

EARTH

ELECTRIC BIKES

T-REX



EMT3



ELECTRIC BIKE MANUAL - PLEASE READ ME FIRST!

YOUR NEW EARTH ELECTRIC BIKE



EARTH T-REX SP 27.5 INCH (650B) HARDTAIL



EARTH T-REX SP 29 INCH HARDTAIL EMTB



INTRODUCTION

For your safety and for the safety of others, we recommend that you obey all road regulations and wear a protective helmet. For optimal, safe and enjoyable use of your EARTH e-bike, make sure you thoroughly read this user guide before you first ride.

EARTH > GREENER >> SMARTER >>> FURTHER >>>>>>>>

1. SPECIFICATIONS

| EARTH T-REX 650B/29 INCH - SP - HARDTAIL - EMTB BIKE COMPONENTS | |
|--|---|
| Frame Material | Aluminum 6061 Alloy 27.5" *47MM / 29" * 51MM |
| Fork | Hydraulic Lockout Suspension Fork |
| Gearing | ALIVIO 9-Speed Shimano |
| Crankset | Sprocket 44T |
| Shifters | Shimano Rapid Shifter Lever |
| Rear Derailleur | Shimano ALIVIO |
| Brakes/Lever | Shimano/Tektro Hydraulic Disc Brakes |
| Rim | 27.5 Inch - 650B / 29 Inch Rivet Rim |
| Tyres | 27.5 Inch Smart Sam x 2.25 / 29 Inch Smart Sam x 2.35 |
| Chain | KMC e9 EPT Rust Resistance |
| Freewheel/Cassette | Shimano - 9 Sprocket 11-32T |
| Handlebars | 720mm Bar |
| Stem | EMTB 100mm Fixed Stem |
| Seatpost / Saddle | Promax 350mm / SR Selle RIO Plush Saddle |
| Rear Rack / Mudguard | Optional (Rear Rack/Mudguard) |
| Weight | Approx 26kg Including Battery |
| ELECTRICAL COMPONENTS | |
| Motor | EARTH T-Rex 48V / Mid Drive 85N.m 250W |
| Display Unit | Side Mount TFT COLOUR Multi Function Display |
| Drive/Sensor | Dual Torque & Cadence Sensor |
| Lights | Optional Front / Rear Light with Rack |
| Battery | 48V 14.5Ah Li-Ion Battery (700Wh)/ Optional 48V10.4Ah (500Wh) Battery |
| Range Performance | Depend on Level of Motor Assist. Range 60~100km EN15194 (48V14.5Ah) |

| | |
|---|---|
| Maximum Speed | 25~27kph with Power Assist EN15194 |
| Charging Time | From 2-8 Hours Depending on Battery Level Indicator |
| WARRANTY | |
| Frame | 3 Year |
| Battery & Motor & Controller | 1 Year (MUST Register your EARTH bike online for an extra 1 year warranty) |
| Bike Parts & Components & Display Panel | 1 Year |

2. TFT DISPLAY PANEL

Features:

- TFT colour multi function display panel.
- High quality contrast 2.2inch IPS colorful matrix screen.
- Suitable for High & low temperature. Max +45/-10°C
- Ergonomic external button design, easy to operate, water resistance



- **Speed display** : AVG SPEED, MAX SPEED, SPEED(Real-time).
- **Kilometer**: speed display in KM.
- **Battery indicator** : Provide approx battery level indicator.
- **Up to 9-level Assist** : 3-level/5-level/9-level optional.
- **Mileage indicator** : Odometer/Trip distance/Riding time.
- **Power indicator** : real time power indicator, digital / analog.
- **Error code indicator**.

3.DISPLAY PANEL FUNCTIONS



3.1 Power On/Off

Press and hold **Power** button for 1 second to turn on/off the display. The Display will automatically turn off when there is no operate & ride for 5 minutes.

*If the display has been set for password power on, you will need to input the right password before start.



3.2 Motor Power Assist Level

Short press **UP/DOWN** button will change the motor assist level. Top assist level is 9, 0 for neutral. Level options can be adjusted according to the rider requirements.

3.3 Speed & Mileage Mode

Short press **POWER** button will change the speed and mileage mode, TRIP→TIME →ODO→AVG SPEED→MAX SPEED.



