maxtron

By WINFIELD SP.Z.O.O.

User's Manual

For models

MT-1 MC-3

MT-2 MC-4

IMPORTANT !!!
READ CAREFULLY BEFORE USE

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1. FOREWORD

The following operation manual is a guide to assist you. This manual is not a complete document on all aspects for the maintenance and repair of your EPAC. The EPAC you have purchased is not a complex object. However, it is recommended that you consult an EPAC repair specialist if you have concerns as to your ability to assemble, repair, or maintain this product.

It is important for you to understand the EPAC. By reading this manual completely before the first ride, one will get better performance and enjoyment from this product. It's helpful to extend the life of the EPAC.

This operational manual should remain an integral part of the product. Changes or any copy actions in pictures, specifications and descriptions are strictly prohibited. When you transfer the EPAC to others, please enclose with this manual as it contains the important safety guidance and operation instructions

This booklet describes assembly and safe operation of your EPAC. Pictures are for reference only and may show the similar component from another model.

Make sure the battery is fully re-charged every 3 months if it is not in use

Store the battery in a dry and warm place. Ideal storage temperature is 15ºC - 30ºC

Ensure the total payload including the luggage should not exceed 130kg

This assembly and operation manual shall remain an integral part of the EPAC. Anyone riding the EPAC shall carefully read the safety guidance and operation instructions first.

The changes in the pictures, data, descriptions and specifications under this manual may not be notified separately with continuous improvement of our corporate products.

Beware of National Legal requirements when the EPAC is ridden on public. Especially safety requirement of road condition and lighting. Never allow the reflectors to be hidden by unnecessary objects.

DO NOT open the battery by non-authorized person. It might cause danger to user and will void the battery warranty.

Always shut down/ remove the battery before maintenance.

2. DUTY OF CARE

The safety of the bicycle can only be assured if all the necessary maintenance are taken.

The user has the duty of care and responsibility for scheduling these measures and checking that they are implemented.

1. Your EPAC is designed for regular road for a single person. Using your EPAC for extreme maneuvers, such as extreme off-road use, jumping, or carrying excessive load will damage the EPAC and could cause serious injury.

2. Wears proper personal protective equipment, such as helmet

3. This EPAC is designed for total weight below 130kg

4. Never carry a passenger on the EPAC

5. Employs specialist staff only for maintenance and repair of the EPAC. Please read the manual carefully. Do not use the EPAC before familiar with its performance. Do not lend it to the one who does not know about its operation.

6. In the bad weather like rain or snow, the braking distance should be increased. When the EPAC runs at the speed of 20km /h, the wet road condition might extend the braking distance up to 15m. Please check and maintain the brake frequently to ensure safety riding.

7. Check the tightness of the chain. The tightness should be around 15mm.

8. For the safety of you and other people, switch off the power when it is not in used

9. Check the air tension of the tire frequently. Low air pressure might cause extra resistance which affects the riding range.

10. Only authorized person is allowed to open the battery. Otherwise, it might cause danger and the warranty will be voided.

11. It is forbidden to force the EPAC overloaded.

12. Cut off the power if there is any hesitation on the electrical parts.

13. Please pay attention to national legal requirements when the bicycle is to be ridden on public roads (e.g. lighting and reflectors)

14. NO Tempering is allowed – Change of any parts which is non-original designed is forbidden. It is risked having unexpected accident. **Warranty will be voided for any tempering of the EPAC or electrical system.**

BATTERY DISPOSAL

NEVER throw batteries away in the trash directly. Take the exhausted battery to a federally or state-approved battery recycle center. Call your waste collection service to find out if they offer disposal of batteries.

3. Name of EPAC Parts

MAXTRON MT series

1. Handle bar and stem
2. Frame
3. Front light
4. Mudguard
5. Front wheel
6. Front fork
7. Battery
8. Pedal
9. Display
10. Gear shifter
11. Saddle/ seat
12. Seat post
13. Seat quick release
14. Carrier
15. Rear light
16. Motor

MAXTRON MC-3 series

MAXTRON MC-4 series

4. Getting Started

4.1 Take out the EPAC

Unpack your EPAC carefully and save all packing material. Be sure to locate your charger, pedals, keys and any small parts like nuts or screws inside the shipping carton. It might happen that some small parts are fall at the very bottom of the carton box during transportation.

