

RACE



User Manual

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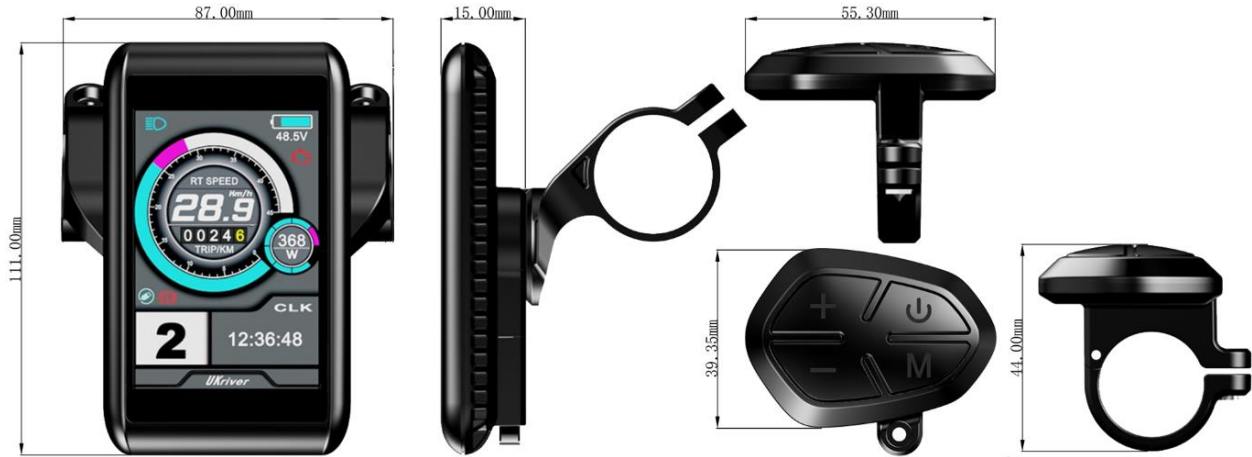
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1. Product Appearance & Material

ABS product shell

LCD transparent window is made of imported high hardness Acrylic

Product holder is made from glass fiber mixed with nylon.



2. Specification, Features and Cycling Interface

Specifications

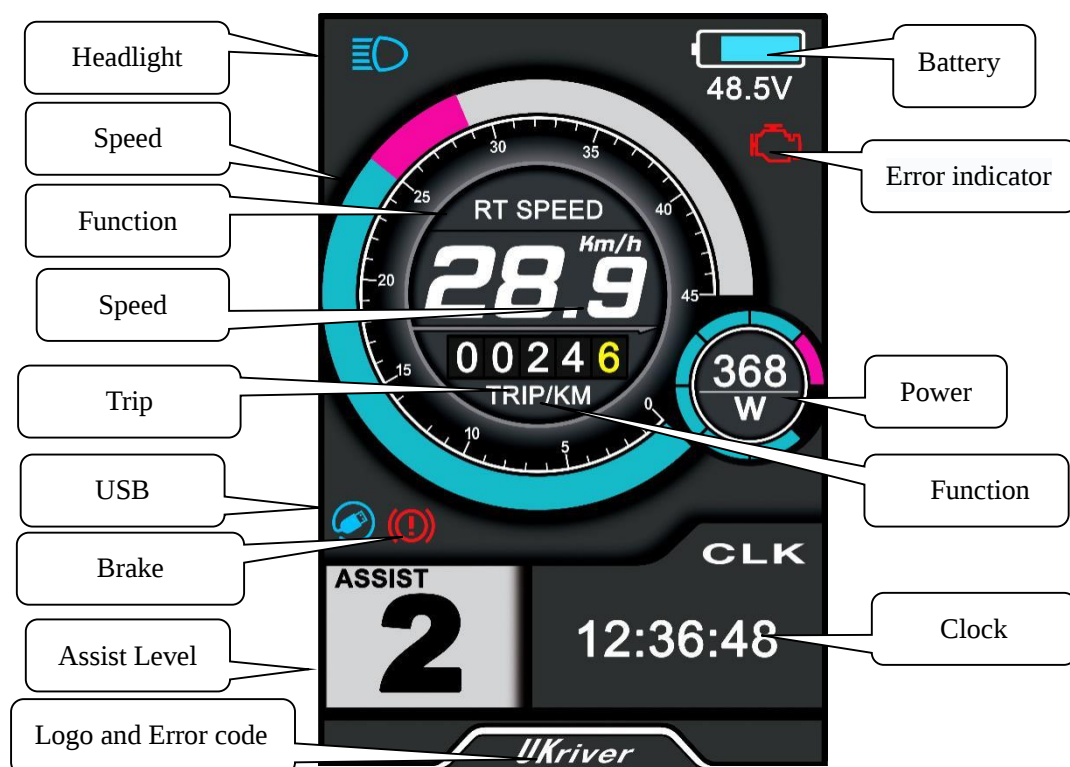
- 3.5 inch TFT screen
- 24V/36V/48V/52V/60V/72V power supply
- Rated operating power : 1W
- Max operating power : 5W
- USB charging port : 5V 500mA
- Off leakage current < 1 μ A
- Support current to controller : 100mA~ 300 mA
- Operating temperature : -20~70 $^{\circ}$ C
- Storage temperature : -30~80 $^{\circ}$ C

