

# Product Specification

Model : UKC1

## 1. Product Name

- TFT LCD display; Model:UKC1

## 2. Suppliers

## 3. Electrical Parameters

- ✧ 3.5 inch IPS screen
- ✧ 36V/48V/52V/60V/72V battery supply
- ✧ Rated operating current : 40mA
- ✧ Max operating current : 100mA (36V battery ,charging state when using external USB equipment )
- ✧ USB charging port : 5V 500mA
- ✧ Off leakage current < 1uA
- ✧ Max output current to controller : 100mA
- ✧ Operating temperature : -20~70°C , Storage temperature : -30~80°C

## 4. Dimensions & Material

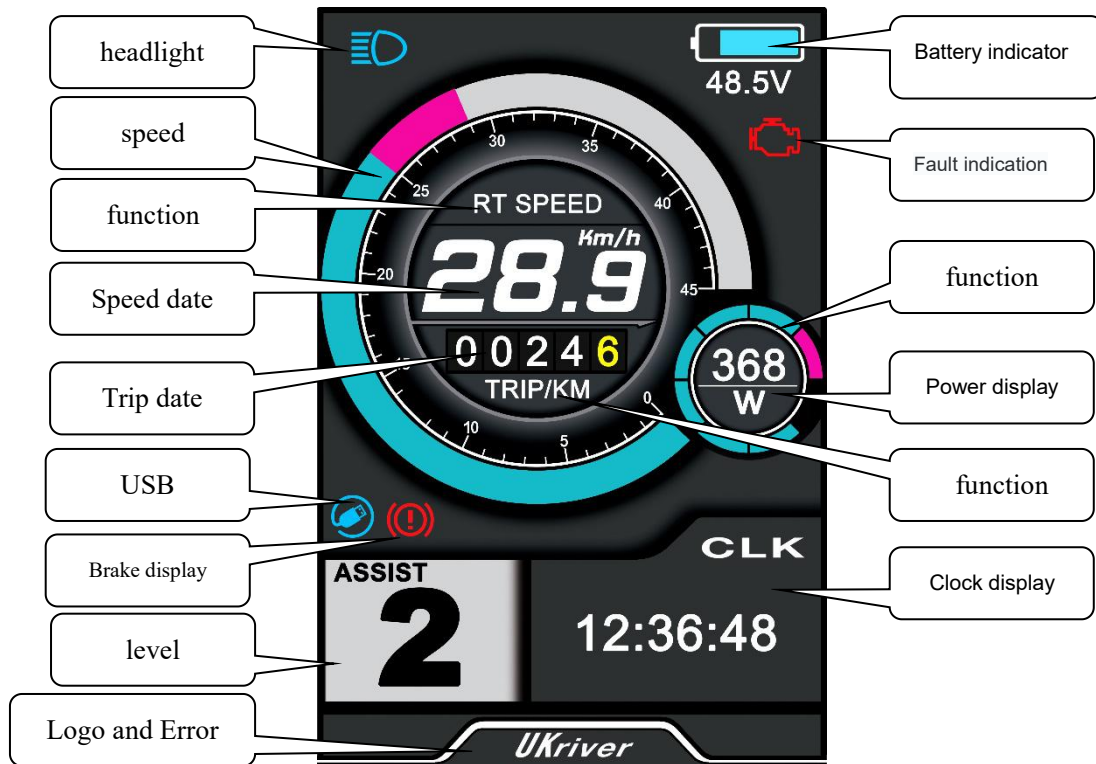
- ABS product shell, LCD transparent window is made of high strength Acrylic which is imported, Product holder material is glass fiber mixed with nylon.



