

# retrospec

## Joe Rev<sup>2</sup>

Electric BMX Bike



**OWNER'S MANUAL**

# Oh, hey!

Welcome to the **retrospec** family! We're so happy to have you along for the ride. Your new e-bike comes with everything you need to hit the ground rolling.

All of our e-bikes have been carefully designed and manufactured to the latest international quality standards. Please read this instruction manual carefully and thoroughly before riding. It contains important information on safety and maintenance. It's the owner's responsibility to read this manual before riding and keep it for future reference.

## A little about us:

The outside is for everyone, but not everyone feels comfortable outside. So we set out to make everyone feel at home in the open air. We believe that all people, regardless of background or experience, should enjoy the life-affirming, eye-opening beauty of nature.

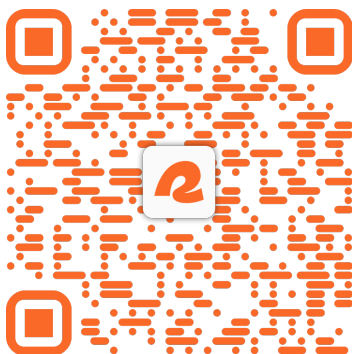
## The retrospec Pledge:

- ★ Invite everyone, regardless of experience
- ★ Focus on having fun, not being first
- ★ Be nice. It's that simple.
- ★ Keep spirits high, even if energy is low
- ★ Leave judgment at the doorstep

## Turns out, you're a natural.

It doesn't have to be intense to be super fun, but you know that. Regardless of your experience, we're here to guide you at every step so you can feel at home outside.

## Need some help? Hit us up:



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## Let's Keep It Safe Out There

**⚠ WARNING** – When using this product, it is important to follow basic precautions, including the following:

- a. Read all instructions before using the product.
- b. To reduce the risk of injury, close supervision is necessary when the product is used near children.
- c. Do not put fingers or hands into the product.
- d. Do not use this product if the flexible power cord or output cable is frayed, has broken insulation, or shows any other signs of damage.
- e. This bike is not intended for use at elevations greater than 2000 meters above sea level.
- f. **⚠ WARNING** – Risk of fire – No user-serviceable parts.
- g. Use only the original charger that came with the bike. Model STC-8137LD by Kunshan ST Electronics Co., Ltd.
- h. Leave it indoors when charging or when the bike is not in use.
- i. The battery must be charged when the ambient temperature is between 0°C (32°F) and 40°C (104°F). Never charge the battery when the ambient temperature is outside this range.
- j. This equipment is not designed for use at ambient temperatures below -20°C (-4°F) or above 40°C (104°F).
- k. The battery is not designed for use at ambient temperatures below -20°C (-4°F) or above 50°C (122°F).

- I. Recommended battery storage temperature: 23±2°C (73±2F)

## MOVING AND STORAGE INSTRUCTIONS

Prolonged exposure to UV rays, rain, and the elements may damage the enclosure materials. Store indoors when not in use.

### A. General Safety

- ⚠ **ALWAYS wear an approved helmet**, which must meet USA/European (CPSC/EN) standards.
- ⚠ **Must be 16 years or older to operate this bicycle.**
- ⚠ **Know and follow local laws**—including lighting, helmet, and bike path rules.
- ⚠ **NEVER ride on the same side of the road as oncoming traffic.**
- ⚠ **Do not exceed the maximum load capacity** of 136 kg (300 lbs).
- ⚠ **Maximum speed** – Your electric bike can reach a top speed of 32 km/h (20 mph).
- ⚠ **Never have more than one rider on the bicycle.**
- ⚠ **Perform a safety check before every ride.**
- ⚠ **Stay clear of moving parts.** Keep body parts and clothing away from chains, gears, and wheels.
  - **Wear** closed-toe shoes, snug-fitting visible clothing, and protective eyewear.
  - **Never ride barefoot, in sandals, or loose clothing** that can snag in parts.
  - **Do not jump** or perform stunts unless your bike is specifically designed for it.
  - **Ride at speeds appropriate** for road and trail conditions.

### B. Electrical Component Warnings

- ⚠ **Do not direct water spray at hubs, bearings, and electrical components.**

⚠ **NEVER** use a high-pressure washer to clean your e-bike.

⚠ **Remove the battery** before placing on any type of vehicle-mounted rack for transport.

