

WAVE 300 XL

EN User Instructions



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User Instructions

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1. SAFETY PRECAUTIONS

Please adhere strictly to the following warnings:



Do not operate the Dolphin Wave Robot Pool Cleaner when there are people in the swimming pool.



When examining the Dolphin Wave Robot Pool Cleaner, disconnect the main power supply.



Risk of electric shock. Connect only to a ground type receptacle protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.



To reduce the risk of electric shock, do not use extension cord to connect unit to electric supply; provide a properly located outlet.

Please ensure that the following precautions are implemented:



Do not bury cord – locate cord to minimize abuse from lawn mowers, hedge trimmers and other equipment.



Only a trained operator should operate the **Dolphin Wave Robot Pool Cleaner**.



Operator should keep hands away from driving belt mechanism.



Position the Caddy and power supply at least 3 m (9.6 ft.) from the pool edge – during operation.



Keep the **Dolphin Wave Robot Pool Cleaner** out of the reach of children.



Only an original power cable must be used, at all times. Replaced by a Dolphin Wave Robot Pool Cleaner certified technician, in case of need.



When lifting the **Dolphin Wave Robot Pool Cleaner**, take care to prevent back injury.



The **Dolphin Wave Robot Pool Cleaner** is suitable for outdoor use, not for residential pools.

2. FCC STATEMENT

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Maytronics Ltd.) could void the user's authority to operate the equipment.

3. INTRODUCTION

This user guide describes how to use your MMI operating console for the Dolphin Wave robotic pool cleaner. The interactive, state-of-the-art MMI (Maytronics Machine Interactive) control console enables full control of the robot and allows you to determine the cycle time, operation delay, and cleaning scan that the robot performs. It also enables diagnosis of various technical functions and parameters. The console houses a remote control unit for manual operation and temporarily overriding automatic cleaning operations.

The Dolphin Wave robot is designed to handle 4 different swimming pool configurations and when these are set, the pool configurations are stored in the MMI's memory. The robot is preset in the factory with specific default pool settings, which can be reset. Please refer to the first *Main Menu* screen, Figure 6 and Customized Settings, page 7.

4. CONTENTS

Carefully remove all the items from the shipping box and check them against the packing list. You should have:

- Documentation and accessories
- Un-assembled Caddy for storing and carrying the Dolphin Wave robot
- MMI console (includes remote control unit)
- Dolphin Wave robot and floating cable
- Filter Bags:
 - 2 fine porosity filter bags assembled in the Dolphin Wave robot for day-to-day cleaning
 - 2 ultra-fine filter bags for fine dust particles
 - 2 loose weave filter bags for rough debris
- Power supply unit

Assembly instructions


Refer to Figure 1

1. Attach the Caddy handle to the Caddy base and fasten with the 4 screws and 4 nuts provided.
2. Attach the cable roller to its place, and fasten with 2 screws. Note the location of the connection cable between power supply and cable roller.
3. Place the Dolphin Wave robot on the Caddy in front of the power supply as shown in Figure 1.
4. Connect the MMI communication's cable to the power supply unit.
5. Connect the connection cable between power supply and cable roller.



Figure 1: The Dolphin Wave

5. MMI GENERAL NOTES

- In this user manual, the instruction press **"Start"** is performed by pressing both green buttons -  - simultaneously on the MMI console (Figure 2).
- The MMI is equipped with a screensaver that comes into effect after 5 minutes idle time. Press **Pool** and **Home** in that order to unlock the MMI console.
- Some options in the MMI menus are blocked by code, in order to prevent un-necessary changes of settings. The code is the following key sequence:



6. DEFAULT SETTING FOR CLEANING SESSIONS

This section explains how to proceed to the default setting for a cleaning session. The robot is preset in the factory with certain configurations that enable you to commence pool cleaning immediately. The settings made during this setup session remain in use until changed by the operator.

To start a pool cleaning session directly after you have assembled your Dolphin Wave, proceed as follows:

1. Lift the MMI's protective cover.
2. Connect the robot's power supply to the main power supply line.
3. Switch on the power supply. The MMI's *Wave* screen (figure 8) opens in the home window.
4. Position the Caddy with robot about 0.5–1.0m (1.5-3ft) from the pool's edge with its sloping edge facing the swimming pool ensuring that the floating cable is facing the direction of the Dolphin Wave power supply unit.

