The book was found

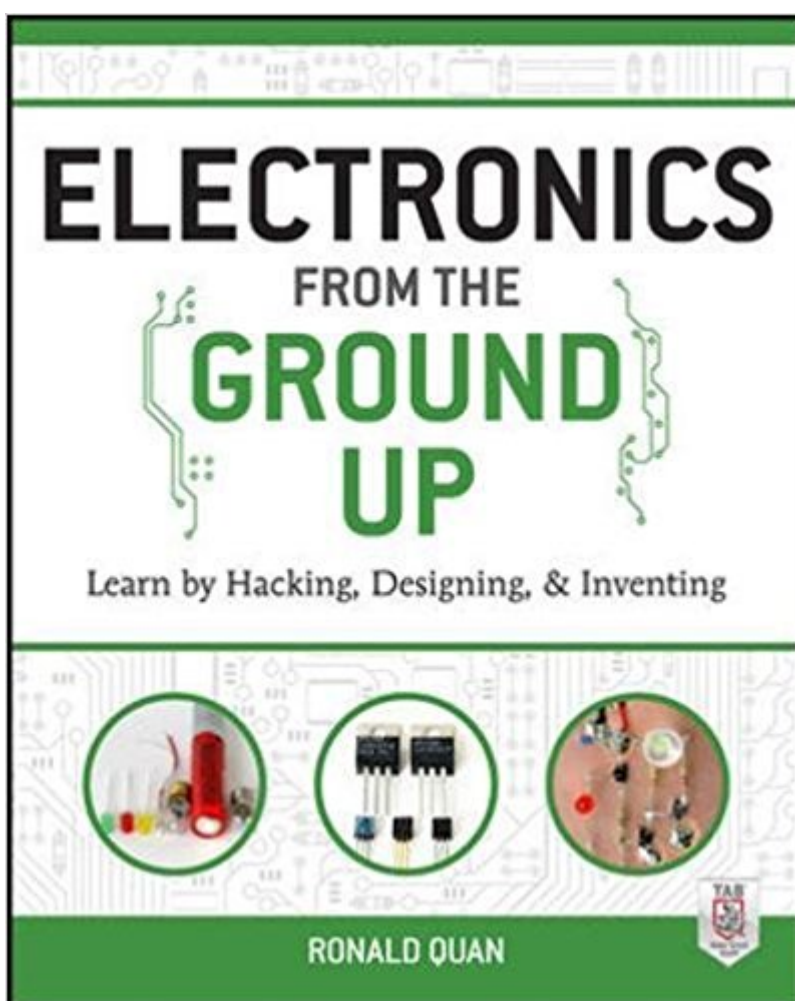# Electronics From The Ground Up: Learn By Hacking, Designing, And Inventing

ELECTRONICS FROM THE GROUND UP

Learn by Hacking, Designing, & Inventing

RONALD QUAN

Synopsis

Discover the inner-workings of electronics through innovative hands-on experimentsAre 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 flashlightsLight emitters and receiversDiodes, rectifiers, and associated circuitsTransistors, FETs, and vacuum tubesAmplifiers and feedbackAudio signals and circuitsOscillatorsAM and FM signals and circuitsVideo basics, including video signalsVideo circuits and systemsâ œExcellentâ | Nothing can replace hands-on experience and Quan immerses the hobbyist/designer right into the fray up to their elbows.â •â •EDN MagazineÂ

Book Information

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Customer Reviews

Ronald Quan (Cupertino, CA) is an RF circuits design engineer and holds more than 77 patents. He

has worked at Ampex, Sony, Monster Cable, Portal Player, Hewlett Packard, and Macrovision, and is the author of Build Your Own Transistor Radios.

"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 introductory work for those new to electronics that want to increase their understanding through a series of bench level exercises. Myself, I'm already an advanced practitioner in this area, but Ron has his own unique approach to things which I find to be both refreshing and intriguing. So I gain a better grasp of fundamentals as a result.I think I've purchases six copies so far because I keep giving away my latest copy to a friend or coworker that I know will benefit from having a copy at their bench or reading chair. Ron's earlier book on designing transistor radios is great companion text as well. I've been drawn to radio design and electronics since grade school. I wish I'd had these books back then.

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.

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.

It's in good condition, has a whole lot of nice clean diagrams, information i cannot understand, and seems to be pretty thorough. But i only have a vague, basic understanding of electronics so far. I guess i thought i t would be good to start my learning off with, but i was wrong. I should have got something else to start off with, but i do not regret the purchase.

Very well written book. The experiments are great. I sometimes had a hard time following the reasoning or theory behind changes that were made in a circuit to get it to perform properly. (I understand that sometimes there is no reasonable explanation; that's just the way that it worked out.) The explanations of how to design and use a transistor as an amplifier were outstanding.

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.

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