

# **APT 750c Display**

## **User's Guide**





# APT 750c Display User's Guide

- PRODUCT SPECIFICATIONS ..... 2**
  - ELECTRICAL PARAMETERS ..... 2
  - DIMENSIONS & MATERIALS..... 2
  - FEATURES ..... 2
- MAIN FUNCTIONALITIES ..... 3**
  - POWER ON/ OFF ..... 3
  - MODE SWITCH ..... 3
  - ASSIST LEVEL OPERATING ..... 4
  - SPEED DISPLAY SWITCH ..... 4
  - MILEAGE DISPLAY SWITCH ..... 4
- PARAMETER SETTINGS..... 5**
  - BUTTON NAVIGATION ..... 5
  - DISPLAY SETTINGS ..... 5
  - BASIC SETTINGS ..... 7
- ERROR CODES ..... 10**
- ASSEMBLY INFORMATION ..... 11**
  - COMPATIBILITY ..... 11
  - PIN LAYOUT ..... 12
  - CERTIFICATION..... 12
- QUICK START GUIDE ..... 12**
  - STEP 1 ..... 12
  - STEP 2 ..... 12
  - STEP 3 ..... 13

The information contained in this document is derived from the TFT LCD Display Guide provided by Tianjin APT Science and Technology Co., Ltd. (otherwise known as APT). All the information contained in this user manual is published in good faith and for general information purpose only. Contact [technical\\_support@cycmotor.com](mailto:technical_support@cycmotor.com) for further assistance.



# Product Specifications

## Electrical Parameters

- 3.2inch IPS screen
- 24V/36V/48V/52V/72V battery supply
- Rated operating current : 40mA
- Off leakage current < 1uA
- Max output current to controller : 100mA
- Operating temperature : -20 – 70 °C
- Storage temperature : -30 – 80 °C

## Dimensions & Materials

### Materials

Product shell – ABS plastic

Transparent window – High strength Acrylic

### Dimensions

L 110mm x W 68.2mm x H 68mm



## Features

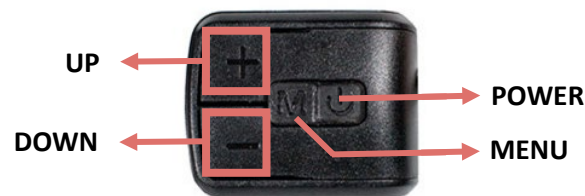
- Suitable for low temperature: Max -20°C .
- High-contrast 3.2inch IPS colourful matrix screen.

The information contained in this document is derived from the TFT LCD Display Guide provided by Tianjin APT Science and Technology Co., Ltd. (otherwise known as APT). All the information contained in this user manual is published in good faith and for general information purpose only. Contact [technical\\_support@cycmotor.com](mailto:technical_support@cycmotor.com) for further assistance.



- Ergonomic external button design, easy to operate.
- Speed display : AVG SPEED, MAX SPEED, SPEED (Real-time).
- Kilometer / Mile : Can be set according to user's preference.
- Smart battery indicator : Provide a reliable battery indication.
- 9-level Assist : 3-level/5-level/9-level optional.
- Mileage indicator : Odometer/Trip distance/ Clock/ Riding time.
- Power indicator : Real time power indication; digital or analog.
- Error code indicator.

## Main Functionalities

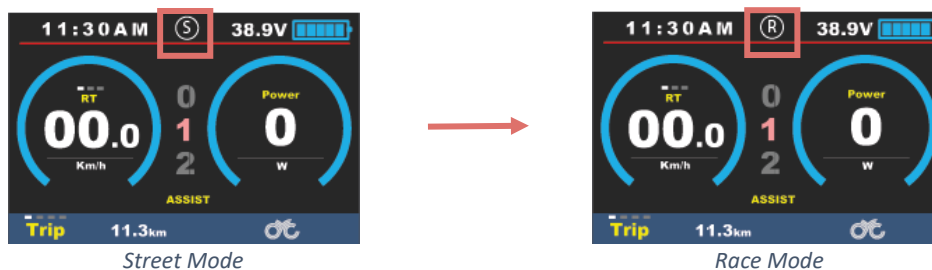


### Power On/ Off

Press and hold the POWER button for 1 second to turn the display on/ off. The display will automatically shut down when there is no operation for a period of time.

