

GREENMOW

User Manual



English Version

*Read this instructions manual carefully before starting to use the **GREENMOW***

BELROBOTICS 
THE GRASS MASTERS





Safety of the GREENMOW

The automatic lawnmower **GREENMOW** has been designed to be safe for the user. It is the subject, amongst other things, of a specific patent concerning the cutting blades. In short, when in contact with objects, the blades retract automatically, which is one of its great advantages.

Furthermore, its sonar system enables it to perceive the presence of people or objects nearby, which instantly makes it slow down. When coming into slight contact with an obstacle, it stops and automatically changes direction.

Unlike traditional garden maintenance machines, the **GREENMOW** offers tranquillity and safety on the lawn. However, it is still important to take certain precautions when handling the machine.

Instructions and pictogram



IMPORTANT!

Read the instruction manual carefully in order to understand the contents before starting to use your **GREENMOW**.



WARNING!

This automatic mowing device may prove dangerous when used incorrectly. The recommendations for use and safety must be respected absolutely for optimal, completely safe use.



WARNING!

Never place your feet and hands near the rotating blades or below the cover while the **GREENMOW** is in operation. Do not put anything on top of the **GREENMOW**.



WARNING!

Never use your **GREENMOW** when children, animals or people who are unaware are in the mowing area. Always leave your **GREENMOW** to operate alone.



IMPORTANT!

Always use suitable protective gloves while working on the **GREENMOW**.



IMPORTANT!

DO NOT climb onto or sit on the machine



IMPORTANT!

Transport the machine when turned off (master switch on OFF, take the machine to places suitable for transport)



Table of contents

Introduction	3
Safety recommendations and pictograms	4
Description of the GREENMOW	6
Composition.....	7
Technical characteristics.....	8
GREENMOW mowing modes	9
Cutting height of the GREENMOW	10
Use of the GREENMOW : Charge.....	11
Configuration of the GREENMOW : Keypad	12
Configuration of the GREENMOW : Menus	13
Summary of the important functions.....	15
Use of the GREENMOW : Various	16
Use of the GREENMOW : Configuration summary: Menu setting	17
Use of the GREENMOW : Configuration summary: Menu Option	19
Maintenance of the GREENMOW	24
Spare parts for the GREENMOW	26
Setting up the peripheral wire: Terrain boundaries	27
Setting up the peripheral wire: Boundaries and slope.	28
Setting up the peripheral wire: Delimitation	29
Setting up the charging station	30
Research and breakdown solutions	31



Description of the GREENMOW

The **GREENMOW** is a completely automatic lawnmower. It is used to maintain areas of up to 5000m². Enabling its owner to maintain his/her lawn constantly and autonomously, it moves around an area delimited by an electric peripheral wire, sheathed and buried.

The **GREENMOW** operates randomly. It adapts to its environment and avoids all obstacles thanks to a sonar system and to various sensors. When its batteries have run down, the **GREENMOW** automatically goes to recharge itself.

The **GREENMOW** uses leading technologies. Its electronics and computer system manage all the information supplied by its many sensors in real time.

The **GREENMOW** is equipped with a display giving a lot of useful information for its use.



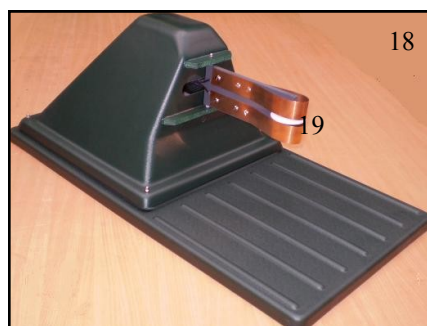
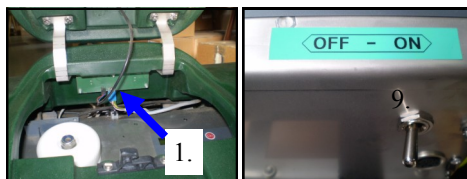
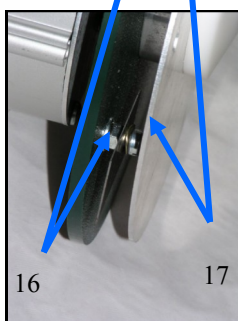
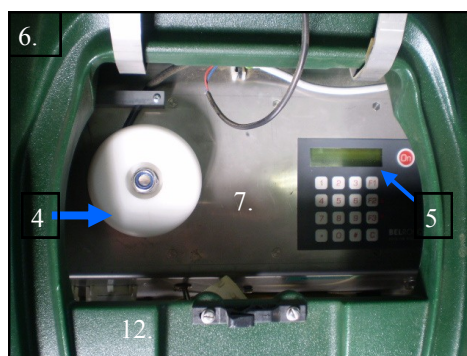
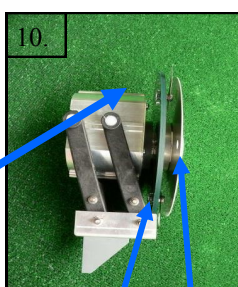
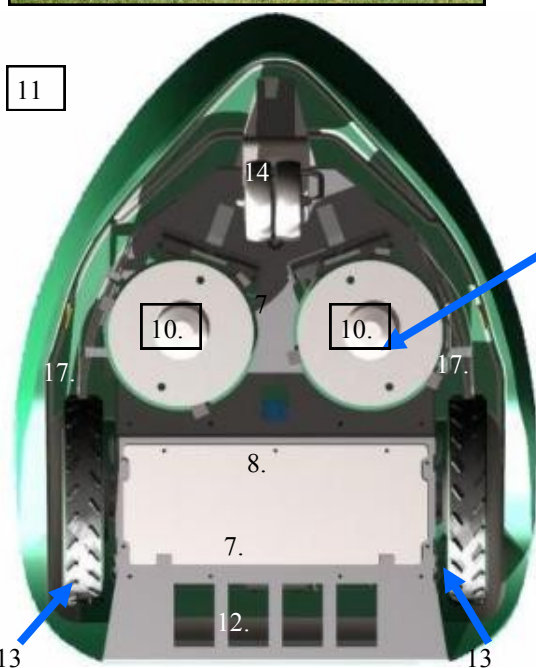
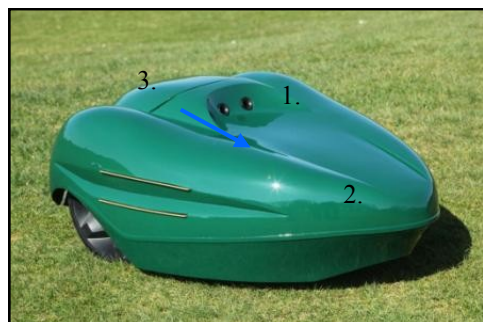
The use of the keypad enables:

1. the modification of certain options to optimise the operation (e.g. choice of mowing mode, choice of language, display of information, etc.).
2. entry of the antitheft safety code, essential for the operation of the **GREENMOW**.

A sound indication is also used to give various information to the user (safety alert, keypad use, battery charge status, etc.).



