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› BAFANG 48V 250W Mid-Motor with EKD01 E-bike Display Instruction Manual

BAFANG BBS01B

BAFANG 48V 250W Mid-Motor with EKD01 E-bike Display Instruction Manual

INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your BAFANG 48V 250W Mid-Motor kit, featuring the BBS01B motor and EKD01 E-bike display. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and safety.

BAFANG**CAN BBS01B 48V250W**Front Lamp
ConnectorRear Lamp
ConnectorSpeed Sensor
ConnectorBattery
communicationBattery
Connector1T4
ConnectorGear Shift
Sensor ConnectorMotor
48V250WMax Torque
80N.mMax Speed
25KM/HWeight
3.8KGPure Electric
ModePedal Assisted
ModeWalking Assisted
ModePhysical Riding
Mode

Image: Overview of the BAFANG 48V 250W Mid-Motor, highlighting its compact design and various connection points for the speed sensor, battery, 1T4 cable, front lamp, rear lamp, and gear shift sensor.

PRODUCT FEATURES

- **BAFANG 250W 48V BBS01B Motor Kit:** Delivers 80 N.m maximum torque and a top speed of 25 km/h, suitable for daily commutes and recreational rides.
- **48V 20Ah Compact Battery:** Provides 960Wh with 4800 mAh L*/G-cells. Weighs 5.0 kg and measures 365 × 85 × 107 mm, designed to fit various bike frames. Features vents, a decompression valve, IP-67 certification, and a Type-C port for charging devices. Includes clamp fastening, an external fuse, and a screw-off port for maintenance.
- **EKD01 LCD Display:** Equipped with 9 adjustable languages, navigation functions, and a Type-C charging port. Compatible with handlebars of Ø22.2/25.4 mm.
- **Strong Compatibility:** This BAFANG bottom bracket is suitable for aluminum alloy bicycles with a bottom bracket measuring 68–73 mm in length and 33.5–36 mm inner diameter, adhering to the JIS standard. It is designed for bikes with chain shifting systems and disc or V-brakes. Not recommended for carbon fiber bicycles.
- **Easy Installation:** The kit includes an installation manual and necessary tools such as a wrench, crank puller, and bottom bracket removal tool. Installation requires removing the existing bottom bracket and crankset.

SETUP AND INSTALLATION

The BAFANG mid-motor kit is designed for straightforward installation. Ensure your bicycle's bottom bracket dimensions (68-73mm length, 33.5-36mm inner diameter) are compatible. The process involves removing your bike's existing bottom bracket and crankset, then mounting the BAFANG motor and connecting the components.

BBS CONNECTION AND INSTALLATION



Image: Exploded view diagram illustrating the connection and installation steps for the BBS mid-motor, including the bottom bracket, chainring, cranks, and various sensors and cables.

The kit includes all necessary tools for installation. Follow the provided installation manual carefully. Ensure all connections are secure and properly routed. The default chainring is 44T, but other sizes (36T, 42T, 52T) are optional and may require different offsets.

OPTIONAL CHAINRING & BRAKE SYSTEM



BBS 44T will be sent by default



36T
(without Chain Guard)



42T
(without Chain Guard)



44T
(with Chain Guard)



52T
(with Chain Guard)

Hydraulic Brake Sensors

(DE/ES/IT/SE/NL/BE)



● Shift integrated brake handle



● Hydraulic Disc Brake

Mechanical Brake Levers

(FR/UK)



● Mechanical disc brakes



● Rim V brake

Image: Details on optional chainring sizes (36T, 42T, 44T, 52T) and their offsets, along with compatible brake systems including hydraulic brake sensors, shift-integrated brake handles, hydraulic disc brakes, mechanical disc brakes, and rim V-brakes.

OPERATING INSTRUCTIONS

The EKD01 LCD display serves as your control center for the BAFANG mid-motor system. It provides essential information and allows you to adjust settings for your ride.



CAN Connector



Screen
2.4" IPS



USB
✓



PAS Level
3, 5, 9



Applicable voltage
24V/36V/48V/52V



Support App
✓



Language
Support English, Français,
Deutsch, Español, Italiano, Polski,
Netherlands, čeština, Chinese



Display Holder Size
φ25.4mm/φ22.2mm

Image: The EKD01 display, featuring a 2.4-inch IPS screen, USB port, 3/5/9 PAS levels, and support for multiple languages including English, French, German, Spanish, Italian, Polish, Dutch, Czech, and Chinese. It also shows a CAN connector.

