

BELROBOTICS

Instruction manual for Belrobotics robot lawnmowers – 2013 models



CONTENTS

1. For your personal and collective safety	3
A. Safety of children and vulnerable people	3
B. Before using your robot	3
C. Using your robot	3
D. Maintenance and storage	4
E. Liability	4
2. Safety recommendations & Warning symbols.....	5
3. Description	7
A. Overview	7
B. Diagram of BigMow parts	8
C. Diagram of ParcMow parts.....	9
D. Diagram of GreenMow parts	10
4. Technical Specifications.....	11
5. Guide to Use	12
A. Mowing mode	12
B. Mowing height.....	12
C. Safety sensors	12
6. Initial setup	13
A. Batteries	13
B. Settings & options	13
C. Switching the robot on/off	13
7. Instructions for use	14
A. Using the control panel and display screen	14
B. Sending the robot back to the charging station.....	15
C. Visual and audio signals	15
D. Using the menu	16
E. Using options	19
8. Service	23
A. Batteries	23
B. Cleaning	23
C. Charging ports	23
D. Winter storage.....	23
E. Cutting heads	24
9. Installation	24
10. Repairs.....	25

1. FOR YOUR PERSONAL AND COLLECTIVE SAFETY

The *Belrobotics* robot lawnmower is designed with user safety in mind. For example, the cutting heads are covered by a special patent. If the lawnmower comes into contact with an object, the heads retract automatically. This is one of the major advantages of the mower.

In addition, the mower can detect people or objects in the vicinity through its sonar system, causing it to slow down instantly. If it comes into contact with an obstacle, it stops and automatically changes direction.

Lifting sensors immediately stop the rotation of the cutting heads if the robot is raised while in use.

Unlike traditional garden maintenance robots, the *Belrobotics* robot is a quiet and safe way of maintaining your lawn. Nonetheless, you are advised to take certain precautions when using the robot.

A. SAFETY OF CHILDREN AND VULNERABLE PEOPLE

- This appliance is not designed for use by children, people with physical, sensory or mental disabilities, or anyone with a lack of experience and understanding of the appliance, as their use of the appliance may put them at risk if left unsupervised or without the guidance of a responsible adult who can instruct them and ensure that the appliance is being used safely.
- Do not let children play with the robot or charging station.
- Keep children and animals at a safe distance from the robot when in use.
- Do not let children clean or perform maintenance work on the robot or charging station unsupervised.

B. BEFORE USING YOUR ROBOT

- Read through this instruction manual carefully from start to finish.
- Make sure that physical barriers are in place where needed (access to a road, swimming pool, pond etc.).
- Make sure that there are no objects lying on the lawn (toys, branches etc.).
- If you have automatic sprinklers on your lawn, program your robot to return to the charging station at least one hour before the sprinkler system is activated.
- Several people will be needed to transport/handle the robot.

C. USING YOUR ROBOT

- Even when you have read and fully understood the instructions for using the robot, you are nonetheless advised to carry out some trial manoeuvres the first time you switch on the robot to make sure you know exactly where the controls and main options are located.
- **Warning:** never put your hands or feet underneath the robot when it is switched on, especially in the area in front of the wheels.
- Switch the robot off safely and wait until the movement of the cutting heads has come to a complete halt before lifting, moving or otherwise handling the robot.
- Never leave the robot on a slope.

These measures are crucial to ensuring your safety. However, the above recommendations are not exhaustive; use your robot with care at all times.

- **Never** connect external electrical parts to the battery cable.
- **Never** remove the batteries from the robot to charge them: always use the charging station.
- **Never** use other methods to charge the batteries (e.g. car battery chargers etc.).

These measures are vital to ensure the batteries function correctly and to keep your warranty valid.

D. MAINTENANCE AND STORAGE

- Carry out maintenance on your robot as per the instructions: regular maintenance will keep your robot in top condition, optimise its performance and extend its life.
- Disconnect the electricity supply before carrying out any maintenance work on the charging station.
- Always make sure the robot's main switch is in the OFF position before carrying out any maintenance work on the robot.
- Check the tightness of the screws joining the main parts together on a regular basis.
- Your robot is an electrical appliance: never clean it with water.
- Wear protective gloves when carrying out maintenance work on the cutting heads.
- Always replace old parts with spare parts supplied by *Belrobotics* in order to maintain the same level of effectiveness and safety.

