



User Manual

**Maintenance+Warranty**

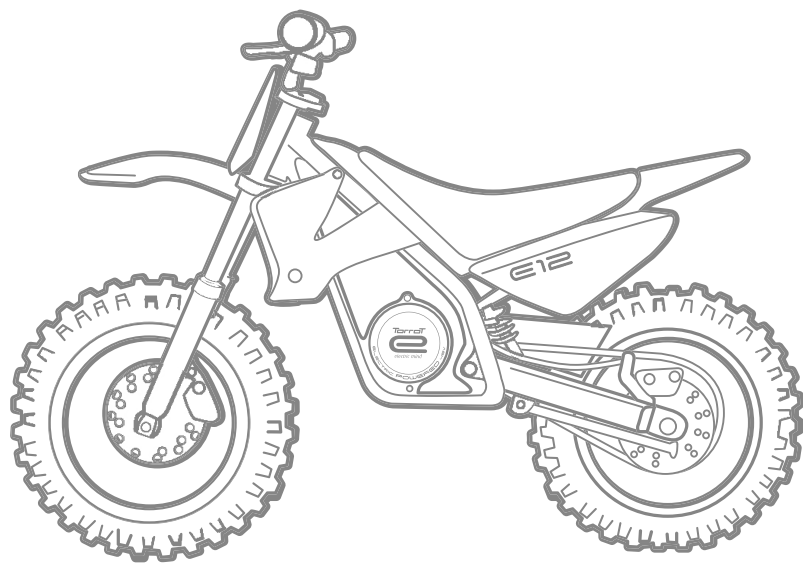
T10	E10	S10
<b>K</b>	<b>I</b>	<b>D</b>
T12	E12	S12
SICS8		





## Welcome to Torrot

Thank you for becoming the owner of one of our funny electric motorbikes KIDS10 / KIDS12 for young riders!



In this manual you will find information about how to use and how to do the maintenance of your KIDS. You will also find information about the Torrot Electric's two years warranty that your new motorcycle has.

KIDS  
T10 E10 S10  
T12 E12 S12



KIDS  
SCHOOL



USB  
MAPPING



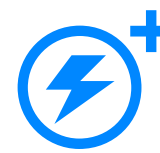
2 YEARS  
TORROT  
ELECTRIC  
WARRANTY



YOUNG  
ELECTRIC



POWER  
KIDS10 FROM  
350 TO 1050W  
KIDS12 FROM  
600 TO 1500W



MOTOR  
BRUSHLESS  
48V



BRAKE DISCS

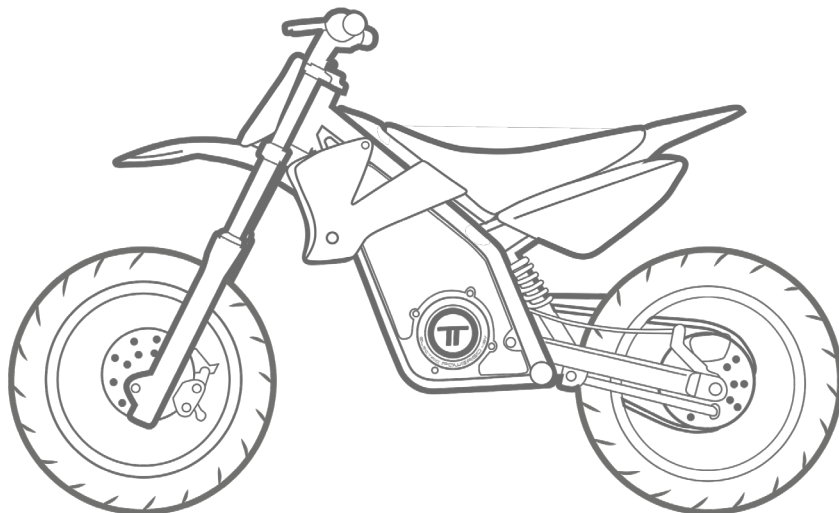


LITHIUM  
BATTERY



# User Manual

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## User Manual

# INTRODUCTION

The KIDS electric motorbike series for young riders allow a very powerful learning curve in both off-road and on-road riding. There is nothing similar to these miniaturized endurcross and supermotard!

The KIDS have been designed to give a realistic and authentic first impression in terms of handling, ergonomics and performance. Furthermore, very high passive safety standards have been added to allow a 100% positive experience.

Besides fast learning and a lot of fun, the KIDS bring to your son strong pedagogical values: equilibrium, concentration and responsibility. Also we can't forget that these e-motorcycles are clean, quiet, and very reliable. The future is here ;- )

To experience them with the maximum intensity and security, we recommend you to read this handbook and make your children understand that this is not a toy and make him/her comprehend the warnings and safety advises we give, this way you will know when and how to charge the battery, how to do the basic maintenance of the motorbike, check the brakes, etc. with simple and practical advices.

From Torrot Electric, we insistently advise you to use always a helmet and the proper protection equipment to have a satisfactory, funny and 100% secure experience.

If you still have any doubt after consulting this manual, go to your Torrot's point of sale or write to [info@torrot.com](mailto:info@torrot.com)

\*No contractual images. Due to our constant improvement policy, Torrot Electric Europa reserves its rights to introduce changes without notice in products or technical specifications. The images of the product showed here can differ noticeably from the product delivered.



# THE KIDS



### QUALITY

The KIDS SERIES 10/12 are children's electric motorbikes conceived exclusively for boys and girls with maximum weight of 30kg for KIDS10 and 40kg for KIDS12. They are designed with care and passion by our technicians to take the first steps and initiate in the motorcycling world. The KIDS are authentic miniaturized motorbikes, and with them, the youngest in the household will learn, progress and have fun, turning into 'little big' riders. The KIDS are not toys: please, parents or guardian must supervise the child when using the motorbike!

### T10/T12

With knobby tyres specific for trial practise, the T10/T12 offers to the young pilot a perfect architecture to take its first steps, with a very similar motorbike that the one that is used by professionals. As a result of the most genuine experience and developed by professional riders, lovers of this modality. This trial motorbike can turn into a E10/E12 off-road motorbike with the special kit. Take it into account!

### E10/E12

The enduro electric motorbike of Torrot Electric has no rivals. Devilishly beautiful, they will delight any child (and so do their parents), because of the power offered thanks to their brushless motor and their lithium batteries, they will offer (depending on the kind of use and other facts as the ground or the rider's weight) fun and 'pro' learning for 40 or more minutes (at full speed). Their strong dynamics, their Italian EBS standard suspensions, their almost indestructible fairing, their programmable power maps or their off-road rims turn them into a unique motorbike.

### S10/S12

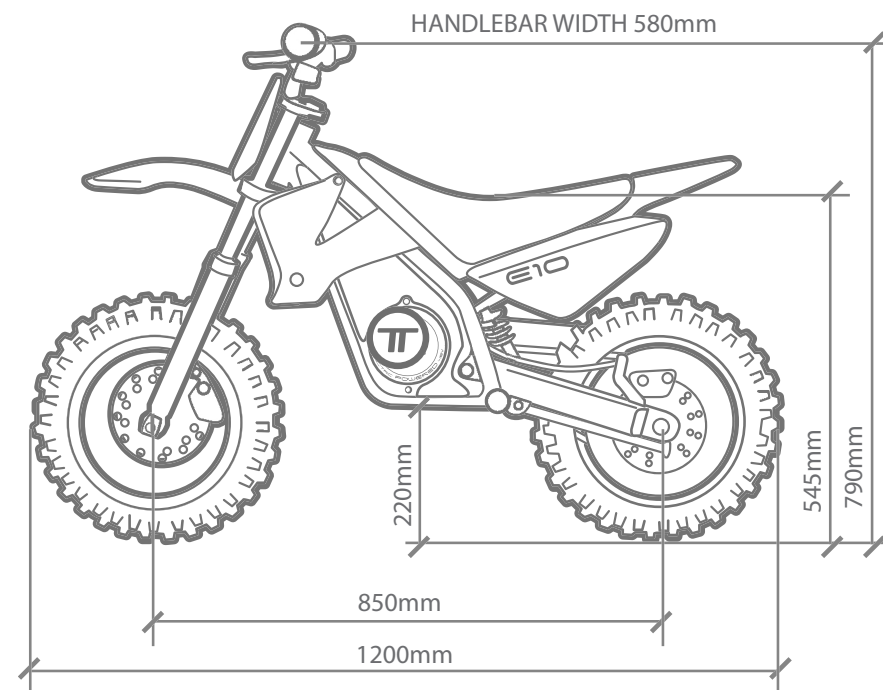
Our supermotard has been designed to make an easier on-road learning and progression in closed circuits (go-kart racing circuits, speed circuits...). They have soft tyres for high speeds, with a good grip for a maximum speed of 42 km/h offered by this model. They inherit the ergonomics of their E10/E12 siblings, for young riders and future child prodigies that desire to begin in the motorcycling world.

# SPECIFICATIONS

# E10

## SPECIFICATIONS E10

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	EBR FORK (WHEEL TRAVEL 75mm)
REAR SUSP.	SHOCK ABSORBER PRELOAD ADJUSTMENT (WHEEL TRAVEL 100mm)
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	350 W-1050 W / MAX. SPEED 40 KM/H
BATTERY	48V LiNiCoMn 6,6Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 10" x 1.60
TYRES	MITAS C12 2.50-12 TT 37J
WEIGHT	22kg
MAX PILOT WEIGHT	30kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) INCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARGE (LIGHTER SOCKET) HANDLEBAR PROTECTOR TRAINING WHEELS



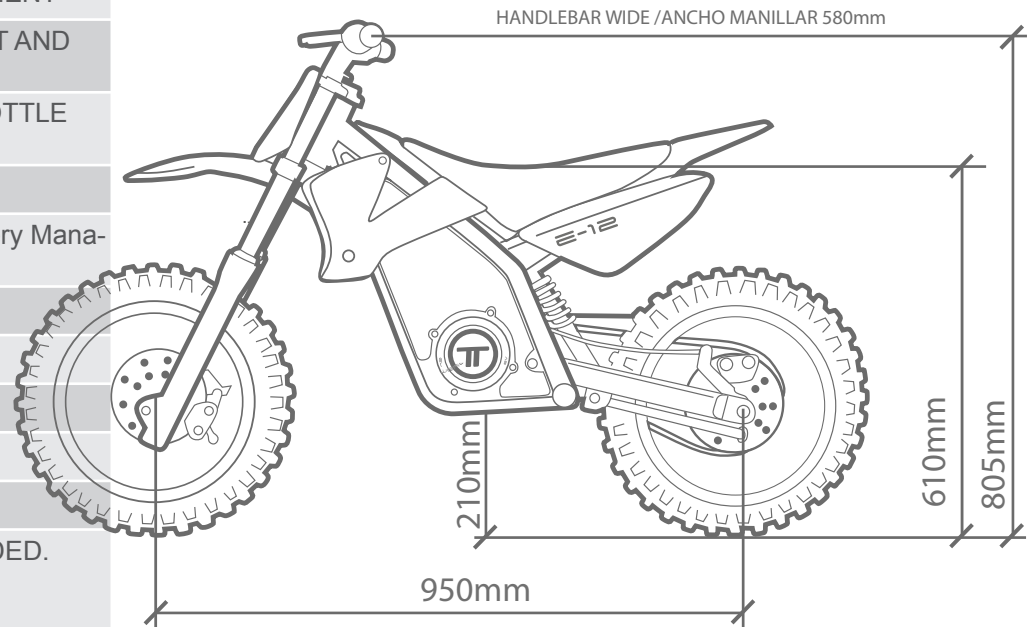
\*Designed and made in barcelona

## SPECIFICATIONS

E12

## SPECIFICATIONS E12

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	HYDRAULIC FORK (WHEEL TRAVEL 100mm)
REAR SUSP.	DNM GAS SHOCKABSORBER. PRELOAD ADJUSTMENT
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	600 W-1500 W / MAX. SPEED 52 KM/H
BATTERY	48V LiNiCoMn 8,8Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 12" x 1.60
TYRES	MITAS C19 2.50-12 TT 37M
WEIGHT	30kg
MAX PILOT WEIGHT	40kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) INCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARE (LIGHTER SOCKET) HANDLEBAR PROTECTOR