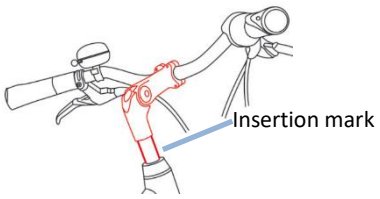
Beware of sharp metal part in the carton. It might cause puncture wounds
We recommend that two peoples work together to assemble the EPAC

4.2 Assembly Instruction

The EPAC is fully assembled and inspected at the factory and then partially disassembled for shipping. Only the front wheel, pedal, saddle and handle bar need to be assembled again at user's side.

4.2.1 Adjust the handlebar angle

Your handlebars have two main parts – the cross bar itself and the stem. MC series stem can be adjusted to tip the handlebar forward or back.



Handle stems are basically installed before delivery.

If your handle bar set has been removed for shipping carton, then insert the stem until the minimum insertion mark into the frame. Adjust the grips in the right place and the angle of the handle bar is comfortable.

Be sure your handlebars are centered and tightened before riding

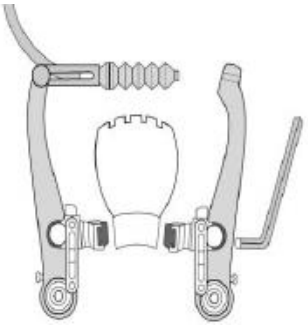
Make sure the forks and the handlebars are facing forward and straight. You may stand in front of the handlebar, vise the front wheel by your legs and hold the handlebar, adjust the handlebar and the body of the bicycle to form an angle of 90 degree, see the picture.

Tighten the screws to hold the bar in place, ensuring all brake cables are clear. The recommended torque is 200-300kgfcm

4.2.2.1 Adjust the rim brake

Always check that both your front and rear brakes are properly adjusted before riding your EPAC.

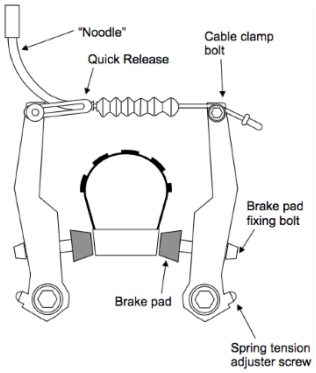
Squeeze the brake arm together and slip the cable into the trough. You may need to adjust the cable length by loosening the nut and sliding the cable through to the proper position. Tighten the nut back to hold the proper position.



4.2.2.2 Disc brake version (MT-11/ MT-12 series)

Please make sure the disc brake system is inspected and maintained by professional person every 3 months.

4.2.3.1 Adjust the brake shoe



Adjust the brake shoe on either side by using an Allen wrench to ensure the contact on the metal wheel rim, not on the tire. Be sure they are straight and the distance between rim and the two brake pads is 1-1.5mm.

The pads will be close when adjusted properly.

4.2.3.2 Disc brake version (MT-11/ MT-12 series)

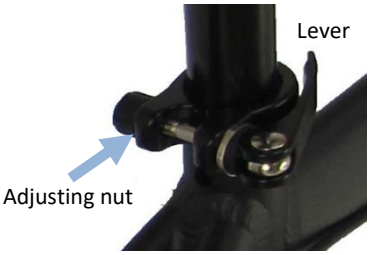
Please make sure the disc brake system is inspected and maintained by professional personnel every 3 months

4.2.4 The braking way

The EPAC is set that the left brake lever operates the rear brake
The right brake lever operates the front brake

The EPAC might keep sliding if the brake is not pressed strong enough. Make sure the braking system is maintained properly

4.2.5 Adjust the Seat Height



The seat height can be adjusted by a quick release lever.

Pull the lever to release, then insert the seat post to at least the minimum insertion line marked fully go into the frame, or a comfortable height. Press the lever back until it touches the clamp ring to hold the seat post position.

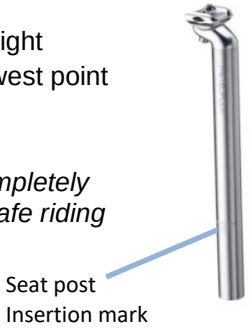
If it is too difficult to insert the seat post, extend the seat post gap space by loosing the adjusting nut and lever together. Lock the seat post tightly and ensure it is not movable when insertion is succeeded.

