REC for Cortex

1.18 Activity: Arcade Control - Advanced

Name: _____ **Class/Period:** _____ **Date:** _____

Overview:

In this advanced activity, you will navigate a course with the BaseBot using one joystick Arcade control.

Duration:

30 Minutes

Materials:

Qty	Description
1	BaseBot
1	Playing field
1	Stopwatch
4	Four small obstacles of your choice

The four obstacles should be small enough to set up on the playing field in a line about 45 cm apart.

intelitek►►

Procedures:

1.18.1A: Driving the Robot in a Straight Line

1 Configure your BaseBot for Arcade control.

2 Turn on the joystick.

3 Turn on the controller.

4 Move the right joystick up. The robot to drives forward.

- Does your robot go straight?

5 Using the edge of the playing field as a reference, drive the robot in a straight line.
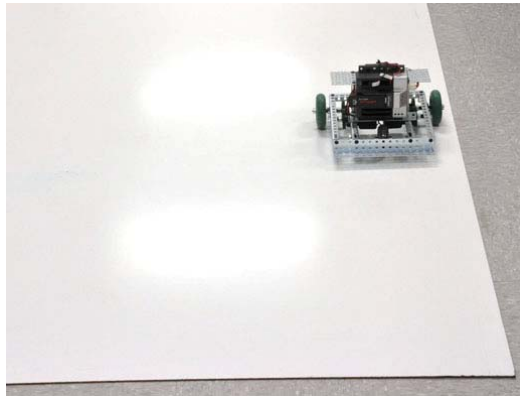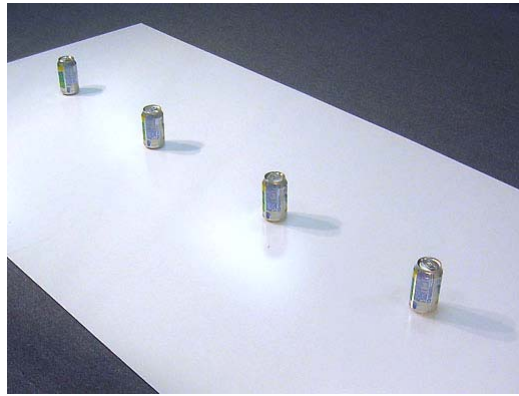

- Can you get your robot to move forwards and backwards in a straight line?

- How does the robot respond differently using arcade control compared to tank control?

1.18.2A: Navigating Obstacles in Arcade Control

1 Set up the four obstacles about 45 cm apart on the playing field.

2 Drive the robot in arcade control between the obstacles like a slalom, while your partner times each lap around the course.

3 Record the time in your engineering notebook. Use your time as a benchmark to track the improvement of your driving skills.

4 Take turns with your partner and make sure everyone in your group gets an opportunity to be timed.

1.18.3: Engineering Notebook

- In your engineering notebook, make a sketch of the course you navigated with your robot.

- Note your progress after each of your timed laps using arcade control.

Questions:

Write the answers to the following questions on your question sheet. Add the completed question sheet to your robotics binder.

Question 1   Did you prefer Tank or Arcade control, and why?

Question 2   After some practice driving arcade style, did your time improve or get worse? Why?

Question 3   What was the hardest maneuver for you to make with the BaseBot driving arcade style?

Question 4   Which maneuvers were easier with tank control?

Question 5   Which maneuvers were easier with arcade control?