

USER MANUAL

Shifter

ST200

P0117253BR



1. Product Overview

ST200 supports both BLE and 2.4G protocols. It works with other wireless device to offer corresponding function such as eBike display, eBike electronic derailleur.

2. Specification & Introduction

2.1. Specification Parameters

Operation Temperature(°C)	-20~50
Storage Temperature(°C)	-25~55
Waterproof Grade	IPX7
Weight	425g
Indicator	Dual-color single LED
Power Supply	CR1/3N
Button Quantity	3 buttons
Communication	BLE/2.4G
APP	Yes (Magene Factory)
Upgrade	Yes (Magene Factory)

2.2. Indicator Introduction



Indicator	Device status
Green indicator blinks 5 times	Search and connect to other device through BLE
Red indicator blink 1 time	Search and connect to other device through 2.4G

2.3. Button Introduction



One button single press, one button long press, two buttons long press

2.4. Function

1. The shifter is in sleep mode, when press any button, the button will be awake, if red indicator blink 1 time, it searches and connects to other device through 2.4G, if green indicator blinks 5 times, it searches and connects to other device through BLE
2. Once shifter connects with other device, the indicator doesn' t blink anymore even press any button
3. To reduce power consumption, shifter will automatically enter sleep mode in 3 minutes of inactivity
4. Long press “-” and “M” , shifter can enter switch mode which you can switch 2.4G communication and BLE communication through APP “nRF Connect”

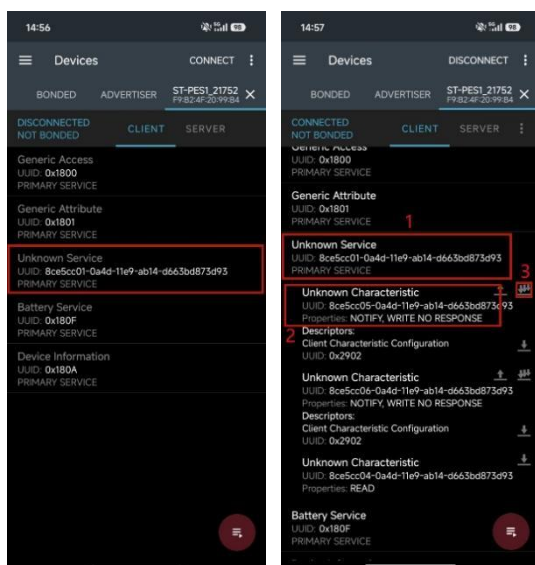
① ST200 is under BLE and switch to 2.4G

- Open APP "nRF Connect" , put phone and ST200 together, find the device with "ST-PES1" character on APP, click "CONNECT"



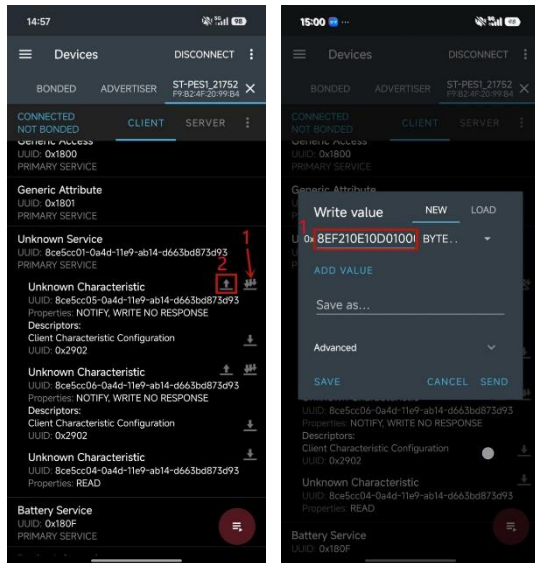
- Find "CLIENT" - "Unknown"

Service" - "8ce5cc01-0a4d-11e9-ab14-d663bd873d93" , click to get inside. Find "Unknown Characteristic" - "8ce5cc05-0a4d-11e9-ab14-d663bd873d93" , click right side three arrows, then you can send message to ST200 and receive message from ST200



- After confirming three arrows icon switch to following icon, then you can send

message to ST200 and receive message from ST200, click the icon just left besides three arrows icon and input "8EF210E10D010000000000" , then click "SEND"



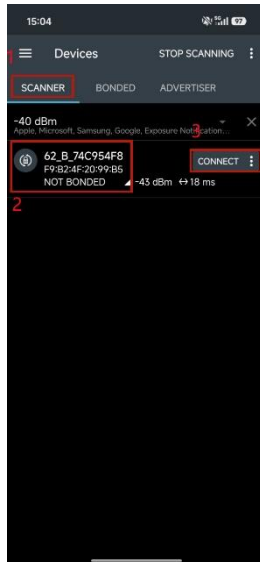
- Click the icon just left besides three arrows icon again and input "8EF210E20200000020000" (Different from up one), then click "SEND"



