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***BURROMAX***  
**BURROMAX XRA, XBR Race Models**



The XRA and XRB Models share similar components, and both models are designed with a special performance S mode for those who will use them in competition. The main difference in these models is the swing arm length on the XRA, approximately 50mm longer than the XRB model. The tires, handlebars, and gearing are the other differences, and both were created to perform at a very high level for brief periods. In general, the XRB is the higher performer due to tire diameter and tire weight, but it's only very slightly. Both bikes are very customizable in performance and are tuned to provide a reasonable performance/range combination while in low gear and second gear. Any time you run these bikes in S3 gear, you will not only deplete the battery quickly, but you can also overheat Motors, controllers, and batteries quickly. We have installed some software settings and components that will assist in keeping the performance and heat within limits. Do not change or attempt to override these settings.. If you have additional questions about performance upgrading or range extending, call us at 18007421189, and we will do our best to help you personalize your bike and experience to fit your needs.

## Specifications

- **XRA**

- **Gross weight:** 128.5lb.
- **Net Weight:** 113 Lbs

- **XRB**

- **Gross weight:** 122.4lb.
- **Net Weight:** 107 Lbs

- **XRA Performance:=**

1. **Speed:** 34 Mph
2. **Speed:** 48 Mph
3. **Speed:** 60 Mph

- **XRB Performance**

1. **Speed:** 33 Mph
2. **Speed:** 47 Mph
3. **Speed:** 58 Mph

- **XRA/XRB Range:** (Tested using 200 lb. Rider on Flat Pavement)

1. **Speed:** 33MPHh –Up to 25 Miles
2. **Speed:** 35-45 Mph–Up to 20 Miles

- **Charge Time:** 90% Discharge approx. 2.5 Hrs to full recharge, 80% Charge in 1.5 Hrs.

- **Weight Capacity:** Up to 250 lbs. on Flat Pavement/Dirt.. For Track or Competition, we recommend 180lb max.

- **Electrical:**

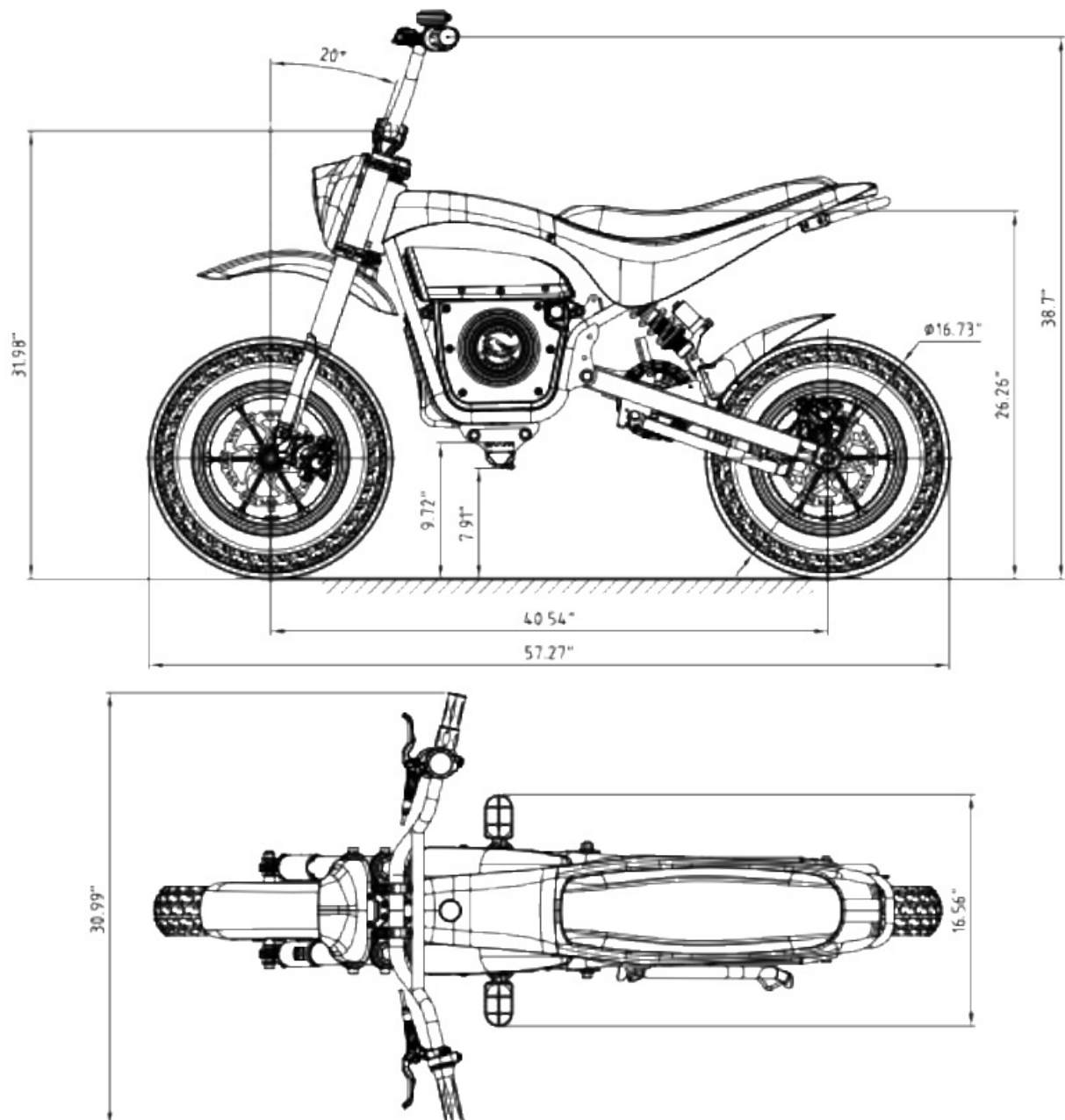
- **Battery:** 72 Volt 20AH Lithium Ion 21700 Samsung 50S 20S4P with 20S100A BMS, 85C Max Temp Discharge and 55C Max Temp internal for charging.
- **Charger:** 84V 10 Amp 4Pin
- **Controller:** Burromax GTS 3 Speed Mode, Programmable\*\* Up to 125 AMP burst operation 330-secondnd max Auto Reset Fuse. Flux Weakening, 105CMax Temp
- **Wiring:** Waterproof \*\*\* Type
- **Motor:** Brushless AC 4000W Rated 5500rpm up to 9500 RPM with Hall and Flux Weakening —Over temp Amperage reduction starts 1at 10C Max Temp 140C
- **Lighting:** LED Headlight, LED Taillight, LED Safety Side Lights
- **Display:** MPH, Odometer, Voltage, Charge Bar Graph, Speed mode 1,2, S3 - Programmable Speed Setting
- **USB Ports:** Dual 4.5 Amp Fast Charging

- **Horn:** Single Note 100 dB

- **Chassis**

- **Fork:** 36mm Inverted Hydraulic—4.25 OZ per Leg 15W Fork Oil
- **Rear Shock:** 230mm Coil Over Hydraulic-Adjustable Dampening, Adjustable Rebound, 800lb Spring
- **Wheel:** 3.5×10" 6 Spoke Alloy
- **XRA Tire:** 3.5"-10" Burromax Super Moto—40 PSI
- **Brakes:** 180mm Hydraulic Dual Piston Disc F/R

## Diminsion



## **RIDERS SASAFETYARNING**

This Motorcycle is designed for off-road use Only and has been designed and intended for use in controlled environments free of potential traffic hazards and not on public streets. It is up to the end user to know the local laws governing such vehicles and where they are legal to be ridden. Burromax does not claim that these bikes are street legal.

Riding an electric motorcycle can be a hazardous activity. Certain conditions may cause the equipment to fail without the fault of the manufacturer. Like other electric products, these vehicles can and are intended to move, and it is therefore possible to lose control, fall off, and/or get into dangerous situations that no amount of care, instruction, or expertise can eliminate. If such things occur, you can be seriously injured or die, even when using safety equipment and other precautions.

## **RIDE AT YOUR OWN RISK AND USE COMMON SENSE**

- It is your responsibility to review this information and make sure that all riders understand all warnings, cautions, instructions, and safety topics, and ensure that riders can safely and responsibly use this product. Burromax recommends that you periodically review and reinforce the information in this manual with younger riders and that you inspect and maintain your product to ensure rider safety. The recommended Minimum rider age is 16 years or older is only an estimate, and can be affected by the rider's size, weight, or skills. Any rider unable to fit comfortably on the Motorcycle should not attempt to ride it. A parent's decision to allow a person younger than 16 years old to ride this product should be based on the child's maturity, skill, and ability to follow rules, and they would be doing so at their own risk.
- DO not exceed the maximum recommended rider weight of 250 lbs. Rider weight does not necessarily mean a person's size is appropriate to fit or maintain control of the vehicle.
- Keep this product away from small children,, and remember that this product is intended for use only by persons who are completely comfortable and confident when operating this motorcycle with appropriate skills.
- Always check and obey any local laws or regulations that may affect the locations where the vehicles may be used. Ride defensively. Watch out for potential objects that could catch your wheel or force you to swerve suddenly or lose control.