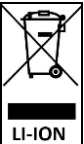
Failure to adhere to these recommendations may result in damage to your robot or even place you at risk of serious injury.

E. LIABILITY

- *Belrobotics* refuses all liability in cases where the robot is used in a manner not in accordance with the instructions provided.
- Do not modify your robot without prior agreement from *Belrobotics*. Any unauthorised modification could render your robot dangerous and could lead to serious injury when used.
- In addition to the risk to the user, the use of "generic" spare parts renders the warranty null and void in case of any damage which may occur as a result.

Belrobotics refuses all liability in case of accidents caused by the use of a generic spare part.

2. SAFETY RECOMMENDATIONS & WARNING SYMBOLS

	Read this instruction booklet carefully and familiarise yourself with the content before using your robot for the first time.
	This automatic lawnmower device could be dangerous if used incorrectly. The instructions for use and safety recommendations must be respected at all times so that the device can be used as effectively and safely as possible.
	Never put your feet or hands near the rotating blades or the underside of the hood while the robot is in use. Do not put anything on top of the robot.
	Do not climb or sit on the robot.
	Risk of flying objects.
	Keep a safe distance from the robot when in use.
	Never use your robot when there are children, animals or people who are unaware of the device in the mowing area. Only switch on your robot when the area is unoccupied.
	Move/handle your robot with the assistance of at least one other person and pick up the robot using the correct parts for easy transportation. Make sure the robot is switched off during transportation (main switch in the OFF position).
	Do not spray the robot. Do not clean it with water. Do not wash the robot with a high pressure cleaning device. Do not use the robot in conjunction with an automatic sprinkler system.
	Always use suitable protective gloves when carrying out maintenance on your robot.
	There are specific rules for the disposal of electrical and electronic waste. Contains Lithium.



BigMow



ParcMow



GreenMow



Station



BELROBOTICS 
THE GRASS MASTERS

Ref.: STNN13

Input: 230V AC 50Hz

Output: 32V DC (SELV) - 10A max.



3. DESCRIPTION

A. OVERVIEW

The *Belrobotics* robot is a fully automatic lawnmower. It can be used to maintain up to 2 hectares of lawn, providing the owner with a consistent and independent method of maintaining their lawn.

The robot works independently in its mowing area, which is marked out by a boundary wire buried underground. It moves in a random manner, adapting to its surroundings using its sonar system and various other sensors to avoid obstacles. When the batteries need recharging, the robot automatically returns to the charging station.

The robot has several sensors which optimise safety in case of user error.

It is also equipped with advanced technology. The electronic and computer systems process the data recorded by the numerous sensors in real time, allowing the robot to run at optimum level in all situations.

B. DIAGRAM OF BIGMOW PARTS



1	Bodywork
2	Sonar obstacle detection
3	Tactile bumper for obstacle detection
4	Charging port
5	Control panel and display
6	Main switch – robot ON/OFF
7	Mowing height regulator
8	Battery area
9	Case containing electronic motherboard
10	Cutting heads (x5)
11	Protective buffers
12	Drive wheels
13	Front wheels (x4)
14	Sensor to detect boundary wire signal
15	Charging station
16	Charging arm
17	Sonar station
18	LED signal display

C. DIAGRAM OF PARCMOW PARTS



1	Bodywork
2	Sonar obstacle detection
3	Tactile bumper obstacle detection
4	Charging port
5	Control panel and display
6	Main switch – robot ON/OFF
7	Mowing height regulator
8	Battery area
9	Case containing electronic motherboard
10	Cutting heads (x3)
11	Protective buffers
12	Drive wheels
13	Front wheels (x2)
14	Sensor to detect boundary wire signal
15	Charging station
16	Charging arm
17	Sonar station
18	LED signal display

D. DIAGRAM OF GREENMOW PARTS



1	Bodywork
2	Sonar obstacle detection
3	/
4	Charging port
5	Control panel and display
6	Main switch – robot ON/OFF
7	Mowing height regulator
8	Battery area
9	Case containing electronic motherboard
10	Cutting heads (x2)
11	Protective buffers
12	Drive wheels
13	Front wheels (x1)
14	Sensor to detect boundary wire signal
15	Charging station
16	Charging arm
17	Sonar station
18	LED signal display

