



Use Guide 2-speeds control device

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1 Before beginning

1.1 Recommendation

These devices were made and checked in our workshops to make the assembly easier and reliable.

We recommend to follow the steps of the assembly.

It is important to check that all accessories are properly fixed to the bike, that the connections are fixed and protected from rain and water spatters.

Cycloboost is not responsible for a wrong use of this software. Anomalies due to a bad programming are not covered by Cycloboost.

Please refer to the General Sales Conditions on the website www.cycloboost.com :
www.cycloboost.com/conditions-generales-de-ventes/

1.2 Technical support

In spite of all our efforts, there may still be some technical information difficult to understand. Cycloboost is at your disposal to make it clearer and to guide you if you need it :

You can contact us @ support@cycloboost.com

1.3 How to report an anomaly

Before reporting to the after-sales service, please check the wiring as well as the charging state of the battery.

If the anomaly remains, send an e-mail to the after-sales service @ support@cycloboost.com with the following information :

- Your name
- Your invoice number
- The serial number of your motor, controller of battery
- The precise description of the failure : how it happened (while cycling, at a standstill, at the start, while charging the battery, while braking, while speeding up ...)
- The tests or handlings you made

1.4 List of the tools necessary for the adjustment of the device

In order to make the adjustment easier, we supply a precision screwdriver.



1.5 Pre-requisite and duration of the assembly of the device

The assembly of the 2-speeds device is simple and easy.

		Difficulty (1)	Duration
1	Setting up the switch on the controls	☑☑☑☑☑	15mn
2	Connecting the device to the controller	☑☑☑☑☑	5mn
3	Adjusting the speed limits	☑☑☑☑☑	15mn

(1) Here is our scale :

☑☑☑☑☑	Very easy
☑☑☑☑☑	Easy
☑☑☑☑☑	Medium
☑☑☑☑☑	Difficult
☑☑☑☑☑	Very hard

2 Presentation of the device

You can set up 2 different functioning options, adjustable at will and usable when cycling :

- « FUN » mode with all the power available
- « Eco » mode for long trips or during the run in of the batteries
- « Super eco » mode to cycle at the speed of a runner
- Pedestrian mode (6km/h) for scooters (can be used on pavements and pedestrian areas*)

Examples of configurations :

- Economical mode and run in of the battery :
 - speed 1 : maximum speed of the vehicle
 - speed 2 : 25km/h, ideal for the run in of the battery
- Pedestrian mode :
 - speed 1 : maximum speed of your vehicle
 - speed 2 : 6km/h - pedestrian mode, ideal for scooters in town

2.1 IMPORTANT : pedestrian mode with the scooter

A scooter equipped with the '**pedestrian mode**' is allowed to circulate on pavements and pedestrian areas at walking speed, that is 6km/h. The scooter needs to respect the rules of the Highway Code for pedestrians. Our scooters are considered by the DSCR (Délégation à la Sécurité et à la Circulation Routière) as personal means of transport and not as vehicles, as they have no seat, with a speed limit of 6km/h and a power inferior to 4kW.

They are not allowed on roads open to public traffic (roads, streets ...)

2.2 Manners

A few civic-minded rules have to be respected when you drive in town with a Cycloboost scooter equipped with the pedestrian mode.

The electric scooter arouses much curiosity from the people who meet it. Like any innovation, it is necessary for the environment in which it circulates to get familiar with the concept. Here are a few basic rules.

- Only circulate in pedestrian areas, not on the road
- Circulate at 'walking speed'
- Be careful and respectful of pedestrians. Always give priority to them.
- Always be ready to stop. A pedestrian can come out of a door or street.
- Give priority to the strollers, old or disable people and completely stop.
- When you come up behind a pedestrian, do not force the passage.
- Always leave a safety distance with pedestrians.
- Do not create any worries in those you come next to.
- If there are many people, adapt your speed and be patient.
- Do not drive side to side.
- Cross protected passages and respect the signposts.

If all users respect these rules, the scooter will easily be accepted by other users of pavements and pedestrian areas.

