

Sample Search & Rescue Design Document

Add a Title: Team Name Search & Rescue Design Document

Research

In this section students will use the internet or other sources to search for facts and information about Robotics in Emergency Services. They will need to provide specific examples of emergency response robots (such as DARPA, search and rescue bots, etc) and cite the sources they used for their research. Finally, they should describe how this research relates to their own project.

Sources:

List sources from research

Specifications:

In this section students will list the dimensions of their robot (length, width, height). Include the primary components used (motors and sensors). They will also include pictures of their robot.

Robot Dimensions:

Length:

Width:

Height:

Sample Pictures of Robot:

Width: 7 ½ inches Length: 9 ½ inches Height: 7 ¾ inches



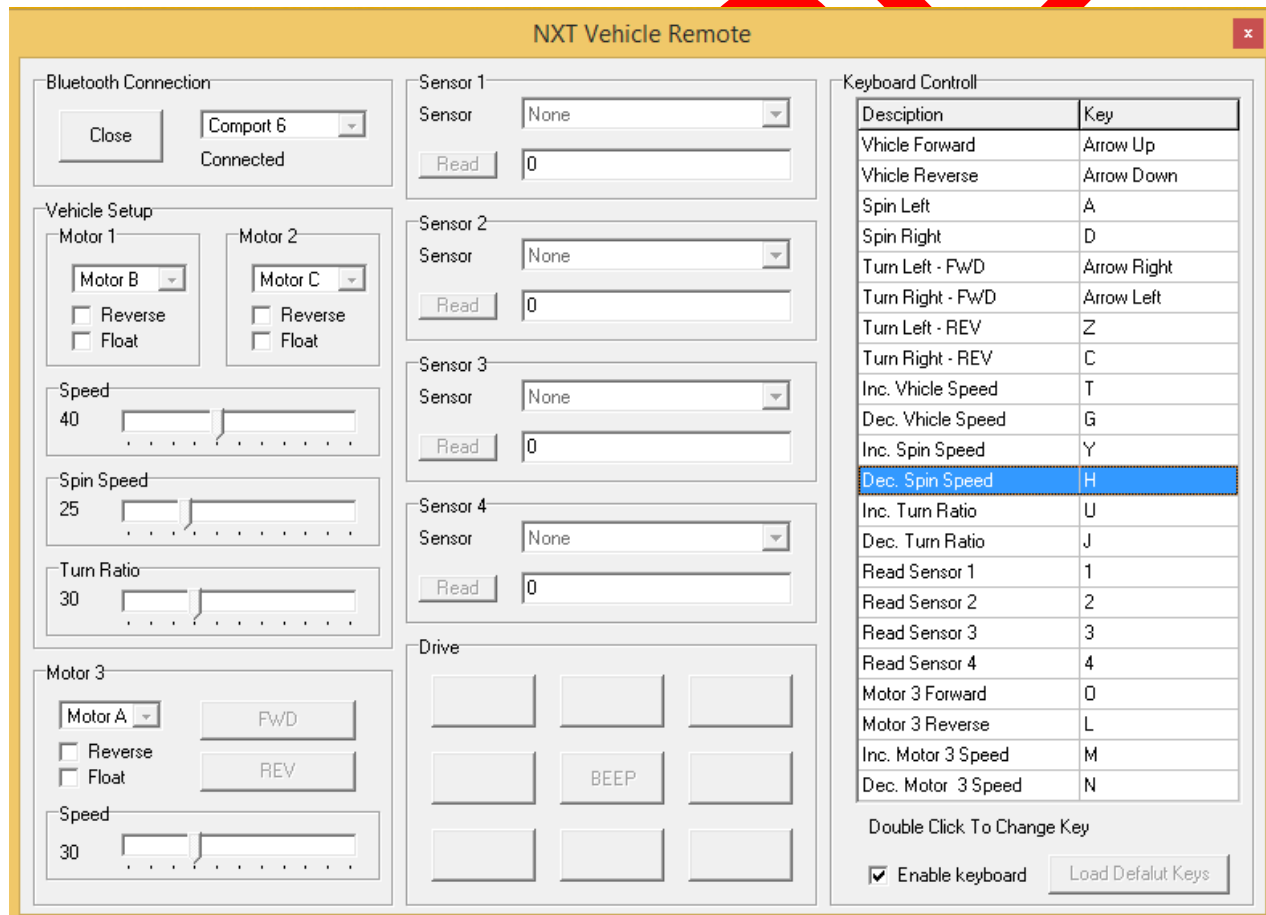
Main Components:

- 3 motors for the whole robot:
- 2 of the motors help the robot move 1 motor is used for our claw
- 2 small wheels
- 1 NXT brick
- 1 rubber band for more grip on the claw 1 Lego built camera holder

Programming:

Students will explain how they controlled their robot to complete the task. They should state what program they used and discuss specific settings. They will also include a screenshot of the program. Students will explain how they set up their video feed: describing both technology used, and apps/software used.

Sample Picture:



Testing:

In the final section, students will describe the testing of their robot and what modifications they made to improve its speed and accuracy. This should include physical changes to the robot such as changing the wheels or redesigning the robot. It should also include changing the setting of the remote-control program. Students should include a data table showing the results of different trials.

Trial	Time	Adjustments
1	4:30	First successful completion of the course
2	3:57	Changed motor A and B speed from 30 to 40 because the speed of the robot was slow and felt like we could have had a faster time
3	4:13	Put rubber band on claw for more grip because the objects kept slipping through the claw
4	4:05	Changed our wheel in the front to "sliding leg" because the wheel kept getting stuck and kept hitting the motor
5	3:45	Changed the speed of our claw from 15 to 30 because the slow speed didn't have enough force to grip the object and the faster speed gripped the object with more force

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