



# ***BURROMAX***

**OWNERS MANUAL HRX 60V MODEL  
ASSEMBLY AND OPERATION**



## Index

|                              |    |
|------------------------------|----|
| Assembly.....                | 4  |
| Operations & Functions.....  | 8  |
| Pre-Ride Checklist.....      | 13 |
| Rider's Safety Warnings..... | 14 |
| Repair & Maintenance.....    | 18 |
| Specifications.....          | 22 |

## From Burromax

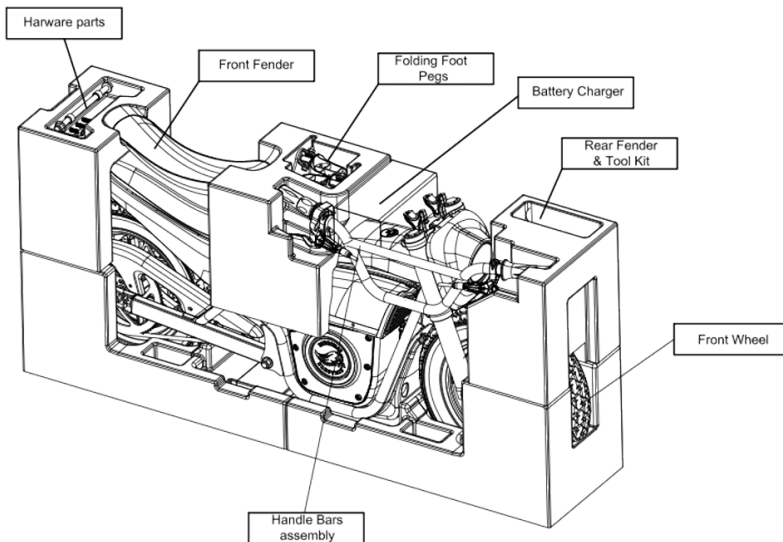
We would like to thank you for purchasing one of our products and we appreciate the trust you put into our company. It is our slogan and often used phrase that “we sell joy and happiness” not just motorcycles. We believe that our customers will look back at times when using our products as some of the best times of their lives and we are very proud to be part of those memories.

With that said, we cannot over stress the need for riders to be extremely careful when using these products. If you allow your children to use these products, make sure they have the skills to operate the vehicle and the maturity to follow directions. We encourage all adults to get to know both the Burromax capability and the rider’s skill level prior to allowing anyone operate these vehicles—especially themselves.

Please, never allow anyone to ride these vehicles under the influence of drugs or alcohol –it’s just not safe and can ruin lives. Please be respectful to others and their property. Remember that kids are watching you and will emulate you. Set the standard for respect and safety high so that they might too. Please accept our sincere gratitude for your purchase from all of us at Burromax!

### A Note about the Model you Purchased

The HRX is our true MotoX bike and has enough power to dominate competitors! In Typical Burromax fashion, we give you some civil modes to cruise around and a real get with the program gear that will provide all the fun you might expect from one of our builds. This bike was designed to be used on tracks and trails with an emphasis on Motorcross riding but will double as a great Super Moto with a simple switch of the tires. These bikes are designed with a taller stance (+50mm Front Forks and +10mm Rear Shock) bigger brake rotors (203mm) and a 60V battery system. This all converts into a great little motorcross bike that every one can enjoy with riding modes for Dad, Mom and the Kids. The HRX is also a great ride as a pit bike for racers, of course. Like all of our bikes, these are very customizable in performance and are tuned to provide a reasonable performance/range combination. If you have additional questions about performance upgrading or range extending call us at 1-800-742-1189 and we will do our best to help you personalize your bike and experience to fit your needs.



## Carton Contents

Located within the top of the packing foam you will find the battery charger, front fender, rear fender, right and left footrest assemblies, handlebar clamps, all hardware and a tool kit. The front wheel is located at the bottom of the packaging.

**OPEN THE TOP OF THE SHIPPING BOX** and remove the 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 or kinked brake lines that may have occurred during shipping. These vehicles are 90 percent assembled and packed at the factory, so there should not be any problems even if the box has a few scars or dents.