2.3 Reduce your consumption and increase your autonomy

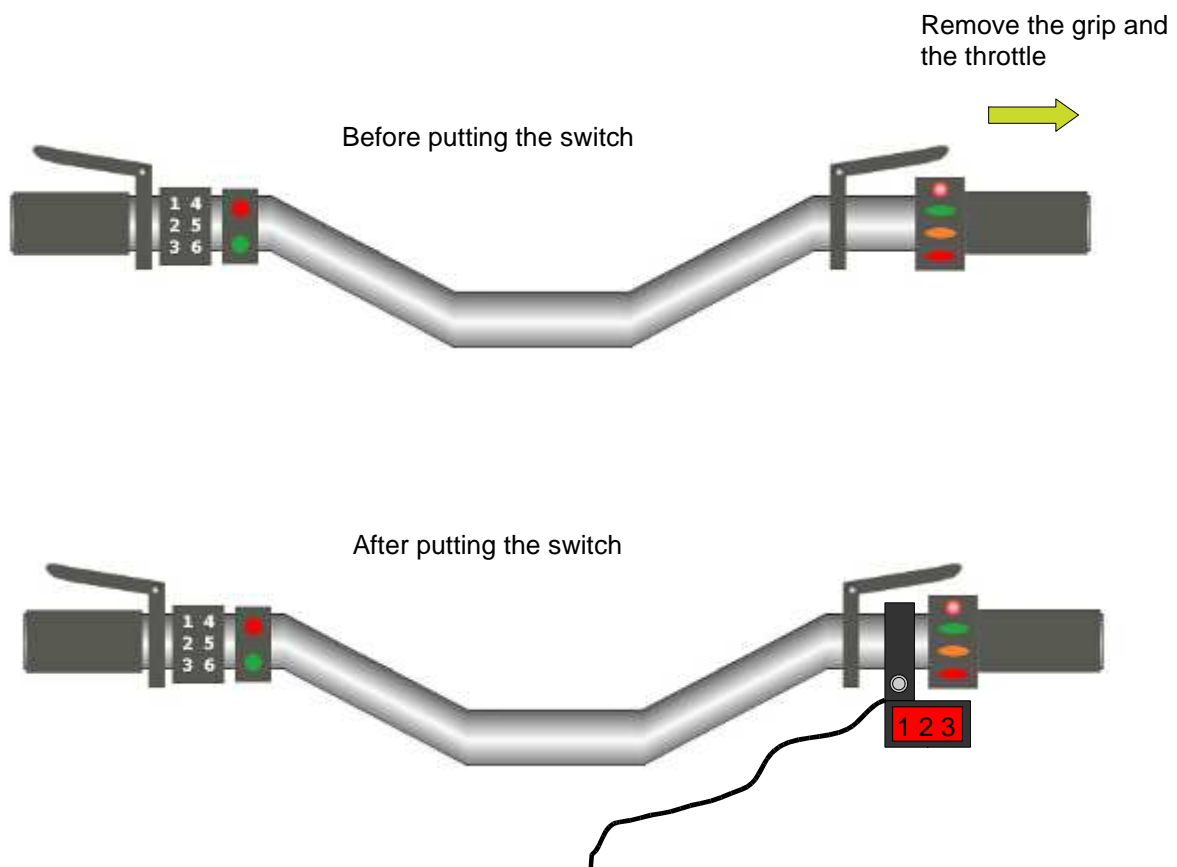
Speed and consumption are linked. By limiting your speed, you will increase your autonomy. You will find below the energy economies you can make with an adapted speed.

Speed*	Pedalling assistance	Electric consumption	Energy economy
40km/h	100w	17,7Wh/km	
35km/h	100w	14,3Wh/km	19,20%
30km/h	100w	11,1Wh/km	37,30%
25km/h	100w	8Wh/km	54,80%

3 Installation

3.1 Setting up the switch on the handlebar

To set up the switch on the handlebar, it is necessary to remove one of the grips and maybe one of the accessories (throttle, cruise control or brakes) depending on the type of setting up you chose.