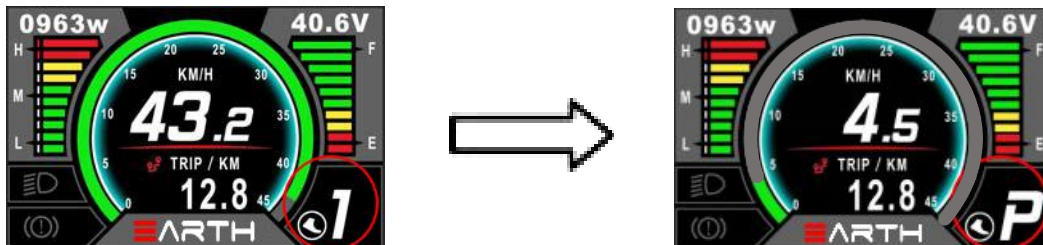
**If there is no operation for 5 seconds, display will return to Speed (Real-Time) display automatically.

3.4 Backlight On/Off

Press and hold **UP** button for 1 second will turn on/off the backlight.

3.5 Walking mode (6km)

Press and hold **DOWN** button for more than 2 second will activate walking mode, release the button to stop walk mode



3.6 Data Reset

Press and hold **UP** & **DOWN** buttons together for 1 second can reset several temporary data, temporary data include **AVG Speed / MAX Speed / Trip / Time**.

* These temporary data will not erased by powering off.

4.DISPLAY PARAMETER SETTING

Press **M** button (press no less than 2second) get into setting menu, press **UP/DOWN** buttons to change the parameter setting, press **M** button can switch to next item. Press **M** (press no less than 2second) button will exit from menu.

* Display will automatically leave menu screen when there is no operation for 30 seconds.

* For safety, display MENU cant not be access when riding.

* Display will quit MENU when you start riding.

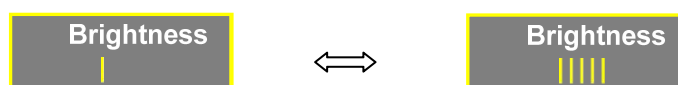
The order of parameters are as follows.

| MENU | |
|------------------------|-----------------|
| System Metric | Brightness |
| Auto off 5 min | Battery 36 V |
| Battery Ind Voltage | More > |

4.1 System : Press Up / Down button to move to next setting.

Please note that the above is for illustration only. **NOT all setting are accessible to change.**

4.2 Brightness : Press Up / Down button to change the brightness of the backlight, | is darkness, ||||| is brightness




Auto off : Press UP/DOWN button to change the auto power off time, from 1 to 9/OFF, the number represent time (minutes) for display shutdown, OFF means disable auto off function, default value is 5 minutes.



Motor / Battery Power OFF : To safeguard the battery pack, Battery will auto turn OFF at 20% level or 45.5V (RED level indicator on display panel)

5.ERROR CODE DEFINITION

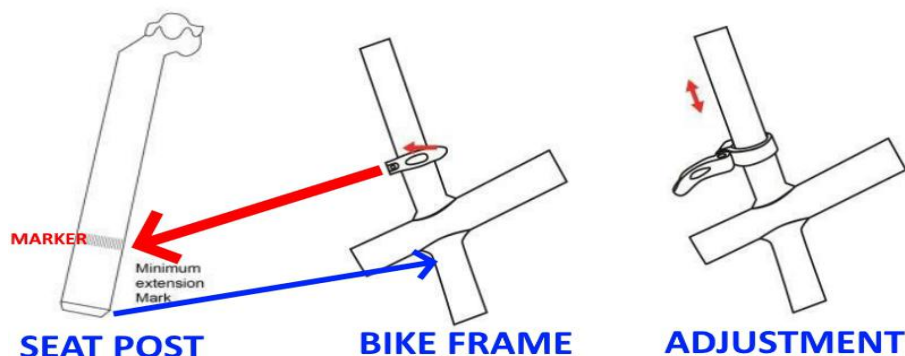
If error occurs , display panel will show warning ERROR code message,  icon on the screen, and show error code at the bottom of the screen, error code is from 01 E~07 E. The table below are the error definitions.

| Error Code | Error description | Handle |
|------------|-------------------------|---|
| 01E | Communication Error | Check the cable connection |
| 02E | Controller protection | Check three-phase power line. |
| 03E | three-phase power error | Check three-phase power line connection |
| 04E | Battery low | Charge the battery |
| 05E | Brake error | Check the brake connection. |
| 06E | Throttle error | Check turn to connect. |
| 07E | Hall error | Check the hall connection |
| 08-99E | Reserved | Please contact the us for error definitions |

6.REQUIREMENTS PRIOR TO EACH RIDE

6.1 QUICK-RELEASE DEVICES/SEAT POST/ BRAKES/ TIRE PRESSURE

Tighten the adjusting nut by hand and move the quick release lever to the closed position. You should feel considerable resistance while moving the lever. If not, re-open and re-tighten the lever, then move it to the closed position so it is in line with the frame.



