Rescue Simulation

Time, Teleporting & World 2

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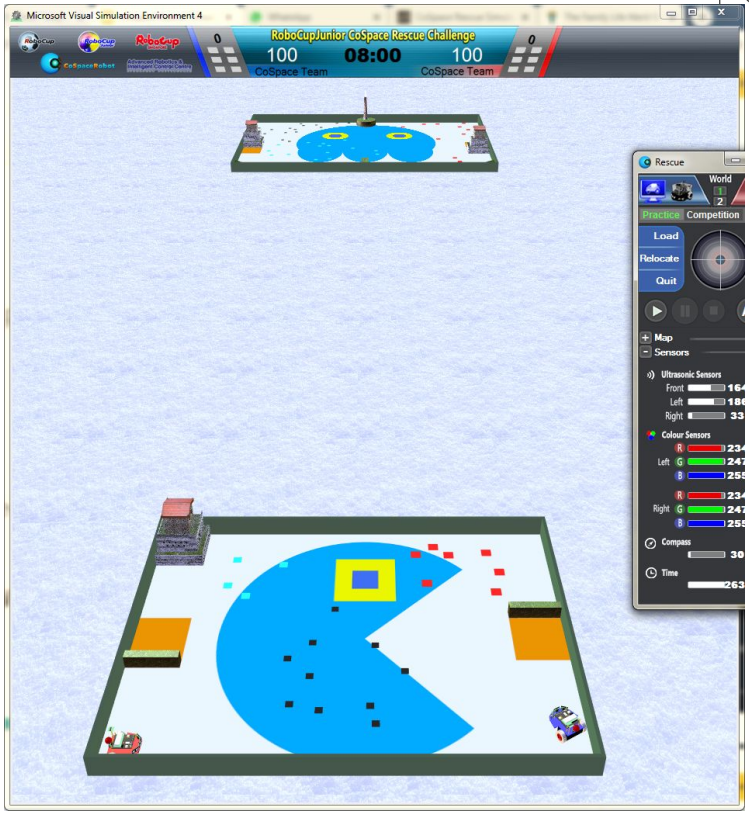
World 2

If you have tested your basic robot from **World 1**, you'd have noticed that after six minutes your robot teleports to a new arena.

Rescue Simulations usually have two worlds**.**

If you zoom out of **World 1** you, can see **World 2** in the distance…



World 2

Rather than flying your camera over, you can change your Practice area home to World 2.

Click [2] to shift your Practice Area to World 2.

Now pressing “H” will take you to World 2 home view.

World 2

World 2 is very similar to World 1. The main difference in that it is BIGGER than World 1.

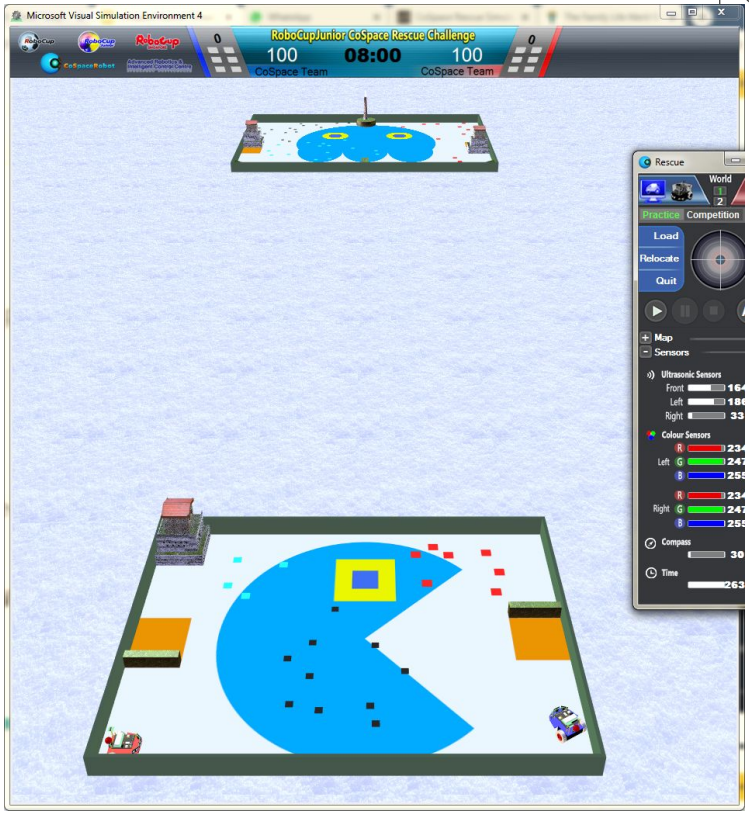
Finding objects and stumbling on Collection boxes can take a lot longer.