⚠ **Never fly with battery.** It is not permitted on passenger aircrafts.

⚠ **Use only the charger provided with the electric bike.** Otherwise, damage could occur to your battery and void the warranty.

⚠ **When charging, both battery and charger should be at least 4 in (10cm) away from the wall.** Charge only in a cool, ventilated environment, and do not place anything around the charger while in use.

## C. Riding Safety

- **Obey all traffic laws.** Use hand signals, yield appropriately, and stop at signs/lights.
- **Ride predictably and defensively.** Always assume others don't see you.
- **Stay alert** for cars, pedestrians, obstacles, and road hazards.
- **Use designated bike lanes** or ride with traffic when required.
- **Never ride on the same side of the road as oncoming traffic.**
- **Never ride too close to another vehicle.** Stay aware and keep your distance.
- **Never hold on to another motor vehicle or bicycle while riding.**
- **Never ride under the influence** of alcohol or drugs.
- **Avoid headphones or earbuds** while riding.
- **Don't carry passengers** unless your bike is designed for it.
- **Secure cargo** to avoid obstruction or imbalance.
- **Avoid riding in poor conditions**—rain, darkness, fatigue, or low visibility.
- **Never jump, race, perform stunts, or abuse your bicycle.**  
Improper use will void the warranty.

## D. Off-Road Safety

- ⚠ **DO NOT ride your e-bike off-road** unless it is designed for varied terrain.
- **Start on easy terrain.** Learn how your bike handles before attempting advanced trails.
  - **Wear safety gear** appropriate to the terrain.
  - **Don't ride alone** in remote areas; let someone know your route and return time.
  - **Carry ID and emergency cash.**
  - **Respect others on the trail.** Yield to pedestrians and animals.
  - **Stay on designated trails.** Avoid riding through mud or disturbing ecosystems.

## E. Wet-Weather Riding

- ⚠ **Wet conditions reduce traction and braking.** Ride slower than normal and apply your brakes well in advance of anticipated stops.
- ⚠ **Avoid sudden turns or stops.** Wear visible clothing and use proper lighting.
- ⚠ **Always use your e-bike's lights when visibility is reduced.**

## F. Night Riding

- ⚠ **Do not ride at night.** If you have to be on your e-bike at night or in low-light conditions, always comply with laws and regulations (local and otherwise) for bicycle lighting.
- ⚠ **Reflectors alone are not enough.** Always use approved headlights (white), taillights (red), and reflectors properly affixed to your e-bike, and wear reflective gear.
- ⚠ **Check all reflectors** regularly for damage and alignment. Damaged reflectors must be replaced immediately.
- ⚠ **Do not remove reflectors or brackets.** They're vital for visibility and brake cable safety.
- ⚠ **Ride slowly in low light.** Stick to familiar routes and avoid traffic-heavy areas.

## G. Changing Components or Adding Accessories

- ⚠ **Only use compatible components/accessories.** Check with your authorized retailer.
- ⚠ **Improper changes can compromise safety** or void your warranty.
- ⚠ **Avoid attaching anything to rotating wheels.** Items can interfere with movement and cause a crash.
- ⚠ **NEVER hang item(s) over the handlebar,** as this could interfere with steering or catch in the front wheel, causing a crash.

### **Proposition 65 Warning**

⚠ **Warning!** This product contains chemicals, including carbon black, known to the State of California to cause cancer, birth defects, or other reproductive harm

## **What's in the Box?**

If you're missing any of these items, please let us know as soon as possible!

- ✓ Joe Rev 2 E-Bike Frame
- ✓ Front Wheel (pre-installed with tire and tube)
- ✓ Rear Wheel (attached to frame)
- ✓ Seat and Seat Post
- ✓ Pedals (marked L and R)
- ✓ Handlebars
- ✓ Bell and Reflectors (pre-installed)
- ✓ Charger
- ✓ Bike Battery
- ✓ Assembly Hardware and Tools

## **What's Not in the Box?**

**(but you might want anyway for safety and security)**

- Helmet (CPSC-approved)
- U-Lock or chain lock
- A front or rear e-bike basket
- Water bottle and cage
- Bike pump

# Caring for Your E-Bike

To keep your e-bike riding smooth and looking great, follow these care tips:

- Store indoors when not in use. Prolonged exposure to UV rays, rain, and the elements may damage the enclosure materials.
- Regular servicing will ensure a better performance and a safe riding experience.
- Do not open or attempt maintenance on any electrical components yourself.
- Contact your local bicycle specialist for qualified service when needed.
- Have your bike serviced only by authorized bicycle shops. Visit <https://retrospec.com/pages/store-locator> to find a **retrospec** Dealer near you.

