Upgrading And Repairing PCs
Synopsis

Access to 3 hours of troubleshooting videos as well as PDFs of previous editions are available through product registration—see instructions in back pages of your eBook. For more than 25 years, Upgrading and Repairing PCs has been the world’s #1 guide to PC hardware: The single source for reliable information on how PCs work, troubleshooting and fixing problems, adding hardware, optimizing performance, and building new PCs. This 22nd edition offers beefed-up coverage of the newest hardware innovations and maintenance techniques, plus more than two hours of new video. Scott Mueller delivers practical answers about PC processors, mother-boards, buses, BIOSes, memory, SSD and HDD storage, video, audio, networks, Internet connectivity, power, and much more. You’ll find the industry’s best coverage of diagnostics, testing, and repair—plus cutting-edge discussions of improving PC performance via overclocking and other techniques. Mueller has taught thousands of professionals in person and millions more through his books and videos—nobody knows more about keeping PCs running perfectly. Whether you’re a professional technician, a small business owner trying to save money, or a home PC enthusiast, this is the only PC hardware book you need!

NEW IN THIS EDITION

The newest processors, including Intel’s latest Core i Haswell processors and AMD’s Kaveri core processors. Everything you need to know about the latest GPU technology from NVIDIA and AMD, including developments in OpenGL, DirectX, and Mantle. New firmware innovations like the InSyde BIOS, Back to BIOS buttons, and all the updated settings available for the newest processors and chipsets. The latest in updated home networking standards, from blazing fast 802.11ac Wi-Fi to HomeGrid and G.hn powerline networking. Ever larger storage, thanks to new technologies like helium-filled hard disks, shingled magnetic recording, and Cfast and XQD for flash memory. Emerging interfaces such as mSATA, USB 3.1, and M.2

Updated coverage of building PCs from scratch—“from choosing and assembling hardware through BIOS setup and troubleshooting

Book Information

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I purchased the 21st Edition of Upgrading and Repairing PCs, based upon reviews of previous editions of the book. I have built a few desktop PCs (reading other books and materials online to do so) and have replaced internal parts including memory, hard drives, video and sound cards, over the past 12 years. I consider myself an advanced intermediate in terms of upgrading and repairing PCs, with a desire to learn more. Getting a book with the latest information on this subject was important to me. This 21st edition, is the first I've seen from this author, is impressive and fit my needs perfectly!

Who should buy this book?
I think this book would be useful to anyone from a beginner to a strong intermediate PC user who is interested in building and repairing PCs. Those preparing to take specific IT related tests like the A+ Certification Exam, would also find it helpful and undoubtedly it is or will be used as a textbook for either high school or college students.

What is included?
You get this comprehensive hardbound book along with 45 days of FREE online access to the online edition of this book (code at back of the book) and a 2 hour DVD in which the author shows the components of a PC build and how they go together. His hands on approach is easy to understand and pleasant to watch.

What will I learn with this book?
Twenty chapters cover everything from the Development of the PC to PC Diagnostics, Testing and Maintenance. Networking, hardware types and functions, and building and upgrading systems are also covered. Basically anything hardware related - not software - for PCs is comprehensively covered by this 1000+ page book.

Is it overly technical?
If you know me, you'll know that I'm a software guy. Specifically, I'm a software developer. I don't
want to build my own PC. I want to turn it on and have it work. When it doesn't work right, I start to get really nervous. I hate to open up the case and look inside any of my PCs. And I can't tell you how many times I've seriously hosed my machine by attempting to install a new piece of hardware or memory. Bottom line... I don't like hardware. So why am I reviewing a book on PC hardware? Because fear is no excuse for not understanding the device that allows me to make my living. Having worked a little with this book, I can honestly say that I would have saved myself a lot of grief if I knew about this book earlier. It is amazing. Scott Mueller covers everything you can think of that you'll find in your PC. He also includes both the "what is" and "how to" details of the devices. For instance, you can read the chapters on magnetic storage and hard disk storage to understand how a hard drive works. He then takes you from the theoretical knowledge to the practical information on how to install a new hard drive in your PC. When I had to install a hard drive about a year ago after a drive failure, I truly had no clue as to what I was doing. While I was successful, it was an extremely stressful experience. If I had been able to review these chapters beforehand, I could have actually learned from the process instead of running scared through the ordeal. In this 15th anniversary edition, there is also a DVD with two hours of video related to the book. I haven't had the time yet to review the DVD material, but I have no doubt that it will be of the same high quality as the book.

I have purchased three of the last five revisions of this book, and bought the latest as a matter of course when it first became available. It’s the first one where I have wished that I had looked at it physically before purchase, because I would have not purchased it had I done so. For many years, this volume has been an industry standard, on the desktops of tech support personnel, PC purchasing agents, vocational educators, and hobbyists. It has grown like Topsy with each revision, steadily becoming larger and larger as more and more detail regarding newer releases in x86-compatible desktop and mobile CPUs, bus types, form factors, and compatibility issues evolved. However, previous standards are described often in mind-numbing and wordy detail as well. While some editing has taken place, it’s not nearly enough. If you have one of the last two or three editions of this book, don’t buy this one. It’s just more paper weighing down your already sagging bookshelf. If you are starting from scratch, this may still be a useful book, but be warned: it’s a colossal aggregation of data, much of it of historical interest only. Much of the "legacy" data is of primary interest to embedded systems designers and developers, but Mueller is strictly a desktop person: embedded people will be frustrated with this volume. Also, Mueller is wholly Microsoft-centric, meaning that there is a lot of DOS and NT stuff in here but no Unix, Unix-like
(Linux or Free/Open/NetBSD), or embeddable (VxWorks or QNX) information whatsoever.

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