World 2

If you followed the lessons to this point, your basic robot:

- Drives around World 1
- Avoids obstacles and walls
- Picks up all 3 types of objects
- Deposits objects when in collection box
- Avoids Traps

Well, all of these a relevant to **World 2.**



Basic World 2 Program

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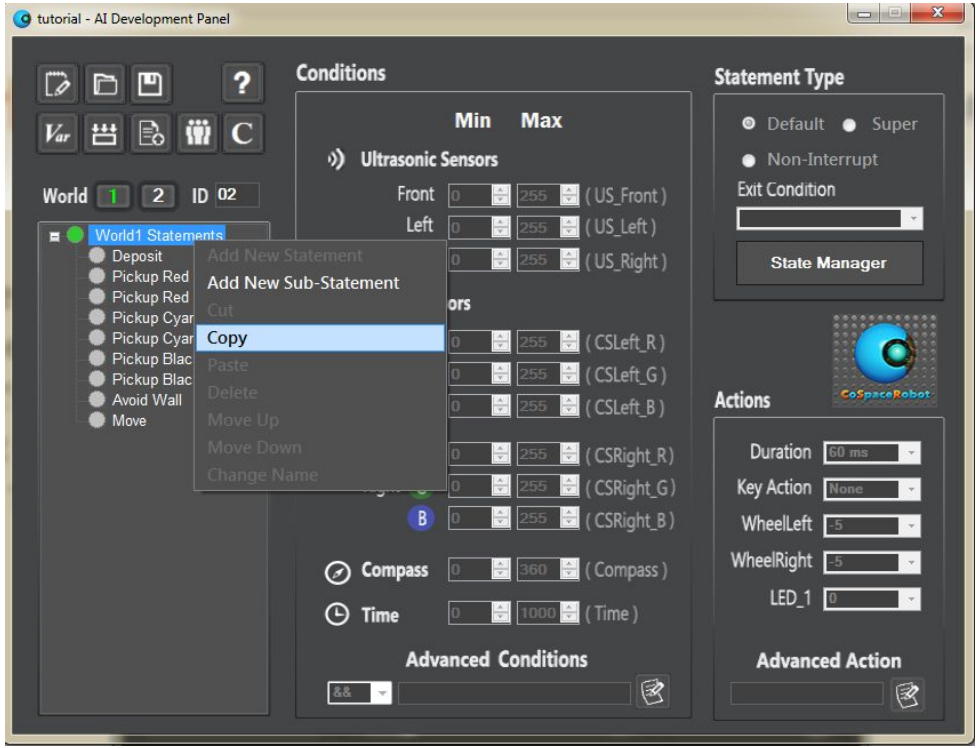
World 2 Basic Program is pretty much the same as World 1, so let's just copy what we have in World 1 over...