Starting a cleaning session

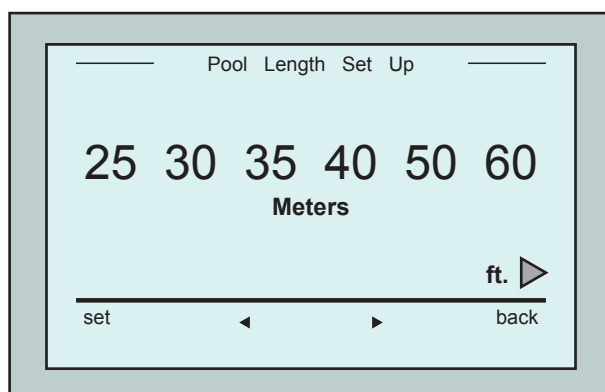


Figure 3: Pool Length Setup screen

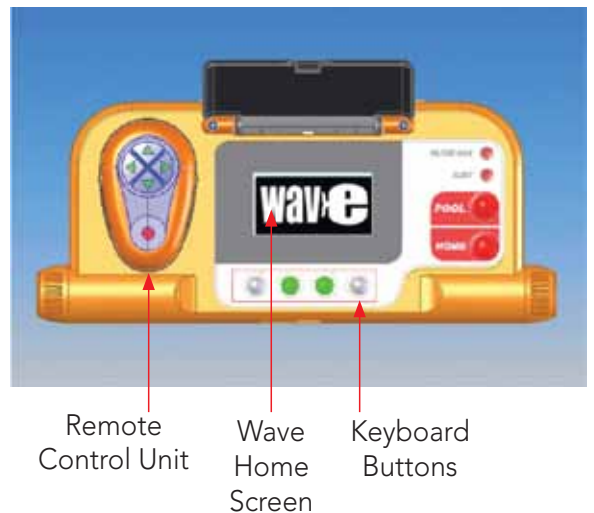


Figure 2: The Dolphin Wave robot MMI console

1. On the MMI, press **POOL**. The robot will start moving towards the pool, while pulling the floating cable, and enter it and position itself on the pool floor.
2. Wait for the *WAVE* screen to appear.
3. In every activation of the robot, it will straighten itself vertically to the wall of the starting point; the robot will start moving backwards to straighten itself and then will continue in straight lines.
4. Press **Start**. "Please select pool length" will appear on the screen. After 2 seconds the *Pool Length Setup* screen appears.

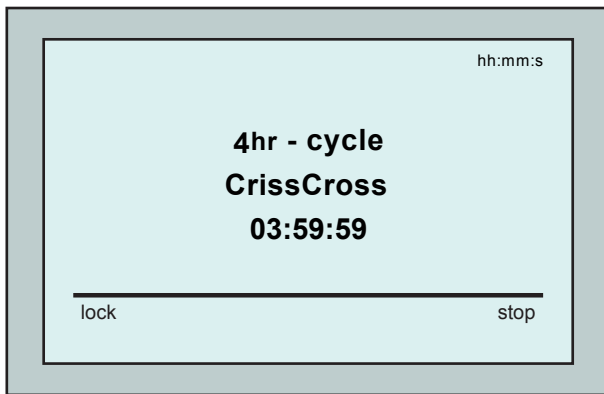


Figure 4: Countdown screen for 4 hour session

- Using the arrows ◀ ▶ select the required pool length. Press **Set**.
For ft. measure units continue scrolling to the right using ▶ arrow.
- Press **Start**. The cleaning session will begin. The factory default settings are used. In order to change parameters refer to **Configuring Additional Pool Profiles** on page 9.
The robot starts its cleaning cycle and the MMI displays the *Countdown* screen (Figure-4):

The *countdown* screen shows that a 4 hour cycle time was selected and that the time remaining is 3 hours, 59 minutes and 59 seconds.

At the end of the cleaning session, the robot stops automatically.

To remove the robot from the pool, proceed as explained in **Removing the Robot from Swimming Pool** on page 6.



To avoid unauthorized changes to the MMI settings you can lock the MMI's keyboard: From the *Countdown* screen, press **Lock** (Figure 4). To unlock the keyboard, press **POOL** and then **HOME** in that order.

7. REMOVING THE ROBOT FROM THE SWIMMING POOL

- Press **HOME**.
The robot starts moving in the direction of the floating cable. Roll the floating cable neatly on the cable roller, using the cable roller handle.
- Holding the floating cable, gently pull the robot upwards and towards the Caddy. As it reaches the side of the pool, pull the cable gently until the floating cable handle emerges. Grasp the handle and pull the robot out of the water. The robot shuts down automatically. By using the remote control you can drive the robot to the Caddy.
Outside the pool, do not pull the robot towards the Caddy by rolling up the floating cable with the cable roller handle.

Manual stop control

If necessary, you can stop the robot during the cleaning session.

- From the *Countdown* screen (Figure 4), press **Stop**. The MMI screen displays the message: "Stopping robot – please wait". After 5 seconds the *Manual Stop* screen is displayed (Figure 5).
- To stop the cleaning session completely, press **Exit**. The MMI display returns to the *Wave* screen.

