Envirologic

Go Cleaner

Made in Sweden by Envirologic

EN User manual

Original user manual

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1. Important information

Signs that are used in the manual

Safety-related information is shown in a grey box marked with a red triangle.

Important information is shown in a grey box marked with an information symbol.

Intended use

The robot is designed to be safe to use provided it is operated in accordance with the user manual.

Go Cleaner is an automatic cleaning robot that is intended to replace manual high-pressure cleaning, for example cleaning of broiler houses.

Any other use of the robot is inappropriate. If the instructions in this manual are ignored, this could lead to accidents and harm to people, the environment or animals.

Robot type

Information in this manual applies to the robot type referred to as Go Cleaner. A machine plate is attached to the robot showing the CE mark, robot type, serial number, year of manufacture and other important information, as shown in **Fel! Hittar inte referenskälla.**.

Envirologic		Envirologic AB (publ) Norra Depågatan 2 754 54 Uppsala Sweden	
Type	Go Cleaner	*Cleaning robot*	
S/N	10xxxxxx	CE	
Manufact. year	2025		
Max in pressure	220 bar	Ambient temp.	+1 - +55 °C
Voltage	24 VDC	Weight	390 kg

Figure 1, machine plate

Restrictions on use

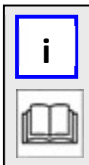
- Go Cleaner must only be used by trained staff
- Go Cleaner must only be used in accordance with the instructions in this manual

Recycling

The robot is subject to the European Directive 2012/19/EU (WEEE). The symbol of the crossed-out wheeled bin indicates that the product must not be disposed of as unsorted waste but must be taken to a suitable collection point for recycling.

2. Safety

Safety instructions



It is important that the use of the robot complies with the safety instructions and warnings in this chapter. Read this even if you are already familiar with the use of the robot.

In this manual important information is provided regarding safe use and maintenance of the robot.

The user manual should be regarded as part of the product and should be kept accessible.

The robot is designed in conformity with applicable standards and directives. Up-to-date information on these will be found in the declaration of conformity (CE document).

The instructions in this manual must be followed to ensure that the safety and performance of the robot will be maintained.

- It is not permissible to remove or modify the design of safety devices on the robot and accessories.
- Only qualified staff are allowed to repair the robot.

Warnings

The safety devices and warning labels on the robot are designed to prevent accidents. The main responsibility for safe use lies with the people that are using, maintaining or carrying out repairs on the robot. To ensure safe use, instructions and warnings should be followed and respected.

Emergency stop switch

As an additional precaution an emergency stop switch is installed, within easy reach below the operator panel. If the switch is pressed the robot and the water jet will immediately stop.

Transportation of the robot

During transportation of the robot with a vehicle (for example with a truck or a trailer):

- The robot **must** only be transported in an upright position, powered on, safely fixed so that the robot cannot overturn or suffer any other form of mechanical damage.
- If a malfunction is suspected due to a mishap while undergoing transport the robot **must** be functionally checked before it is put into use.
- If needed, the robot should be lifted in the chassis.
- During transport, secure the robot by the chassis.

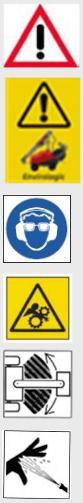
Moving the robot

- The robot must only be moved when it is powered on.
- Methods for moving the robot must be adapted to the ground and personal capabilities.
- If the ground is steeply inclined (upwards or downwards) the motor must be used, **do not use the transport wheel!**

Environmental conditions

- The robot can only clean houses with hard flooring, for example concrete.
- The robot can only clean houses with walls comprised of metal, for example reinforced concrete or sheet metal.
- The robot can only clean houses with even walls, with protruding objects no wider than 20 cm.

Programming and start cleaning



- Before cleaning, the area must be cleared of humans (except for the person carrying out the programming) and animals.
- Before cleaning, the area must be cleared of obstacles and equipment that may affect the radar distance sensor readings. Doors and gates must be closed.
- Warning signs must be placed by the entrance of the area during cleaning.
- The person carrying out the programming must use ear defenders, respiratory mask and safety goggles. Other recommended equipment is protective clothing, boots and gloves.
- During programming the operator must keep a safe distance from the moving parts of the robot and the high-pressure water jet.
- During programming the robot must be manipulated in such a way that the water jet or the moving parts of the robot are not in contact with sensitive electronics or other sensitive equipment.
- The automatic wash must be restarted if the water flow is interrupted. This to ensure that the correct valve in the double nozzle is open when the flow is restored.

Care and maintenance

- Rinse the robot thoroughly after use. **Do not use a high-pressure water.**
- Only qualified personnel are allowed to carry out repairs on the robot.

Risk of overturning

- Do not transport the robot in the parking position if the ground is inclined more than 20 degrees sideways.
- If the tower is turned 90 degrees from the center position and the telescope and the arm are in their most extended positions, the ground should not incline more than 5 degrees (depending also on whether the water jet is directed up or down).
- During cleaning behind the robot in the marked area in Figure 4, there is a risk of overturning that is dependent on the ground and the position of the boom, telescope and arm. If working in this area the recommendation is to have the telescope in its most retracted position.
- When using the transport wheel, the tower must be centered.

Batteries

The robot contains lead-acid batteries. For safe handling observe the following:

- Do not short circuit the battery terminals.
- Power off and disconnect the batteries before maintenance.
- The batteries must be recharged in a well-ventilated area free of flammable materials.
- Charge only with approved chargers.
- To avid short circuits when replacing the batteries, always first remove the connector from the minus pole of the battery connected to the robot. Consequently, always reconnect this pole last.
- Recycle via authorized facility only (contains lead).

Built-in safety devices

The robot has a built-in safety system with several different alarms. If a stopping alarm occurs, the robot will immediately stop the operation, shut off the water jet and display an alarm text in the operator panel. The alarm must be acknowledged before the operation can ultimately be restarted.

- **Protection against current faults** is provided by a fuse on the circuit board.
- **Protection against low battery voltage** is controlled by the computer and generates an alarm if this occurs.
- **Protection against collision during operation** is detected by each individual motor and generates an alarm if the motor does not move as expected.