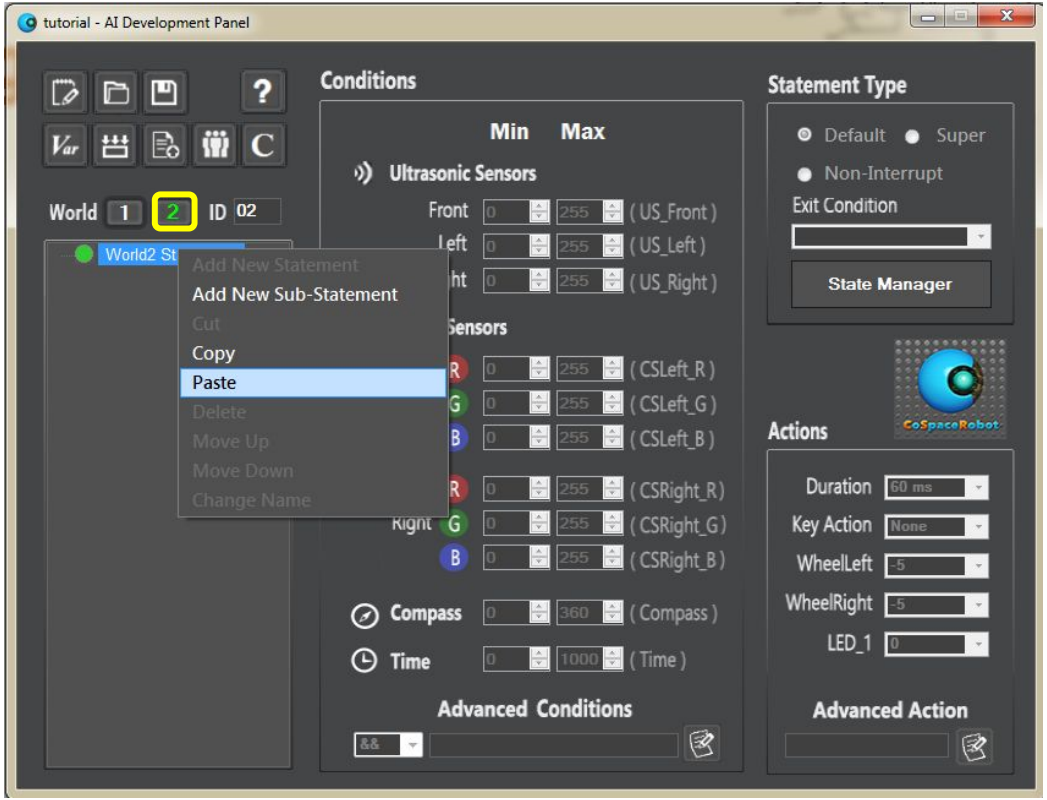
Basic World 2 Program

Now choose World 2…

and Paste…

You will see the same World 1 program pasted into World 2.

Build, and test with Practice arena set as World 2

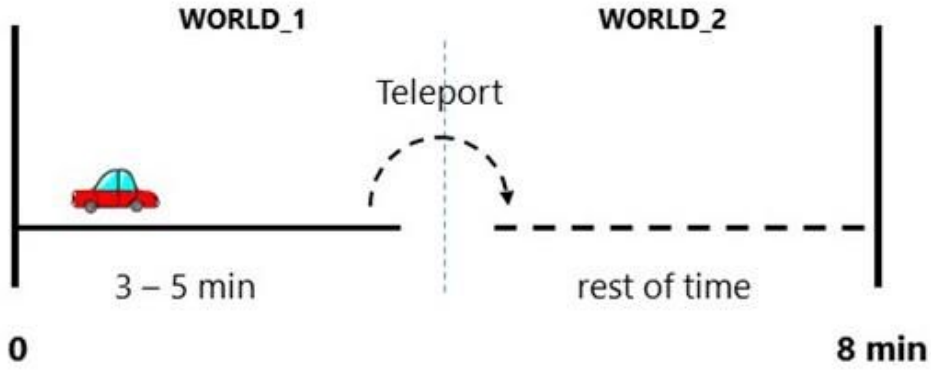


Time

Rescue Simulation demands your Robot stay in World 1 for some duration - say **3 minutes**.

It also demands you have to Teleport away to World 2 within some duration - say **5 minutes**.

You **lose points if you don't teleport** on your own, forcing the game to teleport you when the full 6 minutes are up...