## **RIDERS SAFETY WARNING**

- Be careful to avoid extremely rugged terrain, Roadways, pedestrians, skaters, skateboards, scooters, bikes, children, or animals who may enter your path, and respect the rights and property of others.
- Do not activate the throttle on the hand grip unless you are on the electric motorcycle and in a safe, outdoor environment suitable for riding.
- These bikes were manufactured for performance and durability, but are not impervious to damage.
- Jumping or other aggressive riding can over-stress and damage any product, including this electric motorcycle, and the rider assumes all risks associated with high-stress activity.
- Be careful and know your limitations. The risk of injury increases as the degree of riding difficulty increases. The rider assumes all risks associated with aggressive riding activities.
- Always maintain a hold on the handlebars.
- Never carry passengers or allow more than one person at a time to ride this motorcycle.
- Never use near steps or swimming pools.
- Keep your fingers and other body parts away from the drive chain, Wheels, Brake Rotors, steering system, and all other moving components.
- Never use headphones or a cell phone while riding this bike.
- Never hitch a ride with another vehicle.
- Do not ride the vehicles in wet or icy weather,, and never immerse the electric motorcycle in water, as the electrical components and drive components could be severely damaged by water or create other hazards or possibly unsafe conditions.
- These vehicles are intended for use by adults in various riding conditions where high-speed riding can be very unsafe—know your skill level and respect this.
- Avoid excessive speeds that can be associated with downhill rides.
- Do not touch the brakes or electric motor on your electric minibike when in use,, as they can become very hot.

## **Proper Clothing**

When used in closed-circuit competition, always use approved safety gear required by

track owners or promoter organizations. As a Pit bike, always wear an approved safety helmet (with chin strap securely buckled). A helmet may be legally required by local law or regulation in your area. Long pants and gloves are always recommended. Always wear boots or athletic shoes (never ride barefoot or in sandals, and keep shoelaces tied and out of the way of the wheels, motor, and drive system).

## **BATTERY AND CHARGER WARNINGS**

### **Battery Protection Devices**

- **Battery Fuse Operation:** Your Burromax is equipped with an automatic fuse between the battery and the controller that is designed to regulate the amount of time that the bike can be ridden at maximum speed and load. Typically, you can use the Sport Mode (3 on the gauge) for about a 10-20 second burst before the fuse shuts down the bike. If your bike shuts down, let it cool for about 30 seconds to 1 minute, and the fuse will automatically restart, often making an audible sound when it does. We do this to let you know when you are stressing the system while still allowing you to get maximum enjoyment and additional power when needed. If you experience a shutdown by the fuse, you need to **ADJUST YOUR RIDING STYLE** to a less aggressive style or select gear #2. Typically, you can ride the bike in gear 2 for very long distances without stressing the system.
- **Temp Sensor Protection note:** Li-ion battery (1-72v-20ah) contains a non-replaceable internal temperature sensor, and it will shut down the battery when the internal temperature reaches 75°C. The battery will not accept a charge if the internal temperature reaches 55 °C and will require a cool-off period before charging is allowed. This does not mean the battery is defective and is present to (1) keep users from charging an overheated battery during aggressive use and (2) from overheating the battery. If you experience a cutoff of discharging or charging not related to the fuse, you need to **ADJUST YOUR RIDING STYLE** to a less aggressive style. Typically, you can ride the bike in gear 2 for very long distances without overheating the system.

### **Charger Warnings**

1. The charger supplied with the electric Motorcycle should be regularly examined for damage to the cord, plug, enclosure,, and other parts, and in the event of such

damage, the bike must not be charged until the charger has been repaired or replaced.

2. Use the Y the Burromax Li-ion Battery Charger, Specific to the model you purchased. Do not use other MFG chargers with similar or the same plug!!! The chargers we use are rated for the maximum charge rate for your motorcycle.
3. Do not operate a charger near flammable materials.
4. Unplug the charger and disconnect from the bike when not in use.
5. Chargers are not waterproof and should never be used in wet conditions. Water and moisture will damage the charger, so always use the charger in a clean, dry area.
6. Do not store or charge the battery in extreme temperatures. Above 110° F or below 32° F
7. Keep away from fire.
8. Do not use Lead Acid or automotive battery chargers,, as they will damage the battery and void your warranty.
9. Turn the power switch OFF before charging the battery or conducting any maintenance procedures.
10. Chargers have internal cooling fans that must be kept clean and should never be used in very dirty conditions where debris or hair can get into the charger..

FAILURE TO USE COMMON SENSE AND HEED THE ABOVE WARNINGS INCREASES THE RISK OF SERIOUS INJURY. USE WITH APPROPRIATE CAUTION AND SERIOUS ATTENTION TO SAFE OPERATION.

Recycle batteries ONLY at locations that accept Lithium-Ion Batteries—DO NOT THROW IN THE TRASH..

NEVER DISASSEMBLE OR SUBMERGE BATTERIES IN WATER—THIS CAN BE VERY DANGEROUS AND CAUSE SERVER BURNS, INJURY, OR DEATH

## **POWER WASHING WARNINGS**

Use care when washing to avoid pointing the water streams directly at the electrical components. Avoid pointing the water at the Throttle and Speedometer, Brake Handles, and the ends of the Motor. Do not use high pressure to wash the plastic body, or the graphics may come off! Do not put water directly into the battery housing vents! High-pressure washing tires, wheels, brakes, and under the bike or frame components poses no danger to the bike when washing. Be Careful!!! And thoughtful of all wiring and



Electrical Components when washing. Keep your bike CLEAN.

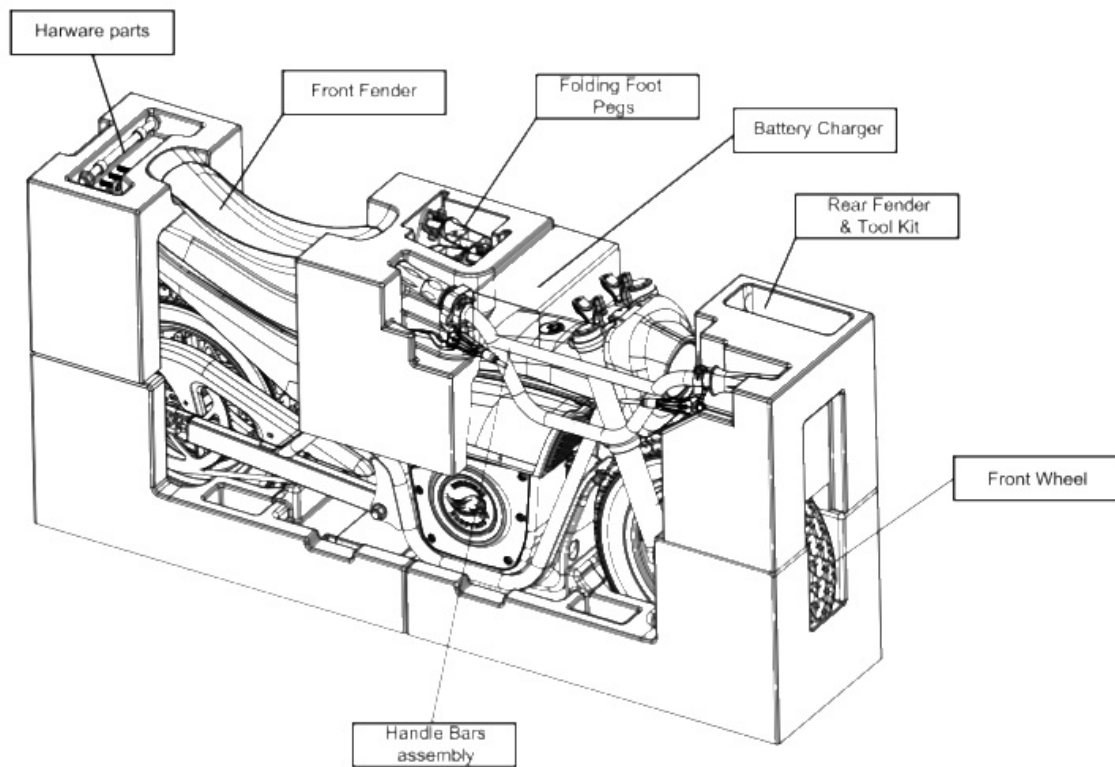
## **Operation and Performance Notes**

This bike was intended for enjoyment for the entire family as a Pit Bike, or as a closed-circuit race bike. It was designed specifically as an off-road motorcycle. This Bike was not intended for use as an on-road bike or as a motocross bike and should not be used to jump. We recommend riders up to 250 lbs. use this bike on relatively flat, hard h, hard-packed surfaces with lighter Lighter-weight riders have more freedom on terrain and riding aggressiveness. Heavier riders will lower performance and range, and can damage or destroy bikes if they are abused. Avoid excessive speeds that can be associated with downhill rides! This bike can achieve high speeds on da downhill ride, which can cause the rider to lose control and cause injury or even death.