## Allow for up to 30 min. for Assembly

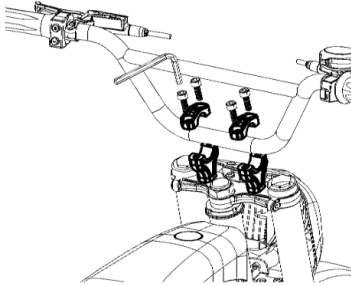
Check for all parts and hardware before beginning assembly. Follow these instructions carefully, checking all bolts, nuts and screws for tightness during the assembly process. **DO NOT squeeze the brake levers until the brakes have been fully assembled.**

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.*

## Attaching the Handlebars and Wiring

Tools required: Allen wrench (6mm, 5mm, 3mm, and 2.5mm)

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 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 to the same color connector. Put the wire ends together and rotate slowly until you feel the connectors snap into place. Do this with all wire connections for each side of the handlebar.

## Brake Levers and Throttle

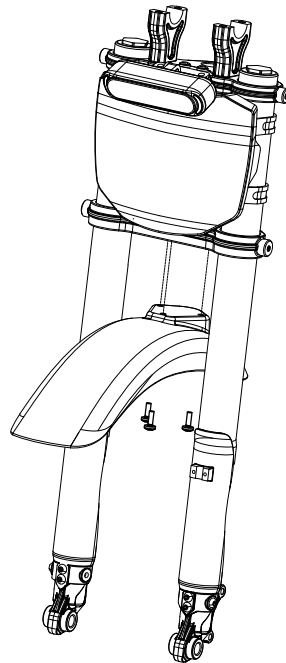
DO NOT squeeze the brake levers until the front brake has been fully assembled to the bike. Install the front and rear master cylinders onto the handlebars using a 5mm allen wrench taking care not to twist the brake hoses.

Rotate the throttle to a good operating position and tighten using a 3mm allen 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 located behind the headlight. Use wire ties supplied to group wire together.

DO NOT tighten tire wires too much or you can break the small wires inside.

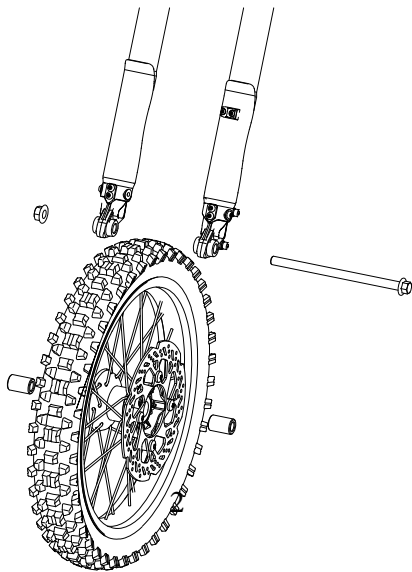
## Installing the Front Fender

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.



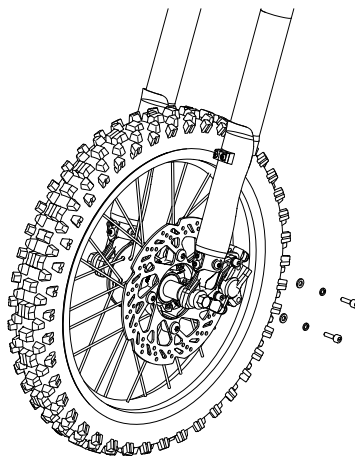
## Attaching the Handlebars and Wiring

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 fork 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 all the way 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 in between the caliper brake pads. Install the caliper over the brake rotor, align the mounting holes and install the mounting bolts (Figure 1) hand tight. Before tightening the mounting bolts, loosen the caliper adjusting bolts (Figure 2) 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.



**Figure 1**

## Adjusting the Brake Caliper

After you have tightened the brake mounting bolts, squeeze the brake lever a couple 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 (Figure 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 approx. 1-inch or more.

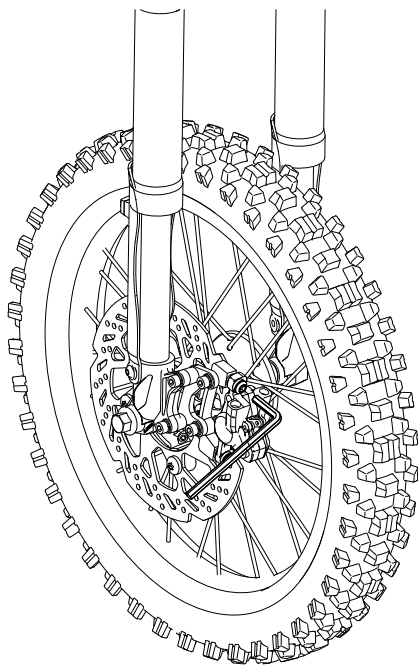
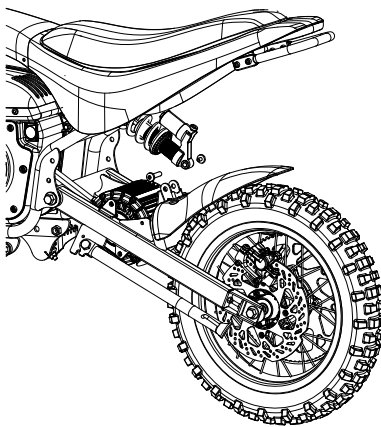