⚠ **WARNING!** It is the responsibility of the rider to ensure all parts are in working order prior to riding.

## Recommended Maintenance Schedule:

### Before & After Every Ride:

- Inspect your bicycle before every use.
- Check tire pressure before each ride.
- Inspect brake pads and cables for wear.
- Keep bolts tightened and components aligned.
- Store your bike in a dry, covered area to prevent rust.
- Wipe down your bike after wet rides to remove moisture.

### Weekly (or As Needed):

- Wash with mild soapy water. Dry immediately with a soft, non-abrasive cloth.
- Do not use strong chemicals or abrasives. Do not use a high-pressure washer.
- Inspect your bicycle while cleaning.

### Half-Yearly:



- Remove, clean, and lubricate chain, derailleur(s), cog set, and all cables. Check and replace as required.
- Bring your e-bike into your local bike shop to be professionally checked to ensure that it is in correct and safe working order.

## Assembly Instructions

Our bikes arrive to you about 85% built. Generally, that means you'll need to attach the front wheel, pedals, handlebars, saddle, and any accessories. (This will be the case with every bike you purchase online.) Everything you need to assemble your e-bike comes in the box.

We highly recommend taking your e-bike to a qualified bike mechanic to make sure your bike is safe before riding. They should check the derailleur(s) and brake(s) adjustments and the wheels for trueness.

Please keep in mind our bikes travel quite a bit to get from our warehouse to you and sometimes they can get hurt during transit, despite our best packaging efforts to keep them safe. Inspect your bike as soon as you receive it and contact us here if you have any issues.

## Step 1: Unpack Your Bike

1. Choose a level, clean space for assembly. Lay down a blanket, large piece of cardboard, or similar material to protect the bike once it's out of the box.

2. Carefully cut the tape with a box cutter.

**IMPORTANT:** Do not lay the box flat and cut it open—this could damage the bike.

**TIP:** Use needle-nose pliers to remove staples before lifting the bike out. This helps prevent scratches to both you and the bike.

**⚠ WARNING:** Watch out for sharp edges and staples while handling the box. Having a second person to assist can make this step easier.

3. Remove the packing materials.
  - a. Do not rotate the handlebar or fork until all packing materials and zip ties are removed to prevent damage.
  - b. Cut zip ties carefully, avoiding contact with tires, cables, or the frame. Diagonal cutters work best.

- c. Place small parts in a designated area to prevent loss.
4. Thoroughly inspect the carton and small parts box to ensure no components are left behind.
5. Examine the bike for any visible damage that may have occurred during shipping. If you find any, contact **retrospec** immediately.

**RECOMMENDED:** Hold onto the box and packing materials for a short period in case a return is needed.

## Step 2: Front Wheel

### 1. Remove the Plastic Dropout Protector

Remove the plastic dropout protector from the fork and keep it in case the bike needs to be returned or shipped.

### 2. Inflate the Tire

Inflate the tire to the recommended pressure, which is listed on the sidewall of the tire. Inflate slowly while closely observing the area where the tire meets the rim. If you notice the inner tube bulging out or the tire not properly seated, deflate the tube, adjust the tire and tube to ensure they are aligned correctly, and then inflate again.

### 3. Install the Front Wheel

Using a 17mm open-end wrench, loosen the axle nuts on the front wheel. Lift the front of the bike and carefully insert the front wheel into the fork dropouts. It may be helpful to have a second person assist. Make sure the washers are positioned between the axle nut and the fork (not between the fork and the hub).

### 4. Inspect Wheel Position

Ensure that the wheel is properly centered in the fork and that the rotor is correctly positioned within the brake caliper.

### 5. Tighten Axle Nuts

Using a 17mm wrench or adjustable wrench, tighten each axle nut a little at a time, alternating between sides. Continue tightening until each axle nut is properly secured (35-40Nm of torque).

## Step 3: Handlebar & Handlebar Stem

The handlebar has been pre-assembled together with brake levers, shifter levers, and grips. Be sure that the longer cable is fixed to the right lever (rear brake) and the shorter cable to the left (front brake).

