

Haueypf BLDC30A-S966

Haueypf 36V 48V Ebike Controller Kit Instruction Manual

Model: BLDC30A-S966
Brand: Haueypf

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Haueypf 36V 48V Ebike Controller Kit. This kit includes a 750W-1000W 30A brushless motor controller and an S966 color LCD display. Please read this manual thoroughly before use to ensure proper function and safety.

2. PRODUCT FEATURES

- **Outstanding Performance:** Crafted with professional technology and premium materials, this brushless motor controller offers powerful torque, strong climbing capability, robust power, steady speed, and low noise.
- **Intelligent Protection Systems:** Features overcurrent, undervoltage, and overheating protection to extend motor and battery lifespan, save energy, and ensure efficient, reliable motor performance.
- **Wide Compatibility (3-Mode Sine Wave Controller):** Sensitively controls braking and direction changes. Compatible with both Hall sensor and sensorless brushless motors. Engages sine wave control with functional Hall sensors; switches to square wave mode if Hall sensors fail or are absent, ensuring seamless motor operation.
- **Smart Ebike Color LCD Display (S966):** Bright, clear, large screen for easy reading of riding speed, battery level, cruise control, and assist levels. Customizable display panel. Equipped with NFC key card unlocking and password protection (default initial password: "2023") for enhanced security.
- **Efficient Heat Dissipation:** The controller features an aluminum alloy grooved housing designed for rapid heat dissipation, ensuring stable performance.

3. SPECIFICATIONS

Feature	Specification
Voltage	36V, 48V, 52V, 60V (Controller) / 48V (Product Listing)
Power	750W-1000W
Current	30A ± 1
Mosfet	12 Mos
Brakes	Low Level
Type	Brushless DC
Controller Weight	Approx. 450g
Controller Size	5.79 x 2.24 x 1.30 inches (147 x 57 x 33 mm)
Display Model	S966
Display Shell Material	ABS
Display Gear Mode	1-3
Display Net Weight	300g
Display Matching Voltage	24V/36V/48V
Display Waterproof Grade	IP65
Material Type	Aluminum (Controller Housing)

Note: Due to manual measurement, slight variations (1-3 mm) in controller dimensions may occur.

4. WHAT'S IN THE BOX

- 1 × Ebike Brushless Controller
- 1 × S966 LCD Display

5. SETUP & INSTALLATION

Proper installation is crucial for the safe and efficient operation of your ebike controller kit. Follow these steps carefully.

5.1. Wiring Diagram

Refer to the detailed wiring diagram below to identify each connector and ensure correct connections. Different manufacturers may use varying connectors; if your controller's connectors do not match, professional assistance may be required to adapt them. If wire colors differ, adjust the wiring sequence per the definitions provided.

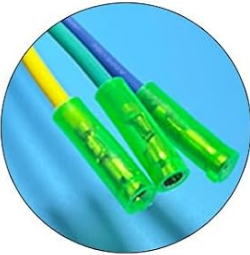
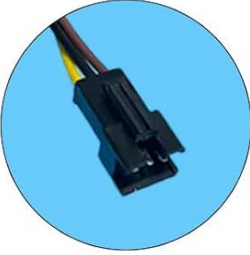
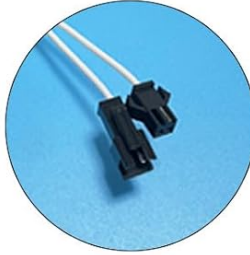
 motor phase female bullet connector	 motor hall 6-Pin (2x3) female connector	 throttle 3-Pin female connector
 lcd display 5-Pin male connector	 light power 2-Pin male connector	 battery XT60 male connector
 PAS 3-Pin male connector	 2× brake 2x2-Pin female connector	 self-learning 2x1-Pin SM connector

Image: Detailed wiring diagram for the Haeweypf ebike controller kit.

5.2. Installation Steps

1. Step 1: Connect the Battery and Motor

- Connect the controller power wire to the battery. **Caution: Ensure correct positive and negative pole connections.**
- Connect the controller to the motor. The motor phase wires and motor Hall wires should be connected one by one. If no Hall sensor wires are present, leave them unconnected.
- Connect the controller to the instrument (display).

