

# **RAMBO**

## **ELECTRIC BIKES**

### **Krusader 3.0**



Assembly



Operation



Scan the QR code for a video of step-by-step assembly and operation

## **TAKES YOU PLACES YOU'VE NEVER BEEN**

Rambo Bikes

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Centerville, IA 52544

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## Contact Information

Email: [cs@rambobikes.com](mailto:cs@rambobikes.com)

Phone: (952) 283-0777

Website: [rambobikes.com](http://rambobikes.com)

## Serial Number

This is a good time to record your serial number on your bike. The serial number is in two locations. One spot is a white sticker on the outside of the bike box. The second is on the frame below the battery.

## **GENERAL WARNINGS:**

Should you have any questions about the assembly and/or use of this product, or any other Rambo Bikes product(s), do not hesitate to call one of our Customer Service Representatives at (952) 283-0777 or visit Rambo Bikes online at [rambobikes.com](http://rambobikes.com). Our Customer Service Representatives will answer any questions you may have about any of the complete line of Rambo Bike's products.

**PLEASE MAKE SURE TO READ THE ENTIRE MANUAL AND UNDERSTAND ALL WARNINGS AND CAUTIONS BEFORE OPERATING THIS BIKE.**

**WARNING: MISUSE OR IMPROPER USE AND OPERATION OF THIS PRODUCT CAN LEAD TO LOSS OF CONTROL AND CAN POSSIBLY RESULT IN DEATH OR SERIOUS INJURY. THERE ARE POTENTIAL RISKS AND HAZARDS ASSOCIATED WITH RIDING A BIKE. CAUTION IS REQUIRED.**

**CAUTION: OBSERVE CONDITIONS AND MAINTAIN SAFE RIDING PRACTICES.**

**WARNING: PRODUCT UNDER POWER AND MOVING PARTS.**

**WARNING: BEWARE OF ELECTRICAL FIRE OR SHOCK.**

**ALWAYS WEAR AN ASTM OR CPSC CERTIFIED HELMET AND PROTECTIVE ATTIRE INCLUDING SHOES.**

**KEEP THIS INSTRUCTION MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE.**

**FAILURE TO READ AND STRICTLY COMPLY WITH THE INSTRUCTIONS CONTAINED IN THIS INSTRUCTION MANUAL MAY RESULT IN SERIOUS INJURY OR DEATH.**

**THE SAFE USE AND OPERATION OF THIS PRODUCT IS THE SOLE RESPONSIBILITY OF THE USER. IT IS ALSO THE SOLE RESPONSIBILITY OF THE OWNER TO PROVIDE ANY PERSON(S) WHO BORROW OR PURCHASE THIS PRODUCT WITH THESE INSTRUCTIONS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY OR DEATH! ADDITIONALLY, FAILURE TO FOLLOW THIS INSTRUCTION MAY SUBJECT YOU TO PERSONAL LIABILITY PENALTIES AS DETERMINED BY THE U.S. JUDICIAL SYSTEM.**

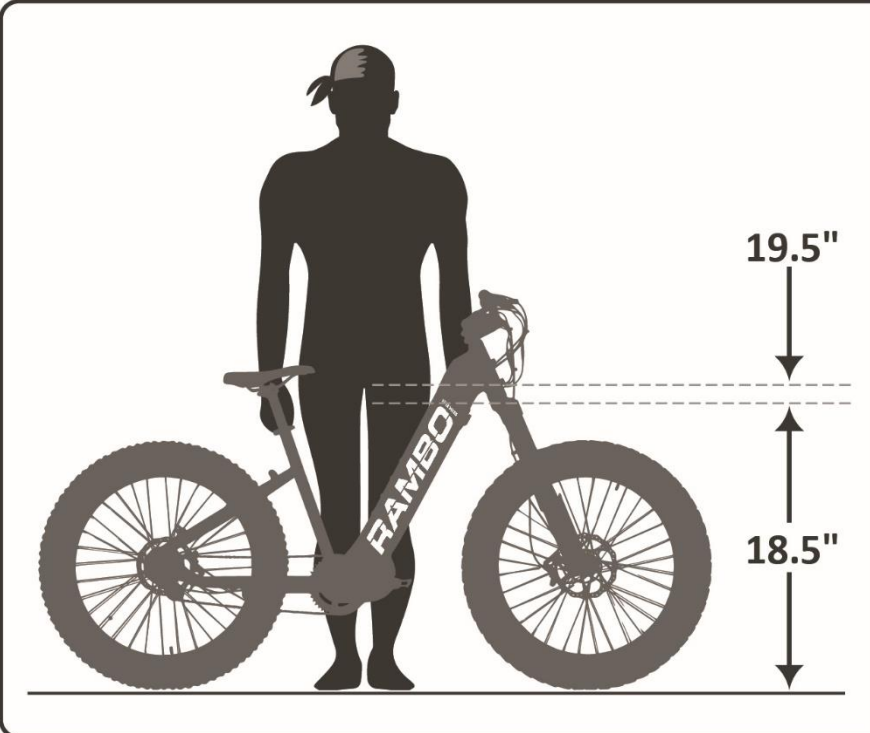
## Recommended Rider Size:

No rider under the age of 18 should be permitted to use the bike. It is up to your discretion to know and understand if you are able to ride the bike safely.

No person should ride the bike if they cannot reach the ground while seated.

If you are not comfortable on the bike, you should not attempt to ride the bike.

Maximum Weight Limit: 300lbs



**SIZE GUIDE:**

When standing over the bike, there should be a minimum of 1.0" between your crotch and the top point of the tube with your feet flat on the ground.

19.5"

18.5"

19.5" is the minimum leg length for this model.

## RULES FOR SAFE RIDING

You must ensure that you understand the safe operation of this bike and follow all traffic, bike laws, and regulations in the area in which the bike is being operated. These may include rules regarding helmets, reflectors, and lights. A few important general rules for riding include but are not limited to:

- Wear a helmet that meets ASTM or CPSC safety testing requirements.
- Have reflectors and lights installed on your bike.
- Use proper hand signals.
- Avoid loose clothing.

- Ride on the correct side of the road with flow of traffic.
  - Always wear brightly colored and reflective clothing.
  - Ride single file if riding with others.
  - Obey all traffic laws and regulations.
  - Watch for parked car doors opening unexpectedly.
  - Watch for pedestrians stepping out, pets and children playing near roadways.
  - Never carry a passenger.
  - Never ride with earbuds or headphones.
  - Always obey traffic signals.
  - Use caution when crossing railroad tracks and carefully cross at a 90-degree angle.
  - Mount a horn or bell on to your bike to signal others of your approach.
  - Before riding fast or in more difficult conditions, try riding at slower speeds in a flat, open area to test the function and performance features of your bike.
  - Consult your local bike shop if you have specific needs regarding the parts and functionality of your bike.
- Many areas offer cycling courses or classes which can be found online or through your local bike shops.

### **Wet Weather Conditions**

Use extra caution when riding in wet weather. Your brake stopping power will be diminished in wet conditions no matter what type of brake system you have; all are affected by wet weather. In order to ensure you can stop safely in wet conditions, ride more cautiously and slowly and brake earlier than you would in normal road and weather conditions. Never ride in storms with high winds and lightning.

