

TRACER



OMEGA ELECTRIC BIKE MANUAL



This manual contains important safety, performance and service information.
Read it before you take the first ride on your new electric bicycle. Do Not Discard



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INTRODUCTION

Thank you for purchasing an electric bicycle by Tracer.

This is a serious piece of machinery designed for use by adults in fully controlled and safe environments. As the purchaser/owner of the bike, you are responsible with the task of keeping the rider safe at all times. Your bike has great capabilities and can grow with the skills of the rider to high levels, but it is imperative that the responsible adult is in control during the entire learning process and give full attention at all times.

The electric bicycle is designed for off-road use, but can also be ridden on the road. Please obey all laws regarding Electric Assisted Bicycles and/or Motorized Vehicles and their usage in your area. The electric bicycle may only be ridden in safe areas where all laws are being followed and all required permissions are given. We recommend that use of a DOT (Department of Transportation) rated helmet at all times.

It is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representation about the safe use of the bicycle under all conditions. There are risk associated with the use of bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider.

This owner's manual provides important information regarding safety and maintenance of your electric bicycle. Please read through the entire manual prior to operating your machine and save this manual for future reference. Visit tracerbikes.com for updated information. If at any time you have questions or need assistance with the maintenance of your Tracer products, please contact our dealer/distributor and contact information throughout the manual.

Thank you again for purchasing a Tracer product. We hope you enjoy the ride!

Tracer Bicycles



TRACER

SAFETY

An electric bicycle can be a great way to access terrain that may be impossible by any other means. It can also be dangerous, especially if you ride terrain above your ability level or beyond the capability of the bike itself. If you are headed into the backcountry, be prepared. we recommends bringing a bike-specific multi-tool that includes various Allen Keys, Screwdrivers, and a Bicycle Chain Tool. Bring water, food and clothing appropriate for the season and the environment. A dry trail with good traction may turn impassible with a little rain, meaning you will need to walk the bike. Always practice proper backcountry safety protocols.

The bicycle will not protect you in an accident. There are no seat belts or air bags, and therefore a crash even at low speeds can result in injury or death. If you are in an accident, inspect the bike thoroughly before continuing with your ride. If you aren't sure, do not ride the bike; take it to a professional bicycle mechanic or repair shop for a professional inspection.

If you experience any mechanical problems while on a ride, immediately turn off the electric power at the battery prior to attempting any repairs. Repairs include anything such as putting the chain back on, adjusting brakes, or adjusting accessories. Attempting to replace or reengage the chain while the power is on could result in injury.

Secure all cargo, and ensure loose straps are secured to avoid interference with the moving parts on the bike. Be aware of loose clothing, especially on the drive side (Right Side) of the bicycle, as to avoid interference between your clothes and the drivetrain. Be sure the wheels spin freely and there is nothing that could get caught in the spokes or prevent the wheels from turning freely. If you get a piece of clothing or equipment caught in the front chainring, first turn the power off. The chainring is not on a freewheel system and won't go backwards like a typical bike. You may need to be prepared to cut or remove clothing that gets caught in the drivetrain in order to remove it from the system.

The electric bike is a fun and exciting ride! Always be aware of your surroundings and your environment. Be cautious of other riders and pedestrians. Always stay in control and within your ability. Tracer alwas recomends the use of a DOT (Department of Transportation) rated helmet at all times.

TRACER ELECTRIC BICYCLE DIAGRAM



UNBOXING AND ASSEMBLY

Tracer recommends that the bike be assembled, inspected and adjusted by a certified bicycle mechanic before riding. For a more in-depth assembly guide, check out our assembly and maintenance at www.Tracerbikes.com

Tools:

Hex Key

Wrench or Pedal Wrench

Phillips Head or JIS Screwdriver

Cable Cutters

General Purpose Grease

Optional Tools:

Torque Wrench



STEP 1 - Carefully remove the bike from the box.