Figure 2

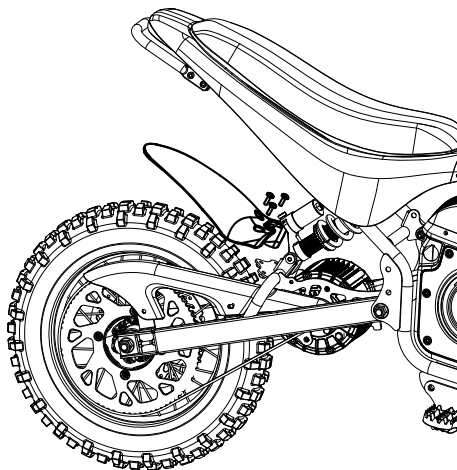
## Installing the Rear Shock

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



## 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 over tighten bolts.



## Checking the Tire Pressure

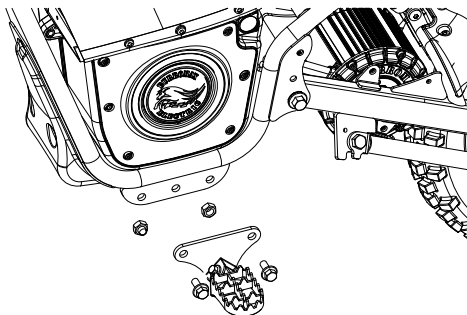
Both tires should be set to 40 PSI. We strongly recommend 40 PSI for persons over 175 lbs when riding this product. Proper tire pressure is very important. Do not squeeze the tire and assume it is correct.

For the best performance and range, this must be checked regularly. 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.

## Installing the Footrests

The footrests are made to fit on the right and left. **MAKE SURE YOU ATTACH THE FOOTRESTS SO THEY FOLD TOWARD THE BACK OF THE BIKE.** Using (4) 10mm hex bolts and lock nuts attach the footrests and brackets to the bottom of the frame just below the battery box. Using 14mm/17mm wrenches tighten the bolts and nuts securely.

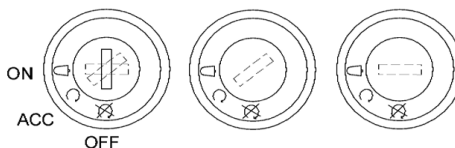


## OPERATION AND FUNCTIONS

### Key Switch Operations

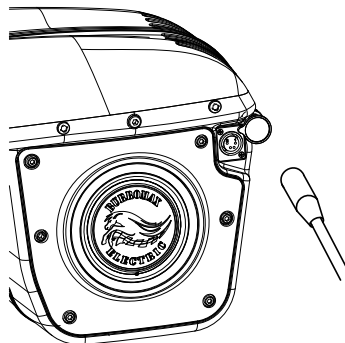
All HR Series mini bikes come with keyed switches so use can be restricted to owners and parental control is available. We send 2 keys with each unit, and we highly recommend you save one of these keys in a safe place. The HR series have a three (3) position switch. The first position (1) is OFF, the 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), the lighting, USB port and motor are **all ON and the bike is fully functional.**

Two Position Switch

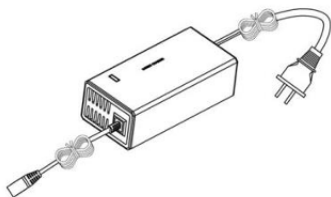


### Charging the Battery

Your HRX 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 orientated 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 are equipped with a small fan to keep it cool during operation. Do not store or use this charger in areas where dirt or debris can get into your chargers' 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 55-53 volts when the vehicle is at rest and then fully recharge, uninterrupted until the battery is full. Typical recharge time: up to 4 hours, depending on level of depletion and quality of power source. After the first 5 discharge cycles, shorter charging times or partial charging is okay. You will get over 75% 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 mini bike is not in regular use, store the battery at 50-70 percent full. Turn 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 mini bike from the charger when the battery is fully charged and before cleaning. Do not use chargers that have ssimilar plugs and assume it is OK.*

