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DRIVEIT

Version 1.0

4K Movement Controller

The 2K "Drive it" software module allows the RB5X robot to be moved from place-to-place under its own power, avoiding the necessity for carrying it. Movement is controlled by pressing the various bumpers; depending on the bumper touched, the robot will execute a forward, backward, or turning movement. When a bumper is touched, the robot acknowledges by saying "Yes, master", before performing the function. During forward movement, the on-board sonar is used to avoid collisions with objects in front of the robot. When an obstacle is detected, the robot stops, says "Excuse me", and waits. If the obstacle is moved out of the robot's way, the robot says "Thank you", and completes the forward movement. Forward movement can be interrupted. The voice card is not required for robot operation with Drive it.

Operation:

1. Make sure the RB5X is switched off and the voice/sound synthesis card is installed (optional).
2. Insert the software module into the socket on the RB5X's interface panel, making sure the guide marks on the socket and on the module match up.
3. Set the module switch located to the right of the socket to 2K.
4. Switch RB5X ON (the top of the rocker switch on the interface panel is pushed in). The red LEDs on top of the robot come on and the four yellow LEDs begin blinking. Pressing the various bumpers invokes various movements from the robot. The bumpers are numbered 1 through 8, beginning with the bumper under the sonar sensor and continuing clockwise around the robot as you look down on it.

Bumper Response

- | | |
|---|-------------------------------|
| 1 | Move backward 18 inches |
| 2 | Turn right 300 |
| 3 | Turn right 900 |
| 4 | Turn right 300 |
| 5 | Move forward about eight feet |
| 6 | Turn left 300 |
| 7 | Turn left 900 |
| 8 | Turn left 300 |

Forward movement can be interrupted at any time by pressing bumper number 5.

5. Experiment by pressing the various bumpers.

Try "driving" RB5X around the room. As you get a little experience, you'll find that moving RB5X from place to place without the necessity of carrying it makes the robot's human partner's life a lot easier.