### **Check the Lights and Reflectors**

Make sure the reflectors are mounted in the proper position and they do not have any cracks or visible damage. All lighting should be inspected to be sure they have fresh batteries and work properly.

### **Check Frame, Fork, and Components**

If you notice that the frame or fork has any visible damage, cracks, dents, or you hear any unusual noises while riding or other problems, do not ride your bike. If at any time you notice a shimmy or wobble, immediately slow down and take your bike to your local bike shop for inspection and/or repair. Carefully inspect your bike before and after each ride. Certain types of impacts can affect the components of your bike and cause them to fail unexpectedly. After any impact or crash, thoroughly inspect all the parts of your bike for damage. A crash or other impact can put extraordinary stress on the bike. An impact or high force is any situation such as hitting a hole or obstacle in the road, such as a bump or curb.

**A BIKE IS A MECHANICAL DEVICE. MATERIALS AND MECHANISMS ARE SUBJECT TO FATIGUE AND STRESS OVER TIME. COMPONENTS CAN FAIL ONCE THEY HAVE EXCEEDED THEIR USEFUL LIMITS AND LIFE. PRODUCT LIFE IS OFTEN RELATED TO THE KIND OF TREATMENT AND RIDING YOU SUBMIT YOUR BIKE TO. HARD AND AGGRESSIVE RIDING ALONG WITH NEGLECT WILL SHORTEN THE PROJECTED LIFESPAN OF YOUR BIKE AND ITS COMPONENTS. IF NOT PROPERLY MAINTAINED, YOUR BIKE AND ITS COMPONENTS CAN FAIL CAUSING SERIOUS INJURY OR DEATH.**

### **Night Riding and Poor Visibility**

Riding at dawn, dusk, during poor visibility, or night riding is extremely dangerous. Your reflectors are not a substitute for required bike lights. Motorists and pedestrians may not be able to see a bicyclist during poor visibility conditions. Consult your local bike shop for night riding equipment if you choose to accept the risk of riding during these conditions.

**RIDING A BICYCLE IN LOW LIGHT CONDITIONS WITHOUT PROPER LIGHTING AND REFLECTORS ATTACHED TO YOUR BIKE IMPAIRS YOUR ABILITY TO SEE AND BE SEEN BY OTHER MOTORIST AND PEDESTRIANS. THIS GREATLY INCREASES THE CHANCES OF BEING INVOLVED IN AN ACCIDENT THAT COULD LEAD TO SERIOUS INJURY OR DEATH. USE A LIGHT ON THE FRONT AND REAR OF YOUR BIKE AND BE SURE ALL REFLECTORS ARE IN PLACE BEFORE RIDING IN LOW LIGHT CONDITIONS.**

### **Unsafe Riding**

While not all accidents can be avoided, the list below outlines a few examples of things that can decrease your risk of serious injury or death:

- Pay attention and avoid distractions while riding.
- Always maintain both hands on the handlebars.
- Avoid bike stunts and/or aggressive riding.
- When carrying gear, make sure it is securely attached to your bike and/or rack.
- Never strap or latch any item to your bike in an area not designed to carry gear.
- Never carry a passenger while riding.
- Avoid riding in mud if possible. Mud may cause loss of traction resulting in loss of control of your bike.

**CERTAIN TYPES OF RIDING SIGNIFICANTLY INCREASE STRESS AND ABNORMAL WEAR AND TEAR ON YOUR BIKE. THESE ARE JUST A FEW TYPES OF RIDING THAT CAN ADVERSELY AFFECT YOUR SAFETY AND LIFESPAN OF YOUR BICYCLE AND COMPONENTS, SUCH AS COMPETITION OR STUNT RIDING, DOWNHILL RACING/RIDING, OR JUMPING YOUR BIKE.**

## **Avoid riding too fast**

Higher speeds create higher risks and greater forces in the event of a crash. At higher speeds, it is more likely that wheels will slip, or that a small bump can create a significant impact to your frame or fork. Always keep your bicycle under control. For children, the limit of speed for safe riding is much lower, so parents should strictly enforce this rule.

## **Off-Road or Backcountry Riding**

Always use special care when riding off-road or in remote areas. If you are unfamiliar with off-road riding, start out on moderate terrain and slowly build your skills until you are confident you can ride on trails and unimproved roads. Remember, always keep your bike under control and never attempt an obstacle that is beyond your skill level. Riding at an increased speed in rough conditions greatly increases your risk of serious injury or death.

## **Special Considerations for Remote Areas**

- While riding on rough terrain even if only a short distance, share your destination and route with another adult.
- Never ride alone in remote areas.
- Carry a signaling device such as a whistle, cell phone, or 2-way radio.
- Take identification and emergency food and drink with you.
- Wear appropriate clothing and safety gear for the type of riding you plan.
- Carry a first aid kit.

## **Respect Local Regulations and Rules / Private Property**

Remember each area in which you can ride your bike may have specific regulations. Always respect private property and never trespass. Respect the rights of others you may be sharing the trail with, i.e.: hikers, cyclists, and equestrians. Stay on your designated trail and do not destroy vegetation and minimize your impact on the environment. If you are unsure of your local laws or regulations, please contact your local conservation officer before riding on designated wildlife areas.

**A BIKE, LIKE ANY MECHANICAL DEVICE, IS SUBJECT TO FATIGUE, STRESS, AND WEAR. OVER TIME AND DUE TO USE, THE FRAME AND ITS COMPONENTS CAN FAIL. THE ENVIRONMENT AND TYPE OF RIDING OF THE BIKE IS SUBJECT TO GREATLY REDUCE ITS USEFUL LIFESPAN. IF PROPER CARE AND MAINTENANCE ARE NOT PERFORMED YOUR BIKE AND/OR ITS COMPONENTS CAN FAIL CAUSING SERIOUS INJURY OR DEATH.**

## GENERAL RIDING INFORMATION

Once you have inspected your bike and all components are in proper working condition, you are ready to test ride your new bike. A few important general rules for riding include but are not limited to:

- Strap on your helmet that meets ASTM or CPSC safety testing requirements.
- Have reflectors and lights installed on your bike.
- Use proper hand signals.
- Avoid loose clothing.
- Ride on the correct side of the roadway with flow of traffic.
- Always wear brightly colored and reflective clothing.
- Ride single file if riding with others.
- Obey all traffic laws and regulations and traffic signals.
- Watch for parked car doors opening unexpectedly.
- Watch for pedestrians stepping out, pets and children playing near roadways.
- Keep a safe stopping distance between you and other vehicles.
- Never carry a passenger.
- Never ride with earbuds or headphones.
- Use caution when crossing railroad tracks and carefully cross at a 90-degree angle.
- Mount a horn or bell on to your bike to signal others of your approach.

**Braking:** Your bike is equipped with two hand brakes. One hand brake operates the front brake and the other operates the rear. Take time to familiarize yourself with which hand brake stops each wheel. You can complete this task by spinning the front wheel and squeezing each brake lever one at a time to determine which one stops the wheel from spinning; this would be your front brake.

