ibo-C500 Instruction Manual

Version 1.1

6/13/2016
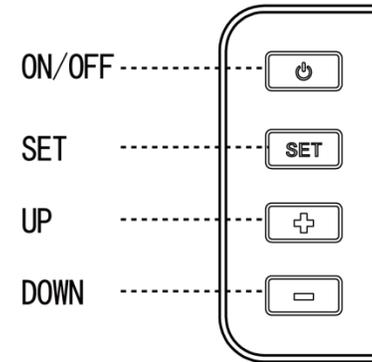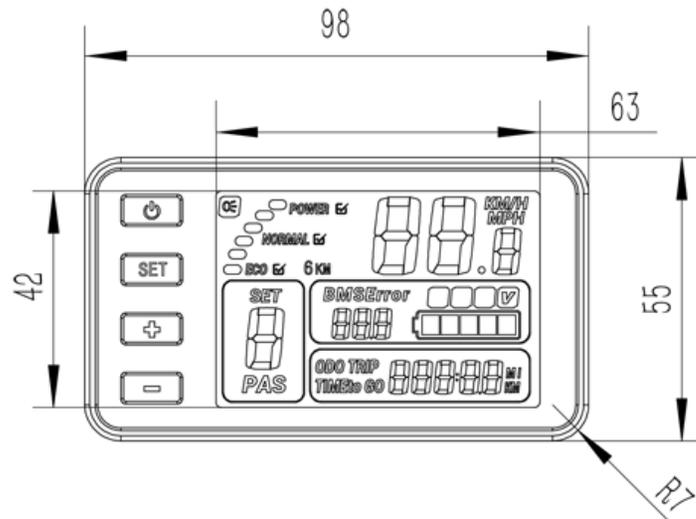
Table of Contents

Display and Controls:

The following displays the buttons on the LCD display of the ibo- C500 model. The display will turn on when the ON/OFF button is pressed.
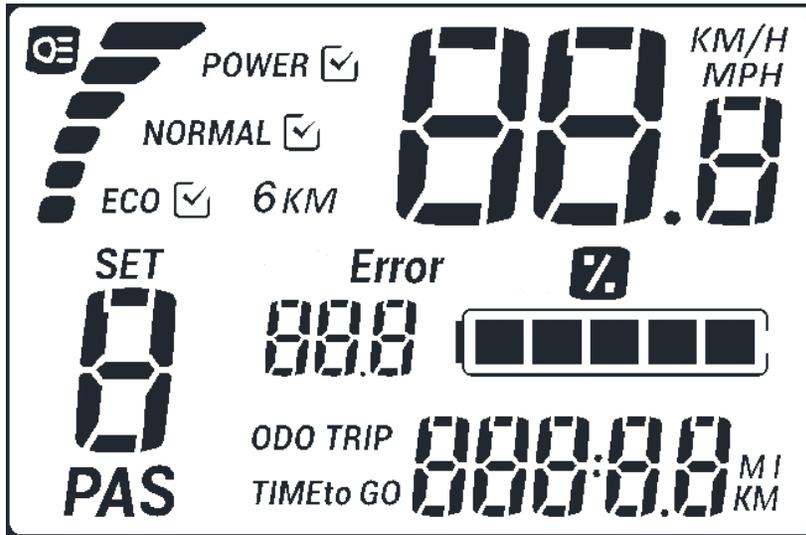
'ON/OFF' : System On / Off & Screen Lighting

'SET' : Options selection & Menu

'UP' : Increase Power Mode & Walk Assist

'DOWN' : Decrease Power Mode

Screen Information

	Speed (KM/H or MPH)
	Assistance Mode Level (0 - 8) Modes, 0 = No Assistance
	Additional Mode Display Mode 0 - 2 = Eco Mode 3 - 5 = Normal Mode 6 - 8 = Power
	Energy Consumption Meter More/Higher bars = Higher Consumption = Less Range
	Walk Assist Indicator Lights up when in walk-assist mode
	LCD Backlight Indicator Turns on when the backlight of the LCD is on
	Error Indicator Lights up with Error Code if there's an error
	Battery Capacity Indicator Shows the remaining capacity of the battery
	Odometer/Trip Distance/Trip Time Shows the corresponding values of the odometer, trip distance, and trip time

Controls

System On and Off

When the system is off, press the 'ON/OFF' button to turn on the system. To turn off the system, press the 'ON/OFF' button for 2 seconds to turn it off. This will only function if the display is connected to the controller and battery. If the display is turned off while riding the battery, it is possible that random values are displayed as the motor generates small powerstreams. If that happens, everything that is shown when the system is not activated can be ignored. The display and system will automatically shut down if the speed is 0 km/h and not used for 10 min.