Composition



- | | | |
|--|--|---------------------------------|
| 1. Sonar | 7. Box containing the machine's management electronics | 14. Front wheels |
| 2. Body | 8. Contact sensor | 15. Supply connector |
| 3. Cover | 9. On/Off switch | 16. Cutting blades |
| 4. Cutting height setting lever | 10. Cutting components | 17. Protection disc (deflector) |
| 5. Command keypad with display screen | 11. GREENMOW underside view | 18. Charging station |
| 6. GREENMOW underside view without body | 12. Battery location | 19. Load arm |
| | 13. Motor wheels | |



Technical characteristics

Cutting system	2 discs with 3 blades
Cutting height	From 25 to 75 mm in 6 positions
Cutting disc motor	24 Volts brushless
Maximum rotation speed	3500 rotations/min
Motor wheel engine	24 Volts brushless
Maximum mowing capacity	50 ares +/- 25%
Theoretic mowing speed	950 m ² /h
Weight	26 kg
Length	70 cm
Height	38 cm
Width	57 cm
Charging Station	30 Volts AC
Peripheral wire	0,5 Volts, 50mA
Transformer	EU: 230 V~ / 15 V~, double insulation US: 115 V~/ 15 V~, double insulation
Equivalent consumption	200kwh/year
Cutting width	44 cm

Non-contractual information can be changed by the manufacturer without warning

General operation

The **GREENMOW** operates according to the random mowing mode (page 9). For the densest areas of the grass, the **GREENMOW** automatically adapts its mowing. Following its mowing mode and programming, the **GREENMOW** begins to mow the grass.

When it is faced with an obstacle of a minimum height of 40 cm and a diameter of 10 cm, the sonar gives the **GREENMOW** the instruction to slow down. When it comes into contact with the obstacle, its various sensors request it to stop, reverse and change direction while continuing to mow the grass.

When its batteries drop below the minimal charge threshold, the **GREENMOW** immediately goes to charge. It moves towards the peripheral wire and follows it in the programmed direction to find its charging station. After a full recharge, the **GREENMOW** automatically begins mowing the lawn again.

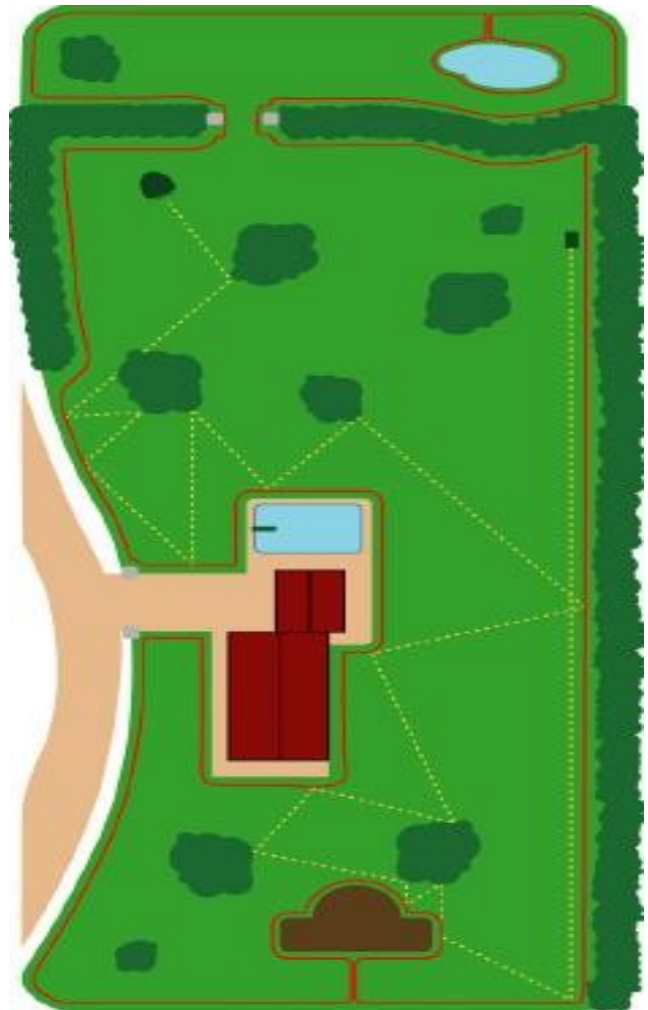
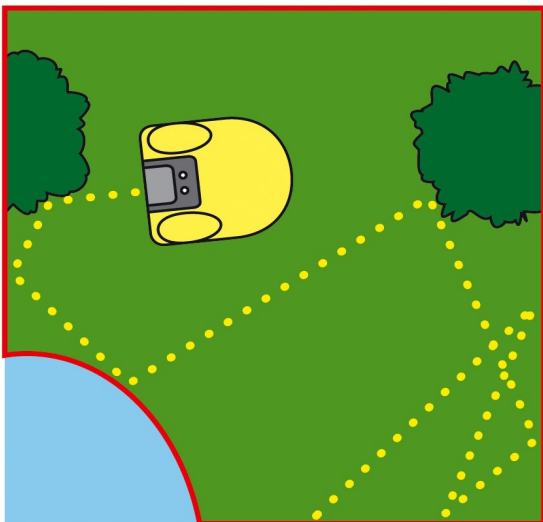
When the lawn does not need mowing, the **GREENMOW** detects it and so it waits at its station, indicating **SC** (slow charge) on its display. It starts mowing again later on. The **GREENMOW** only works when necessary.



GREENMOW mowing modes

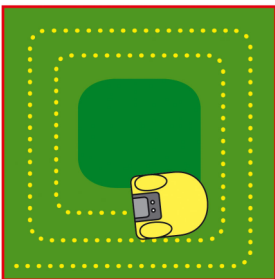
Random Mode

The “random” mode is the mode used the most often. It consists of choosing the path to take at random. When the **GREENMOW** encounters an obstacle or the peripheral wire, the computer tells it a new direction to take. In this way, the path followed is never the same and the machine’s passage is always different. In the end, each and every square metre of the surface area is mowed.



The positioning of the peripheral wire remains the same for the random mode and for the systematic mode. The reaction to obstacles is also identical.

Systematic Mode



The “systematic” mode is specific to certain applications. It needs a uniform terrain, containing as few obstacles as possible (such as a sports terrain). In “systematic” mode, the **GREENMOW** turns concentrically following the shape of the terrain up to the centre of the mowing perimeter. Coming to the middle of the terrain, the **GREENMOW** moves into “random” mode, to then begin mowing again concentrically. The **GREENMOW** detects obstacles and bypasses them to regain the position that it was in the middle of mowing. In systematic mode the grass in a 2-metre width on the edge is not maintained. It is therefore possible that parts of the lawn will not be mowed.

The choice of the systematic mode is made through the “Options” menu. It is also possible to start mowing from the centre towards the exterior (see “Options” menu).

It is strongly recommended not to use this mode for several consecutive days. A better result is achieved in random mode.



