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# BUILDING YOUR OWN *Robots*

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Build  
Your First  
Robot!

Gordon McComb  
Robotics Teacher and Nerd





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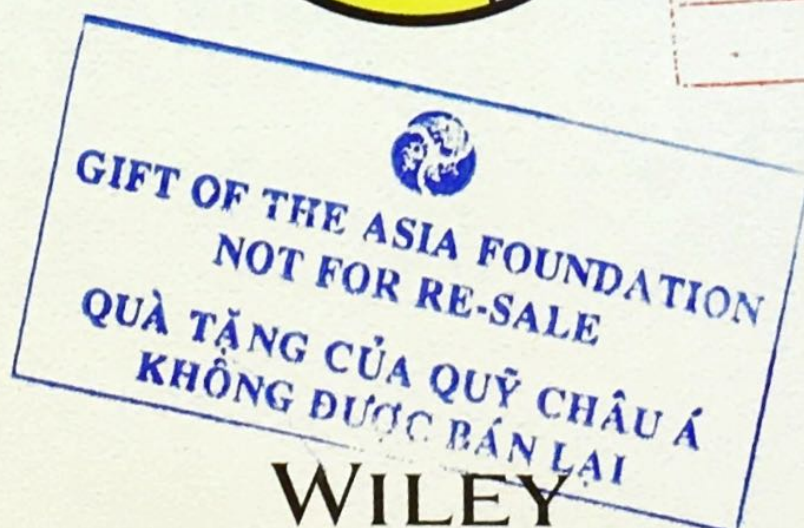
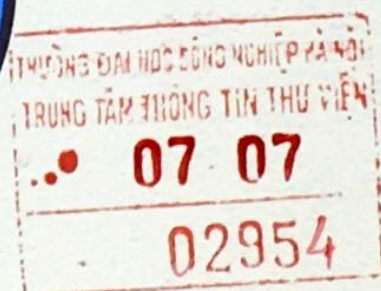
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by Gordon McComb





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# CONTENTS

## **INTRODUCTION: GET STARTED WITH ROBOT-BUILDING**

**2**

About This Book . . . . .	2
Basic Tools and Supplies . . . . .	3
About You . . . . .	4
For Parents. . . . .	4
About the Icons . . . . .	5

## **PROJECT 1: MAKE A BRUSHBOT, FAST AND EASY! 6**

Understanding What Makes a Robot . . . . .	6
Building Your First Robot: Make a Brushbot "Walking" Robot . . . . .	8
For Vibrating Motors: Hack Your Toothbrush. . . . .	9
Use Just the Right Bristle Brush . . . . .	11
Materials You Need. . . . .	12
Tools You Need . . . . .	14
Making the Brushbot — Simple Version . . . . .	15
Making the Brushbot — Open Guts Version. . . . .	19
Remove the Battery Compartment and Motor from the Toothbrush. . . . .	20
Only If Needed: Cut Off the Brush Head. . . . .	21
Tape the Battery Compartment to the Motor . . . . .	22
Test the Motor . . . . .	23
Attach a Rubber Band to Hold the Battery Cover in Place . . . . .	24
Glue the Motor to the Back of the Brush . . . . .	25
Going Further . . . . .	28



## **PROJECT 2: BUILD A ROBOT FROM A TOY CAR 29**

Building a Motorized Robotic Buggy . . . . .	.29
Find the Right Toy Car . . . . .	.30
Materials You Need . . . . .	.32
Tools You Need . . . . .	.33
<b>Making the Bot.</b> . . . .	<b>.35</b>
Take the Body Off the Car Chassis . . . . .	.35
Add a Rubber Layer to the Motor Shaft . . . . .	.36
Wire the Motor. . . . .	.38
Mount the Motor. . . . .	.40
Test the Motor with a Battery . . . . .	.45
Connect and Mount the Batteries . . . . .	.47
Playing with Your Robot Buggy . . . . .	.51
Going Further . . . . .	.51

## **PROJECT 3: BUILD A MOUSEBOT 53**

Getting Everything Rounded Up. . . . .	.54
Materials You Need . . . . .	.54
Tools You Need . . . . .	.55
<b>Making the Mousebot</b> . . . . .	<b>.58</b>
Add a Rubber "Tire" to the Motor Shafts. . . . .	.58
Attach Wires to the Motors . . . . .	.59
Cut the Base Piece . . . . .	.62
Mount the Motors . . . . .	.63
Add a "Tail" . . . . .	.67
Test Each Motor with a Battery. . . . .	.69
Wire the Battery Holder . . . . .	.70
Mount the Battery Holder . . . . .	.74
Playing With The Mousebot . . . . .	.75
Going Further . . . . .	.77



