



**TRUSTMADE**

**E-bike Owner's Manual**



**Model: 4OR05EB0021**

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**IMPORTANT:** Read all instructions before use. Retain instructions for future reference.

**WARNING:** Basic safety precautions should always be observed when using an electrical appliance to reduce the risk of fire, electrical shock or serious injury.

# 1. Safety Notes

## 1.1 Personal Safety:

This e-bike is intended for use on paved roads or paths only. Using the e-bike for any other purpose may result in serious injury. Before you ride this e-bike in a busy area or on public roads, practice riding in a safe area free of hazards. Take time to learn the e-bike's controls and power. It is your responsibility to identify and follow all local laws and regulations, including fitting your e-bike with any additional equipment necessary to comply with local laws. At night your e-bike **MUST** have the white front beam splitter reflector and red rear beam splitter reflector lit. It **MUST** also be fitted with a red rear, amber pedal reflectors and two white diamond wheel lights. Use caution when loading your e-bike into a car or when mounting it on a bicycle carrier. Please pay attention to:

- Don't lend electric bicycles to people who can't control them to avoid injury
- Do not park in the building foyer, evacuation stairs, walkways and safety exits
- Do not charge and park in residential buildings, keep away from combustibles when charging, and the charging time is less than 12 hours

## 1.2 E-bike Safety:

You must be 18 or over to ride this e-bike. Your e-bike is designed for a maximum permitted overall weight (rider + cargo) of 275lbs. You **MUST** have the bike **inspected or assembled by someone experienced with bike mechanics prior to use. Proper professional assembly is required for upholding the Limited Warranty. We will require proof of professional assembly or post-assembly sign-off by a bike professional for warranty coverage to be applied.** Improper installation could cause serious injury. Do not submerge your e-bike in water. Be aware that the speed at which you are traveling may be faster than you are used to, **especially when accelerating. Please check before riding and repair it in time or seek professional repair if there is any abnormality:**

- Check the status of the power circuit, lighting circuit and etc.
- Check whether the front and rear brakes can work normally
- Check the tightness of the handlebars and rear wheels
- Check the tire pressure
- Check whether the reflector is damaged or contaminated
- Check the safety line marks of the handlebars and saddles not exposed when adjusting the handlebars or saddles

## 1.3 Electrical Safety:

Only use the charger supplied with eBike. Do not store the bike or battery plugged into a wall outlet. Unplug the battery before leaving the bike alone. Never modify the charger in any way. The charger has been designed for a specific voltage, always check that the outlet's voltage is the same as that stated on the rating label. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack; never use the charger with another appliance or attempt to charge this product with another charger. Before use, check the charger cord for signs of damage. A damaged or entangled

charger cord increases the risk of fire and electric shock. Keep the charger cord away from hot surfaces and sharp edges. Do not handle the charger with wet hands. Do not store or charge the appliance outdoors. The charger must be removed from the socket before removing the battery, cleaning or maintaining the appliance. Besides, the battery should be used correctly to avoid injury with water washing and unauthorized disassembly forbidden.

#### **1.4 Brake Safety:**

Regularly check your brakes for signs of wear and tear. Any worn parts must be repaired or replaced immediately. Be careful while getting used to the brakes. Practice emergency stops in a place clear of traffic until you are comfortable controlling your e-bike. Wet weather reduces your braking power and the grip of the tires. Reduce your speed and be aware of longer stopping distances when cycling in wet conditions. Braking on unpaved surfaces will differ. Be sure to practice braking on different surface types. Ensure that braking surfaces and brake pads are free of wax, grease and oil. Do not pedal and brake at the same time as this will cause excessive wear.

#### **1.5 Maintenance:**

Many parts on your e-bike are subject to a higher degree of wear due to their function and depending on their use. Have your e-bike checked regularly at a professional bike shop and have any worn parts replaced. After an accident or crash you must take your e-bike to a bike repair specialist to make sure that it is safe to ride. Be aware that damage may not be visible. Failure to do this may result in serious injury. Any form of crack, scratches or change of coloring in highly stressed areas indicate that the life expectancy of the part has been reached and it should be replaced immediately. Ensure the battery is removed from the bike before carrying out any maintenance. Make sure that all screws and bolts are tightened securely before riding. You must always use genuine replacement parts when performing maintenance on your e-bike. Regularly check the tire pressures (See sidewall of your tire for correct psi range) and regularly check the tread depth of tires.