### Mode Switch

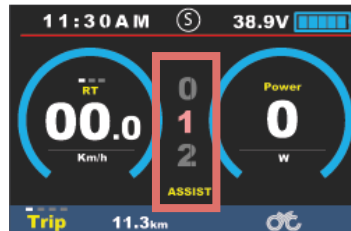
Double the POWER button to change between Race Mode & Street Mode. Note that this will not change the mode in real time but rather set the start-up mode (Street Mode recommended). Change the mode in real time via mobile app.





## Assist Level Operating

Short press UP/ DOWN button to change the assist level. The top assist level is 9 where 0 is neutral. The amount of assist levels can be adjusted according to the user's preference.



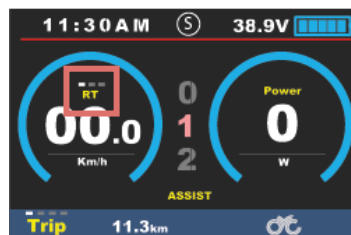
## Speed Display Switch

Short press MENU button to change the speed mode: Speed->AVG Speed->MAX Speed.

**RT** = Real time speed

**AVG** = Average speed

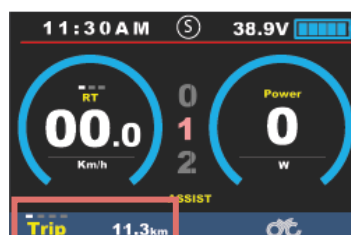
**MAX** = Maximum speed



\*If there is no operation for 5 seconds, the display will return to real time speed automatically.

## Mileage Display Switch

Short press the POWER button to change the mileage mode: Trip->ODO-> Time-> Range.



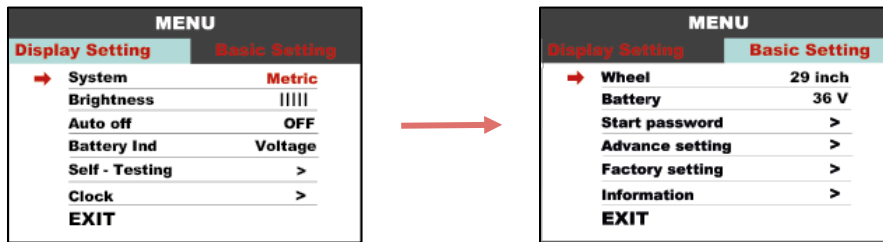


# Parameter Settings

## Button Navigation

Double press the MENU button to get into the settings menu. The press interval must be less than 0.3 seconds.

Press the POWER button to change between the Display Settings & Basic Settings.



Press the UP/DOWN buttons to change between the parameters, MENU button to select, & UP/DOWN to change the selected parameter.

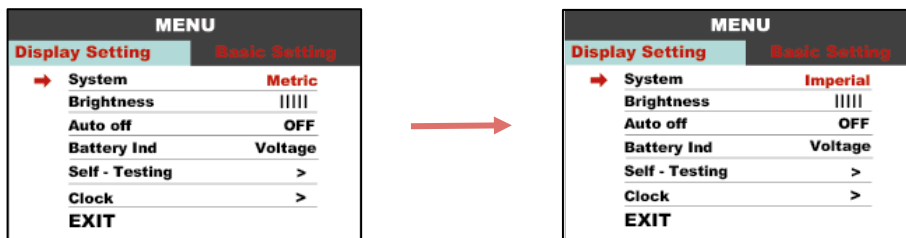
Press the MENU button to deselect parameters & to set changes made.

- \* The display will automatically quit the settings menu when there is no operation for 30 seconds.
- \* For safety reasons, the display cannot get into the settings menu when riding.
- \* The display will quit settings menu when the user starts riding.

## Display Settings

### System

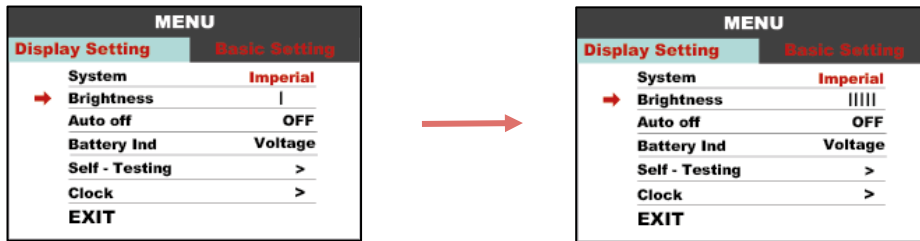
Press UP/ DOWN to change between Metric & Imperial.





