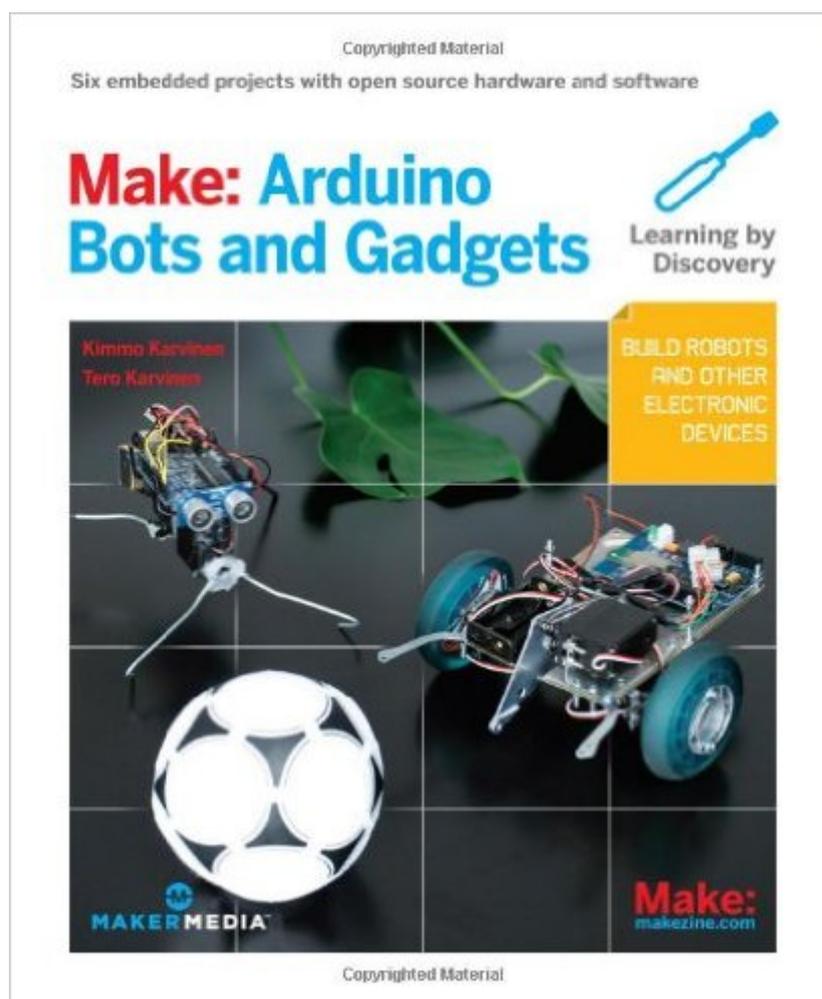


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# Make: Arduino Bots And Gadgets: Six Embedded Projects With Open Source Hardware And Software (Learning By Discovery)



## Synopsis

Want to build your own robots, turn your ideas into prototypes, control devices with a computer, or make your own cell phone applications? It's a snap with this book and the Arduino open source electronic prototyping platform. Get started with six fun projects and achieve impressive results quickly. Gain the know-how and experience to invent your own cool gadgets. With Arduino, building your own embedded gadgets is easy, even for beginners. Embedded systems are everywhere--inside cars, children's toys, and mobile phones. This book will teach you the basics of embedded systems and help you build your first gadget in just a few days. Each learn-as-you-build project that follows will add to your knowledge and skills. Experiment with Arduino, the popular microcontroller board Build robots and electronic projects with easy-to-follow instructions Turn your ideas into working physical prototypes Use Android phones as remote controls in your projects Work with an uncomplicated programming language created for artists, designers, and hobbyists Get everyone involved, with projects that even beginners can build.