Time

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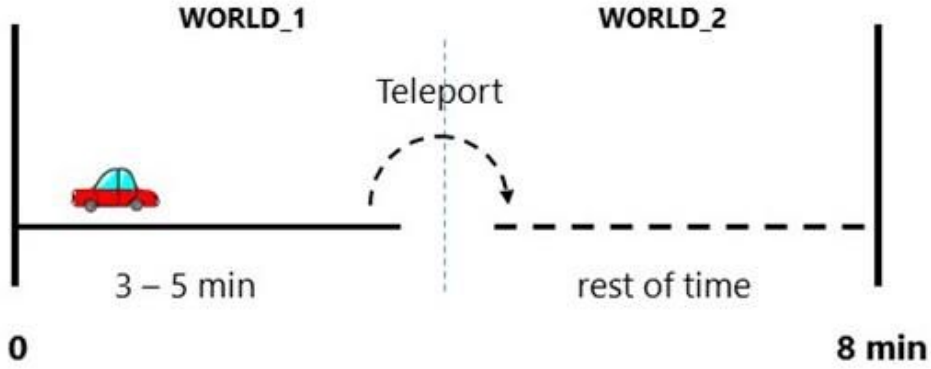
You have to decide whether you want your robot to:

- **Teleport as soon as possible** (after 3 minutes)
- **Stay in World 1 for as long as it can** (5 minutes).

This decision should depend on how good your robot it at getting points in one arena vs. the other.

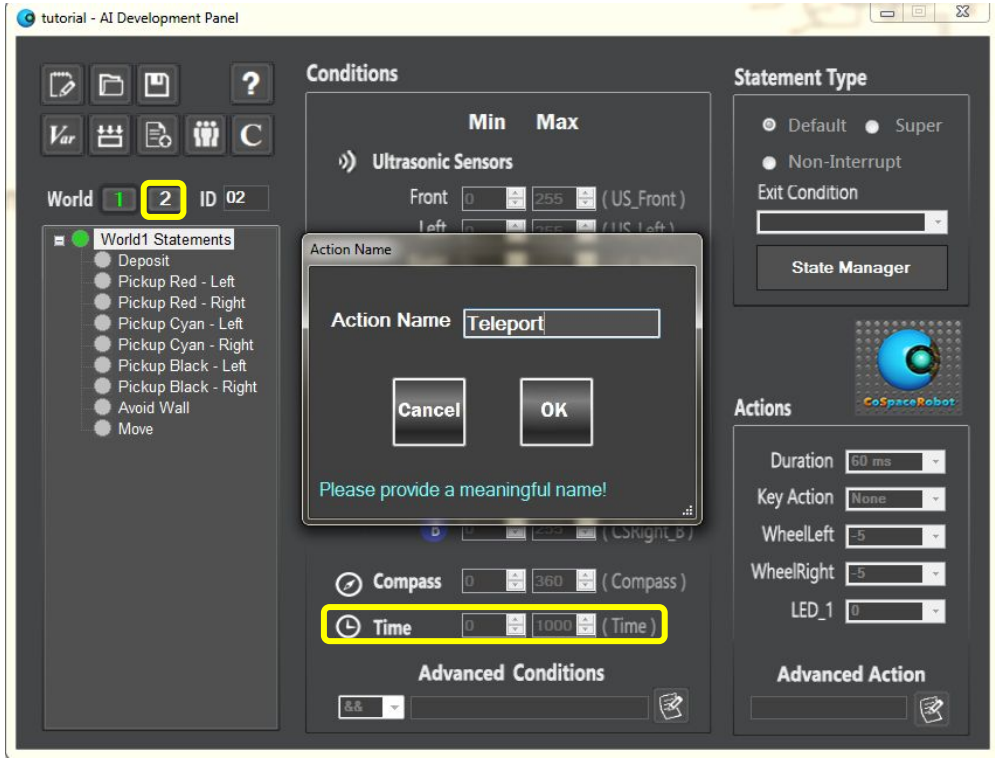


Teleporting

The basic Teleport program statement will have only 1 condition: **Time**

Before adding the new statement, make sure to focus AI panel back on World 1.

We only teleport from World 1 arena...