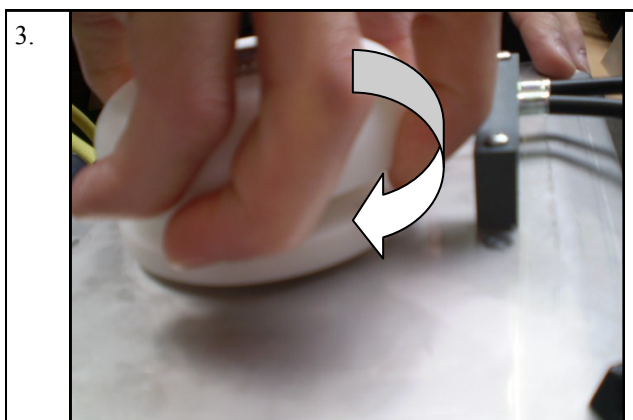
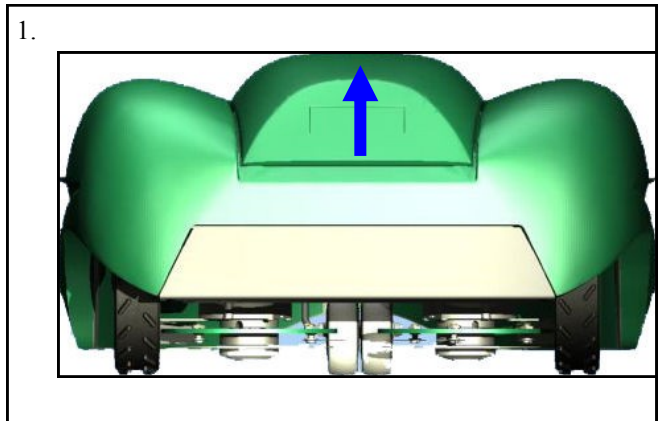
GREENMOW cutting height

Setting the cutting height

The cutting height can be adjusted between 22 mm and 75 mm. There are 6 different positions. This selection is made via a sliding bar, which is found under the cover. To change the height, lift the hand lever (vertical knob) and slide the selection bar (handle).

During activation or after a few days of not working, the lawn will be too dense or too high. It is therefore recommended that you increase the cutting height for a few days and reduce it little by little. (Advice: one notch every other day).

When the height of the grass is uneven, the **GREENMOW** slowly mows the parts of the grass that are too high (for a better result). If the resistance becomes too strong, the **GREENMOW** carries out a blunt cut. Progressive adjustment of the cutting height gives the optimal result with regard to consumption and wear. (Advice: one notch every other day).



Modification of the cutting height

1. Open the cover
2. Lift the selection needle
3. Slide the selection bar to the desired height
4. Drop the needle
5. Close the cover again



Use of the GREENMOW: Charging

The **GREENMOW** is configured in the factory with the standard parameters. When the terrain presents some peculiarities, it is advised that you ask your dealer to configure the **GREENMOW** for your application.

When the peripheral wire (see “setting up the peripheral wire” page 27) and the charging station (see “setting up the charging station” page 30) are connected correctly, you can start operating your **GREENMOW**.

Charge the battery

For safety reasons, the **GREENMOW** is supplied with an uncharged (or slightly charged) battery. During its first use, the **GREENMOW** must therefore be placed on its station for a first battery charge (manual charge). This may take approximately two hours. Afterwards, it will need approximately one hour of charging for one hour of operation. But be careful, this may vary depending on the temperature or workload on the cutting motors. If you get less than 15 minutes work from more than an hour and a half charging, the battery should be checked and changed if necessary. Ask your dealer for advice.



Position en mode charge

In continuous operation mode, when its charge level is too low, the **GREENMOW** automatically goes to recharge itself. When the battery is charged, it starts a cycle again (one mowing cycle + one charge). If during a cycle, the resistance of the grass is low, this means that the grass has not grown much. The **GREENMOW** therefore waits a few hours before starting its work again. The **GREENMOW** therefore only works when necessary.

**WARNING**

- Never leave the **GREENMOW** off in the station
- Never turn off the **GREENMOW** in the station
- Never turn on the **GREENMOW** in the station

This causes the batteries to deteriorate and is not included in the guarantee



Charging

1. Put the switch to ‘ON’
2. Press 
3. Place the **GREENMOW** on the charging station.
4. Type your code ‘*___’ followed by ‘#’
5. Laissez recharger (charge manuelle)
6. Once charged take the machine out manually
7. Press  to start up the machine and close the cover

** Change the settings parameters during charging if necessary*



Configuration of the GREENMOW: Keypad

Use of the keypad

The keypad includes 16 keys (10 numbers and 6 action keys) and 1 activation key :

- **'F1'**: Return to the charging station
- **'F2'**: Return to and wait at the charging station
- **'F3'**: See debug, or technical indication
- **'#'**: To select the chosen action
- **'*'**: To enter the code, or the selection of rest days
- **'C'**: To go back to the previous menu or to delete

To start up the machine, you have to press  (the screen blinks), then close the cover again within 8 seconds. The **GREENMOW** will start up its cutting heads then start to work



Fonctions

2 submenus are found in the "MENU":

The "*Infos*" menu (which is addressed to your technician) for all information about the operation of your **GREENMOW**;

The "*Settings*" menu to access the user settings.

The selection of * enables the user code to be entered and the machine to be activated for a chosen period. After this period, the machine stops and the code has to be re-entered. Before a delayed start, it is therefore advised that you re-enter the code. Without this code, the machine will not operate.

Keypad keys	
	: Return to the charging station
	: Return to and wait at the charging station
	: ▲ go up in the menus
	: See debug; ▼ go down in the menus
	: ↵ Selection
	: Code entry, rest days
	: Go back one level in the menu or delete
	
	: Numeric entries
	: Turn on the machine, start up

Structure of the menus	
Menu	
Infos	
Statistics	
History	
Version	
Serial	
Settings	
Rests settings	
Clock	
New code	
Language	
Options	
Suppress Rests	
‘*’ + ‘ _ _ _ _ ’ user code	



Configuration of the **GREENMOW**: Menus

Menu “Données”

This menu is addressed to your technician. It includes 4 submenus:

1) The “Statistics” menu enables general information about the operation of your **GREENMOW** to be displayed.

CODE	MEANINGS
S0	Mowing time (minutes)
S1	Charging time (minutes)
S2	Total number of cycles (Mowing+Charge)
S3	Left wheel distance (metres)
S4	Right wheel distance (metres)
S5	Battery status; Capacity of the last charge
S6	Battery status; Capacity of the last discharge
S7	Rest time (minutes)

2) The “History” menu enables the events recorded by the **GREENMOW** to be displayed.

CODE	MEANINGS
S	Begin seeking station
Wcxx	Begin Working/charged xx%
Cwxx	Begin Charge/worked xx%
Rcxx	Begin Rest on charge/charged xx%
→U	Panel Opened by User
→Go	Start to work
ON	Switched on
— —	Switched off
Al _ _	Alarm
SC	Station capture
AS	Abort Capture Seek
NP	New Program

3) The “Version” menu enables the **GREENMOW** software version to be obtained.