#### **1.6 Additional Warnings:**

The e-bike is intended for use by those at least eighteen years of age. Use by anyone below the age of eighteen is prohibited. Have installation/assembly checked by a professional bike mechanic or completed entirely by a bike mechanic prior to riding. Failure to do so could result in serious injury and/or death. When operating your e-bike: Do not wear earplugs, headphones, headsets, or use a cell phone while riding. Never hitch rides on other vehicles. Never hold an item which interferes with your grip on the handlebars & never be under the influence of alcohol or drugs while riding.

ALWAYS wear a helmet when riding your e-bike. Failure to do so may result in serious injury and/or death. It is your obligation to check all applicable laws for bicycle rules governing operation, equipment, use and appropriate places for operation. Do not exceed local speed restrictions.

Maintain your brakes such that you can at least execute a one-braked-wheel skid on dry, level, clean pavement. Never configure your e-bike such that the handlebars are higher than a rider's shoulders. In addition to front and rear reflectors, you must also ensure that the e-bike is equipped with side reflectors.

Never ride your e-bike without the seat provided with the e-bike.

This e-bike is not meant for downhill riding or rocky trails. The e-bike is for paved or smooth surfaces only. Do not ride your e-bike in unsafe weather conditions or when the road surface is comprised, with ice, snow, water, sand, or anything else that could cause a loss of traction. Failure to follow this rule may result in serious injury and/or death.

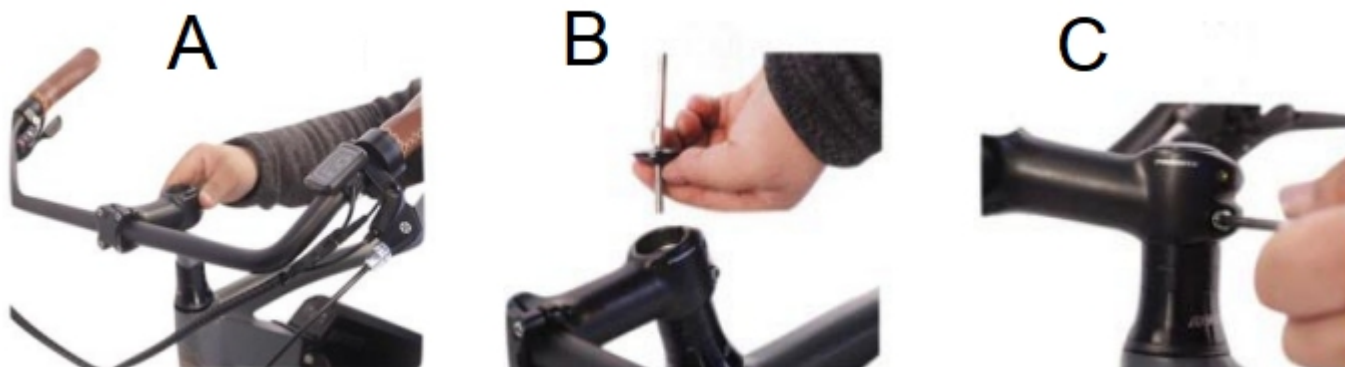
Routine maintenance checks are required on your e-bike. Check all important connections, brake functionality, and ensure axel nuts are secured before riding. Failure to do so may result in serious injury and/or death. Do not ride your bike at night without working front lights and rear tail lights. Failure to do so may result in serious injury and/or death.

Keep your e-bike and packaging away from children. Lithium-Ion batteries can be extremely dangerous if stored or used improperly. Damage to your lithium battery from misuse could result in serious injury, hazardous smoke and fires, and/or death.

Special precautions must be taken if you transport your e-bike with you during air travel, or if shipped by air courier. Be sure to follow all requirements of airlines and air couriers regarding lithium batteries if you take your e-bike with you during air travel, or if you ship your e-bike by air courier.