Be aware that when the seat post is not tightened, it might case danger to the rider. Recommended tightening force is > 20kgfcm

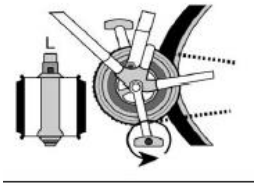
4.2.6 Determination of seat Height

From an ergonomic point of view, the seat height should be set so that the heel touches the lowest point of the pedal when the leg is outstretched.

Make sure the seat post Insertion mark is completely inserted, or lower, into the frame to ensure safe riding

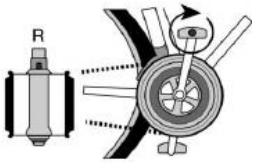


4.2.7 Install the pedals



1. The right pedal attaches to the chain side crank arm with (clockwise) thread

2. The left pedal attaches to the other arm and has a left-hand (counter clockwise) thread.



Check your pedals before each ride to ensure that they are tight. If you ride your EPAC with loose pedals, you may strip the threads that hold the pedal to the crank. The tightening force at both sides are 400kgfcm

4.2.8 Adjust Chain Tension

Chain tension of MT series
Chain tensioner is built in at the rear sprocket. It is well adjusted before ex-factory.

Chain tension of MC series
There should be approximately 0.5 inch of movement in the chain up and down at a point half way between the front and rear sprockets. If the chain is too long after long time use, it can be adjusted by moving the rear wheel a little backward at the frame dropout. Always remember to tighten the rear wheel screw. Recommended torque is 300-400kgfcm

4.2.9 Quick release on front wheel

MT series has a quick release mechanism on front wheel. If rider need to remove the wheel and re-attached. Please make sure the lever is pressed tightly when closing to the locked position. It should touch the fork ends. Recommended tightening force is 15kgfcm

5. Lubrication

Do not over lubricate. If oil/grease gets on the wheel rims or the brake shoes, it will weaken the brake performance and lead to longer stopping distance. Injury to the rider or to others can be occurred.

Pedal	Every 6 months	Put 4 drops of oil where catch pedal axle goes into the pedal
Chain	Every 6 months	Put 1 drop of oil on each roller of the chain
B.B.	Every 6 months	Contact a professional technician
Motor	Every 1 year	Contact a professional technician

6. Operation of Your EPAC

Your EPAC is driven by a motor installed in the hub of the front or rear wheel. The motor is powered by a 36V battery, which is installed on the EPAC. The amount of motor power is controlled by rider according to the power-assisted model selected

To start the operation, riders should:

6.1 Install the battery onto the EPAC

Make sure the dis-charging ports on the battery and on the frame are aligned at their right position.

MT series

MC series

6.2 Lock the battery tightly

MT series

MC series

Make sure the battery is tightly locked onto the frame. If the battery is loose from the frame, it might cause accident to rider.

6.3 Switch on the battery by pressing the ON/OFF Key

Press the ON/OFF button once.

It is available on MC series only

6.4 Check remaining capacity in battery

Consumer may read the remaining battery capacity by pressing either of the below buttons. The more the LED lights, the higher the battery capacity

For MT series

For MC series

6.5 The Handle bar display

MT series is using LCD display, whereas MC series is using LED display. Both displays are installed on the handle bar. Riders may adjust it to a comfortable monitoring angle.

Make sure the cables are well connected

6.5.1 LCD display (MT series)

Press ⏻ button for 2 seconds to get both the power and control level on. Real-time Speed is defaulted to be showed on the screen.

6.5.1.1 Trip distance

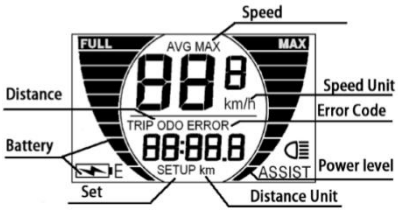
Press ⏻ button to show these information in sequence:

1) Trip distance (TRIP, km)
2) Total Distance (ODO, km)

6.5.1.2 Speed Indication

Press ⏻ and + buttons together for 2 seconds can change the indicated information in sequence of:

1) Real-time Speed (km/h)
2) Average Speed (AVG, km/h)
3) Maximum Speed (MAX, km/h)

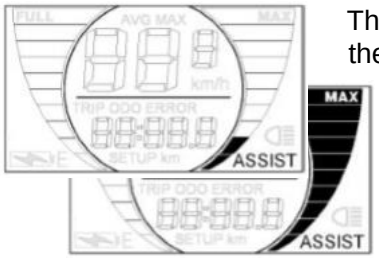


6.5.1.3 Front and Back lights

Press " + " button for 2 seconds to turn on the back light of the display and the front & rear light of the EPAC at the same time.

