

Envirologic

EVO Cleaner Instruction -
From start to finish,
Step by step guide





From start to finish – Step by step



This guide is something you can lean back on when programming your EVO Cleaner. This guide mainly shows the mindset and what buttons to press for you to manage to create a location, learn the robot programs as well as how to put the programs in to recipes.

The movements with the joystick during programming does no one master fully to 100% at the first few times. You will get better and better with the joystick for each program that you create. Aim to take your time to make new improved programs for the location you are going to wash, every time you get the opportunity, until you are satisfied with the results. In this way you will become a better programmer and get more familiar with the robot which leads to better results of the wash and an even more efficient robot at the end.

If you have any questions or concerns, please contact **Envirollogic AB!**

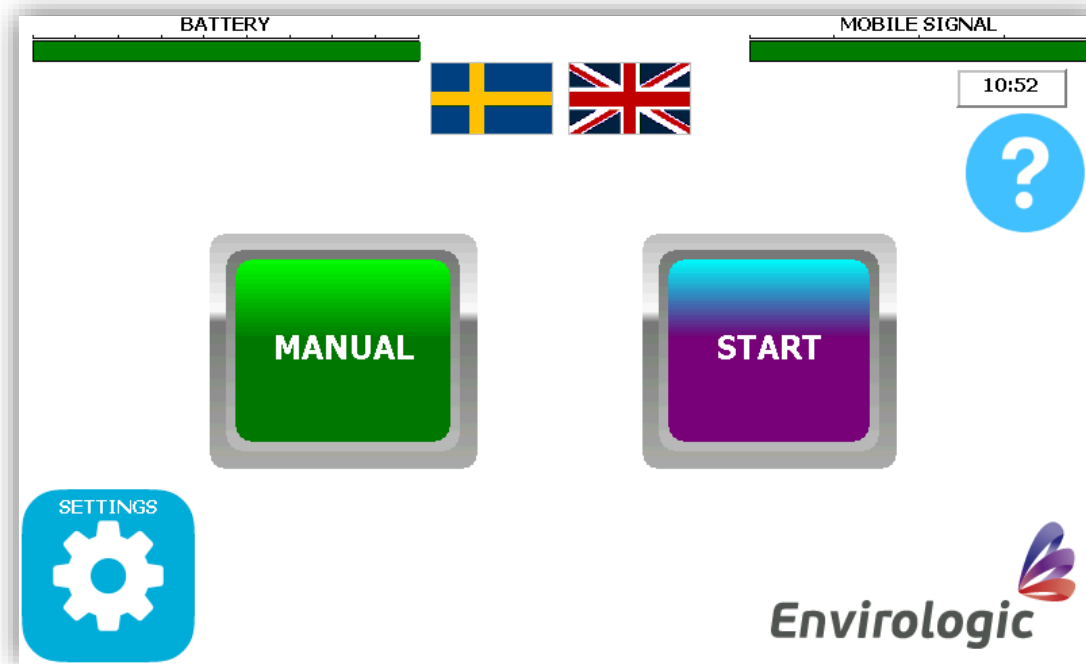
1. Home

At the top of the screen, you can choose between your native language or English.

You can get help and explanation of different buttons if you press . This question mark is available on all screens if there is any button or functions you are considering. To deactivate the help, press the -button again.


Everything you teach the robot (locations/programs/recipes) is done through "**Settings**".

- a) Tap "**Settings**" (the gear in the bottom-left corner).
- b) Enter password: 1000 then "**Enter**".



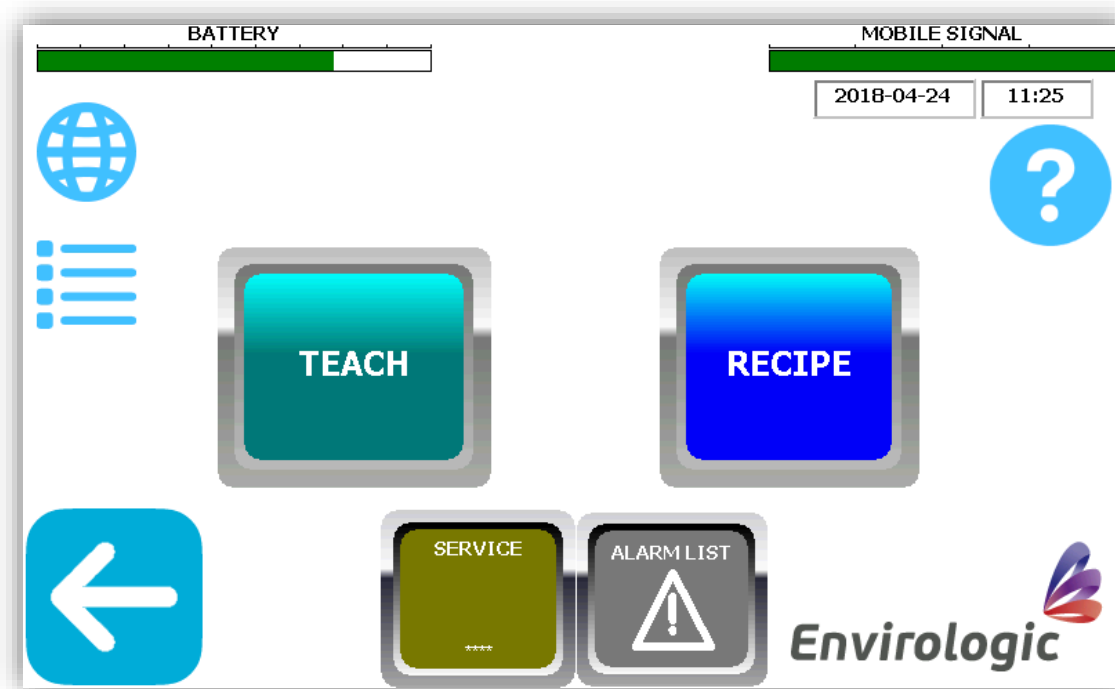
2. Settings

From this screen you can choose whether you want to learn new location, new program or new recipe. In this step, you'll create a new location.

You can also go to the internet screen from settings and enter your phone number. You'll then receive text messages when the robot is finished with a wash. To enter phone number, press the blue globe at the top left corner .

To continue with the teach-in process:

- 1) Press "TEACH".