When preparing to slow down or stop, gently apply both front and rear hand brakes at the same time being careful not to over apply the front brake which could cause you to lose control and fall. Before riding your bike for the first time, please follow the "Brake Burn in Procedure" in your owner's packet. Replacement pads and rotors are available from Rambo Bikes. Always replace pads and rotors at the same time to ensure maximum performance and lifetime.

**AVOID APPLYING SUDDEN OR EXCESSIVE FORCE TO THE FRONT BRAKE SYSEM. DOING THIS CAN CAUSE YOUR FRONT WHEEL TO LOCK UP AND YOUR REAR WHEEL COULD LIFT UP AND LOSE CONTACT WITH THE GROUND. SLIDE YOUR WEIGHT BACK ON THE SEAT AND APPLY PRESSURE TO BOTH THE FRONT AND REAR BRAKES AT THE SAME TIME.**



IDENTIFYING BIKE PARTS

Digital Version



## FEATURES OF YOUR BIKE

### **Hub Motor:**

Your bike's motors are located in the front and rear wheels. This means that the front and rear wheel is directly powered by the motor. This means that there is no motor power transferred through the chain or gearing system. If for any reason the chain, gears, or front chainring become damaged while riding, your motor will still operate and assist you to your destination. This is one of the big advantages of hub motors.

Note: The motor has a built-in temperature sensor that will decrease motor power if the motor temp is too high due to climbing steep hills or hauling heavy loads. Once the motor cools down to a safe level, it will automatically increase its max power.

### **Adjustable Class System:**

Your bike is equipped with ACS (adjustable class system). In the display settings, you can change from Class 1, 2, 3 and unlimited power. This allows you to ride in certain areas where class 1, 2, and 3 regulations are required. Be sure to know all local laws and regulations when riding.

### **Pedal Assist:**

This bike has a pedal assist feature. When using Pedal Assist level 1-5, the motor will assist you while pedaling, Pedal Assist 1 being the slowest and least powerful and 5 being the fastest and most powerful. If on Pedal Assist level 0, you will not have any motor assistance. Each assist level is approximately 20% motor power.

### **Gearing:**

Your bike has a single speed cassette gear system on the rear. The maintenance free system will allow you to tackle the most rugged terrain. This system is able to be converted to an 8 speed.

### **Thumb Throttle:**

Your bike has a thumb throttle located on the handlebars, either on the left or right side of the bars depending on the model. The thumb throttle can be used at any time. Even from a complete stop, it can be used to take off and assist you up to max speed. Please note, the power of the thumb throttle is set to match the power of the pedal assist level you are on, 1 being the slowest and least powerful and 5 being the fastest and most powerful. If on Pedal Assist level 0, the thumb throttle will not have any power.

### **Walk Assist:**

By holding down on the “-” button your bike will enter walk assist mode. The bike will propel itself as you walk along side of it.

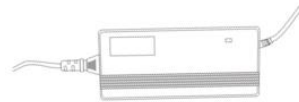
### **Dual Battery Technology:**

With the battery installed from the bottom of your bike frame, you can install a secondary battery on the top of your bike frame. The additional battery is a 48v 14ah battery. Contact Rambo Bikes for more information.

## WHAT'S IN THE BOX



Rambo Bike



Charger



Two Keys



Manuals

## ASSEMBLY

**IF AT ANY TIME YOU DO NOT FEEL COMFORTABLE ASSEMBLING YOUR BIKE, CONTACT RAMBO BIKES OR A LOCAL BIKE SHOP TO HELP ASSIST IN THE ASSEMBLY.**