\*Designed and made in Barcelona

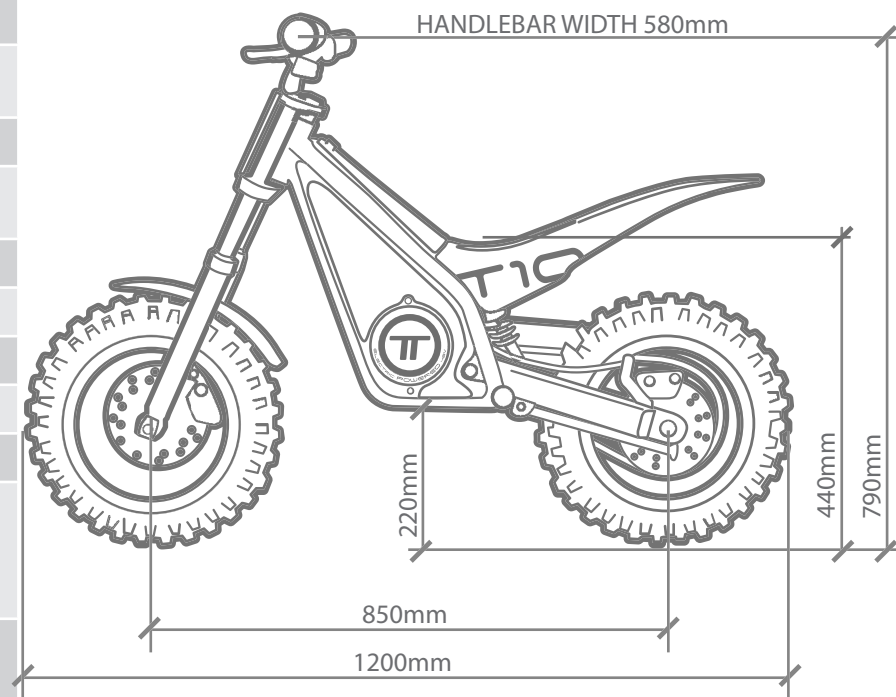


## SPECIFICATIONS

T10

## SPECIFICATIONS T10

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	EBR FORK (WHEEL TRAVEL 75mm)
REAR SUSP.	SHOCK ABSORBER PRELOAD ADJUSTMENT (WHEEL TRAVEL 100mm)
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	350 W-1050 W / MAX. SPEED 30 KM/H
BATTERY	48V LiNiCoMn 6,6Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 10" x 1.60
TYRES	MITAS C12 2.50-12 TT 37J
WEIGHT	22kg
MAX PILOT WEIGHT	30kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) INCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARGE (LIGHTER SOCKET) HANDLEBAR PROTECTOR TRAINING WHEELS



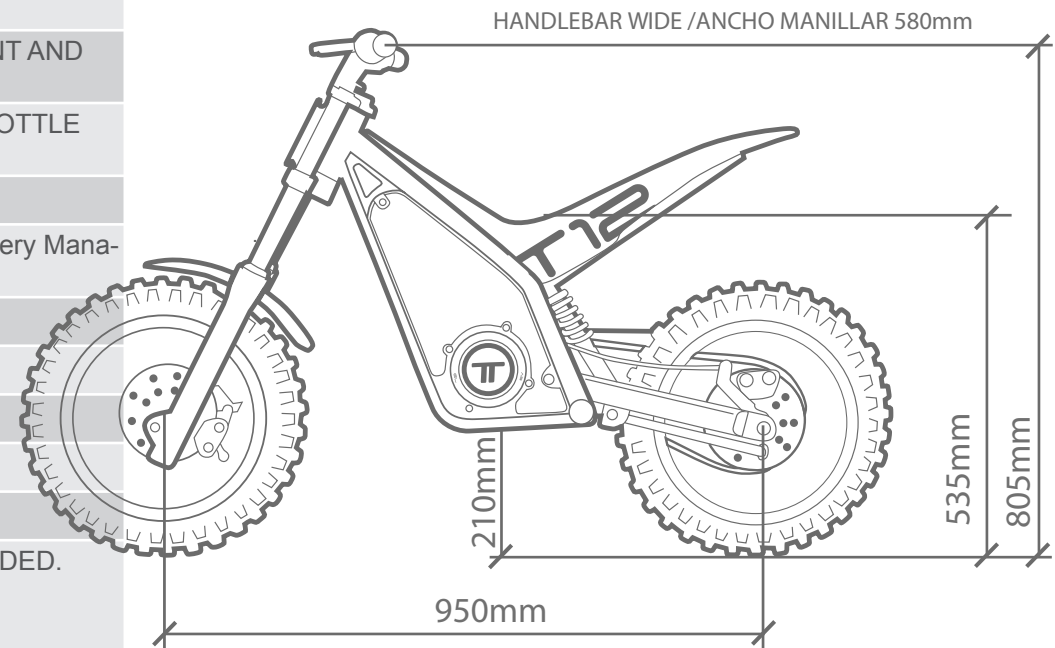
\*Designed and made in barcelona

## SPECIFICATIONS

T12

## SPECIFICATIONS T12

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	HYDRAULIC FORK (WHEEL TRAVEL 100mm)
REAR SUSP.	DNM GAS SHOCKABSORBER. PRELOAD ADJUSTMENT (WHEEL TRAVEL 125mm)
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	600 W-1500 W / MAX. SPEED 40 KM/H
BATTERY	48V LiNiCoMn 8,8Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 12" x 1.60
TYRES	TRIAL 2.50-12
WEIGHT	30kg
MAX PILOT WEIGHT	40kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) iINCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARE (LIGHTER SOCKET) HANDLEBAR PROTECTOR



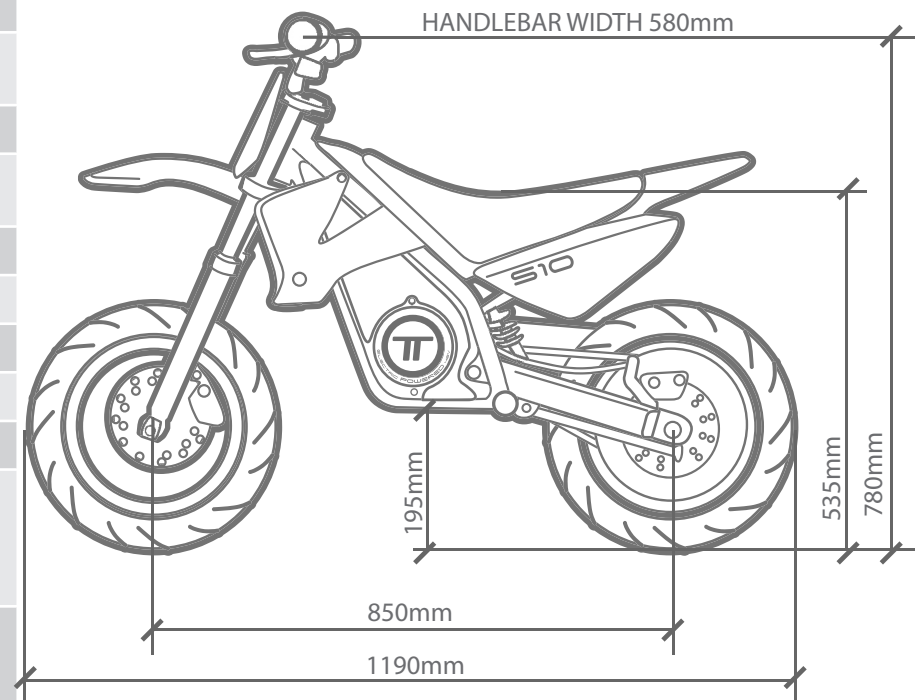
\*Designed and made in Barcelona

## SPECIFICATIONS

S10

## SPECIFICATIONS S10

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	EBR FORK (WHEEL TRAVEL 75mm)
REAR SUSP.	SHOCK ABSORBER PRELOAD ADJUSTMENT (WHEEL TRAVEL 100mm)
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	350 W-1050 W / MAX. SPEED 40 KM/H
BATTERY	48V LiNiCoMn 6,6Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 10" x 1.60
TYRES	MITAS MC34 90/90-10 50P TL
WEIGHT	22kg
MAX PILOT WEIGHT	30kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) iINCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARE (LIGHTER SOCKET) HANDLEBAR PROTECTOR TRAINING WHEELS



