EBOX & Dragster Display

Users Manual

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Product model

E-bike Intelligent color display

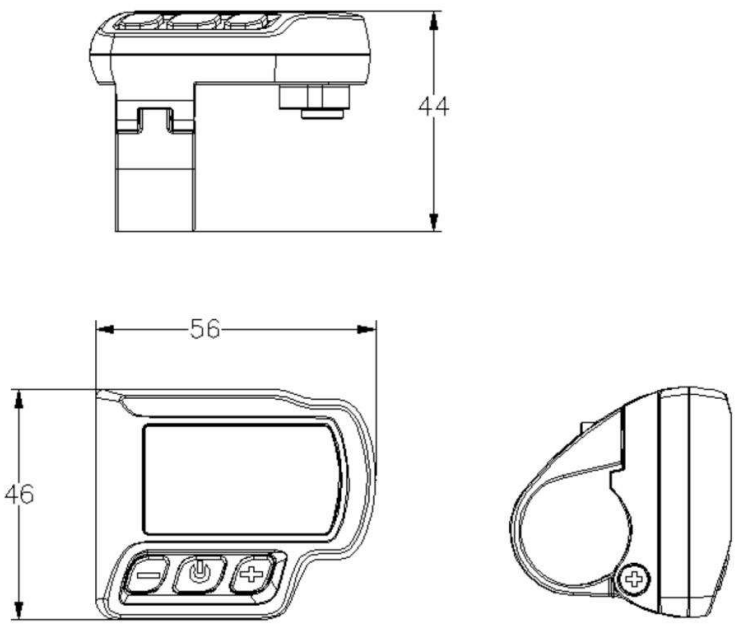
Model: EBOX/DRAGSTER

Specifications

- 60V/72V Power Supply
- Rated working current: 10mA
- Maximum operating current: 30mA
- Off-state leakage current: <1μA
- Operating temperature: -20～60℃
- Storage temperature: -30～70℃

Appearance and dimension

Product appearance and dimensional drawing (unit: mm)



Function Summary

It has many functions to meet the Users' needs. The indicating contents are as follows:

●Battery indicator

●Assist-level selection and indication

●Intelligent indication of Current speed, MAX. speed and AVG. Speed

●Indication of Trip and ODO

●Motor power

●The push-assist control and indication

●Trip Time

●Headlight icon indication

●Error code indication

●Various Parameters Settings

●Recover Default Settings

General Operation

◆Button definition

This display has 3 buttons: including ON/OFF button, UP button, and DOWN button ; in the subsequent instructions, will be replaced with " **ON/OFF** "; will be replaced

with "**UP**"; [redacted] will be replaced with "**DOWN**".

[redacted]

[redacted]

[redacted]

◆Display Interface

After switching on the E-bike system, the display will show Speed(km/h) as default. Pressing the "**ON/OFF**" button to switch between following items:

Trip (KM) →ODO (KM)→Power(Watt) →Time→Max. Speed ((km/h)→ Avg. Speed ((km/h).

Display Interface

[redacted]

[redacted]

Push-assist Mode

[redacted]

Headlight ON/OFF Interface

◆Assist Level Selection

Press "**UP**" or "**DOWN**" button to switch between assistance levels so as to change the motor output power, The default assistance level ranges from level “0” to level “3”, The output power is zero on Level “0”. Level “1” is the minimum power. Level “3” is the maximum power. Please check following photo.

Assist Level Interface

◆Error Code

When the electronic control system fails, it will automatically display the error code. Here is the detailed message of the error code in **Attached list 1**.

Error Code Interface

■Have the display repaired when error code appears. Otherwise, you will not be able to ride the bike normally.

Setting

In the power-on state, when the vehicle is stationary, hold the "UP" and "DOWN" buttons for more than 2 seconds to enter the setting state. It Includes Display setting, Advanced settings, and Information (software information).

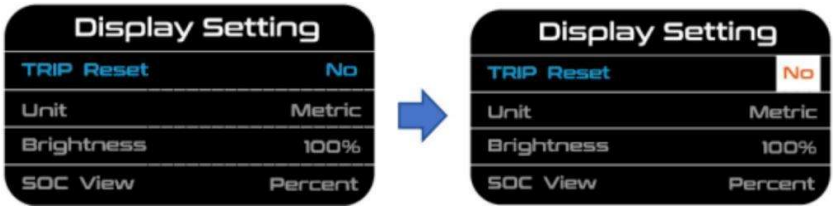
Setting interface

■All the settings are operated on a parked e-bike.

