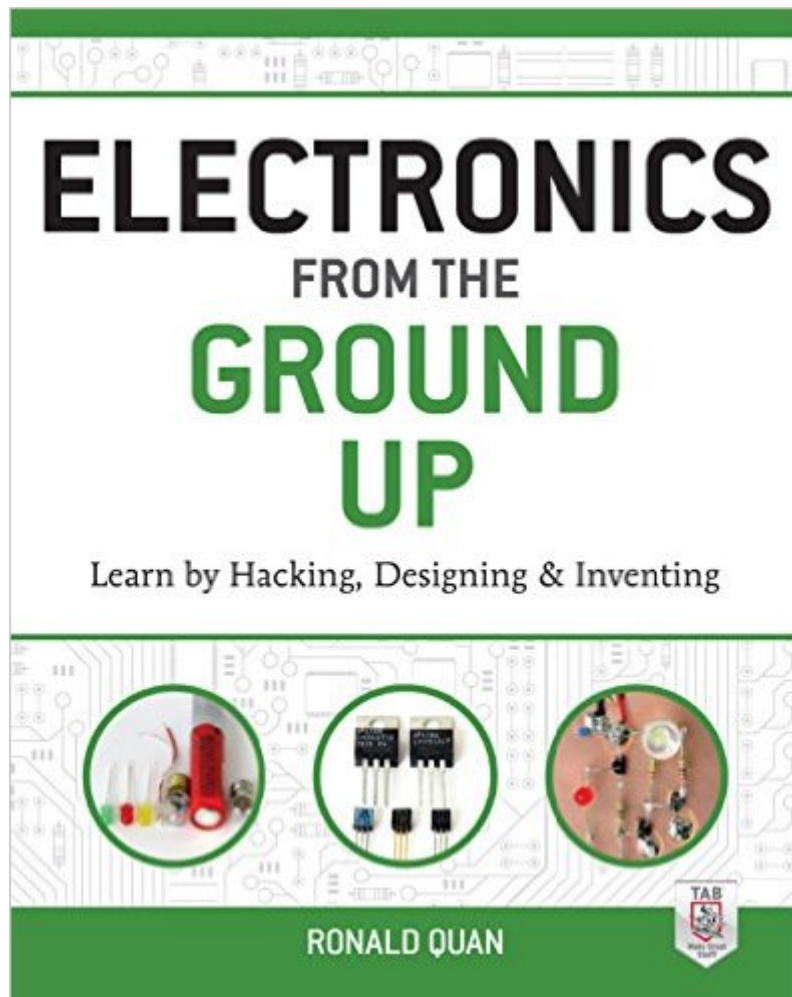# Electronics From The Ground Up: Learn By Hacking, Designing, And Inventing

Synopsis

Discover the inner-workings of electronics through innovative hands-on experiments Are you fascinated by the power of even the smallest electronic device? Electronics from the Ground Up guides you through step-by-step experiments that reveal how electronic circuits function so you can advance your skills and design custom circuits. Youâ ™ll work with a range of circuits and signals related to optical emitters and receivers, audio, oscillators, and video. This practical resource explains components, construction techniques, basic test equipment, circuit analysis, and troubleshooting. Photographs, schematics, equations, and graphs are included throughout. By the end of the book, youâ ™ll be able to hack and modify existing circuits to create your own unique designs. Do-it-yourself experiments cover: Batteries, lamps, and flashlights Light emitters and receivers Diodes, rectifiers, and associated circuits Transistors, FETs, and vacuum tubes Amplifiers and feedback Audio signals and circuits Oscillators AM and FM signals and circuits Video basics, including video signals Video circuits and systems â œExcellentâ | Nothing can replace hands-on experience and Quan immerses the hobbyist/designer right into the fray up to their elbows.â •â ”EDN Magazine

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Customer Reviews

"Electronics From The Ground Up", Ronald Quan's 2nd book of electronic theory by "doing", expands on his first book "Build Your Own Transistor Radios", in the sense that he uses the same learning concepts, but expands them beyond radio / RF circuits to include almost every kind of circuit and component from literally a flashlight to video circuits, stopping along the way at various RF, audio and other types of circuits including video. All basic components of analog electronics and their application, are discussed, explained, experimented with, hacks that use them are discussed and the math and theory are expanded upon as deeply as you want to dig.So, the basic idea is the same as the first book; through fun experiments that start at the beginning with simple concepts, parts and circuits you do gain a great education in electronics. It's just greatly expanded from the first book which sticks more with RF and audio circuits, whereas this goes from basic components and schematics in the beginning, through simple circuits, test equipment, tools, construction techniques and experiments, then on to more and more advanced technologies - oscillators, amplifiers, etc. adding more and more components including active ones like transistors and even tubes(!), to then explaining theory behind all in more depth with High School level math, circuit analysis, mathematical analysis of circuits and experiments constructed, then on to hacking around with commercial circuits and re-purposing circuits for other uses, improving on them, patents, your own designs, troubleshooting your designs, and final conclusions.Really a very very thoughtful thoroughly enjoyable dig into electronics with lots of helpful tidbits of information sprinkled throughout by someone with not only a lifetime of experience in the field, but also refining his teaching methodologies to make it all make sense to anyone at any level. Highly recommended.

This is a great book! And, I am not a beginner but if you are like me you accumulate several references and usually find extremely useful, if not essential information about one aspect or the other of a subject, in this case electronics, that may not be well explained in all your references. Although I am not a beginner it really is a from the ground up reference so if you are you want this book.I recommend this book. It is well priced and worth it for your reference library or just to read, which I have enjoyed. Being a non-beginner I have skipped around a bit but was pleased with each subject I looked at.Another excellent reference, also available from , is a book entitled "Electronics for Inventors" or something like that. One of the two authors is Simon Monk as I recall. That is

another keeper.