4. TECHNICAL SPECIFICATIONS

	BigMow	ParcMow	GreenMow
Propulsion	125 W 2 wheels, $\phi 45$ cm	92 W 2 wheels, $\phi 36$ cm	58 W 2 wheels, $\phi 26$ cm
Working speed	3.6 km/h	2.9 km/h	2.2 km/h
Maximum incline	30%	30%	30%
Battery type / capacity	Li-Ion / 15 Ah	Li-Ion / 10 Ah	Li-Ion / 10 Ah
Max. energy consumption of 1 robot over a 9-month period	800 kWh	555 kWh	450 kWh
Bodywork	ABS	HD-PE	HD-PE
Decibel level (at 1 m)	< 65 dB	< 65 dB	< 62 dB
Dimensions l x w x h	120 x 120 x 50 cm	102 x 100 x 45 cm	80 X 65 x 36 cm
Weight	51 kg	36 kg	25 kg
Cutting width	105 cm / 5 heads	65 cm / 3 heads	44 cm / 2 heads
Mowing height	11 positions From 22 to 80 mm	8 positions From 22 to 65 mm	8 positions From 22 to 75 mm
Mowing capacity	Up to 20,000 m ²	Up to 10,000 m ²	Up to 6,000 m ²
Tactile sensor	Yes	Yes	No
Obstacle sensor	Yes	Yes	Yes
Lifting sensor	Yes	Yes	Yes
Watertight sonar system	Yes	Yes	Yes

	Charging station
Voltage at entry/ exit	In: 230 Vac 50 Hz / Out: 32 Vdc
Energy consumption	3 W (boundary signal), 320 W (charge of robot)
Boundary signal	0.12 A rms maximum
Weight	6 kg
Dimensions	85 x 45 x 35cm

5. GUIDE TO USE

A. MOWING MODE

The *Belrobotics* robot uses a “random” mowing method. The random mode means that it chooses its route in an unsystematic manner. When it comes across an obstacle or the boundary wire, the onboard computer selects a new direction. Thus, the route and the directions the robot takes will be different every time. By the end of the process, every square metre of the lawn will have been mown. In areas where the lawn is denser, the robot will automatically adapt its mowing mode by slowing down or mowing one square at a time.

When the batteries need to be recharged, the robot follows the boundary wire to its charging station. After the batteries have been fully recharged, it automatically continues the process.

If the lawn does not need to be mown, the robot detects this and waits at its charging station for an extended period. It then starts mowing again at a later date. It only mows when necessary.

B. MOWING HEIGHT

I. How to set the mowing height

The mowing height can be set between ‘x’ mm and ‘y’ mm (see table on page 11) by setting intermediary fixed values.



a. Raise the hood



b. Lift the adjustment valve



c. Slide along the adjustment rod to the desired height.

C. SAFETY SENSORS

The robot is equipped with a sonar system and several collision sensors, meaning that it can slow down and change direction when it comes across an obstacle at least 50cm high and 10cm wide.

It is also equipped with a system which instantly stops the rotation of the cutting heads if it detects it is being lifted.

I. How often to adjust mowing height

When using the robot for the first time or after being switched off for several days, the grass may be too dense or too high. At this point you are advised to increase the mowing height for a few days before gradually reducing it again (one notch every 2 days).

If the grass height is irregular, the *Belrobotics* robot will mow the higher patches of grass more slowly (leading to a better result). If the cutting resistance is too high, the robot will mow one square at a time.

6. INITIAL SETUP

A. BATTERIES

The batteries of the *Belrobotics* robot should be sufficiently charged to allow your authorised *Belrobotics* dealer to carry out the initial setup tests.

Once these tests have been completed, it is recommended that you send your robot back to the station to fully charge before it starts to maintain your land.

B. SETTINGS & OPTIONS

When the robot leaves the factory it is set to default settings and options. Some of the settings and options must be adjusted before you switch on your robot for the first time, such as user language, the number of metres of boundary wire, the direction of return to the station, rest ranges etc. By adjusting these options and settings correctly, you can ensure that your robot will be able to provide optimum performance in accordance with the characteristics of the area you wish to maintain.

Please ask your authorised *Belrobotics* dealer to help you configure your robot. You can also consult the "Instructions for use" chapter.