Put the cable along the frame and plan enough cable to be able to **turn the handlebar without pulling on the connectors.**

3.2 Installation of the device

- 1 - Disconnect the battery
- 2 - Disconnect the throttle : black connectors 3 male and female threads, **figure 01**
- 3 - Connect the throttle directly on the device : black connectors 3 male and female threads, **figure 02**

Note : For an MP3 throttle, it is necessary to make this change in order to add the compatible pins. Thank you for getting in touch if you are in that case : support@cycloboost.com

Figure 01 - Before putting the device

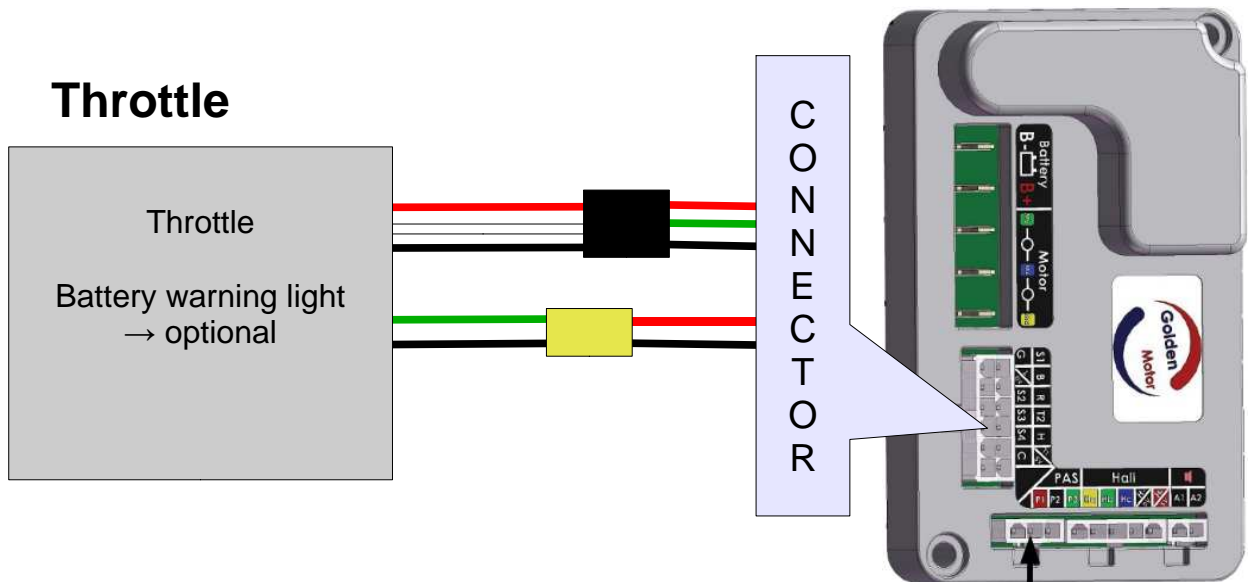
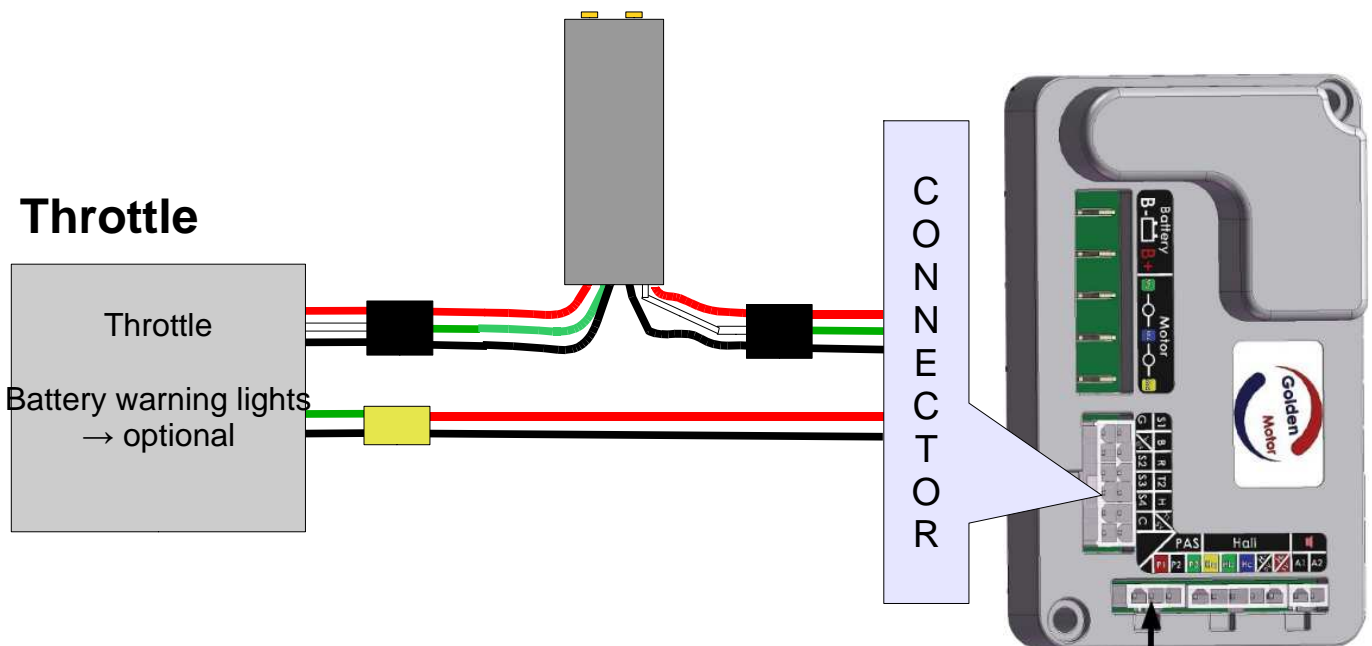