After completing these three steps, proceed to use the self-learning wire to match the motor.

2. Step 2: Self-learning Motor Matching

(Self-learning is valid within 2 minutes of startup. It needs to be turned off and restarted after more than 2 minutes.)

- Power on the meter (long press the power button of the meter for 3 seconds to power on).

- Locate the two white self-learning wires on the controller and plug them into each other. **Note: The motor will rotate after the self-learning wires are plugged in. The motor wheel must be suspended beforehand to prevent speeding.**
- Allow the motor to rotate for 10 seconds, then directly disconnect the two self-learning wires from each other. Do not turn off or power off the system during this process.

After completing the above steps, the motor matching is complete. The test motor can now be connected to the throttle. For other functions, connect according to the definition of the controller socket (unneeded functions can be left blank), ensuring no incorrect connections.

Product Installation Steps

Step1. Connect the battery and motor	1.1 The controller power wire is connected to the battery. (Be careful not to connect the positive and negative poles incorrectly) 1.2 The controller is connected to the motor. (The motor phase wire and the motor Hall wire should be connected one by one, If no Hall sensor wires, leave unconnected.) 1.3 The controller is connected to the instrument. ★ After completing the above 3 steps, you can use the self-learning wire to match the motor.
Step2. Self-learning matching motor	(self-learning is valid within 2 minutes of starting up, and it needs to be turned off and restarted after more than 2 minutes) 2.1 Power on the meter. (long press the power button of the meter for 3 seconds to power on) 2.2 Find the two white self-learning wires on the controller, and plug the two white wires into each other. (★ Note that the motor will rotate after the self-learning wires are plugged in, and the motor wheel must be suspended beforehand to prevent speeding!) 2.3 Let the motor rotate for 10 seconds and then directly disconnect the two self-learning wires from each other. Do not turn off or power off! ★ After completing the above 3 steps, the motor matching is completed, and the test motor can be connected to the throttle. ★ For other functions, please connect according to the definition of the controller socket (unneeded functions can be left blank), and cannot be wrongly connected.

Image: Product Installation Steps for the controller and display.

5.3. Self-learning Wire Guide

The self-learning wires are essential for initial setup to ensure compatibility between the controller and your motor.

Guide to the Self-learning Wire of the Controller

When using this product for the first time, connect the two self-learning wires and wait for about 10 to 20 seconds to match your motor. (1) If the motor rotates forward, the self-learning is completed, then disconnect the self-learning wires. (2) If the motor doesn't work, rotates in reverse, or makes noise, please disconnect the self-learning wires first, and then reconnect them, the motor will rotate forward.

Finally, the self-learning wires should not be connected all the time. After the self-learning is completed, they need to be disconnected to prevent the motor from learning again when it starts next time.



Step 1: connect



Step 2: detach

Note: It must be disconnected after the self-learning is completed!

Image: Guide to the Self-learning Wire of the Controller.

- **Purpose:** To match a replacement controller with your motor's internal phase and Hall wire sequences, resolving compatibility issues.
- **Usage:** Connect the two white self-learning wires together. If the motor rotates forward, the self-learning is complete; disconnect the wires. If the motor doesn't run, spins backward, or makes buzzing noises, disconnect and reconnect the wires to restart pairing.
- **Duration:** Keep connected for approximately 10 seconds during the learning process.
- **Disconnection:** The self-learning wires must be disconnected after the self-learning process is completed. Never leave them connected permanently.

5.4. Installation Video Guide

For a visual guide on the installation process, please watch the official video below:

Video: Installation steps for the 30A 750W/1000W Brushless Controller. This video demonstrates the connection process and self-learning procedure.

6. OPERATING INSTRUCTIONS (S966 LCD DISPLAY)

The S966 color LCD display provides comprehensive information and allows for various settings adjustments.

6.1. Display Overview and Key Operations

The display shows key riding data and allows interaction via three buttons: Plus key, M key, and Minus key.