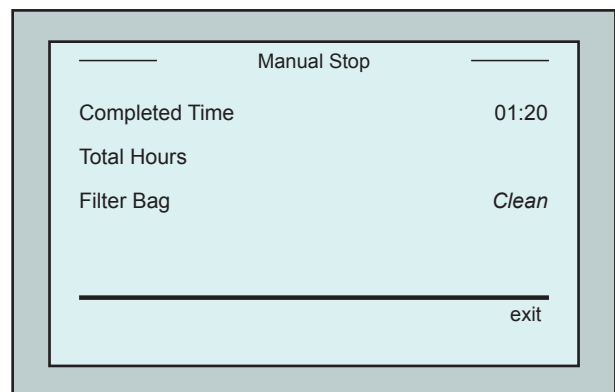


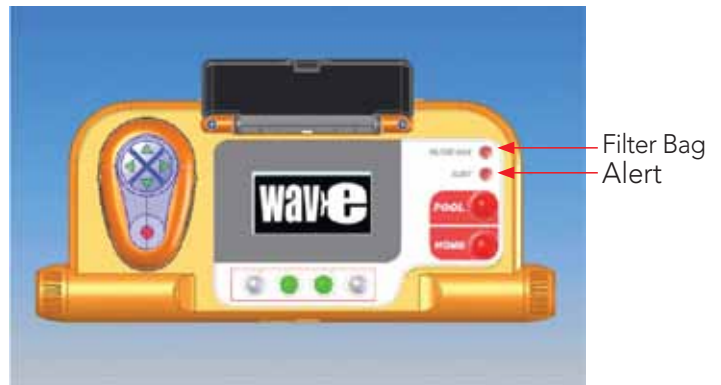
Figure 5: Manual Stop screen

MMI Alerts

Filter bag: This LED will light up when the filter bag is full and needs cleaning at the end of the cleaning cycle. You are not required to immediately stop the operation.

The LED indicator will automatically reset on the next operation with a clean bag.

Alert: LED will light up as an indication of an error that stops the robot. Generally, inspect the robot to locate the problem and re-operate. If the error repeats itself - details of the specific error will be displayed on the *MMI* screen. Refer to the **Troubleshooting** section at the end of this manual.



Loose weave filter bags are provided as an option, to be used to collect large debris. They should also be used in cases of sand accumulation in the pool.


8. CUSTOMIZED SETTINGS

The Dolphin Wave robot is controlled from the MMI console. You can customize the robot's settings to match the specific type of swimming pool that is to be cleaned. 4 different swimming pool configurations can be set and stored in the MMI's memory for future use.

When you configure a pool profile, you can also set the cleaning-cycle time and the delay time before the robot starts its cleaning cycle. The procedure for **configuring additional pool profiles** is explained in Configuring Additional Pool Profiles on page 9.

The MMI keyboard procedures are explained in the next section.

MMI Operation

Use the control buttons  located on the MMI below the screen, to activate the various commands.

Use the MMI functions that appear in the various screen displays to navigate between the screens and to configure the software.

MMI Functions:

Command	Description
Menu	From the <i>Wave</i> screen, press Menu to display the <i>Main Menu</i> screen
▲	Scroll up
▼	Scroll down
↵ Start ↵	Press both green buttons simultaneously to start pool cleaning
Select	Press Select to confirm your selection after using the scrolling buttons
Modify	Press Modify to change settings after making a selection
Back	Press to return to the previous screen
Exit	Press to return to the <i>Wave</i> screen

Defining the robot's parameters:

1. Switch on the power supply. The MMI Wave screen opens in the home window.
2. Press **Menu** to enter the *Main Menu* (Figure 6).