Selecting Menus

Pressing the 'SET' button allows you to rotate between the following options: odometer (ODO), trip distance (TRIP), distance to go (TRIP to GO), and time to go (TIME to GO).

Odometer

Shows the total distance traveled by the bike since manufacturing.

Trip Distance

Resets whenever the system is turned on or when the user manually resets it via the settings menu. It shows the distance traveled for the current trip.

Distance To Go

The approximate distance the bike can go before running out of battery, based on the current battery capacity level and current motor assistance mode.

Time to Go

The approximate time remaining on the bike before running out of battery, based on the current battery capacity level and current motor assistance mode.

Adjusting Motor Assistance

The 'PLUS' and 'MINUS' buttons will allow the user to select the different motor assistance levels for the bike. This varies from 0 to 8, 8 being the strongest assistance. At level 0, the motor provides no power, but the display of the bike is still usable with all functions available. The battery will run out of power faster when using a higher level than a lower level. Levels 1-5 are appropriate for flat roads, while level 6-8 are much stronger and only meant for hills, slopes, and tough circumstances.

Controlling Walk Assist

Using walk assist of the bicycle helps the user more easily walk the bicycle. When the 'PLUS' button is held down, the '6KM' icon will appear on the display, and the bike will start moving at 6 km/hr. When the 'PLUS' button is released, the walk assist mode will end and the motor will no longer provide the 6 km/hr speed. When using walk assist, keep your hands on the handlebars and the brake lever in case its needed.

Display Backlight

When the system is turned on, pressing the 'ON/OFF' button will toggle the backlight of the display to on or off.

Settings Menu

When the system is turned on, holding down the 'SET' button for over 3 seconds will enter the settings menu. Once inside, there are 2 options, SET 1 and SET 2. Pressing the 'SET' button will switch between them. To exit the settings menu, press and hold the 'SET' button for over 2 seconds.

SET 1: Reset Trip Distance

In the settings menu, option SET 1 is to reset the trip distance to 0, pressing the 'MINUS' button should result in resetting the trip distance to 0.

SET 2: Metric or Imperial Selection

in the settings menu, option SET 2 is to change the units between metric (KM/H) and imperial (MPH), pressing either the 'PLUS' or 'MINUS' buttons will alternate between the 2 settings. Once the desired units are selected, press 'SET' to save the setting.

Error Codes

The following table shows the error codes and their significance in the system. Potential causes and sources serve as a guideline to determining where the error may occur.

Error Code	Description	
1	Current Detection Error	
	Potential Causes:	Internal short circuit, MOSFET failure, current detection failure
	Possible Sources:	Controller
2	Battery Communication Error	
	Potential Causes:	I2C bus failure, poor battery connection
	Possible Sources:	Battery, Controller
3	Battery Cell Voltage Error	
	Potential Causes:	Single cell voltage below 2.56V or above 5.12V
	Possible Sources:	Battery, Controller
4	Temperature Error	
	Potential Causes:	Temperature of battery >50 or <-20C of controller > 80 or < -20C
	Possible Sources:	Battery, Controller
5	Motor Stall	
	Potential Causes:	Motor malfunction causing stalling
	Possible Sources:	Motor, Controller
6	Battery Calibration Error	
	Potential Causes:	Real voltage and read voltage difference larger than 0.1V
	Possible Sources:	Controller
9	Communication Error	
	Potential Causes:	No communication between display and controller
	Possible Sources:	Display, Controller

Firmware Version

Bigstone Firmware: C500_R-Bill05-36V.bigstone