C. SWITCHING THE ROBOT ON/OFF

I. Switching the robot on

Use the following procedure to switch on the robot:

- a. Lift the access hood of the robot.
- b. Move the main switch to "I".
- c. Press the "I" key on the control panel. The screen will light up.
- d. Press the "I" key on the control panel a second time. The screen will flash.
- e. Close the access hood in the next 8 seconds. The robot will start.

II. Switching the robot off

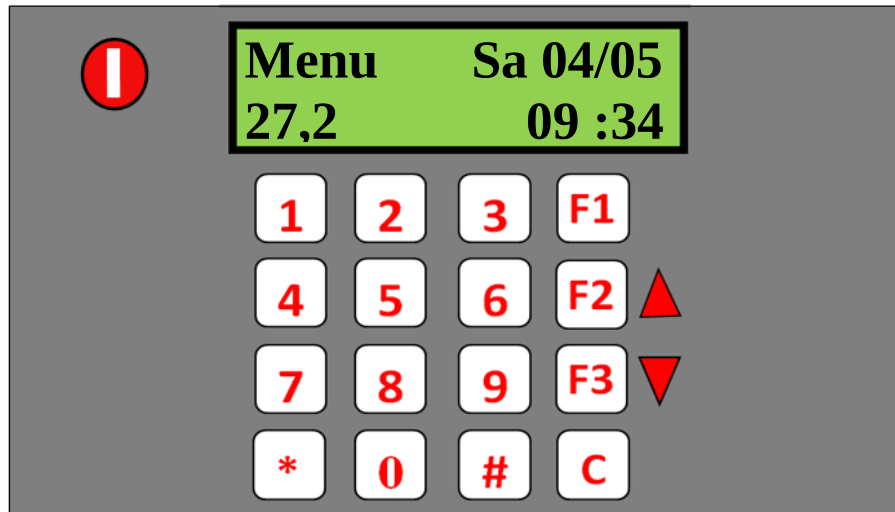
To switch the robot off, simply raise its hood.

It will start working again only when you apply the procedure described above.

7. INSTRUCTIONS FOR USE

A. USING THE CONTROL PANEL AND DISPLAY SCREEN

The control panel has a total of 17 keys: 10 "Number" keys and 7 "Action" keys. When it starts up, the display shows the time and date on the system, as well as the battery voltage.



Keys	Actions
	Switch on and start the robot.
F1	Bring the robot back to the charging station. When the battery is charged, the robot will automatically continue its mowing program.
F2	Navigate through the menu and sub-menus. Bring the robot back to the charging station. The robot will remain at the station even after the battery has been charged. The user will need to press the key for the robot to continue its mowing program.
F3	Navigate through the menu and sub-menus. Show the "magnetic distance" of the robot from the boundary wire (instead of the time). This function is for after-sales service.
#	- Access menu and sub-menus. - (De)select an option.
C	Go back in menu and sub-menus. Delete the robot's alarm messages which are displayed on the screen.
*	- Enter a pin number or access code to change settings. - (De)select rest days.

B. SENDING THE ROBOT BACK TO THE CHARGING STATION

I. For one cycle (Return to station, F1)

If you want the robot to continue mowing after it has recharged:

- Stop the machine by raising the hood.
- Press **F1**. The screen will display: "O01 GoToChge: v "
- Press **⏻** to start the robot again.
- Close the hood in the next 8 seconds.

II. For several cycles (Rest at station, F2)

If you want the robot to remain at the charging station until further notice:

- Stop the machine by raising the hood
- Press **F2**. The screen will display: "O02 Stay@Chge: v"
- Press **⏻** to start the robot again.
- Close the hood in the next 8 seconds.

If you want the robot to restart its mowing cycles after an "F2" rest period at the charging station:

- Raise the hood of the robot at the station.
- Press **⏻** to start the robot again.
- Close the hood in the next 8 seconds.
- The robot will leave the station again once its batteries have been fully recharged.

C. VISUAL AND AUDIO SIGNALS

Your *Belrobotics* robot conveys messages about its status through beeps or information displayed on the screen.

The station also conveys messages about its status through a two-coloured LED light.