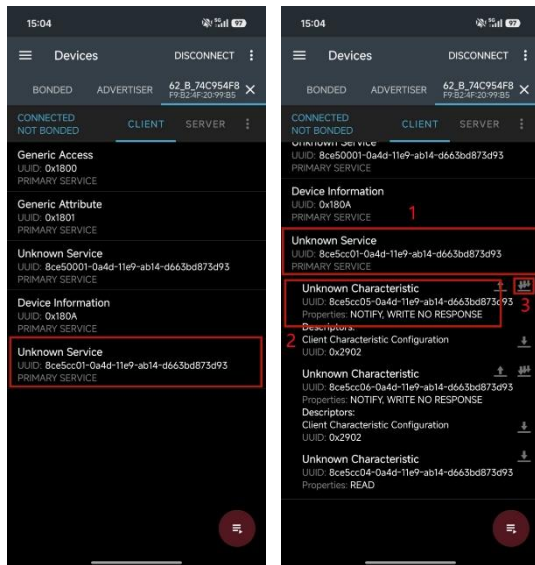
- Click "Z" button on ST200 to check the light status, it' s successfully switched from BLE to 2.4G if the light "Green - 300ms on 300ms off, last 1 minute" , otherwise repeat above operations

② ST200 is under 2.4G and switch to BLE

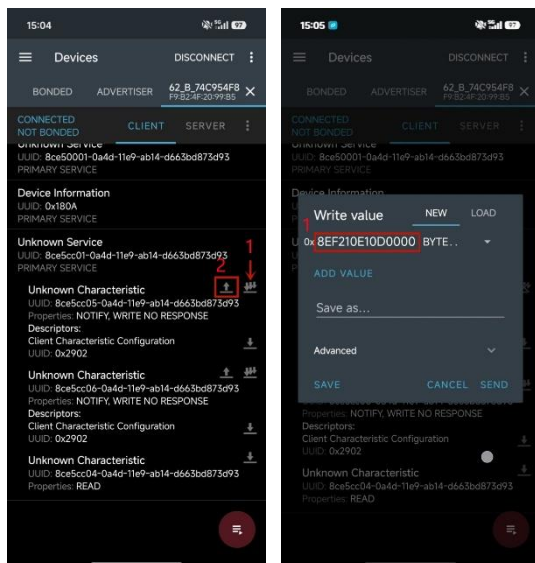
- Long press "X" 10s on ST200 until the light "Red - 100ms on 100ms off, continuous" , release button
- Open APP "nRF Connect" , put phone and ST200 together, find the device with "62_B" character on APP, click "CONNECT"



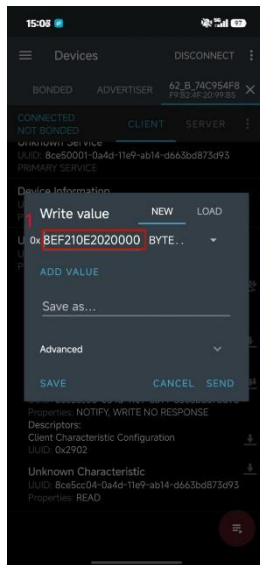
- Find "CLIENT" - "Unknown Service" - "8ce5cc01-0a4d-11e9-ab14-d663bd873d93" , click to get inside. Find "Unknown Characteristic" - "8ce5cc05-0a4d-11e9-ab14-d663bd873d93" , click right side three arrows, then you can send message to ST200 and receive message from ST200



- After confirming three arrows icon switch to following icon, then you can send message to ST200 and receive message from ST200, click the icon just left besides three arrows icon and input "8EF210E10D000000000000" , then click "SEND"



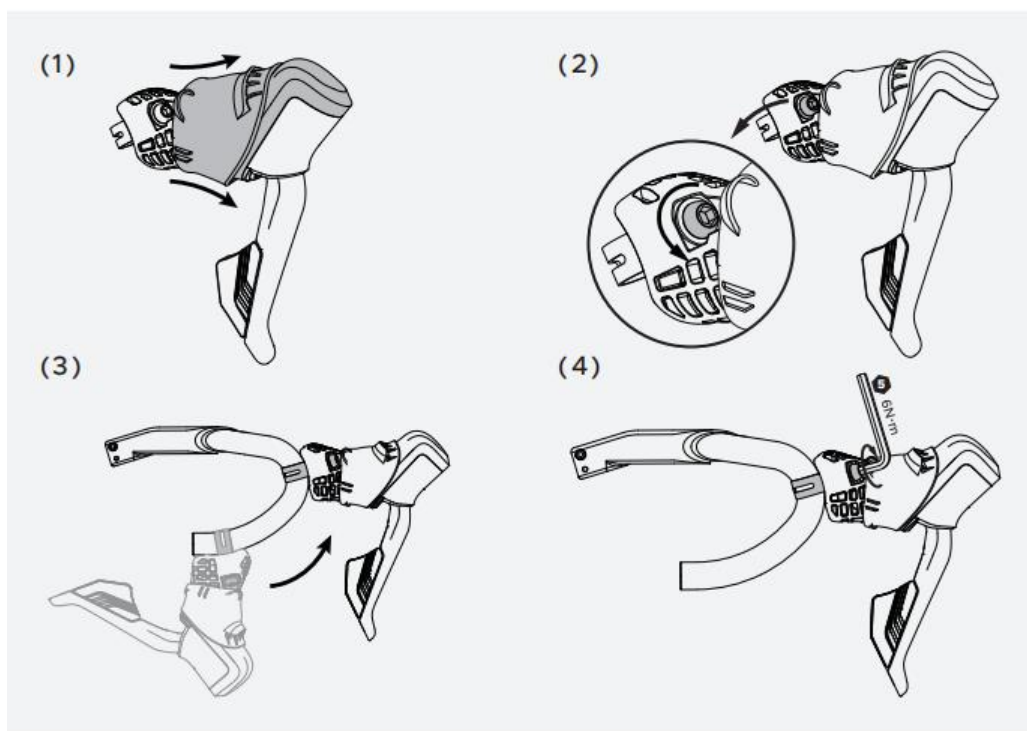
- Click the icon just left besides three arrows icon again and input "8EF210E202000000020000" (Different from up one), then click "SEND"