4) The “Serial” menu enables the serial number of the main menu to be displayed.

“Settings” Menu 7 submenus:

1) The “Rests settings” menu enables the rest range to be programmed (see p.17)

2) The “Clock” menu enables the modification of the time and the date (see p.17)

3) The “New code” menu enables the modification of the user code. (see p.18)

4) The “Language” menu gives the choice of the language (see p.18)

5) The “Debug-info” menu enables either the time, or the information to be displayed. (see p.18)

6) The “Options” menu is configured as follows: (see p.19)

000	MultiSta	007	OutWSyst
001	GoToChge	008	PhiInv
002	Stay@Chge	009	HeadRotInv
003	DemoMode	010	CCWSeek
004	NoChgeBip	011	Chge2Sides
005	SystMowing	012	EnCapture
006	CCWSyst	013	Udocking

7) The “Suppress rests” menu enables all rest ranges to be cancelled



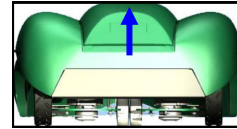
Configuration of the **GREENMOW**: Menus

Starting up the **GREENMOW**

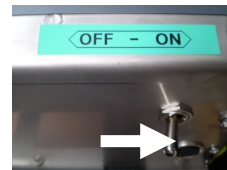
Good to know

To start up the machine:

1. Open the cover of the machine



2. Put the main switch ON if it is OFF



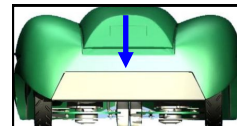
3. Press the red button **On** on the digital keypad. The screen turns on



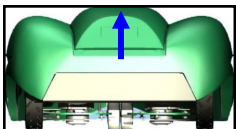
4. Press the red button **On** on the digital keypad. The screen blinks



5. Close the cover again within 8 seconds. The machine starts up its cutting heads and then starts to work



To stop the machine:

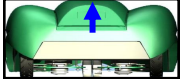


1. Raise the cover



SUMMARY

To force the machine to return to its station:



1. Stop the machine by opening the cover

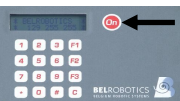


2. Press the **C** key several times if the screen does not display **Menu**



3. Press the **F1** key

Indication: **O01 GoToChge: ✓**



4. Press the red button  on the keypad. To restart the machine



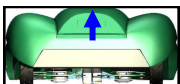
5. Close the cover within 8 seconds



With this option, when the machine has returned to its charging station, it charges itself fully then starts to work again.

If you want it to stay there without starting up, choose the option **O02 Stay@Chge** (see below).

To force the machine to return to its station and stay there:



1. Stop the machine by opening the cover



2. Press the **C** key several times if the screen does not display **Menu**

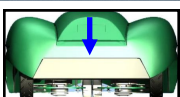


3. Press the **F2** key

Indication: **O02 Stay@Chge: ✓**



4. Press the red button  on the keypad. To restart the machine



5. Close the cover within 8 seconds



With this option, the machine goes directly back to its charging station, fully charges, then stays at its station without starting up, until this option is unticked.



To force the machine to start working again, press  and close the cover (the machine must be in contact with the station automatically).



To cancel the option on the terrain, repeat the operation and when you reach point 3 press '#' to cancel the option, indication **O02 Stay@Chge: -**



Sound and Visual Indications

During the various operations, your **GREENMOW** indicates its status to you by small 'beeps' and/or by information on the display screen.

An error message is displayed on the screen when the **GREENMOW** comes across something unexpected. In order to start the **GREENMOW** again, refer to the chapter "research and breakdown solution". The message is displayed on the screen and corresponds to a warning situation. To solve the machine's defect, refer to the aforementioned chapter.

Information Messages

It is possible to choose between displaying the time and the technical information in the "debug-info" menu.

Manual Charge

When the **GREENMOW** is placed on the charging station manually, it can only go out manually. It will not regain its automatic mode until it returns to its station automatically.

If the machine is fully charged when it is pushed outside its station, a few minutes must be waited before being able to access the commands.



Beeps		Charge status indication
<u>Machine</u>		FC: Fast Charge, normal mode SC: Slow Charge, rest MC: Manual Charge WU: Wait User (option 2) WT: Wait programmed Timers WBH: Wait Battery too Hot WFT: Wait Freezing ambient Temperature
1 long beep:	Stop machine, or Mistake on the keypad	
1 short beep:	Action on a key	
2 long beeps/2sec:	Recharge	
2 short beeps/1sec:	Manual charge	
<u>Charging station</u>		
<i>Pressing the button on the back of the station</i>		
1 beep:	OK	
2 beeps:	Oxidization of the wire.	
3 beeps:	Breakage of the wire.	
4 beeps:	No return for more than 3 hrs	



Use of the GREENMOW: Summary of the settings

“SETTINGS” MENU

- **Rests settings**

Allows the programming of up to four rest ranges during which the machine does not work.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “#” **Rests settings** “#” **Rest range 1#** “#” **Rest hours** “#” (that is “# ▼ # # # #”)
3. Encode HH:MM for the start of rest then HH:MM end of rest. To confirm, type “#”
4. Choose the day or days of the week during which this timetable applies scrolling with ▼ and ▲. To select the day, type “*”. When the days have been chosen, type “#”

Range 1#:	__ : __ → __ : __	□Mon □Tue □Wed □Thu □Fri □Sat □Sun
Range 2#:	__ : __ → __ : __	□Mon □Tue □Wed □Thu □Fri □Sat □Sun
Range 3#:	__ : __ → __ : __	□Mon □Tue □Wed □Thu □Fri □Sat □Sun
Range 4#:	__ : __ → __ : __	□Mon □Tue □Wed □Thu □Fri □Sat □Sun

5. You have returned to the **rest range 2#**. If you would like to encode other rest times for other days, follow steps 2 to 5 again. A maximum 4 rest areas can be programmed. Then, press “C” several times until the **Menu** is displayed on the screen
6. Restart the machine by pressing  on the keypad and close the cover within 8 seconds.

The rest ranges are programmed and operational. If you have any doubts with regard to the programming of the rest ranges, do not hesitate to contact your dealer, who will do it for you.

- **Setting the clock** Enable the modification of the time and the date.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▼” **Clock** “#” (that is “# ▼ # ▼ #”)
3. Enter the time “HH:MM” “0 ... 9”
4. Enter the day (1=Monday;.....; 7=Sunday)
5. Press “▼”
6. Enter the date “DD/MM”
7. Enter the year 20__ “0 ... 9”
8. Confirm by pressing “#”
9. Press “C” 3 times until the **Menu** is displayed
10. Restart the machine by pressing  on the keypad and close the cover within 8 seconds.



Use of the GREENMOW: Parameterisation summary

- **Setting the password** Enables the modification of the user code.