### Tools Required:

One (1) 19mm wrench

One (1) 4mm Allen wrench

One (1) 5mm Allen wrench

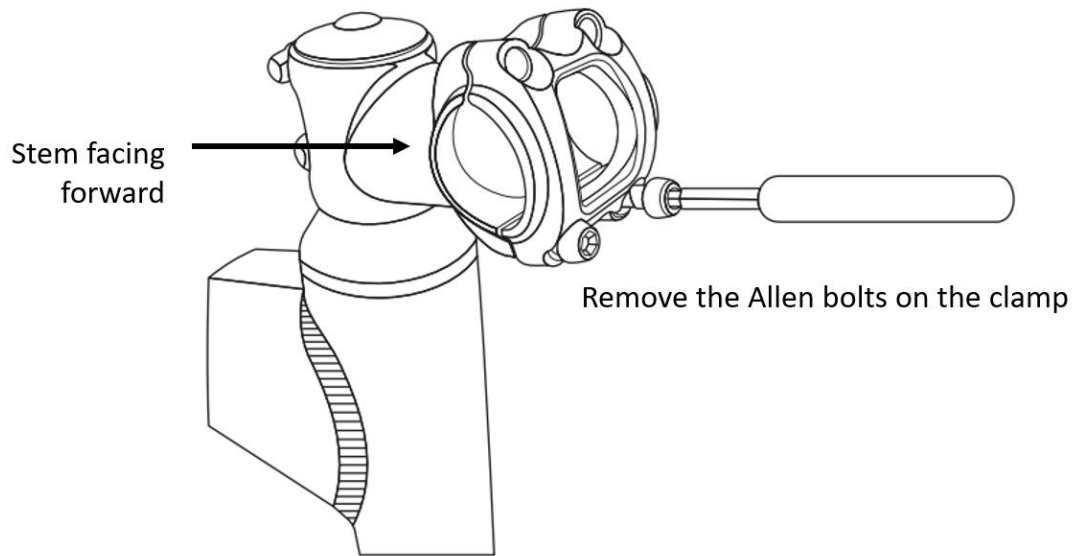
Side cutting pliers

Air Pump

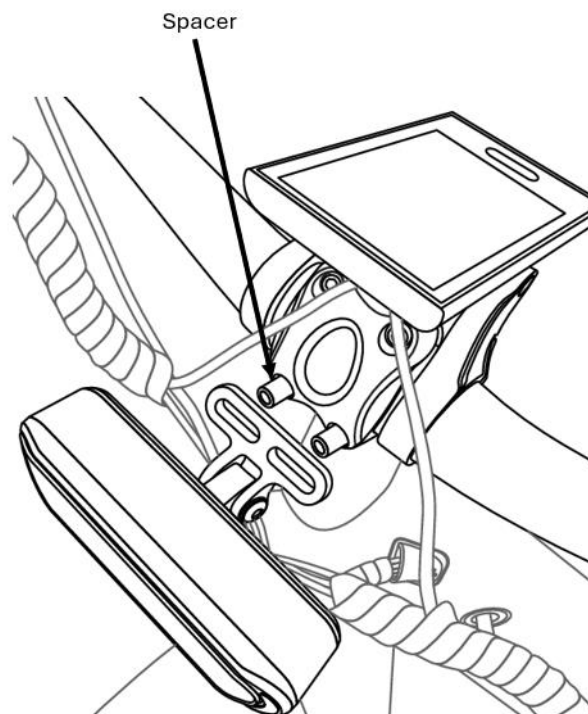
**BEFORE DOING ANY WORK ON YOUR BIKE, ALWAYS BE SURE TO REMOVE THE BATTERY.**

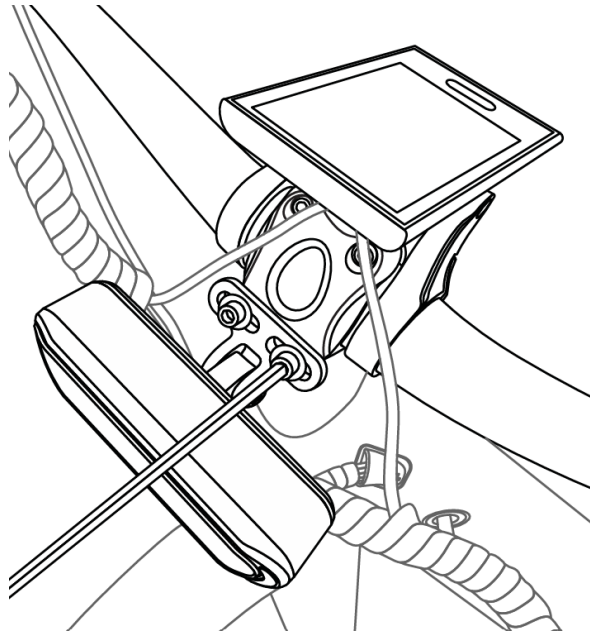
First remove the bike from the box and remove all protective packaging and zip ties using side cutting pliers. BE SURE TO NOT CUT ANY ELECTRICAL WIRES OR BRAKE AND SHIFTING CABLES.

Once the packaging material is removed from the bike, remove the Allen bolts from the handlebar clamp using a 5mm Allen wrench. At this time be sure to turn the stem so it is facing forward, as shown below. (To reduce packaging size, the stem is turned backwards during shipping).

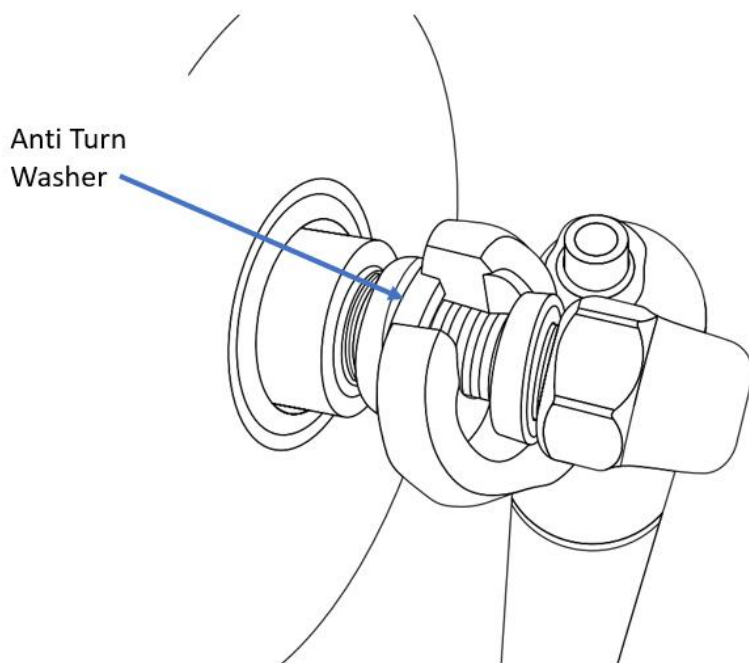


Next, install the handlebars to the stem using a 5mm Allen wrench. Be sure to tighten the Allen bolts in a cross pattern when tightening. Tighten to 79 IN-LBS or 9 NM. Make sure the stem is pointed forward, as shown below. Be sure the handlebars are centered on the stem.

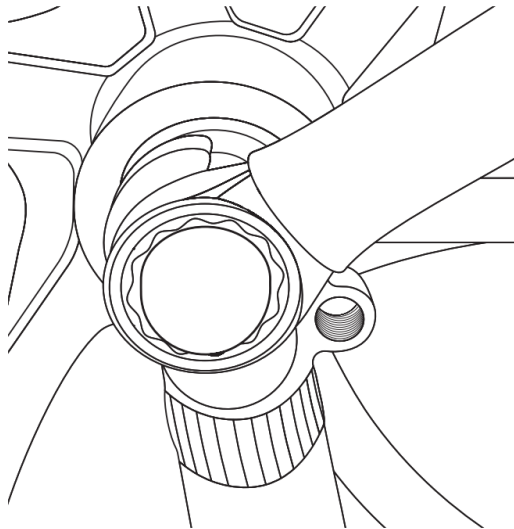




Then flip the bike upside down so that the bike is resting on the seat and the handlebars. Loosen the axle nuts from the axle, then put the wheel into the fork making sure the anti-turn washer is on the inside of the fork and the tab on the anti-turn washer is locked into place on the fork dropout, as shown below. The motor power wire should be facing down (with the bike upside down, or facing up, when the bike is upright). Once the wheel, anti-turn washers, and brake rotor are aligned on the fork, tighten both axle nuts.



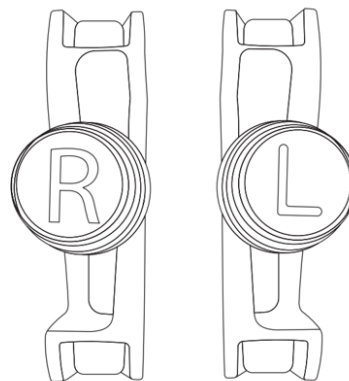
Use a 19mm wrench to tighten the axle nuts firmly, as shown below.

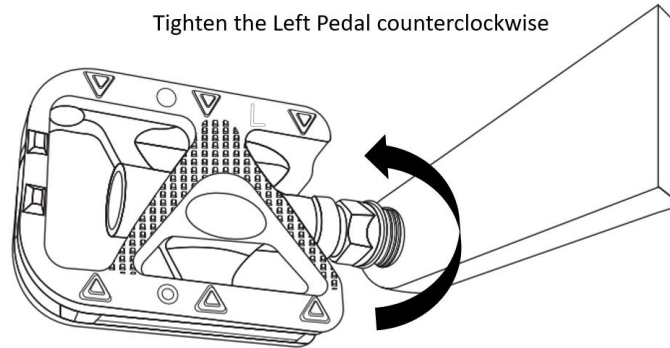
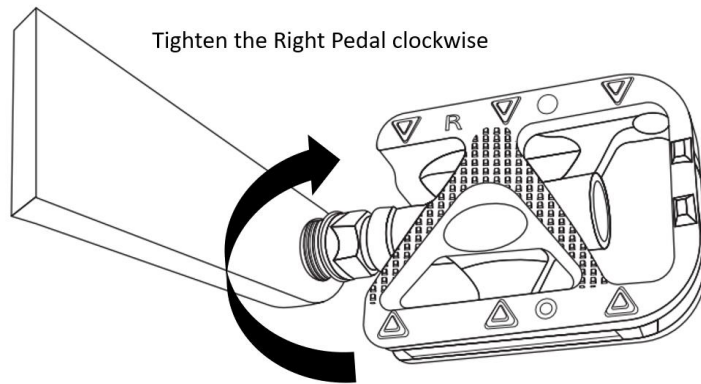


Attach the pedals to the bike by using a 15mm wrench. Be sure to identify the correct pedal for the correct side. There is an R or L marked on the end of the pedal bolt. Be sure to note that the left pedal is reverse threaded. It is recommended to add general purpose grease to the threads before installing the pedals. Right and Left is determined when sitting on the bike. Pedals are always tightened towards the front wheel.