3. Learning location/program

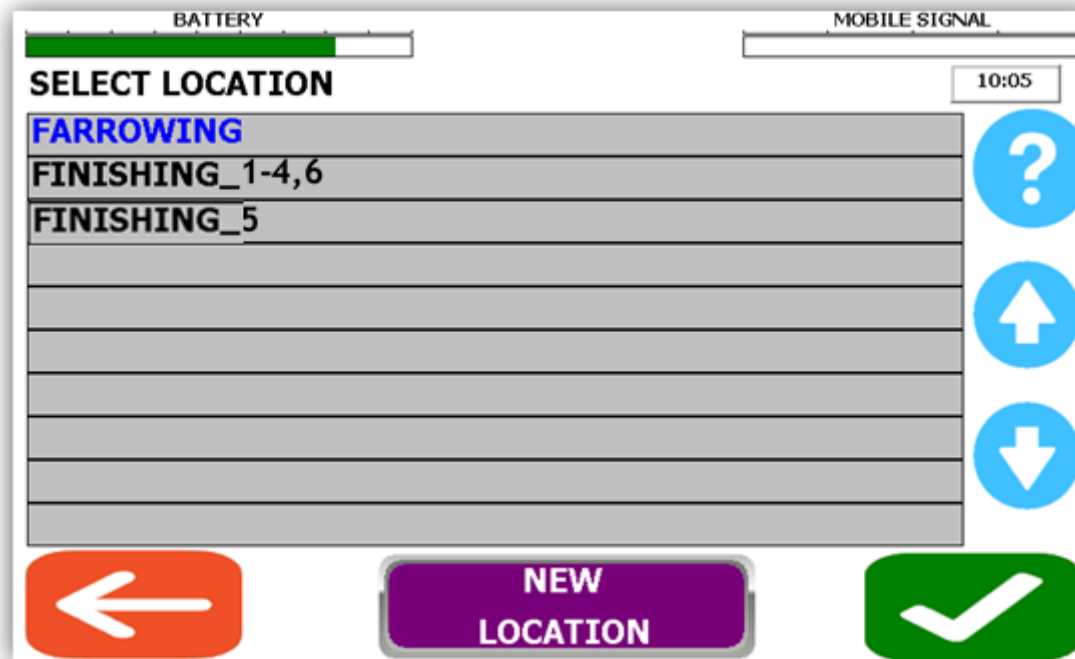
Here you can see and create your different locations.

1) To create a new location, press the purple button at the bottom; "New location".

i. Means that the robot will read and sense where the markers are. Prepare the number of markers you need and make sure that the marker brackets are in the same place at each box.

2) To create a new program in an already existing location, select the existing location by tapping that row in the list (blue text means selected). Confirm with .

i. If you choose to use an existing location, you can proceed to step "9. Name the program".



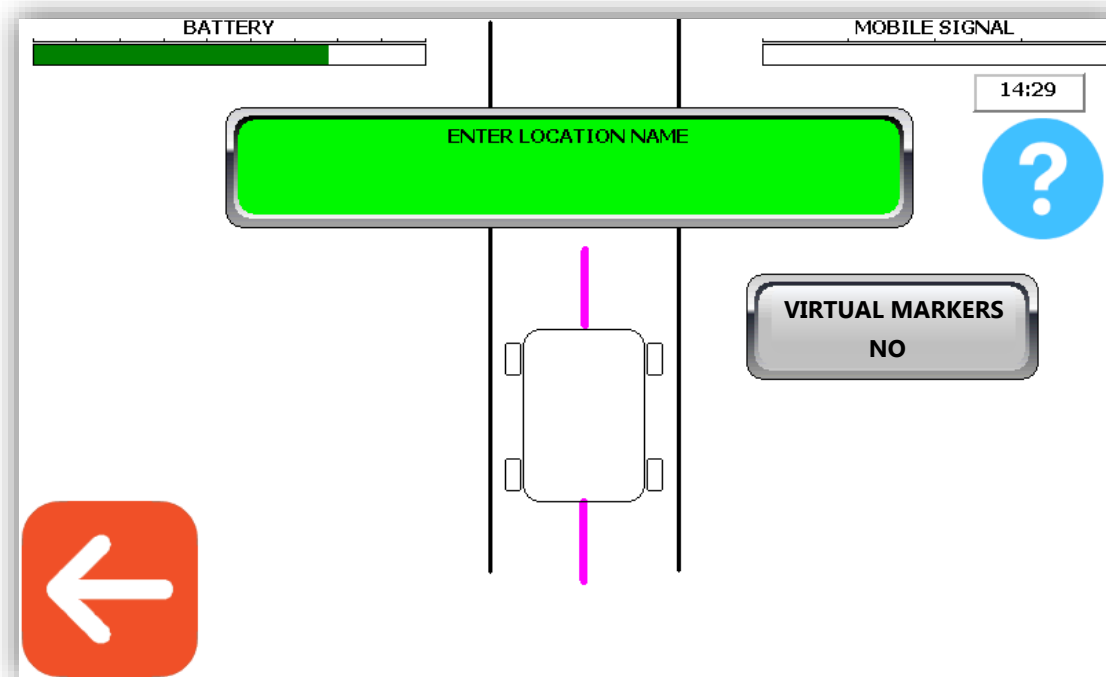
4. Name the location

Here you should name the location you are in. Optionally give a name that fits all locations that are identical.

You do also have the option to choose if you want to use virtual markers. If you don't use virtual markers, go directly to step 2).

To learn more about how virtual markers work, read the document "[virtual markers](#)".

- 1) If you want to use virtual markers, press the grey button "**virtual markers**" **before** leaving this screen.
- 2) Press the **green box** and name the location same as your room. Confirm with "**Enter**"
 - i. If you have rooms that are exactly the same, you can use the same location for all of them as long as you place the markers same in all of the rooms. **Example:** You have 6 finishing rooms. Then you can name them for example to "Finishing 1-6". Alternatively, "Finishing 1-3" and the next place to "Finishing 4-6" If these departments are mirror-facing or in any other way differ to the others. "Finishing 1-4,6" is another option if just "Finishing 5" differs. Then "Finishing 5" will have its own place.



5. Side wheels

Place the side wheels manually against the wall on which the markers are located. **Note that** the marker sensor also must point towards the markers!

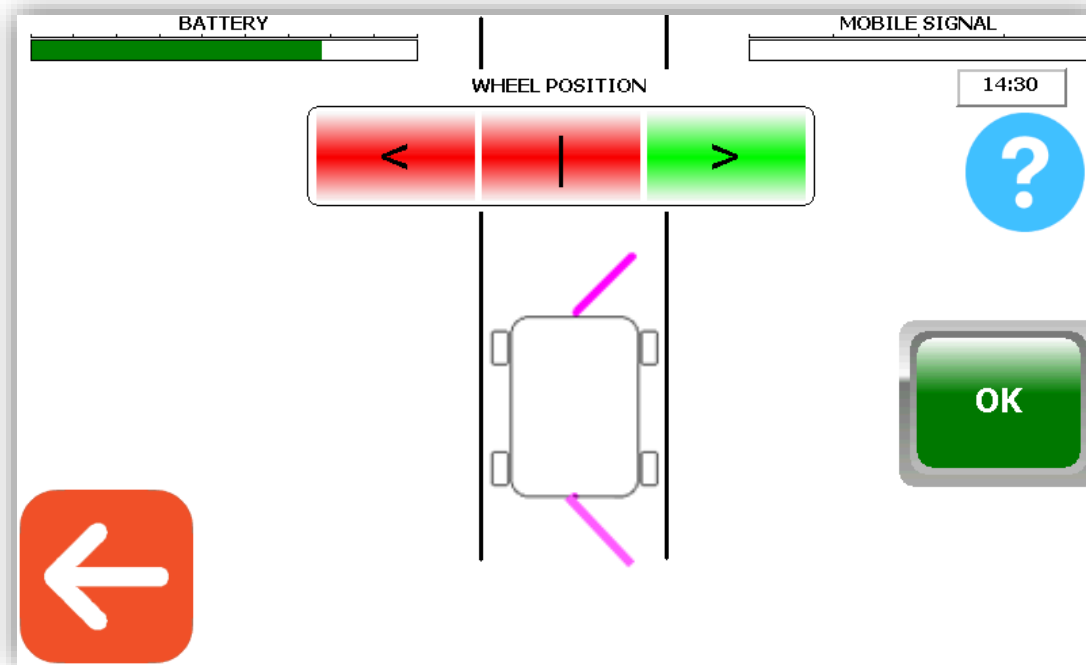
The way you angle the wheels allows the robot to steer in that direction and stay close to the markers and do not steer away towards the other wall.