1. Indication **Menu** (C to return to the **Menu**)
2. Type "# ▼" **Settings** "# ▼ ▼" **NewCode** "#" (that is "# ▼ # ▼ ▼ #")
3. Enter the old code "* _ _ _ _". To confirm, press "#"
4. Enter the new code "# _ _ _ _". To confirm, press "#"
5. Press C 3 times until the **Menu** is displayed
6. Enter the new code before starting
7. Enter the new code "* _ _ _ _"
8. Enter the names of the day of validity of the code (except for the programme version 2009)



Warning, when the machine protection is activated, you must re-enter its code at the end of the validity, or the machine stops and requests its code.



Warning, if you select 0 jour, you must re-enter the code for each operation on the machine

- **Setting the language**

Give a choice between français, English, Deutsch, italiano, español and Nederlands.

1. Indication **Menu** (C to return to the **Menu**)
2. Type "# ▼" **Settings** "# ▼ ▼ ▼" **Language** "#" (that is "# ▼ # ▼ ▼ ▼ #")
3. Select the language by pressing "▼". Validate with "#"
4. Press "C" 3 times until the **Menu** is displayed
5. Restart the machine by pressing  on the keypad and close the cover within 8 seconds

- **See debug**

Enables either the time, or the service information (technical information) to be displayed

1. Indication **Menu** (C to return to the **Menu**).
2. Type "F3"
Indication of the phase in the middle of the screen and technical information instead of the time.

Phase
Φ+: Machine within its mowing area
Φ-: Machine outside its mowing area



Use of the **GREENMOW**: Parameterisation summary “*OPTIONS*”

MENU “*OPTIONS*”

√: Option selected -: Option deselected

Press “#” to select or deselect an option

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “#” (that is “# ▼# ▲▲ #”)
3. Indication Option 1: **001:GoToChge**

- **Multi-charging station 000 MultiSta**

Multi-station mode enables several stations to be managed with one or several **GREENMOW**s.

000 MultiSat: - The **GREENMOW** only returns to a normal station

000 MultiSat: √ The **GREENMOW** only returns to stations configured as Multi-stations



If this option is validated, the machine no longer returns to its ‘normal’ station.

- **Immediate return to the charging station 001 GoToChge**

Forces the machine to return immediately to its charging station. (see p. 15)

1. Indication **Menu** (C to return to the **Menu**)
2. Shortcut “F1” (see p. 15)

001 GoToChge: - The **GREENMOW** does not return to its station and works normally

001 GoToChge: √ The **GREENMOW** returns to its station



When the option 001 Go to the charging station is selected, the machine will start up again after full recharge.

- **Wait at the station after charge 002 Stay@Chge**

Forces the machine, after the end of its cycle, to stay at its station and not leave it again (see p. 15)

Also see the commands summarised at the end of the manual

1. Indication **Menu** (C to return to the **Menu**)
2. Shortcut “F2” (see p. 15)

002 Stay@Chge: - The **GREENMOW** does not return to its station and works normally

002 Stay@Chge: √ The **GREENMOW** returns to its station and stays there



When option 002 Stay at the charging station is selected, the machine will not start up until this option is cancelled.



To force the machine to start working again, press  and close the cover (the machine has to be in contact with the station automatically)



Use of the GREENMOW: Parameterisation summary “*OPTIONS*”

√: Option activated -: Option deactivated

Press “#” to select or deselect an option

- **Demonstration Mode (without mowing) O03 DemoMode**

Normal or demonstration (without mowing) mode.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 3” (that is “# ▼#▲▲ # 3”)
3. Indication Option 3: **O03: DemoMode**

O03 DemoMode: - The GREENMOW operates normally

O03 DemoMode: √ The GREENMOW moves forward without using the cutting heads



If this option is validated, the machine can operate without signal, and therefore leave the mowing area, even if there is no power or signal

- **Silence when charging (no charging ‘beep’) O04 NoChgeBip**

Signal sounds when charging (with or without). Silent charging

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 4” (that is “# ▼#▲▲ # 4”)
3. Indication Option 4: **O04: NoChgeBip**

O04 NoChgeBip: - The GREENMOW beeps during charging (2 long beeps / 2 sec)

O04 NoChgeBip: √ The GREENMOW remains silent when charging



During a manual charge the machine beeps 2 short beeps/sec to warn that it is not charging automatically. To cancel these beeps in manual charge, you can select option 2.



Use of the GREENMOW: Parameterisation summary “OPTIONS”

√: Option selected - : Option deselected

Press “#” to select or deselect an option

- **Systematic mowing O05 SystMowing**

Mowing mode (random standard or systematic).

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 5” (that is “# ▼#▲▲ # 5”)
3. Indication Option 5: **O05: SystMowing**

O05 SystMowing: - The **GREENMOW** operates in normal mode, i.e. in random mode

O05 SystMowing: √ The **GREENMOW** operates in systematic mode

- **Anti-clockwise direction (in systematic mode) O06 CCWSyst**

In systematic mode: the machine moves on the terrain in a clockwise direction or anti-clockwise towards the centre. Only useful if the systematic mode is selected O05 SystMowing: √

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Settings** “# 6” (that is “# ▼#▲▲ # 6”)
3. Indication Option 6: **O06: CCWSyst**

O06 CCWSyst: - The **GREENMOW** turns in a clockwise direction  in systematic mode

O06 CCWSyst: √ The **GREENMOW** turns in an anti-clockwise direction  in systematic mode

- **Movement from the centre towards the exterior or from the exterior towards the centre (in systematic mode) O07 OutWSyst**

In systematic mode, the machine works from the interior towards the exterior. It is only useful if the Systematic mode is selected O05 SystMowing √

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 6” (that is “# ▼#▲▲ # 7”)
3. Indication Option 7: **O07: OutWSyst**

O07 OutWSyst: - The **GREENMOW** moves from the exterior to the interior in systematic mode

O07 OutWSyst: √ The **GREENMOW** moves from the interior to the interior in systematic mode



The systematic mode is very rarely used and not recommended. The random mode has a greater efficiency and a greater aim in terms of the results of the work.



Use of the GREENMOW: Parameterisation summary “OPTIONS”

√: Option selected - : Option deselected

Press “#” to select or deselect an option

- **Inversion of phase. 008 Philnv**

Enables inversion of the detection of the peripheral wire field.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 8” (that is “# ▼#▲▲ # 8”)
3. Indication Option 8: **008: Philnv**

008 Philnv: - Depending on the terrain phase

008 Philnv: √ Depending on the terrain phase



To verify the phase of the terrain, use function F3: see debug, (see p. 18). The indication of the phase must be positive. (Φ+)

- **Inversion left cutting head. 009 HeadRotInv**

Make the left cutting trays turn in the opposite direction to avoid grass jams.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 9▼” (that is “# ▼#▲▲ # 9▼”)
3. Indication Option 09: **009: HeadRotInv**

009 HeadRotInv: - The heads of the **GREENMOW** turn in the same direction

009 HeadRotInv: √ The heads of the **GREENMOW** turn 3 times in one direction ↻ and twice in the other ↻.



In normal mode the option is activated.