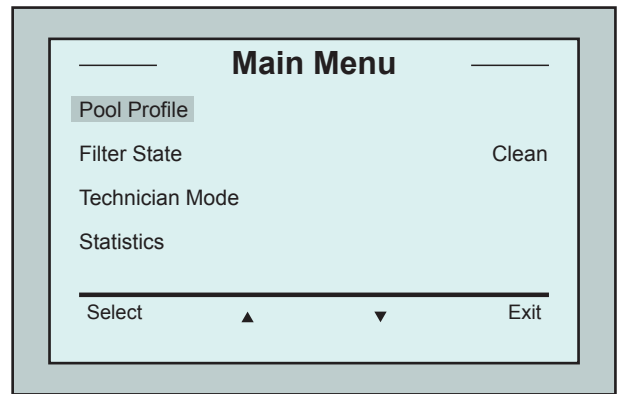


Figure 6: Main Menu screen

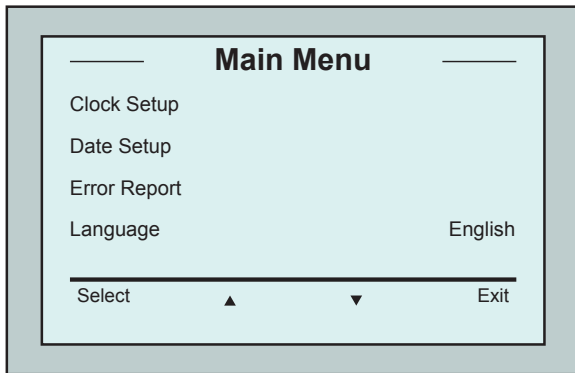


Figure 7: Second Main Menu screen

There are 2 *Main Menu* screens and you access the second screen by pressing the scroll down arrow ▼. After "Statistics", scroll down to the second *Main Menu* screen (Figure 7).

Main Menu Parameters

The parameters that can be accessed from the *Main Menu* screen are explained in the table below:

Parameter	Description
Pool Profile	Press Select to go to the <i>Pool Profile</i> screen. The <i>Pool Profile</i> opens the <i>Pool Profile</i> screen and displays the 4 different <i>Pool Profiles</i> configured. <i>Pool A</i> is the default setting.
Filter State	Reports on the filter's condition. <ul style="list-style-type: none"> • Clean: Filter bag is ready for use • Full: Change/clean filter bag The filter bag warning light on the console will also indicate that the filter bag needs cleaning.
Technician Mode	Technician screen with restricted access.
Statistics	Press Select to review data on robot's usage.

Second Main Menu screen parameters

Parameter	Description
Clock Setup	Press Select to enter the <i>Clock Setup</i> screen and 12/24 hour mode.
Date Setup	Press Select to enter the <i>Date setup</i> screen.
Error Report	Displays information for service technicians.
Language	Language interface mode.



In order to return to English from any other language, press and hold the "menu" button for 3-4 seconds, on the *Wave* screen.

9. CONFIGURING ADDITIONAL POOL PROFILES

The Dolphin Wave can be configured for 4 different pool profiles. The configured settings are stored in the MMI's memory. This section describes how to configure additional pool settings.

To add a new pool configuration, proceed as follows:

1. Go to the *Wave* screen. "Pool A" is displayed as the currently defined setting as shown in Figure 8.
2. From the *Wave* screen, press **Pool A**. The *Pool Profile* screen opens (Figure 9).

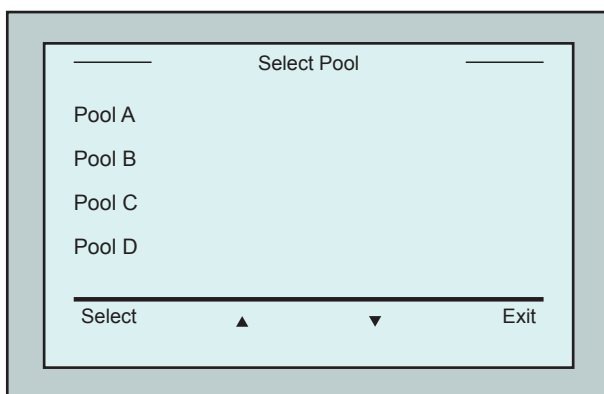


Figure 9: *Pool Profile* screen

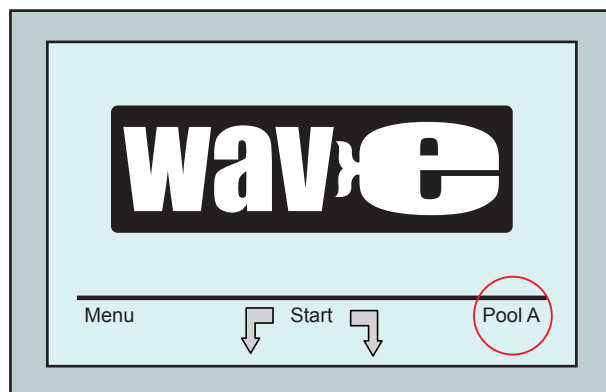


Figure 8: *Wave* screen showing **Pool A** as default setting

3. To select a second pool profile, scroll down to Pool B and press **Select**. The *Wave* screen automatically displays showing that Pool B is the currently defined pool.
4. To configure Pools B, C and D, go to Step 1 of **Starting a cleaning session**, on page 5.

To go to a previously defined pool setting:

1. From the *Wave* screen, press the currently displayed pool setting at the right side of the screen (see Figure 8) to open the *Pool Profile* screen.
2. Scroll to the required pool and press **Select**. The *Wave* screen is displayed with the chosen pool setting.