## 5. Features

- 5.1 High-contrast 3.5inch IPS colorful matrix screen.
- 5.2 Suitable for low temperature, Max -20℃.
- 5.3 The rotatable screen can be freely switched horizontally and vertically.
- 5.4 **Speed display** : AVG SPEED, MAX SPEED, SPEED(Real-time).
- 5.5 **Kilometer / Mile** : Can be set according to customers' habits.
- 5.6 **Intelligent power indicator** contains below : 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.
- 5.7 **Adjusting 5 levels backlight brightness**: 1<sup>st</sup> level is the darkest, 5<sup>th</sup> is the lightest
- 5.8 **9-level Assist** : 3-level/5-level/9-level is optional.
- 5.9 **Mileage indicator** : Odometer/Trip distance/ Clock/ Riding time.
- 5.10 **Clock display**:inner small battery,keep time when the display is closed
- 5.11 **Power indicator**: real time power indicator, digital or analog.
- 5.12 **Error code indicator**.
- 5.13 **Speed limited from 1-200**.
- 5.14 **Bicycle self-checking function**
- 5.15 **Battery information display** (battery communication is required) .
- 5.16 **Endurance Mileage showing** (battery communication is required) .
- 5.17 **USB charging port**, 500mA/5V.
- 5.18 **Software upgraded** : Software can be upgraded through UART.


## 6.TFT screen instructions




**6.1 Speed model:** AVG SPEED/MAX SPEED/RT SPEED

**6.2 Speed display:** Km/h or MPH

**6.3 Battery display:** Voltage date and display model is optional

**6.4 Headlight display:** when the headlight is working, showing 

**6.5 Brake display:** when the brake is working, showing 

**Level display:** 0-3 / 0-5 / 0-9 levels, P means 6km/h


**6.7 Fault indication** 

**6.8 Power display:** showing the true power (showing both date and graph)

**6.9 Trip date:** TRIP/ODO/TIME

**6.10 Clock display:** showing the clock information

**6.11 USB display:** USB function is off by default, If you want to charge, long press the M

button, when the screen shows , that means charging function is activated successfully

## 7 Functional Description



### 7.1 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 operate & ride for X minutes (X could be 0~9) .

**\*If the display has been set power-on password , you need to input the right password when starting.**

### 7.2 Assist level operating

Short press UP/DOWN button can change the assist level. Top assist level is 3/5/9, 0 for neutral. Level quantities can be adjusted according to the customer's requirements.



The screen display of the PAS level adjust

### 7.3 Mileage mode switch

In the state of power on, Short pressing **POWER** button can change the mileage mode ,TRIP → ODO → TIME.



### 7.3 Speed mode switch

In the state of power on, Short pressing **POWER** button can change the speed mode:RT SPEED→AVG SPEED→MAX SPEED.

\*\*If there is no operation for 5 seconds, display will return to Speed (Real-Time) display automatically.



### 7.4 Display model change

Press and hold **UP** button for 1 second to change the daytime/night model. Press and hold **UP** button for 1 second again, change the display model.



Daytime model

Night model

### 7.5 Walking mode (6km), Cruise mode (more than 6km)

If speed is less than 6km, Pressing and holding **DOWN** button for 2 seconds can get into walking mode, then the display will show P, when release the button, it will be out of the mode. If speed is more than 6km, keep throttle speed not change and long press **DOWN** at same time will active cruise, display will show H, when press any key or brake, will stop cruise.



The display of the walking mode

\*This feature needs to be supported by controller.

**7.6 Data cleanup**

Pressing and holding **UP** & **DOWN** buttons together for 1 second can reset several temporary data, temporary data includes **AVG Speed / MAX Speed / Trip / Time**.

\*These temporary data will not be erased by power off.

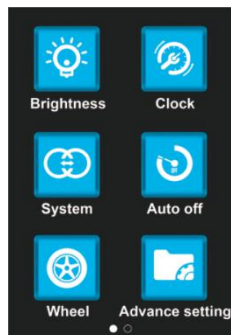
**7.7 USB charger**

Close or open of USB charger is optional. Charging parameters: DC 5V 600mA.

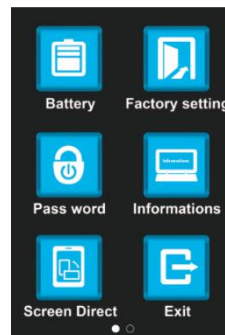
**8 MENU Parameter setting**

In the state of power on,press the M button twice(time interval must be within 0.3S),the system will enter the menu parameter setting state,in this state,users can set the parameters, press M button twice again to quit setting state(time interval must be within 0.3S).