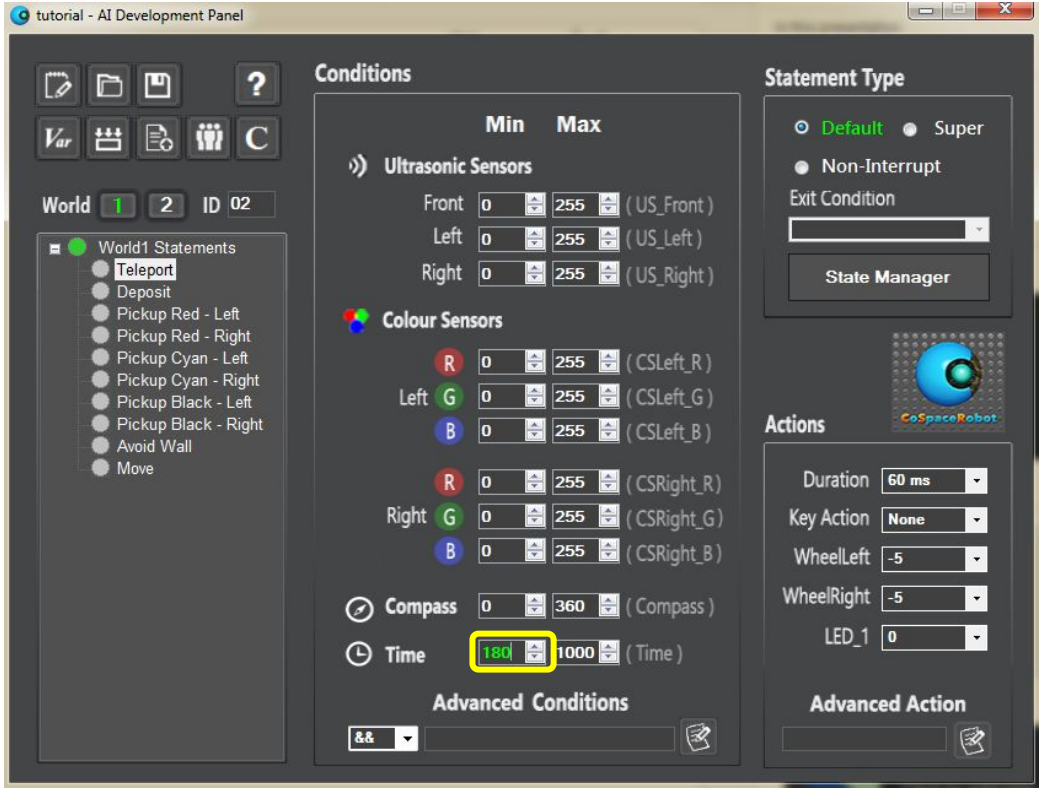


Teleporting

Depending on what you decided for your teleport strategy, you need to pick a Min Time condition when your Teleport will activate.

For instance, if you wish to Teleport as soon as possible, use 3 minutes (or **180 seconds**) as your minimum Time condition.

What should it be to wait as long as possible in World 1?