- a. Use caution when opening the box as there may be staples exposed when opening the lid.
- b. It is easier to clip the zip ties attaching the front wheel to the bike and remove the front wheel from the box first.
- c. Take out all the accessories and the box with pedals and other miscellaneous parts, and the BatteryCharger before removing the bike.

STEP 2 - Remove all bubble wrap and other packaging materials and place them back in the box.

STEP 3 - Install the seat-post into the seat-tube and hang the bike from a bike repair stand (if possible).

- a. If you do not have a repair stand, place the bike on the floor and engage the kickstand. Use caution as the bike could tipover prior to installing the front wheel, even with the kickstand engaged.

STEP 4 - Start by attaching the handlebars.

- a. Using a allen wrench, remove the screws from the front of the stem and remove the bracket.
- b. Place the handlebars on the stem, with REAR brake on the riders RIGHT, and put the bracket and screws back into place.
 - i. Don't worry about aligning the handlebars right away. Tighten the screws until snug. DO NOT OVERTIGHTEN!

STEP 5 - Attach the front wheel.

- a. Loosen quick release skewer and separate the spring.
- b. Install the quick release skewer through the axle of the tire hub and put the spring on then the nut.
- c. Place the axle into the dropouts on the front fork
 - i. Make sure the spring is on the outside of the dropouts and inside of the nut.
 - ii. Make sure the wheel is centered in the fork. The tire should have equal space on each side.
 - iii. If the wheel is not centered, loosen the nuts on the axle, and straighten. It can help to put the bike on the floor (if on a stand) and let gravity help lower the dropouts around the axle.
- b. Tighten nut until snug. DO NOT OVERTIGHTEN!

STEP 6 - Attach the axle to the front brake caliper.

- a. Loosen the bolts attaching the Brake Caliper to the Disc Brake Adapter
- b. Separate the Caliper from the Disc Brake Adapter
- c. Align and bolt on the Disc Brake Adapter to the fork. Bolt the Disc Brake Adapter to the Fork, be careful not to cross thread the bolts! The thread locker will add a little resistance, but overall the bolts should thread in easily.
- d. Align the caliper with the disc rotor, placing the caliper with the rotor between the brake pads.
- e. Mount the Caliper to the Disk Brake Adapter. Once the bolts are tight, loosen $\frac{1}{4}$ to $\frac{1}{2}$ turn so the Caliper is slightly loose on the adapter to allow for easier alignment.
 - i. If the brake lever was squeezed, or the pistons have squeezed the brake pads together, use a Brake Pad Spreader to push the pistons back to their open position (Hydraulic Brakes Only). If you don't have a spreader, you can carefully use a clean flat head screwdriver.
- f. With the Brake Caliper slightly loose, squeeze the front brake lever to engage the pistons and squeeze the rotor with the pads; keep it squeezed while tightening the Brake Caliper bolts. Release the brake lever and spin the wheel to ensure the rotor is centered within the pads. You can make fine adjustments to the inside pad position with a 5mm Allen key on the side of the brake caliper.

STEP 7 - Attach the pedals

- a. The pedals are left and right side specific. The end near the threads will have an L or R on them, indicating Left and Right.
- b. Put a small dab of grease on the threads of each pedal before inserting into the crank.
- c. The right side is threaded normally, and the left is reverse threaded. This must be screwed in opposite to the right (to the left). The greased pedal should thread on smoothly, DO NOT CROSSTHREAD!



STEP 8 - Pump tires to desired pressure.

