

## Ma204—Programming with Robots:

Distributed: April 20, 2009

## Homework 08

Due: April 27, 2009

*Submit the program files to me via the upload web page<sup>1</sup> described in class. Please do **not** print out your program, only submit it electronically.*

- (1) **Programming Exercise:** For this program, you will need to find a partner. Using the simple messaging protocol, use one brick to build a controller and a second to build a tri-bot. The controller brick (the Etch-A-Sketch<sup>TM</sup> might be a good starting point) will use the left knob to steer the tri-bot (using synchronized motors and turn ratios), and the right knob to control the speed (including negative speeds for reverse). The controller will also display the current speed and steering.

The tri-bot brick will receive the controller brick commands and interpret them for steering and speed. One partner is responsible for the sending program, the other for the receiving program. The partners must plan and cooperate to devise a communication standard.

Be sure to test and practice controlling your robot. Bring your completed pair to class on the due date and we'll run an obstacle course. Fastest pair wins fabulous prizes!

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<sup>1</sup><http://carrot.whitman.edu/204/upload.html>