Hacking Electronics: An Illustrated DIY Guide For Makers And Hobbyists
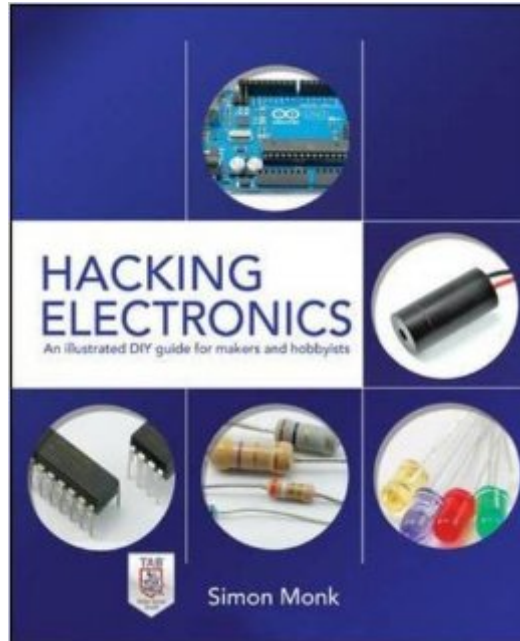

HACKING ELECTRONICS
An illustrated DIY guide for makers and hobbyists

Simon Monk

Synopsis

Bring your electronic inventions to life! "This full-color book is impressive...there are some really fun projects!" -GeekDad, Wired.com Who needs an electrical engineering degree? This intuitive guide shows how to wire, disassemble, tweak, and re-purpose everyday devices quickly and easily. Packed with full-color illustrations, photos, and diagrams, Hacking Electronics teaches by doing--each topic features fun, easy-to-follow projects. Discover how to hack sensors, accelerometers, remote controllers, ultrasonic rangefinders, motors, stereo equipment, microphones, and FM transmitters. The final chapter contains useful information on getting the most out of cheap or free bench and software tools. Safely solder, join wires, and connect switches Identify components and read schematic diagrams Understand the how and why of electronics theory Work with transistors, LEDs, and laser diode modules Power your devices with a/c supplies, batteries, or solar panels Get up and running on Arduino boards and pre-made modules Use sensors to detect everything from noxious gas to acceleration Build and modify audio amps, microphones, and transmitters Fix gadgets and scavenge useful parts from dead equipment

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Customer Reviews

Hacking Electronics is a newly released, modern, and inexpensive `how to' electronics workbook. The rather abrasive word "hacking" might suggest many things to different people, however, in this 275 page paperback it means, practical teaching by doing. Each topic features easy-to-follow projects. You don't need a degree in engineering to create or modify something electronic.

Traditional electronic textbooks can be terrifying, unless one has a good grounding in complex mathematics. This easy to read intuitive guide teaches about micro-controllers, sensors, FM Transmitters, working with modules, and other simple to construct devices. Hacking Electronics is a full-colour exceptional publication, organised into 11 chapters, a Parts Appendix, and a very informative index. Perhaps the following brief description of each chapter, will provide a useful summary of the book's content.Chapter 1, Getting Started. This instructional book starts with advice on where to buy equipment and components. This first chapter also deals with the basics of soldering and describes how to use an old computer fan to make a fume extractor for use while soldering.Chapter 2, Theory and Practice. This particular chapter identifies and explains the variety and use of electronic components. It also introduces a small amount of helpful and essential theory.Chapter 3, Basic Hacks. This chapter introduces transistors with example projects. It includes a "push light" which automatically turns on at night, and `how to' control a motor, using power MOSFETs.Chapter 4, LEDs. Besides discussing regular LEDs, `how to' use them, and making them flash, etc. This chapter also looks at using constant current drivers for LEDs and laser diode modules.Chapter 5, Batteries and Power.

I think I've been looking for this electronics book for a long time! I'm a ham radio operator, and an electronics hobbyist with no formal training in the subject, so I seem to always learn everything the hard way. Well, Simon Monk has put together a book that should become a real must have item for people like me. You could be a rank beginner, or an old hand, and still find a world of things in this book that you need to know, or projects you want to try.If you've always wanted to get into electronics as a hobby, this book will help you get started with the very basics. If, on the other hand, you've been tinkering with Arduino for a long time, and are interested in some new, fresh projects, then this is for you, too. Another thing I like is that, in this book, Simon Monk has helped me get outside the box with electronic projects. Let me explain: Even though I've played around with microcontrollers for a few years, I've bought several books that I hoped would help me learn to think outside the box, and yet when I finished those books, I realized that I had only built a project or two, and that I had not really learned how to progress beyond the confines of those projects. This book is different! It has some very practical advice all through it that has already helped me make that leap toward improvising some ideas of my own. Part of its aim is to help you learn to think on your own about what you'd like to do with electronics.For its size, this book is packed with straightforward, useful information. Mr. Monk hasn't beaten us to death with the boring details of electronic theory. Instead, he has given us the meat that we need to get started, and to develop steadily as hobbyists.

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