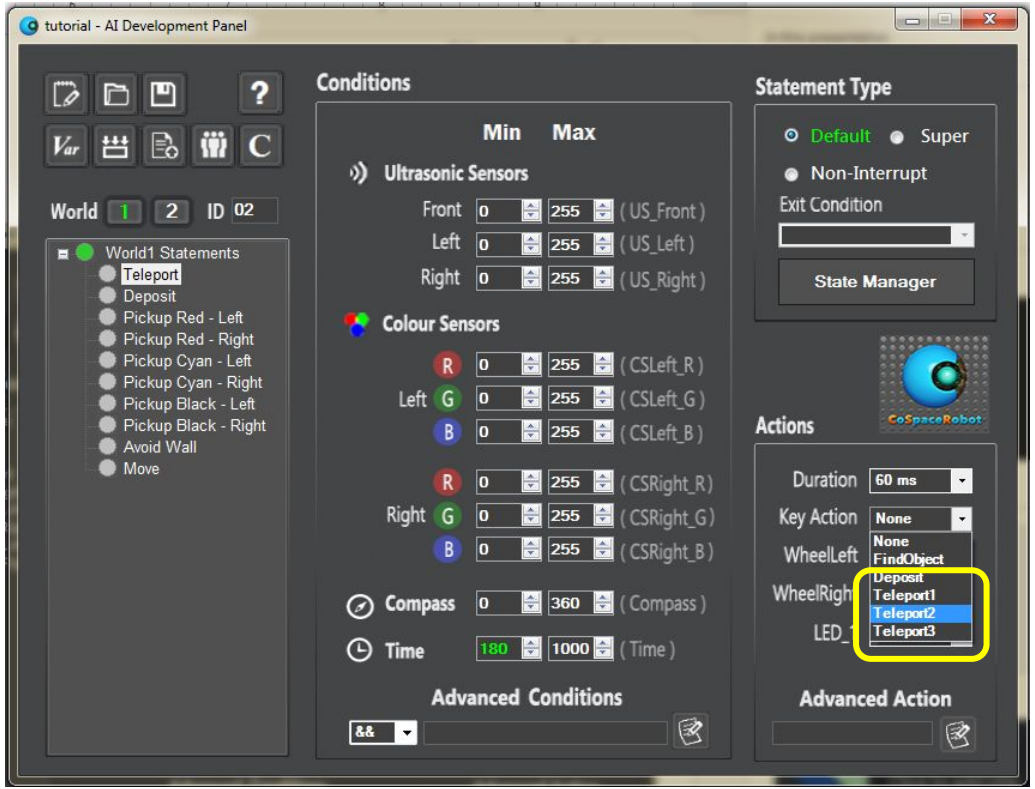
Teleporting

The *Key Action* should be be one of the **3 Teleport Types**.

Each **Teleport Type** will cause your Robot to appear in a different area of World 2's map.

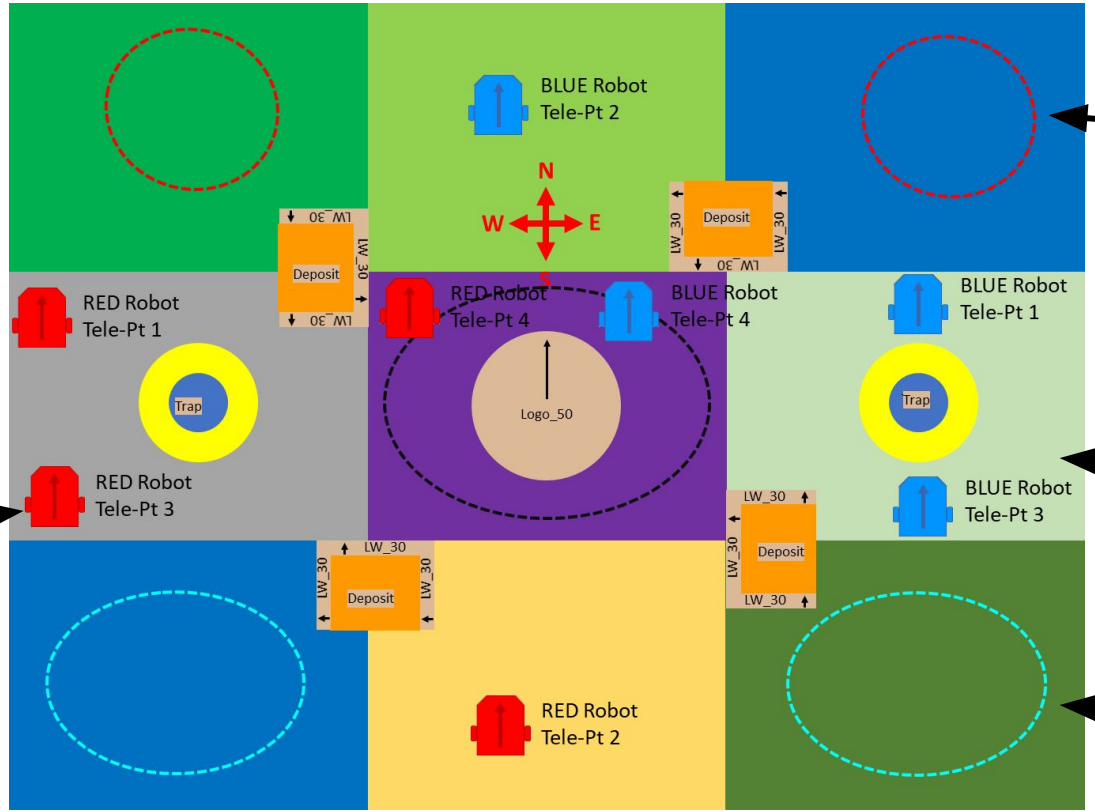
You can test to see where you'd start, and which of the spawn points is ideal.