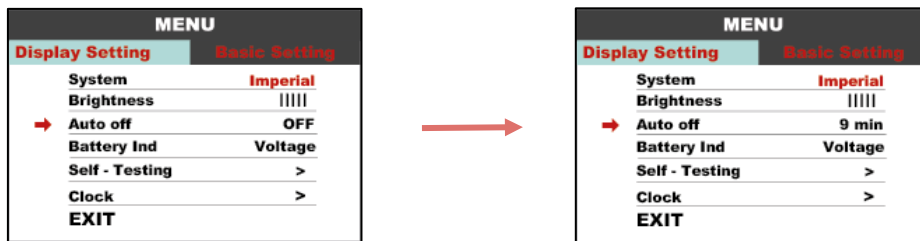
## Brightness

Press UP/ DOWN button to change the brightness of the display's backlight. I is the darkest & IIIII is the brightest.



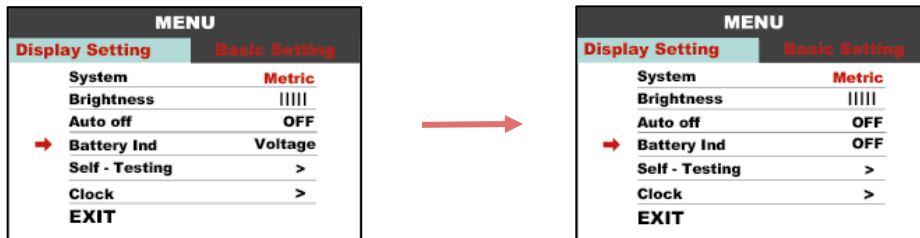
## Auto off

Press UP/DOWN button to change the auto power off time. This can be set between 1 to 9 minutes or off.



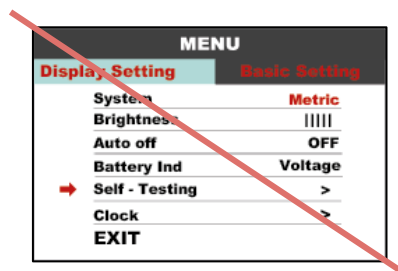
## Battery Ind

Press UP/DOWN button to change your battery indication. This can be set to Voltage, Capacity, Percentage, or off.



## Self – Testing

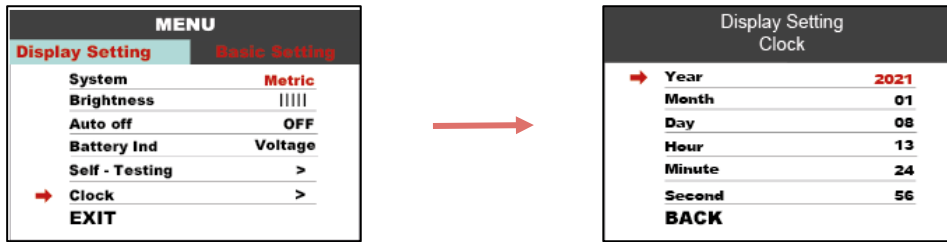
Please ignore! This setting is for CYC Motor Ltd use only. DO NOT attempt to change these settings as you risk corrupting display settings.





## Clock

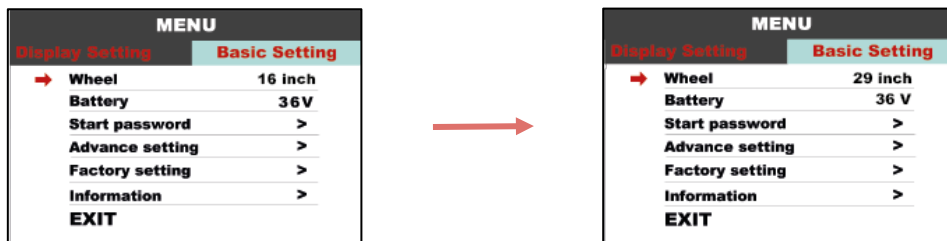
Press the MENU button get into the clock setting menu. Then, press the UP/DOWN button to set Year/ Month/ Day/ Hour/ Min/ Sec.



## Basic Settings

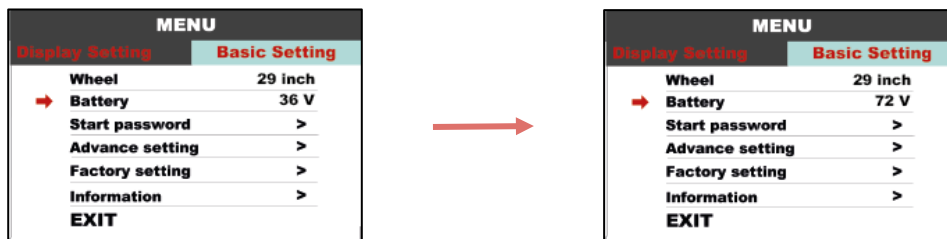
### Wheel

Press UP/DOWN to change the wheel settings. The optional wheel diameter is 16 to 29 inch.