Labels

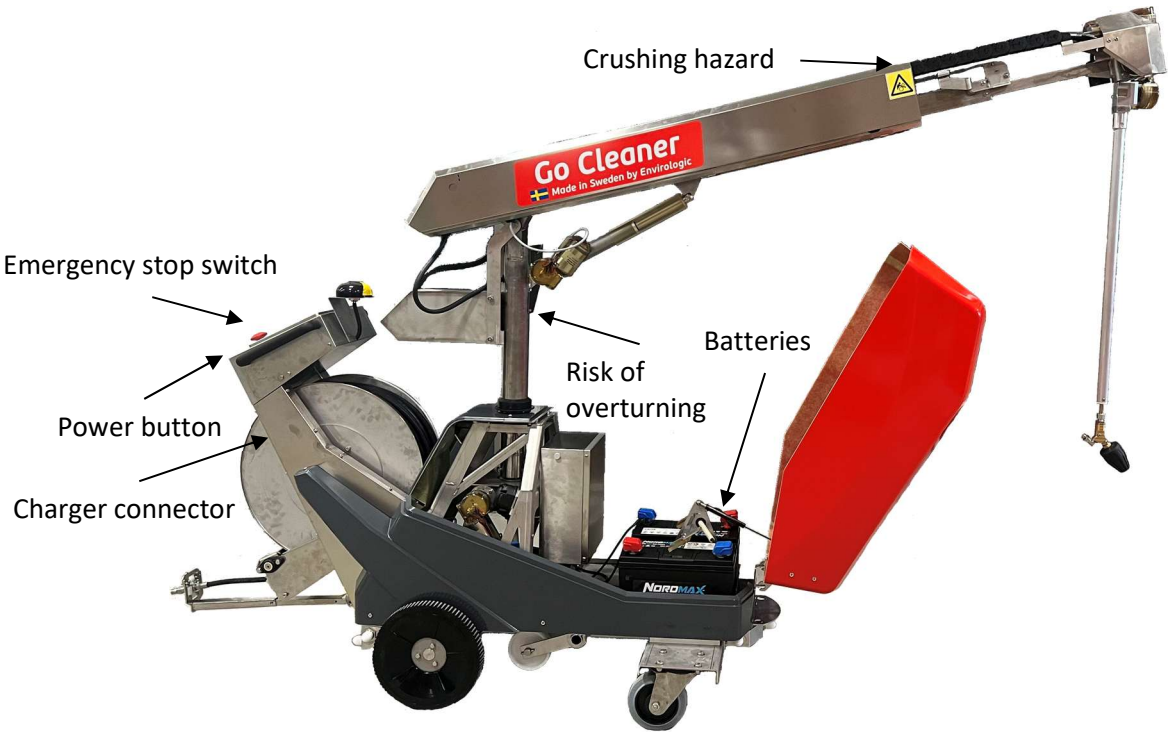


Figure 2, safety label placements

3. Technical specifications

Parts overview

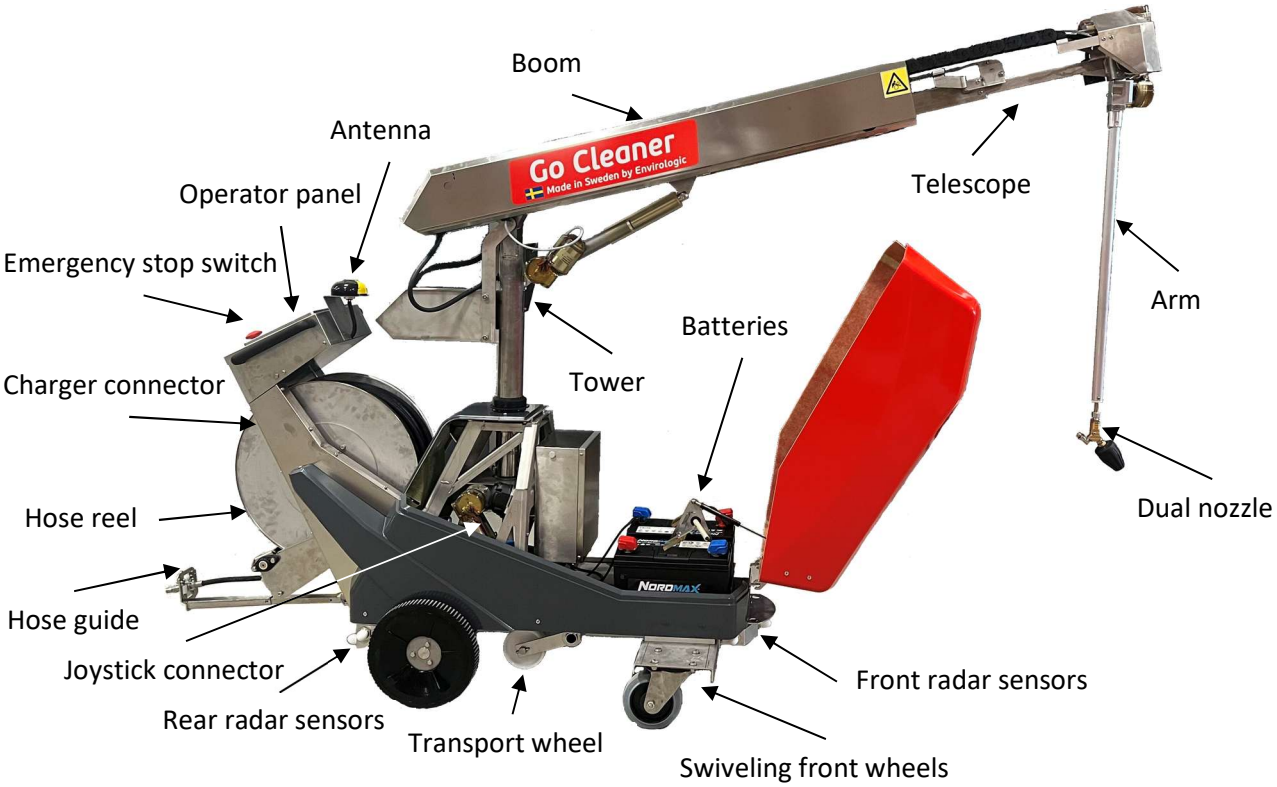


Figure 3, parts of the robot

Technical data

Total width:	0.8 m
Total length when retracted:	2.0 m
Total height when retracted:	1.6 m
Max reach of arm:	4.0 m
Weight:	390 kg
Power supply:	24 V DC (2 lead acid batteries at 12 V)
Electric motors:	24 V DC (9 in total)
Ambient temp:	1°C to 55°C (34°F to 131°F)
Storing temp.:	Empty of water, -10°C to 60°C (14°F to 140°F)
Alarm:	Alarm by SMS in the event of operational breakdown
Water supply:	From external high-pressure cleaning unit
Nozzle:	Rotor jet 0.55 + secondary 0.55
Hose reel:	100 m high pressure hose (operated separately from the robot). Connected to a normal cleaning unit.
Recommended water pressure:	180-220 bar (18-21 MPa)
Recommended water flow:	16-18 l/min
Sound power level[1]:	94 dB(A)
Charger:	see separate specifications supplied with the charger

[1] Measured on rotor with rotor jet nozzle and 190 bar water pressure

Reach

The washing arm reach, safe tower working range and hose reach can be seen in Figure 4.

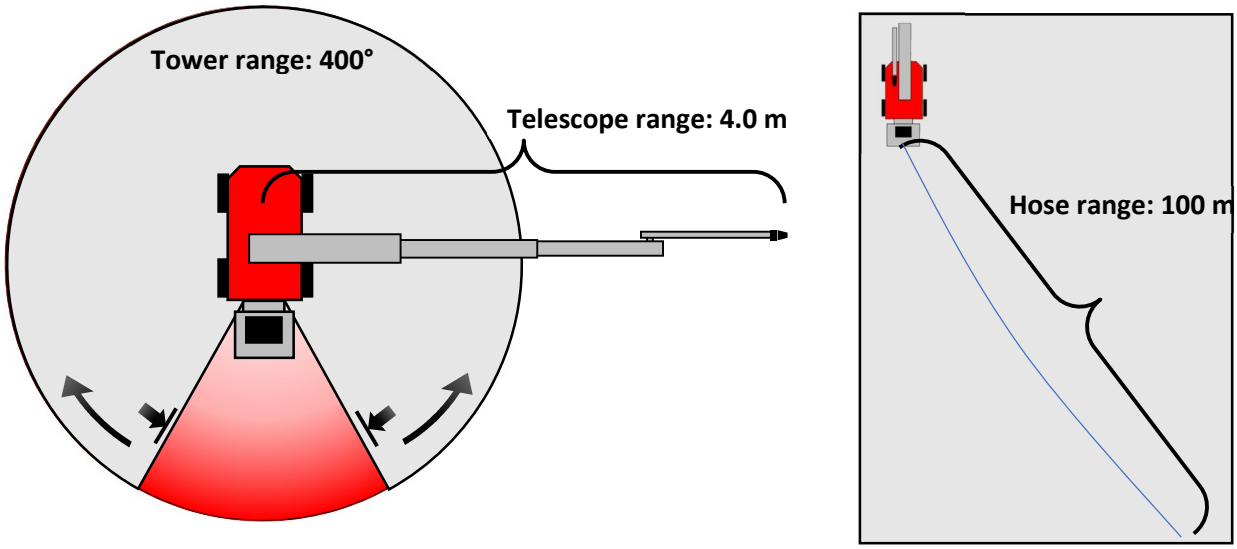


Figure 4, reach of the arm, safe tower working range and hose reach

Nozzles

The robot is equipped with dual nozzles; one forward facing and one backwards facing. A ball valve inside the nozzle housing is used to switch between them.

4. General information