**WARNING:** Do Not Operate this vehicle in WATER or SAND. Water and sand can damage just about everything. Keep water and sand away from moving metal components! These vehicles are intended for use on hard-packed ground without loose debris such as rocks or gravel, ornd sand. Wet, slick, bumpy, uneve,n or rough surfaces may impair traction and contribute to possible accidents.

## **Carton Contents**

Located at the top of the packing foam, you will find the Battery Charger, Front Fender, Rear Fender, Right and Left Footrest assemblies, Handlebar Clamps, alhardwareear, and Tool Kit. The Front wheel is located at the bottom of the packaging. OPEN THE TOP OF THE SHIPPING BOX and remove contents from the top of the foam inserts. Inspect and confirm that you have all parts and Hardware. Remove the foam separators that protect the components from damage during shipping. Remove the Front wheel and brake rotor. Inspect the contents of the box for scratches in the paint, dents, and inked Brake lines that may have occurred during shipping. Because these vehicles are 90 percent assembled and packed at the factory, there should not be any problems, even if the box has a few scars or dents.



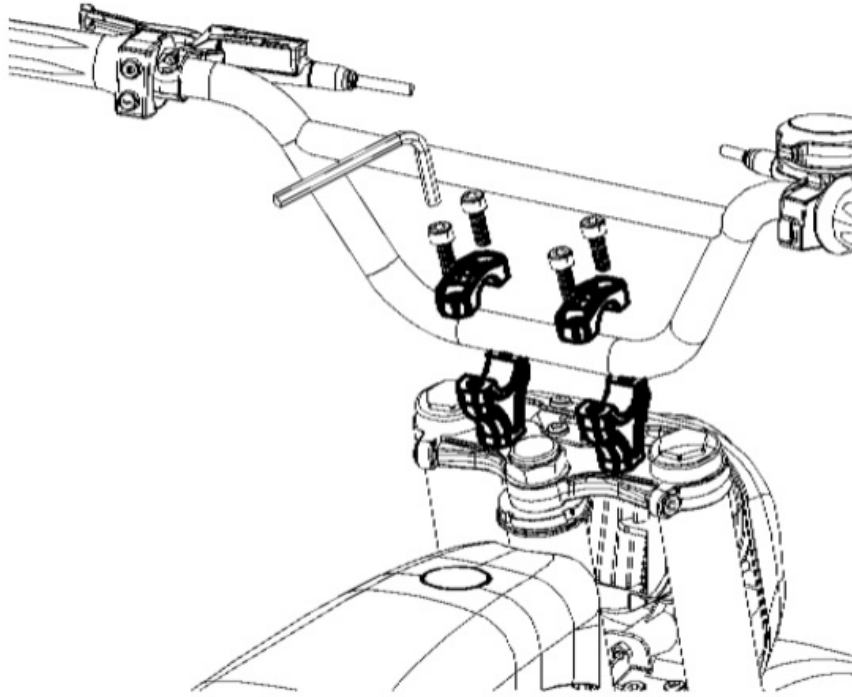
### **Allow up to 30 minutes for assembly.**

Check for all parts and hardware before beginning assembly. Follow these instructions carefully, Checking all bolts, Nuts and screws for tightness during the assembly process. DO NOT squeeze the brake levers until the brakes have been fully assembled. Set the bike on a stable platform at least 18" off the ground. Position the front fork so that it hangs off one end of the platform to facilitate front wheel and brake assembly installation. Enjoy the process and take your time to ensure all components are secure. Checking all bolts, nuts and screws for tightness during the assembly process

## **Assembly**

### **Attaching the Handlebars and Wiring**

**Tools required:** 6mm, 5mm, 3mm, 2.5mm Allen wrench.. Place the handlebars in the Lower handlebar clamps on top of the Front fork. Make sure brake lines are not twisted or kinked and wires are free from the clamps. Loosely install 2 top handlebar Clamps and (4) 8mm Allen bolts.



Center handlebar in clamps and position straight up or slightly forward to fit the rider height. Tighten the bolts using a 6mm Allen wrench. When properly tightened,, the handlebars should not move forward or back.

### **Attach the wires**

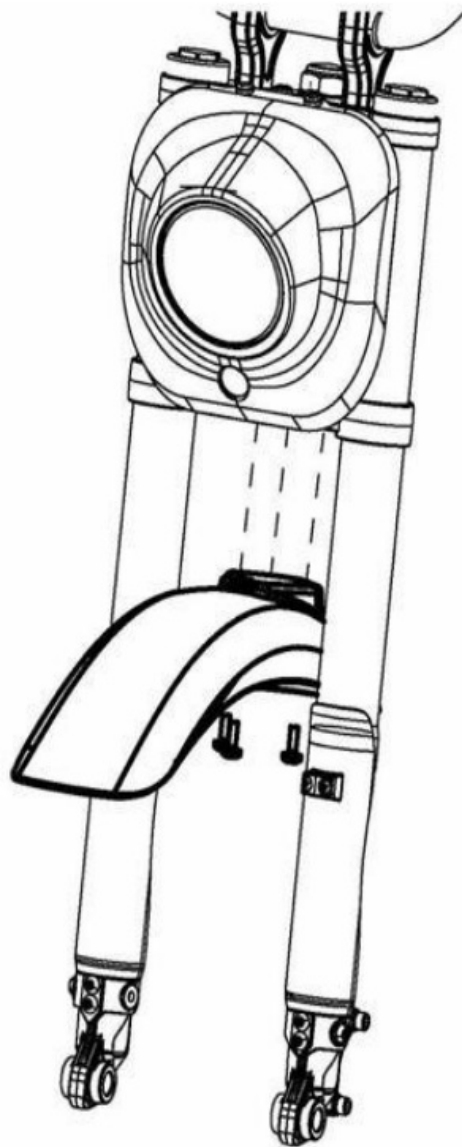
The wires have color-coded ends and will only fit into the same color connector. Put the wire ends together and rotate slowly until you feel the connectors align with each other. Then gently push together until you feel the connectors snap into place. Do this with all wire connections for each side of the handlebar..

### **Brake levers and throttle**

DO NOT Squeeze the brake levers until the Front Brake has been fully assembled to the bike. Install the front and rear master cylinders onto the handlebars at your preferred location using a 5mm Allen wrench, taking care not to twist the brake hoses. Rotate the throttle to a good operating position and tighten using an Allenlllen wrench. Rotate the headlight and horn switch to a comfortable position and tighten using a 2.5mm Allen wrench. Turn the front fork from side to side, making sure that the wires and brake lines are free from binding and clear of the fork stop located behind the headlight. Use wire ties supplied to group wire together. —Do Not Tighten wire ties too much, or you can break the small wires inside.

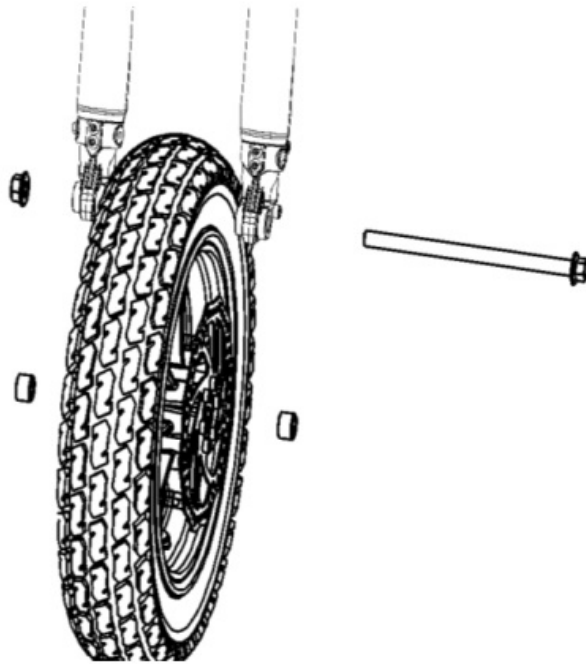
## Installing the Front Fender

Using (3) 6mm Allen bolts, attach the front fender to the bottom of the lower fork clamp above the front wheel and tighten securely with a 5mm Allen wrench. Remember the fender is plastic, so do not over-tighten bolts.



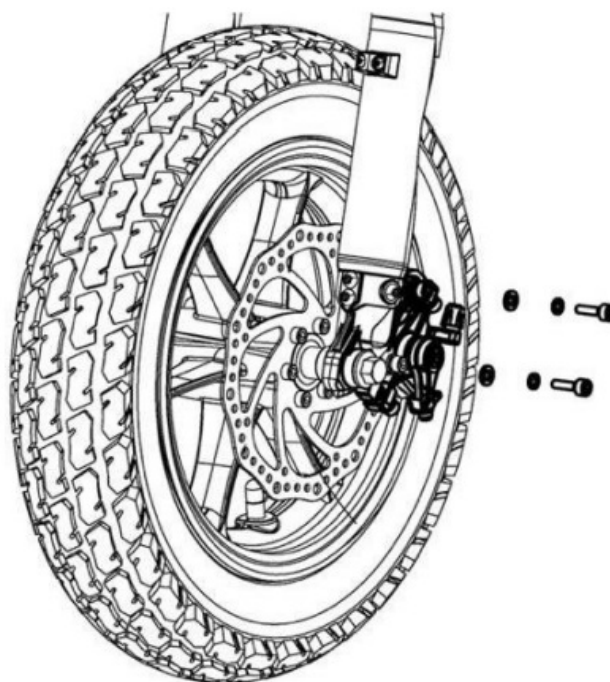
## Installing the Front Wheel

Install the front axle into the left fork leg far enough to install the first wheel spacer. Hold the front wheel up with the Brake rotor to the brake caliper side of the front wheel for K, and insert the axle into the wheel. Twist the axle back and forth to slide it through the bearings and spacer in the wheel. Install the 2nd wheel spacer between the fork and wheel on the opposite side. You may have to spread the forks slightly to get the spacer in between the axle and fork. Slide the axle through the forks and install the axle nut. Tighten Securely. Make sure the front wheel spins freely after you have tightened the axle nut.