\* Display will quit the menu automatically when there is no operation for 30 seconds. In the riding state(speed is more than 0), entering setting state is not allowed. When riding in the menu state(speed is not 0),it will quit menu setting state.in the advanced setup interface,when you press M switch,it's not able to quit menu.



First page menu



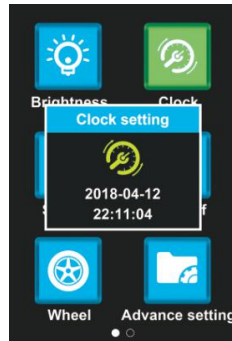
Second page menu

**8.1 Brightness :** Press M button to enter the setting menu,adjusting the brightness 1-5 by pressing up/down button,1 is the darkness,5 is the brightness



adjusting the brightness interface

**8.2 Clock:**press M button to get into the clock setting menu, press UP/DOWN button to set Year/Month/Day/Hour/Min/Sec.when finish setting, press M button and return to previous menu.



Adjusting time interface

**8.3 System:** Press up/down button can change different function,entry into default by pressing M button,press up/down button again will change content,Pressing M button returns to previous menu.

Default and functions:

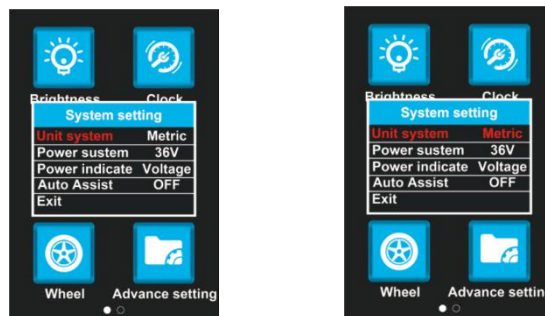
Unit system→Metric/Imperial

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

Power indicate→Percent /Voltage

Auto assist→ON/OFF

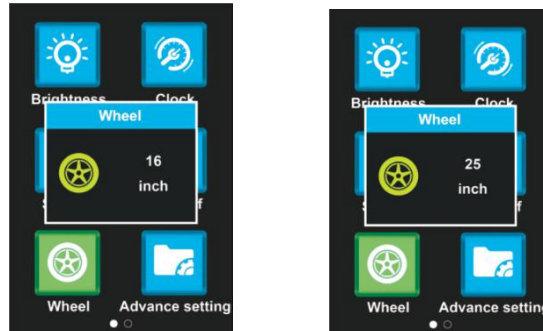
After finish setting,choose Exit,returns to previous menu.



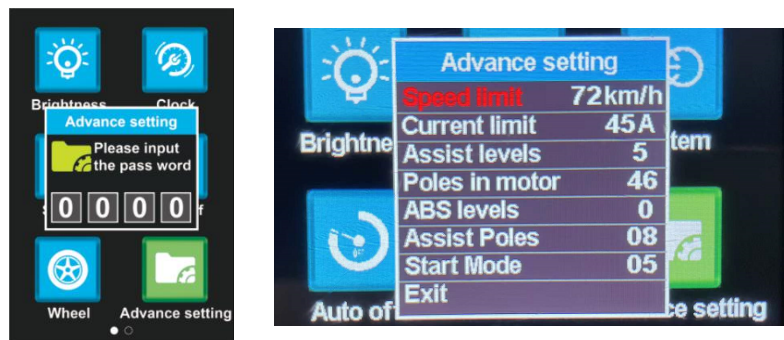
**8.4 Auto Off:** Press UP/DOWN button to change the auto power off time, from 1 to 9, the number represent time (minutes) to shutdown, default value is 5 minutes.



**8.5 Wheel :** Press UP/DOWN can change the wheel setting, optional wheel diameter is 16/18/20/22/24/26/27/27.5/28/29/30/31 inch, 51cm~255cm represent wheel circumference (this needs controller support).



**8.6 Advance setting:** Press M button to enter advance setting menu, adjusting password by pressing up/down button, if the password is right, you can enter the Sub menu of advance setting, password has 4 numbers, default password is '1801'.