***** SEAT POST HEIGHT- DO NOT GO ABOVE THE RECOMMENDED HEIGHT**

FOR TALLER RIDERS, PLEASE BUY LONGER SEAT POST 400MM.

******* DO NOT MOUNT ANY QUICK RELEASE RACK TO SEAT POST*******

WE KNOW FROM PAST EXPERIENCE THAT GOING ABOVE OUR RECOMMENDED SEAT POST HEIGHT 5 & ATTACHING QUICK RELEASE RACK MAY DAMAGE THE FRAME. WE WILL NOT COVER UNDER WARRANTY IF THE TOP SEAT POST FRAME CRACK OR BREAKS.

- Check that the brakes are all working properly. Check the pressure of the tires. Make sure that the hinges on your bike are properly locked. When using the bike on a regular basis, the tension of the hinges' adjustment and locking systems will move slightly. Whenever necessary, adjust the tension again.

This bike is not designed for rough usage condition, such as jumps or stunts.

For your own safety, **DO NOT** modify the bike. **WARRANTY WILL VOID** for bike modification that may cause damage to the E-bike. **Please note: if you use the bike frequently, it is recommended that you inspect the state of the fork, the frame, the suspension and the fasteners. The materials and components may be subject to different reactions to usage and wear.**

7. SAFETY MAINTENANCE AND RECOMMENDATIONS

7.1 SAFETY RECOMMENDATIONS

Helmet

For safe riding- use of a bicycle helmet.

Tyres

Inspect the wear of your tyres on a regular basis and verify the tyre pressure at least once a month. Tyre pressure: depending on the weight of the user, check tire for PSI pressure.

Wheel-rims-spokes

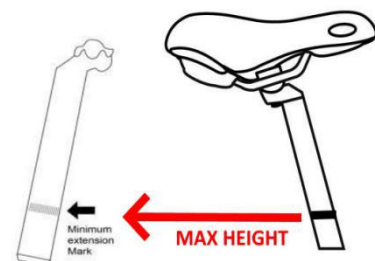
Please check regularly of spokes and rim-wear.

Brakes

Please check your brakes are working properly before attempting to ride the e-bicycle. Secure the front wheel to the bicycle by tightening the quick release mechanism and clamping the lever to the closed position. Important: braking distance increases on humid or slippery ground.

Saddle-post

Do not go above the recommended height. For taller rider please buy the right size frame EARTH ebike or use longer 400mm seat post. **DO NOT** mount rack on seat post.



Reflector

Positioning of reflectors and lights such that these are not obscured when pannier is attached to the rack carrier.

Gears

Like the chain, the freewheel must be kept clean and well lubricated. If the chain has become worn and needs replacing, then it is likely that the freewheel will also have become worn and should also be replaced. Take the chain off the freewheel and rotate it with your hand. If you hear a grinding noise or the freewheel stops suddenly after spinning it, it may need adjustment .

Carrier /Rack

Maximum load: 25kg. This carrier is not designed to pull a trailer. Don't install the child-seat on the carrier. The bicycle may behave differently (particularly with regard to steering and braking) when the carrier is loaded. Please ensure that any pannier fitted to the carrier is securely fitted in accordance with the manufacturer's instructions and that there are no loose straps that can get caught in any of the wheels.

Rack

The rack is able to hold a maximum, evenly balanced load of 25kg.

Signaling device /Bell

The bike is silent. In order to alert others as to your presence, you have a signaling device(Bell): use it only when absolutely necessary, don't abuse it!

WARNING: As with all mechanical components, the bicycle is subjected to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a bike component has been exceeded, it may suddenly fail possibly causing injuries to the rider. Any form of crack, scratches or change of coloring in highly stressed areas indicate that the life of the component has been reached and it should be replaced.

