

Hi Team,

This weekend Jay and I were able to complete Mode 1 for the most part, the Joystick Controls are functional and the walker is able to move along straight/curved walls and make 90 degree turns. Some video has been uploaded here, <http://www.youtube.com/watch?v=5rRagz3SMR4&feature=youtu.be>

Upcoming Tasks

Dolu we need you to test out an ultrasonic sensor for us, I have one I can give you one on Tuesday. We want to see if it would be usable as the front mount sensor on the walker. Being able to detect a "brick wall" with little amount of noise.

Also we need to encapsulate the different motor speeds, maybe you could help with that. We need to know how fast the walker is moving in a range of say cm/sec. The walker has 9 different speed modes so you will need to test and measure each, creating a chart of the values.

Mode 0, taped line test, cannot be implemented until receipt of the sensors, but that should be fairly easy to implement.

Further Improvements

Build Hanger on front for Mode 0 sensors

Improvement of Brick wall scenario, front sensor issues.

Add led for on/off

Test Ultrasonic

Test Speed

Add reverse Turns and Improvement of hardware controls

Vibration Dampers, the walker performs better when someone is holding it because the sensors do not vibrate as much.

Improvement of joy stick interrupts.

Implementation of smart/learning algorithms that allow the walker to be less susceptible to other environments.

Weekend's Completed Tasks/Issues

Friday

Development of motor controls. 9 different speed modes Forward, Backward, Left and Right

Was unable to encapsulate sensory data to cm, due to poor ambient lighting

Sensors set up.

Entire Code rebuilt from Scratch.

Algorithm for Johnny to follow a RIGHT wall implemented.

Determined that speed mode 4 was the best avg speed.

Reduced Reverse speed.

Saturday

Joystick implementation

Circle turns added.

90 degree turn algorithm implemented.

Brick wall scenario algorithm implemented.

Algorithm for Johnny to follow a LEFT wall implemented.

Sunday

Power switch killed itself, replaced by a push button switch.

Joystick external interrupts implemented.

Timer added.

we got rid of the noise when the walker is moving forward.

If I am missing anything please add.

See you guys Tues

Rob