S966 LCD Display Operation Guide

The diagram illustrates the S966 LCD display with the following components labeled:

- Battery level:** Indicated by a bar graph at the top left.
- Light:** Indicated by a headlight icon.
- Multi-Functions Area (ODO/TRIP AVG/MAX):** Located at the bottom left, showing trip and speed data.
- Riding speed:** The central speedometer and digital display showing km/h and mph.
- Vehicle mode:** Includes SPORT, STD, and ECO modes, with a legend: SPORT: Sport mode, STD: Standard mode, ECO: Economical mode.
- Assist gear:** Indicated by a gear icon and the word GEAR.

Key Operations Manual

The control buttons are labeled: Plus key, M key, and Minus key.

- Switch Assist Level:** On the home interface, press the Plus key or Minus key.
- Switch Displayed Items in Multi-Function Area:** On the home interface, press M key to switch among total range (ODO), single trip range (TRIP), etc.
- Turn On the Front Light:** Long press the Plus key to turn on/off the front light.
- Turn On/Off the Display:** Long press the M key to turn on/off the display.
- Setting Menu:** Long press Plus and Minus key together to enter the setting interface. In Setting interface, press Plus or Minus key to adjust the item value, press M key, the display will save the new parameter and switch to next item. e.g. P01→P02. Long press Plus and Minus to exit setting menu.
- Turn On 6km/h Walk Assist Mode or Cruise:** When the vehicle is parked, long press Minus key to enter 6km/h walk assist mode. To exit, normally release the key.
- Display 3 Types of Speed:** Real-time speed (CUR), maximum speed (MAX), average speed (AVG). Long press M key and Plus key to switch among 3 types of displayed speed.

Image: S966 LCD Display Operation Guide.

- **Switch Assist Level:** On the home interface, press the Plus key or Minus key.
- **Switch Displayed Items in Multi-Function Area:** On the home interface, press the M key to switch among total range (ODO), single trip range (TRIP), average speed (AVG), maximum speed (MAX), riding time, and current battery voltage.
- **Turn On the Front Light:** Long press the Plus key to turn on/off the front light.
- **Turn On/Off the Display:** Long press the M key to turn on/off the display.
- **Setting Menu:** Long press Plus and Minus keys together to enter the setting interface. In the setting interface, press

Plus or Minus key to adjust the item value. Press M key to save the new parameter and switch to the next item. Long press Plus and Minus to exit the setting menu.

- **Turn On 6km/h Walk Assist Mode or Cruise:** When the vehicle is parked, long press the Minus key to enter 6km/h walk assist mode. To exit, normally release the key.
- **Display 3 Types of Speed:** Real-time speed (CUR), maximum speed (MAX), average speed (AVG). Long press M key and Plus key to switch among these 3 types of displayed speed.

6.2. Parameter Settings (P-Settings)

The display menu provides a total of 20 parameters (P01-P20) for configuration. Access these settings by long-pressing the Up and Down keys simultaneously.

product model: S966

product shell: ABS

gear mode: 1-3

net weight: 300g

matching voltage: 24/36/48v

waterproof grade: IP65



Meter "P" Parameter Setting Info

Press "Plus" and "Minus" key together 3seconds to enter the setting interface; Press "M" key to save the new parameter and switch to next item; press Plus or Minus key to adjust the value +1 or -1.

P01: Backlight Brightness (1: darkest; 3: brightest)

P02: Mileage Unit (0: KM; 1: MILE)

P03: Voltage Level: 24V /36V (default) / 48V

P04: Auto-Off Time (0~60, 0: never, other values mean Auto-Off interval) Unit: minute

P05: Assist Level: Normally 3 types available: 3/5/9 Levels

P06: Wheel Size. Unit: inch Precision: 0.1

P07: Magnetic Steel Number for Speed Test. Range: 1-100

P08: Speed Limit: Range: 0-50km/h, parameter 50 indicates no speed limit.