This user manual, together with help texts in the operator panel, includes all the information needed for preparing, programming, managing locations, programs and recipes, performing and ending a cleaning process. It also includes necessary information on how to use the robot in the best and safest way.

Short functional description

The cleaning robot obtains 24 V power from two 12 V lead acid batteries. The robot cleans with high-pressure water (warm or cold) with or without additives. The water is supplied from an external high-pressure water supply via a 100 m hose installed on a hose reel that is operated separately by the robot in accordance with how the robot moves. The cleaning is carried out by a telescopic arm, moveable in all directions, with a maximum reach of 4 m. By using the joystick, you can teach the robot to move and clean in a satisfactory way. After this programming operation the robot will be able to carry out the movements on its own to achieve a satisfactory cleaning result.

Starting the robot

The main switch is found below the operator panel. When the robot is switched on, the startup process takes about 2 minutes. When the start screen in Figure 5 is shown the robot is ready to operate.

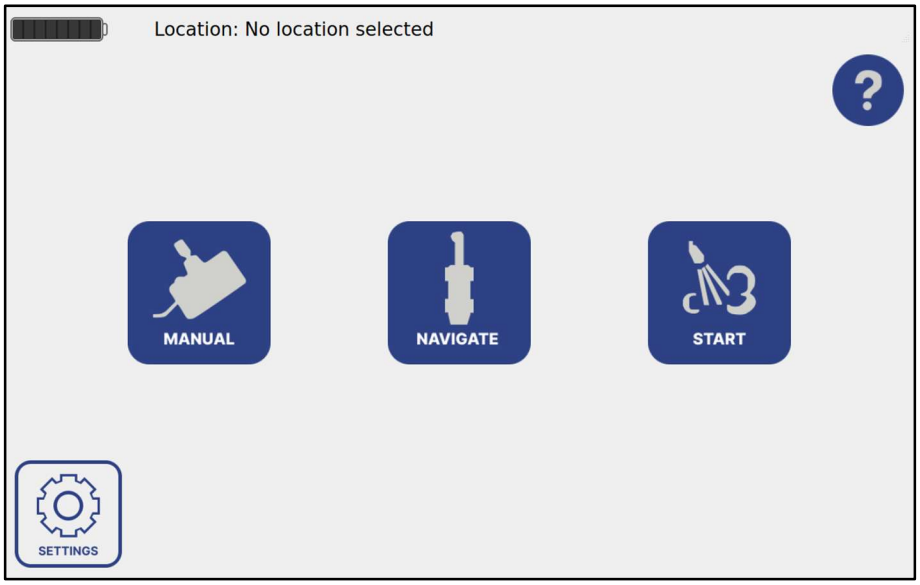


Figure 5, start screen

Help system

Some screens have a button with a question mark, as seen in Figure 5. When pressing that button, relevant help texts will be displayed on the screen.