Figure 02 - After putting the device



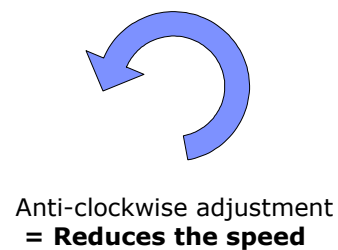
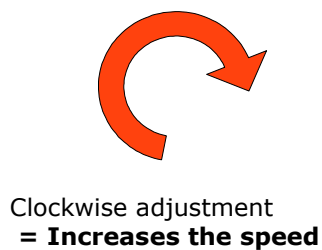
4 Presentation of the device's functions

The device enables to adjust independently 2 speed limits of the motor kit, accessible directly when you are driving thanks to the switch 3 positions.

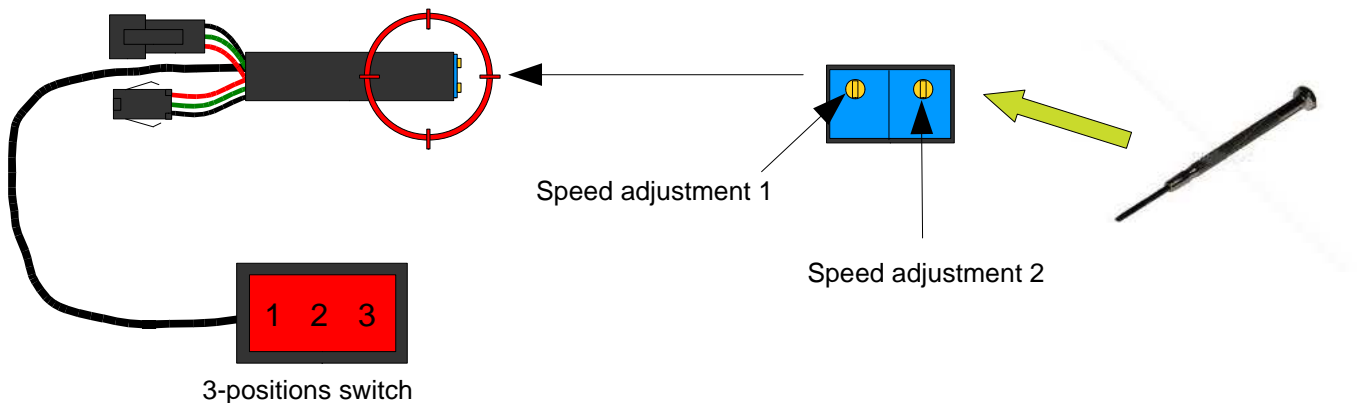
- **Position 1** : speed 1
- **Position 2** : throttle inactivate (the kit is on, but you can not used the electric assistance anymore)
- **Position 3** : speed 2

The potentiometers are adjusted to give the maximum speed of the motor.