Display settings

◆Trip Reset

Trip Reset represents trip distance clearance setting. Press "**ON/OFF**" button to enter **Trip Reset**, press the "**UP**" button or the "**DOWN**" button to select **Yes**(Trip Reset) or **No(Not Trip Reset)**. The default setting is "**TRIP Reset-Yes"**. If you select YES, press the "**ON/OFF**" button to confirm. The display will show the word "OK" to indicate that the reset is complete and return to the item selection interface. If you select NO, you will directly return to the item selection interface.

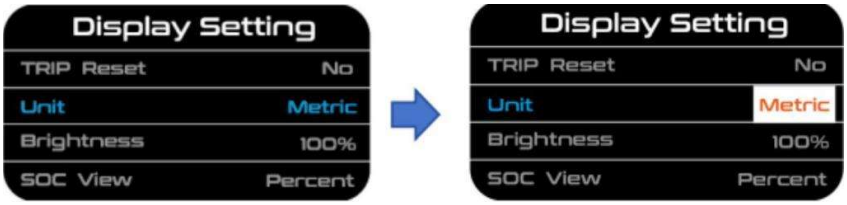


TRIP Reset Interface

◆Toggle unit

"Unit" represents change unit between Metric and Imperial. The default is "Metric". To toggle unit, press the "**ON/OFF**" button to enter the imperial and metric unit switch interface, then press the "**UP**" button or the "**DOWN**" button to choose the desired setting item, and then press the

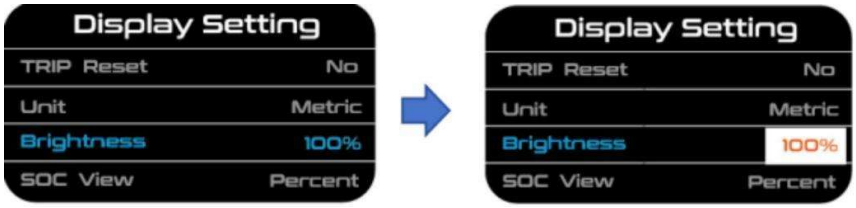
"**ON/OFF**" button to confirm. The display will show the word "OK" to indicate that the setting is complete and return to the item selection interface.



Toggle Unit Interface

◆Brightness Setting

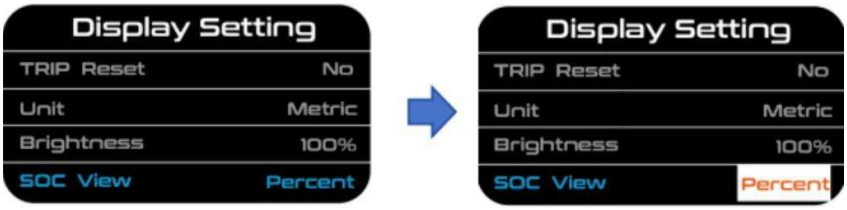
"Brightness" represents display backlight brightness, press the "**ON/OFF** " button to enter settings. To change the backlight brightness, press the "**UP**" button or the "**DOWN**" button to choose the desired percentage. 100% is the highest brightness. 10% is the lowest brightness. 5 settable levels: 100%-75%-50%-30%-10%. Press **ON/OFF** button to save and return to **"Brightness".**



Brightness set interface

◆SOC View Setting

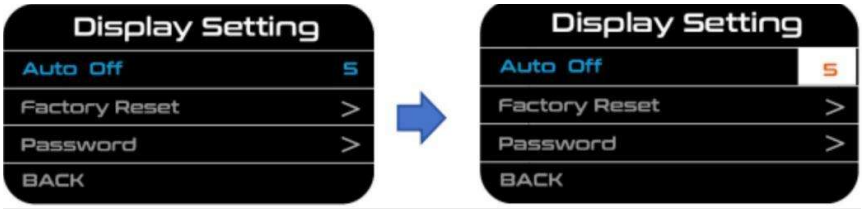
"**SOC View**" represents the display methods of the remaining battery capacity. Press the "**UP**" or the "**DOWN**" button to select between "Voltage"/ "Percent", press "**ON/OFF**" to save and exit to "SOC View".



