LINGENIOUS

FACTORY

ELECTRIC OFF-ROAD MOTORCYCLE

CE

OWNER'S MANUAL

Read and understand this entire manual before using!

NOTE: Manual illustrations are for demonstration purposes only.
Illustrations may not reflect exact appearance of actual product.
Specifications subject to change without notice.

OFF-ROAD USE ONLY!!!

NEVER OPERATE THIS VEHICLE IF YOU ARE UNDER AGE 13!!!

INTRODUCTION

Thank you for purchasing this product. The proper care and maintenance that your vehicle requires is outlined in this manual. Following these instruction will ensure a long trouble-free operating life of this vehicle and your satisfaction with it.

The owner's manual corresponded to the latest state of this vehicle at the time of printing. Slight deviations resulting from continuing development and design can, however, not be completely excluded. All specifications are non-binding, we reserve the right to modify or delete technical specification, parts, design, etc… without prior notice.

SAFETY WARNINGS

This vehicle is NOT A TOY and ONLY used in closed off areas remote from public road traffic.

Never permit children under age **13** to operate this vehicle.

Adult's supervision is required if children under age **16.**

WARNING:

Riding this vehicle can be a hazardous activity. Certain conditions may cause the equipment to fail without fault of the manufacturer. Like other vehicles, the Mini Dirt Bike can and is 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.

This manual contains many warnings and cautions concerning the consequences of failing to maintain, inspect or properly use your mini dirt bike. Because any incident can result in serious injury or even death, we do not repeat the warning of possible serious injury or death each time such a possibility is mentioned.

APPROPRIATE RIDER USE AND PARENTAL SUPERVISION

This manual contains important safety information and use tips to help you and your child operate and handle the mini dirt bike. Carefully read the manual in its entirely together with your child before letting your child ride it for first time. The manual also contains important information on servicing the vehicle.

It is your responsibility to review the manual and make sure that all riders understand all warnings, cautions, instructions and safety topics and assure that the riders are able to safely and responsibly use this product and protect your child from injury. We recommend that you periodically review and reinforce the information in this manual with your child, and that you inspect and maintain your children's vehicle to insure their safety. **The recommended rider age of 13 years** is only an estimate, and can be affected by the rider's size, weight or skills. Any rider unable to fit comfortably on this vehicle should not attempt to ride it.

It is important and necessary to conduct the technical training for your child before first use. To get the train information, please contact the dealer who you purchase the vehicle from. Before your child complete the training, do not let your child use this vehicle.

Children often underestimate or fail to recognize the dangerous situation, you should make it clear to your child that should not, under any circumstances, operate the vehicle without supervision and that your child may only drive at speed that are commensurate with the child's riding ability and other road condition.

A parent's decision to allow his or her child to ride this vehicle should be based on the child's maturity, skill and ability to follow rules.

Keep this product away from small children younger than age **13** and remember that this product is intended for use only by persons who are, at a minimum, completely comfortable and competent while operating the vehicle

Do not exceed **85kgs (187lbs)** total weight on this vehicle. Rider weight does not necessarily mean a person's size is appropriate to fit or maintain control of this vehicle.

Do not touch the brakes or motor on your bike when in use as they can become very hot.

ACCEPTABLE RIDING PRACTICES AND CONDITIONS

Always check and obey any local laws or regulations which may affect the locations where the vehicle may be used.

Ride defensively. Watch out for potential objects that could catch your heel or force you to swerve suddenly or lose control. Be careful to avoid pedestrians, skaters, skateboards, scooters, bikes, children or animals who may enter your path, and respect the rights and property of others.

This vehicle is meant to be used only in controlled environments free of potential traffic hazards and not on public streets or sidewalks. Do not ride your vehicle in any areas where pedestrians or product traffic is present.

Do not activate the speed control on the hand grip unless you are on the vehicle and in a safe, outdoor environment suitable for riding.

The vehicle was 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 vehicle, and the rider assumes all risks associated with high-stress activity. Be careful and know your limitations. Risk of injury increased as the degree of riding difficulty increases. The rider assumes all risk associated with aggressive riding activities.

Maintain a hold on the handlebars at all times.

Never carry passengers or allow more than one person at a time to ride the vehicle.

Never use near steps or swimming pools.

Keep your fingers and other body parts away from the drive chain, steering system, wheels and all other moving components.