a) Select if the side wheels steer to the **left** or **right**.

b) Confirm with "OK".

i. *The example below shows that the right side is selected.*

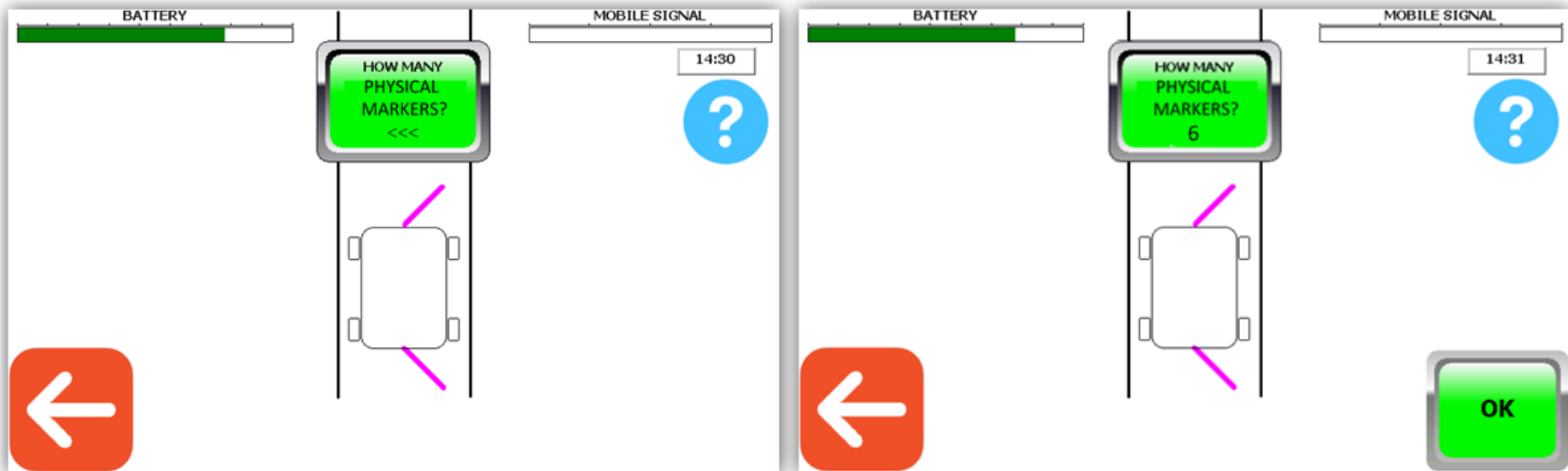
ii. *This isn't a programming part. This is just a reminder for later, so you know which side the wheels must steer to.*



6. Number of markers


Before you begin the following steps, make sure that the robot is positioned correctly in the aisle. That the side wheels are in the right direction; the marker sensor behind the first marker (up to 1m before); that the marker sensor points to the markers; and that the marker sensor is adjusted so that it can sense the markers (max 10cm from the cursor).

- a) How many markers are in the aisle? Tap the **green box**.
- b) Enter the number of markers then "**Enter**".
 - i. *If you are using virtual markers, enter the number of physical markers you have set up in the aisle.*
- c) Now you will see the "**OK**"-button in the bottom right corner. **Note that**, when you press "**OK**", the robot will start running forward to read where the markers are located. So, make sure you have made the preparations as above.

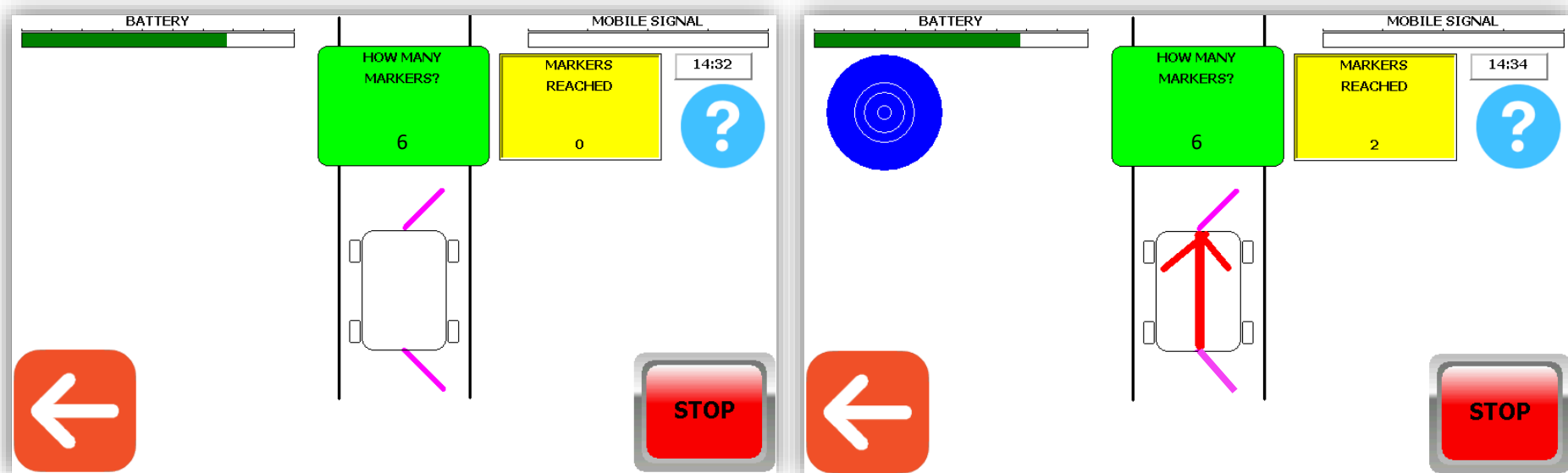


7. Count markers

Now that the robot has begun to drive forward, **it's important to follow the robot all the way down the aisle** to make sure the sensor senses all the markers.


The large blue round symbol in the upper left corner  means that the sensor detects a marker (or something else that's magnetic).

