



# **Equalizer Electric Bicycles**

## **Owner's Manual**

Congratulations on your purchase of a new Electric Bicycle! We here at Equalizer are very proud of our product and we are completely committed to providing you with the best service possible. Your satisfaction is our #1 priority. Your new Equalizer Electric Bicycle is designed and manufactured for many years of dependable and reliable operation.

We know you'll enjoy your new bicycle and **Thank You** for choosing our product. We hope you consider us for future purchases.

## **PLEASE READ AND SAVE THESE INSTRUCTIONS**

This Owner's Guide provides specific operating instructions for your model. Use your bicycle only as instructed in this manual. These instructions are not meant to cover every possible condition and situation that may occur. Common sense and caution must be practiced when operating and maintaining your new bike.

Stamped Serial Numbers are located on the left side bottom bracket shell, where the crankshaft goes into the frame of the bicycle. **These numbers should be recorded** and registered with your homeowners insurance if applicable.

## **EQUALIZER ELECTRIC BICYCLE WARRANTY**

### **One Year Limited Warranty**

When operated and maintained according to all instructions supplied with the product, if this bike fails due to a defect in material or workmanship within one year from the date of purchase, call 1.714.610.7320 to arrange for a free repair.

### **3 Year Pro- Rated Battery Warranty**

When operated and maintained according to all instructions supplied with the product, if the battery fails to hold a charge due to a defect in material or workmanship within **THREE 3 YEARS** from the date of purchase, call 1.714.610.7320 to arrange for a free repair within the first year, 75% Prorated within the Second Year, 50% Prorated within the Third Year.

If this bicycle is used for other than private non commercial purposes, this warranty applies to all systems and components for only **90 days** from the date of purchase.

### **This warranty covers only defects in material and workmanship. Equalizer will NOT pay for:**

1. Expendable items that can wear out from normal use, including but not limited to tubes, tires, brake pads, brake rotors, pedals, saddles, grips, light bulbs, chains, sprockets, cassette clusters, cables and brake lever padding,
2. Damage to or failure of this product if it is not operated or maintained according to all instructions supplied with the product.
3. Damage to or failure of this product resulting from accident, abuse, misuse, or use for other than its intended purpose.
4. Damage to or failure of this product caused by the use of detergents, cleaners, chemicals, utensils or tools other than those supplied or recommended by these instructions supplied with our product.
5. Damage to or failure of this product, parts or systems resulting from unauthorized modifications made to the product.
6. Dealer Generated Labor Fees for cleaning or maintenance.
7. Dealer or Service technician to instruct the user in correct product operation or maintenance.
8. Dead batteries resulting from neglect, damage, abuse, accident, opened, tampered with, misuse or use other than it's intended purpose.

### **Disclaimer of Implied warranties; limitation of remedies**

Customer's sole and exclusive remedy under this limited warranty shall be product repair as provided herein. Implied warranties, including warranties of merchantability or fitness for a particular purpose, are limited to one year from date of purchase. Equalizer shall not be liable for incidental or consequential damages. Parts deemed defective will be replaced free of charge, shipping and insurance are the customers responsibility unless otherwise specified.

This warranty applies only while this bicycle is used in the United States.

### **ELECTRICAL INFORMATION**

The supplied Charger must be plugged into a standard 110-120 Volt, 60 Hz., AC only electric outlet. The power cord of the charger is equipped with a three-prong grounding plug for your protection against electrical shock hazards. It must be plugged into a properly grounded three prong receptacle or extension cord.

Immediately repair or replace any power cord that becomes frayed or damaged.

Never unplug the cords by pulling on them. Always grip the plug firmly, and pull straight out from the receptacle to prevent damaging the power cord.

During the charge cycle the charger will get warm, this is normal. Place the charger on a hard surface to allow air to circulate and cool it while plugged in. Do Not Cover Charger or allow to over heat, this will damage the charger and such damage is not covered on your warranty.