## Book Information

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## Customer Reviews

Make: Arduino Bots and Gadgets is a heavily illustrated guide to incorporating the Arduino platform into six projects which illustrate embedded systems concepts. The author's stated ultimate goal is to teach the reader how to build prototypes, and in that they are largely successful. A secondary

mission is to allow the reader to "learn embedded systems in a week"; here I'm not so sure they reach the objective. The format of the book is excellent, combining a lucid narrative with clear photos of the work underway. Parts lists at the start of each project chapter list precisely the materials and tools necessary to complete that project, usually including potential sources of the materials and part numbers in many cases. One consideration for potential readers is financial. Some projects require components that are relatively expensive, considering that the Arduino Uno can be purchased for about \$30. As an example, the first project uses a Ping))) ultrasonic sensor, which costs about \$30; another project in the book uses three of these sensors. This is not a massive outlay of funds, but should be factored in if you plan to actually build these projects. You will also need some foundation tools and skills, such as a digital multimeter, soldering iron, the ability to solder, etc. Fairly generic stuff, but these are not "snap-together" projects. Overall, this is a great read and an easy introduction to Arduino and embedded systems. Exceptionally clear instructions and excellent supporting photography make it a joy to use.

This is an excellent, fully illustrated idea book for making things with software, physical devices, and simple hand fabrication. The authors have a range of skills in Arduino, Mechanical Construction, Linux, Electronics and Physical Systems. The book most closely resembles O'Reilly/Make Publications excellent previous book, *Making Things Talk*, with the benefit of a few more years of experience in illustrating project construction and careful step by step instructions. Skills taught include the Arduino hardware and software environment, programming an Android smart phone, use of relays, stepper motors, remote controls and other similar electronic devices, as well as project construction with a glue gun, pliers and Dremel tool. The projects are intriguing and give instruction in important Hackerspace skills (I know from experience at Philly's Hive 76). I was somewhat baffled with a slight mismatch between the wide diversity of Hacker skills taught in these projects and the specific subjects of Arduino and Robotics, but this illustrated projects book is a must have in the physical computing, electronics and arts and crafts construction space.--Ira Laefsky MSE/MBA and Hackerspace Enthusiast.

Excellent book! I have successfully completed the soccer robot! For those who have problems with the final project, most of the problems I encountered can be troubleshooted by following the green side box instructions. For problems NOT found explicitly in the book I encountered, this includes adding a switch to the robot, using a good battery and mechanical know-hows (drilling holes etc...). I bought continuous and non-continuous servos, the Arduino pro mini 5V (not the 3.3V as

recommended) and bluetooth mate silver. The codes fully work. Just be careful with the random numbers at the end of some lines. Remember to change your arduino program servo values. In conclusion, this book has brought me to the world of Arduino and motivated me to learn more about open hardware projects! EDIT: Okay, there was one major problem I had, my robot turned left when I tilt the phone right. To fix this, in the function 'void updateLR()', there are two lines 'l+=x;' and 'r-=x;', just change them to this: 'l-=x;' and 'r+=x;'. Vote up so everyone can see!

I'm a fan of Arduino, and interested in robots, so what's not to like about this book? If you haven't heard of Arduino, it's an open source hardware/software embedded platform, basically. Since the hardware isn't patented, and the software is free, anyone can afford to play with it. I've been an embedded programmer for most of my career, and this is the first time I could afford to play with an embedded system at home. So, with Arduino you can buy a \$50 embedded system, get the software free, and use this book to see how to take advantage of them to do some really neat things.

All of the projects in the book are great except for the soccer robot. I am making the soccer robot now and have found many problems on the finished football.java code for android. For some reason it does not work and now I feel that I wasted my money on parts. I tried contacting the author but I have got no response... I made sure that I followed every single instruction but it still failed. There is also close to no trouble shooting and it has trouble going in depth into any of the code. If anybody has gotten it to work can they please post their code. It would be a big help :)

I just wanted to say that I got a good deal on this book for my 8 yr. old son. He's super smart and needs more of a challenge to get him off of computer games (where he likes creating circuits and making things) to real life applications. I absolutely love the way this book is written because it is step by step, totally clear and provides real photos of every step and even the pics of tools and parts. Everything is very clear and that is what I need because I am a total complete beginner. I happen to have a Makey Makey device which has arduino leonardo built into it - and I installed the software and am totally lost from there. I read tutorials online for projects and ideas but none made any sense to me. THIS BOOK however, did make sense and I am going to the store to buy some parts needed for one of the projects. I am absolutely amazed and fascinated with what can be done with an arduino and some electronics. Totally amazed!!!

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