\*Designed and made in barcelona

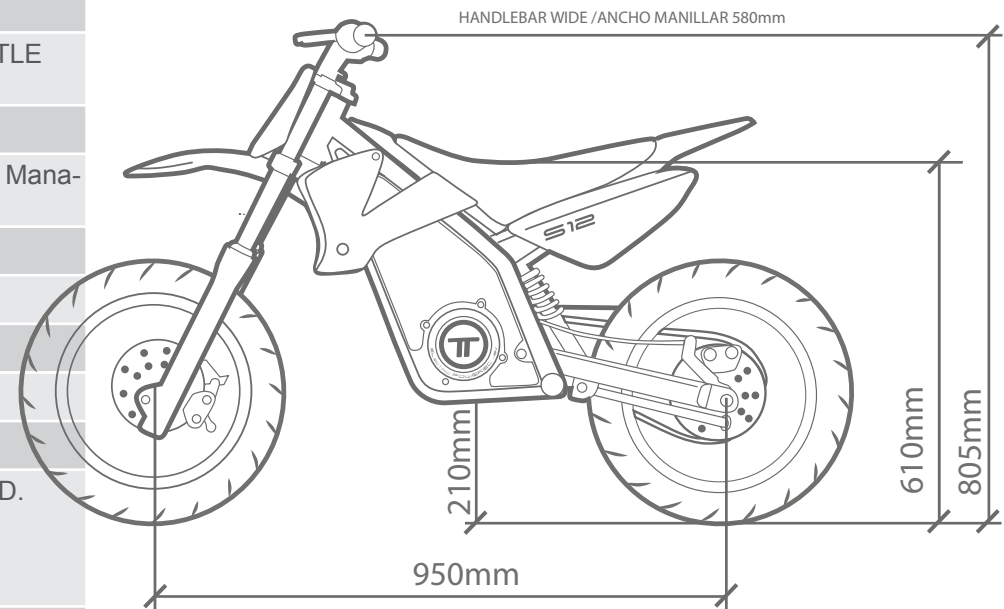


## SPECIFICATIONS

S12

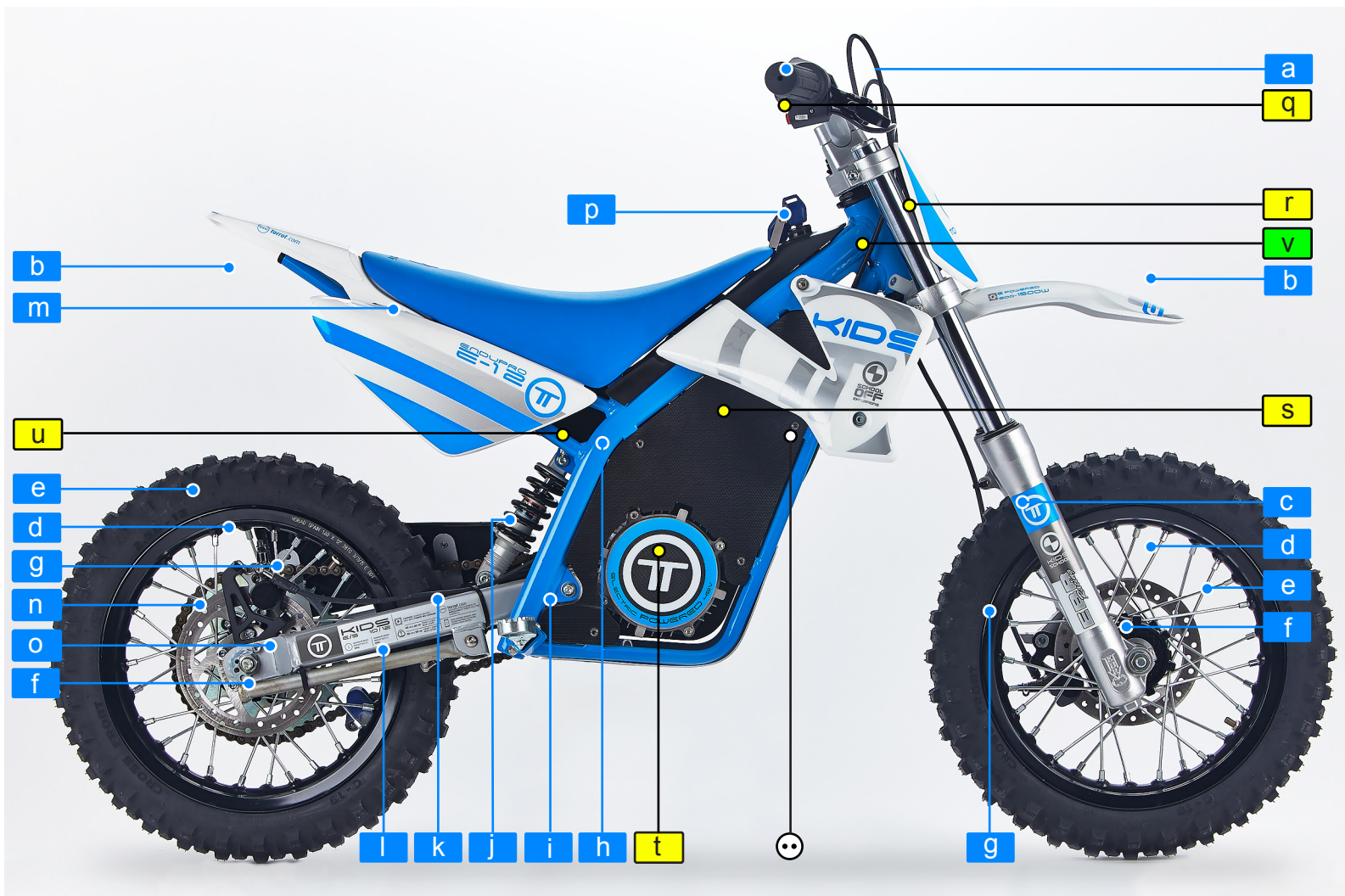
## SPECIFICATIONS S12

CHASSIS	TUBULAR CrMo STEEL FRAME
FRONT SUSP.	HYDRAULIC FORK (WHEEL TRAVEL 100mm)
REAR SUSP.	DNM GAS SHOCKABSORBER. PRELOAD ADJUSTMENT (WHEEL TRAVEL 125mm)
BRAKES	HYDRAULIC BRAKE SYSTEM 160mm DISCS FRONT AND REAR
MOTOR CONTROLLER	48V PROGRAMMABLE TOP SPEED, POWER, THROTTLE SENSITIVITY AND REGENERATION
POWER	600 W-1500 W / MAX. SPEED 52 KM/H
BATTERY	48V LiNiCoMn 8,8Ah WITH BMS INTEGRATED (Battery Management System) REMOVABLE
RIMS	ALUMINUM 12" x 1.60
TYRES	SUPERMOTARD 90/90 12
WEIGHT	30kg
MAX PILOT WEIGHT	40kg
CHARGER	54.6V 2A BATTERY CHARGER (4 HOURS)
OTHERS	POWER TRAIN MANAGEMENT SOFTWARE INCLUDED. (RS232-USB CABLE REQUIRED) INCLUDES POWER SWITCH 50-100% DESIGNED AND MANUFACTURED IN EUROPE
OPTIONAL	BLUETOOTH MODULE VIA APP (iOS/Android) REMOTE PARAMETER PROGRAMMING AND PARENTAL CONTROL TORROT INVERTER FOR CAR CHARGE (LIGHTER SOCKET) HANDLEBAR PROTECTOR



\*Designed and made in Barcelona

# COMPONENTS



- a** HANDLEBAR
- b** MUDGUARD
- c** FORK
- d** RIM
- e** TYRE
- f** BRAKE DISC
- g** BRAKE CALIPER
- h** CHASSIS
- i** MOOTREST
- j** SHOCK ABSORBER
- k** SWING ARM
- l** SIDE STAND
- m** SEAT
- n** CHAIN
- o** CHAIN TENSIONER
- p** IGNITION KEY
- q** ON/OFF SWITCH
- r** POWER MODE SWITCH
- s** CONTROLLER
- t** MOTOR
- u** BATTERY
- v** SERIAL NUMBER
- ⦿** CHARGING PLUG

## User Manual

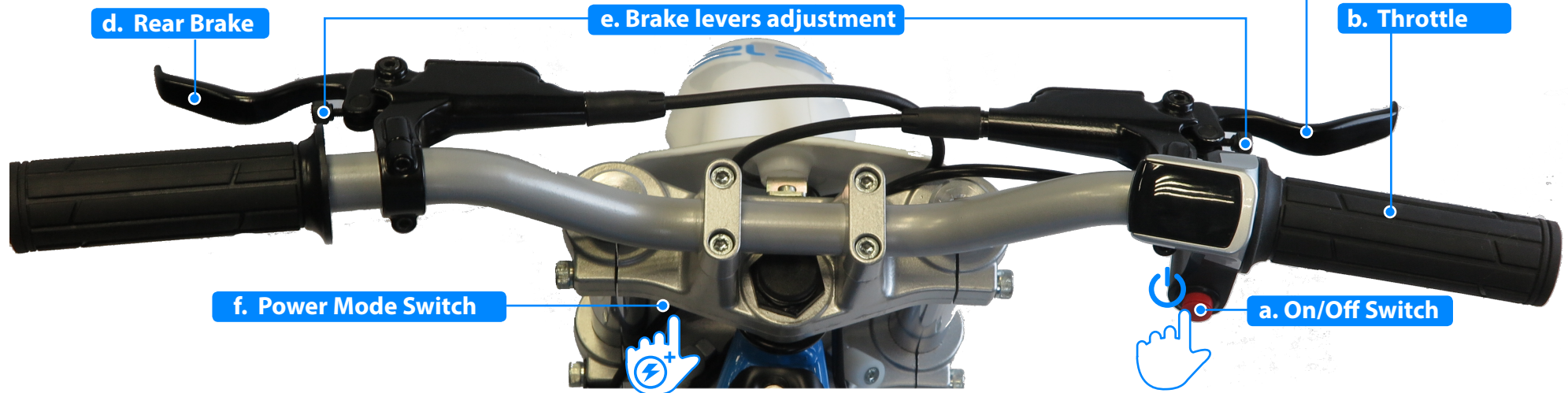
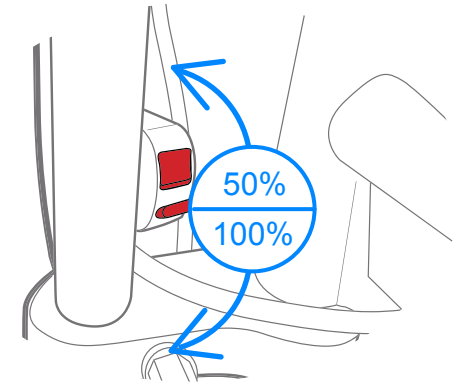
# CONTROLS

**a** To turn on the motorcycle turn the key in ON position and press the red “ON/OFF” button placed in the handlebar, next to the throttle grip. When pushing it inwards the KIDS is ready to ride. turn slightly the throttle grip to check if the motor is working. To switch it off, press again the same button.

Do not forget to fold the sidestand before riding the motorbike.

**f** The KIDS has a switch in the lower lefthand art of the number plate. You can choose between the full power option (100% of power) or limit it to 50% of power.

\* It is possible to map the control unit with a RS232 connector / Bluetooth. To do it, check the pages 26, 27 and 28, 29 of this manual.



# BEFORE USING IT

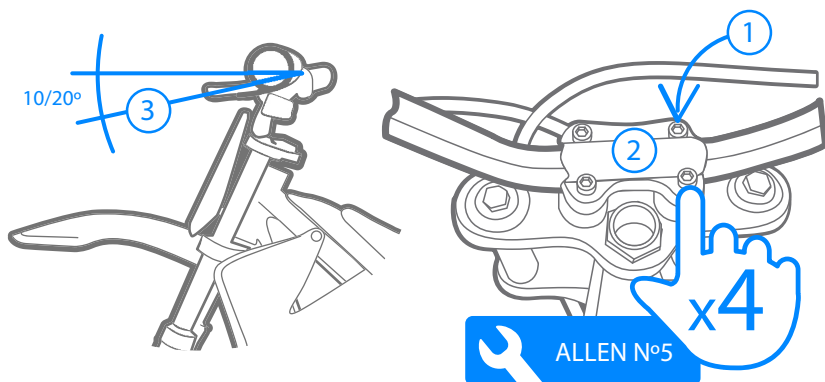
If you receive your KIDS in a box, verify that it contains the following elements:

- ✓ KIDS Motorbike with the handlebar disassembled.
- ✓ 4 allen M6 screws (preassembled in the handlebar clamp).
- ✓ A box with charger and the power cord.
- ✓ An information leaflet.



### HANDLEBAR ASSEMBLY

- ① Unscrew the 4 preassembled M6 screws with a N° 5 allen key. Extract the plastic pipe and put the handlebar in its place. Check that the brake lines have a natural position, in front of the KIDS.
- ② Put the handlebar clamp on top of the handlebar and screw it slightly. Adjust the handlebar position so it remains centered.
- ③ Rotate the handlebar so the brake levers are in a proper angle. To finish, screw the four screws in a crossed sequence.



When we assemble each motorcycle in our factory Mataró, we test the proper operation one by one. However, we want to ask you to check again some components and fit them to your necessities and tastes:



### TYRE PRESSURE

A standard pressure of 1 bar (kg/cm<sup>2</sup>) is recommended for our models. The correct pressure will increase the battery range and its drivability. Check the attached table with recommendations for each model.

RECOMMENDED PRESSURES TABLE* BAR (Kg/cm <sup>2</sup> )		
MODEL	FRONT	REAR
T10 T12	0,9	0,6-0,8
E10 E12	1,0	1,2
S10 S12	1,2	1,4

\*RECOMMENDED PRESSURE FOR DRY, WET AND WITH MUD ENVIROMENTS. AND FOR A 20KG RIDER. TO ADJUST THE CORRECT PRESSURE IN THE TRIAL MOTORBIKE, YOU WILL NEED A SPECIAL MANOMETER.



