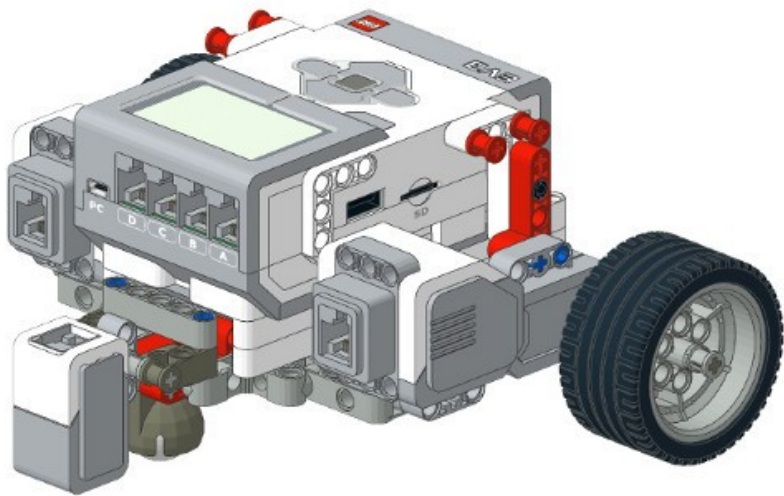




MINDSTORMS
EV3

Mission Tips (Superpowered)



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Workflow

- Mission workflow is the same as always...
- ...but with a special emphasis on step 2 (Plan)

Mission Workflow Steps

1) Build Robot Base

2) Plan Run Routes

3) Test Attachments

4) Prepare Detailed Plan

5) Program

Especially important
this year



Before you start...

- Watch the mission video
 - <https://youtu.be/ILTjo0LHZQA>
- Read the rule book
 - <https://firstinspiresst01.blob.core.windows.net/first-energize/fll-challenge/fll-challenge-superpowered-robot-game-rulebook.pdf>

Important Things to Note

- Two starting areas
 - Technicians cannot change sides during a run (...if you start in East, you'll have to stay in East until the end)
 - You cannot pass anything by hand from one side to the other; this includes the robot
 - You can use the robot to transport items from one side to the other (eg. energy units)

Important Things to Note

- If it's not mentioned in the robot game rule, then it doesn't matter
 - Eg. Hydroelectric: The rule says...
 - “If the energy unit is no longer touching the hydroelectric dam”
 - It doesn't say that the water must be released.
 - IE. It doesn't matter if the water is released or not

Important Things to Note

- Anything that is fully in home can be handled by hand
 - Some missions may be easier to do by first bringing the mission models back home and handling it by hand

Step 1: Robot Base

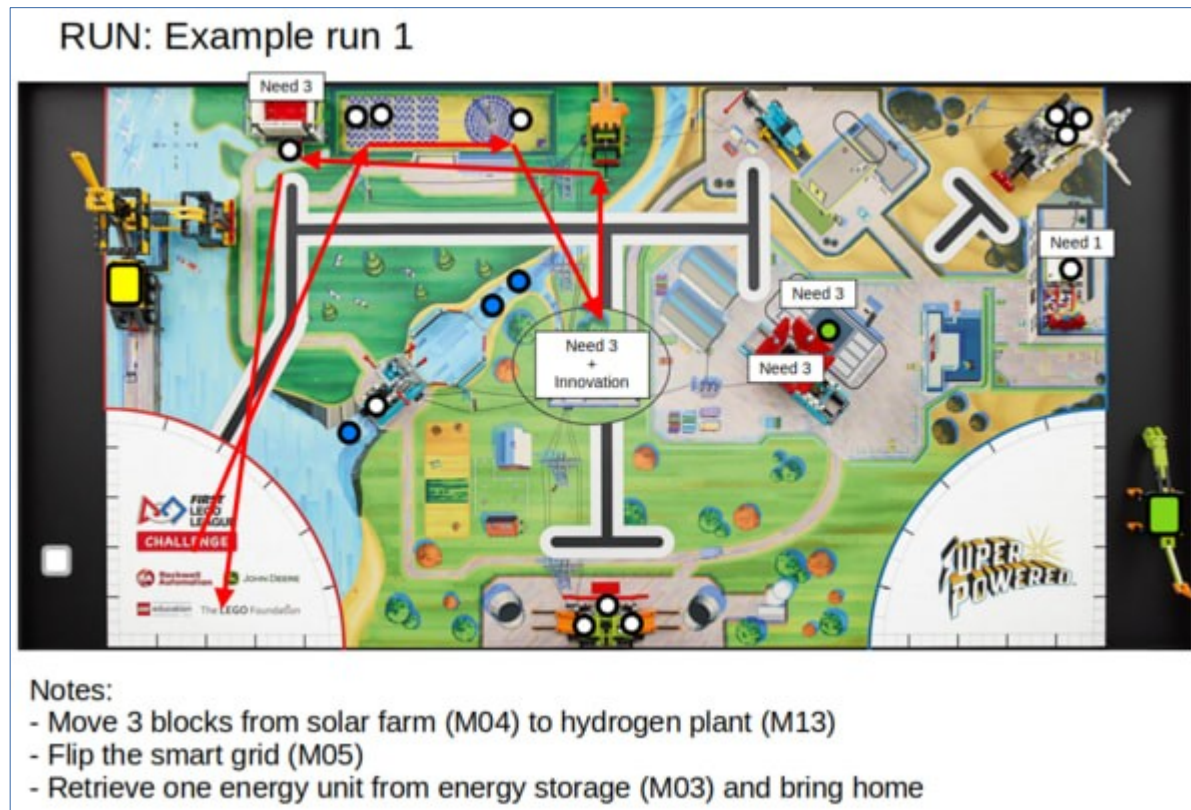
- Two starting areas means...
 - Shorter travel distances → Line following is less important → May want to skip it entirely
- Gyro is important as always
- Likely to have many short runs
 - Setting up and switching programs between runs needs to be fast

Step 2: Plan

- Most scoring conditions requires energy units, but none of the energy units starts in home; you'll need to retrieve them first
- Some missions are easier to do from either the east or west starting point; you'll will need to...
 - Move robot from one side to the other
 - Transports energy units from one side to the other
 - Transport mission models from one side to the other
- You'll likely have many short runs

Step 2: Plan

- Use the mission planner template on the website
- Looks like this...



Step 3: Attachments

- Most missions can be completed with just an up/down mechanism
- See video for some inspirations
 - <https://youtu.be/-aol6su6m84>
 - As always, don't copy, the mechanism in the video is just for demo and isn't the best

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