

Instructions for Exercise 2

- Connect the left and right IR sensors to the Crickit signal pins.
- Connect both DC motors to the Crickit motor ports.
- Place a black line on a white surface for the rover to follow.
- Upload the CircuitPython code to the CPX.
- Place the rover so the IR sensors are above the line.
- Observe the rover move forward when both sensors are on the line.
- Observe the rover turn left or right when one sensor moves off the line.
- Notice that the rover stops when both sensors lose the line.
- Adjust the sensor position or speed if the rover does not follow the line smoothly.

Pseudocode for Exercise 2

Start the program

Set up the Crickit seesaw interface

Set left IR sensor and right IR sensor as digital inputs

Set up left motor and right motor

Repeat forever

 Read value from left IR sensor

 Read value from right IR sensor

 If both sensors detect the line

 Move the rover forward

 Else if left sensor detects the line and right sensor does not

 Turn the rover right

 Else if right sensor detects the line and left sensor does not

 Turn the rover left

 Else

 Stop the rover

 End if

 Wait for a short time

End repeat