

BionX INTELLIGENT BIKE - USER GUIDE

Congratulations on your purchase of the BionX intelligent energy management system, one of the best systems on the market! Adaptable, powerful, light and regenerative it will provide you with a bionic sensation...

Please take a few minutes to read this booklet; it will guide you through the distinctive features, functions, easy care and easy use of your BionX intelligent system.

We are convinced that this product will bring you immense satisfaction and riding pleasure for many years to come.

On your handlebars, ready, ride...

Sincerely,

*Jean-Yves Dubé
President BionX*



PHILOSOPHY

1. BionX believes a bicycle should remain a bicycle. Our system simply adds distinctive features to it in order to increase the cyclist's riding experience.
2. BionX believes that weight is a crucial element. Every ounce we can subtract is worth an ounce of gold. This is why we have focused our energy in developing the most light-weight system on the market.
3. With its discreet look and light weight, we are convinced that the BionX system will become an essential tool for everyday living, just like air conditioning is in a vehicle.

In this spirit, a bicycle equipped with a BionX system shall be used as any regular bicycle. Our intelligent system combined with your regular speed changes will help you increase your riding experience.



The goal of your BionX system is to allow you to work smart and exercise without exhausting yourself. This powerful and intelligent energy management system is perfect for your daily exercise routine and is a powerful commuting vehicle.

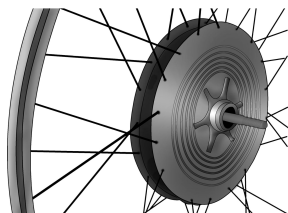
The BionX system will assist you in proportion to your effort; it reads every pedalling effort and adds assistance according to the selected mode: 25 %, 50 %, 100 % or 200% of your effort.



TABLE OF CONTENTS

The BionX System	2
Assistance	2
Generation	4
Command console features	5
Maintenance of your system	10
Long-term storage of battery	10
How to charge your battery	11
Distance vs battery	12
Before any ride	13
Flat tire	13
How to bring the best out of your BionX system	13
Warranty	14
How to contact us	14

THE **BionX** SYSTEM



Motor-wheel/generator

Nominal Power: 250 Watts
Peak Power: 450 Watts
Nominal Torque : 7 N.m
Maximum Torque : 25 N.m
Weight : 3,5 kg (7,7 lb)



Battery

24 Volts
8 AMPS Nickel-Metal Hydride (NiMH)
Weight : 4,1 kg (9 lb)
Installation : 5 seconds
Supplied with a safety lock
Lifespan: approx. 500 cycles (complete charges)



Command Console

The console is equipped with a two-mode microprocessor:

Assistance - Generation.

ASSISTANCE

Four assistance levels compensate the cyclist's effort by 25%, 50%, 100% or 200%, allowing him/her to ride faster while giving the same effort (or ride at the same speed with less effort). To select the assistance mode, simply press **A+** to increase from level 1 to 4 and then **G-** to reduce from 4 to 1.

The assistance will be in proportion to the level of effort given by the cyclist.

Table 1 shows an example of assistance modes to select depending on the situation.

Assistance	For a given condition, compensates your effort by :	Notes/situation
1	25 %	Flat ground
2	50 %	slopes, Front wind ; cancels the bike's weight
3	100 %	Steep hill, Strong front wind
4	200 %	Very steepy road
Generation		
-1	Recharge	Downhill or Back wind; recharge on flat ground
-2	Recharge	Fitness mode – less aggressive; recharge on flat ground
-3	Recharge	Fitness Mode aggressive
-4	Recharge	Fitness Mode Difficult
Generative brake	Recharge	Steep downhill or braking

TABLE 1

Assistance/safety

To insure a smooth departure, the assistance will only start when the bicycle rides at 3 km/h or more.

Assistance levels are approximate. They vary depending on the cyclist's weight, weather conditions and pedalling effort.

The assistance will reduce when the bicycle reaches a speed of more than 24 km/h and will completely stop at 32 km/h in order to follow Canadian and American laws. In Europe, the limit is 25 km/h.

GENERATION

In position G1 through G4, the motor becomes a generator, allowing to restore energy in the battery. For better result, we recommend to recharge the battery in G1 or G2 modes while keeping a riding speed of at least 20 km/h.

Charging at low speed will only have a minimal effect on the battery state of charge.