## **PROJECT 4: HACK A RADIO-CONTROLLED TOY 18**

Finding Radio-Controlled Toys for Robot Forging . . . . .	79
The Good, the Bad, and the Not So Pretty . . . . .	79
Steering Styles . . . . .	79
Two Examples of Hackable R/C Toys . . . . .	81
<b>Hacking the Car-Type R/C Toy . . . . .</b>	<b>82</b>
Materials You Need . . . . .	83
Tools You Need . . . . .	85
Disassemble the Toy Car . . . . .	86
Cut the Parts for the Switch and Control Base . . . . .	87
Construct the Switch . . . . .	89
Wire the Switch to Create an "H-Bridge" Circuit . . . . .	92
Wire the Switch to the Motor . . . . .	95
Attach the Wires to the R/C Car Motor . . . . .	99
Wire the Battery Holder . . . . .	102
Mount the Battery Holder . . . . .	104
Test the R/C Car Using Your Homebrew Switch . . . . .	104
<b>Substituting with Readymade Switches . . . . .</b>	<b>106</b>
Extra Parts You Need . . . . .	106
Wire the Switches . . . . .	108
Run the R/C Car Through Its Paces . . . . .	112
<b>Going Further . . . . .</b>	<b>113</b>

## **AUTHOR NOTES 114**

Finding the Stuff to Build Your Robots . . . . .	114
Discount General Merchandise, Supplies, and Tools . . . . .	114
Electrical Supplies . . . . .	115
Toys for Disassembly . . . . .	115
Tools and Electrical Supply . . . . .	116
Robot-Making Kits and Parts . . . . .	116
Robotics Information, Building Plans, and Blogs . . . . .	117
Selected International Sellers . . . . .	117

## **GLOSSARY 118**



# INTRODUCTION **GET STARTED** **WITH ROBOT-BUILDING**

**WELCOME TO THE WORLD OF ROBOT-BUILDING!** When I was a kid I saw a scary movie about robots. But instead of being afraid, it made me want to build my own “mechanical man.”

My very first robot wasn't a robot at all — it was just a tin can with wires sticking out the top. But it started me on a lifelong journey of building stuff that moved and blinked . . . some of my robots have even walked and talked.

## **ABOUT THIS BOOK**

Robot building isn't just one skill, it's a whole lot of them.

In order to build a robot, you have to learn how to use tools, craft new things out of existing parts or raw materials, apply basic concepts of electricity to motors and switches, plus much more.

*Building Your Own Robots* helps teach you these and other core concepts, while showing you how to construct four different fun and interesting robots. Each of the four projects in this book is designed to be inexpensive, and they each require no more than two hours of building time. Special tools aren't needed.

You'll discover things like:

- » Understanding the important parts of a robot
- » Making robots from discarded toys and common household materials
- » How to use small motors to make your robot creations *m-o-v-e*
- » Using batteries to power your robot



Everything is designed for kids. None of the building plans require using sharp or dangerous tools. (Still, be sure to read and follow all the safety guidelines provided!)

*What this book isn't about:* Sorry, this book won't teach you how to build your own R2-D2 or C-3PO. Those kinds of robots are far more complicated than what can be explained here.

But when you're done with this book, and you want to discover more, don't stop! See "Finding the Stuff to Build Your Robots," at the back of this book, for a list of resources for continuing your robot-building education.

## ***BASIC TOOLS AND SUPPLIES***

Here's what you need to do the projects in this book:

- » Some common household tools, including scissors, a small screwdriver, and a pair of needle nosed pliers. Don't worry — each project details the specific tools you need to complete the robot.
- » A low temperature hot glue gun and a spool of black electrical tape.
- » Some discarded toothbrushes, toys, and other household items, raided for their parts. If you don't already have these hiding somewhere in your closet, you can find them easily enough at garage sales and resale stores. They also are cheap to buy new.
- » Insulated wire — when the time comes, I'll tell you exactly what kind.
- » Foam board (the stuff you make school projects with) or thick cardboard cut from a shipping box.