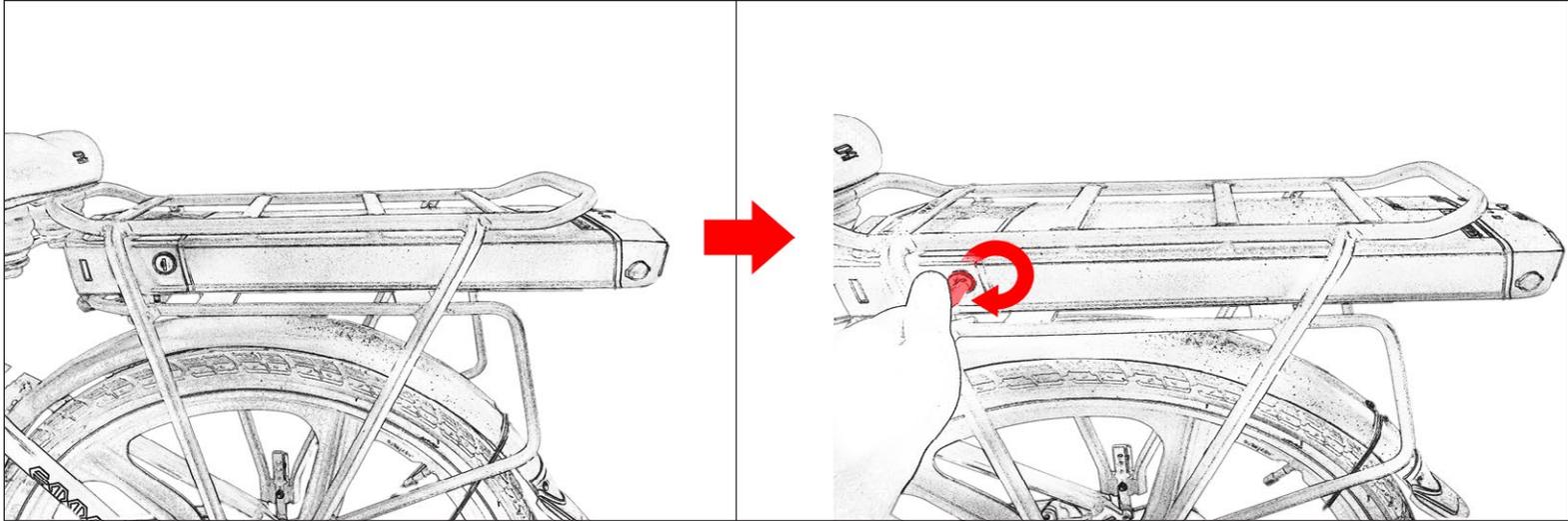

Step 4. Once the battery is fully charged, unplug the charger from the power outlet first and then unplug the charger from the battery.
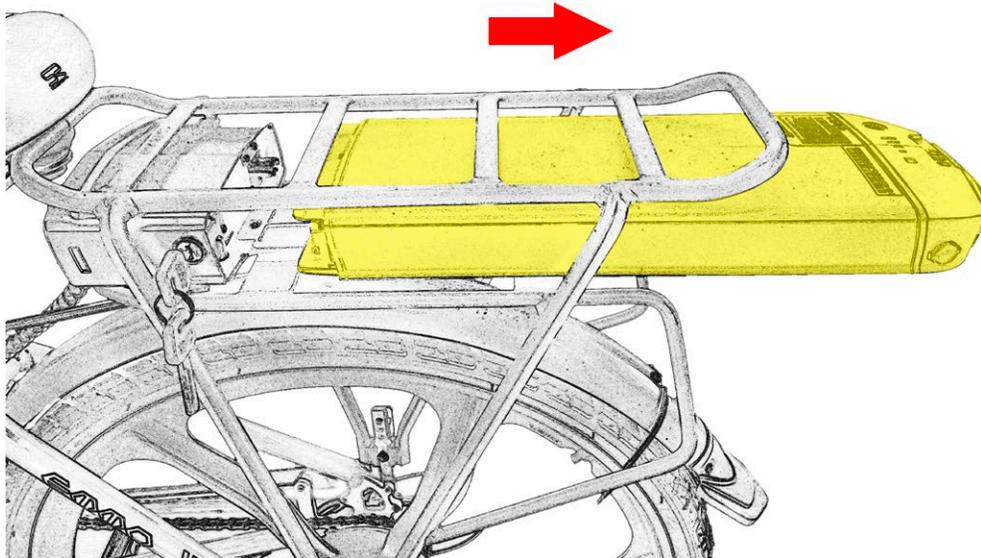

