## Swagtron EB7-CONTROLLER

# Swagtron EB7 / EB-7 Plus eBike Brushless DC Motor Controller (Xt60 Quick Disconnect) Instruction Manual

Model: EB7-CONTROLLER

## 1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of your Swagtron EB7 / EB-7 Plus eBike Brushless DC Motor Controller with Xt60 Quick Disconnect. Please read this manual thoroughly before installation and use to ensure proper function and safety.

## 2. SAFETY INFORMATION

- Always disconnect the eBike's battery before performing any installation or maintenance.
- Ensure all connections are secure and correctly matched to prevent electrical damage or malfunction.
- If you are unsure about any installation step, consult a qualified eBike technician.
- Keep the controller dry and protected from moisture.
- Do not attempt to modify the controller or its wiring, as this may void the warranty and create safety hazards.

## 3. PACKAGE CONTENTS

Verify that all components are present in your package:

- 1 x Swagtron EB7 / EB-7 Plus eBike Brushless DC Motor Controller (Xt60 Quick Disconnect)
- *Note: Additional components such as display, throttle, or motor are sold separately or are part of your existing eBike system.*

## 4. INSTALLATION GUIDE

This section outlines the general steps for installing the motor controller. Specific wiring configurations may vary slightly depending on your eBike model. Always refer to your eBike's original wiring diagram if available.

### 4.1 Identifying the Controller

The Swagtron Brushless DC Motor Controller is a silver-colored rectangular unit with multiple wire harnesses extending from one end. It features a label indicating its specifications.



**Image 1:** Swagtron EB7 / EB-7 Plus eBike Brushless DC Motor Controller. The image displays the silver controller unit with numerous colored wires and connectors, including an Xt60 quick disconnect, extending from its side. A label on the controller shows "Brushless DC Motor Controller," "Input Voltage: DC36V," "Min.Voltage: 31±1V," and other technical specifications.

**Important Note:** For Swagtron EB7 / EB-7 Plus eBikes, there are two different connector types. This specific controller features the **Xt60 Quick Disconnect** type. Ensure this matches your eBike's existing wiring before installation.

## 4.2 Connection Steps

1. **Disconnect Power:** Ensure the eBike battery is completely disconnected before starting.
2. **Locate Existing Controller:** Identify the old motor controller on your eBike.
3. **Disconnect Wires:** Carefully disconnect all wires from the old controller. Pay attention to the color coding and connector types.
4. **Connect New Controller:** Connect the new Swagtron controller by matching the corresponding connectors. Common connections include:
   - **Battery Power (Xt60):** Connect the main power cable to the battery. This controller uses an Xt60 quick disconnect.
   - **Motor Phase Wires:** Typically three thicker wires (e.g., green, blue, yellow) connecting to the motor.
   - **Hall Sensor Wires:** A bundle of thinner wires (usually 5 or 6) connecting to the motor's Hall sensors.
   - **Throttle:** Connect the throttle cable.
   - **Brake Levers:** Connect brake lever cut-off switches (if applicable).
   - **Display/Control Panel:** Connect the display unit cable.

- **Pedal Assist Sensor (PAS):** Connect the PAS sensor cable (if applicable).
    - **Lights:** Connect any integrated light cables.

5. **Secure Controller:** Mount the new controller securely in its designated location, ensuring it is protected from physical damage and moisture.

6. **Reconnect Battery:** Once all connections are verified, reconnect the eBike battery.

## 5. OPERATING INSTRUCTIONS

After successful installation, follow these steps to operate your eBike with the new controller.

### 5.1 Powering On and Basic Display Functions

The controller works in conjunction with your eBike's display unit. The video below demonstrates the basic functionality of a compatible display, including power-on, light control, and assist level adjustment.

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**Video 1:** Demonstration of an eBike display unit. A person wearing white gloves operates an eBike display, showing how to power it on, cycle through assist levels, and activate the integrated light. The display shows battery level, speed (km/h), and assist mode. The video also briefly shows the throttle being engaged, causing the speed reading to increase.