SOC View Setting Interface

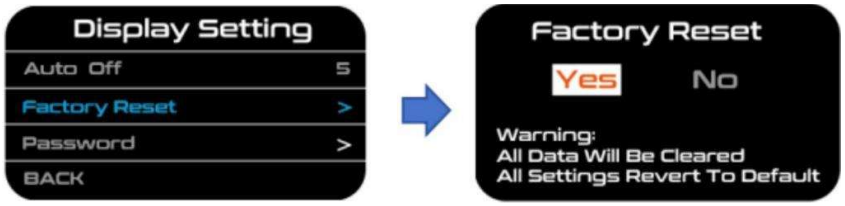
[redacted]

[redacted]



◆Factory Reset Interface

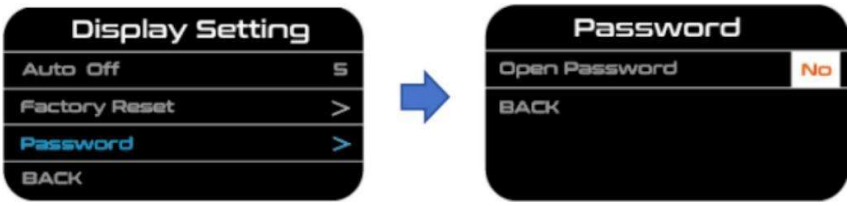
Press "**UP**" or "**DOWN**" to select **"Factory Reset"**, press "**ON/OFF**" to enter the setting, press "**UP**" or "**DOWN**" to switch between "yes" (Restore factory settings) / "no" (Not restore factory settings), press " **ON/OFF** " to save and exit to **" Factory Reset "**.



Factory Reset Interface

◆Password Setting

Press "**UP**" or "**DOWN**" to select "Password", press " **ON/OFF** " to enter the setting, then press " **ON/OFF** " to select Open Password; Press "**UP**" or "**DOWN**" to switch " Yes"/"No ", the following is the specific switching method.

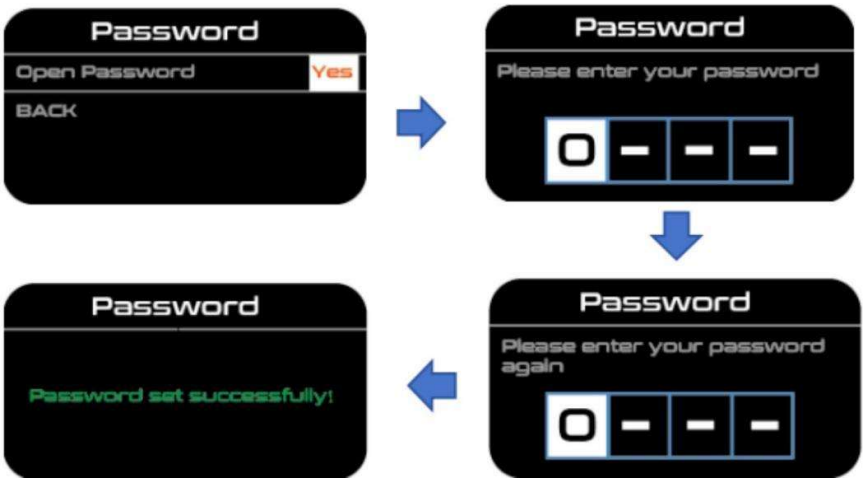


Power-on password setting interface

◆Power-on Password Enable

After selecting "**Yes**" in the "**Open Password**" interface, press " **ON/OFF** " to confirm, the interface shows to enter the password, press "**UP**" or "**DOWN**" to enter the value, press " **ON/OFF** " button to shift, after the 4-digits password is entered, press the " **ON/OFF** " button to confirm; Then the interface reminds to enter the password again. After the two inputs are same, the system reminds that the password is set successfully. If the two inputs are inconsistent, you need to repeat the first

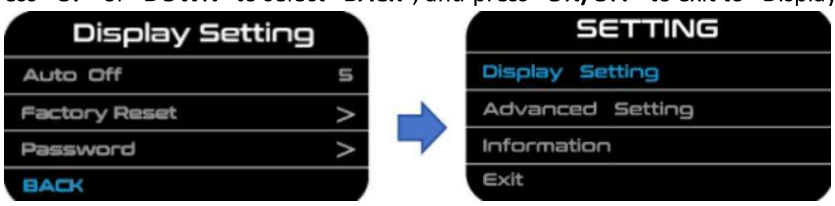
step to enter a new password and confirm. If the password is set successfully, then after 2S, the interface automatically jumps to the original setting interface.



Password Setting Interface

◆Exit Display Setting

Press "**UP**" or "**DOWN**" to select "**BACK**", and press "**ON/OFF**" to exit to "Display setting".



Advanced settings:

◆Assist Level Setting and PAS Ratio

"Assist Levels" represents assist level mode settings.

