## CMACEWHEEL Y20/KS26/GW20/T20/RX20/GT20/TP26/F26

# CMACEWHEEL Bicycle Controller User Manual

Models: Y20, KS26, GW20, T20, RX20, GT20, TP26, F26

## 1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your CMACEWHEEL Bicycle Controller. This controller is specifically designed for CMACEWHEEL electric bicycles, ensuring optimal performance and compatibility. Please read this manual thoroughly before installation and use to ensure safe and correct operation.

## 2. Safety Instructions

- Always disconnect the battery before performing any installation, maintenance, or repair work on the controller or electric bicycle system.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- Avoid exposing the controller to water, extreme temperatures, or direct sunlight for prolonged periods.
- Do not attempt to open or modify the controller casing. This may void the warranty and cause damage.
- If you are unsure about any installation steps, consult a qualified bicycle technician.
- Keep out of reach of children.

## 3. Product Overview and Features

The CMACEWHEEL Bicycle Controller is a crucial component for your electric bicycle, managing power delivery to the motor and facilitating various functions. This controller is 100% from the CMACEWHEEL factory, guaranteeing authenticity and quality.

Figure 3.1: CMACEWHEEL Bicycle Controller. This image displays the main controller unit with various colored wire harnesses and connectors extending from it, designed for integration into an electric bicycle system.

**Important Note:** Due to variations in controller specifications across different production batches, it is essential to provide photos of your original controller's label and all its plugs after placing your order. This ensures that you receive the correct and compatible replacement or upgrade controller for your specific CMACEWHEEL electric bicycle model.


Figure 3.2: Controller Compatibility Information. This image emphasizes the importance of sending photos of your original controller's label and all connectors to ensure compatibility, as specifications may vary between batches.

## 4. Setup and Installation

Installing the CMACEWHEEL Bicycle Controller requires careful attention to wiring and connections. It is highly recommended that installation be performed by a qualified bicycle mechanic or an individual with experience in electric bicycle electronics.

### 4.1 Pre-Installation Checklist

- Ensure the bicycle's power is completely off and the battery is disconnected.
- Identify the location of the existing controller on your electric bicycle.
- Take clear photos of your original controller's label and all connected plugs before removal. This is crucial for verifying compatibility and correct re-connection.
- Gather necessary tools (e.g., screwdrivers, wire cutters/strippers, electrical tape, zip ties).

### 4.2 Installation Steps

1. Carefully disconnect all wires and plugs from the old controller. Note the position and type of each connection.
2. Remove the old controller from its mounting location.
3. Position the new CMACEWHEEL controller in the same location.
4. Connect the new controller to the electric bicycle's wiring harness. Match each plug type and color to its corresponding connection point. Refer to the photos taken of your original setup. Common connections include:
    - Motor phase wires (usually thicker, often green, blue, yellow)
    - Hall sensor wires (usually thinner, often green, blue, yellow, red, black)
    - Battery power input (red/black)
    - Throttle connection
    - Brake lever cut-off switches
    - Display/meter connection
    - Pedal Assist Sensor (PAS)
5. Once all connections are made, secure the controller in place.
6. Before fully reassembling, briefly connect the battery and perform a quick test to ensure basic functionality (e.g., display powers on, motor responds to throttle).
7. If everything functions correctly, secure all wiring, ensuring no wires are pinched or exposed.

## 5. Operating the Controller

The controller operates automatically once correctly installed and powered. It interprets signals from the throttle, pedal assist sensor, and brake levers to regulate power delivery to the motor. Your electric bicycle's display unit will typically show information related to speed, battery level, and assist mode, all managed by the controller.

- **Power On/Off:** The controller powers on with the bicycle's main power switch, usually located on the battery or display.
- **Throttle Control:** Provides immediate power to the motor based on throttle input.
- **Pedal Assist System (PAS):** Engages motor assistance when you pedal, with varying levels of assistance typically selected via the display.
- **Brake Cut-off:** The controller is designed to cut power to the motor immediately when brake levers are engaged, enhancing safety.

## 6. Maintenance

Proper maintenance extends the lifespan of your controller and ensures reliable operation.

- **Keep Dry:** Protect the controller from moisture and water ingress. While some controllers are water-resistant, none are fully waterproof.
- **Cleanliness:** Periodically clean the exterior of the controller with a dry or slightly damp cloth. Avoid using harsh chemicals.
- **Inspect Connections:** Regularly check all wire connections to ensure they are secure and free from corrosion or damage.
- **Avoid Overheating:** Ensure the controller has adequate ventilation, especially during prolonged use or in hot weather.

## 7. Troubleshooting

If you encounter issues with your CMACEWHEEL controller, refer to the following common problems and solutions:

| Problem | Possible Cause | Solution |
|---|---|---|
| Motor not responding / No power | Battery low or disconnected; Loose power connections; Faulty display/throttle. | Check battery charge and connection. Inspect all power cables. Test display/throttle if possible. |
| Erratic motor behavior | Loose motor phase or Hall sensor wires; Water ingress in controller. | Check all motor connections. Ensure controller is dry. |
| Display not turning on | Controller not receiving power; Faulty display connection. | Verify battery connection to controller. Check display cable connection. |
| Brakes not cutting motor power | Faulty brake cut-off sensor/switch; Loose brake lever connection. | Inspect brake lever wiring and sensor functionality. |

If the problem persists after attempting these solutions, please contact CMACEWHEEL customer support for further assistance.

## 8. Specifications

| Attribute | Detail |
|---|---|
| Brand | CMACEWHEEL |
| Manufacturer | CAMCEWHEEL |
| Compatible Models (Style) | Y20, KS26, GW20, T20, RX20, GT20, TP26, F26 (Specifically listed as "For KS26" in specifications, but compatible with others as per product title) |
| Main Material | Aluminum |
| Color | Silver |
| Included Components | Controller |
| ASIN | B0CJMQV3TL |
| Date First Available | September 22, 2023 |

## 9. Warranty and Support

Specific warranty details for the CMACEWHEEL Bicycle Controller are not provided in this manual. For information regarding warranty coverage, terms, and conditions, please refer to the product packaging or contact CMACEWHEEL directly through their official website or customer service channels.

For technical support, troubleshooting assistance beyond what is covered in this manual, or inquiries about replacement parts, please reach out to CMACEWHEEL customer support. When contacting support, please have your product model

(Y20/KS26/GW20/T20/RX20/GT20/TP26/F26) and ASIN (B0CJMQV3TL) ready.