### **INTENDED USE FOR THIS PRODUCT**

Your new bicycle's design is intended for use on paved roadways & OFF-ROAD use such as, gravel roadways, dirt roadways, bike trails, boardwalks and general graded roadways. It is not intended for extreme sports, stunts, water crossings, riding in surf, jumping or extreme mountain biking conditions. Never allow the motor, battery or control compartment to submerge in water. Never allow the chain, derailleur or motor to contact or be buried in sand or mud. All systems and components are weather resistant in case of rain and snow. This product should never be left out in the elements for extended periods of time allowed to freeze or rust. Common sense and caution must be practiced when operating your new bike. Damage to or failure of this product resulting from accident, abuse, misuse, or use for other than its intended purpose is not covered under the warranty.

Before you start assembly read through to the end.

Save scratches and damage - leave all wrapping on until after assembly is completed.

Never squeeze the brake levers when the wheel is not in place, damage to brakes, calipers and pads may occur.

### **ASSEMBLY**

#### **DO NOT REMOVE ANY PROTECTIVE MATERIAL FROM PAINTED SURFACES UNTIL ASSEMBLY IS COMPLETE!!**

Start by removing all contents other than the bike bundle from the box. This will include seat & seat post, the small box that contains (the charger, pedals, quick release skewer, any included accessories and tools for the basic assembly). We supply 2 Allen wrenches for tightening the stem, attaching the headlight, a 15mm pedal wrench & Philips screw driver. This leaves the bundled bike in the box.

Your battery has been tested and charged but should be topped off before you go for your first ride.

At this point, removing the battery is done to lighten the bike and to let the battery charge during the assembly process. Under normal circumstances, the battery is left in the bike to charge, it is not necessary to remove the battery to charge it.

## **Battery Removal**

Before you remove the battery from the frame - look over how it is fitted. Make sure you understand how to put it back before you fully remove it. To remove the battery from the frame - it must be unlocked first. Using the included key unlock the battery by pushing the key in while turning it (never force it). As you turn the key you will see the locking pin retract into the battery, freeing it. The battery has a folding handle on the top. Grasp the handle and pull the battery straight out at the angle it is in the frame. It will slide up the slide bracket - notice how the slide bracket fits in the slide channel in the battery.

Open the small box and remove the charger and power cords. All plugs and receptacles are size/fitment select, so nothing can be plugged into the wrong slot. In this order, plug the charger into the battery. Now plug the charger into the wall receptacle taking care to follow the instructions on keeping the charger on a hard surface. The charger has a light on the front/top that will first turn green confirming the charger is on. If the battery needs charging the light will turn red until charging is complete. The Battery on your new bike must be fully charged before the first use, failure to do this can cause premature battery failure not covered on your warranty.

Once you have the battery on the charger proceed:  
It is helpful to have a second person but not necessary.

## **NEVER put your electric bike upside down on it's handle bars.**

Place a piece of cardboard(or any soft surface material to protect the fork) on the floor where you plan on putting the fork once you have the bike out of the box.

Remove the bundled bike from the box.

With helper, each person holds the box with one hand and picks up an end of the bike, with the other. Remove it from the box.

Place the front fork on the cardboard have helper hold bike from falling over while the front wheel is freed from the bundle.

You will need wire cutters or strong scissors to remove the shipping straps, carefully cutting them without scratching any surfaces. It is advised to cut the zip ties where they press against padding or across a span, never against the paint.

Start by removing the handle bar zip ties - the stem is threaded through the front wheel so take it slowly and carefully. Once you have the handle bars free from the front wheel, temporarily slide the handlebar stem into place in the fork, (doesn't have to be straight) and hand tighten only, with supplied Allen wrench.

Remove remaining zip ties to free front wheel.

