Activity 5 – Worksheet
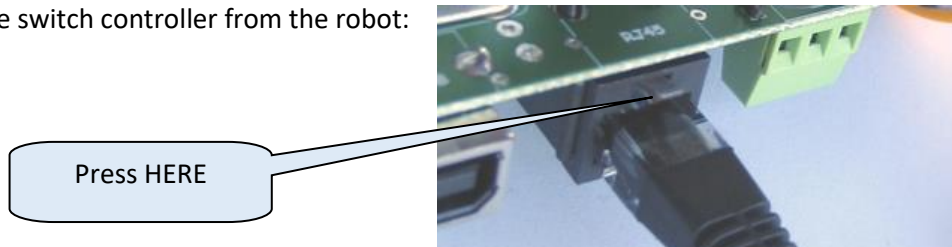# Lines & Curves

Aim:

Get your robot to go in curved and straight lines.

Tasks:

1. Remove switch controller from the robot:
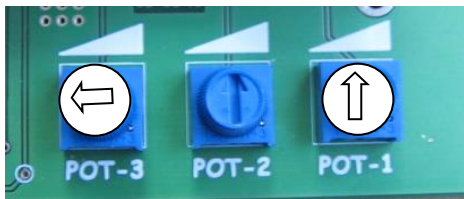
   Press HERE

2.

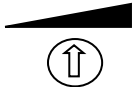| If you are working with the robot on a **DESK**	If you are working with the robot on the **FLOOR**
Mark out a 60cm straight line with the black tape	Mark out a 120cm straight with using the black tape
Set POT-1 and POT-3 to the following:	Set POT-1 and POT-3 to the following:
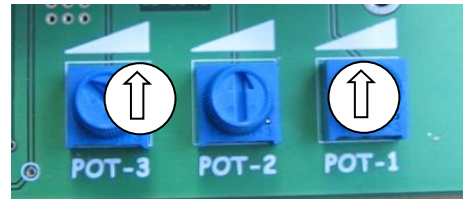
3. Power on the robot and select MODE 'A0' by pressing 'A_D_2A' (press SW-A, then SW-D then SW-A twice). This shown as 'A-D_2A'
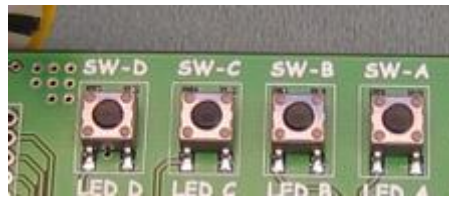
4. When the robot display shows '**A0**' (no flashing) you can use any of the A, B and C switches. These switches can do the following:
   - Pressing **SW-A** will cause the robot to move forward
   - Pressing **SW-B** instructs the robot's computer to read and remember the three POT values (speed, differential and time)
   - Pressing **SW-C** will exit this MODE

5. Place your robot at the start of your black line, set a POT-2 value, press **SW-B** then press **SW-A** to cause robot to do the move. Record your results in the table on the following page. Repeat for the three POT-2 settings.

POT-2 setting	Setting	Observed direction
◹	LOW	
⇧	MEDIUM	
⬈	HIGH	
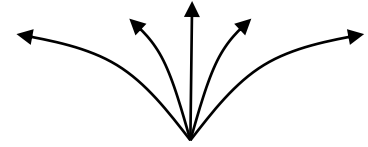
6. Using the information in the table, work out the setting for POT-2 to make your robot go as straight as possible. Record the arrow position in this diagram:

POT-2

7. You can now experiment with the effect that the other POTs have on the way the robot behaves:
   - POT-1 controls the speed of the robot
   - POT-3 controls the amount of time the robot runs (from 2 to 8 seconds)