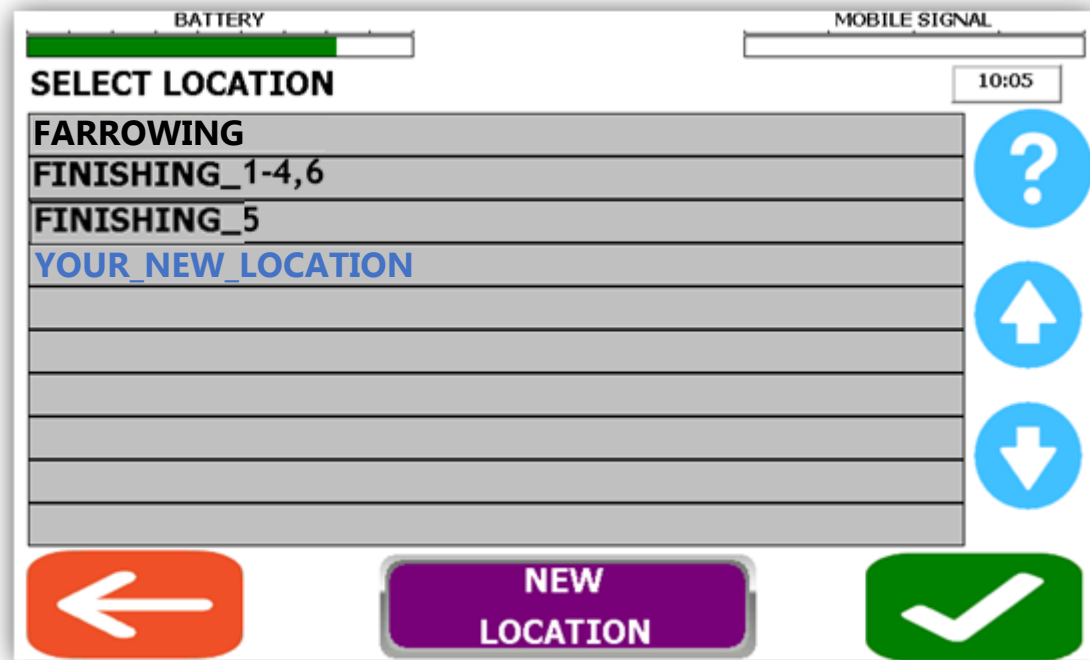
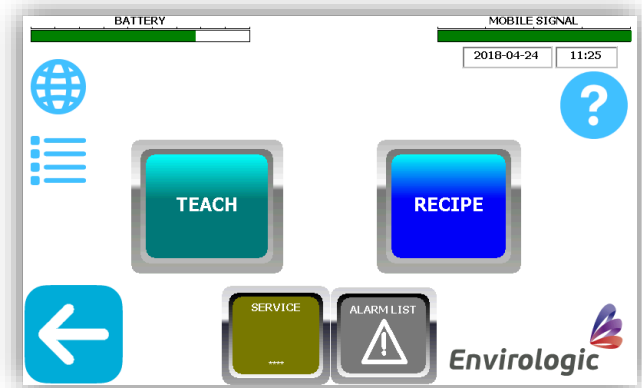
- 1) Make sure this symbol lights up at each marker and not somewhere else.
 - i. *During the run, make sure that the wheels doesn't spin, or the robot gets stuck anywhere temporary. This will make the robot count the pulses incorrectly. If this happens, press "STOP", adjust a parameter and start over.*
- 2) Check so the robot counted the marker in the yellow box and that it finally counted the same number of markers that you specified. When the robot sensed the last marker, it will come back to the first marker.
 - i. *If the robot misses a marker, press "STOP" and start over from first marker.*



8. Create a program

When the robot has sensed all the markers, you will return to **settings**. You have now created the location that you now want to make programs in.

- 1) From the settings screen, go to "TEACH".
- 2) To create a new program, select the location in the list that the program will be created in, then confirm with .



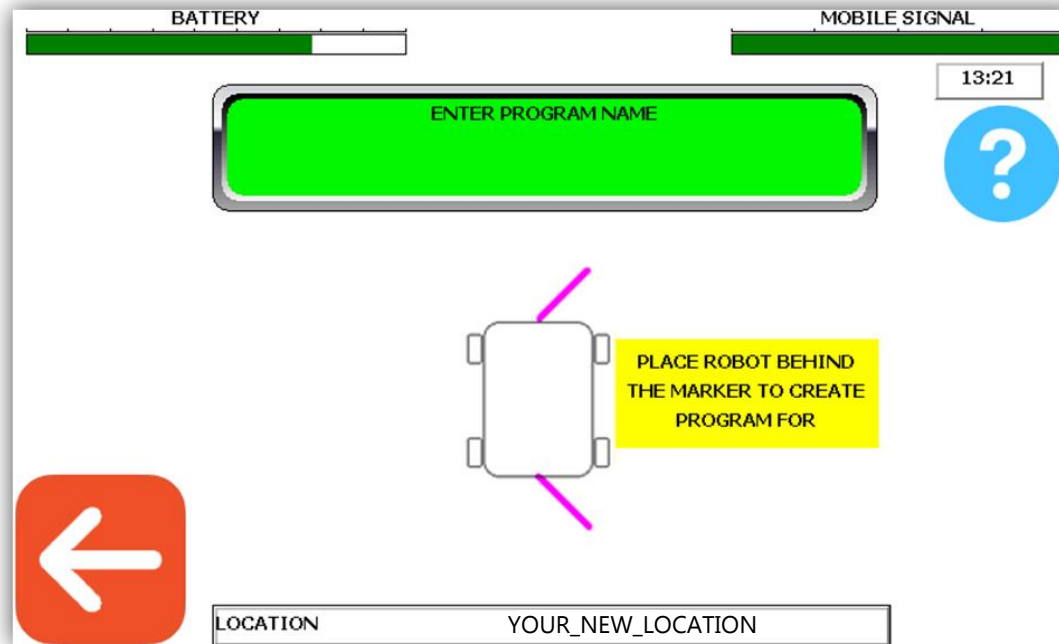
9. Name the program

The name of the program shall describe the specific washing area that this program washes.

Examples of names are: "**Floor Right, Floor Left, Wall Right, Wall Left**" etc.

Note that the robot shall now be positioned **behind** the marker you planned to do the programming at.

- a) Tap the **green box** to name the program, confirm with "**ENTER**".
- b) When you have given the program a name there will be an "**OK**"-button in the bottom right corner. When you press "**OK**", the robot will run forward and look for the marker.
 - i. *Make sure that you are placed behind the marker before you press "OK".*

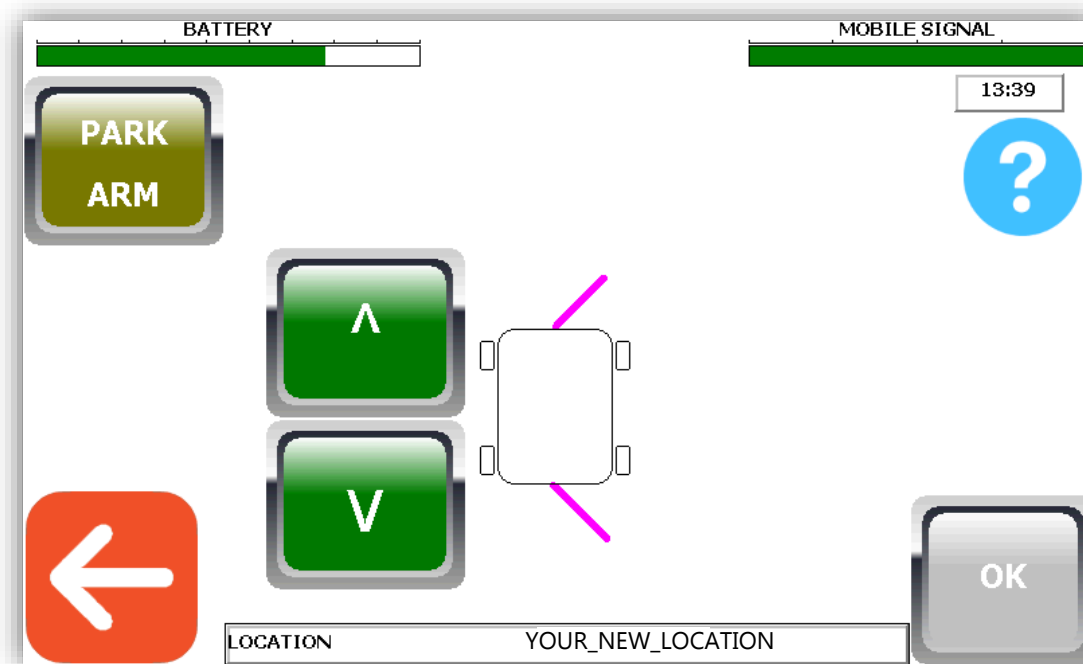


10. Start position

First, you need to park all the functions.