### Battery

Press UP/DOWN to change battery voltage settings. The optional battery voltages are 36V to 72V.



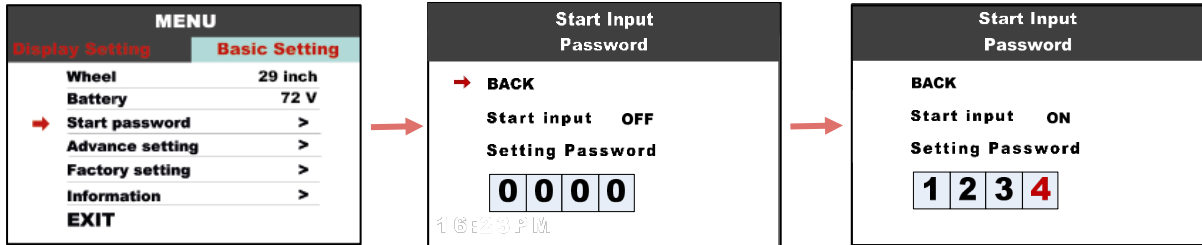




## Start password

Press the MENU button to get into the password setting menu. Start input ON will switch on password upon start-up.

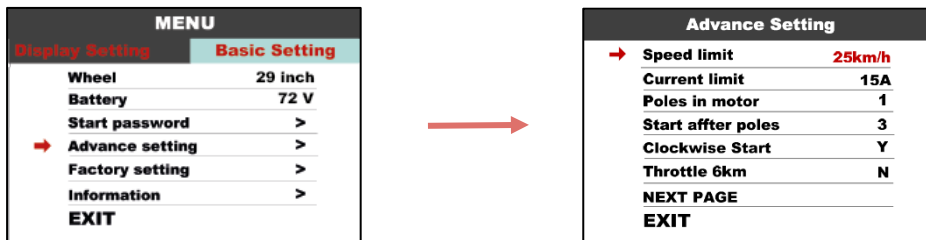
You need to input the right password before start with 30 seconds, display will power off automatically if the password is entered incorrectly three times.



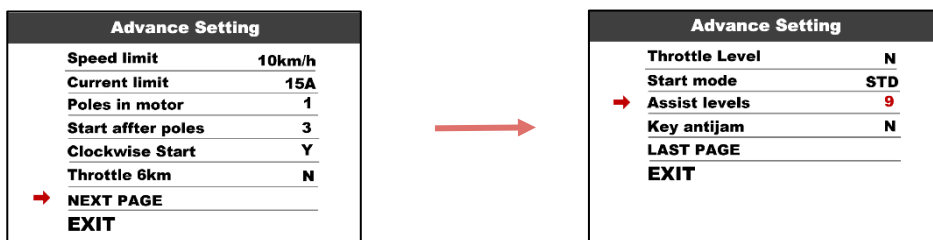
## Advance setting

Press the MENU button to get into the advance settings menu. You will need to enter your Start Input Password. The default password is **1919**.

There is only 1 parameter which needs to be set as all others should be neglected and will not affect your system: Assist levels.



Go to the NEXT PAGE on the display. Here, you can choose the number of assist levels (or gears) accordingly. The available options are 3, 5, or 9 assist levels.





# APT 750C DISPLAY

The power output will distribute evenly across the chosen number of assist levels (*or gears*) according to the Assist Level Configuration, Speed Limit Assist, and Axle Torque Sensor Assist settings on your CYC Motor (BAC) mobile app:

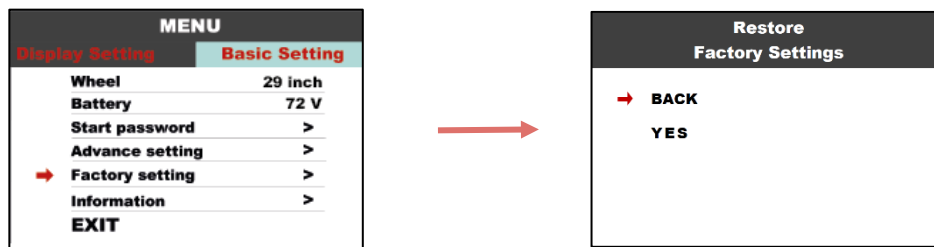
Note that the App Assist Level shown below can be customized in the app.