P09: Zero / Non-zero Start Setting:

0: Zero Start (direct start when throttle turns)

1: Non-zero Start (kick to start)

P10: Drive Mode Setting

0: Pedal Assist Only

1: Throttle Only

2: Pedal Assist+Throttle

P12: Assist Power Intensity Range: 0-5

P13: PAS Sensor Magnet Steel Number: 5 / 8 / 12pcs

P14: Current Limit Value: 12A by default; Range: 1-20A

P15: Unspecified

P16: ODO Zero-Out: Long press the upper key for 5 seconds and ODO value will be cleared.

Note: We are sending a standard manual, and if the version is different, the functionality will be different.
Due to manual measurement, there may be an error of 1 to 3 millimeters



Two NFC Inductive Switches

Image: Meter "P" Parameter Setting Info.

Parameter	Description	Range/Default
P01	Backlight Brightness	1 (darkest) - 3 (brightest)
P02	Mileage Unit	0: KM; 1: MILE
P03	Voltage Level	24V/36V (default) / 48V
P04	Auto-Off Time	0-60 (minutes); 0 means never auto-off
P05	Assist Level	Normally 3 types available: 3/5/9 Levels
P06	Wheel Size Unit	Inch, Precision: 0.1
P07	Magnetic Steel Number for Speed Test	Range: 1-100
P08	Speed Limit Range	0-50km/h; parameter 50 indicates no speed limit
P09	Zero / Non-Zero Start Setting	0: Zero Start (direct start when throttle turns); 1: Non-Zero Start (kick to start)
P10	Drive Mode Setting	0: Pedal Assist Only; 1: Throttle Only; 2: Pedal Assist + Throttle
P11	Assist Power Intensity	Range: 0-5
P12	PAS Sensor Magnet Steel Number	5 / 8 / 12pcs
P13	Current Limit Value	12A by default; Range: 1-20A
P14	Unspecified	
P15	ODO Zero-Out	Long press the upper key for 5 seconds to reset ODO value.

6.3. NFC Key Card Unlocking

The S966 display is equipped with NFC key card unlocking for enhanced security. The default initial password is "2023" if using password unlock.

S966 Smart Display Details

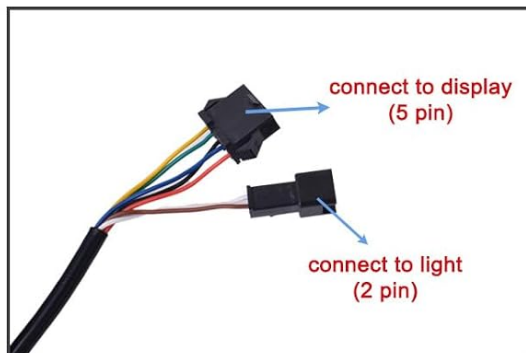


NFC Inductive Switch

- 1 NFC near meter center: auto power on.
- 2 Long-press M key, enter **initial password** "2023" to power on.

Independent Setting Key

- Three keys: Plus key, M key, Minus key.
- Display cable length: 1690mm/66.53in.



SM connector (5pin+2pin)

- ◆ RED(VCC): Panel Power Cord
- Blue(K): Controller Power Cord
- Black(GND): Panel Ground Wire
- Green(RX): Panel Data Receiving Wire
- Yellow(TX): Panel Data Sending Wire
- ◆ Brown (DD): The Positive Electrode of the Light
- White (GND): The Negative Electrode of the Light

Image: S966 Smart Display Details, including NFC key card information.

- **NFC Inductive Switch:** Auto power on when an NFC card is brought near the meter center.
- **Password Unlock:** Long-press the M key, then enter the initial password "2023" to power on.
- Two NFC cards are provided: one for daily use, and the other as a backup.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your ebike controller kit.

- Keep the controller and display clean and dry. Avoid exposure to excessive moisture or direct water spray.
- Periodically check all wire connections to ensure they are secure and free from corrosion.
- Inspect the controller housing for any signs of damage or overheating.
- Ensure the display screen is free from scratches or cracks that could impair visibility.

- If any components appear damaged or worn, consult a professional for repair or replacement.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your ebike controller kit.

Common Questions

01 Why is the speed not showing or inaccurate on the display?

The speed display is related to the settings of Parameter P06 and P07. P07 sets the motor's magnet count. If unsure of the correct value, adjust it incrementally until the speed shown on the display closely matches your GPS speed. This indicates the setting is accurate.