Never use headphones or a cell phone when riding.

Never hitch a ride with another vehicle.

Do not ride the vehicle in wet or icy weather and never immerse the vehicle in a water, as the electrical and drive components could be damaged by water or create other possibly unsafe conditions.

The vehicle is intended for use on flat, level ground without loose debris such as rocks or gravel. Wet, slick, bumpy, uneven or rough surfaces may impair traction and contribute to

possible accidents. Do not ride the vehicle in mud, ice, puddles or water. Avoid excessive speed that can be associated with downhill rides. Never risk damaging surfaced such as a carpet or flooring by use of the vehicle in doors.

Do not ride at night or when visibility is limited.

PROPER RIDING ATTIRE

Always wear proper protective equipment such as an approved safety helmet, elbow pads and kneepads. A helmet may be legally required by local law or regulation in your area. A long-sleeved shirt, long pants and gloves are recommended. Always wear athletic shoes, never drive barefooted or in sandals, and keep shoelaces tied and out of the way of the wheels, motor and drive system.

USING THE CHARGER

The charger supplier with the vehicle should be regularly examined for damage to the cord, plug, enclosure and other parts, and in the event of such a damage, the bike must mot be charged until the charger has been repaired or replaced.

Use only with the recommended charger.

36V lead acid battery charger with label: **43.2V**

36V lithium battery charger with label: **42V**

48V lithium battery charger with label: **54.6V**

60V lithium battery charger with label: **67.2V**

Use caution when charging.

The charger is not a toy. Charger should be operated by an adult.

Do not operate charger near flammable materials.

Unplug charger and disconnect from bike when not in use.

Always disconnect from the charger prior to wiping down and cleaning the vehicle with liquid.

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.

LOCATION OF WARNING STICKER

PIN LOCATION

PIN is stamp marked on an aluminum plate that is riveted on the steering column .
PIN means the Product Identify Number which is unique for each unit.

● HAND DRIVE CONTROLS

1 Front brake lever
2 Rear brake lever
3 Key switch
4 Battery indicator

ATTENTION:

STOP use, and charge the battery once the indicator turn to 10%.

5 Safety ON/OFF switch

6 Throttle

BEFORE YOU BEGIN

Remove contents from box. Remove the paper liner that protect the components from damage during shipping. Inspect the contents of the box for scratches in the paint, dents or kinked cables that may occur during shipping. Because the product was 85 percent assembled and packed at the factory, there should not be any problems, even if the box has a few scars or dents.

MAKE SURE KEY SWITCHES IS TURNED " OFF" BEFORE CONDUCTING ANY PROCEDURES.

Estimated Assembly and Set-Up Time

We recommend assembly by an adult with experience in motorbike or bicycle mechanics.
Allow up to 30-40 minutes for assembly.
Allow up to 7-9 hours for initial charge depending on the models.

Required Tools

Some tools may be supplied; however, we recommend the use of mechanic's grade tools. Use the supplied tools only as a last resort.
The list of tool required is as follows

- Open end wrench 8mm / 10mm / 12mm / 14mm / 17mm
- Allen wrench 5mm / 6mm / 8mm

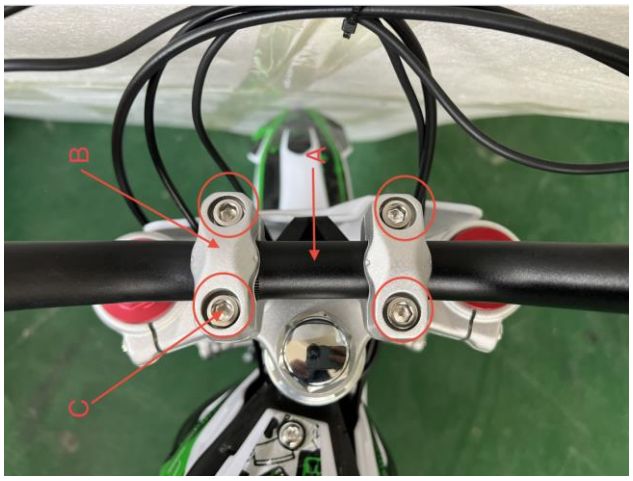
Besides the bike, you can find a small box with below parts inside.