- Click "Z" button on ST200 to check the light status, it's successfully switched from 2.4G to BLE if the light "Green - 500ms on 500ms off, last 5s" , otherwise repeat above operations

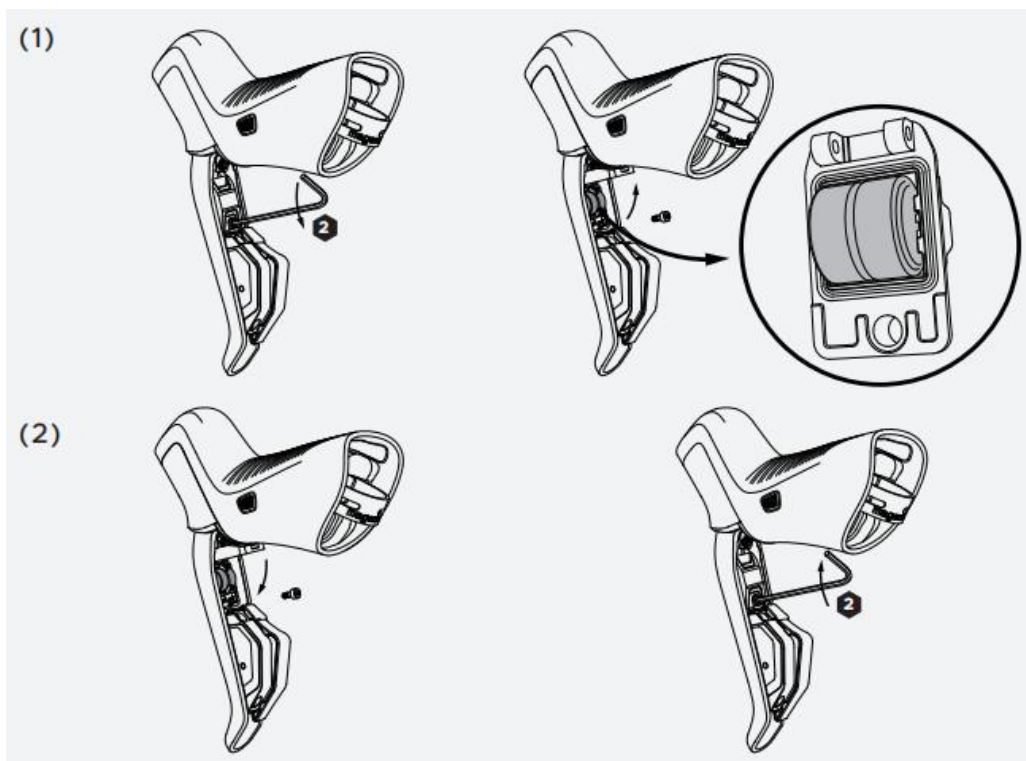
3. Installation

3.1. Install the Shifter



- (1) Firstly, flip the bracket cover from the back according to the direction of the arrow to expose the clamp screw at the top of the shifter
- (2) Loosen the clamp screw appropriately
- (3) Insert shifter into handlebar and adjust the position
- (4) Tighten clamp screw with 5mm hex wrench (6N·m)

3.2. Battery Replacement



- (1) Remove battery cover screw according to arrow direction, open the battery cover upwards and replace battery
- (2) Close the battery cover according to the arrow direction, tighten the battery cover clockwise

■ **WEEE (Waste Electrical and Electronic Equipment) European Directive 2012/19/EU**



This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead,

it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

■ CE Declaration of Conformity

Hereby, Qingdao Magene Intelligence Technology Co., Ltd. declares that this product is in compliance with the Directive 2014/53/U. The full text of the EU declaration of conformity is available at the following internet address: <https://magenefitness.com/certificate.html>

■ FCC Statements

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

■ RF Warning

Qingdao Magene Intelligence Technology Co.,Ltd.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction. Federal Communication Commission (FCC) Radiation Exposure Statement: Power is so low that no RF exposure calculation is needed.