Then choose the desired position from which the robot will start the program, so called **start position**.

- 1) Park by pressing the "**Park**"-button in the top left corner. Wait for the function to be fully parked. Then press the button again until all functions are parked.
 - i. *If the "Park"-button is not visible, all functions are parked.*
- 2) Now select the desired starting position. Press and hold the arrow "forward" to run the robot forward, arrow "backward" run the robot backward.
 - a) When you are satisfied with the positioning, press "**OK**".

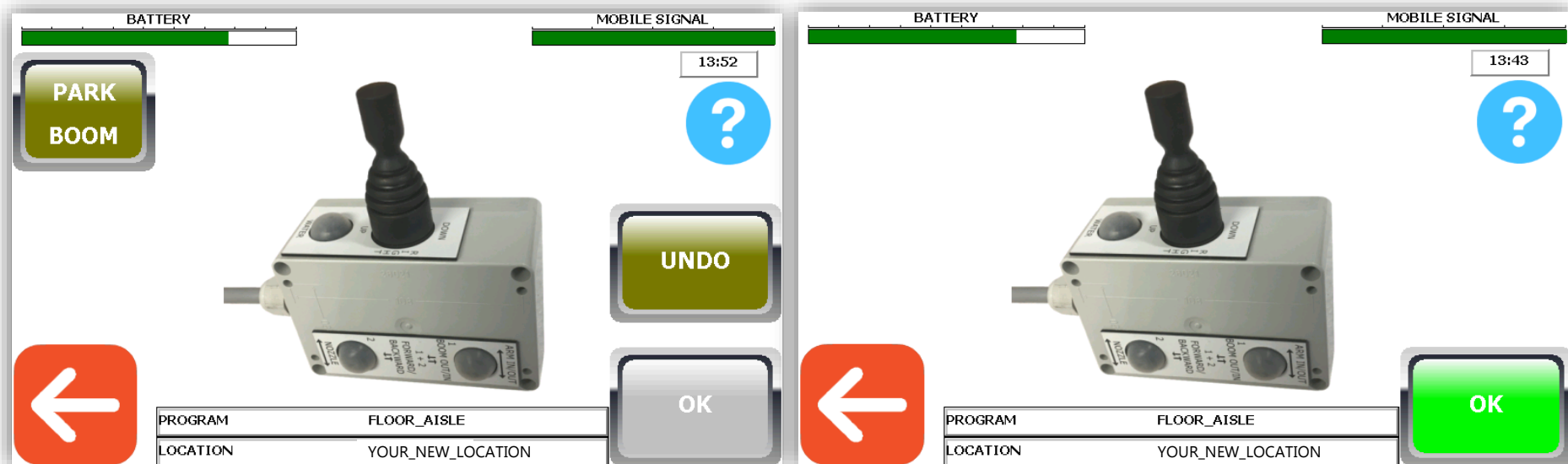


11. Programming with joystick

If you haven't already had the joystick plugged in, plug it in now (under the hood on the right side of the tower).

Wash a lot with circular motions (tower/arm/nozzle). The telescope/boom/wheels are moved mainly to take a new position. This is the most effective washing patterns for the robot and for the best results. **Remember to start with simple programs. Do not overwork. The more you program with the joystick, the better you will be. Have a plan on where you will start and finish with the program. Think through how you on the most efficient way can work your way to where you want to finish.**

- 1) When you see this joystick screen, everything you do is recorded. You can always undo movements with the "UNDO" button.
 - i. *Keep in mind that you have time to pause and think through every move and what you want to do. When the robot runs your program automatically, everything goes in one without pauses.*
- 1) When you are done with your programming, turn off the water on the joystick, then all functions must be parked again using the "PARK"-buttons.
 - a) **Important** that you think through and ensure before you press the "Park" button so the function you are going to park is not likely to get stuck in anything on the way back to its parking position.
 - i. *The first function that is parked is the arm so adjust other functions (boom/telescope/tower) so that the arm can be parked without hitting anything. Apply the same principles when you park other functions.*
 - b) When all functions are parked ("Park"-button not visible), confirm with "OK".



12. Create recipe

Now that you've created one or more programs, you must add it/them to a recipe. Either in a new recipe (*step 1*) or in an existing recipe (*step 2*). Go to **"Settings"** and then press **"RECIPE"**.

Select the current location for which you created the programs in and for which you now want to create a recipe for. Confirm the location with the **Green** button.

Now choose whether you want to create a new recipe or edit an existing recipe.

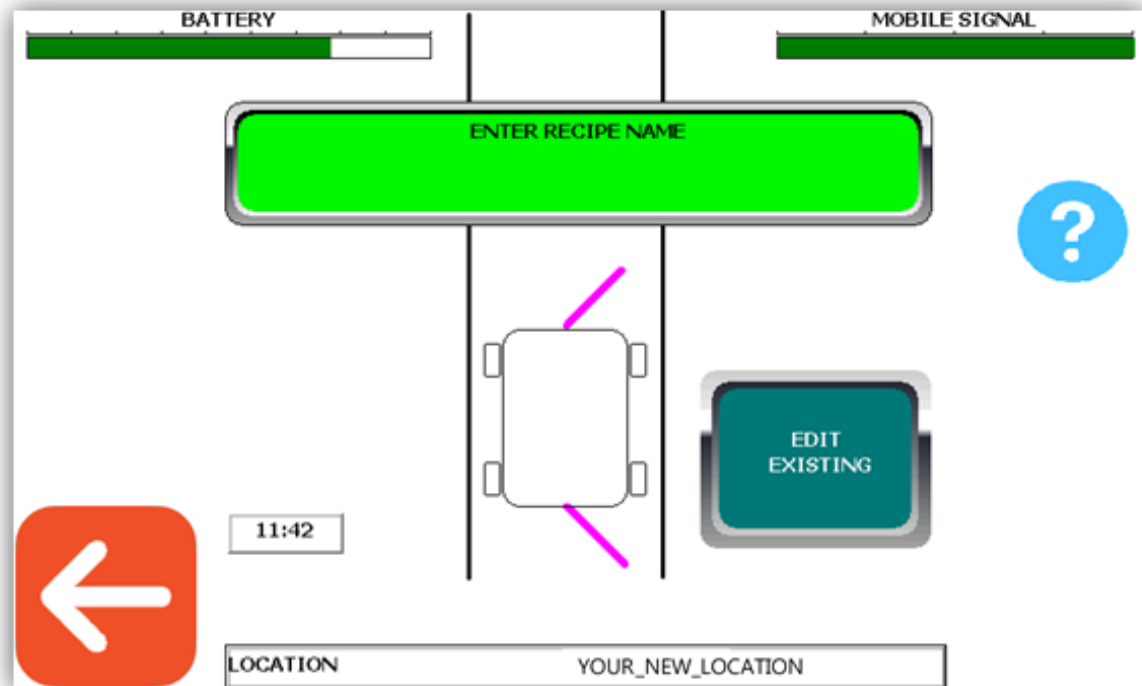
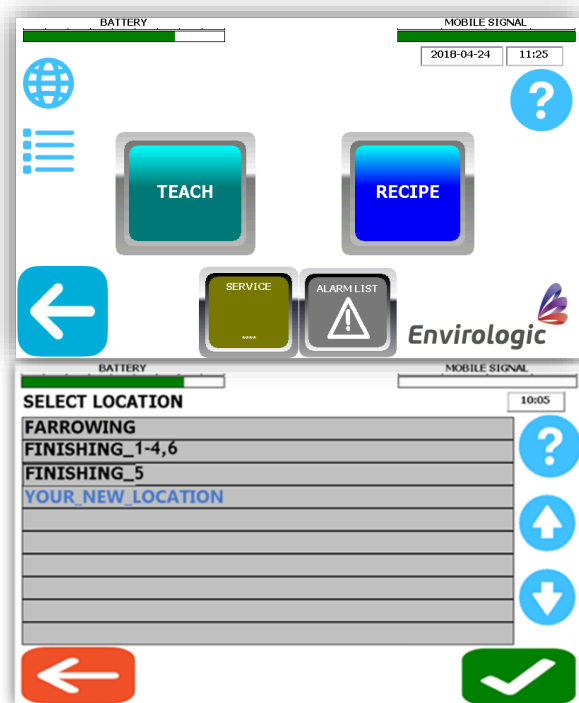
1) Press the **green box** to create a new recipe.