Manual procedure for configuring pool profiles

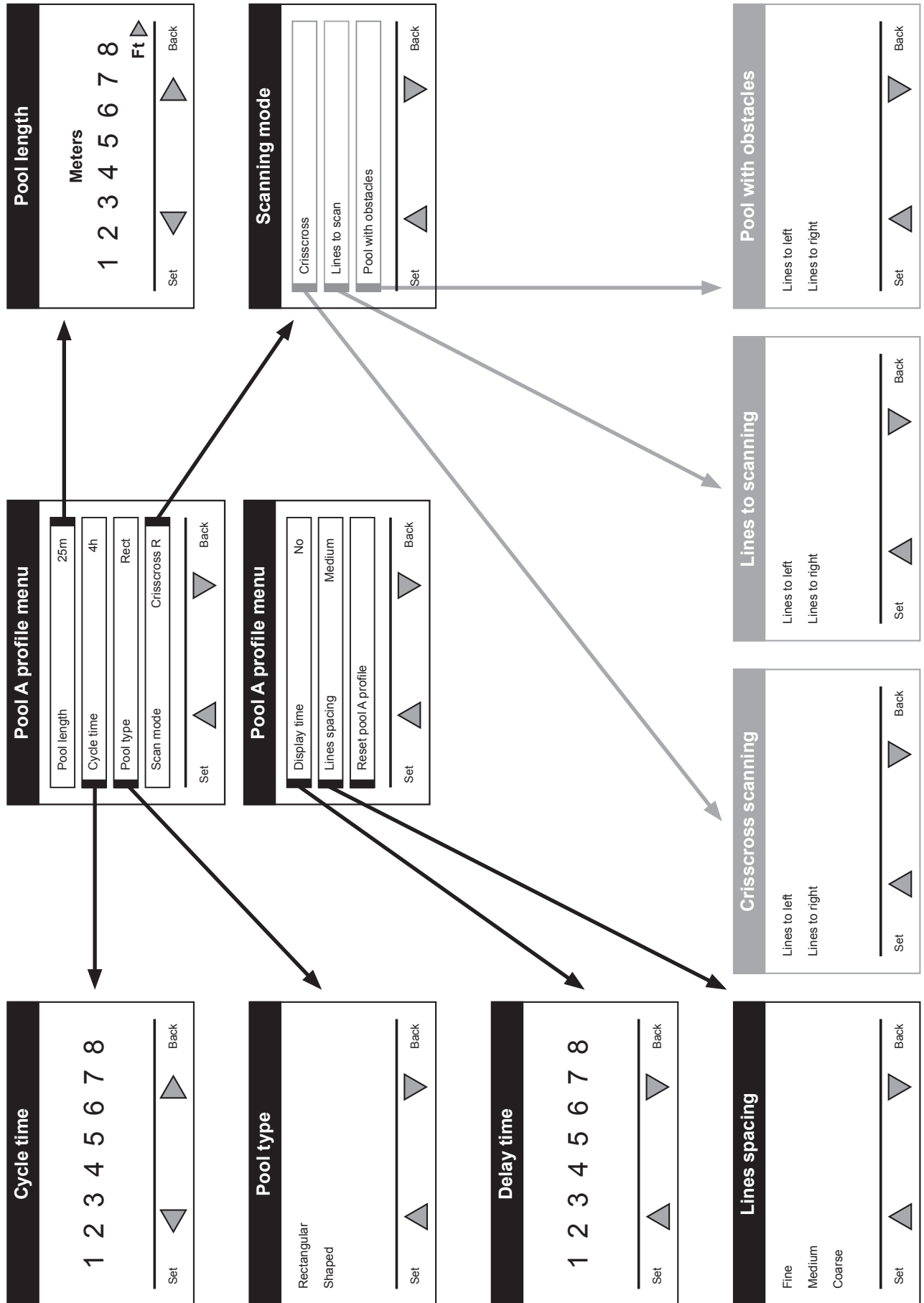


Figure 10: Pool profile diagram

Manual procedure for configuring pool profiles

1. From the *Wave* screen, press **Menu**.
2. From the *Main Menu* screen, with **Pool Profile** highlighted, press **Select** and then **modify**, to display the current active profile screen.
3. Using the **Select** and scroll buttons ▼ ▲ , set each parameter in turn.