Alarms system

If something unexpected happens, the robot will raise an alarm which is shown on-screen. Alarms are divided into two categories:

- stopping alarms will immediately inhibit any movements, actuations and the water jet
- non-stopping alarms inform the user about deviation that may affect performance

Stopping alarms needs to be acknowledged before usage can be resumed. Alarm history can be reviewed by pressing SETTINGS followed by ALARM LIST. A reference of possible alarms can be found in section Alarm list.

Charging the robot

When charging the batteries, the cleaning robot must be switched off. The batteries cannot be charged when the robot is on. The charger must be connected to the robot before it is connected to the wall outlet.

When the charger is connected to the wall outlet only the orange status light should be turned on. See the charger manual for details. The cleaning robot is recommended to always be connected to the charger when not used, in order to prolong battery life. It is essential that the robot is put on charge immediately after a cleaning process has finished.

> **i** The charger must be connected to the powered-off robot before it is connected to the wall outlet.

5. Manipulation

Manual mode

Manual mode means using the cleaning robot without a previous programming process. Manual mode is used for example when the robot is moved from its storage place to the house to be cleaned. Before moving, the robot should be powered on. Manual mode screen is reached from the start screen, see Figure 6.

Figure 6, manual screen

When in manual mode, the cleaning robot can be operated using the buttons on the operator panel or the joystick. It is recommended that you use manual mode to become familiar with the joystick and the different movements.

Moving the robot

The robot can be manually moved either by pushing it by hand or by using the motors for assistance. For unpowered transport, the robot is raised on the transport wheel, see Figure 3, so the rear wheels are lifted off the ground. The robot can also be manually operated using the wheel motors from the operator panel or the joystick.

The transport wheel can also be used to climb thresholds.

> If the ground is inclined towards or away from you the motor **must** be used, **do not use the transport wheel!**

Also, take care to follow the instructions in the

Safety section.

Joystick

> **i** The joystick is needed during the programming process. The joystick is connected to the cleaning robot via a six-meter cable, which facilitates the teaching process and unwanted contamination by manure or collision with the robot's telescopic arm is avoided.

The joystick is connected to the black socket, which can be found under the hood on the rear right-hand side of the cleaning robot, see Figure 3. The plug must be turned 90 degrees for secure tightening when connected. The joystick is used to control all motions of the cleaning robot, including turning water on and off. See Figure 7 for an overview of the joystick.

An overview of the different motions is given in Figure 8.

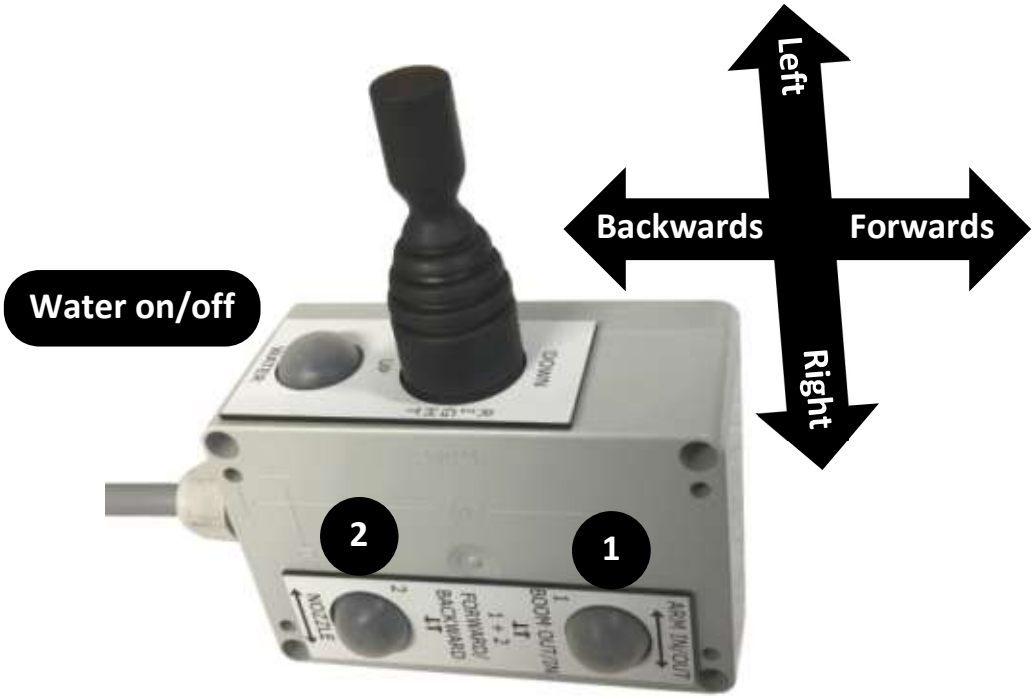


Figure 7, joystick

> **i** The directions of motion in this manual are described as seen from behind the robot.

Motor pulses

Motor movements are measured using so called pulses. The different motors have different ranges as can be seen in Figure 8. By pressing the info (i) button on the manual screen, the individual pulse counts can be seen. During programming the robot records the changes in pulse counts and thereby tracks the motor movements.

Parking

The robot has defined parking positions which all programming should be both started and ended at. Factory-defined parking positions can be seen in the table below.

Motor	***Pulse count***
Boom	700 (horizontal)
Tower	0 ±5 (straight forward)
Telescope	0 (fully retracted)
Arm	-55 ±5 (parallel with boom)
Nozzle	0 ±1 (backwards, downwards when arm is parked)

Initialization

If the robot motors for some reason lost track of the pulse counts, they need to be initialized. The procedure for each motor that can be initialized can been seen in the table below. A red circle is displayed on the manual screen if the initialization is not done.