## **Front wheel - Quick Release - proper installation - your safety depends on this!**

Your new bike is equipped with a Quick Release "QR" front wheel and seat post adjustment. This makes it tool-less to pop the front wheel off/on and dropping the seat down making transporting your new bike easier. Proper usage of the QR is explained below. IF you are not comfortable or able to properly install the front wheel get help from any local bike shop. This is common procedure to all bicycles not just your new electric model.

ONLY if you are familiar with QR mechanisms will your new bike be safe to ride. Follow all instructions carefully.

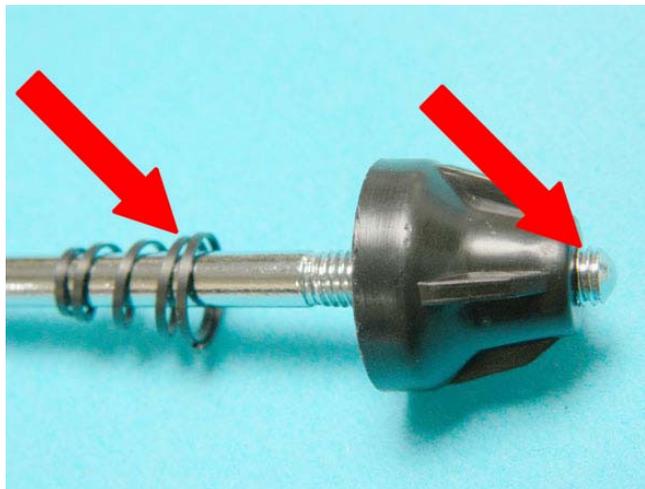
Quick release systems use a cam and handle to tighten the wheel into the fork. They are NOT tightened like a wing nut. If you examine the front wheel axle you will see the QR handle. By pulling the handle parallel with the axle you will see how it works. It flips 180 degrees to open and close. The open position loosens the wheel and the closed position tightens the wheel. The use of a cam enables the mechanism to work. As the handle is pushed into place in the tighten position the cam rides up causing the wheel to tighten into place.

**DO NOT SPIN TIGHTEN INTO PLACE THE QUICK RELEASE HANDLE. Flip into the closed position.**

Installation of the quick release skewer into the axle. The skewer is the long rod that fits in the front wheels axle to keep it on the bike. The skewer is packed in the box with the pedals. It's made up of: Quick Release Handle connected to the skewer, tightening nut, 2 compression springs. Take note that the springs go wide end out on the axle.



Remove the tightening nut and one spring from the skewer, confirm that remaining spring is wide end out/narrow end contacts axle. Slide skewer into front wheel axle from disc brake side, push all the way in. Place spring on skewer narrow end first. Thread tightening nut onto skewer wide end in, and tighten until several threads show out of the nut opposite end



Install front wheel into fork following these instructions carefully. Lift the front of the bike and place front wheel into position making sure the brake rotor is on the left side of the bike. With the quick release in the "open" position, start fitment of the front wheel. Align the brake rotor into the space between the brake pads, slide axle into fork slots letting the bike now rest on the front wheel axle. Hold bike vertical, align wheel in fork. Center tire

in fork while bike rests on axle. Hold the QR handle (in the open position) while turning the tightening nut to hand tight. With the open QR handle at the 8-9 o'clock position, flip the QR Handle into the closed position tightening the front wheel into place.



It may take more than one time to close the QR handle to adjust the proper tension. When closed properly the QR Handle should be tight, in the 2-3 o'clock position (pointed back) almost pressed against the fork, locking the wheel tightly in place. This is the same process every time the front wheel is removed or replaced.



Once you have the front wheel in place and properly tightened (Double check tightness) - adjust the handle bar stem height & alignment. Loosen the stem and correct handlebar alignment & set height. The stem height adjustment has markings for minimum insertion. Double check tightness.

### **Headlight Bracket**

Included in the small parts box you will find the headlight bracket, it attaches to the included bolt in the front fork. Thread the bolt through the bracket and fork, tighten. Use the small nut and bolt to connect the headlight housing to the bracket, do not over tighten.