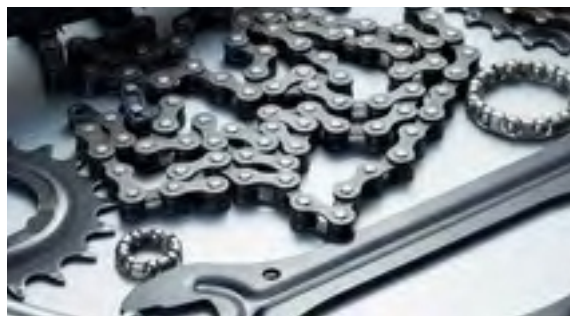
- a. The range for the tires is from 5psi to 30psi.
 - i. 5psi is the lowest the tire is rated for.
 - ii. 5-15psi is for very soft sand or snow.
 - iii. 15-25psi is the recommended range for most off-road riding, depending on your preferences and the specific terrain you are travelling.
 - iv. 25-30psi is for pavement or hard, smooth surfaces.
 - v. Lower pressures can provide more traction, however increase the risk of punctures, and decrease the range of the motor. Higher pressures can decrease the possibility of a puncture, but also can decrease grip on softer and varied terrain.
 - vi. We recommend using a 2psi difference between the Front tire and Rear Tire (+2psi in the Rear tire) to maximize traction in the front and stability in the rear. Example: 15psi Front, 17psi Rear)
- b. If you are in an area with a lot of thorns we recommend adding a tube/tire sealant.

STEP 9 - Align the Handlebars and Brake Levers.

- a. Once the wheels are installed and tires inflated, the bike can be set on the floor.
- b. With the bike on the floor, align the handlebars to the correct angle. To adjust, ensure the handlebars are centered left to right, then roll them forward and/or backwards to get the angle correct. The upsweep and back-sweep of the handlebars is designed to adjust the bars for comfort. The handlebars are properly aligned when the handlebar grips are parallel to the ground. A rotational difference of +/- 15 degrees is acceptable for comfort.
- c. Align your brake levers to a position of comfort. You should be able to reach the brake levers with either One or Two Fingers (Index or Index and Middle fingers)
- d. Using your 5mm Allen key or Torque Wrench, tighten all stem bolts.

STEP 10 - Check all bolts for tightness, including:

- a. Stem (handlebar and steer-tube bolts)
- b. Wheel axles
- c. Crankarms
- d. Chainring
- e. Kickstand
- f. Accessories



HOW TO CHARGE AND POWER ON

1 - Battery

- a. The battery will be mostly charged when you receive it. It is better to use it first to drain it down and then charge it. This is also the case if you haven't used the bike for a few months.
- b. To charge the battery, remove the rubber plug from LEFT side of the bike. Plug the charger into the power outlet and wait until the light on the charging unit is illuminated. Plug the other end of the cord into the bike. The light will change to blue when it's charged.
- c. Allow approximately 4-8 hours to fully charge.
- d. The battery does not have to be installed in the bike to charge
 - i. Remove the battery from the bike by inserting the key, turning it 90 degrees and pulling firmly on the handle.
 - ii. The charger will get hot, so make sure to keep it away from all flammable materials and surfaces.
 - iii. During normal use you can charge it after every ride regardless of battery level, there is no battery memory and therefore consistent charging won't damage the battery.
 - iv. The charging unit will automatically stop charging once the battery is full for safety.
 - v. Always charge in dry, ventilated conditions away from sunlight, ideally 50-80 degrees Fahrenheit.
 - vi. Only use the original charger, DO NOT use any aftermarket chargers or charging accessories.
- e. For long term battery storage, it is best to leave the battery at about 20% (1/4 lights). Always store the battery in a cool place (colder than 65°F). For best results, do not store for longer than 3 months without cycling the battery; use it to de-charge, then re-charge to 20%.



2 - Powering the Unit On

- a. Make sure the battery is fully inserted and locked into the bike.
- b. Get on the bike, ready to ride.
- c. Turn the battery on (I) using the power switch on the Left side of the bike.
- d. Press and hold the power button on the keypad for a couple seconds until the display turns on.
- e. When the power comes on the power level will be set to 1, and therefore engaged for throttle or pedal assistance.
- f. Use the + or – key on the keypad to change your pedal assist power level from 0-5 (0 is the lowest assistance, 5 is maximum assistance)
- g. To turn off, press and hold the power button again for a couple seconds. You can also turn the bike off at the battery (O).