LUBRICATION

| Frequency | Component | Lubricant | How to Lubricate |
|-------------------------|--------------------|-------------------------|------------------------|
| Monthly | Chain | Chain Lube or Light Oil | Brush On or Squirt |
| | Derailleur Pulleys | Chain Lube or Light Oil | Brush On or Squirt |
| | Derailleurs | Oil | Oil Can |
| | Brake Calipers | Oil | 3 drops from oil can |
| | Brake Levers | Oil | 2 drops from oil can |
| Monthly | Shift Levers | Lithium Based Grease | |
| Every Six Months | Freewheel | Oil | 2 squirts from oil can |
| | Brake Cables | Lithium Based Grease | Disassemble |
| Yearly | Bottom Bracket | Lithium Based Grease | Disassemble |
| | Pedals | Lithium Based Grease | Disassemble |
| | Derailleur Cables | Lithium Based Grease | Disassemble |
| | Wheel Bearings | Lithium Based Grease | Disassemble |
| | Headset | Lithium Based Grease | Disassemble |
| | Seat Post | Lithium Based Grease | Disassemble |

Note: The frequency of maintenance should increase with use in wet or dusty conditions. Do not over lubricate - remove excess lubricant to prevent dirt build up. Never use a degreaser to lubricate your chain.

Service Checklist

| Frequency | Task |
|--------------------------|---|
| Before every ride | <p>Make sure battery are fully charged</p> <p>Check tire pressure</p> <p>Check brakes</p> <p>Check wheels for loose spokes</p> |
| After every ride | <p>Be sure to fully charge battery</p> <p>Quick wipe down with damp cloth</p> |
| Monthly | <p>Inspect wires</p> <p>Inspect connectors</p> <p>Check derailleur adjustment</p> <p>Check brake adjustment</p> <p>Check brake and gear cable adjustment</p> <p>Check tire wear and pressure</p> <p>Check wheels are true and spokes tight</p> <p>Check hub, head set and crank bearings for looseness</p> <p>Check pedals are tight</p> <p>Check handlebars and stem are tight</p> <p>Check seat and seat post are tight and comfortably adjusted</p> <p>Check frame and fork</p> <p>Lubrication as per schedule</p> <p>Perform safety check</p> |
| Every six months | <p>Lubrication as per schedule</p> <p>Check all points as per monthly service</p> <p>Check and replace brake pads, if required</p> <p>Check chain for excess play or wear</p> <p>Book general bike service (EARTH electric bike dealer)</p> |
| Yearly | <p>Lubrication as per schedule</p> <p>Book general bike service (EARTH electric bike dealer)</p> |

MAINTENANCE

Caution

Bike maintenance and repair require specific skills and appropriate tools. Do not repair your bike or change any of its settings if you have the slightest doubt regarding your ability to correctly proceed with such work. Contact your dealer. Any adjustments or repairs that are not properly done can damage the bike and lead to accidents resulting in injuries. Using only genuine replacement bike parts for safety-critical components;

Electric Bicycle - Cleaning

Always remove the battery when cleaning. Use soapy water or water mixed with a gentle detergent, and then rinse with clean water. Make sure all electrical components are wipe clean and dry from any water or moisture.

Store your EARTH electric bicycle inside and do not leave outdoor for long period of time.

DO NOT USE HOSE OR HIGH PRESSURE WASHER!



DO NOT use a Hose or High Pressure Washer to Clean Bike!