ROBOT	CHARGING STATION
Beeps	LED
- 1 long beep: Stop robot or incorrect key has been pressed - 1 short beep: Key has been pressed - 2 long beeps / 10 sec: Charge robot - 2 short beeps / 1 sec: Cutting heads starting up - 1 short beep / 2 sec: Alarm	- Blinking green light: OK, normal mode - Blinking red light: boundary wire has been cut or is too long (usually > 1200 m) - Continuous red light: failure of the station's electronic card or wire is too short (usually < 200 m) - No colour: the station is not connected to an electricity supply.
Charge	
- FC: Fast Charge, normal mode - SC: Slow Charge, rest mode - WU: Wait User - WT: Wait programmed Timers - W.BH: Wait Battery too Hot - W.FT: Wait Freezing ambient Temperature	

D. USING THE MENU

I. Infos

In this menu you will find basic information about your *Belrobotics* robot such as the series number of the main electronic card, the program version, statistics and the robot's events log.

See below for details of the four sub-menus under the "INFOS" menu.

a. STATISTICS

This table shows the codes for the different statistics categories and what they mean.

Statistics	
S0	Working time in minutes
S1	Charging time in minutes
S2	Total number of cycles
S3	Left wheel: distance in metres
S4	Right wheel: distance in metres
S5	Latest charging capacity
S6	Latest discharging capacity
S7	Rest time in minutes

b. HISTORY

This table shows the codes for the events recorded by the robot and their meanings. The robot's memory can store nearly 1000 events. This sub-menu will mainly be used by your supplier.

History	
S	begin Seeking station
Wc	begin Working/charged xx%
Cw	begin Charge/worked xx%
Rc	begin Rest on charge/charged xx%
U	panel opened by User
Go	Start to work
On	Switched on
- -	Switched off
Al	Alarm
NP	New Program (upgrade)

c. VERSION

This sub-menu provides information on the program version of your robot.

d. SERIAL NUMBER

This sub-menu displays the serial number of the main electronic card.

II. Settings

The "SETTINGS" menu and its seven sub-menus allow you to adjust several settings in order to adapt and configure your *Belrobotics* robot to your needs. Below you will find explanations of the seven sub-menus.

1. REST SETTINGS

This sub-menu allows you to programme up to four rest periods during which your robot will not work. It will remain at the charging station instead.

1. Enter the time (in hours and minutes) at which you want the rest period to begin, and then the time at which you want the rest period to end using the **0** to **9** numeric keys. Confirm by pressing **#**.
2. Use the **F2** and **F3** keys to move on to the days of the week and **★** to select the days when you don't want your robot to work. Confirm by pressing **#**.
3. When "REST RANGE 2" is displayed, repeat the steps described above as necessary.
4. Once all of the rest periods have been programmed, press **C** several times to return to the "MENU" page.

Rest range 1# : __ : __ → __ : __
☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Rest range 2# : __ : __ → __ : __
☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Rest range 3# : __ : __ → __ : __
☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Rest range 4# : __ : __ → __ : __
☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Note: Rests settings during the night

In order to program a rest period which spans across midnight (00:00) you must program two rest periods, because the rest range covers two separate days.

Example 1: The robot rests from 9pm on Monday and starts working again the following day at 6am.

Rest range 1#: 21 : 00 → 00 : 00
☒ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Rest range 2#: 00 : 00 → 06 : 00
☐ Mon ☒ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Example 2: A two-hour rest period every night during the week starting at 11pm because an automatic sprinkler system is in use.

Rest range 1#: 23 : 00 → 00 : 00
☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☐ Sat ☐ Sun

Rest range 2#: 00 : 00 → 01 : 00
☐ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat ☐ Sun

2. Clock

With this sub-menu users can set the time and date which are displayed on the screen of the robot.

1. When "Clock" is displayed, press **#** once.
2. Enter the time in hours and minutes using the **0** to **9** numeric keys.
3. Once the time in hours and minutes has been programmed, the cursor will automatically move on to the day. Use the **1** to **7** numeric keys to choose the day of the week, from Monday to Sunday.
4. Press **F3** to move on from the day of the week to the date, then use the **0** to **9** numeric keys to enter the current day, month and year. Confirm by pressing **#**.
5. After programming the date, press **C** several times to return to the "MENU" screen.

3. NEW CODE

You can lock your robot with a PIN code to increase security levels.

This sub-menu allows users to input, modify or cancel a code for the robot.