02 Why is the throttle or PAS not responding?

Please check the display settings: Set parameter P10 to 2 to enable both the throttle and PAS. For the PAS type, set P13 to 5 or 8 for a single Hall sensor, or to 12 for a dual Hall sensor. If acceleration feels too slow with the throttle, you may increase the assist gear for stronger power output.

03 What types of e-bike motors is the product compatible with?

This three-mode sine wave controller is compatible with both motors equipped with Hall sensors and Hall sensorless motors or those with faulty Hall sensors.

04 Why is self-learning required after initial controller replacement?

To ensure proper matching of phase and Hall signal parameters between the newly installed controller and your e-bike motor, the self-learning process is essential. If you skip it, the motor may fail to rotate, run in reverse, or vibrate abnormally, making it unusable.

05 Why connect the throttle after self-learning is finished?

It is not recommended to connect the throttle during self-learning, as it may interfere with the controller's learning process, cause matching failure, and result in unresponsive throttle operation afterward.

06 How to troubleshoot the E07 error code?

E07 is a motor fault code. Please check if the motor phase wires and Hall sensor wire connectors are loose, and then perform the controller self-learning process again. Skipping self-learning can cause parameter mismatch and trigger E07.



About Controller Hardware Compatibility Issues

Before ordering, please ensure the controller's wiring harness has all necessary connectors and is compatible with your bike's wiring configuration — including connector types for all components. If any connectors do not match, you may need to strip and splice wires.



Please confirm product size before ordering

The meter's mounting hole is 0.87 in, fitting 0.87 in handlebars. The controller dimensions are 5.8 × 2.2 × 1.3 in (L×W×H). Please verify it fits within your vehicle's frame.

Image: Common Questions and Error Code Troubleshoot.

8.1. Common Questions

• Q1: Why is the speed not showing or inaccurate on the display?

A1: The speed display is related to parameters P06 (Wheel Size) and P07 (Magnetic Steel Number). If unsure of the correct value, adjust it incrementally until the speed shown on the display closely matches your GPS speed. This indicates the setting is accurate.

• Q2: Why is the throttle or PAS not responding?

A2: Check the display settings: Set parameter P10 to 2 to enable both throttle and PAS. For the PAS type, set P13 to 5 or 8 for a single Hall sensor, or to 12 for a dual Hall sensor. If acceleration feels too slow with the throttle, you

may increase the assist gear for stronger power output.

• **Q3: What types of e-bike motors is the product compatible with?**

A3: This three-mode sine wave controller is compatible with both motors equipped with Hall sensors and Hall sensorless motors, or those with faulty Hall sensors.

• **Q4: Why is self-learning required after initial controller replacement?**

A4: To ensure proper matching of phase and Hall signal parameters between the newly installed controller and your e-bike motor, the self-learning process is essential. Skipping it may cause the motor to fail to rotate, run in reverse, or vibrate abnormally.

• **Q5: Why not connect the throttle after self-learning is finished?**

A5: It is not recommended to connect the throttle during self-learning, as it may interfere with the controller's learning process, cause matching failure, and result in unresponsive throttle operation afterward.

8.2. Error Code Troubleshoot (S966 Display)

Code	Indication
0	Normal
1	Reserved
2	Brake
3	Power Sensor Error (riding mark)
4	Reserved
5	Reserved
6	Low Battery Voltage
7	Motor Error
8	Throttle Error
9	Controller Error
10	Communications Receiving Error
11	Communications Sending Error
12	BMS Communications Error
13	Light Error

9. SAFETY INFORMATION

Always prioritize safety when installing and operating electrical components on your ebike or scooter.

- Ensure the power is disconnected from the battery before performing any installation or maintenance.
- Double-check all wiring connections to prevent short circuits or damage to components.
- If you are unsure about any part of the installation, seek assistance from a qualified technician.
- Do not modify the controller or display in any way not described in this manual.

- Keep the product away from children.

10. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the product packaging or contact Haeweypf customer service directly. Ensure you retain your proof of purchase for any warranty claims.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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