*USE ONLY Burromax chargers with Burromax products.*

## MODES OF OPERATION

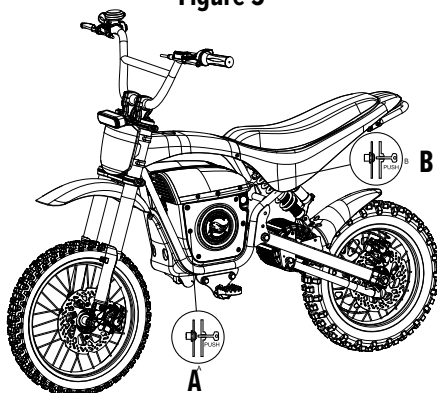
### 3-Speed Throttles

All HR and XR model Burromax electric bikes use a new speed selection arrangement where **the black button on the handlebar controls the 1st-2nd speed selection (low and medium speed)**. **A hidden switch on the side of the battery compartment on the left side of the bike controls 3rd speed (or maximum speed)**—(See Figure 5A)

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 approx. 30 seconds of maximum effort operation. This allows for a 15-30 second burst 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. You might have to wait for the battery to cool before recharging the battery. There is a small hole in the battery side cover (Figure 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.

Figure 5



### 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. To turn these lights on and off you can depress the hidden switch located in the center bolt of the controller cover housing (Figure 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 and still be 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.

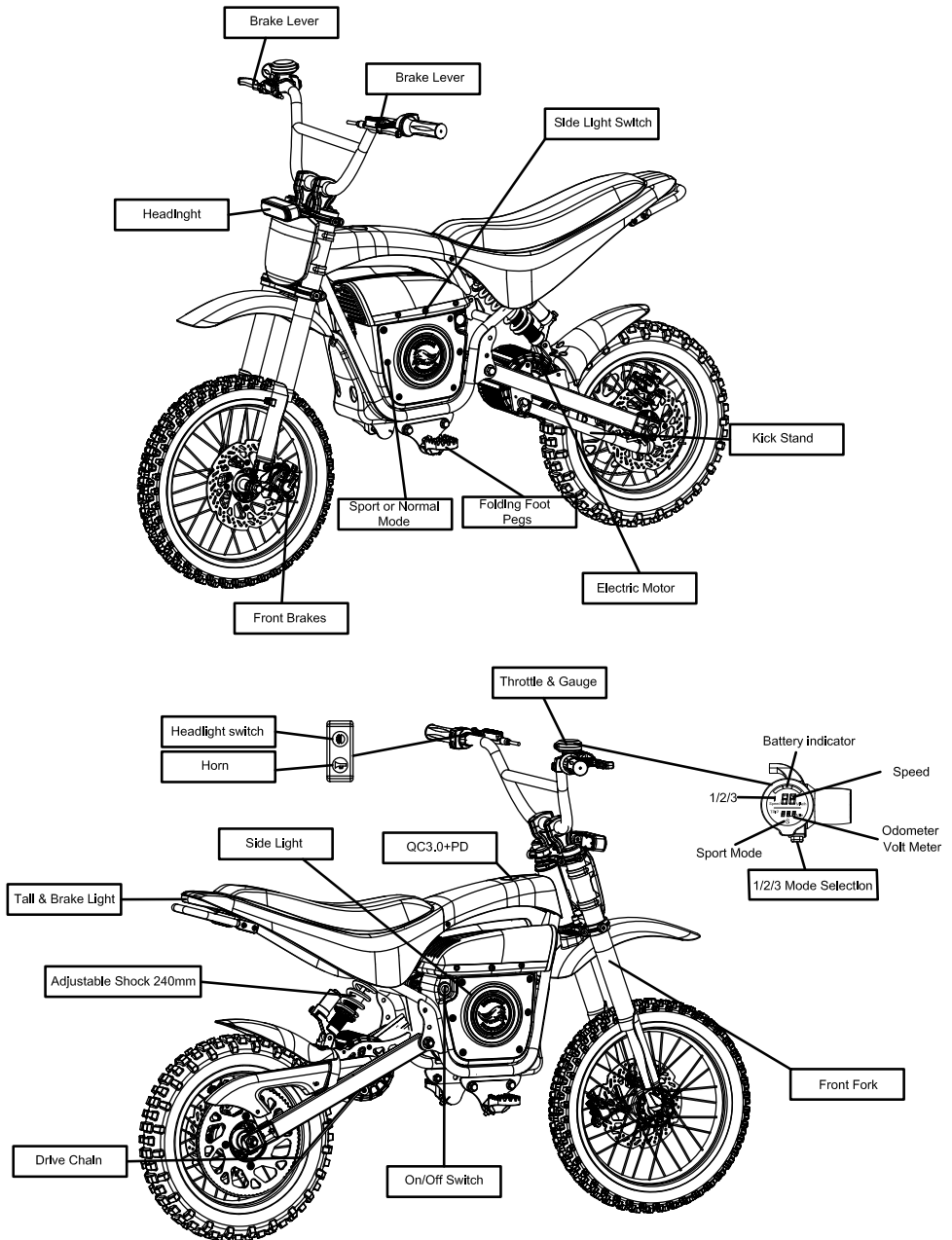
1. Ride the bike with the altered gear ratio or tire size and using a pedometer APP, GPS or other method, compare your actual GPS speed to given speed on the gauge. EXAMPLE: You ride the bike and the speed given was 33 MPH but your actual speed was 30 MPH (10% difference will be the change).
2. Begin program process—Install the small key blank provided with the key set into the hidden speed selection hole (Figure 5A) in the battery box.
3. From the off position, turn the key to run position and quickly press the hidden speed switch (described in figure 5A) 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 (between 86-100) depending on the model, gearing and tire.
5. The throttle will count to 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 (Figure 5A)—to stop counting, simply hit the hidden speed selection button again. If you made an error, resume counting hitting the button again.