1. When "NEW CODE" is displayed, press **#** once.
2. The screen will display " # - - - ". You can now enter your new four-digit code, followed by **#** to confirm.
3. The screen will now be showing "# DAYS: 030 ". The robot will ask you to enter the code once every 30 days. To reduce or increase this frequency, use the **0** to **9** keys and confirm by pressing **#**.
4. To change your code, press **#** once when " " is displayed.
5. The screen will display " * - - - ". Enter your old code and press **#** to confirm.
6. The screen will now be showing " # - - - ". Enter your new code, confirm by pressing **#**, enter the number of days and confirm by pressing **#**.
7. To delete the PIN code, enter '0000' as a new code.

4. LANGUAGE

This sub-menu allows users to select the menu language.

1. When "LANGUAGE" is displayed, press **#** once.
2. Use the **F2** and/or **F3** keys to choose the language and confirm by pressing **#**.
3. Press **C** several times to return to the "MENU" screen.

5. OPTIONS

See section E, "Using options" on page 19.

E. USING OPTIONS

This sub-menu contains 16 options, accessible according to the configuration of the area to be mown and the robot's firmware. Options can be selected '√' or deselected '-' with the # key by your dealer to suit your mowing area.

Caution is advised when using this sub-menu as modifications can significantly alter the effectiveness of the robot.

OPTIONS	DEFAULT
Option 00: Multiple robots	-
Option 01: Go charging	-
Option 02: Stay on charge	-
Option 03: Demo mode	-
Option 04: No beep in charge	-
Option 08: Signal Phase Inversion	-
Option 09: Heads rotation alternated	√
Option 10: Counter-clockwise dock seek	-
Option 11: Both sides docking	√
Option 13: Docking manoeuvre in U	√
Option 14: Back along wire	-
Option 15: No rests	-
Option 16: Multizone	-
Option 17: Active zone	√
Option 18: Keyboard lock	-

➤ Option "000 – MultiRobot":

The "MultiRobot" option must be selected if several robots are working in the same area.

From the "OPTIONS" screen, press # - F2 and use # again to select or deselect the option.

000 MultiRobot: " - ", the robot will charge at any charging station.

000 MultiRobot: " √ ", the robot will only connect to one specific available station.

In practice, this option must only be selected for specific cases (e.g. Golf courses).

➤ Option "001 – GoToChge":

This option requires the robot to return immediately to its charging station. Once the robot's batteries have been recharged, it automatically starts working again.

From the "MENU" screen, press F1.

001 GoToChge: " - ", the robot continues working normally.

001 GoToChge: " √ ", the robot returns to its charging station immediately.

➤ Option "O02 – Stay@Chge":

This option forces the robot to return to its charging station and stay there until further instruction from the user.

From the "MENU" screen, press **F2**

O02 Stay@Chge: " - ", the robot continues working normally.

O02 Stay@Chge: " √ ", the robot returns to its station immediately and stays there.

To restart the recharged robot, open the access hood, press **F2 - # - ON** and close the hood again within 8 seconds.

➤ Option "O03 – DemoMode":

The demo mode allows the user to start up the robot, with or without a boundary signal. The cutting heads will not be activated in this mode: the robot will move around without mowing.

From the "OPTIONS" screen, press **# – 3** and use the **#** key to select or deselect the option.

O03 DemoMode: " - ", the robot works as normal, without a boundary signal.

O03 DemoMode: " √ ", the robot moves without mowing, with or without a boundary signal.

➤ Option "O04 – NoChgeBip":

When the robot is charging, it beeps twice every 10 seconds to show that it is still connected to its station. However, it can be set to silent mode if the station is located near a dwelling, patio etc.

From the "OPTIONS" screen, press **# – 4** and use the **#** key to select or deselect the option.

O04 NoChgeBip: " - ", the robot beeps twice every 10 seconds while its batteries are charging.

O04 NoChgeBip: " √ ", the robot stays silent while its batteries are charging.

➤ Option "O08 – Philnv":

This option should only be used by your authorised dealer.

This option is used only the first time you switch on your robot, to choose the correct phase in accordance with the installation of the boundary wire.

From the "OPTIONS" screen, press **# – 8** and use the **#** key to select or deselect the option.

O08 Philnv : " - ", in accordance with the installation.

O08 Philnv : " √ ", in accordance with the installation.

➤ Option "O09 – HeadRotInv":

This option alternates the direction in which the cutting heads rotate after each mowing cycle.

From the "OPTIONS" screen, press **# – 9** and use the **#** key to select or deselect the option.

