Qingdao Magene Intelligence Technology Co., Ltd.

User Manual

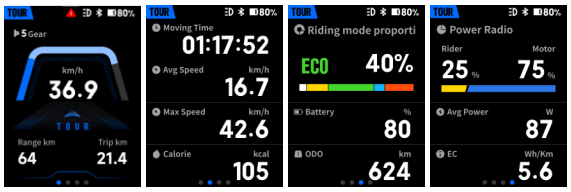
eBike Display
Model： DY12+DY30

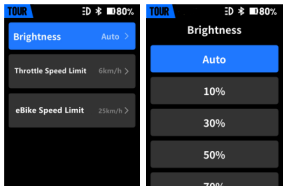
Revision Record

Date	Version	Content	Revised by
2024.6.11	V 1.0	/	刘佳霖
2024.6.18	V 1.1	Updating pic Modifying error	刘佳霖
2024.8.29	V1.2	Updating pic Adding light function	刘佳霖

1. Display Introduction

- **DY30**





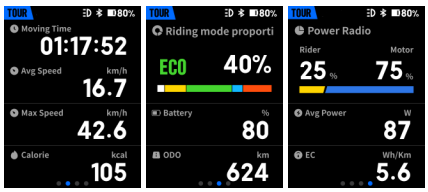
① Status Including：Assist Level (Riding Mode)，Time，Error Icon，Light Icon，BLE Icon，Battery

- Assist Level (Riding Mode)：AUTO，ECO，TOUR，TURBO total 4 normal assist level (Riding mode)， another 1 level stands for walk assistance function
- Error Icon：It shows current error
- Light Icon ： The icon appears and disappears along with light on/off operation
- BLE Icon：It always appears on the screen when display is power on, it means BLE is on working
- Battery Capacity：It shows the percentage of battery

② Home Page：Riding mode，Speed，Rider/Motor Power Ratio，Shifting Gear，Range，Trip

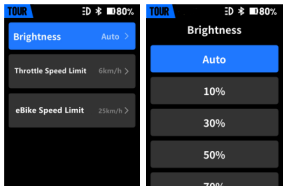
- Riding Mode：AUTO，ECO，TOUR，TURBO 4 modes，1 mode stands for walking assistance
- Speed：Current Speed, It switches along with riding data switching operation, SPEED is default data showing on the display when the display is power on
- Rider/Motor Power Ratio：Power ratio between rider and motor，deep color is rider power，light color is motor color
- Shifting Gear：It shows current shifting gear
- Range：It shows the distance cyclist can still ride
- Trip：Trip distance, the trip distance starts when the display is power on and ends when the display is power off

③ Data Page：Moving Time， Avg Speed，Max Speed， Calorie，Riding Mode Proportion，Battery，ODO，Rider Motor Power Ratio，Avg Power，Energy Consumption



- Moving Time：The trip time starts when the display is power on and ends when the display is power off
- Avg Speed： Average speed in one trip
- Max Speed： Max speed in one trip
- Calorie： Calory consumption in one trip
- Riding Mode Proportion：Each riding mode usage in one trip
- Battery：It shows the percentage of battery
- ODO：Total riding distance
- Rider Motor Power Ratio： Power ratio between rider and motor in one trip
- Avg Power：Average power in one trip
- Energy Consumption： Average power consumption in one trip

④ Setting Page：Screen Brightness，eBike/Throttle Speed Limit Setting



- Screen Brightness： It can select manually / automatically to switch screen brightness, as well as the percentage of screen brightness under manual switching
- eBike Speed Limit Setting：It can set the eBike speed limit
- Throttle Speed Limit Setting：It can set the throttle speed limit

- **DY12**

4 LED，each LED includes cyan，white，yellow，green，blue，red 6 color，various functions and notice are represented by different LED lights with different colors and display combinations

2. Controlling Button Introduction

- **DY12**

Including：3 Buttons，“+”，“-”，“M/⏻”
Operation：One button short pressing，one button long pressing

- **DY30**

A

Including：1 button，“A”
Operation：One button short pressing，one button double-click