## 2. Installation Steps: Assembling Your Bike

### 2.1 Fork/Head Set Assembly:

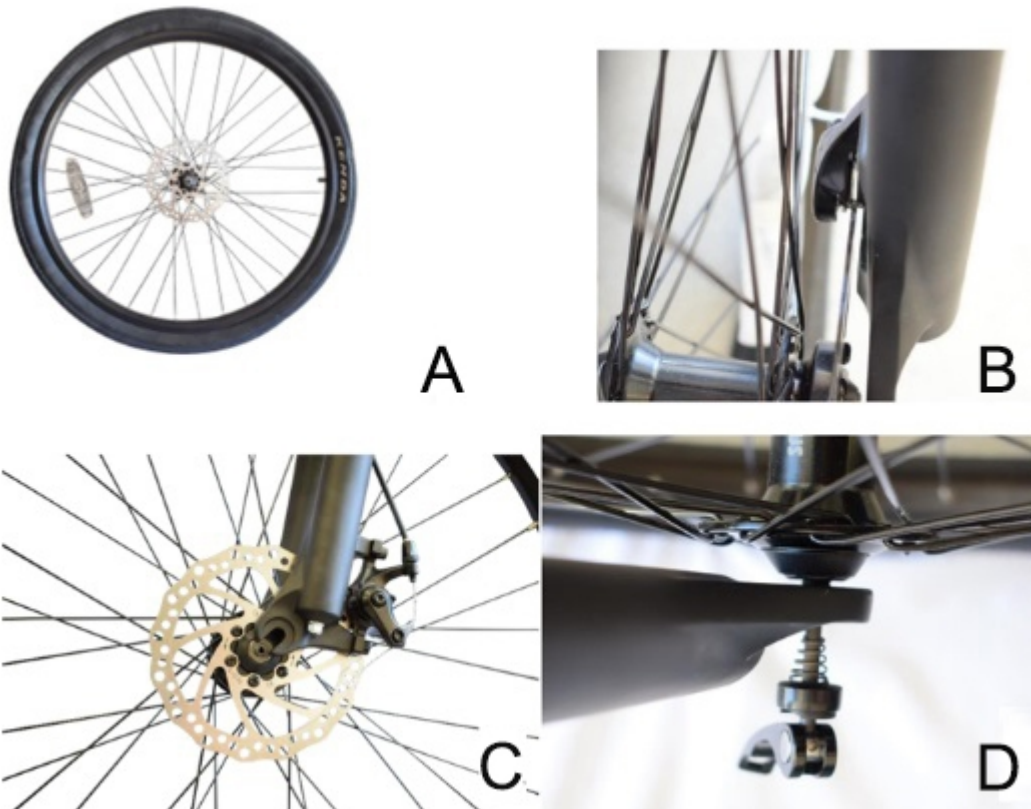


#### **PLEASE COMPLETE STEPS IN ORDER.**

- Unscrew the top cover, remove the alloy gasket at the top (you can choose throw away it, which only protects the handlebars during transportation), and insert the stem into the front fork stem. (Figure A)
- Tighten on the top cap with attached bolt using hex wrench. (Figure B)
- Once top cap is tightened, the handlebar should be kept in a vertical line with the front wheel, and then locked. (Figure C) Please refer to the Detailed Torque Specifications in section 2.7 to ensure that the bolts are torqued to the specified range.

**WARNING:** ♦ IT'S VITAL TO TIGHTEN THE BAR CLAMP TO AVOID THE MOVEMENT OF THE HANDLEBARS, AS WELL AS THE COMPRESSION CAP, ENSURING FORK IS INSTALLED CORRECTLY. THIS SHOULD BE COMPLETED BY SOMEONE FAMILIAR WITH BIKE MECHANICS.

## 2.2 Front Wheel Assembly:



- Align the disc rotor so it fits between the brake pads. Do not force it. (Figure B)
- Place the front wheel axle onto the fork dropouts. (Figure C)
- Install the quick release skewer. **The narrow part of the cone springs should face inward.** Rotate to tighten and then hand tighten the axle skewer quick release arm. Line up the disc rotor to make sure there is space on each side, so they don't rub. Then make sure the wheel is secure. (Figure D)
- Use professional air compressor to pump the tire to 30-50PSI after installing the front wheel.

**WARNING** ♦ IT IS VITAL THAT THE QUICK RELEASE HAS BEEN TIGHTENED. IF NOT PROPERLY ALIGNED & TIGHTENED, THE WHEEL MAY COME OFF, CAUSING DAMAGE TO THE BIKE OR YOURSELF.