**NOTE:** In some areas, such as the UK, the cables are required to be arranged in the opposite way. If your bike is equipped with hydraulic brakes, check that the line is running from the lever to the correct caliper. The stem comes installed on your bike, but it may need to be aligned.

### Aligning the Stem:

1. Loosen the bolts that hold the stem to the bike enough so that you can move it.
2. Align the handlebar stem with the front wheel (See Fig. 3).
3. Securely tighten the stem bolt(s). **NOTE:** Some models require a 5 or 6mm hex key. (5-6Nm).

### Installing the Handlebar:

1. Loosen the stem handlebar hex bolts to remove the face plate (See Fig 4).
2. Position the handlebar at the desired angle and reinstall the face plate. Make sure the handlebar is in the center of the stem handlebar clamp.
3. Tighten the handlebar clamp bolt (5-6Nm).

### Threadless:

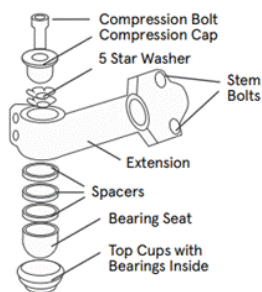


Fig. 3

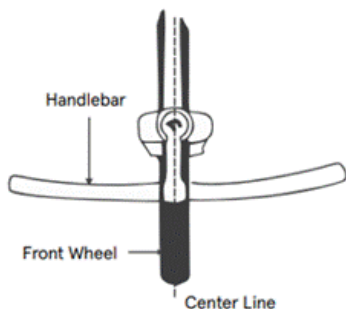


Fig. 4

### Final Safety Check

- ✓ Ensure the handlebar and stem are securely tightened before riding.
- ✓ The handlebar must not rotate up, down, or side to side within the stem.
- ✓ The stem must not rotate in the fork.

## Step 4: Pedals

Each pedal is labeled with an "R" (Right) or "L" (Left) on the threaded end of the pedal axle. Proper installation is crucial to prevent damage to the crank arms. (Fig. 5)

### Installing the Right Pedal (R)

1. Locate the pedal marked "R" (right).
2. Align it with the right crank arm (on the chain side of the bike).
3. Thread it clockwise by hand until snug.
4. Using a 15mm open-end wrench, 15mm pedal wrench, or adjustable wrench, tighten securely to 34N.m (26 lb-ft).

### Installing the Left Pedal (L)

1. Locate the pedal marked "L" (left).
2. Align it with the left crank arm.
3. Thread it counterclockwise by hand until snug.
4. Using a 15mm open-end wrench, 15mm pedal wrench, or adjustable wrench, tighten securely to 34N.m (26 lb-ft).

⚠ **IMPORTANT:**

- **Do not force the pedals**—cross-threading can cause permanent damage to the crank arms.
- **Double-check the tightness** before riding to ensure the pedals are securely fastened



## Step 5: Brake Adjustment & Maintenance

Proper brake function is critical for your safety. Before your first ride, verify that your brakes are properly adjusted and functioning correctly.

⚠ **WARNING:**

- Always test your brakes in a safe, controlled environment before riding.
- Do not ride if your brakes are not functioning correctly.
- If unsure about any adjustment, consult a professional bike mechanic.

### Mechanical Disc Brake Adjustment

Your mechanical disc brakes are pre-adjusted at the factory, but it's essential to check their function before riding.

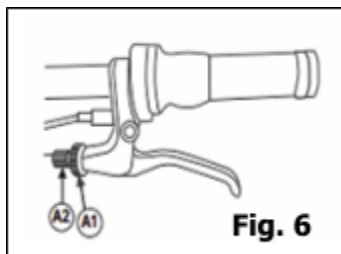
### Brake Function Check

1. Lift the bike and spin both the front and rear wheels to ensure they rotate freely without making contact with the brake pads.
2. If rubbing occurs, follow these steps to realign the caliper:
  - Loosen (but do not remove) the caliper fixing bolts.
  - Squeeze the brake lever to center the caliper over the rotor.
  - While holding the brake lever, tighten the caliper fixing bolts to 8Nm.
  - Spin the wheel again to confirm there is no rubbing.
  - Repeat the process for the other brake if necessary.