1 Rear shock
2 Sponge
3 Screw, fuse, handle bar clamps... etc
4 Sponge pad
5 Tool kit
6 Charger plug
7 Charger

Assembly illustration and instruction

ASSEMBLY HANDLEBAR

Caution: Failure to properly adjust and tighten the bolts that affix the handlebar can cause you lose control and crash.



1. place the handlebar in the bottom clamp, then cover the upper clamp on the handlebar and install the 4pcs bolt.
2. Place the handlebar in the upright and vertical position, then tighten all the bolts securely with 10mm socket spanner.

A：handlebar
B：upper clamp x2pcs
C：bolt M8X20 4pcs

ASSEMLY FRONT MUD GUARD

mount the 3pcs M6X12 bolts under the front mud guard.

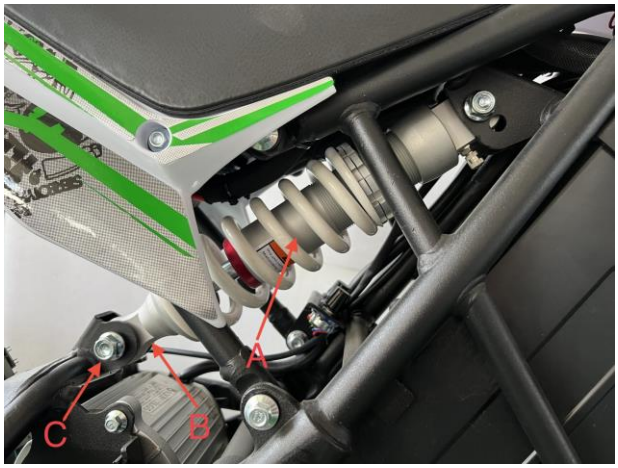
ASSEMBLY NUMBER BOARD

Use the bolt M6X12 to fix the number board into the location pillar of mud guard.

ASSEMLY FRONT WHEEL AND REAR SHOCK ABSORBER

1. put the wheel (A) on the right position to place the disc (E) between the brake caliper pad.
2. mount the axle (B) through the left fork, bush (D), wheel, bush (D) and right fork in sequence, and then fix the nut (C) and tighten it.

A：wheel
B：wheel axle M12X205
C：nut M12x1.25
D：spacer 24mm,28mm longer one to disc brake side
E：brake disc



1. Uplift the frame to align the shock (A) mounting hole to the shackle joint hole.
2. Fix the bolt (B) through the shock mounting hole and shack joint and tighten the nut (C) securely with 10mm and 13mm open end wrench

A：shock absorber
B：bolt M10X40
C：nut M10X1.1

PUT THE FUSE INSIDE THE FUSE HOLDER：

1. Take off the plastic cover first to find the fuse holder.
2. Find the fuse from the plastic bag, and put it inside the fuse holder.

INFLATING THE TIRES

NOTE: The tires are inflated when shipped, but they invariably lose some pressure between the point of manufacturing and your purchase. Always inflate the tires to the correct PSI before first time use.
Please read the specification sheet to get the information of tire pressure.
Using a bicycle-style tire pump to inflate the tire to the PSI indicated on the sidewall of the tire.

Note: The pressurized air supplies found at gasoline stations are designed to inflate high-volume automobile tires. If you decide to use such an air supply to inflate your tires, first make sure the pressure gauge is working, then use very
short bursts to inflate to the correct PSI. If you inadvertently over-inflate the tire, release the excess pressure immediately.

Important information of use guider for tire

Note: Tire is the only contact between the vehicle to the road, the safety of various driving activity depends on the small area of tire where contact with the road. Therefore, it is very important to keep the tire in good condition any time and use the correct size and standard tire to replace the old ones.

Guide:

Tire assembly and disassembly

It is strongly recommended that the tire assembly and disassembly should be done by an authorized technician with necessary skills.

Tire inflating pressure

It is very important to keep the tire in proper pressure and check the tire pressure before use. The inflating should be done while the tire is cold.

Tire maintenance

Tire tread depth should be checked regularly.(Shallower tread means less grip of tire). You must stop to use the vehicle if the tire is pierced, disassemble the tire and check it carefully. Tire maintenance should be done by an authorized technician. Tire should be replaced immediately when it is distorted or damaged.

Tire replacement

It is important to use the correct size and standard tire as per our specification (see details in technical specification sheet)

Don’t use the used tire if you are not sure its previous service condition.

