

ROBOLAB™

Training Mission Investigator Pilot 2

MISSION: Construct and program a robot that will take 12 light readings, one every second, as it travels forward. It will stop as soon as it has collected the final reading.

Step 1 Make sure your robot has a light sensor attached to port (1) and that it is pointing up instead of down to the ground.

Step 2 You can remove the touch sensor if it is still attached to the robot.

Step 3 Go to the Investigator Pilot section of RoboLab.



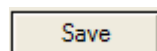
Step 4 Start a new project.



Step 5 Name it Mission2.



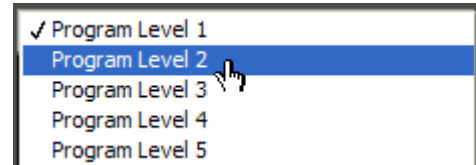
Step 6 Click the Save button.



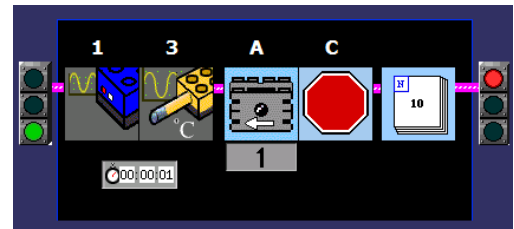
Step 7 Go to the Program Level drop-down menu at the top.



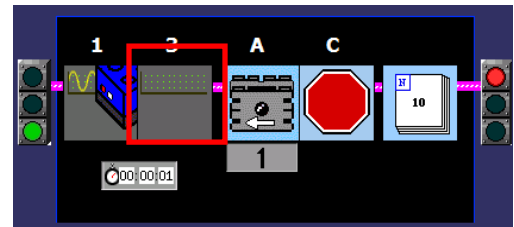
Step 8 Choose Program Level 2.



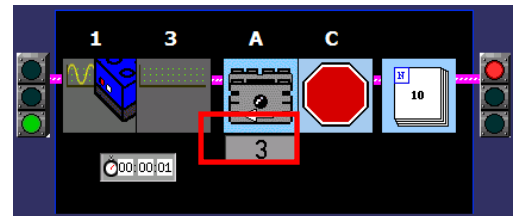
Step 9 The basic program looks like this:



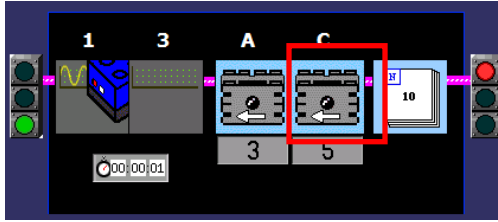
Step 10 Change the Temperature Sensor icon to the No Log icon.



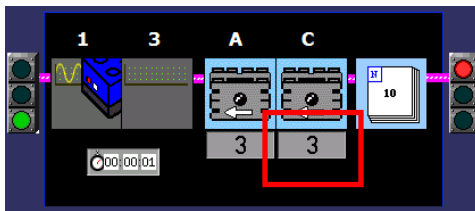
Step 11 Change Motor A's power level to 3.



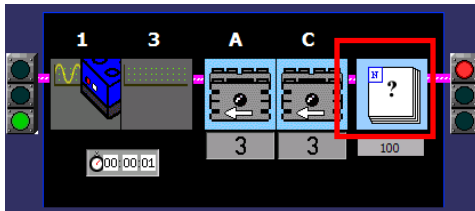
Step 12 Change Stop Sign C to the Motor Forward (←) icon.



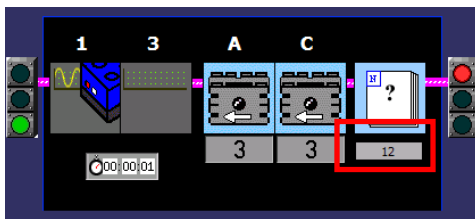
Step 13 Change Motor C's power level to 3.



Step 14 Change the Sampling Data icon to the Pages with ?.



Step 15 Change the 100 to a 12.



Group Questions:

1. Walk through this program verbally with your group. What will this program do?
2. Why do you think you removed the touch sensor?

Step 16 You are ready to download the program. Press the white arrow button to download it.



Step 17 You are ready to run the program.

- Careful not to block the light sensor as it takes readings.
- The robot will stop when all 12 readings have been taken.
- It will count the readings for you on the digital display.

Step 18 When the robot stops, return to the computer to upload your data.

Step 19 Place your robot so that the infrared part of the RCX is facing the IR tower.

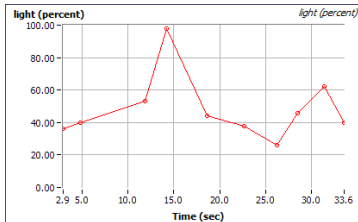
Step 20 Click the Upload Area button on the Navigation Dial.



Step 21 Click the white Data Upload arrow.



Step 22 Your data is automatically displayed as a line graph.



Step 23 Using the Journal button...



Step 24 Write two sentences about graph that is displayed for the data.

Step 25 Try out the View and Compare Area – full of tools to analyze the data.



Step 26 The Compute Area has special templates for using with your data.