### 2.3 Seat Post Assembly:



- Open the seat clamp and insert the seat post. (Figure A & B)
- Adjust the suitable height and rotate the clamp to tighten and then shut it. (Figure C)

### 2.4 Seat Clamp Assembly:



- Slide saddle into seat post clamp.
- Using a 6mm hex wrench. Tighten the bolt to 12 nm of torque.
- The seat post angle is adjustable. Ensure the bolt is correctly torqued. If left loose or over-tightened, the seat post bolt could snap.

**NOTE:** ♦ SOME GENERATIONS COME WITH THE SEAT POST SEPARATE FROM THE SADDLE. IF ALREADY JOINED, CHECK THAT THE TORQUE ON THE BOLT IS TO 12 NM SPEC.



## **2.5 Pedal Assembly:**



- Screw each pedal into a crank by hand. The pedals are marked with an R and L, **the left pedal tightens to the left, the right pedal tightens to the right.**
- Use an adjustable wrench to finish tightening the pedal in place.

**NOTE:** ♦ THERE ARE TWO PEDALS INCLUDED IN THE BOX WITH YOUR BIKE. THE PEDALS SCREW INTO THE ENDS OF THE CRANKS WITHOUT EXTRA NUTS, SCREWS OR PINS. BEFORE INSTALLING PEDALS, CONFIRM THAT THE LEFT PEDAL IS MARKED “L”, AND THE RIGHT PEDAL IS MARKED AS “R”. FAILURE TO USE THE CORRECT PEDAL ON THE CORRECT SIDE WILL RESULT IN A STRIPPED CRANK ARM.

## **2.6 Air Fork Operation:**

The top left of the fork crown is the air valve. Use a shock pump to reach the desired amount of stiffness or sag.

The dial on the top right is a lockout. Turning this to the locked position will lock the fork from compressing and in this mode, it acts as a rigid fork. This is for climbing hills, or riding on smoother roads.

## **2.7 Detailed Torque Settings:**

Saddle Clamp Bolt: 12 nm (unless otherwise marked)

Crank Arms: 39nm

Compression Cap (bolt): 4-5nm

Stem/Steerer Clamp: 8-9nm (unless otherwise marked)

Handlebar Clamp: 8-9nm (unless otherwise marked), tighten evenly in a cross pattern

## **2.8 Spoke Tension:**

|         |     |            |
|---------|-----|------------|
| F-Left  | 13G | 286-330LBS |
| F-Right | 13G | 286-330LBS |
| R-Left  | 12G | 330-374LBS |
| R-Right | 12G | 330-374LBS |

### 3. Battery Connection & Removal

- Insert the key into the battery keyhole.
- Turn the key in a clockwise direction (At 90 degrees).
- Pull out the battery.
- Replace battery with key in the same position, then turn the key to lock. This model's battery lock automatically returns to the locked position.

**NOTE:** ♦ ALWAYS KEEP THE CHARGER PORT COVERED TO PROTECT AGAINST MOISTURE, WHICH CAN DESTROY THE BATTERY. THIS IS ESPECIALLY IMPORTANT IF YOU LIVE IN A WET CLIMATE.

## 4. Charging the Battery:

### **WARNING** ♦ DO NOT LEAVE CHARGING BATTERY UNATTENDED

The battery's voltage is indicated by the LED light on the top of the battery and the percentage Arabic numeral in the upper right corner of the display on the handlebars. Battery Level is indicated using 3 different colors; Blue when full, Green when half or less than full, red when low battery. The percentage Arabic numeral 100 in the upper right corner of the instrument display is fully charged, and the percentage less than 30 indicates that the battery is insufficient and needs to be charged in time. Your battery must be charged in an ambient temperature, on a non-flammable & dry surface, away from any sources of heat, humidity or flammable materials. Also, it must not be covered.

**Follow the steps when charging battery:**

**Step 1.** Turn the bike off. The LCD will be off.

**Step 2.** Insert the plug on one side of the charger into the battery, and then insert the plug on the other side of the charger into the power socket.

- The **red** LED lights on: The battery **is being charged**. ( A )
- The red LED light become **green**: The battery **is fully charged**, and you can unplug the charger. (Figure B)



(A)



(B)

**NOTE:** Depending on the charge level when plugged in, it takes 4-5 hours for the battery to fully charge when using the standard charger supplied with the bike.