Tire aging

Tire aging is unavoidable even the tire is not ever used or just used a few times. Tire aging is mainly reflected in the cracked section on side of tire and tire tread, sometimes the tire is distorted as well. The used and aged tire should be checked and confirmed if it is ok to use again by an authorized technician

BEFORE RIDING

Charging the Battery

Your electric motor bike may not have a fully charged battery; therefore it is a good idea to charge the battery prior to use.
- Initial charge time: **7-9 hours** depending on level of depletion.
- Run time: up to **45 minutes** of continuous ride time at MAX speed, run time may vary depending on riding conditions.
- Average battery life: **250-500** charge/discharge cycles depending on which type of the battery. To ensure long battery life, do not store the batteries in temperature above **40℃** or below **0℃.**
· Recharge time: *Always* remember to turn the power switch off and recharge for at least **7-9 hours** after each use depending on the models. When vehicle is not in regular use, recharge battery at least once a month until normal use is resumed. If you have left the power switch on or your product has not been charged for a long period of time the battery may reach a stage at which it will no longer hold a charge.

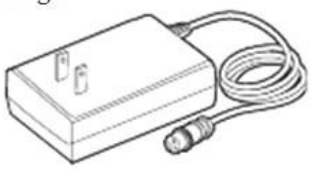
WARNING: rechargeable batteries are only to be charged under adult supervision. Always disconnect your electric motor bike from the charger before cleaning with liquid.

NOTE: Chargers have built-in over charge protection to prevent battery from being over charged. Charger will get warm during use, this is normal for some charges and is no cause for concern. If your charges does not get warm during use, it does not mean that it is not working.

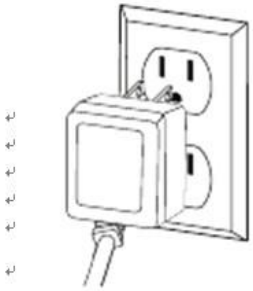
The charger has a small window with LED to indicate the charge status. Red LED means the battery is in charging and Green LED means the battery is full charged. Chargers have built-in over-charge protection to prevent battery from being over-charged.

Be sure to properly align the groove on the charger input port with the corresponding socket on the vehicle and tighten threads; otherwise, no charging action will occur.

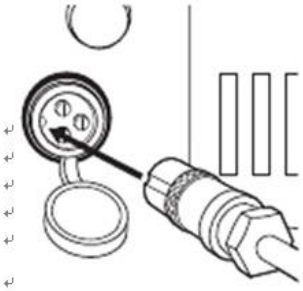
Charger



Note: Make sure power is turned **OFF** when unit is not in use. If the power switch is left on for an extended period of time, the battery may reach a stage at which it will no longer hold a charge.



1 Plug the charger into a wall outlet. If the lights on charger do not light up, check the power to the outlet. If necessary, try a different outlet.



2 Turn power **OFF** before charging. Plug the charger into the charger port to charge unit.

Warning: Failure to recharge the battery at least once a month may result in a battery that will no longer hold a charge.

SAFETY REMINDERS

PRE-RIDE CHECKLIST

❑ **Loose Parts**

Check and secure all fasteners before every ride. Make sure steering stem 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.

❑**Frame, Fork and Handlebars**

Check for cracks or broken connections. Although broken frames are rare, it is possible for an aggressive driver to bash into a curb or wall and wreck and bend or break a frame. Get in the habit of inspecting yours regularly.

❑**Tire Inflation**

Periodically inspect the tires for excess wear, and regularly check the tire pressure and re-inflate as necessary. If you get a flat tire, the inner tube can be patched or a new tube can be purchased from an authorized repair shop.

❑**Safety Gear**

Always wear proper protective equipment such as an approved safety helmet, elbow pads and kneepads. Always wear shoes (lace-up shoes with rubber soles), never drive barefooted or in sandals, and keep shoelaces tied and out of the way of the wheels, motor and drive system.

❑BE CAREFUL TO START THE BIKE

The bike is very powerful, with adjustable motor starting response and adjustable speed. Please take very care to start the bike !

RESPONSE: turn the response switch clockwise to get the strong response to start the bike, anticlockwise turn to reduce the response. (Attention, make the response as soft as possible for kids and new user, and adult should test it first after the adjusting setups)

SPEED: turn the speed switch clockwise to get the fast speed, anticlockwise turn to slow the speed.