Each of the screws enables to choose position 1 or 3 from the switch by turning it in the direction you need :



Here are the 2 screws to turn to get the adjustment of your choice :



5 Speed adjustments

1. Connect the battery
2. Turn anti-clockwise until you reach the speed limit needed
3. Check with meter the speed you adjusted
4. If the speed is right, you are done, if not, start over from step 2

Do the same thing for the second speed limit.

Note : Potentiometers have no 'end'. To reset it, you need to turn the screws clockwise to gain the maximum speed of the motor (around 20 times). Thank you can make them vary anti-clockwise with a screwdriver as described above. **See the examples of adjustments chapter 6.**

6 Adjustments table

You will find below examples of adjustments depending on the motors, batteries and diameter of the rims. You need to adapt this adjustment to each bike. A meter is necessary.

Performances vary depending on the battery (24, 36 or 48v), the kit used and size of the wheels.

6.1 Examples of setting for the Xtrême kits :

Table 1 : Xtrême kit 700C 48V

Anti-clockwise turns	Max speed	Max power
0	42 km/h	1150W
3	33 km/h	1150W
3,5	25 km/h	900W
4	20 km/h	500W
5,25	6km/h pedestrian mode	130W

Table 2 : Xtrême kit 700C 36V

Anti-clockwise turns	Max speed	Max power
0	39 km/h	850W
2,5	35 km/h	850W
4	28 km/h	850W
5	15 km/h	400W
6	6km/h pedestrian mode	120W

Table 3 : Xtrême kit 700C 24V

Anti-clockwise turns	Max speed	Max power
0	31 km/h	600W
3	20 km/h	600W
3,5	15 km/h	400W
4	10 km/h	250W
4,75	6km/h pedestrian mode	100W

6.2 Examples of settings for Magic Pie II kits :

Table 4 : MP2 Kit 26p 48V

Anti-clockwise turns	Max speed	Max power
0	40 km/h	750W
4	30 km/h	700W
5	17 km/h	500W
6	6km/h pedestrian mode	230W

Table 5 : MP2 Kit 26p 36V

Anti-clockwise turns	Max speed	Max power
0	30 km/h	500W
3	22 km/h	500W
3,5	15 km/h	500W
5,25	6km/h pedestrian mode	160W

Table 6: MP2 Kit 26p 24V

Anti-clockwise turns	Max speed	Max power
0	20 km/h	380W
3	15 km/h	380W
3,5	10 km/h	380W
4,25	6km/h pedestrian mode	220W

Table 7 : MP2 Kit 16p 48V

Anti-clockwise turns	Max speed	Max power
0	26 km/h	1050W
4	19 km/h	1050W
5	10 km/h	600W
5,75	6km/h pedestrian mode	350W

Table 8 : MP2 Kit 16p 36V

Anti-clockwise turns	Max speed	Max power
0	20 km/h	930W
3	15 km/h	930W
4,5	6km/h pedestrian mode	230W

Table 9 : MP2 Kit 16p 24V

Anti-clockwise turns	Max speed	Max power
0	14 km/h	500W
3	10 km/h	430W
4	6km/h pedestrian mode	200W

6.3 Examples of setting with Magic Pie III :

Table 10 : MP3 Kit 20p 48V

Anti-clockwise turns	Max speed	Max power
0	34 km/h	1100W
2,25	26 km/h	1100W
2,5	10 km/h	600W
2,75	6km/h pedestrian mode	220W

Table 11 : MP3 Kit 20p 36V

Anti-clockwise turns	Max speed	Max power
0	28 km/h	800W
2,25	10 km/h	800W
2,5	18 km/h	500W
2,75	6km/h pedestrian mode	250W

6.4 Examples of settings with motor Q100 :

Table 12 : Q100 201rpm 26p 36V

Anti-clockwise turns	Max speed	Max power
0	26 km/h	500W
4	20 km/h	500W
5	15 km/h	500W
8	6km/h pedestrian mode	200W

For rim dimensions not mentioned, take as a reference the closest dimension and adjust with a quarter of a turn to find the right adjustment.