3 - Display Screen (Analyst)

- a. Five Button Keypad
 - i. Power Button – Turns power and display on and off
 - ii. (+) Increases power
 - iii. (-) Decreases power
 - iv. Light button – changes level of backlight
 - v. (i) button – scrolls through information screens on the Analyst Display.
- b. The Analyst displays the following information:
 - i. Current speed
 - ii. Total distance
 - iii. Trip distance
 - iv. Battery level
 - v. Power level
 - vi. Watts output
 - vii. USB charging
- c. Use the (i) button to scroll through the different screens on the Analyst Display.

4 - How to Adjust the Front Suspension Fork (If Equipped)

- a. The Red dial is to lock out the fork. Turn toward lock symbol to lock the suspension travel. Turn the opposite direction to activate the spring and allow the suspension to travel.
- b. On Coil Sprung Forks, the Left side Black knob adjusts the preload on the spring. The preload adjustment will change the characteristics of the spring, more tension (tighter) will stiffen the initial travel, while less tension will allow for more supple initial stroke of the spring.
- c. Air Forks have a cap covering a Schrader Valve to adjust the pressure in the Air Spring. Use a Shock Pump to adjust the air spring pressure.

SAFE OPERATION, MAINTENANCE AND INSPECTION

1 - Before First Ride (After Initial Build and Inspection):

- a. Adjust seat to comfortable height.
- b. Adjust the saddle rails fore/aft positioning for comfort.
- c. Adjust the handlebar, shifter and brake lever position to your liking.
- d. Read Chapter 2 of this manual to become familiar with the components and how the motor and analyst work.
- e. Squeeze brake levers and test the braking power with the bike in a stand, or just walking alongside the bike. DO NOT attempt to ride the bike if the brakes are not adjusted properly.

2 - Before Every Ride:

- a. Check tire pressure and tread wear. Check the sidewalls for damage.
- b. Check the brakes, ensure brakes have adequate power and appropriate amount of brake pad remaining.
- c. Check that wheels are straight and turning freely. Ensure spokes are consistently tight.
- d. Check the Chain tension and lube the chain to reduce friction and increase shifting precision.
- e. Check that the handlebars and stem are secure; and tighten all stem bolts.

3 - After every ride:

- a. Wipe down frame with soap and water. DO NOT use a power washer or high-pressure hose, this could damage the motor and electrical components.
- b. Mud and dirt can be washed away with a low-pressure hose, avoiding direct flow with the electrical components and motor assembly.

4 - Monthly Maintenance:

- a. Check frame for any damage.
 - i. Look for any dents, cracks or chips to the frame. Although some may only be cosmetic, a small crack in the frame can be a serious safety hazard. DO NOT ride the bike if you identify any cracks in the frame.
- b. Check for loose spokes.
 - i. Squeeze the spokes together to check the spoke tension. Spokes should flex slightly and return to their original position. See your local bike shop for wheel truing and spoke replacements if necessary. Tighten any loose spokes with a spoke wrench.

- c. Check forks for damage and air pressure (if applicable).
 - i. The fork legs should move freely. Check the seals where the stanchions enter the lower legs of the forks. These seals can wear over time, and if not kept clean can damage the fork stanchions as well.
- d. Check cassette and chainring for wear/damage.
 - i. Ensure the chain flows freely around the front chainring and each gear in the rear. Inspect the teeth in the front chainring as well as each individual cog in the rear. It is typical for grease and dirt to build up along the sides of the chainring, cassette cogs, and pulley wheels on the rear derailleur.
 - ii. Use a bicycle degreaser or chain cleaner and a brush to clean and degrease the chain and drivetrain components. Re-Lube with bicycle specific chain lube, and wipe off excess.

