Teacher Notes: Full Stop!

Introduction to Mobile Robotics > Anytime Activities > Full Stop!

Description of the Unit
No matter how well you design your robot, sometimes things just don't go as planned. In this activity, students will design and program an emergency stop button for their robot, to make sure it can be controlled if it gets out of hand.

Unit summary: students will…
- Design and build an E-Stop button
- Program the robot to respond to the E-Stop button, no matter what else it is doing
- Learn about multitasking

Prerequisites:
- Full Speed Ahead Activity
- Present to class the Full Stop! slideshow from Teacher's Curriculum CD and have class discussion (optional)

Approximate classroom time: under 1 class period (45-minute periods)

Note to the teacher
This Activity can be done with either the Taskbot model or the Robot Educator model (REM). The provided building instructions for the E-Stop button work only with the Taskbot model. Students using the REM will need to design their own E-Stop button.

This Activity is designated as an "Anytime Activity," and is therefore meant to be optional. It can be completed at any point over the course of the Robotics Engineering Unit, though should be done after students have completed the Full Speed Ahead Activity.

This activity is not heavily calculation-based. It deals more with technology, design, human-robot interaction and communication.

Students will be able to:
1. Explain what an E-Stop button is and why it is useful
2. Design, build and program an E-Stop button for their robot
3. Use the Stop block to end programs