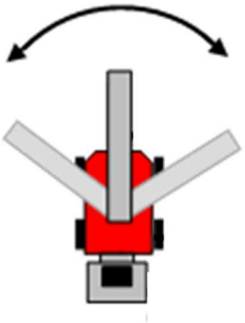
Motor	***Initialization procedure***
Boom	Lower the boom fully and hold for 3 seconds
Tower	Turn the tower 45° in each direction and back twice
Telescope	Extend the telescope slightly and then retract it fully
Arm	Turn the arm outwards 45° and back twice
Nozzle	Turn the nozzle two full revolutions in each direction

Boom up/down
The boom moves about 100° from bottom (position 0) to top (position 1250). Parked position should be horizontal (about position 700).

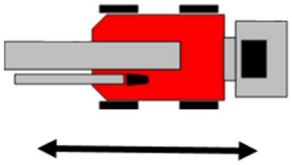
Move joystick shaft backwards/forwards

Tower right/left
The tower can go about 200° in both directions (positions ±1000) from its parked forward position (about position 0).

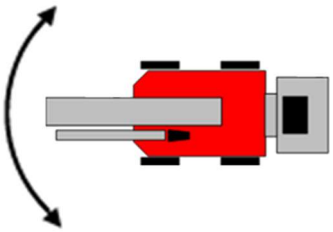
Move joystick shaft right/left



Robot forward/backward
Move joystick shaft forwards/backwards, while pressing buttons 1 and 2 simultaneously

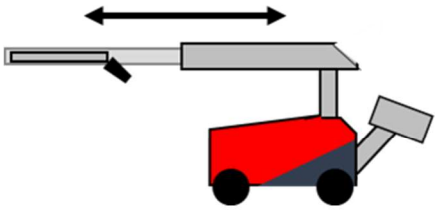


Robot right/left
Move joystick shaft right/left, while pressing buttons 1 and 2 simultaneously



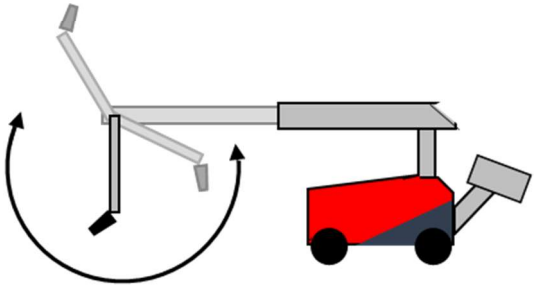
Telescope out/in
The telescope can run out of its parked position 0 to position 425.

Move joystick shaft forwards/backwards, while pressing button 1



Arm out/in
The arm starts from its parked position parallel to the boom (position about -55). The arm can go out about 315° (to position 1100), so it points upwards.

Move joystick shaft right/left, while pressing button 1



Nozzle right/left
The nozzle can spin 360° in both directions. The nozzle is parked when the arm is parked and nozzle points backwards and downwards.

Move joystick shaft right/left, while pressing button 2

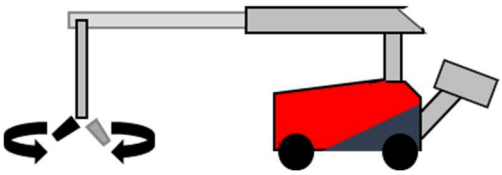


Figure 8, motions and ranges

6. Navigation

Radar sensors

The robot is equipped with 4 radar distance sensors which it uses to determine its position in the house. The front and rear sensors are used to determine start and end positions and the sideways facing sensors on the right-hand side are used to keep the robot parallel to the wall. See Figure 9 for a schematic overview.

Figure 9, schematic overview of radar sensor positions

The sideway radar sensor range is 0.6 to 22 m.

Tracks

The robot will move forwards and backwards along straight tracks programmed during the installation, while always keeping the rear towards the hose fixation point. When the cleaning of one track has been finished, the robot moves by itself between the tracks by rotating 45 degrees, driving between the two tracks and then rotating 45 degrees back to its forward facing position. See Figure 12 for an example of track setup.

> **i**
>
> - Navigation shall always be done with nozzle within ±1 m from the robot central line and with water spraying downwards or upwards (not sideways). This in order to maintain load on driving wheels and not strain the robot steering.

Navigate screen

Navigate mode screen can be reached from the start screen, see Figure 10. When in navigate mode, the cleaning robot can be moved around in the house using the buttons on the operator panel.

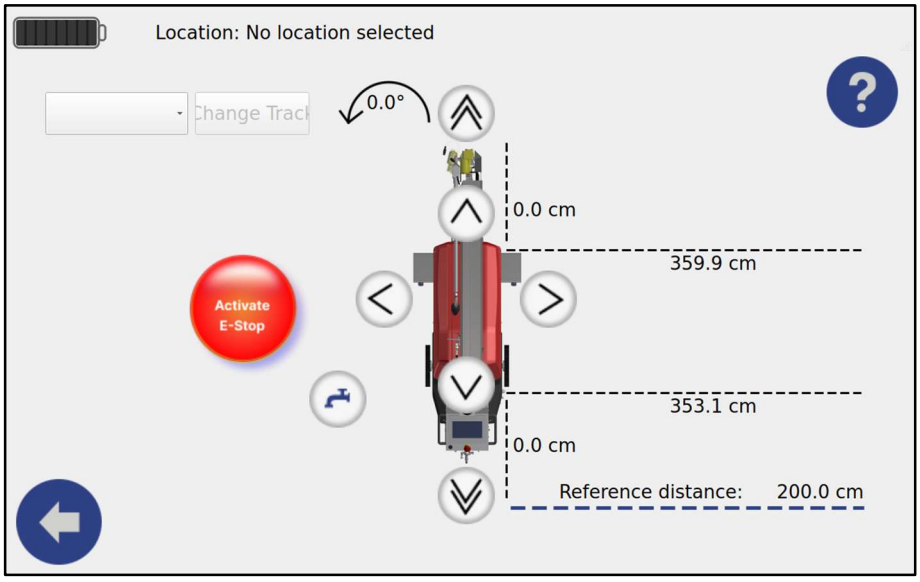


Figure 10, navigate screen

7. Installation

Before the first cleaning of a house can be started, the robot needs to be installed. The installation process has three main steps: creation of a location, programming and creation of recipes. The process is carried out once per unique house.