### **Comfort Stem Adjustment.**

Your new bike is equipped with an adjustable comfort stem, from -10 degrees to 40 degrees. To adjust loose the adjustment bolt - use supplied Allen wrench.

For optimum performance and handling, stay under 30 degrees on the scale on the side of the stem. Double check tightness.

### **Install Pedals**

Right side (side with sprocket) threads in the normal direction, clockwise tight.

Left pedal is a LEFT HANDED THREAD and tightens in the opposite direction - in the counter clockwise direction. Double check tightness.

**Tail light** is factory installed with 2 AAA batteries supplied. To change batteries: unscrew Philips head screw, remove reflector housing, take note how batteries are installed before you remove them. Under normal conditions and temperatures 25-100 degrees F, the factory taillight has a constant on run time of 200 hours per set of batteries. Tail light is visible from 180 degrees and has built in reflector.

### **Seat & Seat post**

Slide the seat post in the seat post opening to about where you want it and tighten. There is an adjustment to fine tune the angle of the seat with the seat adjustment bolt. Loosen the adjustment bolt located on the bottom of the seat post clamp. Adjust the pitch angle of the seat to preferences and re-tighten. Double check tightness.

**Seat post height is tightened by the use of the Quick Release handle, follow QR instructions above.**

### **Tires**

Air should be added to the tires as recommended on the sidewall of each tire. Do not exceed recommended air pressures, can cause tire failure.

At this point it is advised to take the bicycle out for a test ride and complete the adjustments for personal sizing and preferences.

Test all bicycles systems, brakes & gears. Make any fine adjustments using the barrel adjustments located on each component cable end.

To install the battery when it's completed the charge cycle you will need to remove the seat and seat post.

### **Re-install Battery**

Remove Seat post & Seat by opening the quick release on the seat post and removing the seat post.

Slide the battery back into place by making sure the slide bracket is in the battery bracket slide channel. Slide battery down the slide bracket firmly press into place and then turn locking key so that the locking pin engages into the slide locking hole. Once battery is in place and turned on with the key the bike can now be turned on. Battery can be left in place during charging. Battery can be removed at any time for security with the use of the key lock. Slide the seat post in the seat post opening and adjust for proper height

### **Final Assembly**

Once you've reached this point your new bike should be ready for it's first ride.

### **Adjustments**

Your brand new bike has been adjusted at the factory to run smoothly and efficiently. As the bike goes through its break in period some adjustments may be needed. Follow all directions for tuning and maintaining in the appropriate sections.

## **Before your first ride**

Your new bike has been assembled and checked over to make sure everything is tight and correct. The battery has a full charge. Only one thing left to do... know how to use it.

Turning your bike on and understanding how to use the Power Management System.

### **First ride**

Before you start: Familiarize yourself with your new bike. Look over all the controls and know where they are. Know which brake lever controls which wheel. If this is your first time on an electric bike, Lower the seat height so that you can flat foot the ground. Use the bike in motor mode while learning how to control it. It is most safe to find an open area free of any traffic and practice slow speed maneuvers until comfortable and confident. Safety is common sense.

Start off slow and make sure you have a feel for the bike and the way the motor engages before you set out on any journeys.

Certain safety features like Brake Lockout will now be enabled. Squeezing either brake lever will dis-engage the motor temporarily, until the brake lever is released completely.

It is also important not to stare at the display while riding, distractions even for a brief second can be hazardous. Practice glancing quickly and reading one point of information at a time.

It is always smart to have a plan in case of a flat tire. Being prepared with a spare tube or equivalent repair option and pump or air cartridges. Certain tools are necessarily for any repairs on the road.

To energize the Power Management System and Start your bike press the On Button located on the left hand control pad. The display will flash all features screen, tire size screen and then the display will enter riding mode.