5 - General Safety Tips

- a. The user assumes the responsibility for the risk of injury or death as a result of riding or using Tracer products. It is the responsibility of the user to know and obey all local laws, rules, and regulations regarding the use of electric assisted bicycles.
- b. Always wear an appropriate helmet when riding. Tracer recommends the use of a DOT (Department of Transportation) rated helmet at all times.
- c. Your bike is designed for use by persons 16 years of age and older. Always follow local laws and regulations regarding age restrictions and the use of electric bicycles.
- d. Riders must have the physical coordination, reaction time and mental capacity to ride and manage traffic, road conditions, sudden situations, as well as respect and obey the local laws governing bicycle and electric bicycle use.
- e. If you have an impairment or disability, consult your physician before riding any bicycle.
- f. Avoid baggy or loose clothing while operating your Tracer bicycle.
- g. Turn off battery before performing any repairs or maintenance. Any turning of the cranks will cause the motor to engage, which could result in injury.

ALWAYS OBEY ALL LAWS, RULES AND/OR REGULATIONS REGARDING THE USE OF ELECTRIC ASSISTED BICYCLES.

WARNINGS

Adult Supervision Required

- a. Steed is designed for riders 16 years of age or older. Adult supervision is required for any operator under the age of 18.
- b. Never allow a child to alter the settings or to ride without adult supervision.
- c. Begin in a safe area and become familiar with all aspects of the bike before heading out on a ride.
- d. ALWAYS OBEY ALL LAWS, RULES AND/OR REGULATIONS REGARDING THE USE OF ELECTRIC ASSISTED BICYCLES.

Follow Safe Riding Practices

- a. The Steed is designed for ONE (1) rider only.
- b. Long hair, loose clothing or loose items worn by the rider must be secured to prevent interference with moving parts or the surroundings.
- c. Do not exceed the weight limit. Heavier riders may significantly reduce performance and / or render the vehicle unstable and/or exceed the capability of the brakes and other control devices. Exceeding the weight limit may cause structural damage not covered by the warranty.
- d. Do not touch any moving parts.
- e. Be aware, some parts such as brake rotors can become extremely hot during use. Avoid contact with these components until properly cooled.
- f. Do not ride at night or under low visibility conditions without proper lighting and safety practices. Follow all local laws regarding the use of electric bicycles at night.
- g. Do not submerge this vehicle in water.
- h. Do not ride on steep or uneven surfaces.
- i. Do not ride faster than the conditions permit, or beyond your ability.
- j. The rider should be securely seated on the unit ready to ride before turning the power on.
- k. ALWAYS OBEY ALL LAWS, RULES AND/OR REGULATIONS REGARDING THE USE OF ELECTRIC ASSISTED BICYCLES.

Wear Protective Equipment

- a. Off-road riding presents many hazards such as loose dirt, obstacles and varied conditions. Always wear a helmet.
- b. Other personal safety items highly recommended are gloves, wrist, elbow, knee/shin and eye protection. Failure to use appropriate safety equipment can increase the risk of injury.
- c. ALWAYS OBEY ALL LAWS, RULES AND/OR REGULATIONS REGARDING THE USE OF ELECTRIC ASSISTED BICYCLES.

Proper Maintenance Is Required

- a. Failure to maintain your Tracer bicycle and keep your bike in proper operating condition can lead to an accident resulting in injury, death, and/or property damage.
- b. If you have any questions about the proper care and maintenance of this vehicle consult your dealer/distributor.

SHIPPING DAMAGE CLAIMS

Upon delivery, immediately inspect your products for damage. Freight damage claims are extremely time sensitive, and we will not accept any freight damage claims later than 3 business days from delivery. If possible, make notes of any damage to your products on the Bill of Lading before you and the delivery driver sign-off on the shipment. Take any photos of damage and date the images when possible. Report shipping damage claims to the dealer you purchased from and they will give the support that you need.



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