Defaults and functions:

**Speed limit**→\*\*km/h (This function is not available, our controller has speed limit plug which can limit speed as 25km/h)

**Current limit**→\*\*A (minimum is 5A)

**Assist levels**→3/5/9: 3 means 3 levels; 5 means 5 levels; 39 means 9 levels

**Poles in motor**→1~200 (=Poles quantity × Motor reduction rate)

**ABS Levels (Regenerative Braking Level)**→0~3: 0 means off; 1 means weak; 2 means standard; 3 means strong (3 strong is not recommended, motor will have higher defective rate if ABS is too strong, if motor is defective due to this, we will not be responsible)

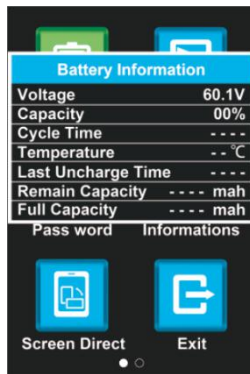
**Assist Poles**→0~12:

**Start Mode**

After finish setting, choose Exit, Previous Menu

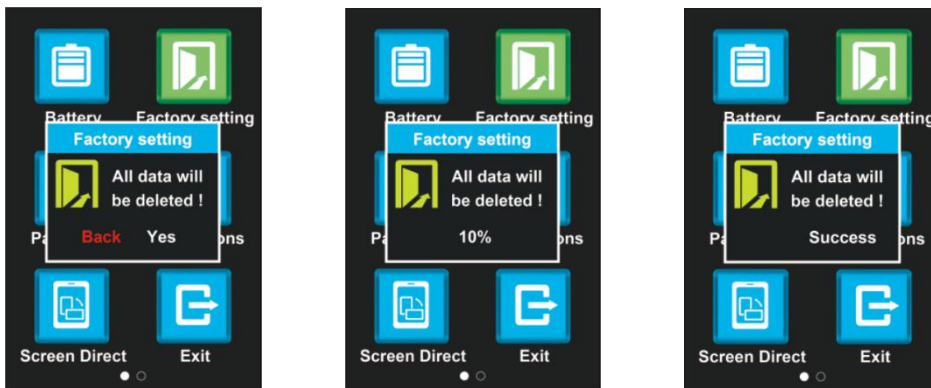
**8.7 Battery:** entry into Battery information menu, showing: Voltage、Capacity、Cycle times、Health、Temperature、Remaining Capacity、Full Charge Capacity、Initial Capacity、Max Charge Times



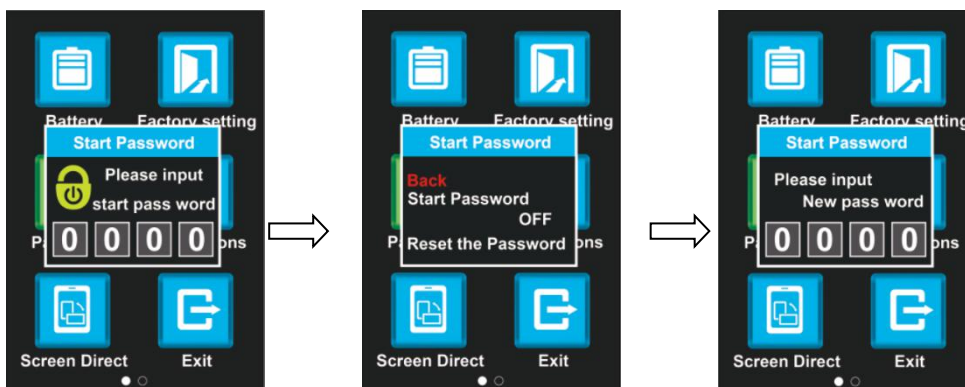


\*If want to show the battery information ,the battery must support tripartite communication

**8.8 Factory setting:** Enter Factory settings menu, set YES will restore all parameter to factory settings.



**8.9 Password:** Press M button to enter the password setting menu. press up/down button to adjust the password number and get into setting menu,choose Start Password and choose ON/OFF,it means open/close password;choose Reset the Password menu, it will get into the new password setting menu.default password is '1801'.