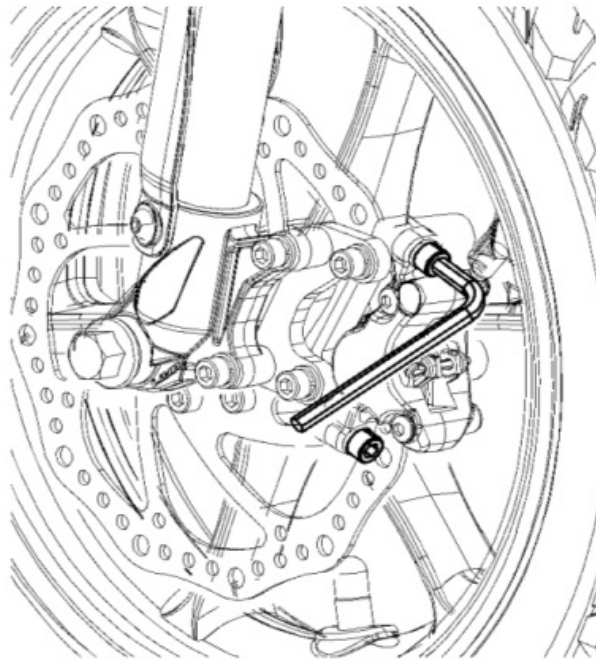
### Installing the Front Brake Caliper

DO NOT Squeeze the brake levers until the brake has been fully assembled to the front fork and brake rotor. Remove the caliper mounting screws from the brake caliper or caliper mount bracket on the front fork. Remove the plastic spacer located between the caliper brake pads. Install the caliper over the Brake Rotor, align the mounting hole, and sand install the mounting bolts (Fig. 1) hand-tight. Before tightening the mounting bolts, loosen the caliper adjusting bolts (Fig. 2)  $\frac{1}{2}$  turn so that the caliper is loose on the mounting bracket. Once the caliper adjusting screws are loose, you can now tighten the caliper mounting bolts.



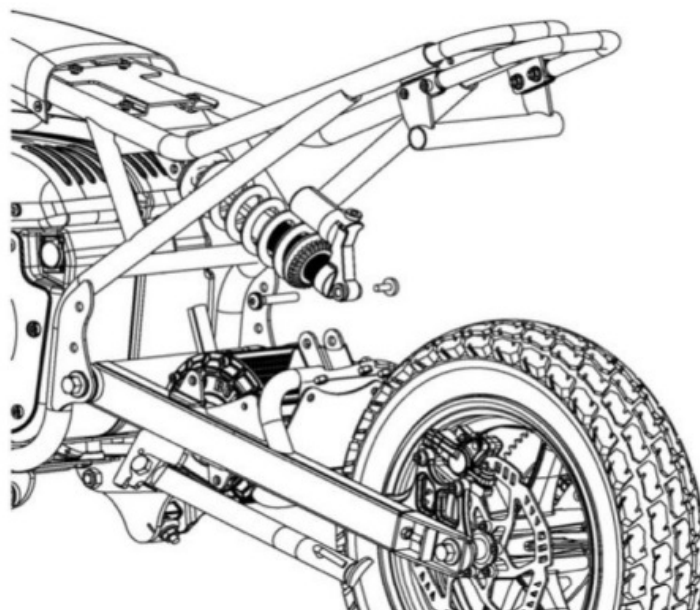
### Adjusting the Brake Caliper

After you have tightened the brake mounting bolts, squeeze the brake lever a couple of times to set the position of the caliper. Squeeze the brake lever one more time and hold pressure on the lever while tightening the caliper adjusting bolts (Fig. 2). This will align the caliper and brake pads. The rotor should be running parallel and central to the caliper body. When depressed, the brake lever should be approximately 1 inch or more off the hand grip and have a firm feel. The front wheel should roll freely without dragging on the brake when this operation is completed.



### **Installing The Rear Shock**

The Rear shock is mounted to the upper frame mount under the seat. Lift the back of the bike enough to swing the shock down into place and install the special 2-piece lower shock bolt provided in your hardware package

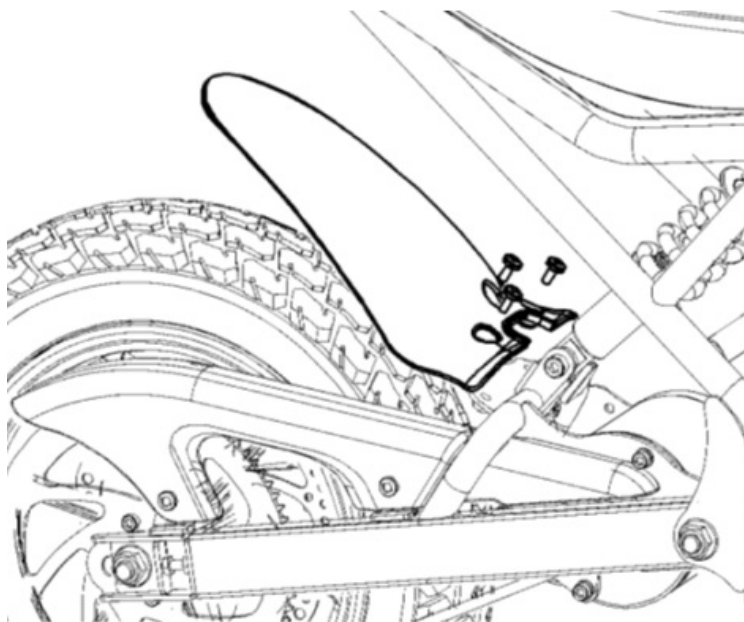


## **Adjusting the Rear Shock**

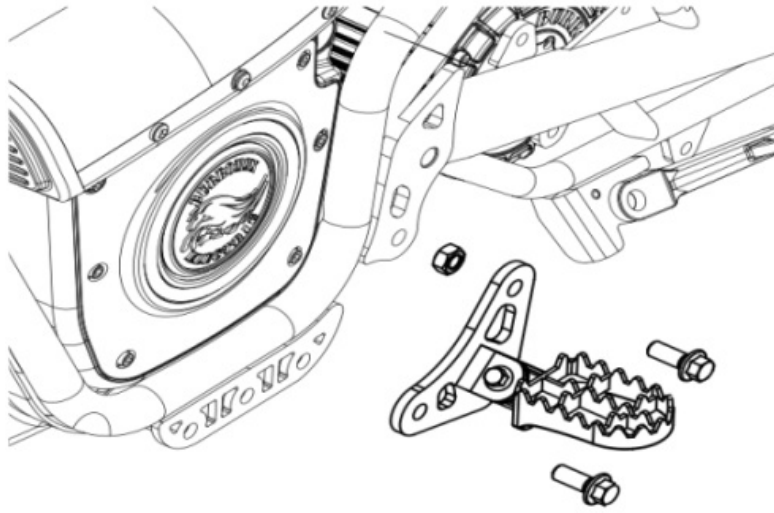
All HR and XR Models come with a 3-way adjustable shock, and it provides the user with a high level of rider comfort and adjustability. The Shocks have a small red dial on the upper side that allows for a rebound adjustment and a larger dial on the lower external cylinder that adjusts compression rate. Both dials will stiffen the adjustment when turning clockwise and soften when turning counterclockwise. You can also set the spring preload to adjust the suspension to your body weight. A lower setting is for the 150 lb range, and increasing the spring preload will allow for much heavier riders. We recommend this being the first suspension setting you adjust before attempting to tune dampening or rebound, as it will affect all other settings. Adjust for a proper 1-3" Seat height drop while sitting on the bike. Softer suspension means comfort; harder suspension is good for performance.

## **Install the Rear Fender**

Using (3) 6mm Allen bolts, attach the Rear Fender to the top of the Rear Fork just behind the rear shock. Tighten securely with a 5mm Allen wrench. Remember the fender is plastic, so do not overtighten the mounting bolts.



## **Installing the Footpegs**



Models allow the pegs to locate in either a rear position (Fig.) or a standard center position. Our peg mounts allow the pegs to rotate to accommodate either location, and when set, the pegs' upper face should always be parallel to the ground plane, and the pegs should fold towards the back of the bike. We also provide long spacer rods that are intended to be placed between the footrest mounts to ensure the peg mounting plate will not bend when standing up on pegs. These spacer rods are required if you mount pegs in the center position.