O09 HeadRotInv: " - ", no alternation of direction in which cutting heads rotate.
 O09 HeadRotInv: " √ ", cyclical alternation of direction in which cutting heads rotate.

➤ Option "O10 – CCWSeek":

This option causes the robot to return to the charging station in a clockwise direction.

From the "OPTIONS" screen, press **# – 9 – F3** and use the **#** key to select or deselect the option.

O10 CCWSeek: " - ", return to the charging station in a clockwise direction.
 O10 CCWSeek: " √ ", return to the charging station in an anticlockwise direction.

If option O11 is selected, option O10 will display the current choice being used by the robot first, but can be overridden by the user.

➤ Option "O11 – Chge2Sides":

This option allows the robot to return to the charging station in either direction.

From the "OPTIONS" screen, press **# – 9 – F3 – F3** and use the **#** key to select or deselect the option.

O11 Chge2Sides: " - ", return to charging station in one direction only, as defined by option O010.
 O11 Chge2Sides: " √ ", return to charging station in either direction.

➤ Option "O13 – Udocking":

This option defines the manoeuvre for returning to the station.

In a "U" return, the robot passes in front of the station before performing a U-turn to connect to the station.

In an "S" return, the robot returns to the station directly without passing in front of it first.

From the "OPTIONS" screen, press **# – 9 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O13 Udocking: " - ", "S" return manoeuvre.
 O13 Udocking: " √ ", "U" return manoeuvre.

➤ **Option "O14 – Back Along Wire":**

This option defines the station return path.

With Back Along Wire enabled, the robot follows its wire back to the station.

With Back Along Wire disabled, the robot follows its trackborder defined at the time of station installation.

From the "OPTIONS" display, press **# – 9 – F3 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O14 Back Along Wire: " - ", back along trackborder.

O14 Back Along Wire: " √ ", back along wire.

➤ **Option "O15 – No Rests":**

This option disables the machine rest times.

From the "OPTIONS" display, press **# – 9 – F3 – F3 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O15 No Rests: " - ", rest times observed.

O15 No Rests: " √ ", rest times ignored.

➤ **Option "O16 – Multizone":**

This option enables Multizone operation. Refer to the Multizone manual.

From the "OPTIONS" display, press **# – 9 – F3 – F3 – F3 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O16 Multizone: " - ", no multizone.

O16 Multizone: " √ ", multizone enabled.

➤ **Option "O17 – Enable Zone":**

Accessible in Multizone mode only. This option enables the zones to be mown. Refer to the Multizone manual.

From the "OPTIONS" display, press **# – 9 – F3 – F3 – F3 – F3 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O17 Enable zone: " - ", zone disabled.

O17 Enable zone: " √ ", zone enabled.

➤ **Option "O18 – Keyboard Lock":**

Keyboard lock

From the "OPTIONS" display, press **# – 9 – F3 – F3 – F3 – F3 – F3 – F3 – F3 – F3** and use the **#** key to select or deselect the option.

O18 Keyboard Lock: " - ", keyboard enabled.

O18 Keyboard Lock: " √ ", keyboard locked.

8. SERVICE

To optimise the working life of your robot, we advise two service operations per year: a minor maintenance check-up halfway through the year and a major check-up in winter.

A. BATTERIES

Belrobotics robot lawnmowers are equipped with the latest generation Li-Ion batteries. Their capacities differ depending on the model of robot.

Battery life is optimised when the robot is allowed to function automatically. Users must therefore leave the robot to manage its own work cycles independently as often as possible.

If the work cycles are unusually short, contact your supplier to check the condition of the batteries.

B. CLEANING

A clean and well-maintained machine will always last longer. You are advised to clean your robot weekly. Simply brush the underside of the robot and remove any grass blockages from around the front and back wheels and the cutting heads as necessary.

Do not use a hosepipe or high pressure cleaning device.

C. CHARGING PORTS

The charging ports, both on the robot and on the station, are important parts because they ensure that the batteries can be charged.

It is therefore highly advisable to clean the charging ports on the robot and the station with sandpaper with a grit size of at least P180:

- during the mid-year check-up
- during the maintenance check-up at the start of the year
- if any problems with charging are observed.

Users are not at risk when carrying out this maintenance work as the robot and station operate on Safety Extra Low Voltage level.