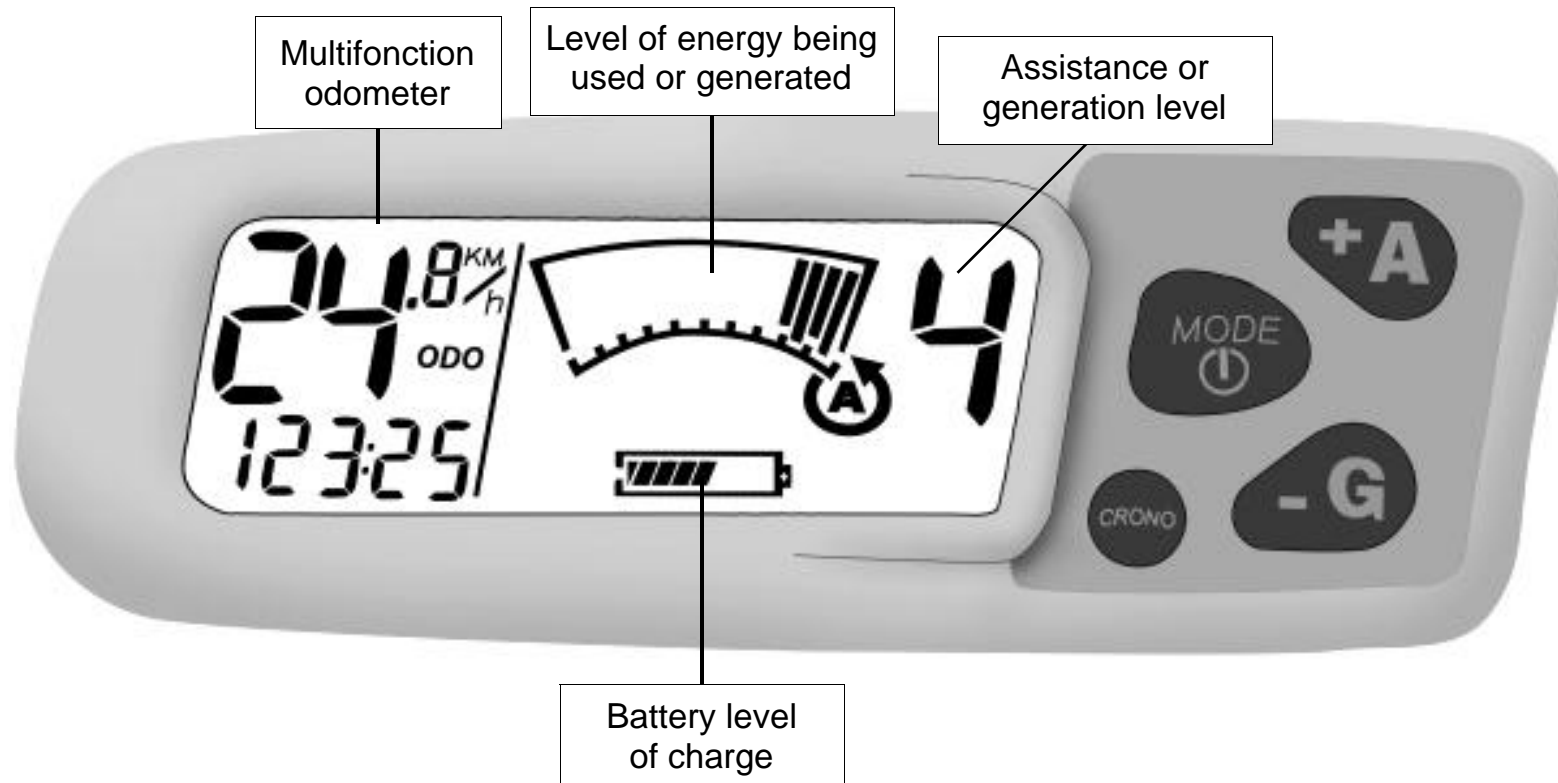
The motor also becomes a generator when using the rear brake. Please note that the generative mode does not replace the existing brakes, but increases considerably the braking quality and will help you slow down when needed. It activates as soon as the rear handbrake is activated.

Fitness Machine

Use the four generative modes to simulate slopes. Your bicycle will become a fitness machine.

The higher the level (G1 to G4) the more effort the system will be demanding.

COMMAND CONSOLE FEATURES




COMMAND CONSOLE FEATURES

On-Off Switch





Press 

Note : the console automatically switches off after 10 minutes of inactivity.

Backlit LCD

Press  for 2 seconds to turn the backlit on / off.




LCD Contrast

- Press both  and  simultaneously to increase contrast.
- Press both  et  simultaneously to decrease contrast.




COMMAND CONSOLE FEATURES

Assistance 1-2-3-4

When riding at assistance 0, the system is not activated. You are riding a conventional bicycle.