Assist Level Configuration		
Assist Gain 1	0.3	PU
Assist Gain 2	0.601	PU
Assist Gain 3	1	PU
Speed Limit Assist		
Assist Speed 1	0.3	PU
Assist Speed 2	0.601	PU
Assist Speed 3	1	PU
Axle Torque Sensor Assist		
Axle Torque Sensor 1	0.3	PU
Axle Torque Sensor 2	0.6	PU
Axle Torque Sensor 3	1	PU

App Assist Level	3 Assist Levels	5 Assist Levels	9 Assist Levels
	0 (Neutral)	0 (Neutral)	0 (Neutral)
1 = 0.3 (30% by default)	1	1	1
			2
		2	3
			4
2 = 0.601 (60.1% by default)	2	3	5
			6
		4	7
			8
3 = 0.1 (100% by default)	3	5	9

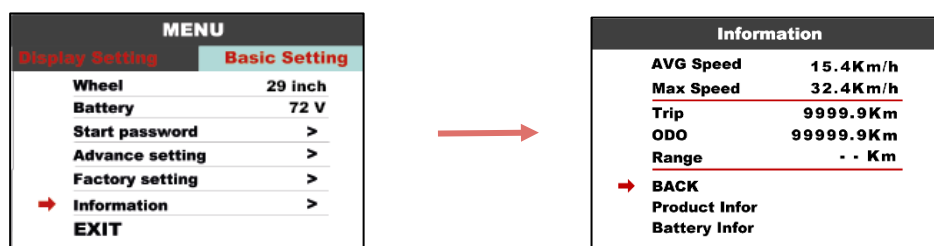
## Factory setting

Press the MENU button to enter the factory settings menu. Selecting YES will restore all parameters to factory settings.



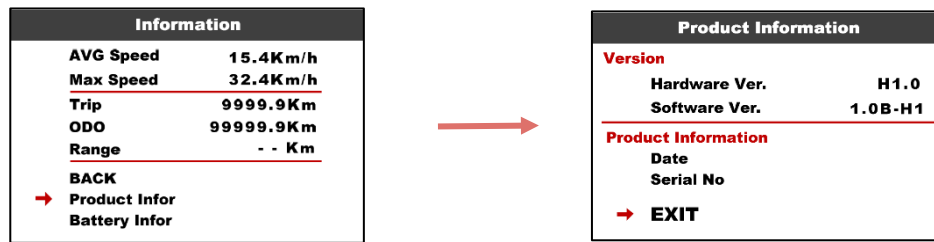
## Information

Press the MENU button to show information of the e-bike, including the average and maximum speeds, the current trip distance, ODO, and range.

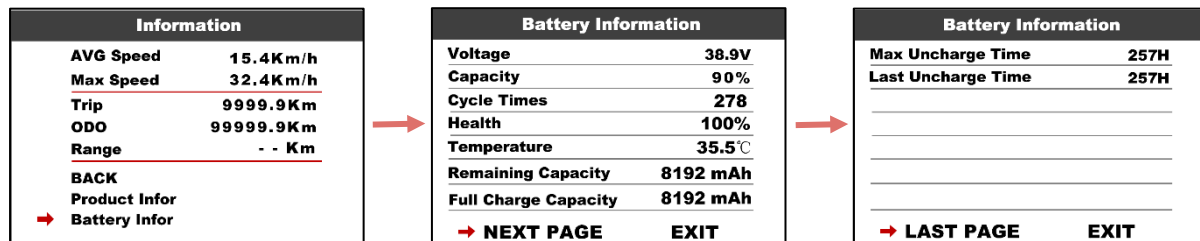




Press the MENU button to select Product Infor. This menu will show you the display's information including its hardware and software versions as well as the display's serial number.



Press the MENU button to select Battery Infor. This menu will show you all the battery information provided that the information is supported by the battery communication system.