ATTENTION

We recommend checking all tightened parts after the first time use. Special attention should be paid to the following parts:

- Footrest
- Engine sprockets
- Shock absorber
- Engine bolts and nuts
- Rear sprocket

TECHNICAL SPECIFICATION SHEET

MODEL	E-SX 36V1300W	E-SX 48V1600W	E-SX 60V2000W
MOTOR	36V 1300W – BLDC motor	48V 1600W – BLDC motor	60V 2000W – BLDC motor
MAX. SPEED	37km/h	48km/h	53km/h
FINAL DRIVE	10T / 70T, chain 219H	10T / 70T, chain 219H	10T / 70T, chain 219H
CONTROLLER OUTPUT	40A	42A	45A
BATTERY	3×12V12Ah sealed lead-acid	48V 15.6Ah lithium	60V 18.2Ah lithium
CHARGER	110-240V, 43.2V 1.5A	110-240V, 54.6V 2A	110-240V, 67.2V 2A
CHARGE TIME	8-9hrs	7-8hrs	7-8hrs
RANGE PER CHARGE	15-17km	28-30km	33-36km
FRAME	High-tensile steel double cradle tube frame, powder-coated		
SUBFRAME	Removeable		
HANDLEBAR	Aluminum Ø 22		
FRONT SUSPENSION	Upside-Down forks, Φ39*Φ41, 550mm		
REAR SUSPENSION	Mono shock with built-in air bag, 270mm		
BRAKE SYSTEM	Mechanical brake	Hydraulic brake	Hydraulic brake
DISC BRAKE	F/R Ø180mm	F/R Ø180mm	F/R Ø180mm
FRONT / REAR RIMS	1.40 x 10"; 1.40 x 10"	1.40 x 12"; 1.60 x 10"	1.40 x 14"; 1.85 x 12"
FRONT / REAR TIRES	2.50 x 10"; 2.50 x 10"	2.75 x 12"; 3.00x 10"	60/100 x 14"; 80/100 x 12"
WHEELBASE	920mm ± 10 mm	920mm ± 10 mm	920mm ± 10 mm
GROUND CLERANCE	225mm	235mm	255mm
SEAT HEIGHT	620mm	630mm	660mm
MAX. LOAD	85kg (187lbs)		
N.W / G.W	46.5kg / 56kg	40.5kg / 50kg	42.5kg / 52kg
BIKE DEMENSION	1330*645*840 mm	1330*645*850 mm	1400*645*890 mm
PACKING SIZE	1190*375*630mm	1190*375*630mm	1230*375*630mm

REPAIR AND MAINTENANCE

Adjusting chain

Checking the drive chain periodically to ensure longer chain life.

Always keep it lubricated and tighten the chain as follows:

Step 1: Use the open end wrench to loose the 3pcs screws and remove the chain cover

Step 2: Loose the rear wheel axle nut with 17mm and 14mm open spanner, then loose the screw of caliper bracket, adjust the chain adjuster.

Adjusting brake

Step 1:

<u>For the bike with mechanical brake</u>

To adjust the brake tension, thread the brake lever adjuster in or out 1/4 or 1/2 turn until the required brake adjustments is attained.

Most of brake adjustments are complete at this step, if the brake still need the further adjustment.

<u>For the bike with hydraulic brake</u>

To adjust the brake tension, thread the brake lever adjuster A by screw driver.

To open the screw B if need check or add oil in the pump.

Step 2:

For the bike with mechanical brake

With 5mm allen wrench, loose the brake cable and adjust the brake caliper arm to make the cable length>30mm from arm to the pillar.

For the bike with hydraulic brake

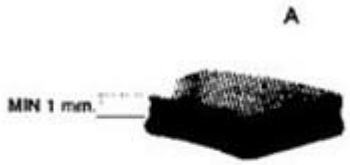
With 6mm allen wrench, loose the brake caliper, and adjust the brake caliper to make it in a proper position.

Step 3:

With 8mm open spanner to loose the nut of friction pad, and with 2.5mm allen wrench to adjust the inner screw for friction pad.

Check

To check the wear of front and rear brake pads **A**, simply inspect the brakes calipers as shown in the below picture.



The thickness of the lining on the ends of the four pads should never be less than 1mm.

Should the lining be thinner, immediately replace the brake pads.