**YOU MUST DO A FULL BATTERY CHARGE BEFORE THE FIRST USE**



# BEFORE USING IT



## ESPECIFICACIONES S12

CHASIS	TUBULAR DE ACERO CrMob
SUSP. DELANTERA	HORQUILLA HIDRÁULICA EBR (RECORRIDO RUEDA 100mm)
SUSP. TRASERA	AMORTIGUADOR HIDRAULICO DNM. AJUSTE EN PRE-CARGA (RECORRIDO RUEDA 125mm)
FRENOS	SISTEMA FRENOS HIDRAULICO. DISCOS (160mm) DEL./TRAS.
CONTROLADORA MOTOR	48V PROGRAMABLE VELOCIDAD MAX, POTENCIA, TACTO ACCELERADOR Y REGENERACIÓN
POTENCIA	600W-1500W / VELOCIDAD MÁX.52 KM/H
BATERÍA	48V LiNiCoMn 6,6Ah CON BMS (Battery Management System) INTEGRADO, EXTRAIBLE.
LLANTAS	ALUMINIO 1.85x12"
NEUMÁTICOS	SUPERMOTAR 90/90-12
PESO	30kg
PESO MAX. PILOTO	40kg
CARGADOR	54.6V 2A CARGADOR DE BATERÍA (4 HORAS)
VARIOS	SOFTWARE CONFIGURACIÓN INCLUIDO (REQUIERE CABLE RS232-USB) iNCLUYE SWITCH DE POTENCIA 50-100% DISEÑADA Y FABRICADA EN EUROPA
OPCIONAL	MODULO BLUETOOTH VIA APP (iOS/Android) PROGRAMACIÓN REMOTA Y CONTROL PARENTAL INVERSOR TORROT PARA CARGA EN COCHE (TOMA ENCENDEDOR) PROTECTOR GOMA MANILLAR



KIDS 12. 02RT-00030-ZZ (450W/11h) O 02RT-00040-ZZ (650W/11h)

\*Diseñada y ensamblada en Barcelona

# MAINTENANCE

### CHAIN TENSION EXAM

The lifespan of the chain depends on its correct lubrication and adjustment. A bad maintenance can cause a premature wear or damages to the chain and to the rear/front sprockets.

Before doing the maintenance to the chain, turn OFF the ON/OFF switch. For a better measurement, the pilot should be sitting in the saddle in the driving position because when there is no weight applied, the chain is more stretched.

Check the movement up and down in the centre of the lower part of the chain as is showed in the image ①. The tension must allow a vertical movement from 10 to 20mm.

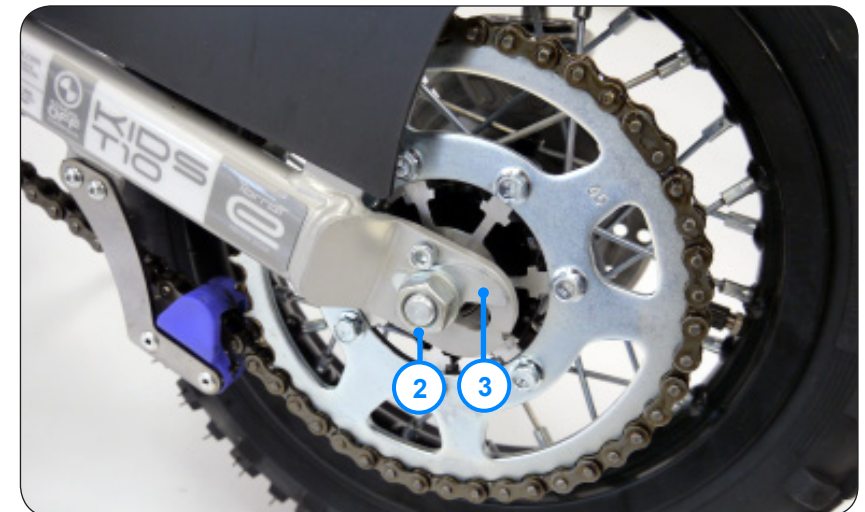
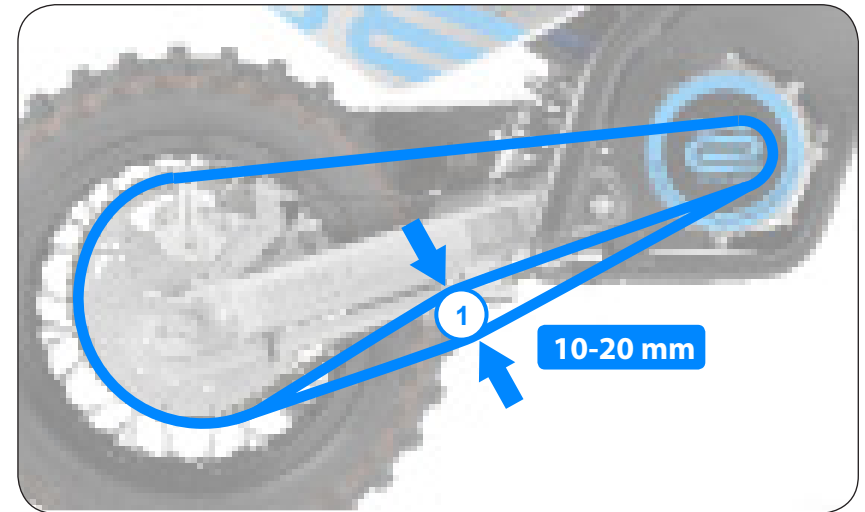
Turn the wheel slightly and check the chain movement in different points, measuring always the gap in the same place.

Examine the teeth in the front and rear sprocket to see if they are wore away or damaged.

### ADJUST YOUR MOTORCYCLE CHAIN TENSION

If the vertical movement of the chain is not inside the recommended values, adjust the tension as indicated below:

- With a 19 mm wrench unbolt the rear axle ②.
- Turn the eccentrics ③ of both sides by pushing the wheel backwards to stretch the chain and push it frontwards to do the opposite.
- Screw the axle again ensuring that the chain and the front and rear sprockets are aligned. Check the movement of the chain again.



# User Manual

## BATTERY



The KIDS10 is provided with a LiNiCoMn 48V and 6.6Ah (316.8Wh of capacity) battery which supplies the motor. The KIDS12 has a battery of 48V and 8,8Ah (422,4Wh).

This kind of battery does not have the 'memory effect' and can be recharged even if they are not fully discharged.

- The complete capacity of the battery will be achieved after several charge and discharge cycles. Then you will get more battery range after the first uses.

- The KIDS is delivered with the battery at half capacity.



**IT IS VERY IMPORTANT TO CHARGE THE BATTERY COMPLETELY BEFORE THE FIRST TIME USE.**

- Always try to charge the battery completely.



**DO NOT LEAVE THE BATTERY DORMANT FOR LONG PERIODS OF TIME, THEY CAN BE DAMAGED**

- For the correct maintenance of the KIDS, it is recommended to do a full discharge and charge cycle at least once per month even if the motorbike is not used.

- If you prevent that you KIDS is will not be used in 1 month or more and is not possible to charge the battery at least once in a month, you should leave the charger connected to the battery, it will provide maintenance to the battery and won't consume extra energy.

- The charger is a component that can heat up noticeably during its use. Therefore they must be always used in places with good air circulation.-

Never cover it up and let it get wet.

- Use only the charger provided by Torrot Electric to charge the battery.

- The charge of the battery must be done in temperature conditions between 5 and 40°C. Below 5°C, the charge cycle will be increased and above 40°C, the battery can be damaged..



**ENSURE THAT YOU DO NOT LEAVE THE MOTORBIKE TURNED ON, THIS WILL DISCHARGE THE BATTERY**

# BATTERY PRECAUTIONS

## 1. GENERAL

- a. The battery is composed of lithium-ion cells with high density energy. In any case it should be manipulated. The disobedience to this indication involves electric and chemical risk and can result in serious damage or injury.
- b. Inspection, reparation or replacement of the battery or any of its elements by non-authorized manufacturers is prohibited.
- c. Manipulation or reparation of any electric element external from the battery by non-authorized manufacturers is prohibited.

## 2. BATTERY DAMAGE

All abusive treatment to the vehicle can affect the battery's lifespan. To keep it in good condition and extend its lifespan, follow these instructions:

- a. Avoid using the vehicle in conditions of extreme heat or cold beyond the limits set by the manufacturer.
- b. Avoid charging the battery in extreme conditions of heat or cold beyond the limits set by the manufacturer.
- c. During dormant periods, the vehicle must be stored in a dry place, away from sources of cold and / or heat and direct sunlight.
- d. Avoid unnecessary hits and vibrations to the vehicle. Periodically check the insulation placed between the chassis and the battery of the vehicle is in good condition. Otherwise, replace it.
- e. The self-discharge is a natural characteristic of the battery and must be controlled. For long periods of inactivity, you should periodically connect the charger and perform full battery charges.

f. Avoid partial charges from the battery. For proper daily use, the battery should always be fully charged.

g. As a general rule, it is advisable to keep the battery connected to the charger for a certain time after the completion of a charge.

h. Never use any charger that has not been directly supplied by the manufacturer or an authorized dealer.

i. Avoid forcing the vehicle abnormally during use.

j. Your battery has internal protection against electrical hazards that can act automatically. In case of a faulty operation or no operation of the battery, contact the manufacturer for repair.

k. Keep your battery clean and in good condition, carefully remove dust, dirt and other external elements that can be introduced into the battery compartment during use.

l. If you detect deterioration in the electrical system, disconnect the vehicle and contact an authorized Torrot dealer for repair service.

m. Avoid direct contact of the electrical system of your vehicle with water, mud or similar environments. If water is accidentally introduced into any electrical element of the vehicle, unplug it and wait for it to dry naturally before using it again.



# RECHARGE

To recharge the battery, follow these steps:

- First ensure that your motorbike is turned off with the ON/OFF switch outwards.
- Then plug the 3 pin connector to the KIDS. The charge connexion for the battery is located in the front side of the chassis. It has a protection cover. Turn it to allow the access to the plug.
- Afterwards, plug the charger to the socket (220-230V). After that, the led on the charger will turn red to indicate that the battery is charging.
- The led will turn green when the battery will have finished the charge cycle. It will take from 3 to 4 hours to do a complete recharge.
- After the charge cycle, disconnect firstly the plug from the outlet and, only after that, the plug from the charger to the battery. In this moment your KIDS will be ready to use it.



REMEMBER TO **COVER ALWAYS THE CHARGE PLUG** TO AVOID THE DIRT ENTRANCE



TO EXTEND THE LIFESPAN OF YOUR BATTERY, **AVOID MID-CHARGES**. WAIT UNTIL THE LED TURN GREEN!

Recharge plug



LED  The battery is charging.

LED  The battery is fully charged.

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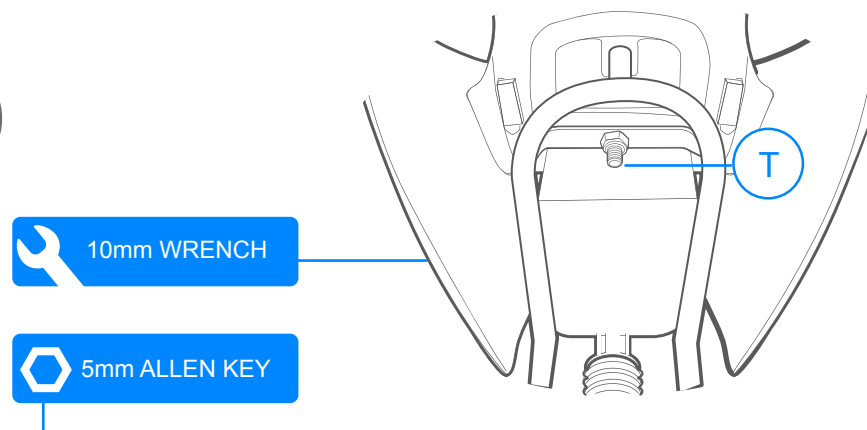
# ACCESS TO BATTERY KIDS10

Now, we will explain you how to remove part of the fairing to have access to the battery in case you want to disconnect it or change it for a new one.