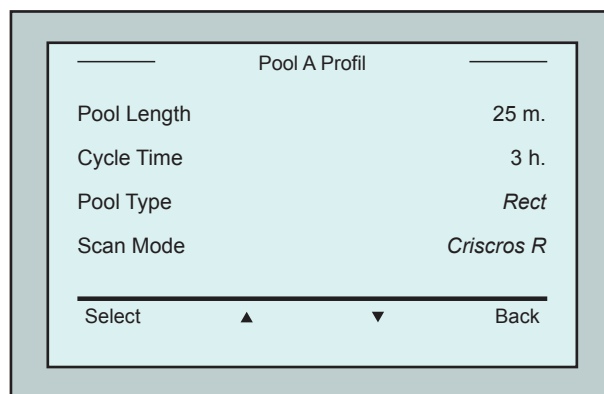


Figure 11: Pool A menu: first screen

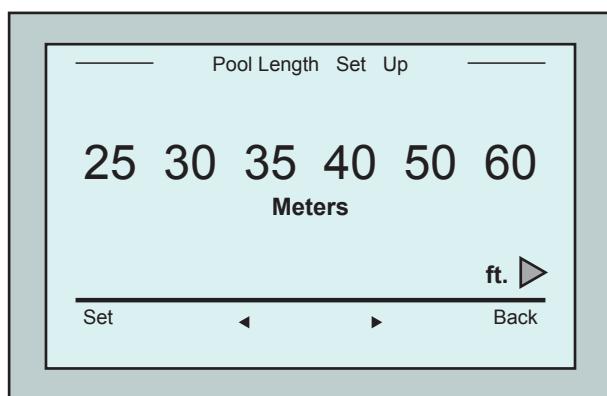


Figure 12: Pool length setup screen

4. Press **Select** to enter the *Pool Length Setup* screen.
5. With **Pool Length** highlighted, press **Select**. The *Pool Length Set Up* screen is displayed:
6. Using the arrows ◀ ▶ select the desired pool length. Press **Select** and scroll down to the next parameter, *Cycle Time*.

Cycle Time determines the duration of each cleaning cycle.

7. Set each parameter and then scroll down to the next line.
8. Set Pool Type and choose either *Rectangular* (Default), or *Shaped*.
Rectangular - Recommended for pools with parallel walls and 90° 'L' shape.
Shaped - Recommended for free formed pools.

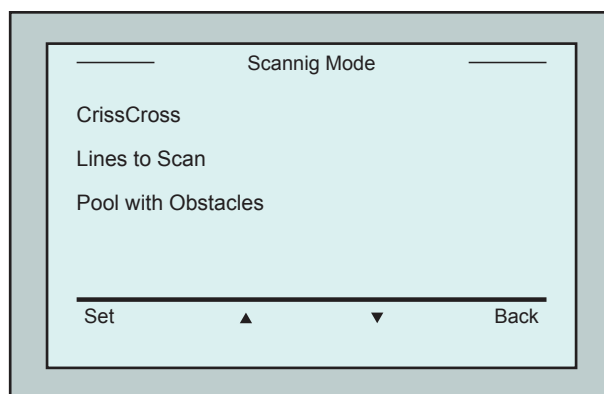


Figure 13: Scanning mode

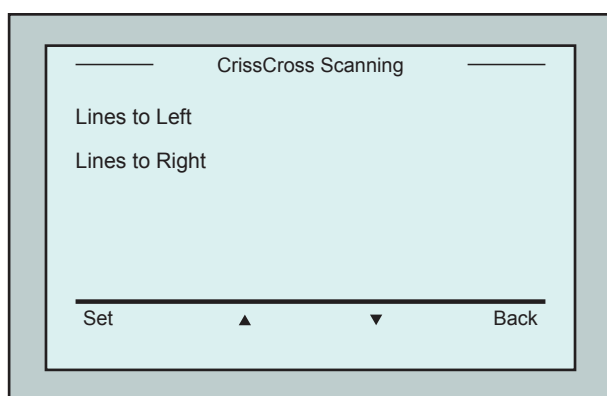


Figure 14: Scanning Direction screen

9. Set Scan Mode and choose either *CrissCross*, *Lines to scan* or *Pool with Obstacles*.
CrissCross - Recommended.
Lines to Scan - To be used when the pool scan needs to be limited to one direction or split into 2 sections.
Pool with Obstacles - To be used in pools with an obstacle such as Island.
10. After choosing the "Scanning Mode" you may choose the robot's progress direction - "Lines to Left" or "Lines to Right".