Location creation

A location corresponds to the house to clean. The location is given dimensions (length and width) and a washing height for the drinking and feeding lines in a broiler house can be set. If another house varies in size or design, a new location for that house needs to be created.

If the house is larger than what can be managed considering the hose length, it needs to be divided into two or more locations.

Locations are given descriptive names, for example:

- OLD_HOUSE
- NEW_HOUSE_1-4
- BIG_HOUSE_FIRST_HALF

To create a new location, press SETTINGS on the start screen and then press LOCATION. In the screen that follows, as seen in Figure 11, press NEW LOCATION and enter location name. Then press EDIT to enter dimensions and to add tracks.

Figure 11, location screen

Track addition

Tracks are defined by their distance to the right-hand wall. Add the number of tracks needed to cover the location entirely. Generally, one track per line is needed in a broiler house. The robot will center itself automatically on the track while navigating. See Figure 12 for an example of track setup together with the corresponding house layout.

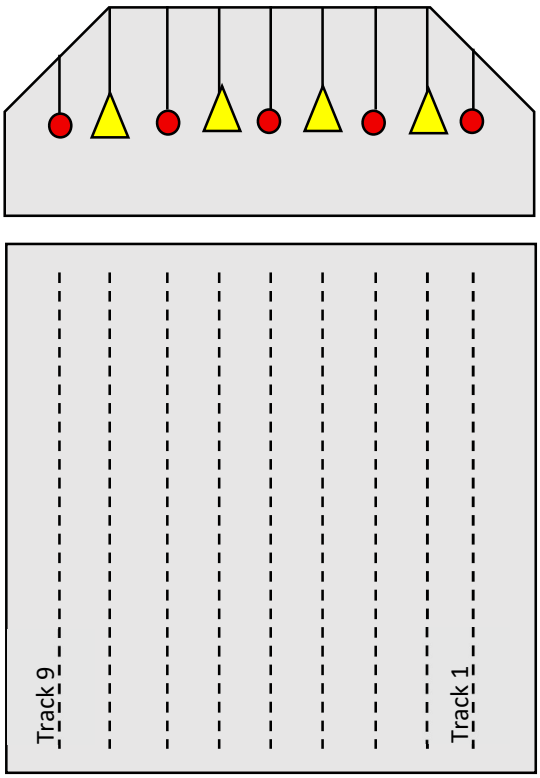


Figure 12, example of a track setup

Programming

> **i**
>
> - Before programming, also read the section “Programming tips”.
> - The programming should be done in a dirty house with working water pressure.
> - Any pauses during the programming process will not appear during automatic cleaning. Therefore, the programming can be carried out in a relaxed way, with no requirement for haste.

A program is a recorded set of movements, for a selected location, defining a cleaning procedure. They are created, “programmed”, by using either the joystick or the on-screen buttons. The aim of programming is to create short snippets of movements that can be repeated to cover a specific part of the house. Typically, the programs can be divided into 4 different types:

- Ceiling
- Drinking and feeding line
- Wall
- Floor

Programs are divided into three stages. Their designation and purpose of each stage can be seen in the table below.

- Start
- Main
- End

A ***start*** program brings the robot from parked position, then to start spraying water and then to a position where a repeatable pattern can be initiated.
A ***main*** program is a short repeatable set of movements where the first point and the last point are close/identical in order to seamlessly repeat the set of movements over the full track length. A main program typically includes 1 or 2 navigation steps.
An ***end*** program includes turning the water off and parking the robot.

Programs are given descriptive names specific to the area being washed. The names should include enough information to be easily identifiable for proper usage. Naming convention is TYPE_TRACK_STAGE_DIRECTION. Examples include:

- FLOOR_FIRST_FEED_START
- FLOOR_WATER_2,3,4_MAIN_FORWARD
- FLOOR_LINE_5_END

- WALL_RIGHT_1M_START
- WALL_RIGHT_1M_MAIN_BACKWARD
- WALL_RIGHT_1M_END

- WATER_LEFT_L1_START
- WATER_RIGHT_L1_MAIN_BACKWARD
- FEED_RIGHT_L2-8_END
- FEED_LINES_MAIN_FORWARD

- CEILING_WATER_LINES_START
- CEILING_7M_MAIN_FORWARD
- CEILING_L1_END

Programs are repeated along the track and do not take any deviations along the track into account. That means that the programs should be created with the whole track in mind so that no obstacles are hit or so that no sensitive equipment is damaged by the water jet. It is also recommendable to re-use programs between tracks. As a result of this, programs can be made from any position along a track.

The water jet should always be turned on when programming. This is because the water pressure will affect the washing arm position. In addition, the cleaning result will be immediately visible.

There are some movements that should be avoided:

- Moving tower with the water sideways as it increases power consumption and wear on the washing arm
- Moving telescope in and out repeatedly as it increases wear on the washing arm and lowers washing speed
- Moving boom up and down repeatedly as it increases power consumption and lowers washing speed
- Moving telescope when the boom is high as it increases power consumption and wear on the washing arm
- Navigating both forwards and backwards within a program since it increases the risk of navigation errors due to drive wheels slipping and front wheels turning
- Navigating with nozzle more than 1 m from the track as it increases the risk of navigation errors due to drive wheels slipping and turning due to sideways forces
- Navigating with water jet spraying sideways as it increases risk of navigation errors due to sideways forces

To create a new program, press SETTINGS on the start screen and then press PROGRAM. In the screen that follows movements can be recorded either by using the on-screen buttons on the MANUAL screen, by using the on-screen buttons on the NAVIGATE screen or by using the joystick on the JOYSTICK screen. Make sure to select a valid track for the programming. See Figure 13 for the different programming modes. While programming erroneous movements can be removed by pressing UNDO and the whole program can be restarted by pressing RESET.