3. Function Introduction

- Display DY30 working with single display DY12

DY12 DY30

① Power On/Off

Power On：Long pressing DY12 “M/⏻” 2s when the display is power off

Power Off：Long pressing DY12 “M/⏻” 2s when the display is power on

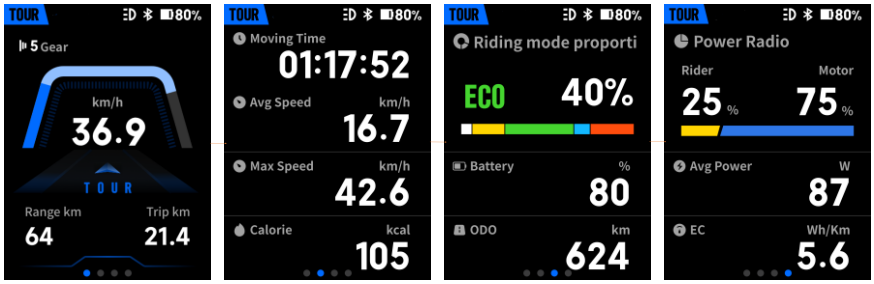
② Riding Modes Switching Operation

Short pressing DY12 “M/⏻” to loop switch riding mode

Riding Mode	DY12 LED Color / DY30 Mode Color	Remark
OFF	White/White	No Assist
AUTO	Yellow/Yellow	Auto Assist
ECO	Green/Green	Lowest Assist Mode
TOUR	Blue/Blue	Mid Assist Mode
TURBO	Red/Red	Highest Assist Mode
WALK	None/Purple	Walk Assist

③ Data Page Switching

Short pressing DY30 “A” to loop switch riding data



④ Walk Assistance Operation

Pressing DY12 “-” 2s and hold it to start walk assistance mode， then release “-” to stop walk assistance mode

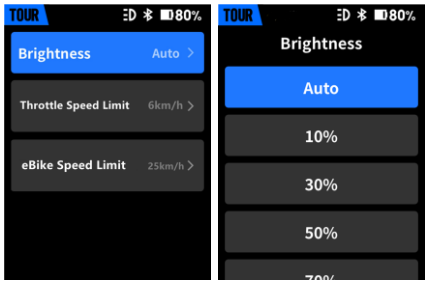
⑤ Shifting Gear Switching

Short pressing DY12“+/-”to switch shifting gear，short pressing “+”to switch to small freewheel；Short pressing“-”to switch to big freewheel

⑥ Function Of Setting Page

Double clicking DY30“A”，it entries setting page，including screen brightness setting，eBike Speed Limit，Throttle Speed Limit，short pressing DY12 “+”and“-”to switch subpage，short pressing DY12 “M/⏻”to entry subpage and confirm，short pressing DY30“A”to return previous page and exit setting page

Notes: After some setting operation，there will be a pop-up window indicating that it needs restart eBike to take effect，short pressing DY30 “A”to exit pop-up window，then restart eBike



⑦ Light

Auto light: The eBike is on auto light when every time cyclist power on the eBike，cyclist can close auto light function and switch to manual light function when pressing “+” 2s, and cyclist can power on/off light by pressing “+” 2s，once cyclist power off eBike and power on again，it will return to auto light automatically

Manual light: Long pressing ”+” 2s to power on/off light when it isn’t on auto light function

TOUR
80%
5 Gear
km/h
36.9
TOUR
Range km
64
Trip km
21.4

4. Error Code Definition

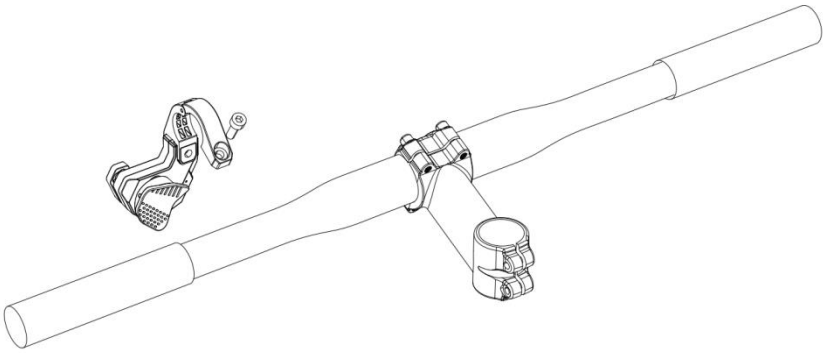
When there is fault in eBike system， DY12 all yellow and white LED are on and flash alternately， DY30 screen shows fault codes