11. After setting the *Scan Mode*, from the *Pool Profile* screen, scroll down to the next screen (Figure 15).
12. Press **Select** to enter Delay Time. Setting a Delay Time allows you to delay the start of cleaning operations by a time factor selected from the *MMI* screen.
13. Line Spacing- this parameter is used in order to optimize scanning. Choose *Fine / Medium / Coarse* to set the distance between the lines.
14. Reset Pool Profile- Allows you to delete all current pool profile parameters. (*Pool Length, Cycle Time, Scan Mode, Delay time...*)

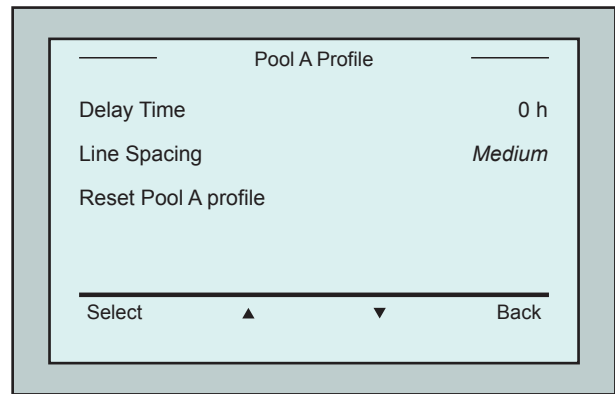


Figure 15: *Pool A* menu: Second screen



During parameter setting operations:

- Press **Back** to return to the previous screen.
- Press **HOME** on the console, to return to the *Wave* screen.

Starting Cleaning Operations

Once all the customized settings have been configured, you can proceed to a cleaning session:

1. Prepare the Dolphin Wave for operation and immersion into the pool.
2. On the MMI press **POOL**. The robot starts moving towards the pool, enters the pool and positioning itself on the pool floor.
3. Wait for the *WAVE* screen to appear.
4. In every activation of the robot, it will straighten itself vertically to the wall of the starting point; the robot will start moving backwards to straighten itself and then will continue in straight lines.
5. Press **Start**. The robot will start its cleaning operation.

If a *Delay Time* has been set (see *Configuring the Dolphin Wave*, above), the countdown commences and the time remaining before automatic cleaning starts is displayed on the screen.

If no delay time is specified, the robot begins cleaning immediately.

Once cleaning operations have started, the MMI screen displays the countdown time as in Figure 4.



To override the delay time to start cleaning immediately, choose start from the delay countdown screen. The robot will begin working immediately.



If the screensaver is displayed, press **POOL** and then **HOME** to unlock the MMI.

10. OPERATING GUIDELINES

- A large-sized swimming pool of approximately 300m² requires approximately 3–4 hours to clean. This is the default setting.
- An Olympic size pool of 1,250m² requires approximately 6 hours cleaning time. This is the default setting.

Maintenance

1. Clean the filter bag as needed. When the MMI displays “Filter Bag Full”, you should clean the bag before the next operating cycle.
2. Click the filter bag into its place.



- It is not necessary to stop the Dolphin Wave in the middle of the cycle when the “Filter Full” indicator appears. Clean the filter before the next cycle.
- Filter bags can be cleaned in a washing machine.

3. Before each operating cycle, clean the robot’s body, brushes and driving belt area and remove foreign objects, rubber bands, hair, etc.
4. Once a week clean the impeller area:
 - Remove the impeller cover’s securing screw using a No. 2 Philips manual screwdriver.
 - Twist counter-clockwise and open the cylinder cover.
 - Remove foreign objects from the impeller.
 - Close the impeller’s cover and replace the securing screw.
5. Keep the floating cable orderly enabling it to be rolled up easily.
Important: Every 2 or 3 cleaning sessions, disconnect the floating cable from the roller inner connection, unroll the entire cable and re-arrange it on the roller as required.
6. **Preventive Maintenance (PM)** should be performed on the Dolphin Wave robot, in order to keep it in good and long lasting working condition. Maytronics provides the parts required – as a dedicated PM kit. The work and the service will be provided through the dealer. PM service should be performed every 1,500 working hours or 1 year (the earlier of the two).
7. A warning message to perform PM will appear on the MMI screen, when applicable. It is obligatory that PM service be performed. Please contact your dealer. Failure to perform the PM service will void the warranty.

11. THE REMOTE CONTROL UNIT

The remote control unit (RCU) is located on the MMI console and held in position by a magnet. Pull it upwards gently to remove it from its base. When the robot is in automatic operation, use the remote control to override the robot’s programmed direction settings.



When the robot is moving in a forward direction, the floating cable follows the robot from its tail end.



The remote control unit has a control range of 50m (164ft) from the Caddy.

Using the remote control unit

1. To activate the remote control unit, press the touch pad as indicated in the diagram. Four activation lights will light up.
2. Press the forward arrow briefly. The robot will start moving in a forward direction.
To stop the forward movement, briefly press and release the forward arrow.
3. Press the backward arrow briefly. The robot will start moving in a backward direction.
To stop the reverse movement, briefly press and release the backward arrow.