- **Power On/Off:** Typically, press and hold the 'M' (Mode) button on the display to power the system on or off.

- **Assist Level Adjustment:** Use the '+' and '-' buttons to cycle through different pedal assist levels (e.g., 0-5). Level 0 provides no motor assistance, while higher levels provide more power.

- **Light Control:** A short press of the 'M' button or a dedicated light button may activate/deactivate the eBike's integrated lights.

- **Information Display:** The display typically shows current speed, battery charge level, assist level, and trip distance.

### 5.2 Throttle Operation

If your eBike is equipped with a throttle, it allows for motor assistance without pedaling. Gently twist or press the throttle to engage the motor. The amount of twist/press typically corresponds to the power output.

## 6. MAINTENANCE

- **Regular Inspection:** Periodically check all wire connections to ensure they are secure and free from corrosion or damage.

- **Cleaning:** Keep the controller and its connections clean and dry. Use a soft, dry cloth to wipe away dust or dirt. Avoid using water or harsh chemicals.

- **Environmental Protection:** Protect the controller from extreme temperatures, direct sunlight, and heavy rain.

## 7. TROUBLESHOOTING

- **No Power to Display/Motor:**
    - Check battery connection and charge level.
    - Ensure all controller connections are firmly seated.
    - Inspect power cables for any visible damage.

- **Motor Not Responding to Throttle/PAS:**
  - Verify throttle and PAS sensor connections.
  - Check for any error codes on the display (e.g., a common issue resolved by replacing the controller).
  - Ensure the assist level is not set to 0.

- **Intermittent Operation:**
  - Inspect all wiring for loose connections or frayed cables.
  - Ensure the controller is not overheating (though this is less common for a new unit).

If troubleshooting steps do not resolve the issue, contact Swagtron customer support or a certified eBike technician.

## 8. SPECIFICATIONS

| Feature | Specification |
|---|---|
| Brand | Swagtron |
| Model Name | EB7-CONTROLLER |
| Input Voltage | DC36V (as per controller label) |
| Minimum Voltage | 31±1V (as per controller label) |
| Material | Aluminum |
| Style | Xt60 - Quick Disconnect |
| Included Components | Motor Controller |

## 9. WARRANTY AND SUPPORT

This Swagtron motor controller comes with a **30-Day Manufacturer Hardware Limited Warranty**. For warranty claims or technical support, please refer to the official Swagtron website or contact their customer service directly.
You can also visit the Swagtron Store on Amazon for additional product information and support resources.

**Related Documents - EB7-CONTROLLER**



[SWAGTRON EB-7 Electric Bike User Manual](#)
Comprehensive user manual for the SWAGTRON EB-7 electric bike, covering setup, operation, safety, maintenance, and specifications. Learn how to ride and care for your eBike.

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| | [SWAGTRON EB-7 Electric Bike User Manual](#)<br>User manual for the SWAGTRON EB-7 electric bike, detailing safety, operation, folding, charging, riding, maintenance, specifications, and warranty information. |
| | [SWAGTRON EB-6 Electric Bike User Manual](#)<br>Comprehensive user manual for the SWAGTRON EB-6 20-inch electric bike, covering safety, assembly, charging, operation, maintenance, specifications, and warranty information. |
| | [Swagtron EB-5 Pro Plus Folding Electric Bike: Warranty, Assembly, and Riding Guide](#)<br>Comprehensive guide for the Swagtron EB-5 Pro Plus folding electric bike, covering its 1-year limited hardware warranty, assembly instructions, safe riding practices, and charging procedures. |
| | [SWAGTRON EB-8 E-Bike User Manual](#)<br>Comprehensive user manual for the SWAGTRON EB-8 E-Bike, covering assembly, safety, operation, maintenance, and specifications. Learn how to fold, unfold, charge, and ride your EB-8 safely. |
| | [SWAGTRON SWAGSKATE NG3 User Manual - Electric Skateboard Guide](#)<br>Official user manual for the SWAGTRON SWAGSKATE NG3 electric skateboard. Learn about features, charging, riding techniques, maintenance, specifications, and warranty information. |