Warning: Do not charge the battery for more than 8 hours. If you have any concern, please contact your local dealer for assistance.
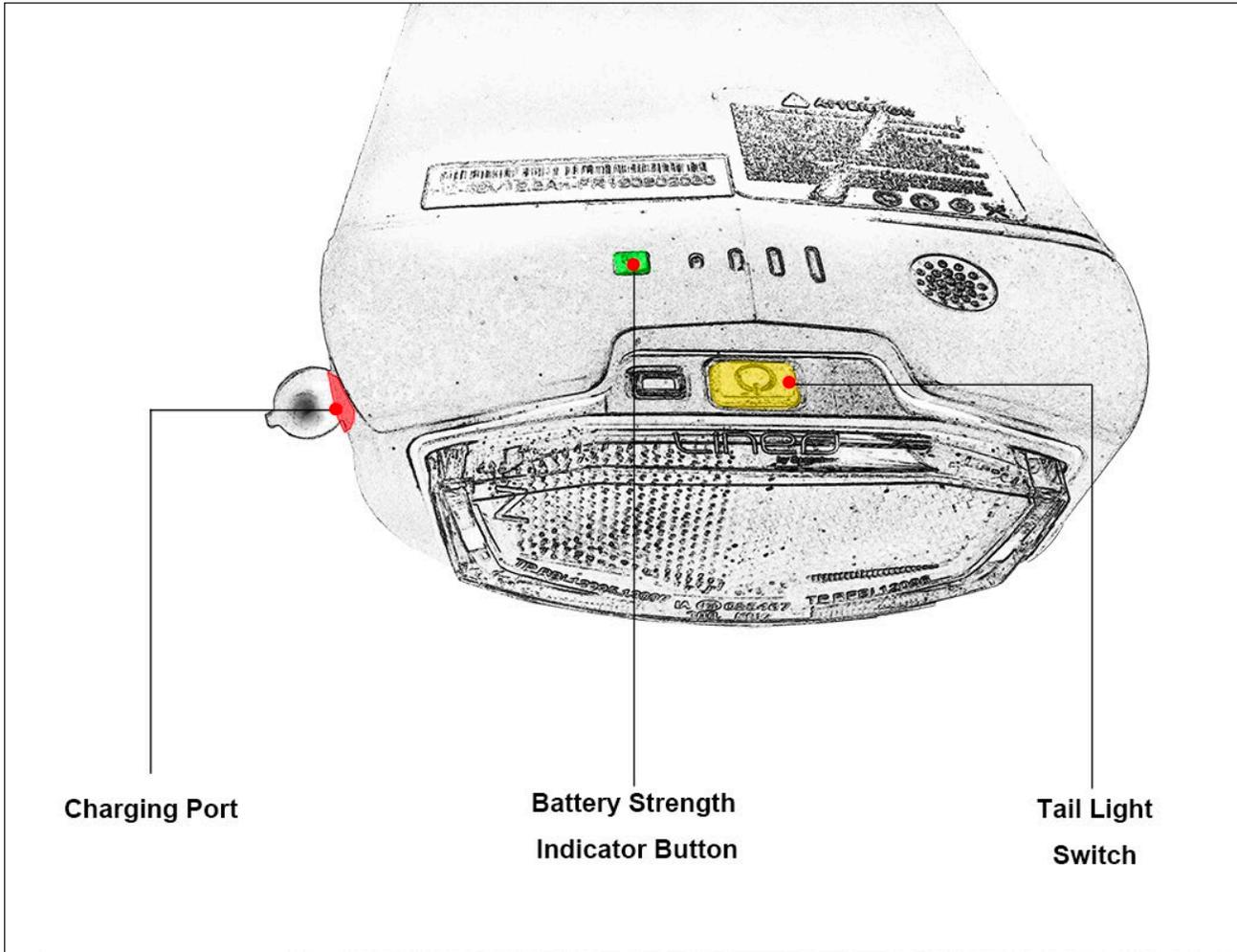
8. HOW TO REMOVE THE BATTERY

- Plug in the key. Unlock the battery lock.

- Hold the tail part of the battery and slide the battery out carefully.

9. BATTERY BUTTONS

Charging Port

Battery Strength
Indicator Button

Tail Light
Switch

- **Charging Port:** Plug in the charger to charge the battery.

- **Battery Strength Indicator:** Press the button to see how many bars left (4 bars = 100%, 3 bars = 75%, 2 bars = 50%, 1 bar = 25%).

- **Tail Light Switch:** Press the button to turn on the tail light.

10. MAINTENANCE

Regular maintenance is required to keep the bike in its best working conditions.

CLEAN

Please use clean water and neutral detergent to clean the bike. Use soft cloths or sponges to clean the surfaces. Please do not use metal brushes, sandpaper or any other abrasive material to avoid scratches or physical damage. Dry the bike with soft cloths. Please clean and grease the chain and sprockets.

Warning:

- *Please turn off the circuit breaker and remove the battery (if applicable) before cleaning the bike.*
- *Please do not power wash the e-bike.*

STORAGE

In case of storage of more than one month, such as winter storage, **Please charge the battery regularly (at least once a month) and turn off the crcuit breaker.**The bike, including the battery and charger, is suggested to be stored in clean, dry ventilated place. Please do not leave the battery outside under freezing temperature. Please avoid any corrosive material or heat source.

REGULAR INSPECTION

For **every 3000km** you travel or every **6 months**, a full inspection/tune-up is recommended based on the condition of the bike.

E-Bike Registration

E-Bike Registration
Once you have purchased an Emmo E-bike, you can register your vehicle with us to validate your warranty.

In order to register your e-bikes, please follow the steps listed below:
1.   Fill out the following form:

Invoice Number: _____

Store Location: _____

Customer Name: _____

Address: _____

Phone Number: _____

E-mail:_____

Survey:
How did you find out about Emmo Inc.? (Please select the options that apply)
 □ Returning Customer   □Family/Friend   □Passing by Store   □Kijiji
□TERA   □Google   □Yelp   □Other_____

2. Send the information listed above to our e-mail: info@emmo.ca

3. Wait for a confirmation e-mail from Emmo Inc.