- **Direction of return to the station: Anti-clockwise 010 CCWSeek**

In random mode, force the machine to return to its charging station in an anti-clockwise or clockwise direction.

1. Indication **Menu** (C to return to the **Menu**)
2. Type “# ▼” **Settings** “# ▲▲” **Options** “# 9” (that is “# ▼ # ▲▲ # 9”)
3. Indication Option 9: **009: CCWSeek**

010 CCWSeek: - The **GREENMOW** returns in a clockwise direction ↻ to return to the station

010 CCWSeek: √ The **GREENMOW** returns in an anticlockwise direction ↻ to return to the station



The machine returns to its station following its peripheral wire at a distance of approximately 1 metre.



If option 11 is selected (return in both directions), option 10 is useless.



Use of the GREENMOW: Paramenterisation summary "OPTIONS"

√: Option activated; -: Option deactivated

Press "#" to activer ou deactivate an option

- **Charging the machine from both sides O11 Chge2Sides**

Allows the machine to return to its charging station in both directions (clockwise and anti-clockwise) and cancels option O10 CCWSeek.

1. Indication **Menu** (C to return to the **Menu**)
2. Type "# ▼" **Settings** "# ▲▲" **Options** "# 9 ▼▼" (that is "# ▼ # ▲▲ # 9 ▼▼")
3. Indication Option 11: **O11: Chge2Sides**

O11 Chge2Sides: - The GREENMOW returns to the station in one direction (that of option 9)

O11 Chge2Sides: √ The GREENMOW returns to the station in both directions (1x↻,1x↺)

Option 10 is of no use in this configuration

- **Sensor mode from the station O12 EnCapture**

The machine returns to charge, if necessary, by passing in front of its station, it passes it and then makes a half turn before placing itself on its wire and entering the station. This saves time following the peripheral wire.

1. Indication **Menu** (C to return to the **Menu**)
2. Type "# ▼" **Settings** "# ▲▲" **Options** "# 9 ▲▲" (that is "# ▼ # ▲▲ # 9 ▲▲")
3. Indication Option 12: **O12: EnCapture**

O12 EnCapture: - It returns to station following its wire when the batteries are low.

O12 EnCapture: √ Station sensor mode when the batteries are nearly low.

Make a half turn after its station to charge, not taking into account option 13

- **Return to the station mode O13 Udocking**

If the option is selected, the machine returns to charge itself, by passing in front of its station, it passes it then makes a half turn before coming to position itself on its wire and entering the station.

1. Indication **Menu** (C to return to the **Menu**)
2. Type "# ▼" **Settings** "# ▲▲" **Options** "# 9 ▲" (that is "# ▼ # ▲▲ # 9 ▲")
3. Indication Option 13: **O13: Udocking**

O13 Undocking: - It returns to station by placing itself directly on its wire once the station is detected

O13 Undocking: √ It returns to station by passing in front of the station, it passes it and then makes a half turn before coming to position itself on its wire and entering the station.



If option 12 is not selected, we have the choice between 2 return modes. But the machine will always return to its station following its wire.



Maintenance of the GREENMOW

Batteries

The batteries have a certain operation capacity. In automatic mowing, your **GREENMOW** goes back to the charging station as soon as the batteries reach an average charge level. In this way, your **GREENMOW** keeps a margin to get to the station and increase the battery yield.

To check whether your batteries need changing, contact your dealer.

Cleaning

A well-cleaned and well-maintained machine will always have a longer life. Weekly cleaning is recommended. It is enough to brush the underside of the **GREENMOW** and, if necessary, remove the possible clumps of grass (around the front wheels, on the tyres and from the cutting discs). **Using a jet of water or high pressure cleaner is forbidden.**

During the winter

At the end of the mowing season, recharge your **GREENMOW** and place it in a dry, protected place. The station must stay plugged in, it consumes very little but it generates a heat that leaves the electronic components dry.

It is recommended that you give it a service during the winter so that your dealer can analyse the history of your **GREENMOW** via a connection to a laptop. If the maintenance contract stipulates it, please get in touch with your dealer in order to arrange an annual maintenance check.

Ref	Pieces	RECOMMENDATION OF THE CYCLE OF THE SPARE PARTS
BR22370	Cutting blades	2X per year
BR25390	Battery Pack	2 years
BR24190	Silent rear block kit	1X per year
BR24191	Silent front block	1X per year
	Wheel check	1X per year
	Maintenance	1X to 2X per year



Maintenance of the GREENMOW

The maintenance of the **GREENMOW** is important. A regular check may improve the everyday quality of the mowing. To help you, you can refer to the maintenance summary sheet. (see p.24)

Cutting blades

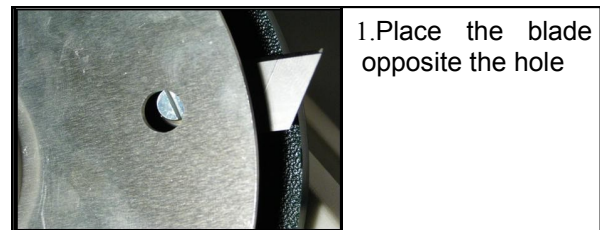
The blades are the main components that ensure optimal cutting. It is recommended that they are checked at least once a month and replaced when they are too used or broken.



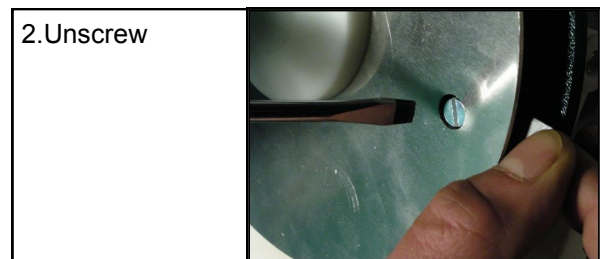
For one season, you will need two sets of blades (ref. BR22370: 6 pieces/set). It is recommended that they are changed at the beginning of the season and during June (the grass is thicker at that time).

To change a blade (machine off, equipped with protective gloves), bring the hole of the protection disc to face the fixing screw of the blade to change. Unscrew the screw with a FLATHEAD screwdriver. When the screw has been removed, take the blade, incline it and remove the blade carefully. Take your new blade and carry out the opposite operation screwing it in properly.

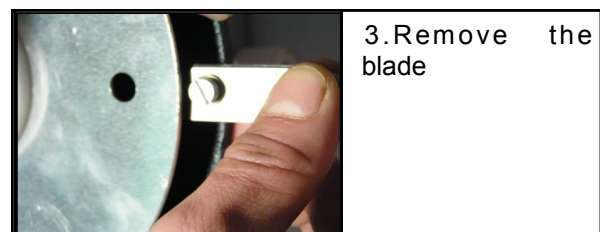
If you have doubts about how to do it or about the fixing of one of your blades, do not hesitate to contact your dealer.



1. Place the blade opposite the hole



2. Unscrew



3. Remove the blade

Changing the cutting blades

1. Machine OFF, protective gloves
2. Straighten the machine
3. Put the hole of the disc opposite the screw head of the blade
4. Unscrew the blade
5. Remove the component from its support
6. Insert the new component and screw it in.