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% change or 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 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 barefoot 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 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 wheel should spin freely without drag.

### **Frame, Fork 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/wall and wreck, bend or break a frame, fork or suspension components. Get in the habit of inspecting yours regularly.

## **RIDERS SAFETY WARNING**

**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 makes no 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 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 own responsibility to review this information and make sure that all riders understand all warnings, cautions, instructions and safety topics and assure 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 can inspect and maintain your product to ensure rider safety. The recommended minimum rider age of 16 years or older is only an estimate and can be affected by rider weight, size and skill. 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 300 lbs. Rider weight does not necessarily mean a person's size is appropriate to fit or maintain control of the vehicles. Keep this product away from small children and remember that his 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 which 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. Risk of injury increases as the degree of riding difficulty increases. The rider assumes all risks associated with aggressive riding activities.
- Always maintain hold of 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. 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 mini bike when in use as they can become very hot.

## **Proper Clothing**

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 barefooted 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 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 with a sound. 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 shut down 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 (60V-28ah) 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 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. In the event of such damage, the bike must not be charged until the charger has been repaired or replaced.
2. Use **ONLY** Burromax Li-ion battery charger SPECIFIC to the model you purchased. Do not use other MFG chargers with similar or 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 charger and disconnect from 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 it 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 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 SEVERE BURNS, INJURY OR DEATH

## POWER WASHER WARNINGS

**Use care when washing to avoid pointing the water streams directly at the electrical components. Avoid pointing the water at the throttle, 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. Keep your bike CLEAN! Your bike will thank you!

## Operation and Performance Notes

The bike was intended for enjoyment for the entire family as a pit bike, camping bike, hunting, stunting and mobility or to cruise around the property on. **It was designed specifically as an off-road motorcycle.** **This bike was not intended for use as a motorcross bike and should not be used to jump.** We recommend riders up to 250 lbs use this bike on relatively flat, hard packed surfaces. 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 too much. Avoid excessive speeds that can be associated with downhill rides! This bike can achieve high speeds on downhill rides 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, gravel or sand. Wet, slick, bumpy, uneven or rough surfaces may impair traction and contribute to possible accidents.

## Running Time

Run time may vary depending on many factors such as riding conditions, rider weight, climate and/or improper maintenance. Distance and performance testing was done with 200 lb riders, and these bikes were tested to have a 50 mile range on the low setting (1 speed - 25 mph) and nearly 30 miles on the medium setting (2 speed - 35 mph).

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 a wide open throttle in calm weather while on speed modes 1 and 2. These bikes were tested from fully charged to cutoff voltage, and we DO NOT recommend this level of usage as the norm. 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 approx. 67V and cutoff is approx. 49.5V.

