Assignment 2
Due: Tuesday, January 13, 2009, 5 PM

1 Getting Started with the HappyBoard

Test your Happyboard.

- “happytest” should be loaded on your board already. You can use this as a test suite for all of the electronics on your robot, but feel free to custom tailor your own.
- Check the wiki Knowledge Base for instructions on setting up your coding environment.

Bring your chassis to life!

1. Your robot must be able to move in a direction. Don’t worry about precision just yet. We will work with feedback control later in the class.
2. Your robot must detect some world input. This can be as simple as a bump sensor detecting a collision.
3. Your robot should be programmed to respond to the input. For example, a robot backs up and rotates after a collision.

2 Planning Ahead

1. We would like for your team to write up a design plan for the coming days. This can be a 2-page written document describing:

   (a) Your robot’s game strategy. Which balls will your robot go for? When will it worry about raising its flag (if ever)? How will your robot adapt to mistakes along the way?

   (b) What mechanical/electrical features will this strategy require? How soon can your team prototype these ideas?

   (c) What is your team’s timeline for the next two weeks? Set reasonable deadlines for yourselves, and plan for Murphy’s Law. Everything that can go wrong will go wrong.

2. Pitch your design to one of the staff members. Convince them that your game strategy is competitive and feasible. We will hold your team to the deadlines that you propose and have a check-in toward the end of the competition to make sure everything is on track.

3 Checkoff

Your team will be checked off for Assignment 2 when your robot meets the above requirements, and when a staff member has approved your design writeup.