

# Guidelines for S\_LCD of Electric Power Bicycle Users

## 1. Introduction

Feature:

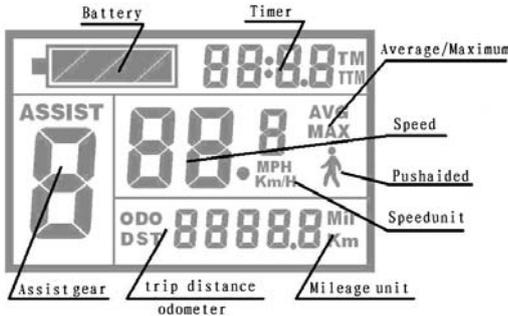
1.1 Timing function. This function starts and stops as the bicycle runs and stops, and it is equipped with single timing function and progressive timing function.

1.2 PAS Level saving function. For the user's convenience, the S-LCD will automatically return to the level when it closes.

1.3 Advanced setup function. This function makes it possible for controllers to match up with all series of motors, and it makes the display meter, the controller and the motor work to the optimum. Besides, it allows users to choose the optimum power-assisted mode. This function is only open to professional technicians.

## 2. Display Interface

2.1 Display under normal operation (Refer to illustration 1)



Battery indicator, single trip time (TM), motor power ratio (ASSIST), current speed, single trip distance (DST), 6Km/h PAS speed, malfunction code of electrical system.

2.2 Display of riding histories (Refer to illustration 1)

Total trip time (TTM), odometer (ODO), maximum speed (MAX), average speed (AVG).

## 3. Button definition

S\_LCD is set with a panel of three buttons; In the following introduction, the button  is named as "SW". The  is named as "UP", and the  is named as "DOWN".

## 4. General operation

4.1 Power on/off

By pressing the button SW, the LCD starts to operate under normal condition with power on. Under normal operation, by long pressing the SW, the power supply will shut down. When the bicycle stops with no operation in five minutes, the LCD will automatically close. With the display off, the display and controller shut down. The leakage current is less than 1 uA.

4.2 Change of PAS (throttle) level

Under normal operating condition, press button UP or DOWN to adjust the assisted power or throttle level to change the output power of the motor. The level ranges from 1 to 5(or set up as requested). Level 1 stands for the lowest power, while level 5 the highest power. (Every time you turn on the LCD, the level will return to the status the moment it closes.)

4.3 The Use of 6Km/h power assistant walk

It is possible to use the 6km/h assistant power function when pushing the bicycle. By long pressing the button DOWN, the icon  flashes, and the bicycle runs at a uniform speed 6km/h. The push-aided function stops the moment you release the DOWN button.

4.4 The Use of Backlight

Long press the button UP, then the backlight will start (if the controller has been connected to the front light, the front light will start at the same time), long press the button UP again, then the backlight will turn off (if the controller has been connected to the front light, the front light will close at the same time).

## 5. Trip review and remove

5.1 Trip data under running condition

Under normal condition (non-setup condition), the timer displays the time of single trip, while mile indicator displays the trip distance, the level indicator displays the level grade, speed indicator displays the speed (Km/H or MPH)

5.2 Review of trip history

Short pressing the button SW will achieve the function of reviewing previous trips data, such as the display of TTM and ODO. By pressing the button UP or DOWN, the user can view the maximum speed and average

speed respectively. Short press the button SW to exit the mode of data review (or it will automatically exit after riding for five minutes)

5.3 Methods of clearing trip time and trip distance

5 seconds after turning on, when the meter displays a single time (TM) and a single distance (DST), hold the button UP and DOWN for 3 seconds at the same time, then both of the lights indicating single time and single distance are flashing. Press the SW key within 5 seconds to remove the records of single time and single distance.

## 6. Battery capacity indicator

6.1 Battery capacity indicator

The automatic recognition of battery capacity 24v, 36v can be achieved through the combining use of this LCD and its corresponding controllers. The LCD of 48V can only match up with the controller of the same voltage. When the remaining battery capacity is more than 70%, the indicators of the four stages will lighten up; when the battery capacity become low, the four indicators will extinguish in turn, when the surplus battery is less than 15%, all the indicators will extinguish. When the controller stops for the reason of power shortage, the LCD battery indicator will flash to show the battery capacity shortage (indicating the shutdown status of capacity shortage).

## 7. User setup

7.1 User setup

a. maximum speed; b. wheel diameter selection (12-28inch); c. metric/English unit selection (MPH or Km/H, Mile or Km); d. With the instruction of professional technicians, the user could conduct the advanced setup to make motor, controller and LCD reach the optimum matching.

7.2 Start and entering setup

In shutdown mode, the LCD will start by pressing the button SW. After it starts up, press the button UP and DOWN (within five seconds) at the same time for three seconds, then it will enter the setup condition (the backlight will lighten up automatically when entering the setup condition. The backlight will close when exiting).

7.3 Highest speed limitation setup

After entering the setup condition, firstly set up parameters of the speed limitation. The highest speed of factory reset is 25km/h. This value could be changed by pressing the button UP or DOWN, when the actual speed exceed the default value, the controller will cut off motor power to protect the rider's safety.

7.4 Wheel diameter setup

After adjustment of speed limitation parameter, press the button SW to enter the wheel diameter setup. Select the corresponding diameter by the button UP or DOWN to guarantee the accuracy of the displayed speed or distance.

7.5 Select the indicating unit (metric or English unit)

After adjustment of the wheel diameter, press the button SW to enter the option of 'metric or English unit', and press UP or DOWN to choose the unit, the Km/H&MPH is available for the speed. The mile unit will change between Mile and Km in accordance with the speed unit change.

7.6 Setup exit

After correctly setting the three parameters hereinbefore, press the button SW for 2 seconds to keep the adjusted settings and exit from setup condition and return to the operation status.

## 8. Malfunction code illumination

8.1 Malfunction code

- 01\_error Throttle Signal Abnormality;
- 03\_error Motor Hall Signal Abnormality;
- 04\_error Torque Sensor Signal Abnormality;
- 05\_error Speed Sensor Signal Abnormality (Suitable for torque system);
- 06\_error Motor or Controller Short Circuit Abnormality;

## 9. Appearance and dimension



## 10. Version

10.1 S\_LCD\_V 2.5 Version

10.2 Released on June 8th, 2013

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