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 temperature protection in various components that are designed to protect the bikes from the effects of excessive heat or overheating. 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 slow down or experience an abrupt power shutdown, it is likely due to one of these systems going into a protective mode. Here are some of the scenarios that can occur:

1. Battery is fully charged and you go out in 3rd as fast as the bike will go for over 45 seconds straight. The main protective fuse can shut the bike down. If the power still shows on the gauge, pull over and wait about 30-45 seconds. The breaker will reset with a barely audible click. Bike is ready to go 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 and begin limiting power at 130C. You need to wait for the motor to cool off.
3. You are traveling at high speeds or long distances in muddy or loose terrain, and the motor or fuse have overheated and all power has shut off. The battery has overheated and shut down all power to the bike. You must wait—sometimes a couple of hours for battery to cool enough to restart.
4. You have ridden bike at med-high speeds or in loose terrain for long periods and stop to charge the bike but it won't charge. Battery is over the 60C max allowed temp for recharging battery. You must wait—sometimes hours for the battery to cool enough to charge.

## Riding Until the Battery is Completely Dead

This will completely shut off anytime the voltage dips down to approx. 49.5V, which is displayed on the handlebar gauge at all times when the bike is moving. We do not recommend running the bike to cutoff, as it is a real pain to push your bike home. If this happens to you, you can wait approx. 5-10 minutes and the battery voltage will rise enough to allow you one short ride if you are gentle with the throttle, but do not expect to go far. If you do run the bike until 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 OF TIME.

## 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.

## REPAIR AND MAINTENANCE

### Basic Trouble Codes:

#### Error Codes Explanation

**E1=Motor Failure** (Broken connections, power or signal)  
Some HR series motors can be rebuilt if they're not working properly—call a Burromax technician to find out if yours qualifies or if you need to order a new motor.

**E2=Instrument Failure** (Gauge is Malfunctioning/Brake)  
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 1/4 before brake light turns on.

**E4=Controller Failure** (Check Wiring Harness Also)  
This can happen when controllers are overheated or short circuit—call a Burromax technician at 800-742-1189.

**E5=Throttle/Mid Wiring Harness Failure** (Testing Req.)  
This code could require testing the throttle operation and controller operation to diagnose. Check for broken pins on controller and throttle connections.

**Warning:** Turn power switch "OFF" before conducting any maintenance procedures.

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

The HR series are equipped with hydraulic brake systems using Mineral Oil Fluid. These brakes should be inspected every month or 100 miles and replaced when the pad is getting thin. Pads are inexpensive, replace when they are under 1/16" thick. Burromax stocks replacement brake pads, and they are relatively easy to replace.

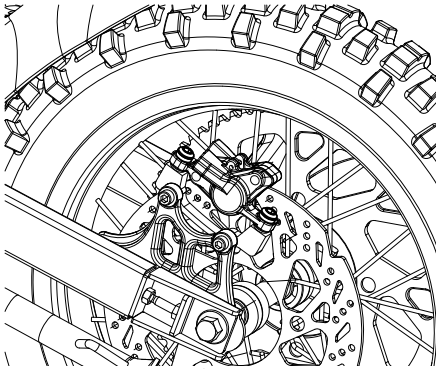
It's important to check the pads regularly—if they wear out right down to the backing plate, metal-on-metal contact will destroy brake rotors very quickly. You also need to check for leaks and loss of fluid. If you are unfamiliar with hydraulic brakes, you may find it better to have a good bike repair shop do the 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 screw driver spread the 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 cleaner to remove any brake dust or dirt build-up. Install the new pads along with the retention pins and spring clip.

If you need to replace the brake disc, it is 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 the caliper is loose on the mounting bracket. Finish tightening the brake caliper mounting bolts. You might have to squeeze the lever several times before the pads engage. Squeeze the brake lever a few more times after to set the position of the caliper. Give it a final squeeze and hold pressure 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 approx. 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.



**Figure C**

## 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 AND CHAIN REPLACEMENT

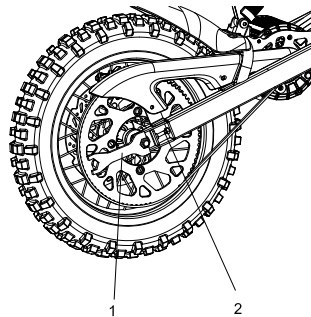
Tools required: 5mm allen wrench, 2- 10mm, 14mm and 17mm wrench and chain lube.

