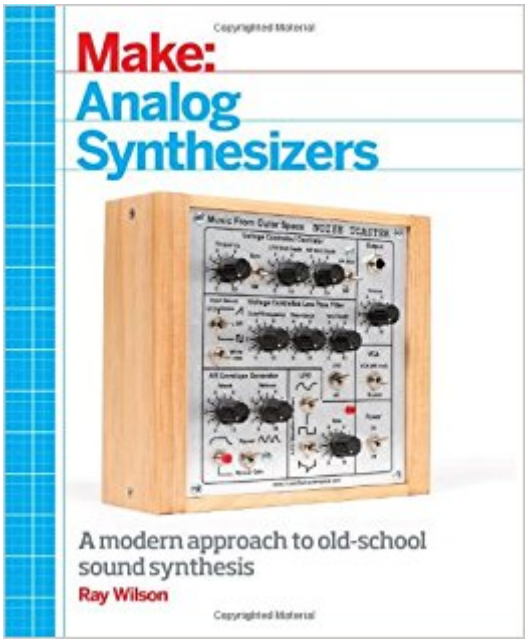
Make: Analog Synthesizers: Make Electronic Sounds The Synth-DIY Way



Synopsis

Dive hands-on into the tools, techniques, and information for making your own analog synthesizer. If youÃ¢â ¬â„¢re a musician or a hobbyist with experience in building electronic projects from kits or schematics, this do-it-yourself guide will walk you through the parts and schematics you need, and how to tailor them for your needs. Author Ray Wilson shares his decades of experience in synth-DIY, including the popular Music From Outer Space (MFOS) website and analog synth community.At the end of the book, youÃ¢â ¬â„¢ll apply everything youÃ¢â ¬â„¢ve learned by building an analog synthesizer, using the MFOS Noise Toaster kit. YouÃ¢â ¬â„¢ll also learn what it takes to create synth-DIY electronic music studio. Get started in the fun and engaging hobby of synth-DIY without delay.With this book, youÃ¢â ¬â„¢ll learn:The differences between analog and digital synthesizersAnalog synthesizer building blocks, including VCOs, VCFs, VCAs, and LFOsHow to tool up for synth-DIY, including electronic instruments and suggestions for home-made equipmentFoundational circuits for amplification, biasing, and signal mixingHow to work with the MFOS Noise Toaster kitSetting up a synth-DIY electronic music studio on a budget

Book Information

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Customer Reviews

Ray has been interested in analog synthesizers since the first time he heard "Switched On Bach" back in 1968. That magic box on the cover of the album with all of the knobs, switches and patch cords grabbed his attention and never let it go. After working at U.S. Steel, Intec Systems, Siemens

Pacesetter, and Telectronics, he now runs his popular web site Music From Outer Space full-time. Most of his electronics learning has been hard won and experiential with hundreds of hours devoted to reading, bread-boarding, experimenting and appreciating analog synthesis.

I was initially somewhat disappointed when I got this since it's mostly a print version of the Noise Toaster circuit straight from his website. I'd been studying it for months, printing out everything I could to help me in my electronic noise quests. Nevertheless it's an excellent book for neophyte sonic solderheads like me and it too lived in my backpack for months and is well worn.In my opinion there's nothing else like this for people who want to get DIY with analog synthesis. Highly recommended! Ray is a bit of a hero to me.

Have been dabbling in electronics for a long time now and more recently in electronic music. I found this to be an excellent introduction to analog synthesis. In particular I liked the way the author introduced each of the key synthesis modules, e.g. VCO, VCF, ADSR etc., and then proceeded to describe the inputs, outputs and the functions provided by each (Chapter 3).The synth pictured on the cover, the Noise Toaster, provides a case study for the following discussion. Chapter 4 dives right in, providing detailed instructions on how to build it. This is followed by a chapter on operational amplifiers (Chapter 5) and then a detailed analysis of each section of the Noise Toaster circuit in Chapter 6. I found this to be particularly good, combining the theory from chapters 3 & 5 with the practical design.Appendixes A, B and C provide an interesting set of circuit techniques and ideas for experimentation. I found the examples to be simple enough to be easily understood but with also non-trivial.One of the most interesting books I have read in a while.

Using the Make: Electronics book as an intro, I've been really happy with this book in the series. It includes a full step by step chapter that details the building of the Noise Toaster synthesizer on the cover. There are chapters on the different types of modules and how they work, op amps, and recording in digital formats at home. The author's website is another fantastic resource, but he is no longer selling pcb boards on his site. This means you'll have to etch your own boards. I haven't started on the Noise Toaster yet, but will be building it over the holidays. In the meantime, I've been experimenting more with the Make: Electronics projects and planning out a nicer custom version.

An excellent guide to the basic principles behind synth DIY! A lot of books on this and similar subjects tend to deal only in theoretical, giving textbook style descriptions of the various circuits,

while neglecting the more practical aspect of how to actually build the damn thing! This book has an excellent balance between the technical and the practical, all with a very readable writing style and plenty of humor. I highly recommend this book to anyone interested in building a synthesizer, or just learning more about how they work on the component level. Pretty sure this book will be born completely ragged by the time I'm done with it!!

So chill. Wish it contained more schematics of more circuits for VCOs, VCFs, EGs, & LFOs. Like, maybe 20 pages dedicated to the simplest circuits to super difficult ones. This book really only concerns itself with circuits in the MFOs noise toaster. It would be nice to know what parts of the circuits can modified to create different frequencies or Timbres.

I think this book is great. The problem is that it is actually about 5 different essays together, which, as a group, do not necessarily add up to a coherent whole.The first chapters are really basic. Analog synth 101. Then it skips from that to a long chapter on assembly and parts specifically for the Author's kit the MFOS Noise Toaster.After building this, you can then read the section on how each circuit functions. But you had better basically have already built similar circuits or finished a practice kit completely as the book jumps right into the deep end. This could have been the most useful section of the book, but frankly, I think that between Forrest M. Mims (Timers and Op Amps boook) and Thomas Henry, you can get a better sense of how to build simple circuits. I especially recommend the Thomas Henry book on Electronic Drums which takes a much more modular approach and shows how to build complex drum sounds from a series of simple and basic circuits. I think this area of the book should be expanded significantly in the future, assuming less basic knowledge from the reader.There are also two chapters on Op Amps and various useful IC Chips. This is great. A real asset for the future when I get to actually putting together multiple more complicated circuits. Again, though, I think the Thomas Henry books are better as standalone objects.Also notably missing are anything about logic, sequencers, or clocking. Maybe this book is really written for people who are good at electronics but don't know anything about synthesizers. I don't know. As a result, there is still a considerable gap in the market for people who are good at synthesizers and have a good understanding of the basics of electronics, but might need to better understand how an AD Envelope Generator circuit actually functions.

Much of what is in the book is very similar to the free articles on the MFOS web site. But the text is put together in a very organized way that leads the reader through the investigation of the individual

circuits of the MFOS Noise Toaster in an easy to follow manner. This book is definitely worth buying. If you are new to electronics, be sure to check out Make's YouTube videos describing basic electronic components like capacitors, inductors and transistors. They're great!

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