Features

- Screen size: High-contrast 3.5inch TFT colorful matrix screen.
- Screen direction: Horizontally or vertically.
- Speed indicator: AVG SPEED, MAX SPEED, and Real-time SPEED.
- Users can either change it to metric or imperial
- It can provide a stable power indication through the optimization algorithm. The power is not affected by the start-stop fluctuation of the motor. If the system supports battery communication, the accurate percentage of power will be displayed.

- Backlight brightness: It has an option from 1 to 5.
- Assist level: 3 /5/6 /9 is optional.
- Mileage indicator: Odometer/Trip distance/Time and Range.
- Clock
- Output power indicator: It can displays real-time output power of the battery.
- Error code indicator.
- Speed limit can be set
- Current limit can be set
- Battery status indicator: battery communication is required to support this function
- Range indicator: battery communication is required to support this function
- USB charging port: It can provide rated charging for mobile devices with current 500mA/5V.
- Software can be upgraded by UART. For detailed information, please refer to related documents.
- Users can select speed measurement magnetic steel numbers as needed.
- Users can select power magnetic steel numbers as needed.

Cycling Interface



- Speed indicator: AVG SPEED/MAX SPEED/RT SPEED

- Speed value: It is displayed as Km/h or MPH
- Battery indicator form: Icon, icon and voltage, icon and current
- Headlight indicator: When the headlight is working, the icon  shows up on the screen
- Brake indicator: When the brake is working, the icon  shows up on the screen
- Assist level: It has an option from 0 to 9. 0 is for neutral. When the bike goes into walk mode, the screen displays P.
- When an error is detected, an icon  will be displayed on the screen.
- It indicates the real-time power.
- Mileage indicator: TRIP/ODO/TIME
- Clock
- The icon  means USB function has been enabled.

3. Keypad Description



4. Operation Instruction

4.1 Power On/Off

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

***If the power-on password of the display has been set, you need to enter the correct password when starting.**

4.2 Assist Level Operation

Press PLUS or MINUS button can change the assist level. Top assist level is 9, 0 for neutral.



Assist level

4.3 Mileage Mode Switch

Press POWER button to switch mileage mode. TRIP→ODO→TIME.



4.4 Speed Mode Switch

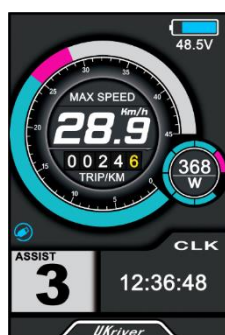
Press 'M' button to switch the speed mode: RT SPEED→AVG SPEED→MAX SPEED.

**If there is no operation for 5 seconds, it will return to real time speed mode automatically.



4.5 Headlight/Display Model Change

Press and hold PLUS button for 1 second, the backlight brightness will be lowered and headlight will be on (controller support is needed). At the same time, it switches to night mode. Press and hold PLUS button for 1 second again, the headlight will be off and daytime mode recovers.



Daytime mode

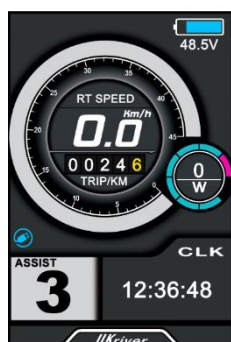


Night mode

Users can adjust the brightness in the main menu. It has 5 levels. For the operations, please refer to 5.1 Brightness below.

4.6 6km/h push assist mode

Press and hold MINUS button longer than 1 second to enter 6km/h push assist mode. And the screen shows P. When release the button, it will exit the mode.