**Do not leave the battery unattended while plugged into the charger. Do not store the batteries connected to the charger.**

## 5. KD286 LCD Display Instructions



### **5.1 Power On/Off**

Press and hold POWER button for 2 seconds to power on and off. The Display automatically shuts down when the bike is not used for 10 minutes.

### **5.2 Assist level operating**

The assist level ranges from Level “0” to Level “5”. Level “1” is the minimum power and Level “5” is the maximum. To change the assist level, press the UP or DOWN buttons until desired level is displayed.

### **5.3 Speed & Mileage mode switch**

Pressing the POWER button will switch between: ODO (km) → Max. Speed (Km/h) → Avg. Speed (Km/h) → Trip Time (Min.)

### **5.4 Backlight On/Off**

Press and hold UP button for 2 seconds to turn on/off the display backlight and headlights if wired.

### **5.5 Walk/push Assist (4mph)**

Press and hold DOWN button for 2 seconds enters the walking mode until released.

### **5.6 Change Settings**

Hold the POWER button to enter the setting menus, press UP/DOWN buttons to change the parameter setting, pressing the POWER button can switch to the next item. Holding the POWER button will exit from menu.

**NOTE:** ♦ THE DISPLAY MAY VARY BASED ON GENERATION. PLEASE REFER TO OUR ONLINE USER MANUAL BASE FOR UPDATED OR PREVIOUS MODELS.

## 6. Error Code Troubleshooting:

In the event of a problem with the electrical components of your bike, the display will show an error code. Compare the code with this list below and **how to resolve**:

### 6.1 Error Codes/Source of the Error:

| Code | Error                         | Source of the Error  |
|------|-------------------------------|--|
| 21   | Current Abnormality           | The battery is not supplying the required voltage to power the display and motor. Use the display to view the real-time voltage being output from the battery. It can also be checked using a multimeter. If the battery is old and has been charged / discharged many times, it may need to be replaced.  |
| 22   | Throttle Abnormality          | When you press and release the throttle, it should return to the original position. Remove any obstructions. Check the throttle and throttle cable for damage, such as a cut or frayed cable.  |
| 23   | Motor Phase Abnormality       | Check the cable that connects the rear hub motor to the rest of the system and make sure it is free from grit or contaminants and is firmly connected. This error might appear if you don't reconnect the cable after removing the rear wheel (for example, after changing a flat tire, or transporting your bike in the trunk of a car). At least one of the motor wires has been damaged or is disconnected. |
| 24   | Motor Hall Signal Abnormality | Check the motor cable connection point by the chainstay, and where the motor cable connects to the internal controller. The wire might be disconnected or damaged, reconnect the motor cable. Another possibility: Damage to the motor cable as it exits the axle, perhaps if the wheel was dropped on the cable.  |
| 25   | Brake Abnormality             | Disconnect electronic brake shut offs. Likely a magnet sensor issue. This can happen often after a crash or when the bike is dropped.  |
| 30   | Communication Abnormality     | A problem with the connection from the internal controller to the display. The display is not receiving vital information.   |

## 7. Warranty Information

Please contact your dealer or distributor to know more about warranty.

Normally, the warranty covers product defects only that were already present at time of handover. It does not cover normal wear and tear, product misuse, act of God, accident, commercial use, alterations, modifications, improper assembly, water damage, extreme riding, installation of electrical or mechanical components that have been modified, altered or replaced with third-party parts, operator error and improper follow-up maintenance.

## 8. Parts Sheet

| No. | Parts Sheet                        | Items                   | Numbers           |
|-----|------------------------------------|-------------------------|-------------------|
| 1   | Small Parts                        | A:Pedals (L/R)          | 1 pair            |
|     |                                    | B:Reflectors            | Red 1pc/White 1pc |
|     |                                    | C:Simple Assembly Tools | 1 set (2 pcs)     |
| 2   | Charger                            |                         | 1 set             |
| 3   | User Manual                        |                         | 1 pc              |
| 4   | Shimano Variable Speed User Manual |                         | 1 pc              |
| 5   | Disc Brake Manual                  |                         | 1 pc              |
| 6   | Qualified Certificate              |                         | 1 pc              |

**Qualified Certificate**

**TRUSTMADE** PANTHER X E-BIKE

Model: 4OR05EB0021

Top Assisted Speed: 28 MPH

Range: 30-50 miles

Spec: 48V 750W 14Ah

Bike Weight: 54 LB

Date: 20220110

**INQBRANDS INC.**