- To activate assistance, press  to go from 0 to 1.
 - Press again on  to increase assistance or on  to decrease it.
 - 1 = 25%
 - 2 = 50%
 - 3 = 100%
 - 4 = 200%
-

Generation 1-2-3-4


- To activate generation, press  to go from 0 to 1.
 - Press again on  to increase generation or on  to decrease it.
 - 1 = 25%
 - 2 = 50%
 - 3 = 100%
 - 4 = 200%
-

COMMAND CONSOLE FEATURES



Shortcut to pass directly from one mode to the other

If you already are on assistance mode and wish to pass directly to the generative mode, simply maintain  pushed during a few seconds.







AND

The same way, if you are on generative mode, maintain  pushed during a few seconds to come back to the assistance mode.

Distance, odometer, chronometer, av



- Press  to switch displays.
- Maintain  pushed during 2 seconds to refresh the chrono and distance to zero.
- Both chrono and distance have to be refreshed individually.
- They cumulate when the wheel turns.

Choosing a PIN number





- Press both  and  simultaneously during 2 seconds. 4 zeros will appear, the first one is blinking.
- Press  to go from 1 to 9 and on  to go from 9 to 1.
- When the right digit is displayed, press on  to have the next zero blink.
- When the fourth digit is chosen, press on  to finalize the programming of your PIN number.

COMMAND CONSOLE FEATURES

How to activate the alarm system

Maintain both  and  simultaneously pushed. The blinking lock will be displayed.

How to deactivate the alarm system

- Press on any button, 4 zeros will appear, the first one is blinking.
- Select your PIN number by pressing  (1 to 9) and  (9 to 1) and press  to pass to the next digit.
- When the fourth digit is selected, press on , the motor-wheel is unlocked.

NOTE : If you have not selected your PIN number yet, the default PIN number is 0000.

MAINTENANCE OF YOUR SYSTEM

Spokes tension

We recommend that you visit your bike shop to inspect the spokes tension after 2 to 3 weeks of use (and/or 300 km).

Motor

Made of permanent magnets (brushless), the motor does not require any maintenance

Long-term storage of battery

When storing your BionX battery for more than 2 months, you should:

- Charge completely your battery before storing it;
- Keep it in a fresh and dry location (approx. 20 °C);
- Keep it away from extreme temperature deviations;
- Make sure the battery never freezes;
- **Recharge every two months.**



Long-Term Storage

Please store the battery fully charged and recharge at least every two months.

HOW TO CHARGE YOUR BATTERY

We strongly recommend to always charge your battery after a ride. For a better efficiency, we recommend to let the battery rest for approximately 30 minutes after your ride before charging it.

Recharge at ambient temperature.

Avoid warm locations.

You can either remove the battery or connect the battery directly on your bicycle.

Then plug the battery pack cord into a standard wall outlet (110 Volts or 220 Volts).

A fully discharged battery can be recharged in less than three hours.

The battery might not charge completely during very hot weather. Let the battery cool down for 30 minutes at ambient temperature or in a fresh area (approx. 20 °C), and start again.

NOTE : Since the battery does not have a memory, it is not necessary to completely discharge the battery before charging it again.

CHARGING WITH THE BIONX CHARGER



**Keep the charger away from children's reach.
Use the BionX charger ONLY.
Never use the charger for other purposes.
Do not charge the battery right in the sun.**

DISTANCE VS BATTERY

Table 2 will guide you and give you an idea of potential distances that you can travel on one battery charge according to a use in ideal conditions. Distances will vary depending on road conditions, riding surface, cyclist's weight and assistance need. The following averages are based on a 68 kg cyclist riding on a flat surface, in a windless environment.

ASSISTANCE	APPROXIMATE DISTANCE TRAVELLED ON ONE BATTERY CHARGE
Mode 1 : 25 %	70 km
Mode 2 : 50 %	45 km
Mode 3 : 100 %	35 km
Mode 4 : 200 %	25 km
pedalling without assistance	Unlimited (no use of the motor)

TABLE 2

BEFORE ANY RIDE

- Make sure the connexions are all adequately plugged in;
- Look for a full battery charge level on your LCD command console. If this is not the case, please refer to the “how to charge the battery” section (page 11);
- Always make sure your battery is well fastened to the frame and locked.

FLAT TIRE

Simply disconnect both connectors that are covered with a neoprene (rubber girdle) near the rear wheel. You can remove the BionX wheel like any conventional wheel. In case of problem, please see your retailer.

HOW TO BRING THE BEST OUT OF YOUR BIONX SYSTEM

Use the assistance levels according to your needs. Always remember that your BionX is still a bicycle and should be used as such.

Look for opportunities to use the recharge modes. If you are going downhill or with the wind to your back, it is sensible to put the bike in recharge mode by pressing the **G-** button or by braking.

WARRANTY

The system components are guaranteed two (2) years against all fabrication defaults, except for the battery, consumable good, that is guaranteed one (1) year.

HOW TO CONTACT US

Please feel free to contact us if you have any questions or comments.



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