Press " + " button again for 2 seconds to turn off the backlight.

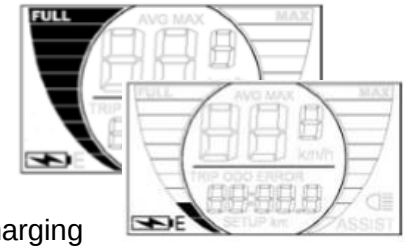
6.5.1.4 Power Assisting Indication



There are 10 power assisting bars on right hand side of the display. Every 2 bars represent 1 assisting level.

Press + button to increase assisting power, or − to reduce. The power range is from level 1 to level 5. The more the number of bars, the higher the motor power assist.

6.5.1.5 Battery Status Indication



The display shows the battery capacity in 5 levels. When the battery is in high voltage, the word "**FULL**" at the top of 10 black bars at left hand side of the display appears.

Letter "**E**" appears when battery level is low. Recharging the battery is necessary

6.5.1.6 Auto Power Off

Press ⏻ button for 2 seconds again can shut down the display.
When the EPAC is not in use for 10 minutes, the display will be shut down automatically.

6.5.1.7 Walk Assist Mode

Press - button continuously can activate the Walk Assist mode. The EPAC goes at max. speed of 6km/h without pedaling. Release the button will stop the function. It can help to keep the EPAC moving during a climbing condition.

Never ride on the EPAC with Walk Assist mode.

6.5.1.8 Error Codes

When the LCD display showing these codes. They mean:

Error Code	Definition	Actions to take
21	Current Error	Inspection if motor phrases short-circuits
22	Throttle Error	Inspect if throttle recover original state
23	Motor Error	Inspect if motor phrase is well-connected: Inspect if cables between motor phase and controller are well-connected.
24	Motor Hall Signal Error	inspect if motor phrase is well-connected
25	Brake Error	Inspect if brakes original state before display startup
30	Communication Error	Inspect if cables between display and controller are well-connected

6.5.2 LED display (MC series)

There are 5-level power assisting. Press ⏻ button for 2 seconds to get the power on.

Press + to increase motor assisting power, or − to reduce. The power range is from level 1 to level 5 with LED indication. The more the LED lighted, the higher the motor power.

Press the ≡D button for 2 seconds to get the front and rear light switched on.

Lights and power will be shut down when ⏻ button is pressed for 2 seconds again.

6.5.2.1 Walk Assist Mode

Press - button continuously can activate the Walk Assist mode, which allow the EPAC goes at max. speed of 6km/h without pedaling. Release the button will stop the function.

Never ride on the EPAC with Walk Assist mode.

6.6 Peddle to get the EPAC started

Electric-Assisting power is triggered when power on and pedal forward. The faster the pedaling, the faster the EPAC.

6.7 Power assisting cut off or slow down when:

- Pressing the brake lever.
- EPAC speed at assisting model reaches 25km/h

The higher the power assisting level is used, the easier the EPAC riding. Please noted that it will cause more battery power consumption and shorten the power assisting riding distance when high level of power assisting level is selected.

7. Battery

7.1 Battery Specification

Rated Voltage: 36V
Max. Charging voltage: 42V
Rated Capacity: 11.6ah
Cut off Voltage: 29V

7.2 Charging the Battery

Fully charge the battery before your first ride and re-charge after every operation
Connect the battery with charger before connecting to the wall outlet.

This is location of the charging plug

MT series

MC series

7.3 Riding range per charge

Under standard road conditions (concrete and cement road without resistance and with temperature around 25ºC, battery is fully charged), the riding range per charge can be

With the lowest assisting mode (level 1), it can be run up to 100km
With the highest assisting mode (level 5), it can be run up to 45km

7.4 Remove the battery

There is a battery fixing lock on the battery (see below pictures). Open the lock may take out the battery**.**

For MT series

For MC series

Always to separate the battery from the EPAC for storage during winter. Keep it in a warm and dry place.

8. The Charger

The battery charger temperature may be a little high. Temperature below 50℃ is normal.