Press **"UP"** or **"DOWN"** to select "Assist Levels", there is 2 modes to select: 0-3, 1-3. Press "**ON/OFF**" to enter the PAS ratio setting, press "**UP**" or "**DOWN**" to change the PAS ratio parameters, press "**ON/OFF**" to enter the ratio of next assist level, after the PAS ratio setting of 3 assist levels is completed, press "**ON/OFF**" to save and exit to **"Assist Levels"**.

See **Attached list 2** for detailed PAS Ratio.

Assist Setting Interface

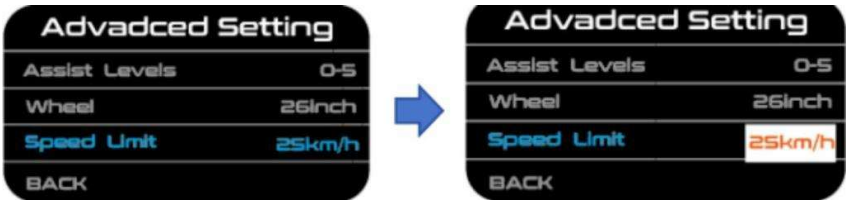
◆Wheel Diameter Setting

"**Wheel**" represents wheel diameter settings. Press the "**ON/OFF**" button to enter wheel diameter settings. Press the "**UP**" button or the "**DOWN**" button to select desired value, the range is from 10 to 30inch. After selected desired value, press the "**ON/OFF**" button to save and exit to "Wheel".

Wheel Diameter Settings Interface

◆Speed Limit Settings

"**Speed Limit**" represents speed limit settings. Press the "**ON/OFF**" button to enter speed limit settings. To change basic settings, press the "**UP**" or the "DOWN" button to select the desired value. The speed limit range is "12-99km/h", [redacted] After selected desired value, press the "**ON/OFF**" button to save and exit to "**Speed Limit**".



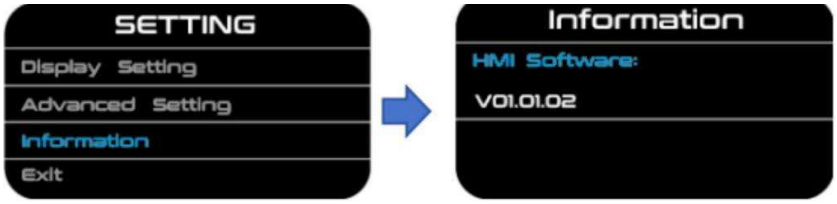
Speed Limit Setting Interface

◆Exit Advanced Setting

Press "**UP**" or "**DOWN**" to select "**BACK**", and press "**ON/OFF**" to exit to "Advanced setting".

Information:

Press the "**ON/OFF**" button to enter "Information", you can check the software information. Press and hold the " **ON/OFF** " button to exit the setting interface or press "BACK" to exit the setting interface.

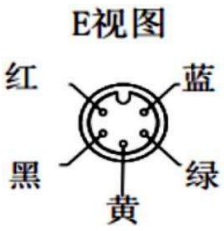


Software Info Interface

Note: this manual is a general-purpose version, some versions of the displayed software will differ from this version, depending on the actual version used.

Connection Layout

Connector line sequence



Line sequence table

Line	Color	Function
1	Red（VCC）	+
2	Blue（K）	Lock
3	Black（GND）	_
4	Green（RX）	RX
5	Yellow（TX）	TX

■ Some wire use the water-proof connector, users can not see the inside color.

Quality Assurance and Warranty Scope

Ⅰ Warranty

（1）The warranty will be valid only for products used in normal usage and conditions.

（2）The warranty is valid for 12 months after the shipment or delivery to the customer.

Ⅱ Others

The following items do not belong to our warranty scope.

（1）The display is demolished.

（2）The damage of the display is caused by wrong installation or operation.

（3）Shell of the display is broken when the display is out of the factory.

（4）Wire of the display is broken.

（5）The fault or damage of the display is caused by the force majeure (e.g., Fire, Earthquake, etc.).

（6）Beyond Warranty period.

Operation Cautions

Be careful of safe use. Don't attempt to release the connector when battery is on power.

●Try to avoid hitting.

●Do not modify system parameters to avoid parameters disorder.

●Make the display repaired when error code appears.

This operating instruction is a general-purpose version. Some of the version for the display software will be different from the specification, which should depend on the actual use version.

■If no operation is performed within one minute, the display will automatically exit the setting state.

Attached list 1： Error code definition

Error	Definition
01	Motor Encoder Signal Abnormality
02	Throttle Abnormality
03	Controller Abnormality
04	Battery Undervoltage
05	Motor Phase Loss
07	Cannot Receive Datas From Display
30	Communication Abnormality