**For complete Display instructions please read the Equalizer Display Users Manual.**

### **Battery Care & Charging**

We use the highest quality individual cells available to construct our battery packs. With proper care and maintenance your battery pack should last many years and many thousands of miles of service.

The battery charger supplied with your bike is specially made to charge the battery and is the only one that should be used to charge it. Using any charger other than the one supplied may cause permanent damage to the battery and is not covered in the Pro Rated Warranty.

### **Proper Charging Technique**

You should always recharge your bike at the end of each day it is used. Keeping the battery fully charged will make your bike more reliable and trouble free. It is advised to charge the battery in the bike unless otherwise unable. The use of an approved and grounded extension cord is preferred over removing the battery. If the battery is removed for charging, leave in a safe place laid down if possible. Battery packs are shock resistant when mounted in the bike frame. Extra care should be taken when the battery is not in the bike. Batteries must not be dropped or bumped while not in the bike. Always carry your battery with two hands and use the handle.

The Smart Charger comes with a specially fitted plug that fits in the battery's charging port only. You will need to connect the power cord to the charger for the first time use, it is suggested this cord is left connected to the charger permanently.

## **Battery Charging Port**

The battery charging port is located on the top left side of the battery pack, next to the key. A dust cover sliding door keeps the big stuff out but it is not waterproof. Slide the cover to either side to expose the charging port. Never Get Water In the Charging Port. Slide closed when charging is completed. It is important to keep the charging port battery connections clean. Keep the dust cover closed while operating your bike.

Plug the charger into the battery charging port. Then plug the charger into the wall receptacle. The automatic charge cycle will start with the light turning green and then the light will turn red and the charging cycle will begin. For optimum battery life, it is advised to let the battery fully charge each time you charge it. When the battery has fully charged the light will turn green, you can now unplug the charger from the wall and then from the bike. Even though the Smart Charger stops charging the battery when it turns green it should be unplugged when the charging cycle is complete. Over night charging is fine, Do Not leave the charger plugged in for over 12 hours.

It is normal for the charger to get warm while charging. Rest charger on hard surface allowing it to radiate the heat away, do not cover it. Normal charging times for a partially drained battery fluctuate. For a fully drained battery allow 5-6 hours for a full recharge. Once the light on the battery charger turns green the battery is ready for use.

## **Partial Recharges**

Some times you might have to go with a partial recharge, this shouldn't hurt the battery as long as you never take the battery all the way down to dead. Never leave the battery in a depleted state. It is advised to always fully charge the battery after every use and keep it fully charged when not in use.

## **Dead Battery**

Your bikes battery is a very durable, rugged, reliable power source. Properly cared for it will last well over 1,000 charge cycles and many years. If you forget to charge your battery and it goes dead, always try to recharge it fully first. Li batteries are very hearty. It may take a few recharge cycles but they will regain most of their capacity and continue to work. Improper maintenance is not covered under the pro rated warranty.

## **Cleaning and lubrication**

Keeping your new bike clean will help make it last longer and run better.

Never use a pressurized water source, spray washers and even garden hoses focused in the wrong place can cause damage not covered under your warranty. Only use mist and damp cloth to rinse and wash your bike. Use only a soft cloth to wipe and wash painted surfaces. Do NOT use steel wool and scrub sponges or anything like them, it will damage painted, polished and anodized surfaces.

Battery cases and all electronics are water resistant and rated safe in rain and rain like conditions. When washing your bike, remove battery and wipe down with damp cloth to clean. Do not get contacts receptacle on battery bottom wet. Do not set battery down in water or submerge in water - not waterproof.

Place a plastic bag over battery plate - keep water out of battery plate and control compartment below it. Do not use pressurize hose in this area. Do not submerge in water: hub motor, control compartment or battery or any part of these components.

Waxes and polishes are suggested to keep the finish of your bike protected. Use of these products are based on your person preferences.