Set the bike on a stable platform so that the rear wheel is off the ground. To adjust the chain only perform steps 3, 6 and 7.

To replace and adjust the chain perform steps 1, 3, 5, 6 and 7.

To replace or repair the rear tire, perform steps 1, 2, 4, 6, 7, 8, 9 and 10.

Use a 5mm allen wrench and remove the chain cover screws and slide chain guard to the back of the minibike.



If replacing the tire, remove the two-brake caliper mounting bolts (5mm hex key) and remove the caliper. For adjusting or replacing the chain, only use 14mm and 17mm wrenches to loosen the axle and complete approx. 2-full turns.

Remove the rear wheel, axle nut, axle and chain from the sprocket—pull the wheel out.

Please take note of the sequence of hardware for assembly.

Replacing the chain requires 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 clip as shown.



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

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

## **HRX Axle Assembly**

1-Rear Axle pin

2-Rear Axle Adjuster Plate

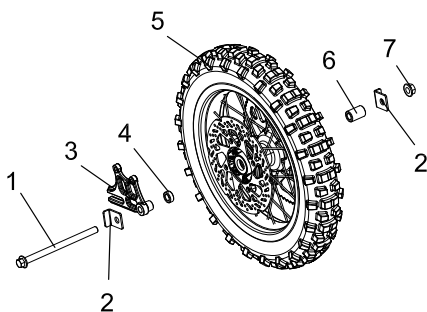
3-Rear Axle Spacer and Caliper Plate (6mm)

4-Rear Axle Spacer-Disc Side-Inner ONLY-6mm

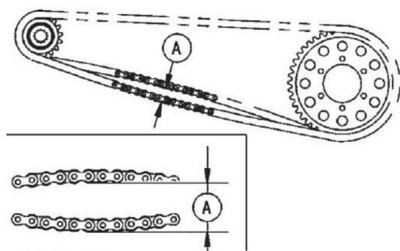
5-Rear Rire

6-Rear Axle Spacer-Sprocket Side-Outer ONLY-6mm

7-Rear Axle Nut



1. 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, and 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, 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.
2. 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 (Figure A). When you have 1/2" of free play in the chain at the tightest spot, tighten the axle nut. Recheck chain free play by rolling the wheel around again to find the tight spot and confirm that you still have the 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 off freely.
3. 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 brake works properly.
2. Slide the chain guard back in place and reattach using two 6mm allen screws. Now, tighten using a 5mm allen wrench.
3. Take it for a test ride.

## Chain and Sprocket Notes

The chain will typically have a “loose spot” and “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).

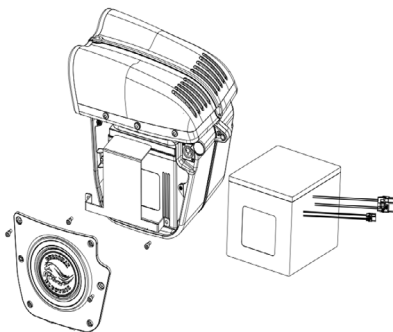
**WARNING:** To avoid a pinch or injury keep fingers away from moving sprockets and chain.

## Battery Replacement

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

**Temp Sensor Protection Note:** Li-ion battery (60V-28ah) contains a non-replaceable internal temperature sensor and will turn off when the internal temperature reaches 75C. The battery will not accept a charge if the internal temperature reaches 55C 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 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 battery set out of mounting tray.
3. Disconnect battery connection and the charging port connection. Re-install 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.