First locate the screw **(T)** that is used to attach the saddle to the subchassis (only in the E10/S10 models). This is situated under the rear mudguard of the motorbike. Unscrew it and remove the lock nut with a 10mm wrench. Then remove the saddle.

The next step is unscrew with a number 5 allen key the screw **(1)**

If you have the KIDS T10 you will only have to also unscrew screw **(2)** indicated in the next picture.



## User Manual

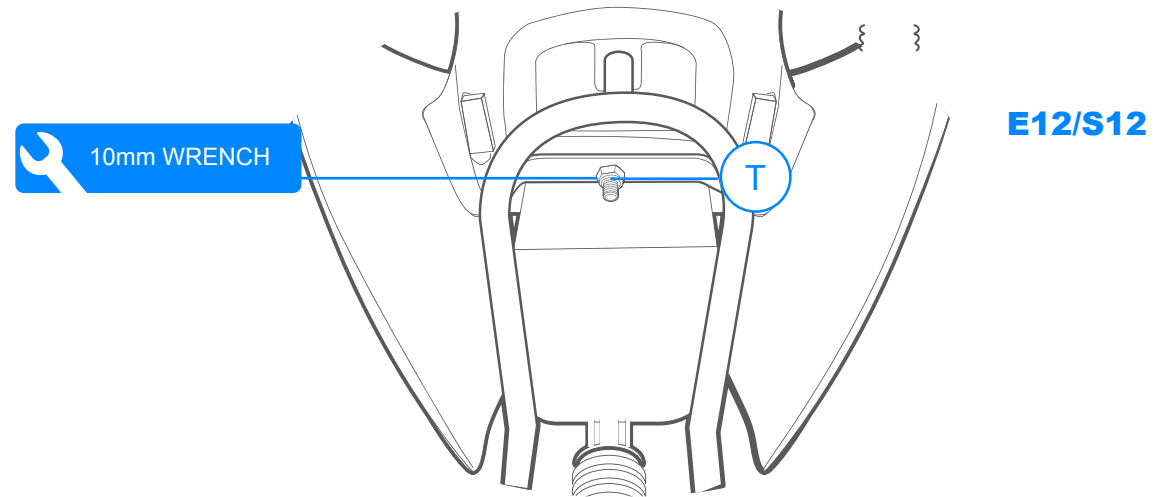
# ACCESS TO BATTERY KIDS12

Now, we will explain you how to remove part of the fairing to have access to the battery in case you want to disconnect it or change it for a new one.

First locate the screw **T** that is used to attach the saddle to the subchassis (only in the E10/S10 models). This is situated under the rear mudguard of the motorbike. Unscrew it and remove the lock nut with a 10mm wrench. Then remove the saddle.

Now you have access to the battery so read the next pages in order to understand how to remove the battery.

If you have the KIDS T10 you will only have to also unscrew screw **2** indicated in the next picture to have access to the battery.





# BATTERY REMOVAL KIDS10



Having that part of firing removed, now is the moment to disconnect the cords:

-Unplug the connector that goes to the recharge point. ①

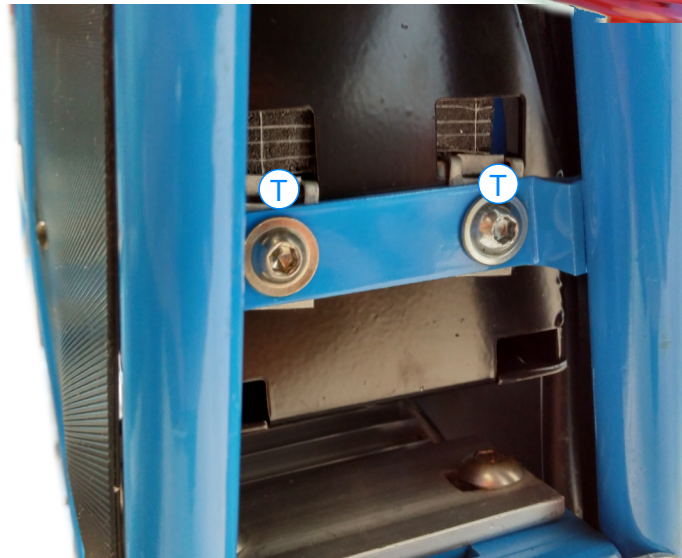
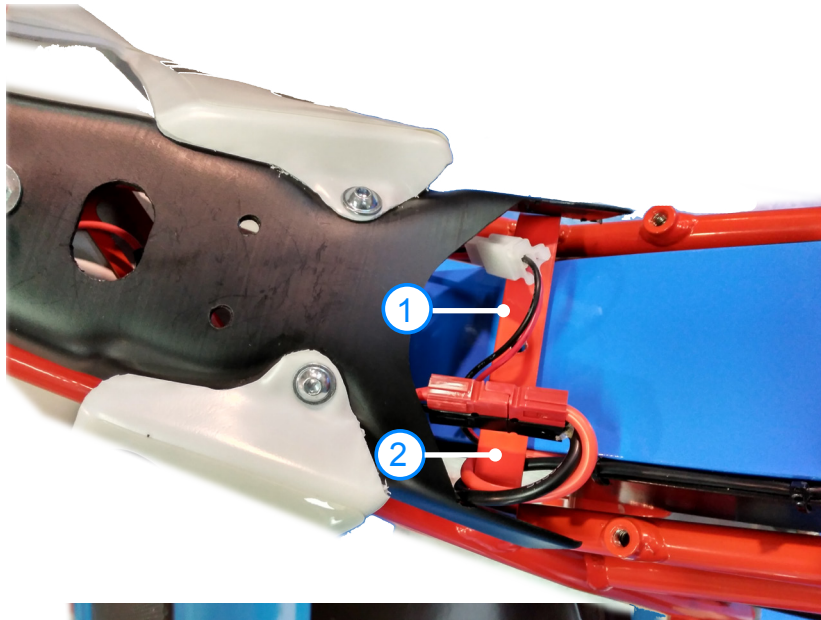
-Finally disconnect the red and black wires. ②

In this moment you can remove the battery. To mount the battery again, follow the instructions in reverse order.



**THE VOLTAGE IN THE KIDS IS VERY HIGH. BE CAREFUL WHEN YOU WORK WITH THE CORDS AND THE BATTERY TERMINALS. A SHORT-CIRCUIT IN THE BATTERY TERMINALS WILL DAMAGE THE BATTERY AND IT CAN CAUSE A FIRE AND INJURIES TO THE PERSON.**

# BATTERY REMOVAL KIDS12

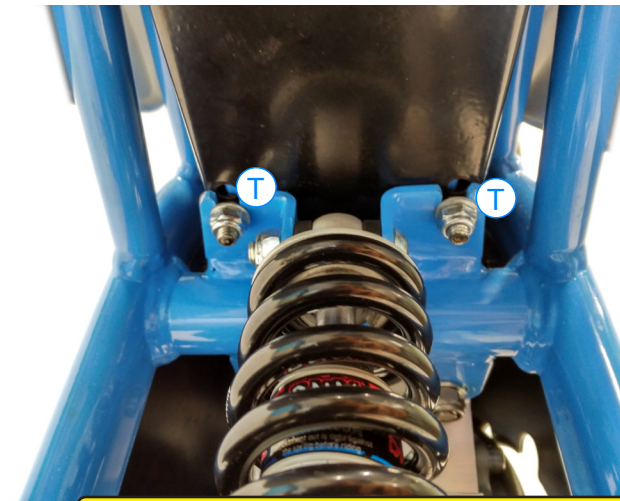


Having that part of firing removed, now is the moment to disconnect the cords:

-Unplug the connector that goes to the recharge point. ①

-Finally disconnect the red and black wires. ②

To remove the battery, unscrew the four screws (T) from the following picture and then proceed to remove the battery with its black box.



**THE VOLTAGE IN THE KIDS IS VERY HIGH. BE CAREFUL WHEN YOU WORK WITH THE CORDS AND THE BATTERY TERMINALS. A SHORT-CIRCUIT IN THE BATTERY TERMINALS WILL DAMAGE THE BATTERY AND IT CAN CAUSE A FIRE AND INJURIES TO THE PERSON.**



# ECU MAPPING

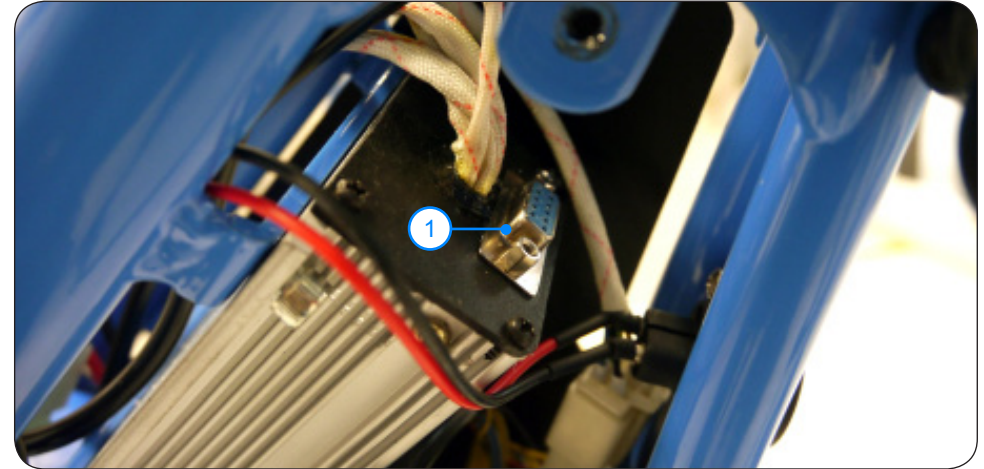
Apart from the power maps that can be selected with the switch situated behind the number plate, the KIDS allows to programme other power maps that fit to your tastes and necessities.

To programme the KIDS' controller you will need a RS232 connector (or an USB-to-RS232 converter and the appropriate drivers, in case your PC does not have a RS232 port) and the Torrot ePower software installed in a PC. This software can be downloaded in the webpage [www.torrot.com](http://www.torrot.com). You can also configure the KIDS' controller using the bluetooth device available in Google Play or AppStore

Before connecting the computer or your mobile phone to the controller ensure that your motorbike is switched on but the motor has been turned off. That is, the throttle must not be activated in any moment.

To access to the controller and to the RS232 connector <sup>1</sup> you will have to remove the plastic of only one side of the chassis. The controller is situated just behind the head tube.

Once you have the cord connected to the computer and to the controller, and you have turned on the computer and the motorbike or the bluetooth linked, open the software



THE EASIEST THING IS TO GO TO YOUR CLOSEST TORROT ELECTRIC DEALER AND LET THEM CONFIGURE THE CONTROLLER AS YOU WANT.

## User Manual

# PC ECU MAPPING

The **Torrot ePower** allows you to control three parameters:

### POWER

In this tab you can regulate the max power supplied by the KIDS' motor. 100% corresponds to full power and 20% of the maximum power.

### THROTTLE RESPONSE

This parameter regulates the how the motor supplies the power when accelerating. The closer to the **minumum**, the more immediate will be the power supply. To novel riders, is recommended to begin with high values (25%) that gives a more gradual power supply.