### **Checking the Tire Pressure**

Both tires should be set to 35-45 PSI. We strongly recommend 40 PSI for persons over 175 lb. when riding this product. Proper Tire checks are regularly performed. Low tire pressure reduces range, speed, and all-around performance. Please note: There is a tire information label located on the left side of the rear fork with this information as well. Tire pressure is VERY IMPORTANT. Do not squeeze the tire..

## **Operation and Functions**

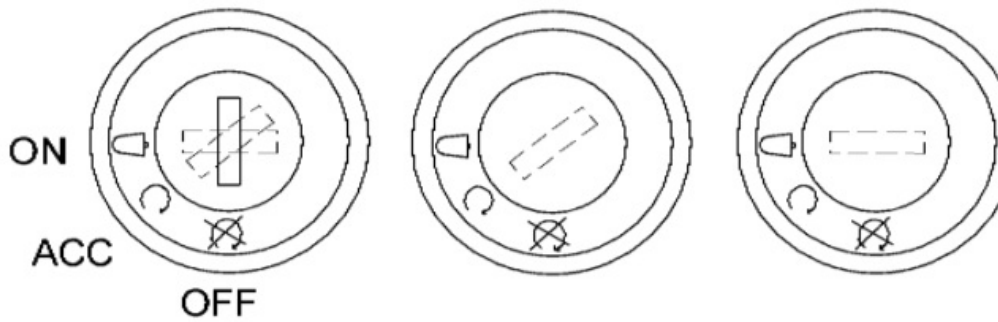
### **Key Switch Operation**

All XR Series minibikes come with keyed switches so that use can be restricted to owners and parental control is available. We send 2 keys with each unit, and we highly recommend you save one of these keys in a safe place. The XRA/XRB has a three (3) position switch. The first position (1) is OFF, the second position (2) allows all lights and USB ports to operate without power to the motor. This is useful when using the lights, charging cell phones, and using other accessories without the possibility of the vehicle taking off due to someone accidentally twisting the throttle. In the third position (3),



Lighting, USB port, and Motor are all ON, and the Bike is Fully Functioning. al

### Two Position Switch



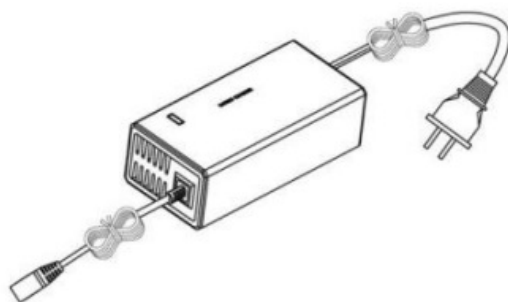
### Charging the Battery

Your XRA/XRB has a charging port located on the left side of the battery box as shown below. To access the plug, rotate the charger port cover away from the Battery box housing. This plug must be oriented properly for the plug to connect, and the charger plug can easily be turned until the charger port pins align,, allowing the connection to be made.



The charger has a small window with one LED to indicate the charge status. A Green Light indicates the charger is on or ready, and a red light indicates the charger is charging. When the battery is fully charged, the indicator will change from a red light to a green light, signifying the battery is fully charged. The charger will get warm during use; this is normal and is no cause for concern. These chargers have a small fan to keep them cool during operation. Do not store or use this charger in areas where dirt or debris can get into your charger's fan. These chargers will often keep running the cooling fans

even after the battery has reached full charge. This is normal operation, and if your charger does not get warm during use, it does not mean that it is not working properly.



For the first 5 charge cycles, we recommend that you discharge the battery to 65-67 volts when the vehicle is at rest and then fully recharge, uninterrupted, until the battery is full. Typical recharge time: up to 2.5 hours, depending on the level of depletion and the quality of the power source. After the first 5 discharge cycles, shorter charging times or partial charging are okay. You will get over 90% charge in 2 hours. There is no need to fully cycle the battery every time you ride with Lithium batteries. You can ride for an hour and charge to full again if you like. When the minibike is not in regular use, store the battery at 50-70 percent full. Turn the power switch “OFF” before charging and conducting any maintenance procedures. Expect up to 400 charge and discharge cycles. Charging and discharging the battery in extreme temperatures above 110°F and below 32°F can cause damage to the battery. The Burromax Li-ion battery and charger are to be used together. Do not use chargers from other model bikes—USE ONLY Burromax battery chargers at the correct rated voltage.

**WARNING:** Rechargeable batteries are only to be charged under adult supervision. Always disconnect your electric minibike from the charger when the battery is fully charged and before cleaning. Do not use chargers that have similar plugs and assume it is OK. USE ONLY Burromax CHARGERS WITH Burromax PRODUCTS

## Modes of Operation

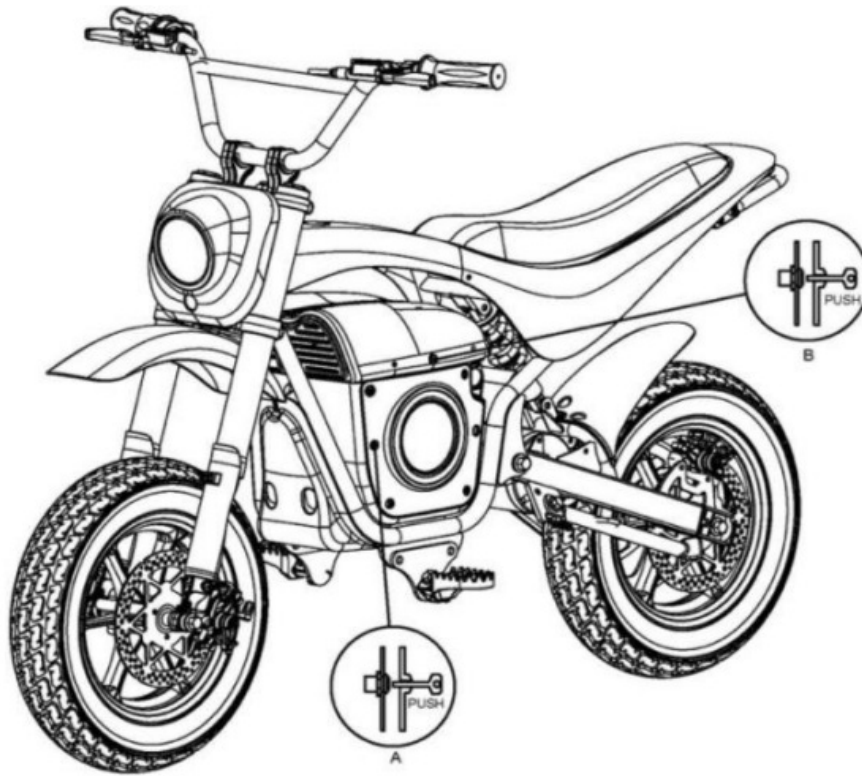
### 3 Speed Throttles

All HR and XR model Burromax electric bikes use a new speed selection arrangement where the Black button on the handlebar controls the 1st -2 nd speed selection (low speed and medium speed) and a hidden switch on the side of the battery compartment on the left side of the bike controls 3 rd speed (or maximum Speed)

All bikes come shipped in Low Mode (1-2 speed mode), and we suggest this mode for general use for most people. If you choose to use the bikes in the 3rd speed mode, you will deplete the battery very quickly, and the bikes are very powerful in this mode. We have included a fuse in these bikes that automatically shuts the bike off after approximately 30-45 seconds of maximum effort operation. This allows for 15-30 second bursts of speed and will keep you from overheating the battery/controller or motor. Do not repeatedly use this bike at maximum effort, or you can overheat the battery and cause it to shut down, or you will have to wait for the battery to cool before recharging the battery. There is a small hole in the battery side cover Allen bolts (fig. 5A), and with the key switch in the on position, you can insert a small tool and depress and release the switch. Look at the gauge for a change in the lower center area for an "S" to identify that all 3 modes are available. If you repeatedly hit the speed button, it will provide 1-2-3-1-2-3 operation, and it's no problem to go to any speed setting while moving. The 1-2 and hidden 3 speed setting was designed for people who want others to ride and not be able to easily reach a switch that drastically improves performance and top speed. Low speed (1) has a soft and easy throttle mode and will have the longest riding range. The Medium Speed (2) increases torque, but still has a limited top speed for additional power when pulling hills. The High Speed (3) switch should only be used with experienced riders for burst speed and power needs, sparingly. This mode will deplete the battery quickly and is the most stressful for all components. Heat in the Battery, Controller, and Motor components can rise quickly in this mode.

### **Kill Switch operation**

The kill Switch is located in front of the driver on the body panel and has a red button that is normally open in design when the small key that's connected to the red chord is in place. This kill switch is a high brake switch on the controller and will kill the power when the small key, when the Red cord is attached, is removed from the switch. To set up for the ON/Run position just lift on the Red Knob and install the supplied Key that is attached to the red cord by sliding the small c clip into the slot in the switch shaft just below the red button. The intent is to have you attach the other end to your racing clothing, so if you and the bike get separated, the bike will stop when the red cord removes the kill switch key.