Important : to get a precise setting, it is necessary for the meter to be perfectly calibrated.

7 End of installation

You are done, **have a nice ride :-)**

8 Use of the electric bike

8.1 Important recommendation of the use of your kit :

Your new electric bike is above all a bike. It is the association of the **muscle power** and **electric power** which will enable you to get a **good output** of your motor and a **good autonomy**.

We strongly recommend **to pedal** when using your bike on flat roads but also and **above all at the start and uphill**. To improve your autonomy, we recommend to :

- regularly pedal when using your kit
- pedal more strongly at the start, uphill, facing the wind ...
- reduce your speed if the motor forces
- adapt the choice of sprocket according to the speed and the difference in height
- disconnect your battery when the bike is at a standstill
- check the tire pressure : under-inflated tires deeply increase the electric consumption and reduce the vehicle's performances

Tricks : we recommend the use of a cycle-analyst (with **partial adding-machine** function). With a few tests, it will enable you to measure your autonomy.

The kits must not be used like a scooter : **pedalling regularly is necessary** for the good functioning of the kit.



Regularly check the temperature of the controller in the following cases :

- high speed
- uphill and/or facing the wind
- during frequent starts
- if you pull a trailer

If this kit is too strongly solicited, you may '**burn out**' the kit's or the battery's electronics. **This kind of use is not covered by the guarantee.**

8.2 Maintenance of the kit

There is no maintenance. At the beginning, you can check from time to time that the connexions have not moved.

Important :

- Regularly check the tightening screws of your motor wheel
- Check the tension at the spokes
- From time to time make sure the wiring has not moved because of the vibrations
- Check the forks' ends if the motor is at the front

8.3 Maintenance and use of the battery

Consult the batteries' 'Use guide' for **use and run-in process**.



- Disconnect the battery when the bike is at a standstill
- Disconnect the battery during the charge
- Keep the battery protected from dampness, cold and rain
- Charge the battery in a clear and ventilated space (do not cover the battery during the charge)
- Let the battery charge (until the green light is stable)

Trick : To protect your battery, do not discharge it completely : stop at 90% of its capacity, for example 55km if the maximum autonomy is 60km.

8.4 IMPORTANT : what you must never do !

Do not force the motor uselessly : if your bike can not go up a steep hill even if you are pedalling, there is no need to insist. You may overheat the electronics part of **the kit** or **the battery**. In that case, do not hesitate to walk and push your bike.

Do not hose down or use a Karcher© to wash the elements of the electric kit : motor, accessories and battery. Use a damp sponge and use a dry cloth.



The guarantee does not cover an abnormal or non-conform use of the products : competition, research, use with assistance like a motorbike or a scooter, forced use uphill ...



The use of handmade batteries is not covered by the guarantee.

For more information, consult the following page :

<http://www.cycloboost.com/velo-electrique/>

9 Analysis of the failures

9.1 Different failure cases

9.1.1 The bike does not start

- Turn the 2 potentiometers clockwise 20 times so it will reset and deliver the full power of the motor
- Check that the switch is not on the full stop
- Check the tension of the battery
- Make sure the power really comes to the controller
- You should hear a little sound coming from the horn
- Check the connections at the level of the controller. Sometimes, some connections are not enough pushed in during the wiring process.
- Check the connections at the level of the battery
- Check the battery fuse and replace it if need be

9.1.2 How to reset the device

- Turn the 2 potentiometers clockwise 20 times so it will reset and deliver the full power of the motor

END OF DOCUMENT