Spare parts of the GREENMOW

1. The cutting blades kit

Around two sets of cutting blades are necessary during the season. It is therefore important to change the blades once at the beginning of the season and a second time in around June. When the cutting blades are subjected to harder work (such as branches, gravel, etc.), it is strongly recommended that the blades are checked and changed more frequently.

(BR22370: set of 6 cutting blades)

2. The battery kit

The normal duration of a set of batteries is two to three years. A battery management system regularly checks their status.

Ask your dealer to check the status of the batteries during each maintenance check. The manufacturer guarantees the batteries for one year.

During replacement, the full set of batteries must be changed (BR25390: battery kit)

Please go to your local dealer for all spare parts orders.

Battery kit;
reference BR25390

6 piece cutting blade kit;
reference BR22370





Setting up the peripheral wire: terrain boundaries

It is recommended that you leave a professional to set up the peripheral wire of your **GREENMOW**. He has the necessary tools, as well as good knowledge of how to set up the equipment. If, having positioned the wire, you wish to make your mowing area larger, contact your dealer or installer to make the modification(s). They alone are authorised to make these changes. The guarantee does not cover problems that occur with the machine after personal modifications.

Setting up the peripheral wire: boundaries

Lors du placement du fil périphérique, il faut tenir compte des limites extérieures de la surface de tonte.

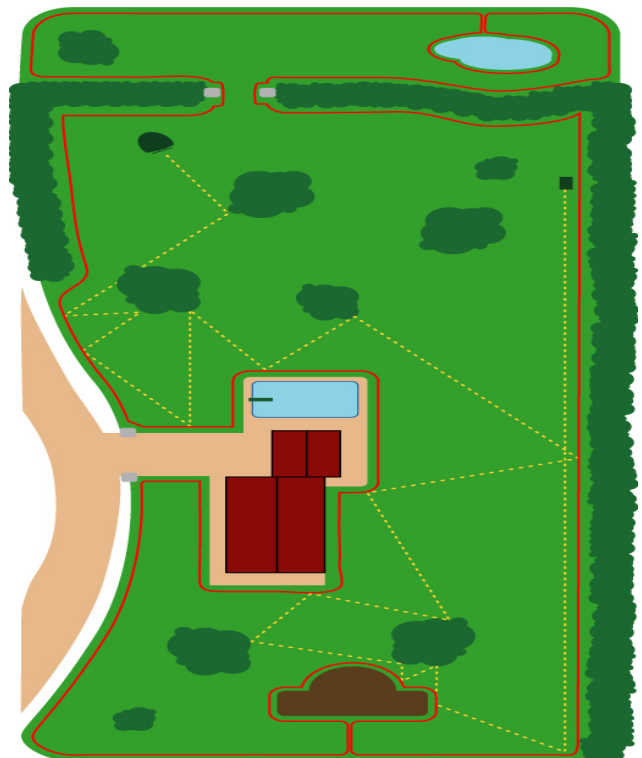
If a fragile obstacle (flowers, for example) is found just outside the mowing boundary, the peripheral wire may be positioned at a distance of 30 cm to avoid the **GREENMOW** damaging it.

When the mowing boundary is along a wall, it is recommended that you position the peripheral wire at a distance greater than 40 cm, in order to avoid useless chafing of the machine against the wall.

Near flowerbeds or vegetable patches, it is possible to set up the peripheral wire 20 cm from the edge. In this way, the edges will be perfectly maintained.

If the peripheral wire has to be placed on a slope, the distance from it will be increased to 50 cm depending on the incline (therefore 0.9 m). It is strongly recommended that you do not set up the peripheral wire perpendicular to the slope (maximum 10 to 15 % depending on the quality of the soil and the grass).

For paths or patios located at the same level as the lawn, the wire may be placed 15 cm from the edge.



UTILISER IMPERATIVEMENT DU CABLE MONNBRIN 1,5mm² SOUS TUBE.





Setting up the peripheral wire: boundaries and slope

Boundaries for a long passage or a path

When the **GREENMOW** has to move through a long passage (maximum 10 m), a corridor or a bottleneck, this passage absolutely must be at least 5 metres wide. If this width is not respected, a part of the lawn risks not being maintained. The machine will stop and will display an error message. For a passage longer than 10 metres another solution such as setting up an additional station must be considered. (see resolution of problems chapter).



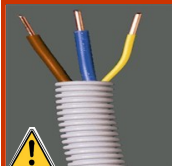
Maximum degree of slope of the terrain

The slope limit is 30% ($\pm 15^\circ$). Beyond this limit, the **GREENMOW** risks slipping in difficult conditions (humidity, rain, uneven density of the terrain etc.).

When the **GREENMOW** comes to an ascent that is too steep, it carries out, as when it meets an obstacle, a manoeuvre.

When the **GREENMOW** comes to an angled slope, the effort being less, it goes up more easily.

The **GREENMOW** is however capable of going down steeper slopes.



! IT IS ESSENTIAL TO USE THE 1.5 mm² CABLE IN A SEALED TUBE !

Any cable other than the 1.5 mm² single strand wire is to be avoided. Belrobotics does not guarantee the operation of the machine with another cable. Any problem that occurs because of incorrect set-up annuls the guarantee.





Setting up the peripheral wire: delimitation

Delimitation in the mowing area

1. Trees and cottages

When large trees or a cottage is found in the mowing area, it is not particularly necessary to delimit them. Following certain conditions, the **GREENMOW** is, in short, able to identify them with the help of its sonar. When it touches them, it changes direction.

With regard to *trees*, no roots should be visible. In addition, the tree must be rigid and have a diameter of at least 10 cm.

For *cottages*, it must be ensured that the structure is solid, and that there is no obstacle less than 15 cm high at the base.

2. Two delimitation methods

For all other delimitations in the mowing area, there are two different methods: either by delimiting the area with the peripheral wire (island or pseudo-island), or by planting obstacles such as small stakes or edges at least 40 cm high. Sloped obstacles (stones, roots...) or too low to be detected are also to be protected or removed. It is recommended that you protect areas at risk (a pond, for example) to avoid any problems.

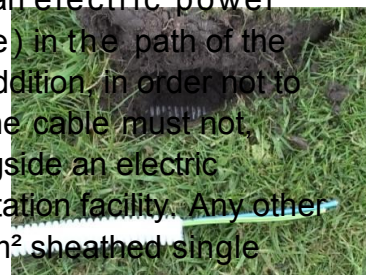
For *the creation of islands*, the wire has to make a return journey in the same line, with just a separation at the level of the area to be protected. For *the creation of pseudo-islands*, the wire must make a return journey in a line separated by a minimum of 40 cm.