- **Power On/Off:** Press and hold the power button on the display to turn the system on or off.
- **Assistance Levels:** Use the '+' and '-' buttons to cycle through the 3, 5, or 9 pedal assistance (PAS) levels, adjusting the motor's power output.
- **Information Display:** The screen shows current speed, battery level, trip distance, total distance, and other relevant riding data.
- **Settings:** Access the settings menu to change units (km/h or mph), adjust backlight brightness, set wheel size, and select display language.
- **USB Charging:** The integrated Type-C port allows you to charge small electronic devices while riding.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your BAFANG mid-motor system. Pay particular attention to the battery and electrical connections.

VARSTROM BATTERY PARAMETER



Voltage/Current	Energy
48V 20Ah	960Wh
BMS	Battery Cell
30A	L-G 21700 4800mAh
Cell Arrangement	Discharge Port
13S4P 52PCS	6PIN Blade
Cycle Life (Time)	Installation Position
1000 Times	Downtube
Weight	Battery Charger
5KG (11.02LBS)	54.6V 3A
Charger Port	
DC2.1	



SIZE:365*85*107MM

Image: Specifications for the VARSTROM 48V 20Ah Downtube Battery, including voltage/current (48V 20Ah), energy (960Wh), BMS (30A), battery cell type (L-G 21700 4800mAh), cell arrangement (13S4P 52PCS), discharge port (6PIN Blade), cycle life (1000 times), installation position (Downtube), weight (5kg), charger (54.6V 3A), and charger port (DC2.1). Dimensions are 365mm x 85mm x 107mm.

- **Battery Care:** Charge the battery regularly, even when not in use, to maintain its health. Avoid fully discharging the battery. Store the battery in a cool, dry place. The external fuse and screw-off port facilitate maintenance.
- **Motor Inspection:** Periodically check the motor for any loose bolts or unusual noises. Keep the motor housing clean.
- **Electrical Connections:** Ensure all cables and connectors are clean, dry, and securely fastened. Avoid exposing connectors to excessive moisture.
- **General Bike Maintenance:** Continue with regular bicycle maintenance, including chain lubrication, brake checks, and tire pressure monitoring.

TROUBLESHOOTING

If you encounter issues with your BAFANG mid-motor kit, refer to the following common troubleshooting steps. For more