Error Code	Fault	Solution
101	Over Voltage	①Updating software ②Battery is wrong， voltage is more than 60V， just change correct battery
102	Low Voltage	Checking the battery and charge it
103	Phase current over current	If this fault always appear, just check eBike controller or motor, it may be broken
105	Lack phase of motor	①Checking the cable and connector between eBike controller and motor， the cable maybe broken or connector become less crowded ②eBike motor or controller is broken， it needs change eBike motor or controller
106	Short circuit of motor	①Checking the cable and connector between eBike controller and motor， the cable maybe broken or connector become less crowded ②eBike motor or controller is broken， it needs change eBike motor or controller
107	Lock rotor of motor	Over load or exceeding the uphill ability when the cyclist riding， it can recover when removing load or riding within the requirements of uphill ability
108	Hall anomaly	①Checking the cable and connector between eBike controller and motor， the cable maybe broken or connector become less crowded， ②Hall sensor is broken， it needs change motor
109	Controller over heat	Over load or exceeding the uphill ability when the cyclist riding， it can recover when removing load or riding within the requirements of uphill ability
110	Throttle anomaly	①Checking the cable and connector between eBike controller and throttle， the cable maybe broken or connector become less crowded， ②Throttle is broken， it needs change throttle
111	Communication fault （Controller）	①Checking the cable and connector between eBike controller and display， the cable maybe broken or connector become less crowded. ②Controller or display is broken， it needs change controller or display

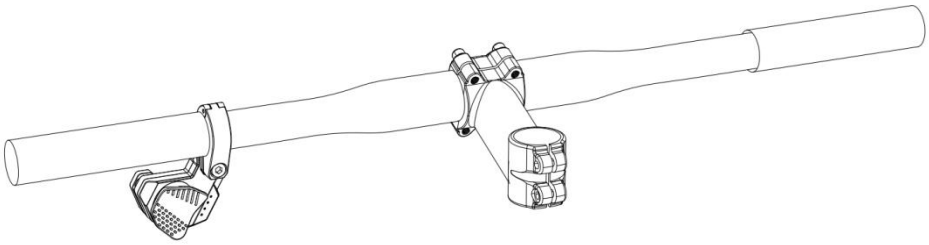
113	Communication fault（Digital torque sensor）	①Checking the cable and connector between eBike controller and torque sensor，the cable maybe broken or connector become less crowded. ②eBike torque sensor or controller is broken，it needs change eBike torque sensor or controller
115	Temp sensor fault of controller	Sensor is broken，it needs change controller
001	Communication fault（Display）	①Checking the cable and connector between eBike controller and display，the cable maybe broken or connector become less crowded ②eBike controller or display is broken，it needs change eBike controller or display
002	Storage fault（Display）	Display is broken，it needs change display
003	“M| ⏻ ”long pressing fault(20s)	①It can recover to normal once loose button if it is manual default ②Display fault, it needs change display
301	Low Voltage（Electronic Shifting）	Electronic shifting default, it needs change electronic shifting
302	Motor block fault (Electronic Shifting)	Chain stuck and some other scenarios may occur that electronic shifting can’t pull derailleur, motor of electronic shifting can’t rotate, it can recover to normal when there is no motor block
303	Magnetic Encoder fault(Electronic Shifting)	Electronic shifting default, it needs change electronic shifting

5. Mounting Instruction

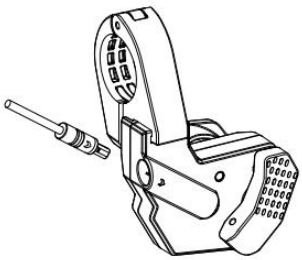
- DY12



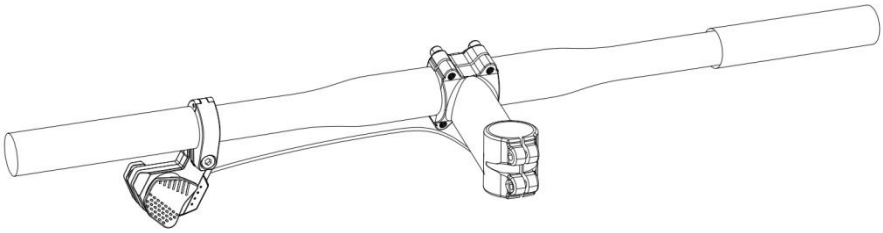
① Fixing DY12 on the left or right side of the handlebar and tightening the screws