**⚠ WARNING: Do not ride if the wheel does not spin freely or if the rotor is misaligned.**

### Brake Lever Check

- Squeeze the brake lever—it should feel firm and stop the wheel before the lever touches the handlebar.
- If the lever reaches the handlebar or lever travel is longer than desired, you can tighten the cable by turning the barrel on the lever A2 (Fig. 6) counterclockwise. Once tight enough, lock it into position by turning the A1 part of the barrel clockwise.



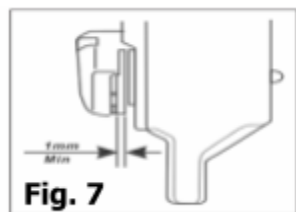
### Maintenance

- Periodically check that all bolts for the brake system are tight.
- If the cable or housing becomes damaged or frayed, have a professional mechanic replace them immediately.
- Professional servicing is highly recommended to ensure proper maintenance.

### Checking Brake Pad Wear & Replacement

Replace brake pads immediately if they are 1mm thick or less (Fig. 7). To replace the brake pad, follow these steps:

1. Remove the Retaining Pin that secures the pads inside the caliper.
2. Remove the Worn Pads:
  - Pull the inner pad downward using the tab.
  - Use a thin screwdriver to lift the outer pad, then remove it with pliers.
3. Transfer Springs from the old pads to the new ones.
4. Install the New Pads:
  - Insert the new pads into the caliper at a slight incline.
  - Ensure the spring hooks onto the small piston—the pads should stay in place when pulled down.
5. Reinstall the retaining pin into the pads on the caliper.
6. Engage the Brake Lever a few times to ensure proper pad engagement.
  - Expect minor noise initially as the pads "bed in."



### **⚠ WARNING:**

- Do not touch the brake rotor or pads with your bare hands—oils from your skin can reduce braking performance.
- If the rotor or pads become contaminated with oil or grease, replace them immediately.

## **Professional Maintenance**

For optimal performance and safety, have your brakes regularly inspected and serviced by a qualified bike mechanic or authorized dealer

## **Step 6: Saddle & Seatpost**

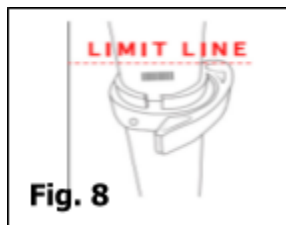
1. The saddle may need to be attached to the seat post. If this is the case, loosen the seat clamp nut/bolt.
2. Insert the seat post into the seat clamp, ensuring it is firmly seated against the seat clamp limit and properly aligned with the saddle rails.
3. Hand-tighten the seat clamp nut.
4. Insert the seat post into the frame's seat tube, then rotate the saddle until it is level with the ground. You can fully tighten the seat now or after Step 6.1.

**⚠ WARNING!** Do not sit on or test the saddle until completing all steps!

**⚠ The seat post must be inserted deep enough that the minimum insertion line is not visible!**

### **6.1 Inserting the Saddle/Seatpost Assembly Into the Frame Seat Tube (Quick-Release Seatpost Clamp)**

1. Open the seat post quick-release lever (Fig. 8). Apply a small amount of grease to the seat post. Insert it into the seat tube until the minimum insertion line is no longer visible.



2. Once you're satisfied with the seat post height, close the quick-release lever, ensuring it is secure. The tightness can be fine-tuned by adjusting the nut opposite the lever.

**NOTE:** The quick-release lever should require some force to close. If it closes too easily or fails to hold the seat post securely, tighten the adjusting nut on the opposite side. If it's too difficult to close, loosen the nut slightly.

⚠ **WARNING:** Always ensure both the outer and inner seatpost tubes are inserted past the **minimum insertion line** to prevent failure and potential injury.

## Before Your First Ride

We strongly recommend taking your bike to a local bike shop after assembling so a professional, reputable bike mechanic can check your work and perform all necessary safety checks prior to the first ride. Visit <https://retrospec.com/pages/store-locator> to find a **retrospec** Dealer near you.

### BATTERY PREPARATION:

To ensure a safe and reliable first ride, follow these steps:

- 1. Fully Charge the Battery**

- Charge the battery completely before your first ride for optimal performance.

- 2. Refer to the Safety Manual**

- Follow the Lithium-Ion Battery Safety Manual for proper charging procedures and safety guidelines.