### MAX SPEED

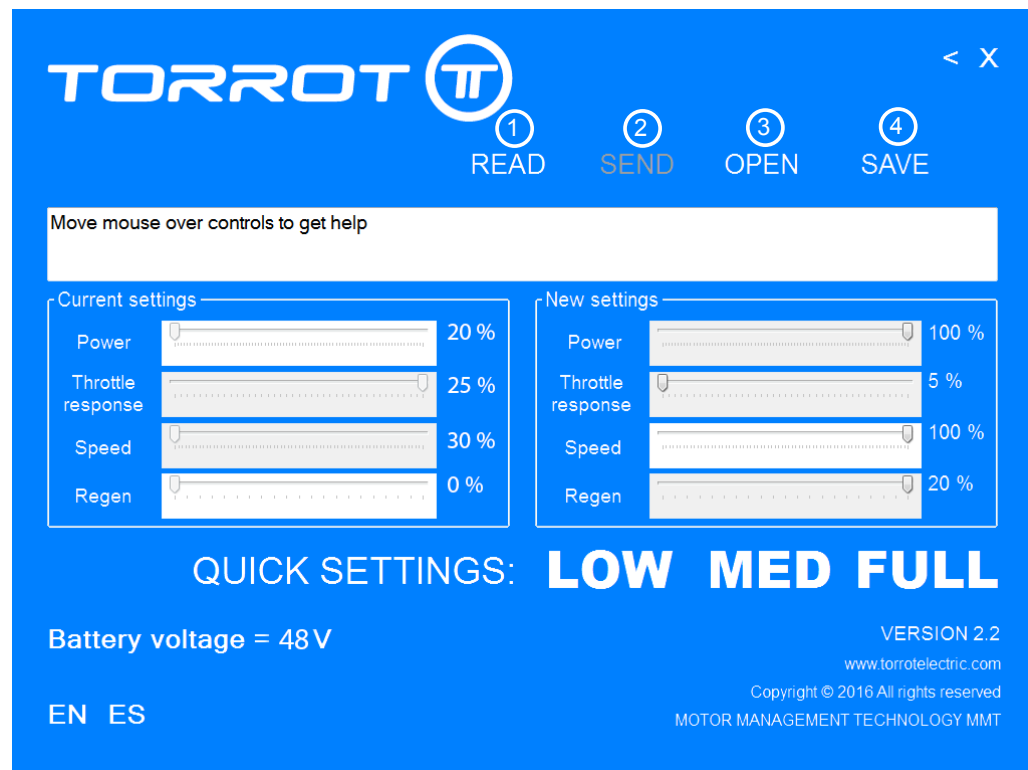
This parameter regulates the top speed of the motorybike

### REGEN. SYSTEM

This parameter regulates the electric brake of the motor, that hold back the motor when stop accelerating. For high values, the motor will slow down faster. With a value of 0%, the motorbike will roll free when the throttle is released.

When you have all the parameters as you want, push the '**SEND**' button. In this moment you will have your KIDS ready with the new power map installed.

- Lead the previous configuration ①
- Send the new configuration to the motorbike ②
- Load a saved configuration ③
- Allows to save different configurations in the program to load them afterward to the motorbike ④



\*Software compatible with Windows XP, Windows 7, Windows 8 and Windows 10

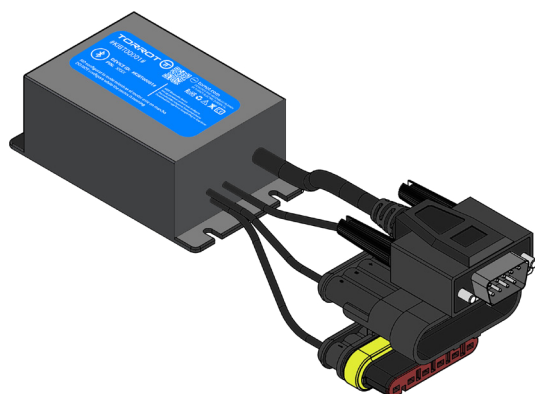


BEFORE CONNECTING CONTROLLER TO THE COMPUTER OR YOUR MOBILE DEVICE ENSURE THAT YOUR MOTORBIKE IS SWITCHED ON BUT THE MOTOR HAS BEEN TURNED OFF. THAT IS, THE THROTTLE MUST NOT BE ACTIVATED IN ANY MOMENT

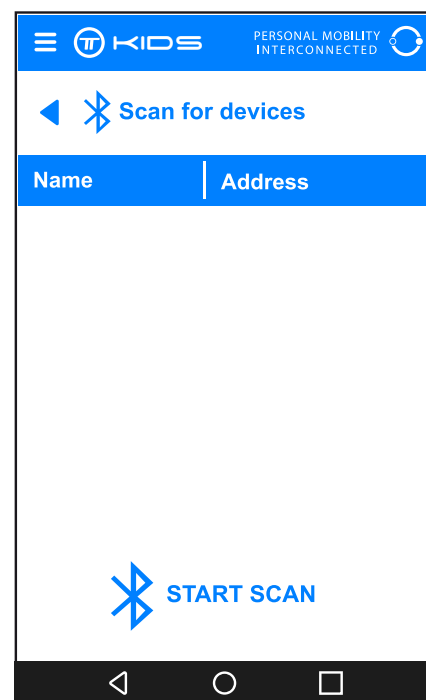
## BLUETOOTH DEVICE

App available in Play Store and App Store

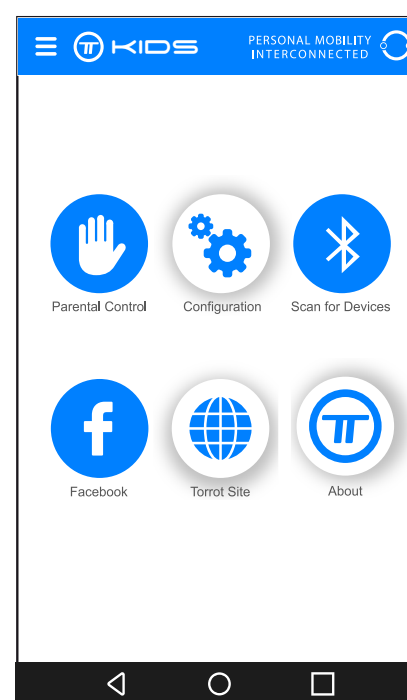
A bluetooth device (Ref. 03EL-00250-ZZ), you can add to the motorbike, has been developed in order to enable you to configure the same parameters of the motorbike as the PC ECU MAPPING. Apart from that, it also provides a Parental Control over the motorbike using the phone.



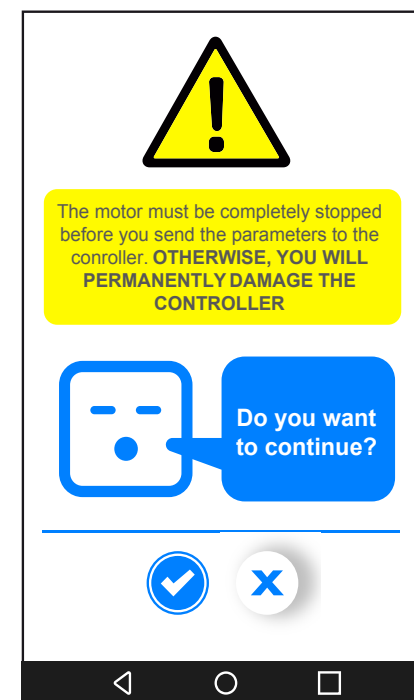
1 When you open the app, it goes directly to the scan for devices screen. Press "Scan for Devices" in order to find your bluetooth device and link your mobile phone to it. Once you find it in the list, enter the PIN from the sticker and done!



2 App main menu. From here you can select what you want to do. Access the Parental Control, Configure the motorbike, Scan again for devices, etc



3 After pressing "Configuration" this screen is loaded. Only configure the motorbike if the motor is stopped. Otherwise, you will permanently damage the controller and the warranty will be voided.



\*The app is compatible with devices from Android 4.4 and from iOS 8.0

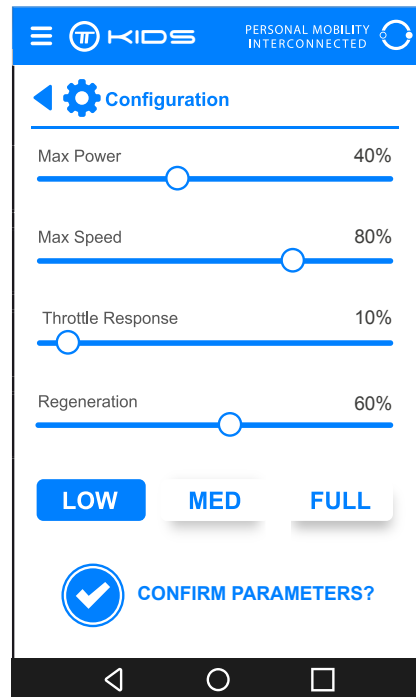


# BLUETOOTH DEVICE

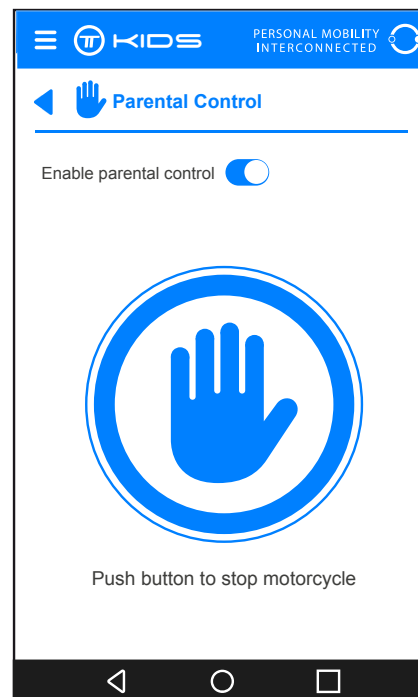
App available in Play Store and App Store

The parental control is used to control the activation using your mobile phone. Connecting or disconnecting the motorbike as explained in ⑤.

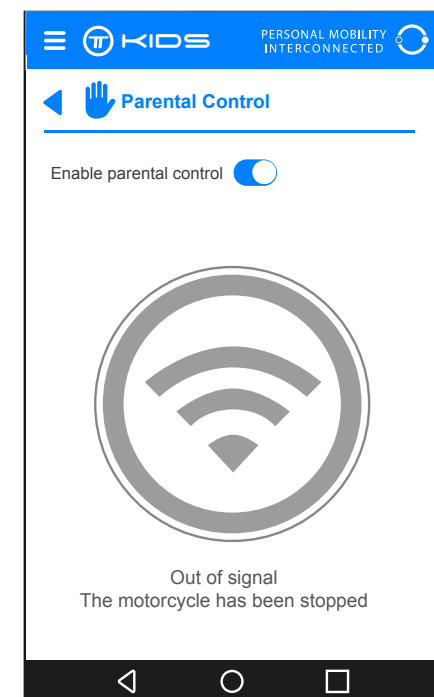
④ After accepting, this screen is loaded. Look in the previous page to know how to configure the parameters. When finished, press "Confirm Parameters".



⑤ Parental control activation screen. Parental control allows you to disconnect or connect the motor from the distance from the mobile phone.



⑥ The Parental Control also disconnects the motorbike when it goes out of range in order to prevent the use if you are not nearby.