D. WINTER STORAGE

At the end of the mowing season, recharge your robot before storing it in a dry, sheltered place away from freezing temperatures.

The main switch MUST remain in the OFF position throughout the winter storage period, in order to protect the batteries from potential damage.

You are advised to switch off the outdoor electricity supply to the charging station (mains plug, switchboard etc.) throughout the winter storage period.

E. CUTTING HEADS

The cutting heads are the main determiners of the mowing result. You are advised to check them at least once a month and replace them when they are worn out. It is advisable to change them at the beginning of the season and during the month of June.

Use the following procedure for changing the cutting heads:

1. Make sure the machine is switched OFF and wear protective gloves.
2. Lift the robot.
3. Place the disk opening opposite the top of the screw attaching the cutting head.
4. Unscrew the cutting head.
5. Remove the new part from its packaging.
6. Insert the new cutting head and screw it in.

If you have any doubts about this process or attaching one of your cutting heads, please contact your supplier.

9. INSTALLATION

The installation of the boundary wire and the charging station are essential to ensuring your robot can work effectively.

Furthermore, the electrical installation (connecting the charging station to the electricity supply) must be carried out by a professional.

It is therefore highly recommended that an authorised professional carry out the installation process from start to finish.

10. REPAIRS

The table below illustrates the most common problems encountered by users.
For all other problems or irregularities, contact your dealer immediately.

Situation		Explanation		Solution
1	Alarm message on screen: <i>"Head..."</i>	1	The grass which has been cut was too high and has clogged up one or more of the cutting heads.	Clean the cutting heads (the user must wear protective gloves).
		2	Something is blocking one or more of the cutting heads (e.g. a branch, fruit etc.)	Unblock the cutting heads (the user must wear protective gloves).
2	Alarm message on screen: <i>"Lifted"</i>	1	Someone has lifted the robot while it was working.	This alarm has been activated for safety reasons. Simply restart the robot.
		2	The robot has sensed a difference in height because of an irregularity on the ground (e.g. deep hole, rut etc).	Fix the problem on the ground so that the robot no longer detects an irregularity.
3	Alarm message on screen: <i>"Supply outage"</i>	1	The robot was connected to its charging station but has been detached.	Restart the robot. If you put the robot back on charge manually, remember to press the  key so that it continues working again automatically once fully charged.
		2	The robot seems to be connected to the charging port at the station.	Check whether the station is connected to the electricity supply and whether the charging ports on the station or robot have rusted. See §8.C., p.23
4	Alarm message on screen: <i>"Charge contact?"</i>	1	Upon returning to the station, the robot has manoeuvred to connect to the charging port, but has not detected a charge and has moved away from the station.	Check whether the charging ports on the station or robot have rusted. See §8.C., p.23

Situation		Explanation		Solution
5	The robot remains at the station for a long time and does not move away.	1	Screen displays: SC (see §7.C, p.15) The grass in the mowing area has been adequately cut. The robot is now resting at the station to save energy and avoid damaging the ground unnecessarily.	This situation is normal. The robot will continue its work cycle again when necessary.
		2	Screen displays: WU (see §7.C, p.15) The robot has been manually brought to the charging station by a user and won't start working again.	If you want the robot to switch on automatically after a manual charge, please press 1 .
		3	Screen displays: WT (see §7.C, p.15) The robot is resting during a programmed rest period.	This situation is normal. The robot will continue its work cycle again when necessary.
		4	Screen displays: W.BH or W.FT (see §7.C, p.15) The robot is not working as its battery temperature is too high or too low. This helps to avoid damage to the batteries or the land being maintained.	This situation is normal. The robot will continue its work cycle again when necessary.
		5	Option O02: "Stay@Chge" has been selected.	To restart the robot, press 1 .
6	Alarm message on screen: <i>"No wire signal"</i>	1	The LED at the back of the station is not switched on. The station is not connected to a power supply.	Check the status of the electricity supply to the station. If the LED still does not light up, contact your dealer.
		2	The LED at the back of the station is flashing red. The boundary wire has been cut or damaged.	Contact your dealer.
		3	The LED at the back of the station is flashing green. The problem could be coming from the robot or from the ground.	Contact your dealer.

7	Keyboard disabled	1	The keyboard was disabled by option 18.	Press the 0 key for 5 seconds
		2	The keyboard is defective	Contact your installer.