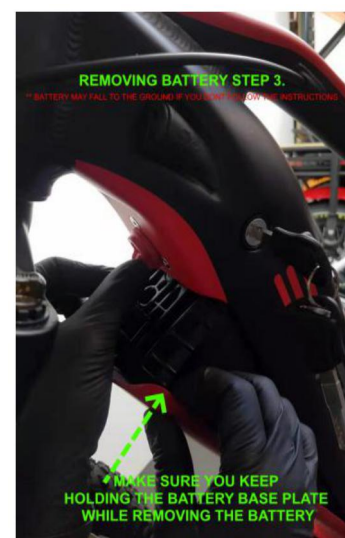
8. BATTERY

8.1 INSTALLING AND REMOVING THE BATTERY

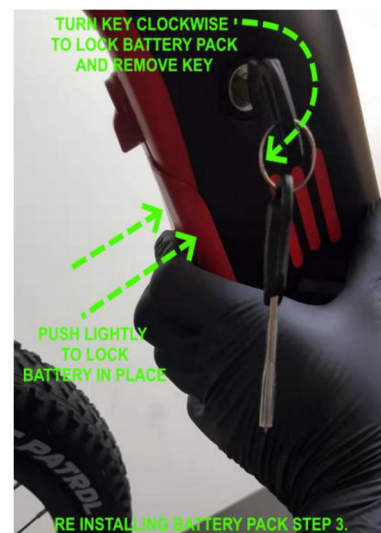
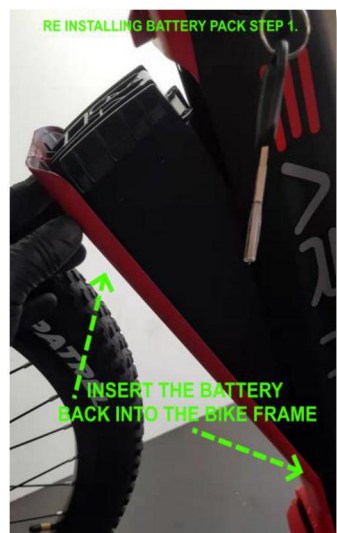
To remove the battery, use key and turn anti clockwise. The lock is located along the top side of frame. Use your finger and turn latch anti clockwise, hold at that position and then use your other hand to flip down the battery as shown on pictures below. Remove the battery by pulling downwards and making sure you hold the battery so it does not fall to ground. To put the battery back into place, insert the battery then gently push up against the frame until you hear a click. Turn key to lock and remove key.



REMOVING - BATTERY PACK



INSTALLING - BATTERY PACK



8.2 CHARGING THE BATTERY

Never let a battery be charged unattended. We recommend charging battery during the day and NOT over night. The battery's voltage is indicated by the LED lights located on the battery, and also on the display unit located on the handlebar.

Your battery must be charged in an ambient temperature, on a non-flammable and dry surface, away from any sources of heat, humidity or flammable materials. Also, it must not be covered.

Here are the steps to be followed when charging your battery:

| | |
|---------------|--|
| Step A | Remove battery from the bike. |
| Step B | Plug the charger into the socket and then insert the charger's plug into the battery, which is also off. |
| Step C | <p>The charger's LED indicators lit up in the following manner:</p> <ul style="list-style-type: none"> • The red LED light will be on: (A) the battery is being charged. • The red LED light becomes green : (B) the battery is fully charged; You can unplug the charger. |



(A)



(B)

It takes 2-8 hours for the battery to be fully charged when using the standard charger that's supplied with your bike. Will Vary depending on battery capacity.

Charging Battery off Bike



Charging Battery on Bike



8.3 BATTERY AUTONOMY AND LIFESPAN

Autonomy

The bike's autonomy ranges from 60 to 110 kilometers EN15194 , as it depends on many different factors (degree of assistance used, , rider's weight, frequent stops/start-ups, hills, tyre pressure, etc....)

Battery

Your battery is just like a household battery. It contains a limited amount of energy, which diminishes as it is being used over time. EARTH electric bike battery comes with 2 Year limited warranty.

Maintenance



If you don't use your bike for a period of time exceeding 2 months, store it in a humidity-free area to protect the electronic components and make sure that the battery is neither completely charged nor completely discharged .

Note: *Never store a completely discharged battery as it might result in permanent damage. During the winter or long storage periods, it is recommended that you charge the battery halfway every 2 months. Don't forget to remove battery pack from your ebike. Store your battery at a temperature between 15° and*

8.4 BATTERY SAFETY INSTRUCTIONS

The battery is an electric component made up of chemical elements. For your safety, it is imperative that you READ the following rules:

- Do not take it apart or drop, pierce or submerge in water
- Keep it away from temperatures exceeding 45°C
- Never create a connection between the contacts located at the bottom of the battery
- Never leave battery charge unattended; Never sleep near a battery that is charging
- Only use the charger that came with your EARTH electric bike.
- If your battery is damaged, do not use it and take it back to your dealer as soon as possible.
- Always handle with great care; Always keep it away from children
- Keep away from flame or fire.

WARRANTY

Your EARTH electric bike comes with;

- * 3 years frame warranty
- * 1 years motor warranty
Register your EARTH bike online for an extra 1 year warranty
- * 1 year bike parts & display panel warranty

Warranty is not transferable, NO exceptions

Details regarding the warranty coverage terms is available from our EARTH website
www.earthbikes.com.au

Please make sure that you register your bike serial number to activate warranty.

The serial number is located in front of the head tube.