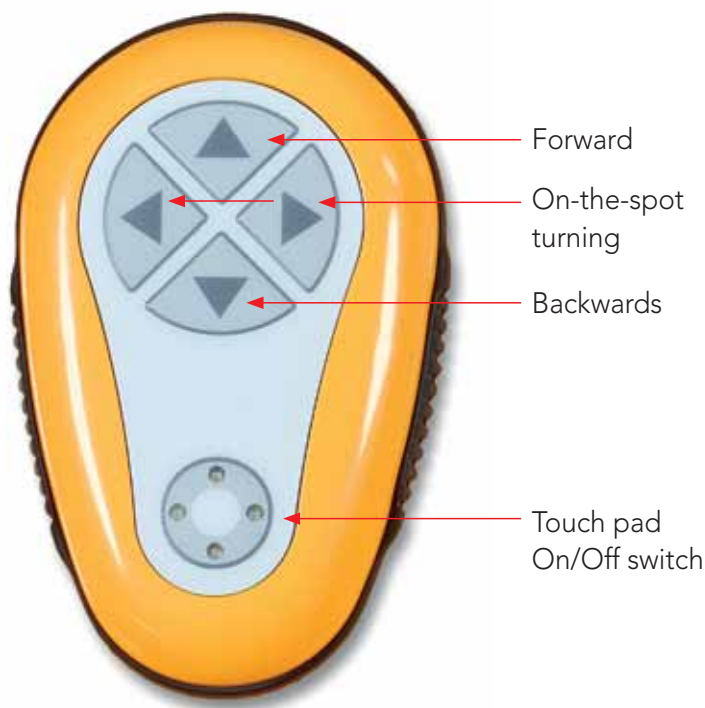


Figure 16: The remote control unit

On-the-spot turns

On-the-spot turns can be carried out while the robot is in motion or executed when the robot is stationary.

4. To turn the robot clockwise, press and hold down the right arrow. The robot will turn-on-the spot. Release the button to stop the robot from turning.
5. To turn the robot counter-clockwise, press and hold down the left arrow. Release the button to stop the robot from turning.
6. To deactivate the remote control unit, press and hold down the touch pad. The activation lights will switch off.
The robot reverts to its programmed direction mode of cleaning after the manual correction.



The remote control unit deactivates automatically after approximately 3 minutes and the indicator lights switch off.

Maintaining the remote control unit

The remote control unit is powered by 2 AAA batteries. It is splash-proof and should not be immersed in water.

To replace the batteries, remove the 4 back-cover securing screws and replace all the batteries with new battery cells.

12. TROUBLESHOOTING

How to save a log file to USB memory stick (in case required by technician):

From the main *Wave* screen, press on the green buttons in sequence – ‘right-left-right-left’ and follow the further instructions.

Error message	Check possible cause	Action to take
Imp over load	Is there dirt or other foreign matter in the impeller?	Unscrew the bolt that secures the protective cover of the impeller. Turn it counter-clockwise slightly until it is released. Remove any dirt from around the impeller. Replace the protective cover.
Imp over load	Does the problem reoccur every operation?	Contact Maytronics dealer.
Imp under load	Does the problem reoccur every operation?	Contact Maytronics dealer.
Drive over load	Is there any interfering dirt in the driving belts, brushes, or drive axles?	Remove any dirt or foreign bodies that might have become entangled with the driving belts, brushes, or drive axles.
Drive over load	Does the problem reoccur on every operation?	Contact Maytronics dealer.
Drive under load	Does the problem reoccur on every operation?	Contact Maytronics dealer.
DC input	Is there an electrical short, partial or complete disconnection? Is there a visible rupture in the floating cable?	Contact Maytronics dealer.
Robot is stuck on wall	Has the robot stopped in a vertical position of more than 70°? Has the robot stuck on an obstacle?	Move the robot from its position and remove the obstacle. Reactivate. If this reoccurs, contact Maytronics dealer.
Out of water	Was the robot operated out of the water for an extended time?	Check that the impeller is in order and that its blades are not broken. Reactivate. If this re-occurs, contact Maytronics dealer.
Robot is stuck	Has the robot stopped on an obstacle? Is there an obstruction in the water channel or in the robot's driving belts?	Move the robot from its position and remove the obstacle. Reactivate. If this reoccurs, contact Maytronics dealer.
Navigation System	Does the problem reoccur every operation?	Contact Maytronics dealer.

Error message	Check possible cause	Action to take
Fuse Fail	Wet connector	Dry the connector and replace the fuse. Note: The fuse holder is located beneath the power supply on the right hand side. Replace the fuse with the spare provided. Note: This is a special fuse and a replacement can be obtained from your Maytronics dealer.
No Communication	Does the problem occur when pressing POOL or HOME on the MMI?	Contact Maytronics dealer. Note: You can work temporarily without using the MMI. Disconnect it from the power supply thus disabling the Pool/Home function and using the remote control.



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