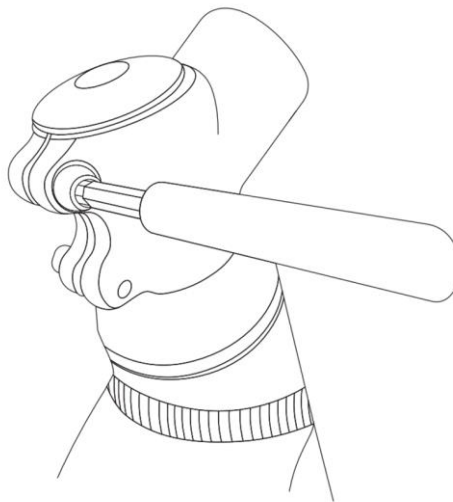
R, L represent Right and Left Pedal. Right and Left side of the bike is determined when the rider is sitting on the bike.

**Note:** Right is standard thread, (tighten clockwise)  
Left is reverse thread (tighten counterclockwise)





After the pedals are installed, flip the bike over onto the wheels and be sure to check that the handlebars are aligned with the front tire. Then tighten both sides of the stem to the fork using a 4mm Allen wrench. Tighten to 79 IN-LBS or 9 Nm.



Next, check the tires for proper air pressure. The minimum and maximum air pressure should be between 10psi-30psi.



Torque Specs			
Category	Component	Newton Meters	Inch- Pounds
Bottom Bracket	Cartridge Bracket	50-65 Nm	442-575
Brakes	Brake Adaptor	9 Nm	79
	Brake Caliper	9 Nm	79
	Brake Lever Clamp Bolt	6 Nm	53
	Brake Rotor	7 Nm	62
Cassettes & Freewheels	Cassette Lockring	45 Nm	398
	Freehub	35-45 Nm	309-398
Chainrings	Chainring Bolts	10 Nm	88
Crank Bolts	Crank Arm Bolt	45 Nm	398
Derailleur	Rear Derailleur Mounting Bolt	9 Nm	79
	Rear Derailleur Cable Pinch Bolt	7 Nm	62
Headset	Headset Compression Bolt	11 Nm	97
Shifters	Shifter	6 Nm	53
Pedals	Pedal Shaft into Crank Arm	35 Nm	309
Seats & Seat post	Seat Rail Clamp	22-24 Nm	194-212
Stems	2 Bolt Fork Column Bolts	11 Nm	97
	4 Bolt Handlebar Clamp	9 Nm	79
Wheels and Hubs	Front Axle Nut (Bolt-On)	30-40 Nm	265-354
	Rear Axle Nut (Bolt-On)	30-40 Nm	265-354
	Spokes	160-180 KGF	
	Torque Arm Bolts	6 Nm	53

Once the bike is assembled, fully charge the battery, and install the battery into the bike frame, being sure to insert the key and turn clockwise to open the battery latching system.

## OPERATING INSTRUCTIONS

Before operating, be sure the rider can keep balance by testing the bike without using the motor to ensure the rider is capable.

**IF YOU INTEND TO USE YOUR BIKE IN CLASS LEVEL 4 SETTING, IT IS RECOMMENDED TO USE THE UPGRADED 20AH BATTERY TO HELP DELIVER HIGHER PERFORMANCE. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT RAMBO CUSTOMER SERVICE AT [cs@rambobikes.com](mailto:cs@rambobikes.com).**

Be sure the seat height is set properly. The rider should be able to put both feet on the ground while fully seated. The seat post has a minimum insertion point. Be sure not to extend the seat beyond this line.

When using the bike for the first time, be sure to practice in a safe environment with no obstacles or hazards.



**ALWAYS WEAR AN ASTM OR CPSC CERTIFIED HELMET AND PROTECTIVE ATTIRE INCLUDING SHOES.**

## THROTTLE OPERATION

Your bike is equipped with a thumb throttle. The throttle can be used from a complete stop all the way to the top speed and at any time. The thumb throttle is activated when the pedal assist level is on Level 1-5. The throttle will not work on Level 0.

## LCD INFORMATION

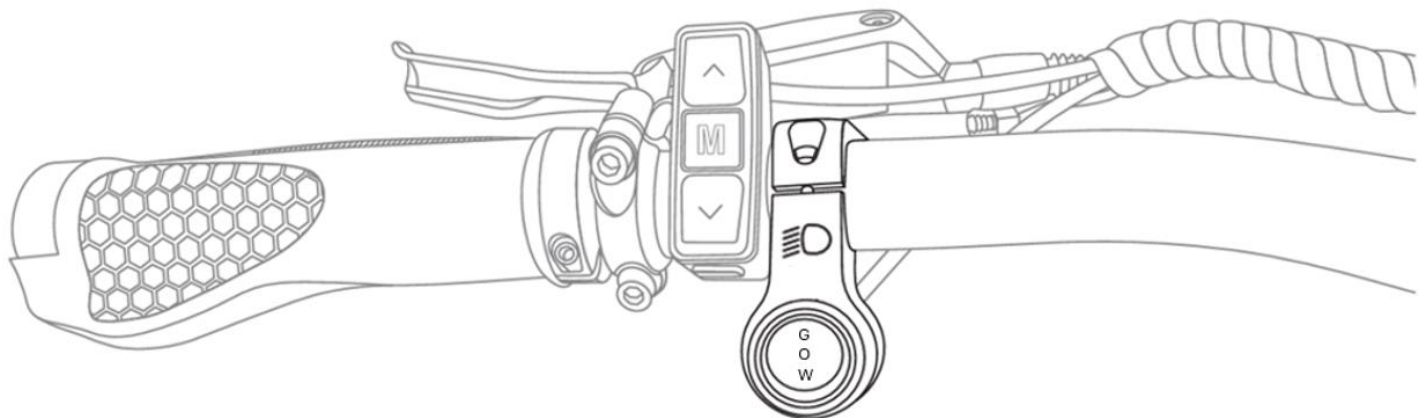
Below is a picture of the LCD on your bike. Note that when the pedal assist level is on 0, there is no power from the motor for both pedaling and for using the thumb throttle. Once the assist level is set above 0, the motor will have power and pedal assist and the thumb throttle will be activated. Note that once you come to a complete stop, the LCD will reset the pedal assist level to 0 after 15 seconds. This is a built-in feature to ensure safety.



Each PAS (Pedal Assist Level) is approximately 20% motor power. Level 1 is 20%, Level 2 is 40%, Level 3 is 60%, Level 4 is 80% and Level 5 is 100% motor power.



The left hand side of the handlebars has a switch that is used to turn on your headlight. This is a 3 position switch that will toggle between white light, green light, and off.