## Side Light Operation

Your Burromax is equipped with LED side lights for rider safety, and they are very useful in pit areas or camping to provide light for the area. To turn these lights on and off you can depress the hidden switch located in the center bolt of the controller cover housing (Fig 5B) using a supplied key blank on your key set. This is a push button switch so press once for on and once for off. Your setting will remain until changed.

## Throttle programming

### 3-speed throttle, Speed alteration

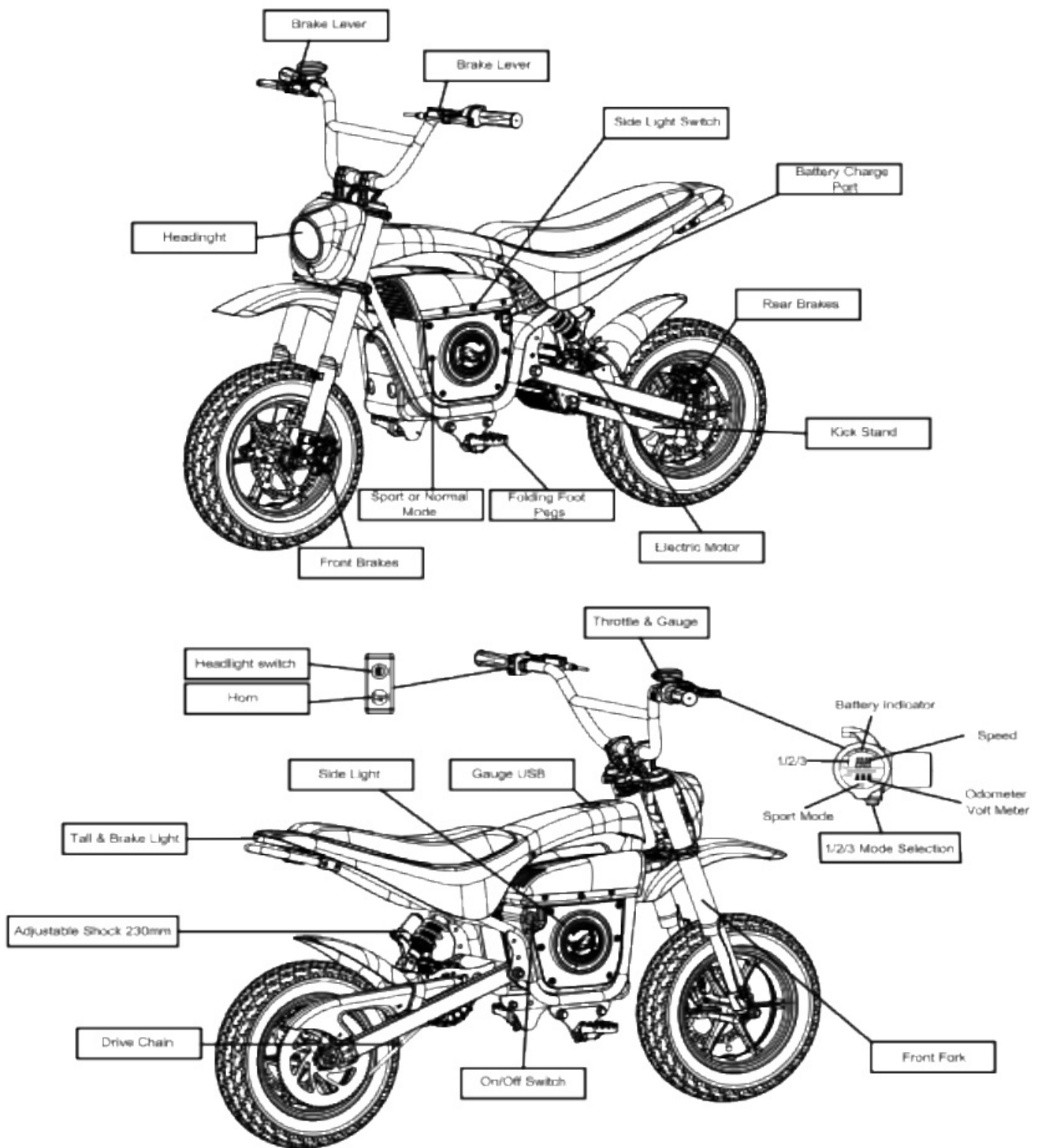
All HR and XR model Burromax electric bikes come with a programmable speedometer that allows you to change gearing and tire size, substantially still being able to set the correct speed on the throttle. We have many people who enjoy being able to customize the gear ratios or tire sizes, and this allows speed calibration. This does require downloading an APP (such as –Pedal Speed Machine) or checking speed with another method.

1. Ride the bike with the altered gear ratio or tire size and using a pedometer APP, GPS or other method, compare your actual GPS speed to given speed on the gauge—make note and Calculate change needed—**Example** You ride the bike and the Speed given was 33 but actual speed was 30 (10 percent difference will be the change)

2. Begin program process—Install the small key blank provided with key set into the hidden speed selection hole (fig 5A above) in the battery box.
3. From the off position, turn the key to run position and quickly press the hidden speed switch (described fig 5A above) 6 times (within approx. 5 seconds) watching for the gauge readout to change—make note of the initial number shown as soon as it enters program mode.
4. The gauge will switch into program mode and begin counting by 2 from the base programmed number it was installed with from the factory (somewhere between 86-100) depending on the model, gearing and tire.
5. The throttle will count to a maximum of 150 and then go back and begin at 50 (minimum). These numbers represent a percentage of change.
6. Once you have entered program mode the throttle will count until you stop it by pressing the hidden speed selection button (Fig 5A) –to stop counting simply hit the hidden speed selection button again. If you made an error, resume counting by hitting the button again (if you miss your number).
7. Once you have stopped at the desired number, stop and wait about 10 seconds for the throttle to reprogram. Turn the key off. Your throttle has been recalibrated. In the simple example given, to change the gauge from 33 to 30 MPH would require a 10 percent change or a 10 10-number change from the base setting (started with 100—change to 90). See our online video as well at [www.burromax.com](http://www.burromax.com).

**MPH to KPH**— Hold rear wheel off the ground while accelerating to 6 (mph or KPH), hold for 1 min at speed for the change to occur from one standard to the next

## **Features and Controls**



## PRE-RIDE CHECKLIST

### Skill Level

Never allow novice riders or people without experience to use these products without adult supervision. Burromax HR and XR Models are designed for Skilled Riders or Adults, and use by others could cause injury, property damage, or even death.

### Safety Gear

Always wear proper protective equipment such as an approved safety helmet, elbow

pads and knee pads if needed. Always wear athletic shoes (lace-up shoes with rubber soles) or a riding or hiking shoe for additional safety, never ride barefooted or in sandals, and keep shoelaces tied and out of the way of the wheels, motor and drive system.

## **LOOSE PARTS**

Check and secure all fasteners before every ride. Make sure the handlebar clamp bolts are locked properly in place. There should not be any unusual rattles or sounds from loose parts or broken components. If you are not sure, ask an experienced mechanic to check.

## **BRAKE**

Check the brake for proper function. When you squeeze the lever, the brake should provide positive braking action. When you apply the brake with the speed control on, the brake cut-off switch will stop the motor. When the brake is not in use, the Front and rear wheels should spin freely without drag.

## **FRAME, FO, RK, AND HANDLEBARS**

Check for cracks or broken connections. Although broken frames and chassis components are rare, it is possible for an aggressive rider to Jump, run into a curb or wall and wreck, bend or break a frame, fork or suspension components. Get in the habit of inspecting yours regularly.

## **Running time**

Run time may vary depending on many factors such as riding conditions, rider weight, climate, and/or proper maintenance. Distance and performance testing was done with 200 lb. riders, and these bikes were tested to have a 25 Mile range on the low setting (1 Speed 35mph) and nearly 20 miles on the medium setting (2 speed 35-45mph) average riding speed No runtime claim is made in Speed Mode 3 and the bikes should never be ridden in this mode continuously at full throttle. Testing was done on flat ground with wide open throttle, with calm weather in speed modes 1 and 2. These bikes were tested from full charge to cutoff voltage, and we don't recommend this type of usage as normal. You should familiarize yourself with the voltmeter located on the handlebar gauge and the voltage displayed while the bike is under power and moving. You will notice the voltage changes with the power load required; this is normal. At full charge, you should see approximately. 84V and cut off is approx. 60V. The most common cause of low

performance is low tire pressure or dragging brakes. Please ensure brakes and tire pressure are maintained for optimum ride time and performance.

## **Over Temperature Protections**

Burromax HR Models have over temperature protection in various components that are designed to protect the bikes from the effects of excessive heat. The Battery BMS as well as the Motor and Controller all have protections that can take effect while riding these bikes. If the bikes begin to slowdown or an abrupt power shut down occurs, its likely due to one of these systems going into a protective mode. Here are some of scenarios that can occur.