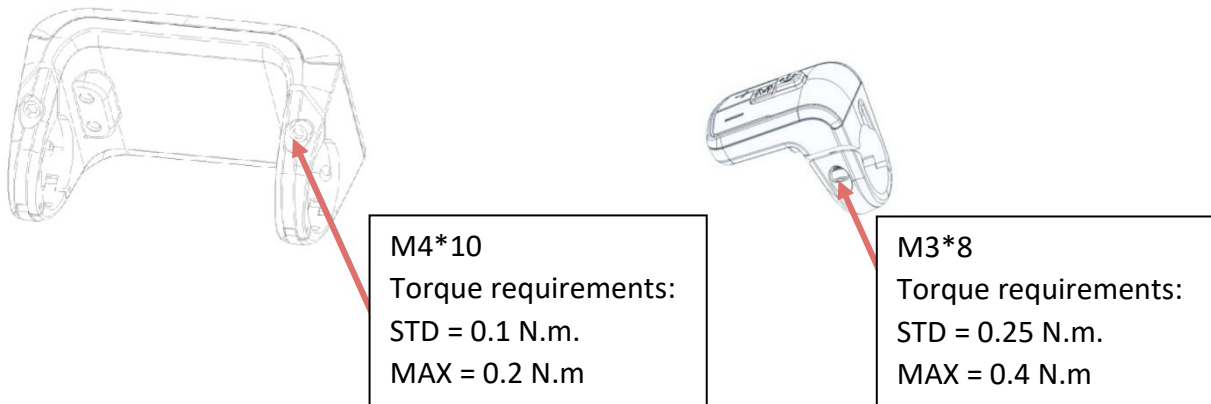
## Error Codes

In certain circumstances, an error code may appear on your display. Refer to the CYC Motor (BAC) mobile application user guide for instructions on how to clear the errors.

Error Code	Description
Error 21H	Instantaneous phase overcurrent
Error 22H	Throttle voltage out of range
Error 24H	Hall sensor error
Error 30H	Communication error



# Assembly Information



Note the torque requirements described above as excessive torque can cause damage.

## Compatibility

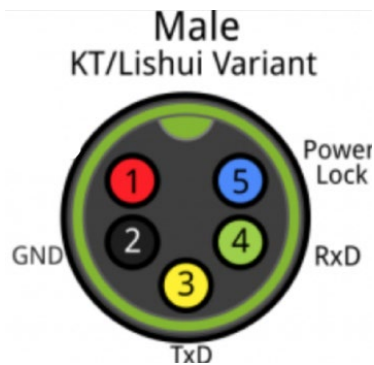
The clamps are suitable for 3x different handlebar sizes: 31.8mm, 25.4mm, and 22.2mm.

There are transfer rings included for 25.4mm and 22.2mm (marked with L or R) as shown below. Be sure to pay attention to the directions below to insert the transfer rings correctly.





## Pin Layout



1. Red wire : Anode(36V to 72V)
2. Black wire : GND
3. Yellow wire : TxD (display -> controller)
4. Green wire : RxD (controller -> display)
5. Blue wire : Power cord to the controller

## Certification

CE / IP65 (waterproof) / ROHS.

## Quick start guide

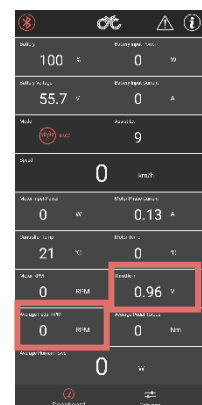
After unboxing & installing your X1 PRO or X1 Stealth, there are a few things you need to set up.

### STEP 1

Ensure that all wires are properly connected & that your system can switch pressing the display's power button. Check that the display shows your battery voltage & level. Should your display briefly show Error 30H upon start-up, this is normal as the system takes a moment to connect. Should your battery voltage & level not display refer to step 3.

### STEP 2

Ensure that your pedal assist & throttle are working correctly. To test this, connect to the CYC Motor (BAC) mobile app & change to Assist Level 0 on your display. You can test the PAS by looking at the app's dashboard & turning the crank set. If your Average Pedal RPM reading changes, then your PAS is working. To test the throttle, open your throttle & check that your Throttle In voltage changes. Ensure that you test the PAS & throttle in Assist Level 0 as to not make the bike thrust forward.



The information contained in this document is derived from the TFT LCD Display Guide provided by Tianjin APT Science and Technology Co., Ltd. (otherwise known as APT). All the information contained in this user manual is published in good faith and for general information purpose only. Contact [technical\\_support@cycmotor.com](mailto:technical_support@cycmotor.com) for further assistance.



## STEP 3

Set up the correct information on your display. You will need to enter your wheel diameter, battery voltage (if incorrect), & your preferred number of assist levels.

Be sure to contact [technical\\_support@cycmotor.com](mailto:technical_support@cycmotor.com) if further assistance is needed.

**THANK YOU!**