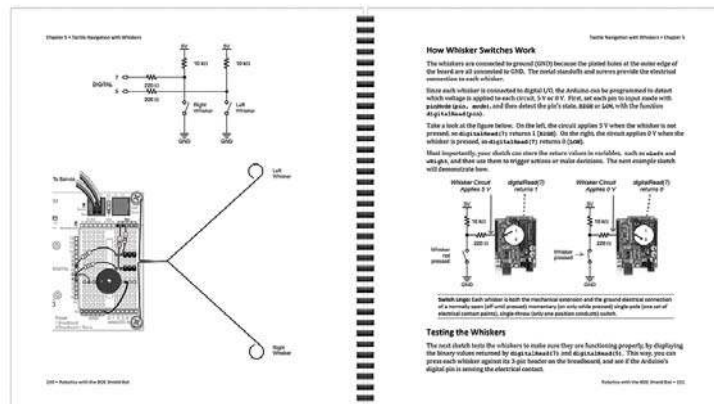
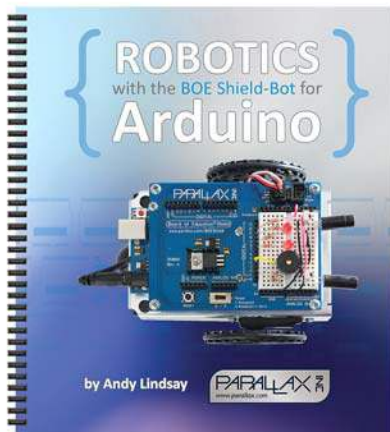




# Robotics with the BOE Shield-Bot for Arduino

Product ID: 122-32335



122-32335: Robotics with the Board of Education Shield for Arduino - sample pages

## Overview

Build a rolling robot with an Arduino Uno microcontroller. Using one of our supported kits below, just follow the clear, step-by-step instructions and illustrations in the beginner-friendly text, Robotics with the BOE Shield-Bot for Arduino. This text was written with hobbyists, robotics summer camps, and grade 7-12 classrooms in mind. Paired with a supported robotics kit, it can be used as a California A-G approved elective course; contact [education@parallax.com](mailto:education@parallax.com) for details.

## Supported Kits

- Robot Shield with Arduino kit; book is included as of October 2016 (#32335)
- Robotics Shield Kit (for Arduino); book not included (#130-35000)
- Boe-Bot to Shield-Bot Retrofit Kit; book not included (#32333)
- Boe-Bot to Shield-Bot Retrofit Kit with Arduino; book not included (#910-32333)

The assembled and programmed robot will be able to navigate by touch, by light, or by infrared distance detection. Each chapter introduces new STEM skills the areas of programming, electronics, robotics, and engineering. A set of questions, exercises, and projects with solutions are included at the end of each chapter. For additional teacher resources, email [education@parallax.com](mailto:education@parallax.com).

#### Chapter Topics:

- Programming the Arduino microcontroller
- Calibrating the servo motors and monitoring servo signals with LED lights
- Assembling and testing the BOE Shield-Bot
- Navigation basics and pre-programmed maneuvers
- Tactile navigation with whisker switches
- Light-sensitive navigation with phototransistors
- Navigating with infrared headlights for object detection
- Shadow vehicle navigation with distance detection

#### Publishing Details

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