a) Then name the recipe.

- i. For example: If you have recently created the programs **"Floor Right"** and **"Floor Left"** and want to make a recipe for these, the recipe is named only **"Floor"**. The same principle with the wall programs, then the recipe is named to **"Wall"**.

2) To change an existing recipe, press the **"EDIT EXISTING"**-button.

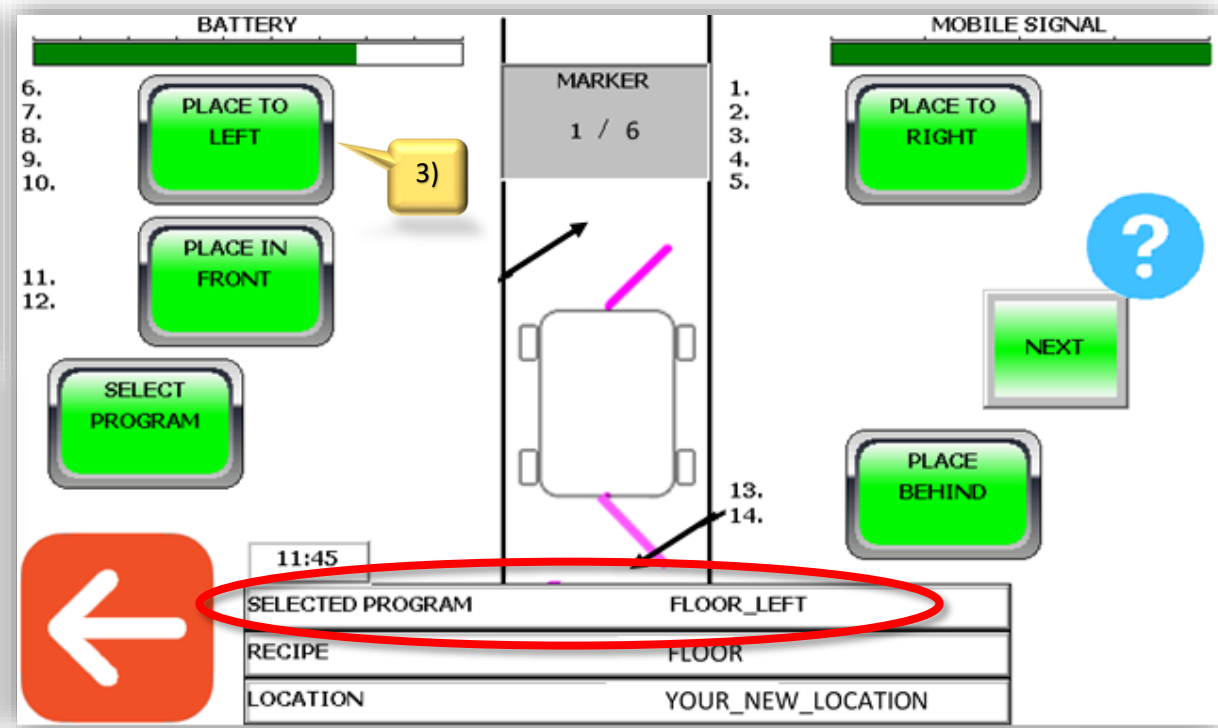
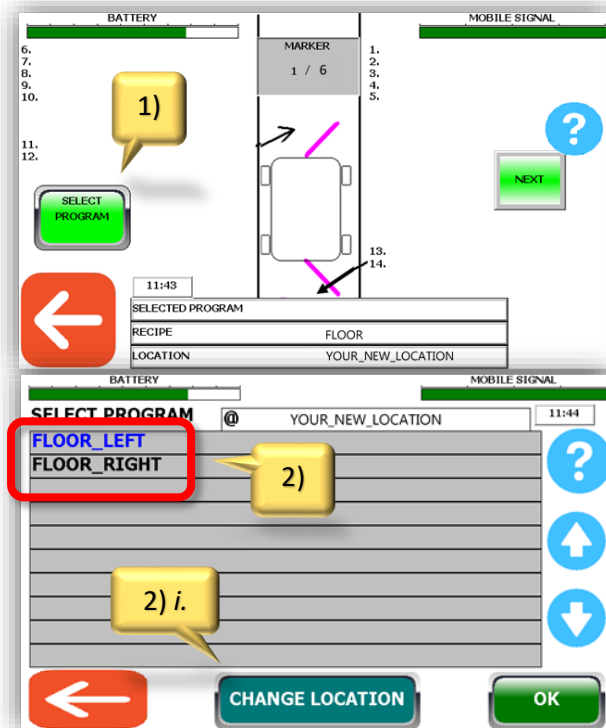
- i. This means that you can add new programs to an old recipe without making a new recipe every time.



13. Select programs for the recipe

Here you tell the robot what it should do at each marker. You can see in the middle of the screen, in the gray box, which marker you are at. The screen examples show that this location has 6 markers. These examples tell you how to create a new recipe. You use the same principals if you want to edit an existing recipe.