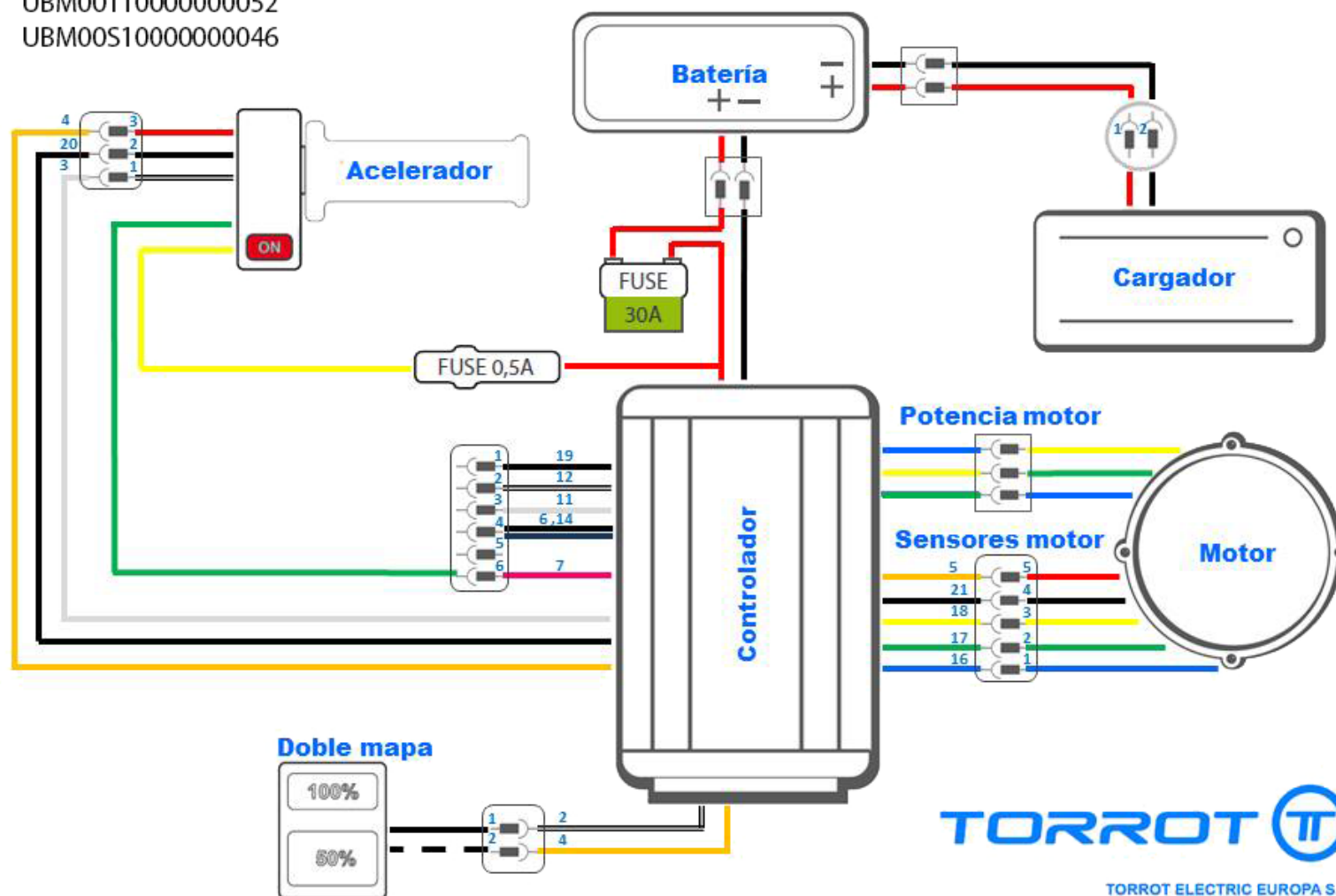
\*The app is compatible with devices from Android 4.4 and from iOS 8.0

# WIRING DIAGRAM I

\*If your chassis number is earlier than this, we recommend you to go to your Dealer and upgrade the system.

\*Chassis number up to:  
UBM00E10000000220  
UBM00T10000000052  
UBM00S10000000046

## KIDS 10 Serie A



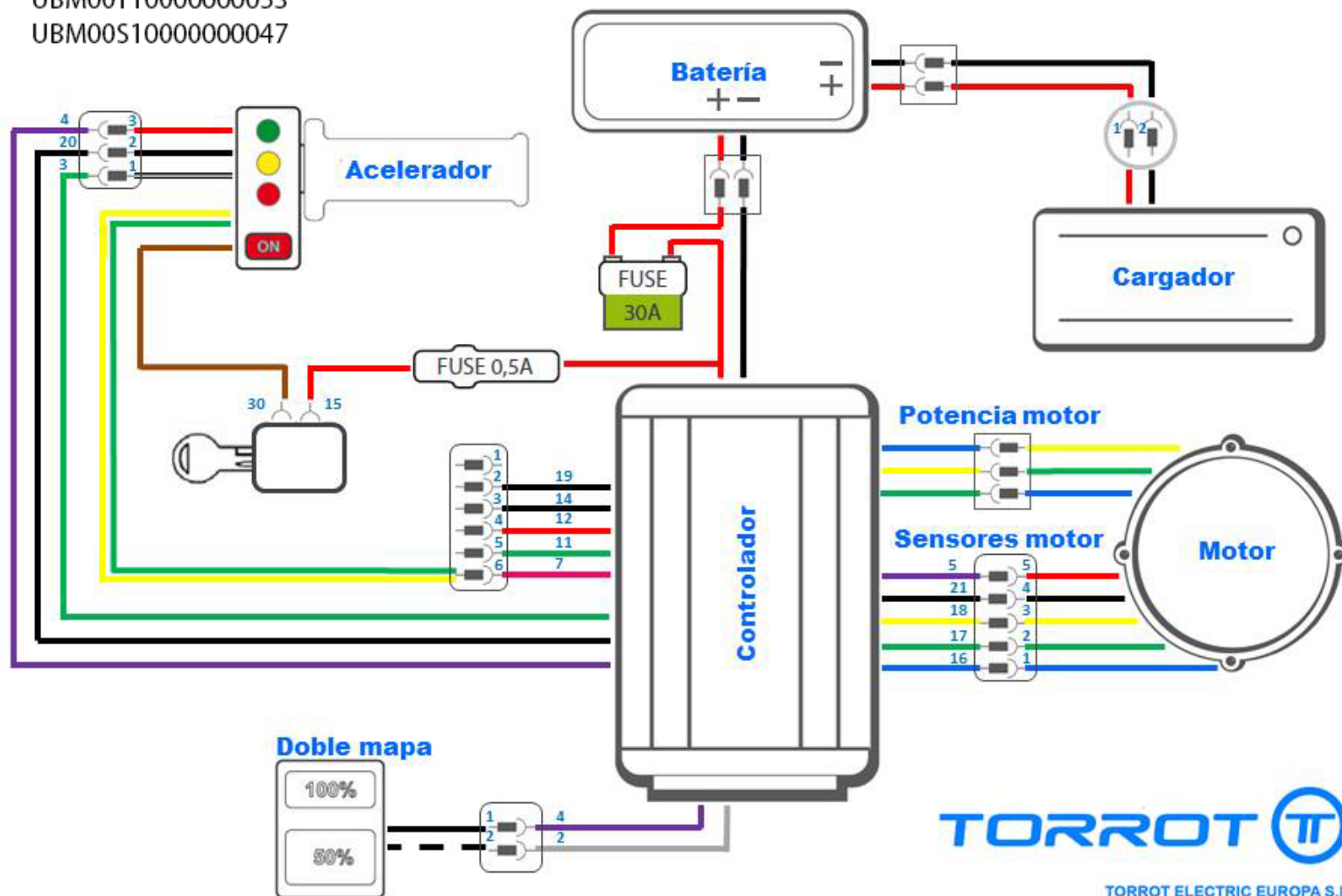
**TORROT** 

TORROT ELECTRIC EUROPA S.L.  
www.torrotelectric.com

# WIRING DIAGRAM II

\*From chassis number:  
UBM00E10000000221  
UBM00T10000000053  
UBM00S10000000047

**KIDS10 From Series B**  
**KIDS12 From Series A**



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# WARNINGS AND SAFETY ADVISES

Not suitable for children under 6 years

If this is your children's first motorbike we recommend your children to access a training course in order to start with this sport the best and safest way possible. Visit [www.torrotelectric.com](http://www.torrotelectric.com) for more info.

We recommend you to read this handbook and make your children understand that this is not a toy and make him/her read and comprehend the warnings and safety advises we give in this document.

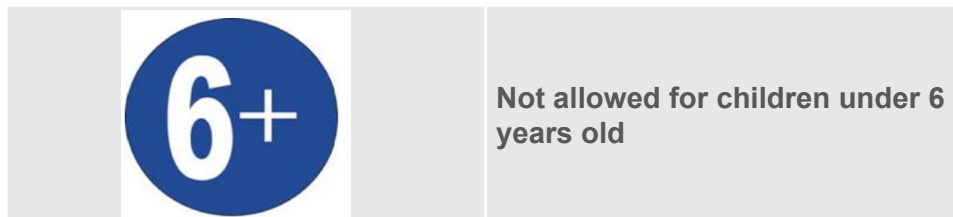
In order to prevent an unauthorised use of the motorbike by your child, an adult should keep the ignition key away from the children after every use or when not supervising them.

To prevent serious injuries, your children should wear protective measures such as helmet, appropriate boots and clothes, glasses, knee guards and elbow guards.

The motorbike has drawings and pictograms stuck inside in order to grant a correct use and alert the owner about these warnings.

### DRAWINGS

The locations of the pictograms are at chain protector



		<b>Supervise your children while they are using it</b>
		<b>Read the instructions handbook</b>
		<b>No pillion allowed</b>
		<b>Not allowed to use it in road</b>
		<b>Always wear helmet and appropriate protections</b>

## User Manual

# FAQ

### Why the battery range decreases when it is very cold?

Below 0°C, the battery performance gets worse. This does not represent any problem nor damages the battery. It only decreases momentarily the capacity of the battery, reducing at the same time the motorcycle range.

### Should I have a Third Party Liability Insurance?

No, the insurance is not obligatory.

### Can I ride in the street?

No, these motorbikes are not allowed to ride in the street legally. You can only ride in closed circuits.

### Is there any minimum age to use the KIDS?

It is recommended for ages from 3 years, but it also depends on the height of your child. Remember that it must always be used under the supervision of an adult.

### Can I leave the charger continuously plugged to the battery?

Yes. The battery pack has an integrated electronic circuit (BMS) which communicates with the charger. When it detects that the battery is fully charged, the BMS automatically disconnects the charger.

### Is the KIDS water-resistant?

Both the motor and the controller and its electrical connections are properly protected to a normal use under the rain. Nevertheless, the bicycle is not prepared for high pressure cleaners or immersion.

### Does it have regenerative braking?

No, it doesn't have regenerative braking.

### How can I programme the controller?

We explain you how to do it in pages 26, 27 and 28, 29 of this manual. If you still have doubts, the easiest thing you can do is turn to an official Torrot Electric dealer and let them configure the controller.

# TROUBLESHOOTING

PROBLEM	POSIBLE CAUSE	ERROR DETECTION/SOLUTION
When pressing ON button, the indicator doesn't turn on and the motorbike doesn't respond	Discharged battery	Check the voltage of the battery. Charge the battery
	Principal fuse deteriorated	Check the main fuse. Check if there is any short-circuit. Replace the main fuse when is safe to do so
	Start fuse deteriorated	Check the 0.5A fuse. Check if there is any short-circuit. Replace the main fuse when is safe to do so
	You haven't turned the ignition key	Check that the ignition key is in the ON position.
	The ignition switch doesn't work	Check if there is any voltage in the terminal number 15 of the battery before turning the key and if the terminals 15 and 30 are connected when the key is in ON position. Replace the ignition switch
	No start signal arrives to the E/S connector	Check the circuit and if the battery voltage arrives to the cable number 7 (pink) of the E/S connector. Replace the faulty parts of the circuit.
The indicator does respond and there is power in the Start line, but the motorbike doesn't respond	The controller doesn't power the throttle	Disconnect the throttle and check if there is power in the terminals. Replace the controller if necessary.
	The throttle is broken	Once check that there is supply voltage, check the analogic signal from the throttle. Replace the throttle if necessary.