We recommend having the brake pads replaced by an authorized dealer.

Warning:

The brake is capable of causing the electric bike 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 stop as this can cause you lose control or damage the rear tire.

Testing the Brakes

To use the brake, squeeze the lever to increase the pressure on the brake. The brake lever is fitted with a cable adjuster to compensate for cable stretch and/or to fine-tune the lever movement to brake engagement. If brake is not engaging properly, follow instructions for adjusting the brakes.

Chain and sprocket

The chain will typically have a “loose spot” and “tight spot” corresponding with a particular sprocket rotational position. This is normal and common to all chain-driven products due to

run-out to tolerance of the free wheel and sprocket. The chain should be adjusted to the ideal tension with 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 sprockets, in that order.

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

Charger

The charger supplied with the bike should be regularly examined for damage to the cord, plug, enclosure and other parts, and, in the event of such damage, the bike must not be charged until is has been repaired or replaced.
USE ONLY WITH THE RECOMMENDED CHARGER

TROUBLESHOOTING GUIDE

Problem	Possible cause	Solution
Vehicle does not run.	Undercharged battery.	Charge the battery. A new battery should have been charged for at least 7-9 hours before using the vehicle for the first time depending on the models, and up to 8 hours after each subsequent use for the bike with 36V12Ah lead acid battery.
		Check all connectors. Make sure the charger connector is tightly plugged into the charging port, and that the charger is plugged into the wall.
		Make sure power flow to wall outlet is on.
	Charger is not working.	You may check to see if your charger is working by using a volt meter or asking the authorized service center to test your charger for you.
Vehicle was running but suddenly stopped.	Loose wires or connectors.	Check all wires and connectors to make sure they are tight.
	Burned-out fuse.	The fuse will burn out and automatically shut off the power if the motor is overloaded.
		An excessive overload could cause the motor to overheat. Refer to replacing the fuse instructions of this manual. Correct the conditions that caused the fuse to burn out and avoid repeatedly burning out fuse.

	Motor or electrical switch damage.	Contact the authorized service center for diagnosis and repair.
Short run time less than 15 minutes per charge	Undercharged battery	Charge the battery. A new battery should have been charged for at least 7-9 hours before using the vehicle for the first time depending on the models, and up to 8 hours after each subsequent use for the bike with 36V12Ah lead acid battery.
		Check all wires and connectors. Make sure the battery connector is tightly plugged into the charger connector, and that the charger is plugged into the wall.
		Make sure power flow to the wall outlet is on.
	Battery is old and wil not accept full charge.	Even with proper care, a rechargeable battery does not last forever. Average battery life is 1 to 2 years depending on vehicle use and conditions. Replace only with a replacement battery.
	Brakes are not adjusted properly	Refer to brake adjustment instructions.
Vehicle runs Sluggishly	Tires are not properly Inflated.	The tires are inflated when shipped, but They invariably will lose some pressure Between the point of manufacturing and your purchase. Refer to tire instructions to properly inflate tires.
	Vehicle is overloaded.	Make sure you do not overload the vehicle by allowing more than one rider at one time, exceeding the maximum weight limit, going up too steep a hill or towing objects behind the vehicle. If the vehicle is overheated, the temperature circuit protector will slow motor down and if the condition continues, will shut off power to the motor. Correct the driving conditions that caused the overheating, wait 5-10 minutes and then resume riding. Avoid repeatedly overheating the unit.
Sometimes the vehicle doesn't run, but other times it does.	Loose wires or connectors	Check all wires around the motors and all connectors to make sure they are tight.
	Motor or electrical Switch damage.	Contact the authorized service center for diagnosis and repair.
Charger gets warm During use	Normal response to Charger use	No action required. This is normal for some Chargers and is no cause for concern. If your charger dose not get warm during use, it does not mean that it is not working properly.

Vehicle does not Stop when applying the brake.	Brakes are not adjusted properly	Refer to brake instructions to properly adjust Brakes.
Vehicle makes loud noises or grinding sounds	Chain is too dry	Apply a lubricant to the chain.

Please read the owner's manual before riding.

Never operate this vehicle if you are under age 13.

Never use the vehicle on public road. OFF ROAD use only.

Never ride with a passenger

Always use an approved helmet and protective gear

NEVER use with drugs or alcohol

Cold tire pressure.