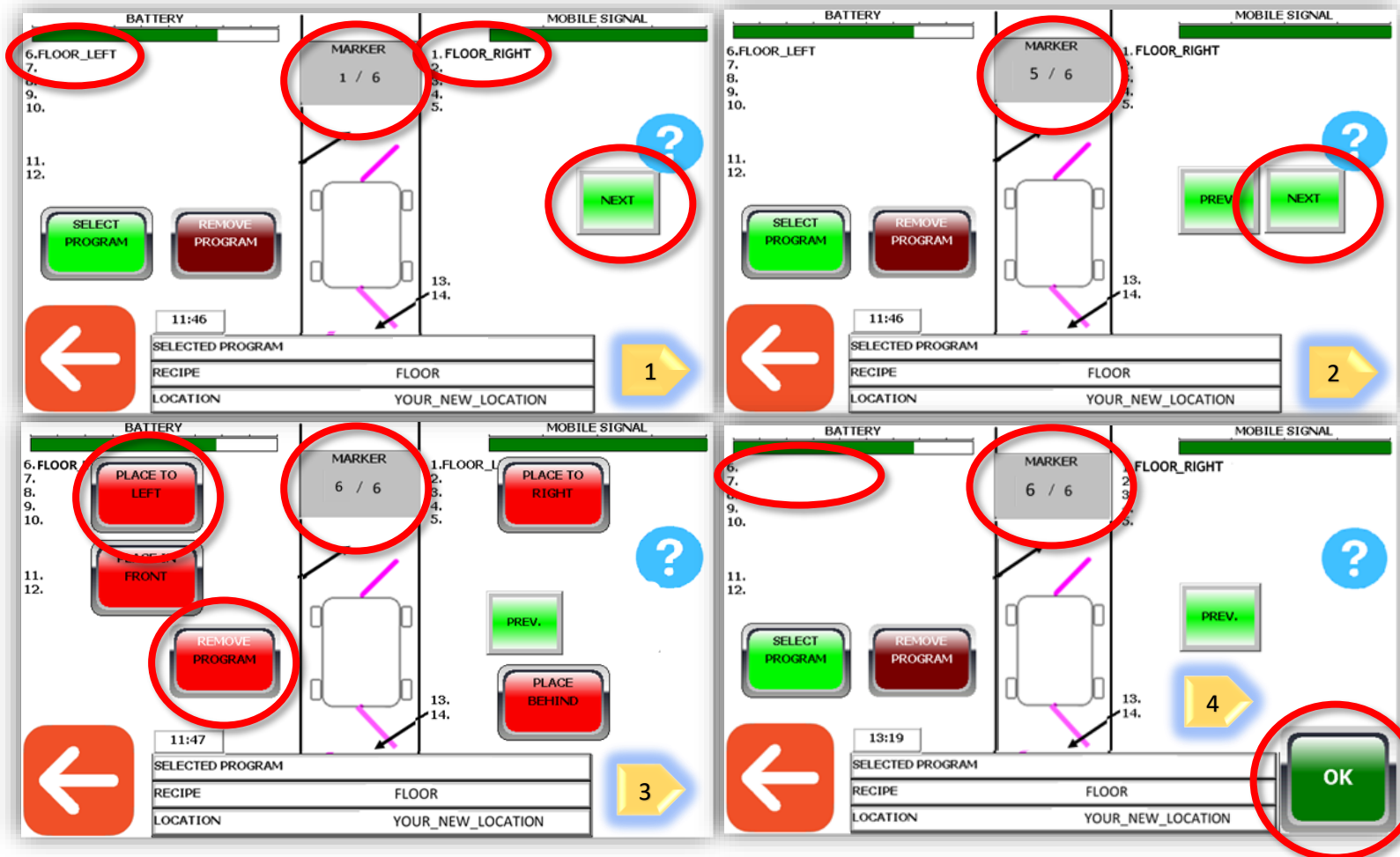
- 1) Press "SELECT PROGRAM".
- 2) Select the program you want to place at this marker, press "OK" after selecting your program.
 - i. You can also copy programs from another location that would work to your new location (if boxes are identical and markers placed at the same positions in both rooms). You can copy programs if you choose "CHANGE LOCATION" at the bottom of the screen.
 - ii. Select the application you want to copy.
- 3) Once you've chosen your program, place it where you want it. That means that you place "Floor Right" on the right side, "Floor Left" on the left side. Place programs for the aisle in front or behind the robot. However, have in mind that the robot will wash in number order. So, for example, if you want the robot to run the aisle program first, you have to place that program on the right side at position 1.
 - i. You can add several different programs to a single marker. If you want to add more programs to this marker, repeat step 1-3.



14. Right program at right marker

Now that you have chosen what you want to do at marker 1, press the little green box "NEXT" (screen 1). Then you will proceed to marker 2. The programs you selected at the previous marker follows in the same order to the next marker (screen 2). If there is something you want to change at any marker, you can add additional programs according to the previous page or, you can remove programs that followed from the previous marker by pressing "REMOVE PROGRAM" and then selecting which side you want to remove programs from (screen 3). Proceed to the next marker and continue through all markers with same principles. Confirm with "OK" when you have gone through all the markers (screen 4).

You have now created your recipe. Repeat this procedure with the other recipes you need for this location. If you just created a floor recipe, you now need to create a wall recipe (if you have wall programs ready. If not, go and make wall programs. Step: **8. Create a program**).




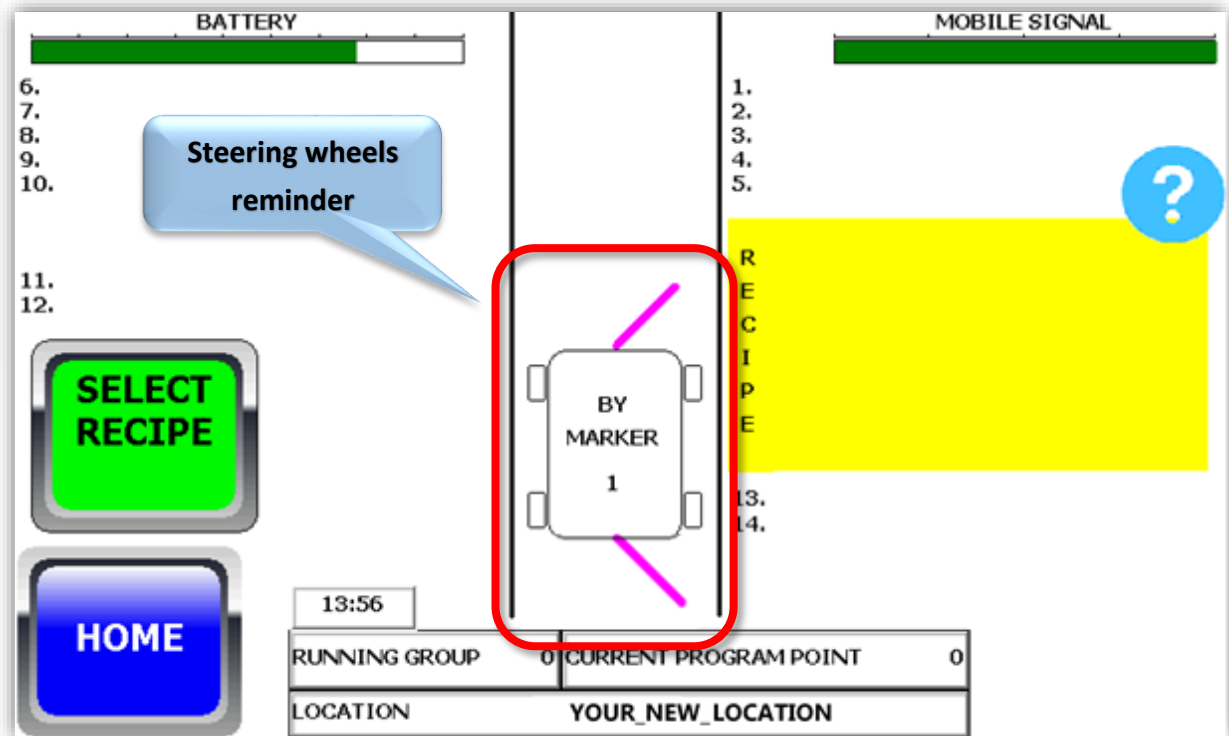
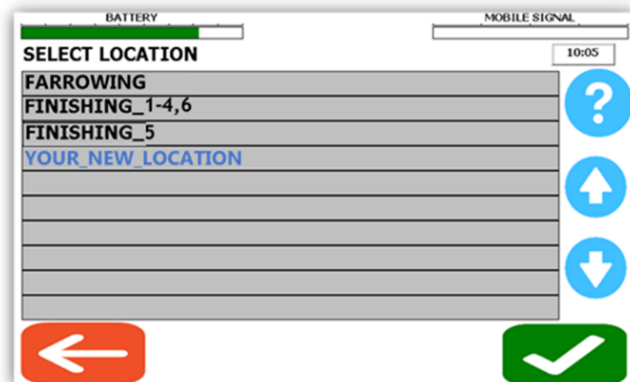
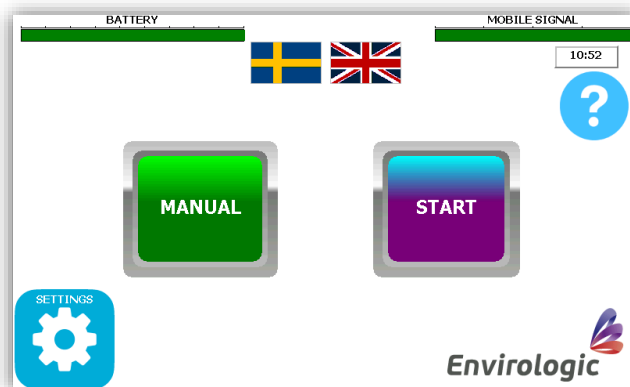
In this example, we can see that "Floor Right" and "Floor Left" are placed at marker 1 to 5 on the top two screens. At marker 6, "Floor Left" is removed.