## **Specifications:**

### **HRX:**

Gross: 132.4 lbs

HRX Net (Bike only): 114 lbs

### **HRX Performance:**

1 speed: 26 MPH

2 speed: 38 MPH

3 speed: 48 MPH

### **Ride Time (Tested using 200 lb rider on flat pavement):**

1 speed: 25 MPH—Up to 50 miles

2 speed: 35 MPH—Up to 30 miles

### **Charge Time:**

90% discharge approx. 4 hrs to fully recharge

80% charge in 2.5 hrs

### **Weight Capacity:**

Up to 250 lbs on flat pavement/dirt

For off-road riding we recommend 180 lbs max

## **Electrical:**

### **Battery:**

61V 28 ah Lithium Ion 21700 Lishen 4000 16s7p

100A Bluetooth BMS

### **Charger:**

67.2V 10 amp 4 pin

### **Controller:**

Burromax GT 3 speed mode, programmable up to 100

AMP burst operation 30 max auto reset fuse

Flux weakening, 140C max temp

### **Wiring:**

Waterproof \*\*\* Type

### **Motor:**

Brushless AC 3500W rated 4800 rpm up to 9500 RPM

with hall and flux weakening—over temp average

reduction starts 130C 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,

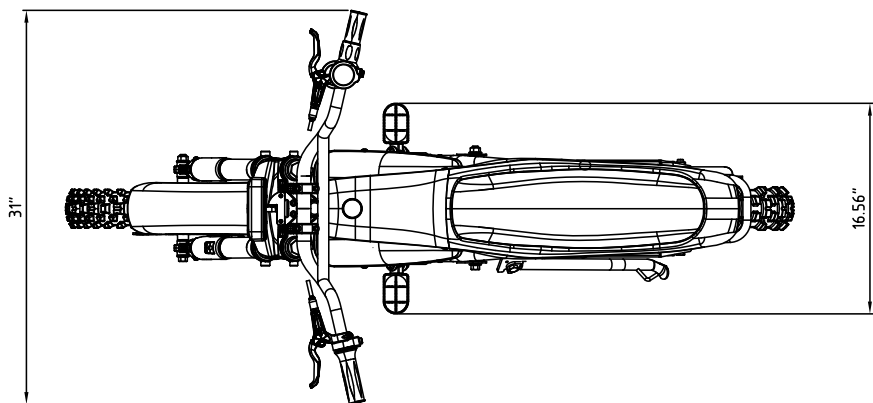
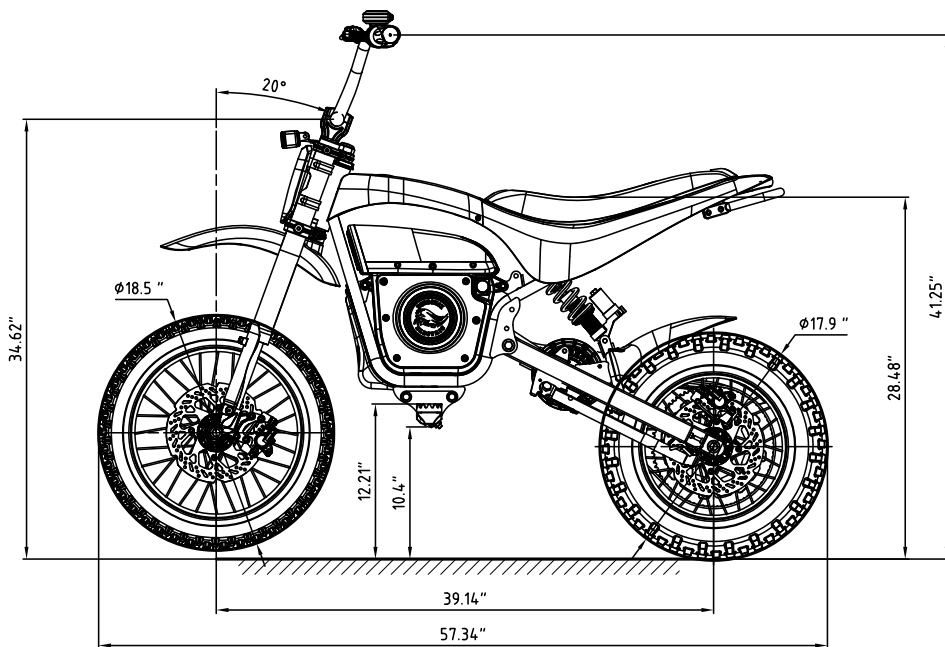
adjustable rebound

### **Wheel:**

Rear: 12"

Front: 14"

Brakes: 203mm Hydraulic Dual Piston Disc F/R



## California Prop 65 Warning



### WARNING!

Lithium-ion Batteries and/or products that contain Lithium-ion Batteries can expose you to chemicals including cobalt lithium nickel oxide and nickel which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information, go to  
[www.P65Warnings.ca.gov/passenger-vehicle](http://www.P65Warnings.ca.gov/passenger-vehicle).

## Warranty

If you have defects of quality or workmanship, Burromax will send you replacement parts free of charge for a period of 90 days from 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. Electronics are warranted 1-year from date of purchase. Frames may be replaced under situational circumstances within a year 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 and mail it to:

**Burromax**  
**3080 Elm Point Industrial Drive**  
**Saint Charles, MO 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

**Replacement parts are available at:**  
**burromax.com**  
**1-800-742-1189**