I bought this book because I want to learn electronics. To understand what is written in this book you will have to already know electronics extremely well. Which kinda defeats the purpose of buying this book right? Can I get my money back please? Or can I sell my book and recoup some of my loss ? If you are wanting to learn electronics and are try to self teach yourself, this is definitely not the book to buy. And I don't have any recommendations at the moment. I've bought other books and will begin reading those soon but wanted to review this one while it was fresh on my mind. My first sign was when the first electronics hack was using cardboard encased batteries that are no longer in production. Yep.

A great book for an intermediate electronics hobbyist.I have found this book a great addition to my library. I tinker and enjoy electronics and this was the exact book I needed when I read it. It really isn't for a true beginner and some concepts are brushed over in such a way that you really have to stop and think about it. That said, when you do stop and think about it, you realize that hte author was very careful in his word choice and described the concept perfectly.Some concepts are hard to simplify and I would recommend this book after reading an "Introduction to Electronics" type of book. Beginners will likely not be able to follow some of the logical/conceptual leaps made in the book, nor will they be able to construct the circuits in the book to apply the concepts.Bottom line, this book is fantastic if you are looking for a way to bridge theory to application. I greatly enjoyed, and keep enjoying the content and style. If you have a box full of components and want to start building, buy this and you will be very pleased. If you don't have a parts bin, keep working at it and revisit this book at a later date.

Ron has done a great job with his second book which begins with simple theory and advances to issues including the latest in software designed radio. The most interesting part of the book is the last chapter, "Hacking, Inventing and Designing" that serves as inspiration for the reader to dive in to make his own discoveries. Ron's creativity is well represented here and helps the reader to understand why the author holds over 400 patents. I highly recommend this book.

I love this author- I read his Building Radios book and saw he had something new and snapped it up. I'm an old engineer and know most of the stuff here but its well presented and a nice review. I'm waiting to have a newbie niece or nephew ask for a good electronics book and this would be on the

short list. Very good intro to pretty advanced stuff without anything more than basic math.

Hacking: The Ultimate Beginners Guide (Computer Hacking, Hacking and Penetration, Hacking for dummies, Basic security Coding and Hacking) (Hacking and Coding Book 1) Electronics from the Ground Up: Learn by Hacking, Designing, and Inventing Hacking: Ultimate Hacking for Beginners, How to Hack (Hacking, How to Hack, Hacking for Dummies, Computer Hacking) HACKING: Learn Hacking FAST! Ultimate Course Book For Beginners (computer hacking, programming languages, hacking for dummies) Hacking University: Sophomore Edition. Essential Guide to Take Your Hacking Skills to the Next Level. Hacking Mobile Devices, Tablets, Game Consoles, and ... (Hacking Freedom and Data Driven Book 2) Hacking: How to Hack Computers, Basic Security and Penetration Testing (Hacking, How to Hack, Hacking for Dummies, Computer Hacking, penetration testing, basic security, arduino, python) Hacking University: Freshman Edition Essential Beginner's Guide on How to Become an Amateur Hacker (Hacking, How to Hack, Hacking for Beginners, Computer ... (Hacking Freedom and Data Driven Book 1) Hacking: Wireless Hacking, How to Hack Wireless Networks, A Step-by-Step Guide for Beginners (How to Hack, Wireless Hacking, Penetration Testing, Social ... Security, Computer Hacking, Kali Linux) Hacking: The Ultimate Beginners Guide (Hacking, How to Hack, Hacking for Dummies, Computer Hacking, Basic Security) Hacking: Beginner's Guide to Computer Hacking, Basic Security, Penetration Testing (Hacking, How to Hack, Penetration Testing, Basic security, Computer Hacking) C++: C++ and Hacking for dummies. A smart way to learn C plus plus and beginners guide to computer hacking (C++ programming, C++ for Beginners, hacking, ... language, coding, web developing Book 2) Hacking: How to Computer Hack: An Ultimate Beginner's Guide to Hacking (Programming, Penetration Testing, Network Security) (Cyber Hacking with Virus, Malware and Trojan Testing) HACKING: Beginner's Crash Course - Essential Guide to Practical: Computer Hacking, Hacking for Beginners, & Penetration Testing (Computer Systems, Computer Programming, Computer Science Book 1) Hacking: The Beginners Guide to Master The Art of Hacking In No Time - Become a Hacking GENIUS Wireless Hacking: How To Hack Wireless Network (How to Hack, Wireless Hacking, Penetration Testing, Social ... Security, Computer Hacking, Kali Linux) C++: Beginners Guide to Learn C++ Programming Fast and Hacking for Dummies (c plus plus, C++ for beginners, JAVA, programming computer, hacking, how to ... Programming, Coding, CSS, Java, PHP Book 5) C++: The Crash Course to Learn C++ Programming and Computer Hacking (c plus plus, C++ for beginners, programming computer, hacking the system, how to ... Coding, CSS, Java, PHP) (Volume 9) Learn German Step by Step: German Language Practical Guide for Beginners (Learn

German, Learn Spanish, Learn French, Learn Italian) Hacking: Viruses and Malware, Hacking an Email Address and Facebook page, and more! Cyber Security Playground Guide The Basics of Hacking and Penetration Testing: Ethical Hacking and Penetration Testing Made Easy