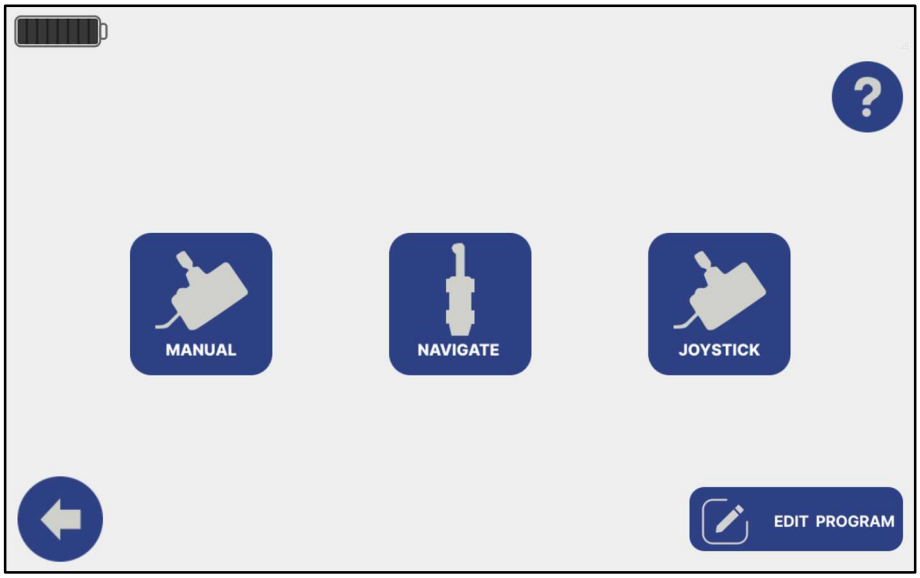


Figure 13, program screen

When the repeatable pattern has been programmed, press OK to save the program and give it a name. If the program is a main program that can be repeated indefinitely, check the corresponding box.

Recipe creation

A recipe is a compilation of programs to cover a full track. The compilation will determine which programs to execute in which order. Thus, it is important to consider the program types, stages and directions. A ***start*** program is inserted in the beginning or at the end of a track. Correspondingly an ***end*** program is inserted at the other end of a track. A ***main*** program is inserted one or a fixed number of times to cover the full track. It can also be set to repeat automatically until a front or rear wall is detected. The procedure is repeated for all unique tracks.

Recipes can be divided into different tasks such as:

- Soaking
- Ceiling and lines pre-wash
- Floors only
- Full wash

Recipes are given descriptive names specifying the track being washed and the task. Naming convention is TRACK_TASK and examples include:

- FEED_LINES_SOAKING
- LINE_2-8_CEILING_AND_LINES_PREWASH
- RIGHT_WALL_FLOOR_ONLY
- L1_FULL_WASH

To create a new program, press SETTINGS on the start screen and then press RECIPE. In the screen that follows, as seen in Figure 14, press CREATE RECIPE. Now programs belonging to the selected location will be shown to the left. From there they can be inserted in the right-hand list by pressing the right arrow buttons. Multiple instances of a programs are inserted with the “x” button. If a main program that can be repeated indefinitely is inserted, it will be marked by an asterisk. When the recipe is done, press OK to save the recipe and give it a name.

Figure 14, recipe screen

Programming tips

1. The teaching process should take place using working pressure, because the washing arm is affected by the power from the water jet.
2. The teaching of programs should be done in a dirty area to be able to observe the track of the water jet.
3. Keep some clearance (approx. 15 cm) from house equipment and fixtures during the programming process. This is important when changing the position of the washing arm, to avoid collision if the cleaning robot has a slightly different position during the cleaning process. There can also be a discrepancy in the house equipment when going from one house to another.
4. Take care and avoid damaging the house equipment; keep the nozzle at a sufficient distance.
5. Keep the nozzle at a distance where you have the water pressure and width of the spray to manage the task you've planned for the program. Being closer to the surfaces gives more pressure but also results in more movements and longer programs due to the narrower spray.
6. Use backwards facing nozzle when washing features, such as feed/drinking lines and ventilation chutes, from above. Be careful in turning the water on, so the correct nozzle is chosen. When you change nozzle, turn the water off, move the arm out into a horizontal position, turn the nozzle, run the tower, boom, telescope or the machine in, for at least, 5 seconds and only then turn the water on.
7. Pauses during the programming process are not recorded so there is a lot of time to plan the next move.
8. During automatic cleaning the subsequent movement will start a bit before the previous movement is done, which means the robot will round off corners. During automatic washing, this could lead to a bit shorter nozzle movements compared to those movements you taught the robot. The conclusion would be to always make your nozzle movements a bit longer than necessary.
9. Washing should be performed with circular movements: tower, arm and nozzle. This results in faster, more ergonomic and energy-efficient programs. Linear movements of the boom and telescope should be used only to take a new position to continue with a circular movement from. The linear movements are heavier to move and can increase wear on the robot if used incorrectly.
10. During programing, prioritize according to:
    a. No alarms: Keep safe margins to interiors such as lines, floor, walls, ceiling and ventilation. Prioritize safe navigation.
    b. Efficiency and speed: Cover the area with few and standard movements. Don't chase dirt nor focus on persistent dirt.
    c. Result: Should not be prioritized higher as it could lead to programs being overambitious, complex, risky and both energy and water inefficient.

11. After a program has been created, it can be tested and adjusted (edited) to optimize safety, speed and coverage. Start with simple programs that works rather than doing the “perfect” program. The same goes for creating a recipe. Once a recipe has been created, it can be tested to evaluate it and adjust it (edit) if needed.

8. Automatic cleaning

i **Before cleaning, check the following:**

1. That the area to be cleaned is clear of obstacles, which can interrupt the cleaning process or robot navigation.
2. That the high-pressure washing unit is powered up and has water connected.
3. That the high-pressure hose is secured centrally on the wall behind the robot.
4. That the charger is disconnected and that the batteries are sufficiently charged.
5. That you know where to start the cleaning process.
6. That the area to be cleaned is cleared of humans and animals and the warning signs are put up on every access to the house.
7. That the hose guide arm is in its extended position.
8. That the 100 m hose end is fixated in the house.
9. That all lines are set to the correct height.