Charger Specification

Input voltage: 100V-240V 50/60Hz, 90W
Output Voltage: 36V – 2A
Normal charging time: 4-6 hours

Connections

1. Connect the charger to battery first
2. Then plug the power cord to AC power wall outlet
3. The green LED lights means it is standby.
4. The red LED light during charging process.
5. When greed LED light is on again. The battery is fully charged. Then unplug.

WARNING !!

- **Do not connect the charger if any abnormal damage is observed.**
- **It is a must to charge the battery indoor and dry place, environment temperature below 30°C.**
- **The charger is designed specifically for original EPAC battery. Connecting the charger to any other battery might cause unexpected injury to persons and property.**

9. Ride with Speed Gear

Riders may adjust the gear shifter for a proper gear ratio according to road conditions, and comfortable speed necessity. may adjust the gear shifter for a proper gear ratio according to road conditions, and comfortable speed necessity. The derailleur should only be shifted during pedaling. To keep the derailleur in adjustment. The derailleur / shifting and pedaling are completely independent to the motor.

9.1 For models MT series

There is a SHIMANO ALTUS 8-speed rear derailleur installed on the rear wheel.

Toggle the upper lever at the right ha nd side of the shifter, the gear number going from 1 to 8. The higher the number, the faster the EPAC per pedal, whereas lower number provides comfortable riding feeling.

Toggle the lower lever to obtain opposite function.

9.2 For model MC-3 series

There is a SHIMANO NUXUS Inner-7 speed gear installed on the rear wheel. Twist the shifter clockwise or anti-clockwise to change the gear ratio

The higher the number, the faster the EPAC per pedal.

9.3 For model MC-4 series

There is a SHIMANO NUXUS Inner-3 speed gear installed on the rear wheel. Twist the shifter clockwise or anti-clockwise to change the gear ratio.

The higher the number, the faster the EPAC per pedal.

10. Adjustments and Maintenance

- Do not use high pressure water streams to clean your EPAC, as water might seep inside the motor or the wiring compartment and cause rusting of electric parts or short circuits. Please use damp cloth with neutral detergent to clean the EPAC body. Do not use alkali-based or acid based detergent such as rust cleaners as it may result in damage and/or failure of the EPAC body.

- Avoid parking your EPAC outside when there is rain or snow. At the end of a trip where there was rain or snow, bring the EPAC inside and use a clean, dry towel to eliminate any wetness.

- The chain can throw excess oil onto the wheel rim. Wipe excess oil off the chain. Keep all oil off the surfaces of the pedals where your feet rest.
- Using soap and hot water, wash all oil off the wheel rims, the brake shoes, the pedals, and the tires. Rinse with clean water and dry completely before you ride the bicycle.

- Using a light machine oil (20W) and the following guidelines, lubricate the bicycle:

11. Faults and Trouble-shooting

No	Faults	Causes	Troubleshooting
1	Battery gauge lights up but bicycle does not operate	1) Power cord is not properly plugged into battery 2) Brake cut-off engaged or faulty 3) Speed sensor adjusted too low 4) Blown fuse 5) Loose motor wire connector 6) Loose connectors 7) Broken wire 8) Throttle disengaged or faulty	1) Properly plug in power cord to battery 2) Disengage brake cut-off or replace 3) Adjust speed sensor 4) Replace fuse 5) Check motor wire connector 6) Check all connectors 7) Inspect all wires 8) Engage throttle or replace
2	Bicycle operates but battery gauge does not light up	1) Loose connectors 2) Damaged wires 3) Faulty battery gauge	1) Check throttle connectors 2) Inspect all wires 3) Replace battery gauge
3	EPAC has reduced speed and/or range	1) Speed sensor is not adjusted 2) Low batteries 3) Faulty batteries 4) Low tire pressure 5) Brakes dragging against rim	1) Adjust speed sensor 2) Charge batteries for recommended time 3) Replace batteries 4) Inflate tires to recommended pressure 5) Adjust brakes and/or rim
4	Bicycle has intermittent power	1) Loose connectors 2) Loose fuse 3) Damaged wires	1) Check all connectors 2) Check fuse connector 3) Inspect all wires
5	Charger light does not operate	1) Power outlet faulty 2) Charger is not plugged to wall or battery properly 3) Charger light or charger is faulty	1) Try another outlet 2) Check all plugs 3) Replace charger
6	Charger completes charging in short time abnormally	1) Faulty charger 2) Faulty batteries	1) Replace charger 2) Replace batteries
7	Chain jumping off freewheel sprocket or chain ring	1) Chain ring out of true 2) Chain ring loose 3) Chain ring teeth bent or broken 4) Rear or front derailleur side-to-side travel out of adjustment	1) Adjust if possible, or replace 2) Tighten mounting bolts 3) Repair or replace chain ring/set 4) Adjust derailleur travel
8	Gear shifter does not work properly	1) Derailleur cables sticking/ stretched/ damaged 2) Front or rear derailleur not adjusted properly 3) Indexed shifting not adjusted properly	1) Lubricate/ tighten/ replace cables 2) Adjust derailleur 3) Adjust indexing