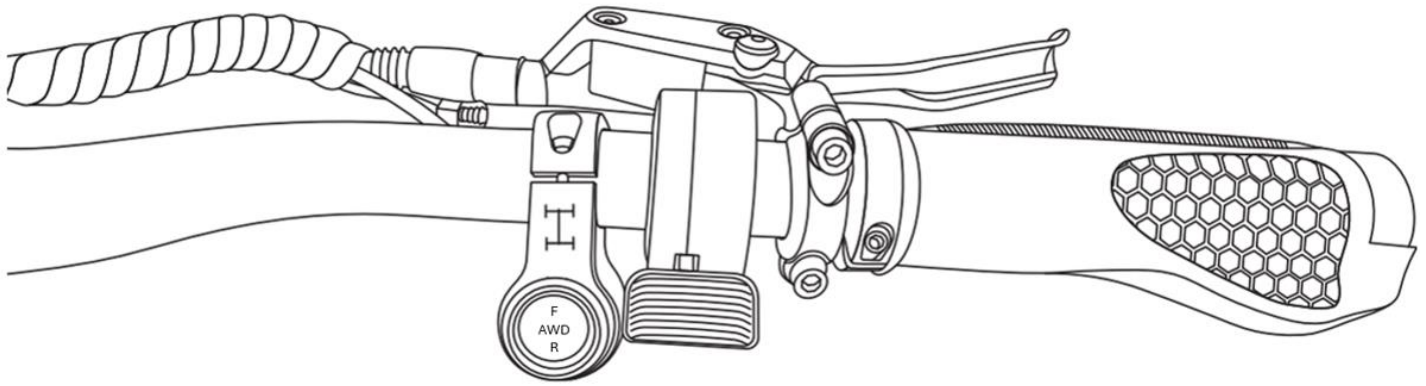
### HEADLIGHT SWITCH

G = Green Light Only

O = Off

W = White Light Only

The right hand side of the handlebars has a switch that is used to change the drive system. You can toggle between front wheel drive, all-wheel drive, and rear wheel drive.



### **ALL-WHEEL DRIVE SWITCH**

F = Front Wheel Drive Only

AWD = All Wheel Drive

R = Rear Wheel Drive Only

### **RANGE ESTIMATES**

The range that you can get on a single charge depends on many variables such as terrain, hills, windy conditions, rider weight, and rider assistance. To extend your range, you can ride at a lower assist level, use pedal assist instead of throttle only, and pedal when starting from a complete stop.

Range Estimate up to 25 miles is using throttle only on PAS levels 3-5 with mostly flat ground.

Range Estimate up to 35 miles is using pedal assist on level 3-4 with mostly flat ground.

Range Estimate up to 48 miles is using pedal assist on level 1-3 with mostly flat ground.

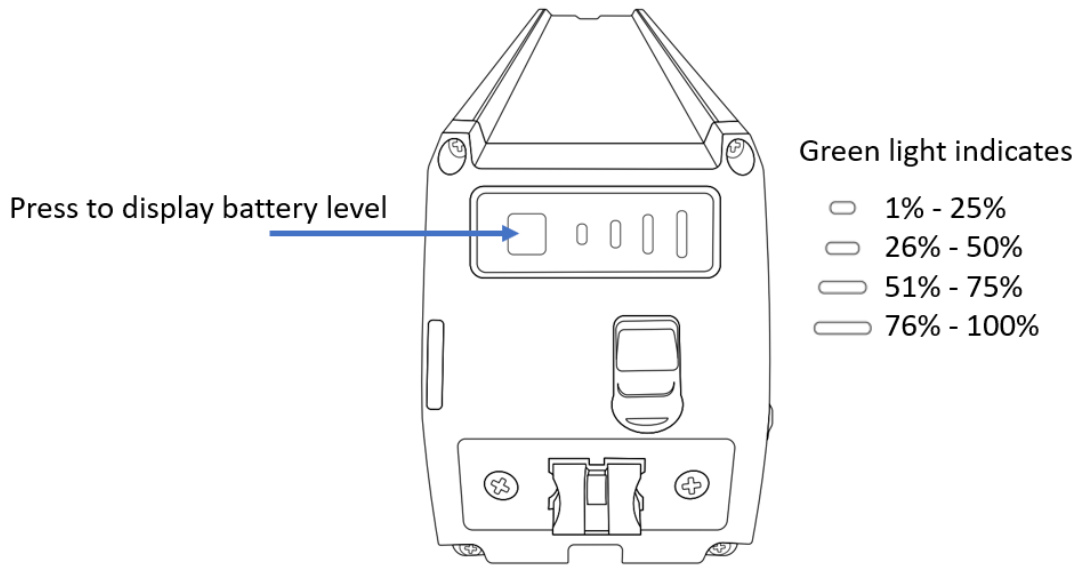
## **BATTERY INSTALLATION/REMOVAL**

### **CHARGING/STORAGE**

**WARNING: NO CHILD UNDER THE AGE OF 8 YEARS OLD SHOULD ATTEMPT TO CHARGE THE BATTERY ON THEIR OWN.**

**WARNING: DO NOT SHORT CIRCUIT, DO NOT CRUSH, DO NOT HEAT, OR INCINERATE, DO NOT IMMERSE IN ANY LIQUID, DO NOT DISASSEMBLE.**

## Checking Battery Level:



## Installing/Removing Battery:

Insert the key into the keyhole, then turn the key clockwise as indicated on the keyhole. This will unlock the battery latch and allow the battery to drop down to the second safety latch. Next, turn the safety latch on the battery and lower the battery out of the frame. When installing the battery, be sure the battery clicks twice into the frame and the battery is sitting flush with the frame. The first click is the safety latch, and the second click is the lock system for the battery.

## Charging:

Do not charge the battery at temperatures below freezing and above 113 Fahrenheit (45 Celsius).

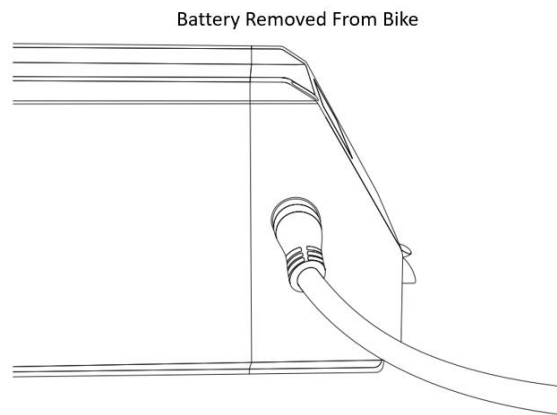
**ONLY USE CHARGER THAT IS SUPPLIED WITH THE BIKE TO CHARGE THE BATTERY, DO NOT USE ANY OTHER CHARGER.**