It is important to keep all moving parts clean and lubricated. Chain, derailleur, sprocket and gears will need to be kept clean and well lubricated especially after off road use. All cables should be lubricated as needed. If your bike starts to not go into gear, lubricating the derailleur cable will fix it. Brake cables also need lubricating occasionally.

## **DO NOT GET OIL, GAS, CLEANING PRODUCTS, WAXES ON BRAKE ROTORS**

Wipe clean immediately. Do not engage brake until rotor has been completely cleaned.

### **Maintenance**

Ordinary bicycle maintenance is needed for all the bicycle components of your bicycle. Regular cleaning and proper lubrication is needed to keep your new bike running like new.

### **Lubrication of cables**

With bike shut off, squeeze brake lever and apply a drop of oil lubricant onto exposed brake cable, release lever - repeat. Squeeze the lever a few times to work the oil down into the cable housing.

With the shifter in First gear, apply several drops of oil to the exposed cable end and then while riding it shift the bike into top gear and back to first. Do this several times to work the oil into the cable housing.

### **Cleaning**

A bucket of warm soapy water - using simple green, dish detergent, etc... Wear gloves, spray bottle or gentle spray mist at max. Keep all water spray out of motor, battery and controller compartment. Wet dirty bike down, wipe gently with soapy sponge/soft cloth remove all dirt/debris/grease from painted surfaces, rims, spokes, tires side walls. Wipe dry, wax or a protective spray for paint is recommended.

### **Chain and Derailleur**

Eventually you will need to do the basics. Using a chain cleaning brush or equivalent with a degreasing agent to clean the chain is a normal duty shared by all cyclists. Preparation is half the battle to contain what is a messy operation. A technique often used is placing a plastic drop cloth on the ground below the bike before starting keep grease from getting into/onto the ground. Using a degreasing solution and a brush clean the chain, derailleur and all cogs and the sprocket. Once you get all the drive train scrubbed, wipe excess degreaser off. Use of a garden hose, high pressure sprayer or compressed air to spray off the chain, cogs & sprocket are not advised around the motor, battery or control compartment. Use a small hand spray bottle with solution is suggested. After the chain, cogs, derailleur & sprocket are clean & dry, lubricate all links of the chain and every moving part in the derailleur.

### **Long term storage**

Guidelines for Storage of more than two weeks.

Batteries should be left in place and kept charged during storage. Keeping the battery in place keeps dust and dirt out of the connections and off contact surfaces. Batteries should be looked after monthly and kept fully charged. Batteries that are left to die are not covered in the pro-rated warranty. Tires should be kept fully inflated and checked at the same time as the battery.

It is a good idea to keep the bike covered when not in use. A sheet or breathable material with soft cloth surface is suggested.

### **Cold weather storage tips:**

If temperatures of storage will go below 0 zero degrees Fahrenheit it is advised to remove the battery and keep in a warm dry location. A moisture resistant cover should be placed over the battery plate to keep the connections from getting dirty or corroded. Do not store your bike in a damp location or leave it outside in the weather. The use of a water proof tarp or cover is advised if the bike is to be left outside. Tires should be kept inflated and checked regularly. A bicycle tire will normally loose air over time and faster in the cold.

### **Long term care**

Your bike is designed and built to last a very long time and give many years of trouble free service. Keep your bike running like new by taking good care of it. A properly maintained bike is one that is kept clean and lubricated. As parts wear it is your responsibility to make sure they are replaced in a timely fashion and don't cause additional damage and costly repairs. The better you look after your bike the better your bike will look after you. If possible keep garaged or store your bike indoors when not in use.

**Replacement parts**

All the parts and instructions you will need are available at [EqualizerElectricBicycles.com](http://EqualizerElectricBicycles.com). When the time comes, give us a call, we can help you understand what parts you'll need and how they are replaced. Most of your bike is made up of standardized bicycle parts. Should you decide to make any changes or upgrades check with us first. If we don't have it we can help you determine if it will work with your bike. Only authorized replacement parts are covered under your warranty.