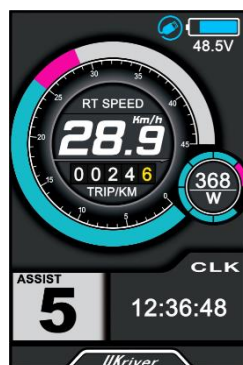
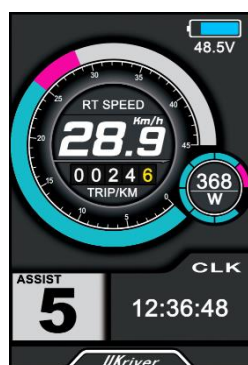


6km/h push assist mode

* Some controllers may not support this function.

4.7 USB port

Hold on M button longer than 1 second, USB charger is on. Hold on M button longer than 1 second again, USB charger is off. Charging parameters: DC 5V 500mA.



4.8 Data Zero Out

To zero the data out, including AVG speed, MAX speed, Trip and Time, hold PLUS and MINUS buttons for a few seconds.

*These temporary data will not be erased when the display or the bike is powered off.

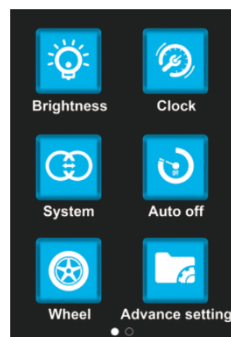
5. User Menu

Click M button twice quickly, it will enter the menu. Press M button twice quickly again to exit.

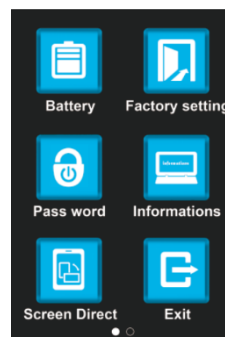
Enter the main menu. Press M button to save your choice and press POWER to cancel. Click PLUS or MINUS to switch adjusting items. Press M button, the parameter to be set starts flashing. Then adjust the parameter by clicking PLUS or MINUS button. And press M to save and press POWER or select EXIT to back to the main menu. Double tap M button twice quickly or select EXIT to exit the menu.

* If you don't operate the menu for 30s, the system will return to main page automatically. For safety reasons, you cannot operate the menu when the speed is more than 6Km. In walk mode, i.e., the speed is less than 6 Km, settings can be operated. When you ride with the display indicating menu state (speed is more than 6Km), it will exit the menu.

In the advanced setting interface, system cannot exit the menu by pressing M button twice quickly.

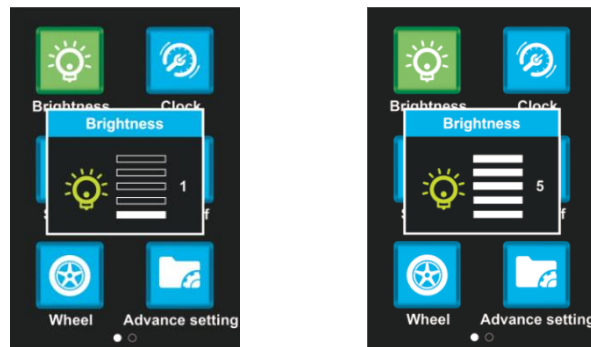


Menu Page1



Menu Page 2

5.1 Backlight Brightness: Press M button to enter the setting menu. Adjust the brightness 1 to 5 by pressing PLUS or MINUS button. 1 is the darkest, 5 is the brightest. Then click M button again to save your choice.



Brightness

5.2 Clock: Press M button to enter the clock setting menu. Press PLUS or MINUS button to set Year/Month/Day/Hour/Min/Sec. After finish setting, press M button to return to previous menu.



5.3 System: Press PLUS or MINUS button to switch different functions. Enter the option by pressing M button and press PLUS or MINUS button again to switch functions. Press M button to save settings and press POWER button to cancel and return to main menu.

Options and functions:

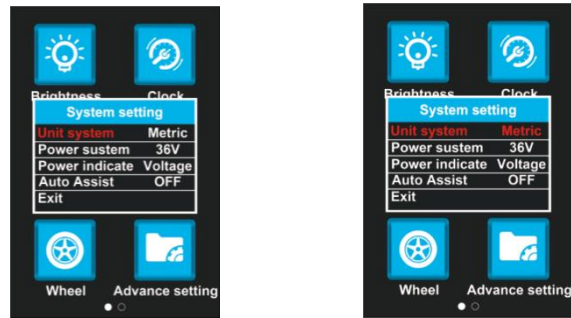
Unit system→ Metric/Imperial

Power system→24V/36V/48V/52V/60V/72V/UBE

Power indicator→ Percent /Voltage

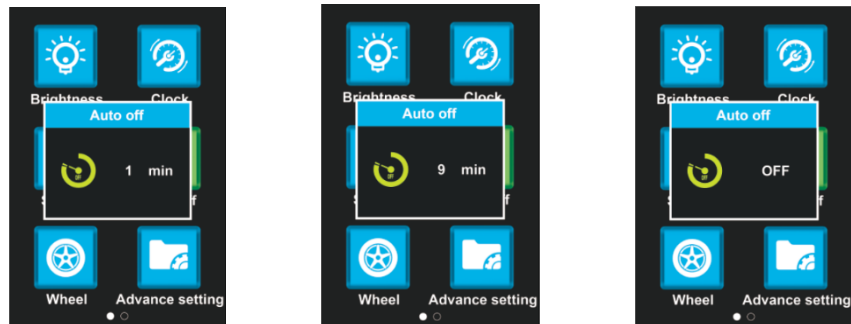
Auto assist→ ON/OFF

After finish setting, choose Exit to return to previous menu.



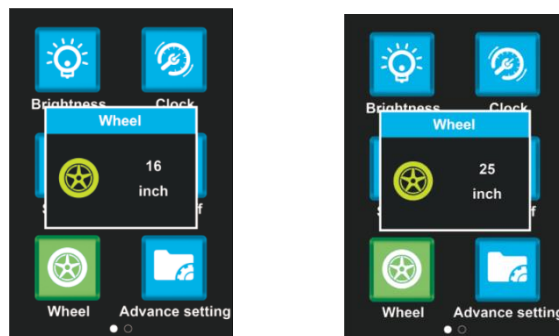
System Setting

5.4 Auto Power Off: Press PLUS or MINUS button to change the auto off time. The number from 1 to 9 represents time (minutes) to shut down and the default value is 5 minutes.



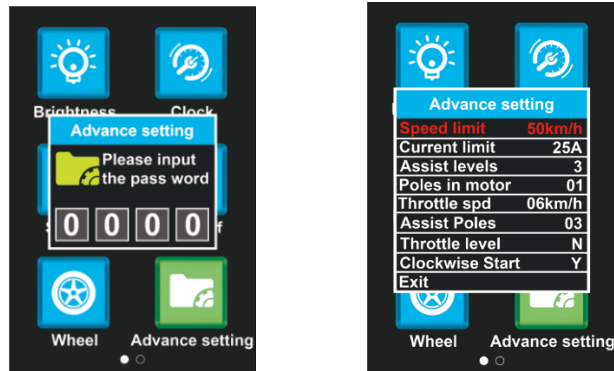
Auto off Time

5.5 Wheel diameter: Press PLUS or MINUS to modify the wheel diameter. Optional wheel diameter is 16/18/20/22/24/26/27/27.5/28/29/30/31/32 inch. Wrong wheel diameter will lead to abnormal speed. Press M button to save the setting or click POWER button to cancel.



Wheel size

5.6 Advanced Setting: Speed settings cannot be changed and is set to 30Mph



Advanced setting

Options and functions:

Speed limit→**km/h

Current limit→**A

Assist levels→1~4: 1 means 3 level; 2 means 5 level; 3 means 6 level; 4 means 9 level

Poles in motor→1~15

Throttle 6km→Y/N

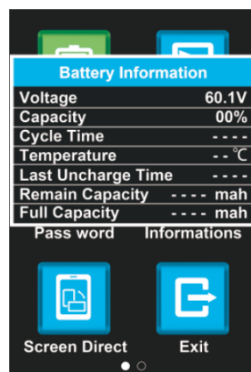
Assist Poles→3~15

Throttle Level→ Y/N

Clockwise Start→ Y/N

After finish setting, choose Exit or click POWER button to back to main menu

5.7 Battery: Press M button to enter Battery information menu. It shows battery information including Voltage, Capacity, and Cycle times, Temperature, Remaining Capacity and Full Charge Capacity. Press M or POWER button to back to main menu.