**WARNING: DO NOT CHARGE BATTERY FOR LONGER THAN 12 HOURS.**

**WARNING: ALWAYS CHARGE IN A DRY AREA.**

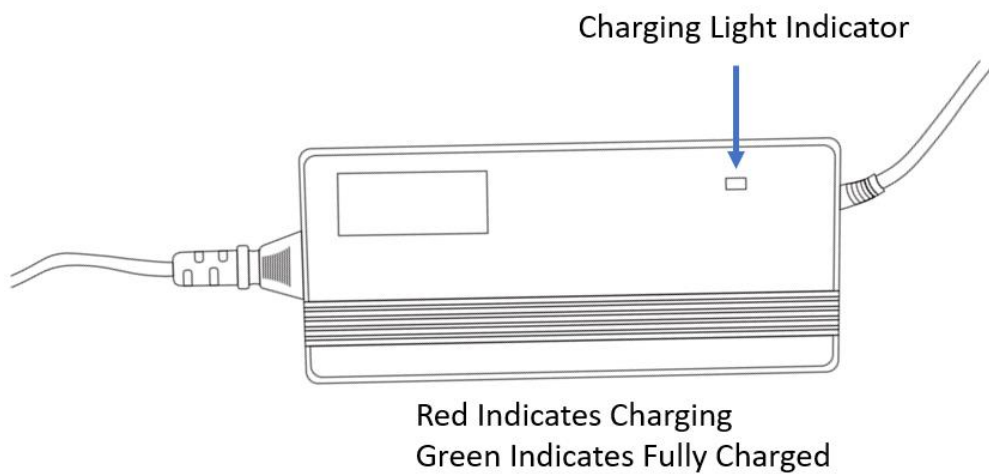
The battery can be charged while on the bike. Make sure to turn the bike off before charging the battery and/or removing the battery.

Install the charging plug into the battery charging port, as shown below.



When charging the charger will display red, and once fully charged the charger will turn green.

Charging will take approximately 4hrs depending on the battery level.



### **Storage:**

Always store the battery in a dry place with temperature above freezing and below 113 degrees Fahrenheit (45 Celsius).

It is best practice to store the battery with a charge above 50%.

To extend the life of your battery, it is best to discharge and charge every 3 months.

## INSPECTION BEFORE EVERY RIDE

Before every ride, inspect the bike with the following check list. If any part of the bike fails the inspection, repair the bike by following the information provided in this manual or take the bike to your bike shop for service. Never ride a bike with a damaged part; have it replaced.

### Tires and Wheels

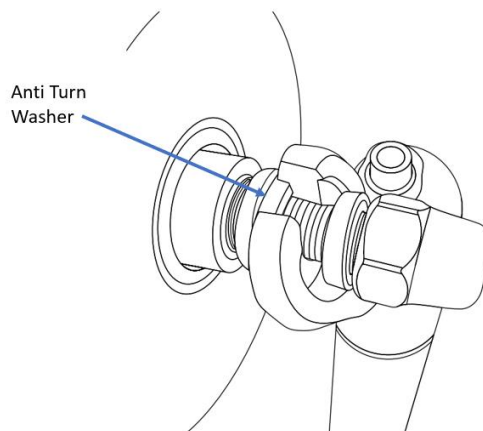
- Spin each wheel and check that the tires are in good shape with no cuts or abrasions. If these are found, replace the tire immediately.
- Inspect the rim for trueness by spinning it and watching for any side-to-side or up-and-down wobble. If any movement is noted, do not ride this bike until the rim is repaired.
- Check the tire inflation. Make sure to check tire pressures using a tire pressure gauge. The tires should be set between 10psi and 25psi.

**NEVER SET TIRE PRESSURE BELOW 10PSI OR ABOVE 25PSI**

**A WHEEL ATTACHMENT DEVICE THAT IS NOT PROPERLY ADJUSTED AND CLOSED MAY ALLOW THE WHEEL TO BE LOOSE OR COME OFF UNEXPECTEDLY, CAUSING YOU TO LOSE CONTROL AND FALL. MAKE SURE THE WHEELS ARE PROPERLY ATTACHED BEFORE RIDING THE BIKE.**

### Wheel Retention System:

- Your bike comes with a bolt-on style front axle. Make sure the front tire is centered on the fork. Once centered, secure the wheel to the front fork with a washer and nut on each side.
- Check that the disc brake operates properly.
- The illustration below shows the correct tightening of the front wheel.



## **Brake Reach**

Some bikes have adjustable brake levers. These can be adjusted to fit each individual rider's specific needs. For example, if you have a short reach, you may need the levers adjusted closer to the handlebar. This adjustment or brake lever replacement should be done by a qualified bike technician or bike shop.

**DISC BRAKES AND DISCS CAN GET VERY HOT DURING USE AND COULD BURN SKIN. ALSO, THE DISC EDGES MAY BE SHARP AND COULD CUT SKIN. AVOID TOUCHING THE DISC OR DISC BRAKE WHEN HOT, OR WHEN ROTATING.**

## **Handlebar stem and front wheel alignment**

- Make sure the front wheel and handlebar stem are aligned in the proper orientation to each other.
- Turn the handlebar from side to side with the front wheel locked between your knees to test the stem connection of the fork. If any movement is noted, do not ride the bike until this is corrected.
- Inspect cable routing to be sure the handlebars can turn freely without binding or pinching the cables. Check to be sure that your hand grips on the handlebars are in good condition and the bars are not protruding through the grip.

## **Seat Position**

The saddle should be adjusted for proper fit and is an important factor in riding safely. Place your pedals in the 6 o'clock and 12 o'clock position. Your bottom leg should be very slightly bent when the ball of your foot is placed on the lower pedal. If it's bent too much, you need to raise the saddle. If you have to rock your hips to reach or can't easily reach, you must lower the saddle. Ensure that the saddle is straight and level.

## **Seat and Seat Post**

Check that the seat is securely mounted on the seat post by lifting up and down on the seat. This should not tilt or move. Next, check the security of the seat post in the frame by attempting to rotate the seat. If the seat rotates, then the seat tube is not properly clamped into the frame.

# **MAINTENANCE AND CARE**

**MOTOR AND CONTROLLER CAN BE VERY HOT, CAUSING BURNS AND SEVERE INJURY. BE SURE THESE COMPONENTS HAVE HAD TIME TO COOL BEFORE ATTEMPTING TO DO ANY MAINTENANCE.**

**BEFORE DOING ANY WORK ON YOUR BIKE, ALWAYS BE SURE TO REMOVE THE BATTERY.**

**Service:** Before every ride, complete the bike inspection outlined in the section "Inspection Before Every Ride". If you identify any areas that need adjustment or service, take your bike to a qualified bike technician for repair and service.

**Before and after every ride:** Check wheels and tire inflation, check handlebar and stem, check brakes, check seat and seat post, check lights and reflectors, check frame, fork, and components. Clean your bike and remove any grass or debris on your bike, especially from your drivetrain system. Never clean your brake pads or rotor with any type of lubricant.

**Monthly:** Clean your bike thoroughly and remove any grass or debris on your bike, especially from your drivetrain system. Lubricate chain rollers with bike chain lubricant. Squeeze and inspect brakes for wear and proper working order. Check reflectors, lights, and seat/seat post for excess wear or damage. Check the frame, fork, handlebars, and stem for cracks and damage. Check each pedal to make sure they are not loose. Make sure there is no rust or kinks in the control cables or cable housing. Check your wheel rims for excessive wear and dents or for any loose or damaged spokes. Check your tires for tire inflation and excessive wear, cuts, or abrasions. Check each pedal arm to be sure they are tight.

