



# Display Manual

Fat 20c

Fat 20t

Fat Step 20c

Fat Step20t

Fat 20IL

[www.boommoto.com](http://www.boommoto.com)

# Display Screen



## Type 1

Fat 20C Series

Fat 20IL Series



## Type 2

Fat 20T Series

### 1 . **Operating Voltage & Connections**

- a. **Operating Voltage:** DC24V/36V/48V/52V/72V (set by the control panel).
- b. **Connections:** Julet Waterproof Connector.

### 2 . **Functions**

#### a. **Display**

Speed Display, Motor Power Ratio Display, Battery Level Display, Error Indication, Total Mileage, Single Mileage, Single Running Time Light Signal

#### b. **Control and Settings**

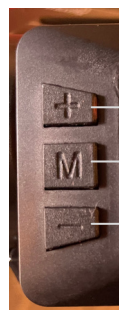
Power Switch, 6km/h Inching Control, Wheel Diameter Setting, Top Speed Setting, Time Setting for Auto-Hibernation, Backlight Brightness Setting, Voltage Level Setting

- c. **Communications Protocol:** UART Display Readings (display at the start for 1 second)

# Introduction to keys



- + Up Selection
- "C" Multi Function
- Down Selection



- + Up Selection
- "M" Multi Function
- Down Selection

## Introduction to Keys

Key operations involve short press, long press, and long press of combination keys. Short press is used for short/frequent operations as:

1. Short press the Up or Down Button to change assist power/speed during riding.
2. Short press the "M/C" button to switch the readings in the multi-function display section. Long press on a single key is used to switch mode/on/off status. Long press on combination keys to set parameters, which can avoid misoperations (short press on combination keys is disabled, for it's easy to induce misoperation and hard to manipulate).
3. Long Press on the M/C multi-function button to Power the screen On/Off
4. Long Press the +/Up button Turn on Headlamp
5. Long Press the -/Down button Turn on Walk assist

## Detailed Instructions

1. Changing the assist power.
  - a. Short press assist power +1.
  - b. Short press assist power -1.
2. Turn on/off the LCD Display When the display panel is operating, long press and it will be turned off, otherwise, it will be turned on.
3. *Switch Displayed Readings in Multi-Functions Section Short press to switch readings shown in the multi-function section.*
4. *Set Parameters Long press + to enter the setting interface. In the setting interface, short press or to change the value to the parameter, which will blink after modification. After selecting the parameter that needs to be set,
  - I. Short press to switch to the next parameter and the previously set value will be saved at the same time.
  - II. Press + to exit the setting and save the parameters. Without this operation, the system will automatically exit and save the modified parameters after 10 seconds. Note: Due to product upgrade, the product you purchased may be slightly different from the descriptions in this user manual, this will not affect normal usage*

# Recomended Settings

P Setting	20T (Type 2)	20C/IL (Type 1)
<b>P01</b>	001	00002
<b>P02</b>	001	00001
<b>P03</b>	00048	00048
<b>P04</b>	010	00010
<b>P05</b>	0-5	0-05
<b>P06</b>	20.00	20.00
<b>P07</b>	001	00006
<b>P08</b>	0100	0100
<b>P09</b>	0000	0000
<b>P10</b>	0002	00002
<b>P11</b>	0002	00002
<b>P12</b>	0003	00012
<b>P13</b>	0012	00020
<b>P14</b>	0020	00020
<b>P15</b>	039	0039.0
<b>P16</b>	001	0039.0
<b>P17</b>	N/A	N/A

# P Setting Definition

To go to Parameters, press & hold "UP & DOWN" at the same time for about 5 seconds, within the 8 seconds when you turn the kit on.

**P01** : Brightness (1 is the darkest; 3 is the brightest)

**P02** : 0 is KM, 1 is MILE

**P03** : Voltage grades; 24V/36V/48V/52V/72V

**P04** : Sleep time. 0 means the LCD screen will never go off for energy save mode, other numbers stand for the sleep time (1-60 min).

**P05** : PAS grades. 3: 3 level speed for both throttle and PAS 5: 5 level speed for both throttle and PAS 9: 9 level speed for both throttle and PAS

**P06**: Wheel Size. Unit: inch Precision: 0.1 The wheel size unit shown in inches, must be set correctly.

**P07**: Range: 1-100 This is 46 for direct drive (1200w and above) motors and 01 for geared (500w - 750W) motors.

**P08**: Speed Limit Range: 0-50 km/h, 100 means no limit The limit is set in Km and can not be switched to a Mil. So calculate it carefully when you set the limit. Communication Status (controlled by the controller): The driving speed keeps the same as the ones we set. Random error:  $\pm 1$ km/h. (Speed limit is for both PAS and Throttle)  
Note: These data are based on KM. When changing KM to Mile, the speed value on the screen would convert to correct Miles automatically, but if you do not change the setting of the speed limit from KM to Mile, it would be different from the real speed limit in Mile.

**P09**: Zero & Non-zero Start Setting: Zero start (0) will engage the motor instantly while Non-zero start (1) will give some delay when you throttle.

**P10**: Drive Mode Setting 0: Power Drive – The specific gear of the assist drive decides the assist power value. In this status, the throttle does not work. 1: Electric Drive – The vehicle is driven by the handlebar. In this status the power gear does not work. 2: Power Drive + Electric Drive – Electric drive does not work in zero-start status.

**P12**: Assist Power Intensity Range: 0-5 Lower value provides a little assist when you start pedaling.

**P13**: Power Magnet Steel Number. There are 3 types: 5, 8, and 12. Dots on the magnetic ring. In our system, it is 12 by default.

**P14**: The Current-limiting of Controller The original Current is 12A. Range:1-20A Please check the current your controller and the hub motor can handle. Set the limit accordingly.

**P16**: ODO Zero-Out: Long press the upper key for 5 seconds and ODO will zero out. Use this option to reset ODO. Note: When you set P09 as 0, whether you set P10 as 0, 1, or 2, both throttle and PAS can start the system and work. When you set P09 as 1 and P10 as 0, only PAS can start the system. When you set P09 as 1 and P10 as 1, both throttle and PAS won't work. When you set P09 as 1 and P10 as 2, only PAS can start the system, then the throttle will work.



All material appearing on the boom! MOTO documents or website (“content”) is protected by copyright under U.S. Copyright laws and is the property of boom! MOTO or the party credited as the provider of the content. You may not copy, reproduce, distribute, publish, display, perform, modify, create derivative works, transmit, or in any way exploit any such content, nor may you distribute any part of this content over any network, including a local area network, sell or offer it for sale, or use such content to construct any kind of database. You may not alter or remove any copyright or other notice from copies of the content on boom! MOTO documents or website. Copying or storing any content except as provided above is expressly prohibited without prior written permission of boom! MOTO or the copyright holder identified in the individual content’s copyright notice. For permission to use the content, please contact [sales@boomoto.com](mailto:sales@boomoto.com)