3. Metal objects

During determination of the mowing area, it is important to know that disturbances may be caused by *metallic objects* (metal fence, metal rail, scraps, concrete bar, concealed ducts, etc.). The peripheral wire must be set up at a distance of at least 30 cm from these objects. If this distance is not respected, the **GREENMOW** risks always stopping in the same place. If this is the case, the machine display must be checked. If a "loss of signal" alarm is indicated and if, when the machine moves away, it begins mowing again, it is that the problem is effectively due to a problem caused by a metal object. In this case, get in touch with your dealer for a possible setting of the "installation parameters".

4. Depth of the path

The peripheral wire must be buried between 2 and 5 cm deep. Warning, the current legislation prohibits the placement of any other cable (an electric power cable, for example) in the path of the peripheral wire. In addition, in order not to disturb the signal, the cable must not, preferably, run alongside an electric installation or a sanitation facility. Any other wire than the 1.5 mm² sheathed single strand cable is to be avoided.



IT IS ESSENTIAL TO USE THE 1.5 mm² CABLE IN A SEALED TUBE





Setting up the charging station

Placement of the charging station

When setting up the station, it is important to find a suitable place. The station must, in short, be set up not far from a power source (230 V~), and on an even, horizontal terrain.

At least 5 metres of peripheral wire must be able to be placed in a straight line on either side of the charging station.

The connection to the network must be made via a differential circuit breaker for an outside power supply (in accordance with the current guidelines in the country of installation).

The charging station must be positioned behind the peripheral wire (40 cm from the edge of the station cover). Thus, when your **GREENMOW** goes to recharge, the connection is made in the optimal way.



Recommendation for the charging station

1. Near 230 V~ sector
2. Plug connected to a suitable differential circuit breaker (outside)
3. Flat area, without obstacles in a 15 m radius
4. 5 metres in a straight line on both sides of the station
5. The station must be behind the peripheral wire. (40 cm from the edge of the station cover)



<u>Problems</u>	<u>Situation</u>	<u>Solution</u>
1 Operates in reverse	1 Body position connector in permanent contact.	1 Check whether the body moves freely and check that the contacts are properly in the body inserts.
	2 The phase of the peripheral wire is reversed (indication Stuck on wire).	1 Reverse the phase: Menu F1 type 5x on F2 or 8 and choose the option or reverse the wires going into the station.
	If necessary consult your dealer	
2 The machine constantly moves slowly	1 The sonar is contaminated (or moistened due to abnormal water projections).	1 GENTLY clean the inside of the 2 "eyes" of the sonar with a soft cloth.
	2 Interference noise.	1 There is something on the cover or nearby which reflects the sonar wave.
	3 The sonar has come out of its	1 Check that the sonar is well positioned in its
	4 The sonar is faulty.	1 Have it changed by a technician.
	5 Resistance on one or several cutting heads.	1 Check whether the cutting discs turn freely.
	If necessary consult your dealer	
3 The machine carries out squares systematically	1 The grass is too high in one area of the lawn and the machine deals with this area systematically.	1 You simply need to check that the mowing area is not too high. If this is the case, you need to begin by mowing at a greater height and gradually lower the cutting heads to the desired position (this may take several days).
	2 The systematic mowing option is chosen.	1 Menu F1 type 5x on F3 or the key 5 and untick the option.
	If necessary consult your dealer	
4 Machine Alarm Indication: Blocked head	1 The grass cut is too high and has clogged a cutting head.	1 Clean the cutting head in .question
	2 Faulty cutting motor.	1 Consult the dealer who will change the faulty piece.
	3 Fuse (5A) of one of the cutting heads is burnt out.	1 Turn the machine switch to OFF, Survey it, open the cover (wing screw) and check the 5A fuse, replace if necessary.
	If necessary consult your dealer	
5 Machine Alarm Indication: Blocked wheel	1 The wheel is blocked by an object (e.g. a branch).	1 Remove the object in question.
	2 Faulty motor.	1 Consult the dealer who will change the faulty piece.
	3 Fuse (10A) of one of the wheel motors burnt out.	1 Turn the machine switch to OFF, survey it, open the cover (wing screw) and check the 10A fuse, replace if necessary.
	If necessary consult your dealer	
6 Machine Alarm Indication: No signal	1 The station is unplugged.	1 Plug it in
		2 Wait for the network power to go back on.
	2 There is a break in the wire.	1 Call the dealer to come and repair it.
	If necessary consult your dealer	



7	Machine Alarm Indication: Blocked	1	The machine is stuck between several constraints.	1	Remove the objects obstructing the passage and the manœuvres.
				2	The machine has several force field actions, check that there are no metal objects in or on the ground.
		If necessary consult your dealer			
8	Machine Alarm Indication: No wayout path	1	The machine is stuck in a narrow passage and detects all the sides of the field of its peripheral wire.	1	Remove the objects obstructing the passage and the manœuvres.
				2	The machine has several force field actions, check that there are no metal objects in or on the ground.
		If necessary consult your dealer			
9	Machine Alarm Indication: Supply outage	1	The machine was plugged into its station and has been disconnected from it.	1	Check that the charging contacts of the station and the machine have not been oxidised.
				2	Check that the station has not been set up on a slope.
		Warning: if you have placed the machine to charge manually, it will not go ahead and solve the problem, see point 14.2 here below			
If necessary consult your dealer					
10	Machine Alarm Indication: no station	1	The machine carries out its manœuvres to enter the station but stops before or after its station.	1	The sonar machine or station is faulty: contact your dealer.
				2	The option Multi station has been chosen: To untick it F1 then untick by pressing # then C several times.
				3	The number of metres of peripheral wire encoded in the machine is less than the reality: contact your dealer.
				4	The set up of the charging station was not done in a suitable place: contact your dealer.
		If necessary consult your dealer			
11	Machine Alarm Indication: contact station	1	The machine enters the station normally but the contact is not made properly with the latter so it continues and stops a little further along.	1	Check that the charging contacts of the station and the machine have not been oxidised.
				2	Check that the distance between the peripheral wire and the station is at least 55 cm.
				3	Check the height of the contacts of the charging station in comparison with those on the side of the machine.
		If necessary consult your dealer			



12	Machine Alarm Indication: Wheel slipping	1	The machine travels an abnormal distance in comparison with the terrain without finding its peripheral wire.	1	Check that there are no muddy areas in the machine's path.
		2		2	The number of metres of peripheral wire encoded in the machine is fewer than the reality: contact your dealer.
		If necessary consult your dealer			
13	Machine Alarm Indication: Loss of wire	1	When returning to the charging station, the machine has not found the field of its peripheral wire.	1	Contact your dealer.
14	La machine reste à sa station longtemps ou ne la quitte pas	1	The machine has nothing left to mow and stays at the station.	1	Check whether the machine display mentions SC (Slow Charge) the machine starts its cycle when necessary.
		2	The machine has been put back in its charging station manually and cannot start itself up on its own.	1	Send the machine back to the station via the menu option (F1) type 1, validate with # then press C several times then ON to restart the machine return to its station and start its cycles again.
		If necessary consult your dealer			



Your dealer:

Date of Purchase: __ / __ / 20.....

Serial number:

GM__ - __ - __ -B

GREENMOW

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