Preparations

Before automatic cleaning is started the location needs to be prepared:

- Set drinking and feed lines to the predetermined height as given by the information in the robot’s location corresponding to the house to be cleaned
- Remove loose equipment or other obstacles that may interfere with the cleaning or robot navigation
- Place high-pressure washer and fixate the robot hose behind the robot, preferably centered on the rear wall behind the robot. Use an extension hose if needed to allow connection of the robot hose behind the robot.
- Extend the hose guide arm behind the robot and make sure the hose is tightly arranged on the hose reel

Starting

To start an automatic cleaning press START on the start screen and select the location that corresponds to the house to clean. Now the line height which the current location was configured with can now be seen on-screen.

All tracks configured for the location are displayed on screen. Press every track intended to be cleaned and select corresponding recipes for each track. This will configure the whole cleaning process. See Figure 15 for an example of a fully configured cleaning process.

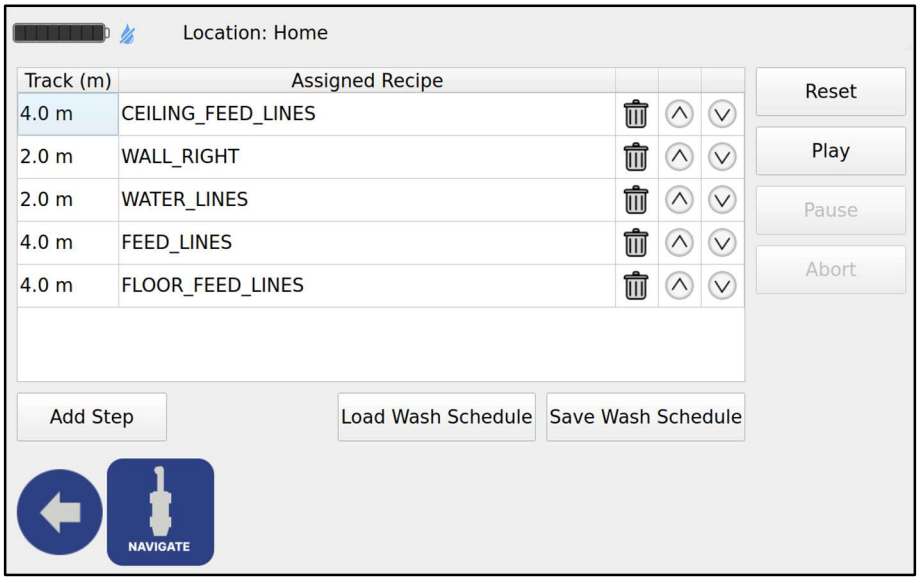


Figure 15, wash schedule

Once the cleaning is configured, press NAVIGATE and position the robot

1. parallel to the wall right wall
2. on the first track counted from the right, at the distance indicated on-screen
3. at the correct distance from meter from the wall behind the robot, as indicated on-screen

Once the correct position is obtained, press PLAY to start the cleaning.

The robot will finish the recipe for one track, starting with the right-most track, before switching to the next track and its recipe. The robot will automatically move between the tracks.

Restarting

The cleaning process can be paused and resumed on-screen. If the cleaning is interrupted by a stopping alarm, try to remedy the issue and resume the cleaning process. If that is not possible, abort the cleaning process and configure a new one following the steps in the Starting section.

Aborting

An automatic wash can be aborted before it is finished by pressing stop on the screen. When pressing pause or the E-stop switch, the robot will be immediately inhibited but cleaning can be resumed if the E-stop is cleared and resume is pressed.

Notifications

When the robot finishes a cleaning process it will send a text message (SMS) to a preconfigured recipient. The robot will also send a text message if the robot goes into a stopping alarm which is not immediately acknowledged on the screen. Refer to section Alarm list for a full reference.

9. Alarm list

In case of persisting issues, contact service.

Code	Level	Description
104	Stopping	There is a critical hardware communication problem.
106–107	Stopping	The installed components are incompatible with one another.
113	Stopping	A motor cannot move properly (stuck).
114	Stopping	The battery charge level is low. Please charge the robot.
115, 155, 158	Stopping	There’s a critical hardware power problem.
116	Stopping	There's a critical hardware initialization problem.

121	Stopping	The robot failed to navigate. Please ensure that the robot is positioned correctly before starting to wash.
123	Stopping	The robot failed to complete a wash. Please ensure that the correct wash recipe is used and that the robot is positioned correctly before starting to wash.

10. Maintenance

- **Do not use high pressure** for cleaning the robot.
- When the robot is not in use it must be kept in an area that is frost-free.

After use the robot shall be cleaned thoroughly with a low-pressure water hose. The batteries shall be charged fully after the cleaning robot has finished washing. As a rule of thumb, charge the batteries for as long as the robot has been washing. Store the robot in a well-ventilated, frost-free area, preferably always with charger connected.

Follow the recommended service intervals as stated by the distributor.

11. European declaration of conformity

We,

Envirologic AB, org.nr. 556572-1775
Norra Depågatan 2
754 54 Uppsala
SWEDEN
Telephone No. +46 18 39 82 30,

declare under our sole responsibility that the product:

Go Cleaner, nr of items 10xxxxxxx

to which this declaration relates is in conformity with the following standards or other normative documents:

Council Directive 2006/42/EC (May 17, 2006) on Machinery,

Council Directive 2014/30/EU (February 26, 2014) on Electromagnetic Compatibility

Council Directive 2011/65/EU (June 8, 2011) on RoHS

The Technical Construction File required by this Directive is maintained at corporate headquarters of Envirologic AB, Norra Depågatan 2 754 54 Uppsala Sweden.

Uppsala October 9th 2025

…….
Martin Pamrin, CEO

Envirologic

Address: Envirologic AB
Norra Depågatan 2
SE-754 54 Uppsala
Sweden

Phone: +46 (0)18 39 82 30

E-mail: info@envirologic.se
support@envirologic.se

Website: www.envirologic.se