1. Battery is full and you go out in 3rd Speed as fast as the bike will go for over 45 seconds straight— Main protective Fuse can shut bike down. Power still shows on Gauge. Pull over and wait about 30-45 seconds and the breaker will reset with a barely audible click. Bike is ready again.
2. You are traveling for a long period of time at medium to high speeds or up long hills and the bike begins to slow down when in 3 Speed max throttle. Motor is overheating and reducing power. If Motor sees 140C controller will shut down. Begins limiting power at 110C. You need to wait for motor to cool off.
3. You are Traveling at high speeds or for a long time in muddy or loose terrain and motor or fuse have already overheated then all power shuts off. Battery has overheated and shut down all power to bike. You must wait—sometimes a couple of hours for battery to cool enough to restart.
4. You have ridden a bike at Med- High Speeds or in loose terrain for long periods and stop to charge the bike, but it won't. The battery is over the 60 °C max allowed temperature for recharging the battery. You must wait, sometimes hour, hours the battery to cool enough to charge.

## **Riding until the battery is completely dead**

This bike will completely shut off anytime the voltage dips down to approximately 59.5V, which is displayed on the handlebar gauge at all times when the bike is moving. We do not recommend running the bike to cut off, as it is a real pain to push your bike home. If this happens to you, you can wait approximately. 5-10 minutes, and the battery voltage will rise enough to allow you one short ride if you are gentle with the throttle, but don't



expect to go far. If you do run the bike until the cutoff, we recommend that you recharge the battery after the bike has cooled for about an hour if the battery was depleted during heavy use. DO NOT LET A DEAD BATTERY SIT FOR A LONG PERIOD.

## Storage

If you allow these batteries to sit for long periods of time when fully discharged, you may risk being unable to recharge the battery. Store these batteries between 50-75 percent full charge.

## REPAIR AND MAINTENANCE

### Basic Trouble Codes

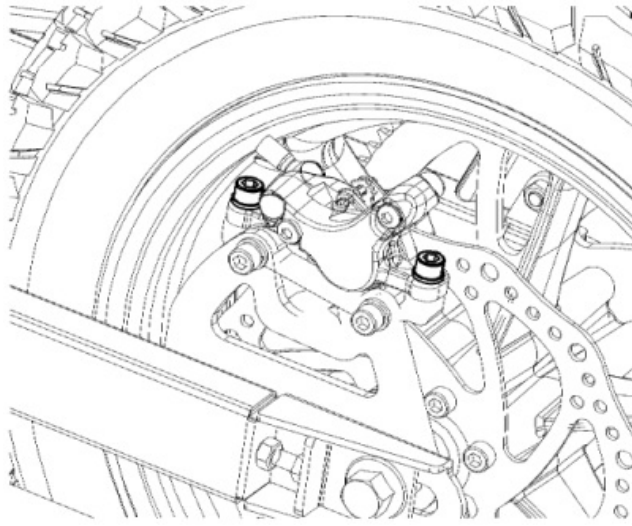
Error Codes explanation

- **E1=Motor Failure**— (Broken Connections, power or signal) This could indicate a Wiring problem, Bad Hall Sensor, loss of power to motor (small Red Wire), loss of ground to hall (small Black Wire), over temperature (small White Wire), bad hall sensor (small Yellow, Blue Green). Check with the key on—Black is ground. Check the DC Voltage on the yellow, blue, and green wires while rotating the motor. It should measure 3.25V intermittently if the hall wires are good.
- **Instrument Failure**— (Gauge is Malfunctioning/broken). This should be obvious for most scenarios—Defective Screens or operation. This can also be due to improper gauge wire installation. - Check for broken connector pins.
- **E3= Brake Failure (Disconnect at Handlebar to Test.)** Brake light is stuck on or won't activate—Most often this is a sensor adjustment needed on the brake master cylinder proximity switch. This switch can be turned (7mm open end wrench) and adjusted by loosening a small Allen set screw (2mm) holding the sensor in place on the master cylinder housing. Try to adjust so that the lever must be moved at least  $\frac{1}{4}$  before the brake light turns on.
- **E4=Controller Failure (Check HB Wiring Harness Also)** This can happen when controllers are overheated or short circuited – Turn off and on again and reboot.
- **E5=Throttle/Mid Wiring Harness Failure**—Testing Req.. This code could require testing throttle operation and controller operation to diagnose. Check for broken pins on the Controller and throttle connections.

**Warning:** Turn the power switch “OFF” before conducting any maintenance procedures.

## **Inspecting and Replacing the Brake Pads**

The HR and XR Series Bikes are equipped with Hydraulic brake systems front and rear using Mineral Oil fluid. These Brakes should be inspected every month or 100 miles and replaced when the pads are getting thin. Pads are inexpensive, and replace when they are under 1/16 thick. Burromax stocks replacement brake pads, and they are relatively easy to replace. It's important to check the pads regularly – if they wear out right down to the backing plate, metal-on-metal contact will destroy brake rotors very quickly and make enough heat to destroy the brake caliper as well. You also need to check for leaks, loss of fluid. If you are unfamiliar with hydraulic brakes, you may find it better to have a good bike repair shop inspection if needed. If you need to replace the brake pads, start by removing the caliper from the brake mounting bracket. With a large flat head screwdriver, spread the pads apart until both caliper pistons are fully pushed back into the caliper and the pads are as far apart as possible. Remove the split retaining pin holding the brake pads in place. Remove the pads and spring using needle-nose pliers. At this point, it's a good idea to clean the inside of the caliper and rotor with a little brake clean degreaser and paper cloth to remove any brake dust or dirt buildup. Install the new pads along with the retention pins and spring clip. If you need to replace the brake disc, now is the time to remove the wheel and replace it. When reinstalling the wheel, make sure that you reinstall the spacer in the correct locations and the wheel rolls freely after the axle has been properly tightened. Install the caliper over the Brake Rotor, align the mounting holes, and install the mounting bolts. Before tightening the mounting bolts, loosen the caliper adjusting bolts (shown in Figure C) 1/2 turn so that the caliper is loose on the mounting bracket. Finish tightening brake caliper mounting bolts. You might have to squeeze the lever several times before the pads engage. Squeeze the brake lever a couple more times to set the position of the caliper. Squeeze the brake lever one more time and hold pressure on the lever while tightening the caliper adjusting bolts. This will align the caliper and brake pads with the rotor face. The rotor should be running parallel and central to the caliper body. When depressed, the brake lever should be approximately 1 inch or more off the hand grip and have a firm feel. The wheel should roll freely without dragging on the brake when this operation is completed.



## Testing the Brakes

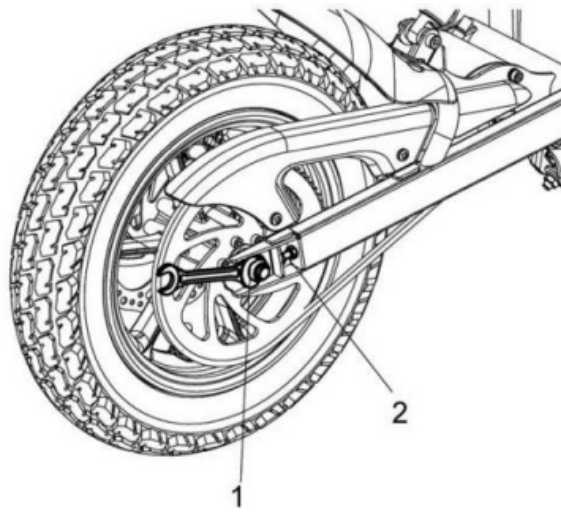
To test the brake, squeeze the lever to increase the pressure on the brake. When depressed, the brake lever should be approximately 1 inch or more off the hand grip and have a firm feel. The wheel should roll freely by hand when the brake is not applied, and the brake should lock up when applied with force.

**WARNING:** Hard Braking or loose terrain can cause the electric motorcycle to skid the tire throwing an unsuspecting rider. Practice in an open area free from obstacles until you are familiar with the brake function. Avoid skidding to a stop as this can cause you to lose control and wear the tire prematurely.

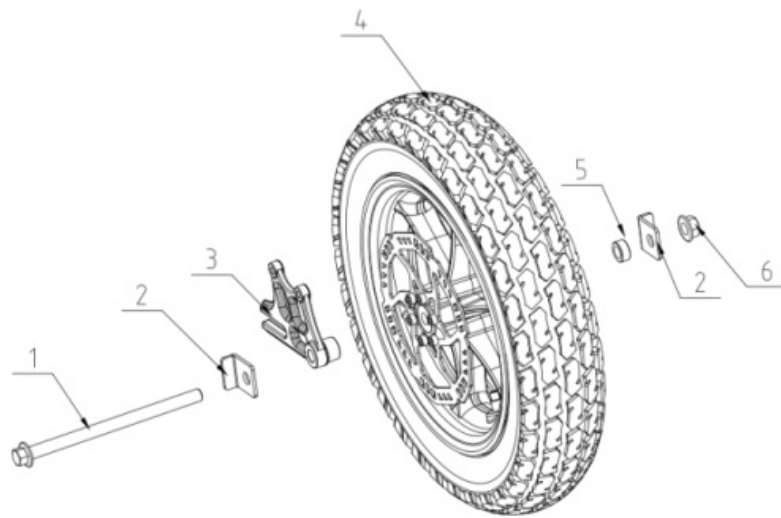
**Note:** Brakes that are poorly adjusted can be draggy and will cause excessive wear and poor performance.