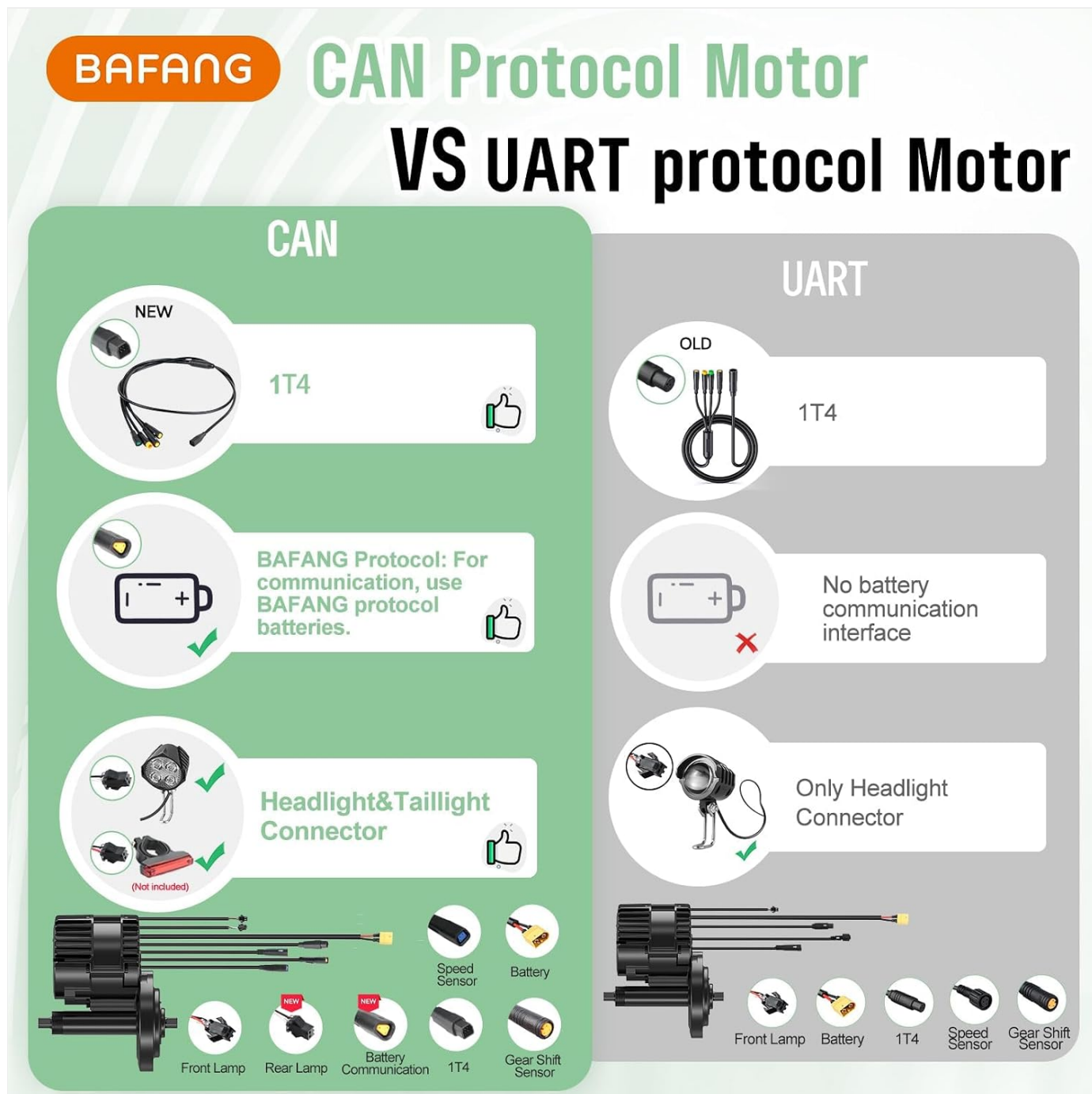


Image: A comparison diagram showing the differences between BAFANG CAN Protocol and UART Protocol motors. The CAN protocol motor features new 1T4 cables, BAFANG protocol for battery communication, and connectors for both headlight and taillight. The UART protocol motor uses older 1T4 cables, lacks battery communication, and only has a headlight connector.

- **Motor Not Engaging:**

- Check battery charge level.
- Ensure all electrical connections are secure, especially the main battery connector and motor cables.
- Verify the display is powered on and showing no error codes.
- Confirm the correct protocol (CAN or UART) is used for your motor and battery. The provided kit uses CAN protocol.

- **Display Not Working:**

- Check the display cable connection to the motor.
- Ensure the battery is charged and connected.

- **Reduced Power/Range:**
 - Battery may not be fully charged or is aging.
 - Check tire pressure.
 - Ensure no mechanical drag (e.g., rubbing brakes).
- **Unusual Noises:**
 - Inspect the motor and chainring for any obstructions.
 - Check for loose components.

SPECIFICATIONS

Feature	Specification
Brand	BAFANG
Model Name	BBS01B
Motor Type	Mid-Motor
Motor Power	250W
Voltage	48V
Max Torque	80 N.m
Max Speed	25 km/h
Battery Capacity	48V 20Ah (960Wh)
Battery Cell Type	L-G 21700 4800mAh
Battery Weight	5.0 kg
Display Model	EKD01 LCD Display
Display Screen Size	2.4 inch IPS
Display Languages	9 (English, French, German, Spanish, Italian, Polish, Dutch, Czech, Chinese)
Bottom Bracket Compatibility	68-73mm length, 33.5-36mm inner diameter (JIS standard)
Frame Material Compatibility	Aluminum alloy (not recommended for carbon fiber)
Brake Style Compatibility	Disc brakes, V-brakes
Included Components	44T chainring (offset: 6.5 mm), 48V20Ah Downtube-battery, BAFANG 48V 250W motor kit, EKD01 Multilingual Screen, Mechanical brake levers

WARRANTY AND SUPPORT

This BAFANG product comes with a limited warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or contact the seller. For technical support or assistance with installation and troubleshooting, please reach out to your authorized BAFANG dealer or the point of purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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.

Submit question