- 3. Check Battery Connection**

- Ensure the battery is securely attached and all connections are clean and tight.

- 4. Inspect for Damage**

- Check for any visible damage or irregularities before riding.
- If any issues are found, consult the manual or contact support before use.

⚠ **NOTICE:** Failure to follow these steps may result in reduced performance or safety risks.

### Battery Installation & Removal

Your e-bike's battery is positioned in the down tube and comes pre-installed.

### Removing & Reinstalling the Battery:

1. Insert the key into the battery lock.



2. Turn the key twice to unlock the battery. It is a two-stage mechanism:
  - a. The first click undoes the latch. Be ready to catch the battery, and continue turning the key.
  - b. The second click releases the battery.
3. To reinstall, insert the battery in the reverse fashion of removal and ensure it is locked into position.

Your battery ships in Deep Sleep Mode. To take it out of this mode, press the battery button for 3 seconds. Hold the button again for 3 seconds to put the battery back into Deep Sleep. This is used for storage of the battery when it will not be used for a while.

## Main Technical Specifications

Parameter	Specification
Model	Joe Rev 2
Electrical	47.9V/750W
Motor Type	Brushless Planetary Gear Drive
Rated Torque	85Nm
Rated Power	750 W
Rated Voltage	47.9 V
Battery Type	Lithium-Ion
Voltage	47.9 V
Amp Hours	9.6 Ah
Watt Hours	459.8 Wh

# General Use Information

Your new electric assistance bicycle is a revolutionary means of transport, using an aluminum frame, Li-Ion battery, a super high efficiency electric hub motor, and controller with electric pedal assistance system, to support normal pedaling. These components will ensure safe riding with excellent function and performance. It's important for you to note the following guidelines to get the best possible riding experience.

## Charging Your EBIke

You can charge your battery while it is installed on the bike or remove it for remote charging.

- **On-Bike Charging:** If your bike is near an AC outlet, you can charge it with your bike's battery still installed. The charging port is covered by a plastic cap.
- **Off-Bike Charging:** Follow the instructions above to remove the battery for charging.
  - Make sure the battery is unlocked.
  - Remember to keep your key secure!

**WARNING!** Use only the charger provided with the electric bike. Otherwise, damage could occur to your battery and void the warranty. When charging, both battery and charger should be at least 4 in (10cm) away from the wall, and in a cool, ventilated environment. Do not place anything around the charger while in use!

## Procedure for Charging

Charge the battery using this process:

1. **Turn the bike OFF before charging.**
2. The battery can be charged in either normal mode or Deep Sleep mode.
  - Deep Sleep mode is only needed if storing for 4+ weeks. A quick press of the button will indicate the charge status via LED light:
    - i. **RED** = charging
    - ii. **GREEN** = fully charged
3. Securely insert the charger output plug into the battery.
4. Plug the charger into a reachable AC wall outlet.
5. When fully charged:
  - First, unplug the charger from the wall outlet

- Then, disconnect the charger from the battery
- Finally, close the charging port cover securely

## Riding Basics

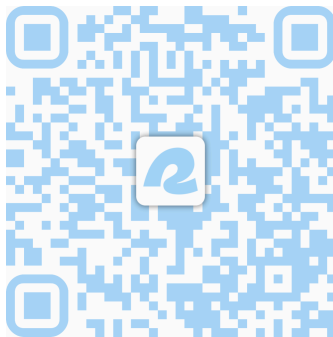
Whether it's your first bike or your fiftieth, here's everything you need to know to start riding with confidence:

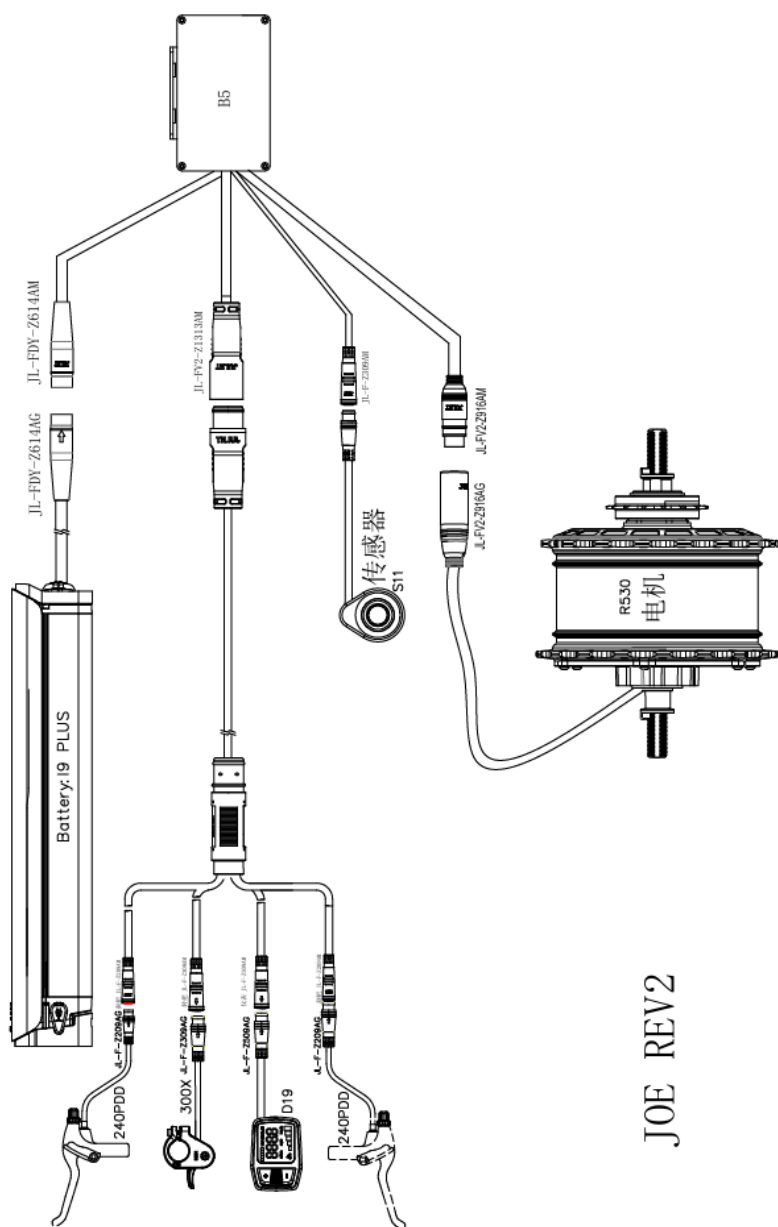
- **Mounting and Dismounting:** Swing your leg over the top tube of the frame and gently lower yourself onto the seat. To dismount, come to a complete stop, tilt the bike slightly toward you, and step off of the frame to the side.
- **Adjusting the Seat Height:** Before you ride, adjust your seat so that when the pedal is at its lowest point, your leg is almost—but not completely—straight. This helps you pedal efficiently and reduces strain on your knees. Tighten the seat clamp securely after adjusting.
- **Braking:** Use both the front and rear brakes together for smooth, controlled stops. Avoid using only the front brake, especially when going downhill, to prevent flipping forward. Gently squeeze the brake levers instead of grabbing them suddenly.
- **Riding Basics:**
  - Keep your eyes on the road and stay alert for cars, pedestrians, and road hazards like potholes or gravel.
  - Use hand signals to indicate turns or stops to nearby traffic.
  - Ride in a straight line, and stay to the right side of the road or bike lane when possible.
  - Follow all local traffic laws and ride in the same direction as car traffic.

**NOTICE:** It is important that you locate and record the serial number of your bicycle in case of a recall or if the bicycle is stolen. Register your e-bike's serial number (located on the bottom bracket) and keep a copy for your records.

## Warranty

All **retrospec** electric bicycles are backed by a limited warranty. Scan the QR code or visit [retrospec.com/pages/warranty-policy](https://retrospec.com/pages/warranty-policy) for full details.



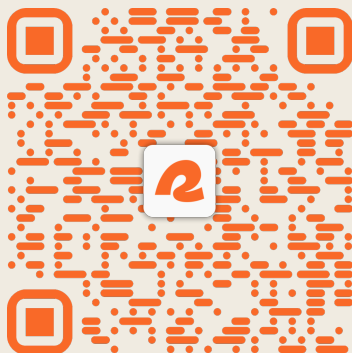


JOE REV2

# retrospec

## Contact Us

Need some help with your new gear? Just want to say “hey” and talk to someone on our team? We’re here for that too.



Give us a follow, while you're at it:

@retrospec

#retrospec

#readytooutdoor