## CHAIN ADJUSTMENT, REAR TIRE, REAR FENDER AND CHAIN REPLACEMENT

Adjusting or replacing chain use 14mm, 17mm and 10mm wrenches to loosen the axle nut and adjust chain adjusters (1-2 Fig 7), If removing the wheel, remove the two-brake caliper mounting bolts (5mm Hex Key) and remove the caliper, remove axle nut (1) and remove the chain from the sprocket—pull the wheel out. Note the sequence of the hardware for assembly.



## HR and XR Series Axle Assembly



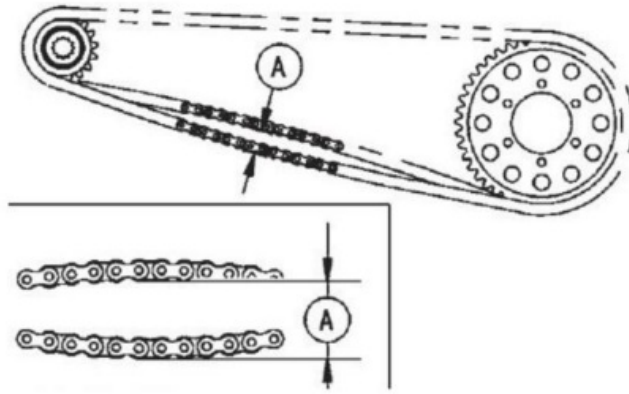
1. Rear Axle
2. Rear Axle Adjuster Plate (2)
3. Rear Caliper Mounting Bracket
4. Rear Wheel assembly
5. Rear Axle Spacer
6. Rear Axle Nut

Replacing the tire requires the removal of a master link. Removing the outer retainer allows this link to be disassembled and removed. Be careful not to damage the Retaining clip. Note. Install the clip as shown (fig.X) using a pair of needle-nose pliers—push the clip on—do not bend the clip



Install the new chain by lacing the chain around the motor sprocket. Maneuver the chain onto the sprockets on the rear wheel and motor. Pull the chain tight. Place both ends of the chain at 10 o'clock on the rear wheel sprocket. This will make it easier to install the master link. Slide the master link into the chain with the pins out, and place the outer side link onto the protruding master link pin. Push the link together so that you can see the retaining clip grooves in the pins. Lay the retaining clip over the pins with the open end toward the back of the bike and slide the clip in place using a pair of pliers. Make sure the clip is locked in place. **IF THE CHAIN FALLS OFF, NEVER ROLL THE CHAIN BACK ON THE SPROCKETS LIKE YOU WOULD ON A BICYCLE.** These chains are strong and can and will bend the steel motor shafts if you use this method to get the chain onto the sprockets. Only reinstall chains by either removing the rear axle or splitting the chain at the master link

1. Roll the wheel while feeling the slack in the chain and find the tightest spot in the chain. Using two 10mm wrenches. Hold the adjusting bolt and loosen the Jam nut on the chain adjuster bolts. Turn the chain adjuster bolts one flat at a time counterclockwise to tighten the chain adjusters. Work both sides evenly to remove slack from the chain as required. Keep rolling the wheel while checking the free play in the chain. (Fig. A) When you have  $\frac{1}{2}$ " of Free play in the chain at the tight spot, tighten the axle nut. Recheck the chain free play by rolling the wheel around again to find the tight spot and confirm that you still have the  $\frac{1}{2}$ " free play. Hold the axle adjusting bolt with one 10mm wrench and tighten the Jam Nut with the other 10mm wrench. Recheck for free play and that the rear wheel rolls freely.
2. Now is a good time to lube the chain with chain lube. Slowly roll the wheel while spraying chain lube on the inside of the chain. Roll the wheel a few more times to work the chain lube into the chain. Do not spin the rear wheel for 10-15 minutes after chain lube has been applied.



1. Reinstall the rear brake caliper. After the caliper has been reinstalled, spin the rear wheel by hand and squeeze the brake lever to make sure the wheel spins freely and the brake works properly.
2. Slide the chain guard back in place and reattach using two 6mm Allen screws. Tighten using a 5mm Allen wrench.
3. Test ride

### Chain and Sprocket Knowledge

The chain will typically have a “loose spot” and a “tight spot” corresponding with a sprocket rotational position. This is normal and common to all chain-driven products due to run-out tolerances of the sprockets. The chain should be adjusted to the ideal tension with the chain in the tightest spot. Proper chain alignment must be maintained. The wheel must not be skewed. If the chain is noisy or rough running, check the lubrication, tension, and alignment of the sprockets, in that order.

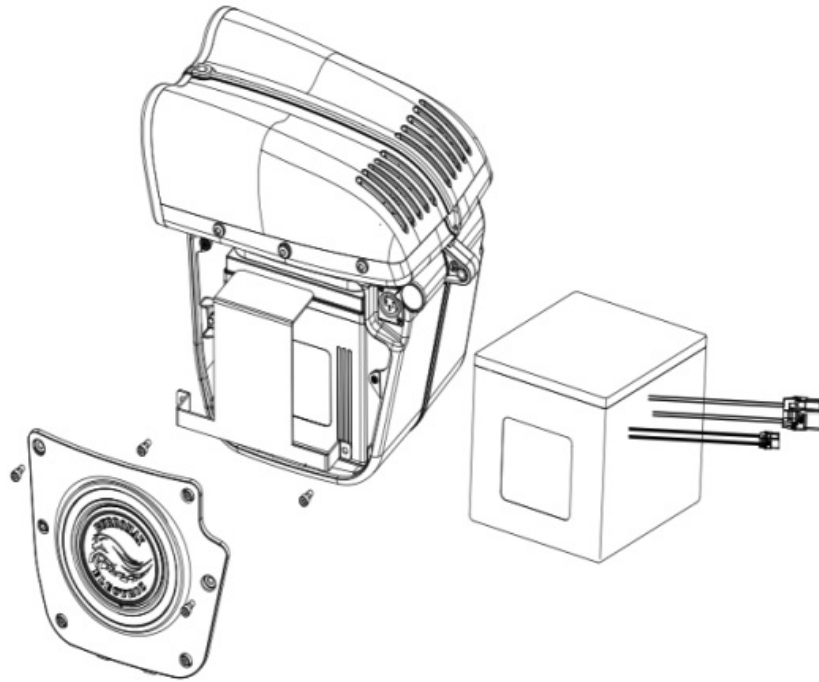
**WARNING:** To avoid a pinch or injury, keep fingers away from moving sprockets and chain.

### Battery Replacement

**WARNING:** Make sure the power switch is in the off position before performing any maintenance.

Temp Sensor Protection note: Li-ion battery (72V-20ah) contains a non-replaceable internal temperature sensor and will turn off when the internal temperature reaches 75 °C. The battery will not accept a charge if the internal temperature reaches 55 °C and will require a cool-off period before charging is allowed. This does not mean the battery is defective, and is present to keep users from overheating the battery during aggressive use. If you experience a cutoff of discharging or charging, you need to

ADJUST YOUR RIDING STYLE to a less aggressive style.. Only use the Burromax Li-ion battery and Li-ion Battery charger together. Do not attempt to replace this battery with anything other than the OEM battery



1. With the battery cover removed, disconnect the hold-down strap.
2. Slide the battery set out of the mounting tray.
3. Disconnect the battery connection and the charging port connection. Reinstall the new battery and reconnect.
4. When reconnecting the new battery, you may get a small spark—this is normal.
5. Tuck in wires and reassemble.
6. See [www.burromax.com](http://www.burromax.com) for ordering.

### **Burromax Limited Warranty**

If you have defects of quality or workmanship, Burromax will send you replacement parts free of charge for 90 days from the date of purchase. This Limited Warranty does not cover normal wear and tear, tires, tubes, chain, or any damage, failure, or loss caused by improper assembly, maintenance, storage, or use of these products. Batteries are warranted for 18 months from the date of purchase. The manufacturer is not liable for incidental or consequential loss or damage due directly or indirectly to the use of this product. Burromax does not offer an extended warranty. If you have purchased an extended warranty, it must be honored by the store at which it was purchased. For your records, save your original sales receipt with this manual., Fill out the product

registration page online, o— fill it out and mail it to:

Burromax

3080 Elm Point Industrial Dr

Saint Charles, MO USA 63301

All Warranty requests will be evaluated by Burromax, and final determination will be made at our sole discretion.

This Limited Warranty will be void if the product is ever:


- used in a manner other than for recreation specified in this manual
- modified in any way from as-purchased condition

## FAQs

**Q: Can I change the software settings for performance upgrading?**



A: It is advised not to change or override the installed software settings, as it may lead to overheating and performance issues. For any customization inquiries, contact Burromax at 18007421189.

## Documents / Resources

	<a href="#">BURROMAX XRA,XBR Race Models [pdf]</a> Instruction Manual XRA, XRB, XRA XBR Race Models, XRA XBR, Race Models, Models
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## References

- [User Manual](#)

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