Battery

***To show the battery information, the battery must support tripartite communication**

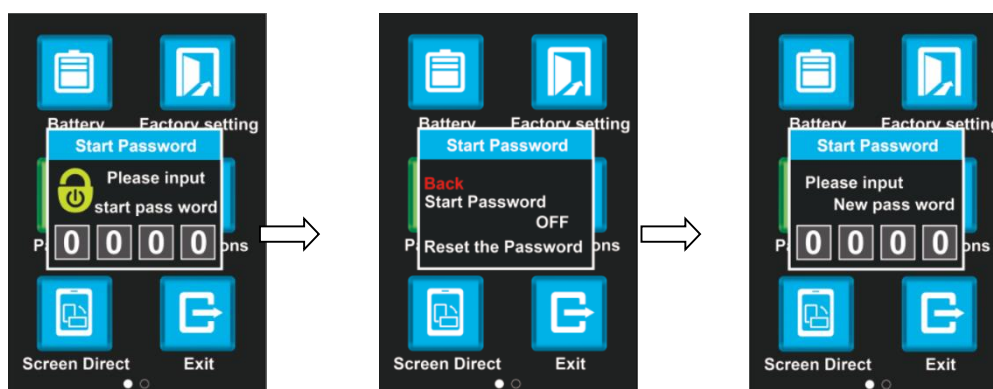
5.8 Factory Setting: Press M button to enter Factory Settings menu. Press YES will restore all

parameter to factory settings except ODO. Press BACK or POWER to back to main menu.



Factory setting

5.9 Password: Press M button to enter the password setting menu. Please enter the default password “0000” firstly. You can adjust the numbers by taping PLUS or MINUS button. And click M to save your choice. If you want to have a password at the beginning when you start the display, please turn ON Start Password. If you do not want to do so, please turn OFF Start Password. You can also reset a password by clicking Reset the Password item. But make sure you remember your password.



Input Password

choose

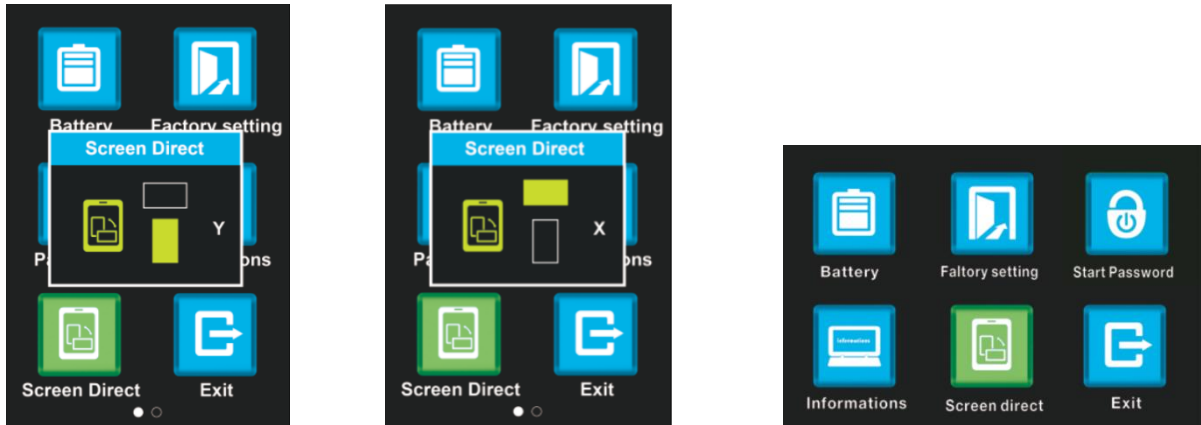
Rest New Password

5.10 Information: Press M button and enter the menu. It will show you the speed information and mileage data. Click M button or POWER to return to the main menu.



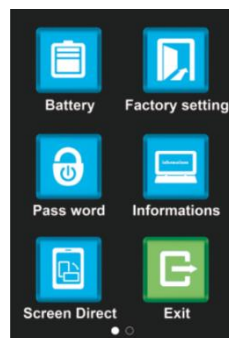
Information Menu

5.11 Screen Display Mode: Press M button and enter the menu. Press PLUS or MINUS to change display mode Y/X. Y means Vertical mode and X means Horizontal mode.



Screen Display Mode

5.12 Exit



Exit

6. Error Code Definition

UKC1 can provide error code indication. When an error is detected,  icon will show on the screen and also display error code at the bottom of the screen. Please refer to the error description at the bottom-right corner of the screen.



Error code

7. Assembly Instructions

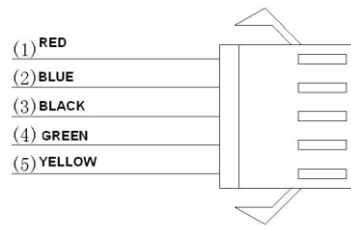
7.1 Please pay attention to the screw's torque value. Damages caused by excessive torque are not covered by the warranty.



7.2 Clamps are suitable for 3 sizes of handlebar, 31.8mm, 25.4mm, and 22.2mm. Users can choose it as needed. Handlebar of 25.4mm and 22.2mm must be assembled with the corresponding adapter rings. Pay attention to the blue arrow below.



8. Connector Descriptions



- 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)