**Every 3 months:** Check reflectors, lights, and seat/seat post for excess wear or damage. Check the frame, fork, handlebars, and stem for cracks and damage. Lubricate handlebar stem and seat post. Check each pedal to make sure they are not loose and lubricated. Make sure there is no rust or kinks in the control cables or brake housing. Check your wheel rims for excessive wear and dents and for loose or damaged spokes. Check your tires for tire inflation and excessive wear, cuts, or abrasions. Check crankset and bottom bracket. Inspect and lubricate brake levers. Lubricate bottom bracket bearings and wheel bearings. Check each pedal arm to ensure they are tight.

If you are uncomfortable with any service or general maintenance to your bike, please visit your local bike shop for service and maintenance.

Take your bike to your local bike shop for inspection after 30 days, or if you think something is wrong with your bike, take it in immediately.

Your bike and components are subject to wear and fatigue. If a component's life cycle is exceeded, it can suddenly fail which may cause serious injury or death.

**IF ANY SIGNS OF WEAR, DAMAGE OR FATIGUE, DO NOT RIDE YOUR BIKE. TAKE YOUR BIKE IMMEDIATELY TO A LOCAL BIKE SHOP FOR REPAIR AND SERVICE!**

Replacement parts can be purchased by contacting Rambo bikes at: [rambobikes.com](http://rambobikes.com).

A list of Certified Repair Centers can also be found at:

[rambobikes.com/dealer-locator](http://rambobikes.com/dealer-locator)



## TROUBLESHOOTING GUIDE

### Error codes

- 03 - Brake ON (03H)
- 04 - Throttle doesn't go back (in the furthest position) (04H)
- 05 - Throttle fault (05H)
- 06 - Low voltage protection (06H)
- 07 - Over voltage protection (07H)
- 08 - Hall signal wires fault on the motor (08H)
- 09 - Phase wire fault on the motor (09H)
- 10 - Controller temperature is too high, and reaches the protection point (10H)
- 11 - Temperature sensor inside controller fault (11H)
- 12 - Current sensor fault (12H)
- 13 - Temperature sensor inside battery fault (13H)
- 14 - Temperature sensor inside the motor fault (14H)
- 21 - Speed sensor fault (21H)
- 22 - BMS communication fault (22H)
- 23 - Light fault (23H)
- 24 - Light sensor fault (24H)
- 25 - Torque sensor torque signal fault (25H)
- 26 - Torque sensor speed signal fault (26H)
- 30 - Communication fault (30H)

**Bafang Troubleshooting Guide**



**Rambo LCD Manual**



**Align your brake rotor**



**Tips from Ebike Essentials**



**Adjusting your rear derailleur**



**Bleeding your brakes**



## STANDARD LIMITED WARRANTY

**Bicycle Lifespan.** Rambo Bikes™ have an expected lifespan depending on the level of care and/or use. Misuse, neglect, and abuse will significantly reduce the expected lifespan of your bike. Some types of riding styles - competition, jumping, downhill racing, and extreme conditions or climates - will all impact the lifespan of your bike and its components. These types of riding may cause premature failure of your bike and its components. This warranty does not extend to any failures associated with this type of riding, or to any Rambo products that have been subject to misuse, neglect, abuse, or improper storage, or if the product is modified or altered in any way other than as directed by official Rambo Bike instructions. Always have your bike periodically inspected by a qualified bicycle technician. These inspections are crucial for the safety of you and others around you as well as extending the lifespan of your Rambo.

**Limited Lifetime** Frame Warranty Rambo Bike frames are warranted against factory defects for the lifetime of the original purchaser if they remain the owner of the Rambo Bike. This warranty is non-transferable. Your Rambo frame is warranted against premature failure caused by faulty workmanship or materials, as determined by Rambo Bikes. Frames must be returned to Rambo Bikes at the owner's expense for determination of defect and/or replacement. If a frame replacement is found to be warranted by Rambo Bikes, a comparable frame (depending on availability) will be issued to the original purchaser. Front forks and suspension forks do not have a lifetime warranty!

**Warranty Beyond** the lifetime frame warranty, Rambo Bikes warrants all bikes, enclosed hardware (where applicable) and accessories to be free from defects in material and workmanship for a period of twelve months from the original date of purchase. Some components on your Rambo Bike such as brakes, tires, tubes, chains, grips, motors, and cables are not warranted against normal wear. If you find a product to be defective, contact Rambo at (952) 283-0777. All components must be returned at the owner's expense for inspection. Product repairs and/or updates not covered under the warranty will be provided at a set rate. At its sole discretion, Rambo will determine whether the component will be covered under this warranty. This warranty is in lieu of all other warranties expressed or implied. You may have certain legal rights that extend beyond this warranty in certain states. Terms and Conditions of this Limited Warranty does not cover installation, disassembly, adjustments of components, normal wear and tear, damage caused by improperly installed parts or components, installation and use of aftermarket accessories or storage fees. Any installation of a powerplant (motor electric or internal combustion) other than powerplants supplied directly by Rambo Bikes immediately voids this warranty. Some parts and components may from time to time become obsolete or discontinued. Rambo Bikes reserves the right to substitute any component at its sole discretion. This is the only warranty provided or honored by Rambo Bikes, and no other warranty will be honored unless specifically provided for by law. No implication of merchantability or fitness for a particular purpose has been made by Rambo Bikes.

**General** Rambo Bikes™ will not be held liable for any damages resulting from breach of warranty or for sums beyond the purchase price of the product. Rambo Bikes is not liable for lost profits or goodwill; downtime; damage or destruction of items or equipment used with, or in conjunction with Rambo Bikes™; personal injury or loss; or any other damages. This agreement is the entire agreement between you and Rambo Bikes™, and supersedes any prior agreements, representations, or proposals; and may be changed only by written agreement with Rambo Bikes™. Waiver by any party or breach of this agreement will not constitute a waiver of any subsequent default or breach of the same of different kind. The invalidity of any provision of this agreement shall not affect the validity of the other provisions hereof. This agreement shall be governed by laws of the State of IOWA, U.S.A. Rambo Bikes™; Centerville, IA 52544 \*\*\*\*\* PRODUCT REGISTRATION

\*\*\*\*\* Please complete this card and mail to Rambo or visit RamboBikes.com and submit registration online to activate your warranty. Product \_\_\_\_\_ Model Number/Serial Number

\_\_\_\_\_ Owner's Name \_\_\_\_\_ Purchase Date

\_\_\_\_\_ Street Address

\_\_\_\_\_ City

\_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ E-mail Address

\_\_\_\_\_ Phone \_\_\_\_\_ Purchased From (Dealer Name) \_\_\_\_\_ How did you hear about us: \_\_\_\_\_

Catalog \_\_\_\_\_ Webpage \_\_\_\_\_ Friend \_\_\_\_\_ Magazine Other, Please Explain

\_\_\_\_\_ WWW.RAMBOBIKES.COM



# ***RAMBO***

***ELECTRIC BIKES***