# TROUBLESHOOTING

PROBLEM	POSIBLE CAUSE	ERROR DETECTION/SOLUTION
When the motor is active, it emits an unusual noise or too much vibration	Hall sensors wrongly connected	Check the hall sensors connections. Check the continuity of the connectors. Replace the connector if necessary
	Some phase of the motor disconnected or mistake with the connections	Check the motor's phase connectors
	Controller not powering the sensor correctly	Disconnect the controller and verify if there is power in the hall sensors. Reconnect them and check again. Replace the controller and/or the motor.
	One or more sensor don't generate position signals	With the motorbike in the start position, make the motor spin manually. Check if the hall sensors change when moving the motor. Replace the motor if necessary.
	One or more phases had deteriorated	Check if the resistance of the windings is correct.
	Excessive resistance applied to the motor	Check manually whether the wheel can move easily. Solve possible problems with the braking system or the chassis.

# TROUBLESHOOTING

PROBLEM	POSIBLE CAUSE	ERROR DETECTION/SOLUTION
The power switch doesn't work	Connection error of the power switch	Check the connections of the power switch. Replace the faulty parts
	Faulty power switch	Check the continuity of the switch. Replace it if necessary
	Programming error	Program a random set of parameters to the controller. Reset the controller and check if it works
	The controller doesn't supply voltage to the power switch	Disconnect the switch. Check if there enough voltage in the power supply cable of the switch
When you connect the charger, the light stays green	Battery fully charged	Check the voltage of the battery. If it is at full charge, it won't charge more.
	Connection error	Check if there is voltage in the circular battery connector and in the charge connector of the battery. Replace the battery if necessary
Impossible to configure the controller	Wrong conneciton cord	Compruebe que el cable de conexión está en buen estado y correctamente conectado e instalado en su PC.



# WARRANTY TERMS & CONDITIONS

Torrot Electric Europa S.L. guarantees that only the original components of each Torrot Electric vehicles will not have defects in their materials or during their manufacturing within the following time periods:

### **Two (2) years warranty for:**

Chassis/frame and swingarm in the electric bicycle, in the KIDS motorcycles and in the e-scooter MUVI. Surface finish and any original Torrot Electric component/piece on any Torrot Electric vehicle (KIDS, CITYSURFER and MUVI). Two year warranty or 40.000km within that period, for MUVI's batteries, subjected to the conditions of use and maintenance provided in this manual are respected.

Two year warranty for CITYSURFER batteries, subjected to the conditions of use and maintenance provided in this manual are respected.

Two year warranty for KIDS batteries, subjected to the conditions of use and maintenance provided in this manual are respected.

This warranty is only applied to new Torrot Electric bicycles and electric vehicles bought to a Torrot Electric Europa S.L. authorized dealer or just directly online to the manufacturer and assembled by the dealer or the manufacturer at the time of the purchase. This warranty does not cover not allowed components or parts mounted by not authorized dealers of Torrot Electric Europa S.L.

### **REPARATIONS**

Unless the opposite is established, the only reparation covered by the warranty previously presented, is the replacement of the defective parts by others with similar or higher value in the original model, at the discretion of Torrot Electric Europa S.L. This warranty begins on the purchased date. It only covers the original owner and is not transferable, with the exception of the electric scooter MUVI (see warranty transfer section in the appendix).

In no case will Torrot Electric Europa S.L. be considered responsible for direct hurts, unexpected events, including without limitation, hurts caused by personal injuries, material damages or economic losses, either based on a contract, warranty, malpractice or any other situation.

### **EXCLUSIONS**

The previous warranty, or any other warranty given by Torrot Electric Europa S.L., do not cover:

- The normal wear and breaking in components as tires, chains, front and rear sprockets, brakes and wires in situations in which the assembly was fulfilled correctly or materials without defects.

- The vehicles whose maintenance or reparations were made by not authorized people by the manufacturer or unconnected to Torrot Electric Europa S.L.

- Changes related to the original conditions that had the vehicle when it was delivered.

- The use of the Torrot Electric vehicles in competition, unusual and/or commercial activities different from the ones that our vehicles were designed for.

- Damages caused by not following the instructions explained in the User Manual.

- Damages in the bodywork caused by taking part in competitions, academic training for those activities, social events or as a result of the exposure or the use of the Torrot Electric vehicles in adverse climates or conditions.

- Damages caused by external agents as chemical products, salt, rusting, discoloration or natural deterioration.

- Logistical costs in the replacement or substitution of parts.

Excluding the explained in this warranty and the subjected to additional warranties, Torrot Electric and their employees and representatives will not be considered responsible for losses or damages, whatever they may be (including losses or unexpected events caused by negligence or omission) derivative from or related to any Torrot Electric vehicle.

Torrot Electric Europa S.L. does not make any other warranty, either implicit or explicit. All implicit warranties, included in the marketability warranties and adaptation to a particular purpose, are limited in duration to the explicit warranties previously mentioned.

Any reclamation under this warranty must be carried out through a Torrot Electric authorized dealer, directly online or by post to Torrot Electric Europa S.L. It is necessary the receipt of the purchase date before dealing with the reclamation under warranty, and also having activated the online warranty in [www.torrotelectric.com](http://www.torrotelectric.com)

The complaints under this warranty made out of the country of purchase can be subjected to additional taxes and restrictions, and unless the contrary was indicated, will only and directly be covered by the importer of the country or region out of Spain.

The warranty durability and its details can differ depending on the kind of the vehicle, battery and/or country. This warranty gives specific legal rights. Nevertheless, you can also have other right that can differ depending on the country or region. This warranty does not affect the rights established by the law.

These warranty conditions are applicable since 2016/07 for the following vehicles: electric motorcycles for children KIDS, electric bikes Citysurfer and electric scooter MUVI.

## APPENDIX

### ONLINE WARRANTY REGISTRATION

To validate and activate the warranty, the vehicle must be online registered by the dealer or importer.

### WARRANTY TRANSFER (ONLY MUVI)

The transfer of the warranty will be accomplished for the new owner when he/she prove to have concluded the change of account holder of the vehicle as the law of each country or region dictates, subject to the Spanish manufacturer and the importers of the other countries.

### USER'S RESPONSABILITIES

Torrot Electric Europa S.L. asks the user for some requisites of good maintenance and use of their vehicles to support correctly a complaint under warranty. During the warranty period of your vehicle, you should only be attended by Torrot Electric Europa S.L., Torrot Electric Importers or authorized dealers. You will be responsible of keeping your vehicle in good conditions and do not subjected to strains beyond a normal use. During the validity of the warranty you must make all the periodical technical services as described in each Torrot Electric vehicle's User Manual. Otherwise, the warranty will be invalidated immediately.

The Torrot Electric vehicle's owner accept and understand that when a Torrot Electric vehicle is bought, the warranty does not cover damages repairing appeared as a consequence of a misuse, overuse, accident or negligence, as well as an unit with the following characteristics:

- Modified characteristics with respect to its original configuration, specified in the specification data sheet, User Manual or online at [www.torrot.com](http://www.torrot.com).
- Vehicles used in competition. That is to say, time trials, competition with other vehicle or any other application of unusual strain.
- Vehicles with lacking of a proper maintenance, cleaning or without having made the pertinent periodical and compulsory services detailed in each model's User Manual.
- Vehicles with an alteration in its speedometer or in another electrical component (as the controller, electronics...).
- Rental vehicles.
- Respect the gross vehicle mass in each vehicle, specified in the User Manual, in the specification data sheet of each Torrot Electric's product or online in [www.torrotelectric.com](http://www.torrotelectric.com).
- Parts that worn away by their normal use as: batteries, Motorcycle grips and brake pads, secondary transmissions to the wheel, tires, upholstery, electrical components, suspension parts...

- Electric/electronic circuits modified to alter its original performance, which do not belong to the original parts or parts authorized specifically by Torrot Electric Europa S.L.

- Batteries charged with a not authorized or official charger, and batteries which had suffered an overload or not controlled charges.

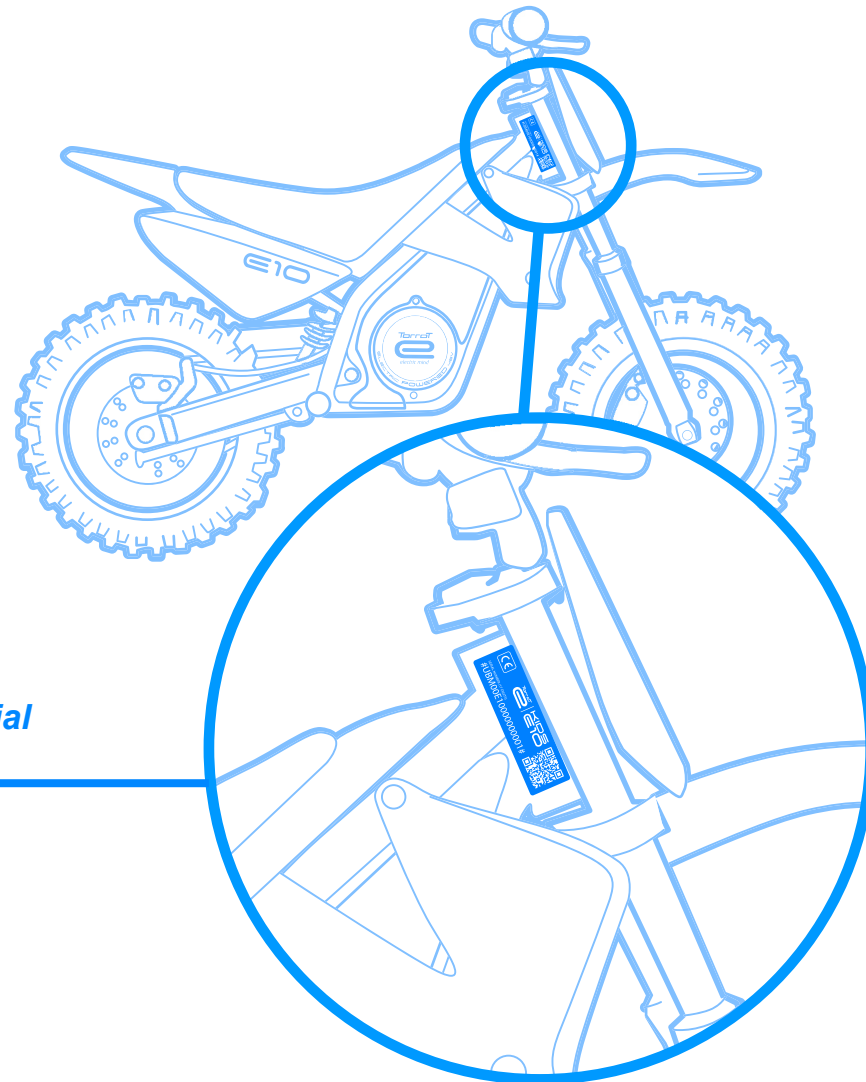
- Vehicles repaired in points of sale or dealers not authorised by Torrot Electric Europa S.L., or without the Torrot Electric Europa S.L. original parts.

**This warranty does not cover the periodical and compulsory maintenance services, or the services indicated as a matter of routine for each model in their User Manual.**

In case you have any issue, please contact us for more information in [info@torrot.com](mailto:info@torrot.com), attaching the Vehicle Identification Number, the problem detected, your name and a phone number to be in contact with you.

Our technicians will get in contact with you quickly, and after a pre-evaluation on the phone, they will tell you which procedure to follow.

**Frame Serial  
Number**



## Torrot Electric After Sales Service

Check a map of all our Dealers updated in our website:



UPDATED INFORMATION AT [WWW.TORROT.COM/EN/STORES](http://WWW.TORROT.COM/EN/STORES)  
FIND YOUR TORROT CLOSEST DEALER AND GO THERE FOR THE BEST AFTERSALES  
SERVICE ;-)



USER MANUAL MADE BY **TORROT ELECTRIC EUROPA S.L.**

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Serious fun.