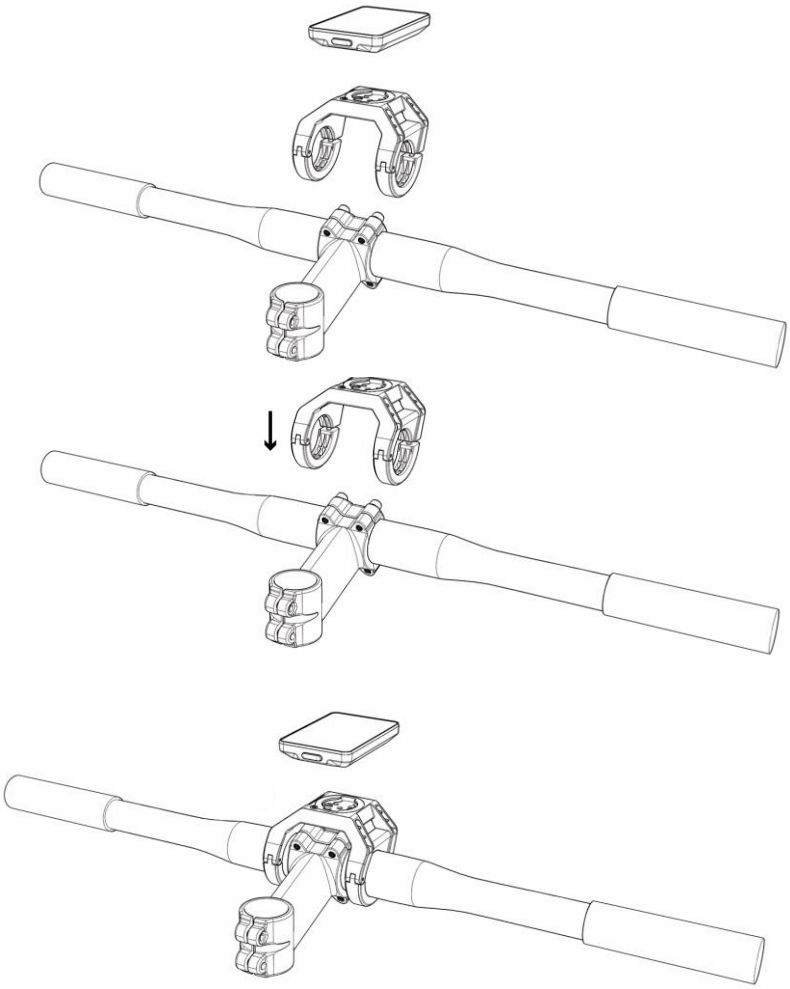
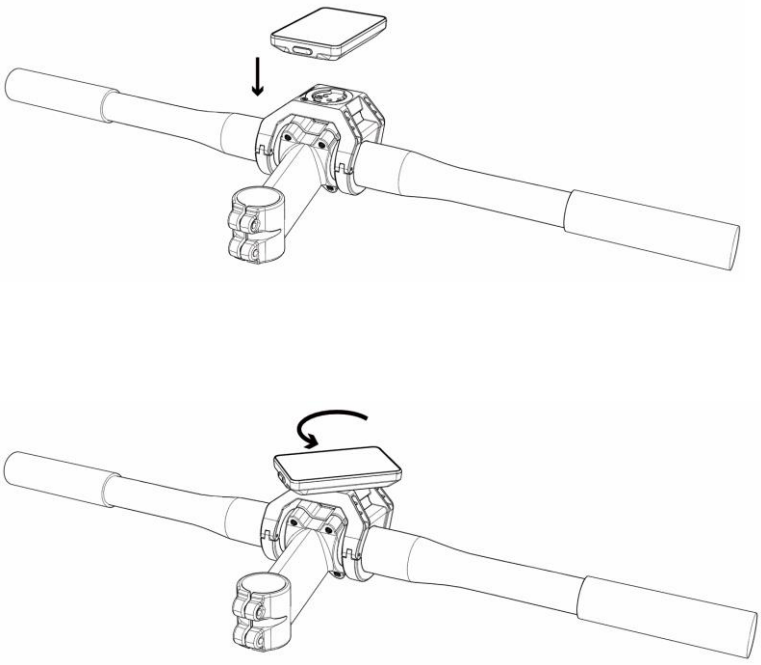
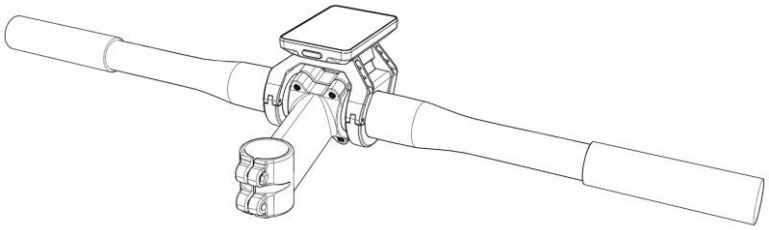
② Inserting the connector into DY12 according to the connector indicator of controller and DY12 back side indicator



③ Finishing Mounting



- DY30



② Rotating the display on the support and finish mounting