Red & Blue Robots will spawn at different, mirrored locations.



Map Layout Guide

Some Maps will come with a layout guide, like this.



Area with red objects

Blue's Teleport3

Red's Teleport3

Area with cyan objects

Time as 4th Dimension

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Many students are confused by only 1 robot teleporting, and another staying behind, and the the reemergence of only 1 robot in World 2, joined a little later by the laggard companion… This timeline may help:

Time	Blue Robot	Red Robot	Simulation Shows
0 - 3 mins	World 1	World 1	World 1 - Both Robots
3-5 mins	World 2	World 1	World 1 - Red Robot Only
3-5 mins (rewind time!)	World 2	World 1	World 2 - Blue Robot Only
5-8 mins	World 2	World 2	World 2 - Both Robots

World 2 - Super Objects

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World 2 is also different from World 1 in that when you deposit sets of RGB objects (red, cyan, black) instead of getting a point bonus, a pink/purple Super Object only your robot can pick is deposited in the field, somewhere along the perimeter.

Deposit RGB, and you get:
Super Object worth 90 points

Deposit RRGGBB, and you get:
Super+ Object worth 180 points

World 2 - Super Objects

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Make sure to add pickup statements to your robot's World 2 program, specifically for Super Objects.

To test, and get color calibration measurements, you will need to make a RGB/RRGGBB deposit. You can make this happen quickly by manually forcing your robot to pickup the three color objects - using pause and manually placing the robot just behind objects.

World 2 - Super Objects (Advanced)

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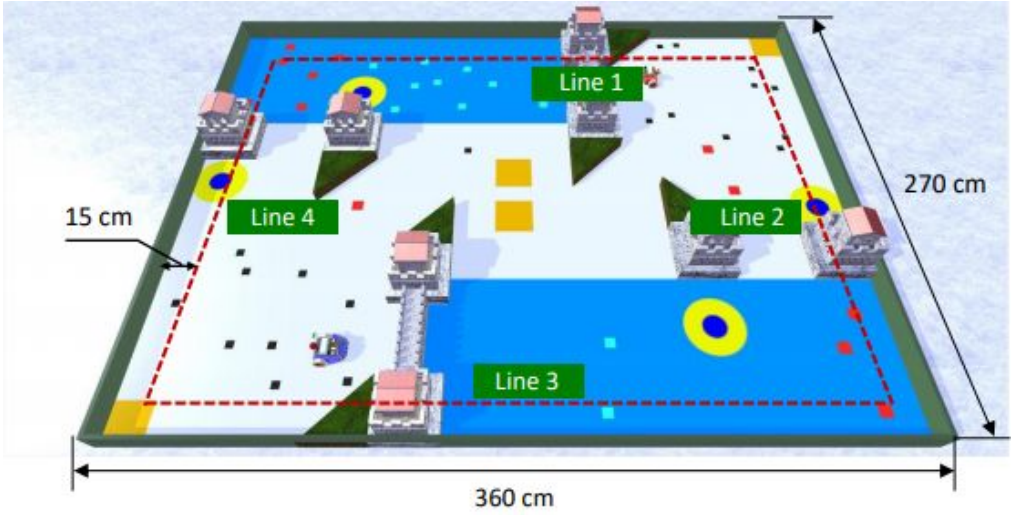
Variables containing the location of the Super Object are briefly populated for your robot's reference at the time you make your RGB/RRGGBB deposits.

It is possible to add a "Go To Super Object" strategic state (see advanced topics in the tutorial area where you found this deck.



Super Objects are placed 15cm from the boundary