15. Start washing

If you have all your programs placed in their recipes (floor programs in a floor recipe, wall programs in a wall recipe), you can start washing. Start by making sure that the robot's marker sensor is positioned about 30 cm behind the first marker (or behind that marker you want to start washing from) and adjusted so the sensor is maximum 10 cm away sideways from the marker. The robot can only start washing from physical markers.

The overview of the robot is a reminder for which side to set the steering wheels to.

- 1) On the home screen, press "START".
- 2) Then select the location you want to wash, followed by .
- 3) Press "SELECT RECIPE".

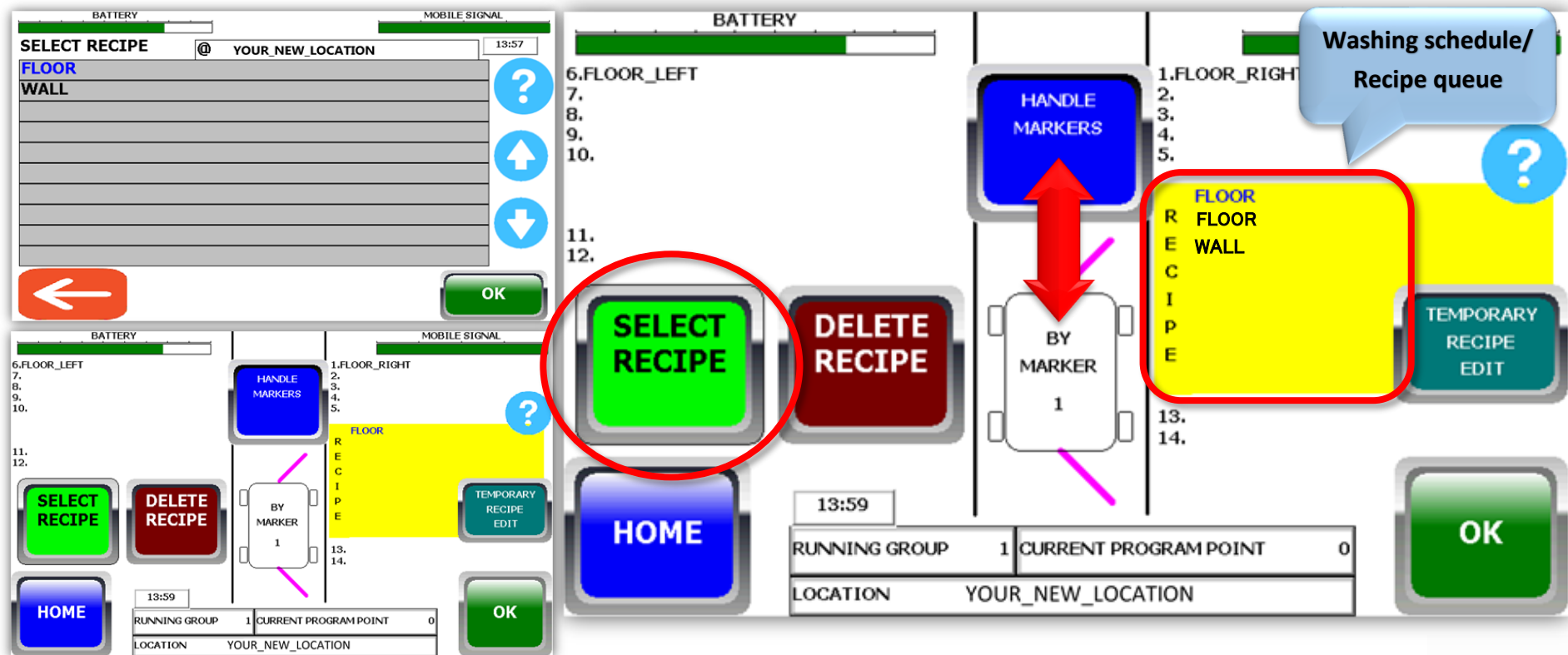


16. Start Washing – Select Recipes

Choose the recipe you want your wash to start with. When starting a wash, the recipes are added to a list. This list is yellow and shows the washing schedule/recipe queue. You can run the same recipe several times. For example, you can wash floors, floors and then wall if you have seen that the floor is extra dirty. See the example below.

If you don't want to start at the first marker, you need to change and set the start marker via the blue button in the middle "HANDLE MARKERS". You can also set the last marker from there.

Make sure that the robot is positioned with the marker sensor in front of the marker where you want to start washing (about 30 cm in front). When you press the "OK"-button, the robot will run forward to find the marker and then start its automated wash based on the recipe queue that you have selected.



17. Automated wash

The robot now automatically washes according to the information you have given it. In the middle of the screen you can **ENABLE** so you will receive a text message when the wash is finished (press **"SMS WHEN FINISHED"** for enable/disable). But for that to work you must enter your mobile number via the internet screen (step 2. Settings).

If you press **"STOP"** during an active wash, the robot will finish the program it has begun then stop when it's parked.

You can pause the wash with **"PAUSE"**. In paused mode, you can also make temporary changes to the current recipe.

To cancel the wash immediately, press **"PAUSE"** and then **"STOP"**.

Use the **emergency stop** (the big red button on the robot, under the screen) to stop the robot in unexpected situations.