SAFETY WARNING!

Danger of wheel failure due to rim wear. Replace wheel immediately when any part of above groove wears off.

After a tire change, refer to the tire markings for the permitted tire pressures and make sure that they are observed. The tire pressure must not be exceeded the recommended level, which is engraved on the tire.

12. List of parts should be checked regularly

Before every ride, it is important to carry out the following safety checks:

1) Brakes
   - Ensure front and rear brakes work properly
   - Ensure brake shoe pads are not over worn and are correctly positioned in relation to the rims.
   - Ensure brake control cables are lubricated correctly adjusted and display no obvious wear.
   - Ensure brake levers are lubricated and tightly secured to the handlebar.

2) Wheels and Tires
   - Ensure tires are inflated to within the recommended limit as displayed on the tire sidewall.
   - Ensure tires have thread and have no bulges or excessive wear.
   - Ensure rims run true and have no obvious wobbles or kinks.
   - Ensure all wheel spokes tight and not broken.
   - Check that axle nuts are tight. If your bicycle is fitted with quick release axles, make sure locking levers are correctly tension and in the closed position.

3) Steering
   - Ensure handlebar and stem are correctly adjusted and tightened, and allow proper steering.
   - Ensure that the handlebars are set correctly in relation to the forks and the direction of travel.
   - Check that the headset locking mechanism is properly adjusted and tightened.
   - If the bicycle is fitted with handlebar end extensions. Ensure they are properly positioned and tightened

4) Frame and Fork
   - Check that the frame and fork are not bent or broken.
   - If either are bent or broken, they should be replaced.

5) Chain
   - Ensure chain is oiled, clean and runs smoothly.
   - Please go to the qualified technician for adjusting the correct chain tension
   - Extra care is required in wet or dusty conditions.

6) Bearings
   - Ensure all bearings are lubricated, run freely and display no excess movement, grinding or ratting.
   - Check headset, wheel bearing, pedal bearings and bottom bracket bearings.
   -

7) Cranks and pedals
   - Ensure pedals are securely tightened to the cranks.
   - Ensure cranks are securely tightened to the axle and are not bent.

8) Derailleurs
   - Check that front rear mechanisms are adjusted and function properly.
   - Ensure control levers are securely attached
   - Ensure derailleurs, shift levers and control cables are properly lubricated

9) Accessories
   - Ensure that all reflectors are properly fitted and not obscured
   - Ensure all other fittings on the EPAC are properly and securely fastened, and functioning.
   - Ensure the rider is wearing a helmet

WARNING!

As with all mechanical components, EPAC 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 component has been exceeded, it my suddenly fail, possibly causing injuries to the rider. Any form of crack, scratches or change of coloring in highly stressed areas are indicate that the life of the component has been reached and it should be replaced.

CAUTION !

If any safety-critical components need to be changed. Please go to authorized retailer for changing genuine replacement.

13. The rear carrier

The carrier is installed by Winfield. But please noted that the total maximum loading of is 15kg. Please make sur the permissible load of the EPAC should not be exceeded.
It is not allowed to carrier a second passenger, nor attach a child seat.

1) Maximum load capacity of the carrier is 15kg. Do not put weight on carrier exceed the limit.
2) Always pack and tie the luggage safely on the carrier
3) Do not carry a second passenger nor attach a child seat, nor a trailer.
4) Do not modify nor tamper the carrier
5) Fasteners should be secured and checked frequently.
6) The EPAC may behave differently (particularly with regard to steering and braking) when the luggage carrier is loaded.
7) Make sure the rear reflector/ light can be seen, even luggage is loaded on the carrier.