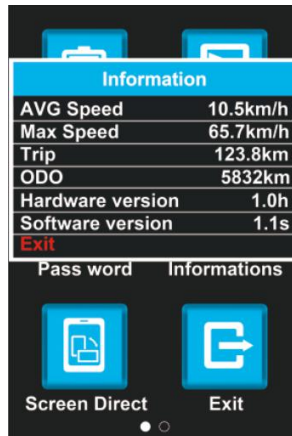


Input password

choose

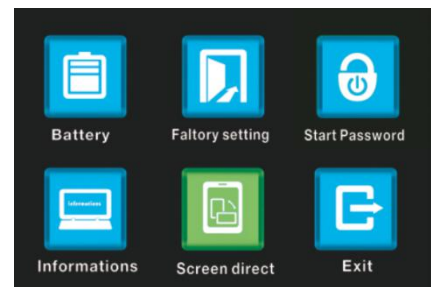
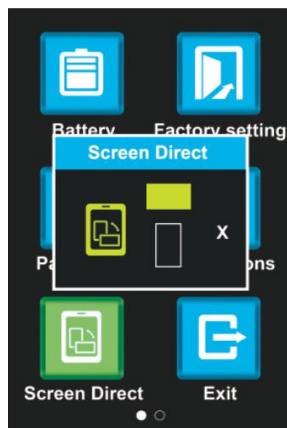
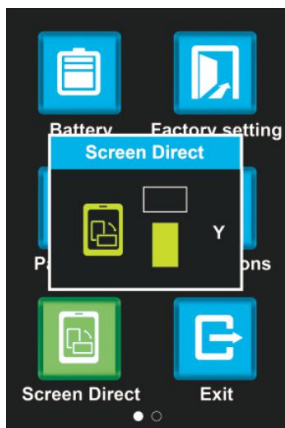
Input new password

**8.10 Information:** Press M button and choose Information,get into information menu, it will shows speed mode and mileage mode date information, After finish setting,choose Exit and return to previous menu.



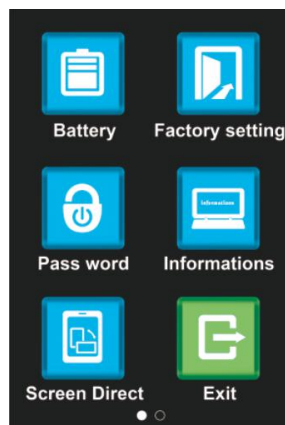
information menu

**8.11 Screen direct:** Press M button, choose screen direct option, get into menu, press up/down change display mode Y/X. Y means Portrait screen mode, X means Horizontal screen mode.




Screen display mode

**8.12 Exit**

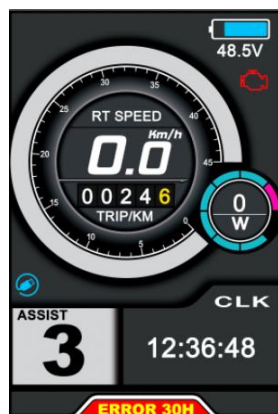


### 9. Error Code define

UKCT-18 can provide error indication for fault , when the fault is detected ,  icon will show on the screen, also shows error code at the bottom of the screen,error code from n (n=01H~FFH) ,definition see the table below:

Different protocol error codes are different, according the agreement content concretely.

Error Code	Error description	Handle
0x01	Communication Error	Check the cable connection
0x21	Current Error	Check the controller
0x22	Throttle Error	Check the throttle cable connector
0x23	three-phase power error	Check three-phase power line connection
0x24	Hall sensor error	Check the hall connection
0x25	Brake error	Check the brake connection.
0x26-0xFF	Reserved	Please contact the manufacturer for error definitions
0x30	Communication Error	Check the cable connection



### 10 Assembly instructions

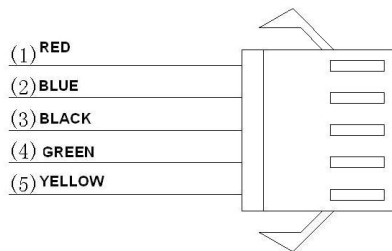
Please pay attention to the screw’s torque value, damages caused by excessive torque are not within the scope of the warranty.



Clamps suit for 3 sizes 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.



## 11 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)