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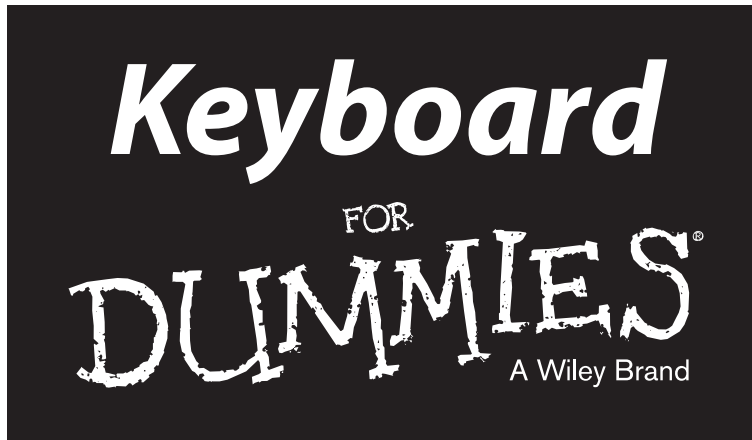


Listen to audio tracks online

Jerry Kovarsky

Acclaimed keyboard developer and musician





by Jerry Kovarsky

Foreword by Stephen Fortner
Editor in Chief, *Keyboard* magazine



Keyboard For Dummies®

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Foreword

When the folks at Wiley first approached me about adding a title on playing keyboards to their hugely popular *For Dummies* family of reference books, I was delighted. The concept, they said, was to be different than the excellent *Piano For Dummies* (first published in 1998). It was to go beyond how to play the piano and cover all the ways in which modern electronic keyboards make learning music fun, enrich the lives of players of all levels of ability and aspiration, and give professionals powerful creative tools not offered by the traditional piano or organ.

I was particularly inspired because this was very much the same challenge faced by *Keyboard* magazine (originally called *Contemporary Keyboard*) at its inception in 1975. Then, electronic keyboards and synthesizers were a nascent and esoteric thing — sci-fi starships piloted by a crew of rock-and-rollers, academics, avant-garde composers, and committed enthusiasts. Now, they're enough of a known quantity that — although technology never ceases to evolve — they really do offer something for everyone. Which sort of instrument is best for you? How do you take full advantage of its features? How do the two somewhat-different experiences of pushing buttons and playing notes integrate to produce musical fulfillment? How can all this technology actually help you *play better* as opposed to being a crutch? That — and much more — is what this book is all about.

Just after that first phone call with Wiley, a little guy with wings and a harp — make that a keytar — appeared on one shoulder, and a red guy with horns and an unusually pointy tuning fork appeared on the other. "Write this book," said the red guy. "Think of the prestige, the fame, the red carpet!" "Puh-leeze," retorted the winged guy, "the only carpet is the one you'll get called on for blowing the deadline because you're already so busy running a magazine. You and I both know that Jerry Kovarsky is *the* one to write this. Call him. *Now.*" Fortunately for all of us, the winged guy then shot a bolt of lightning from his keytar, and the only other thing I heard from the red guy was his tuning fork ringing (a tritone, of course) as he vanished in a puff of smoke.

Indeed, I can think of no better guide for your first journey into keyboards than Jerry Kovarsky. He's as talented a traditional keyboardist as he is a technologist, so he understands that technology is there to serve the music. He was there at the dawn of MIDI, the digital language at the core of every electronic musical instrument since the early '80s. Though he has held high-level product management gigs for Casio and Korg — two companies that have long been at the forefront of creating fun and affordable musical instruments — even their competitors always considered him an asset thanks to his tireless passion for educating people about music technology in general. Last but not least, his technical know-how, integrity, and get-it-done attitude have earned him the trust and friendship of many of the keyboard world's brightest stars, including prog-rock godfather Keith Emerson and the late, great George Duke.

I hope that *Keyboard For Dummies* launches you into a lifetime exploration of creating cool sounds, playing your favorite tunes, and even composing some of your own. If you're hungry for more after working through this book, head to www.keyboardmag.com to check out our online content and subscribe to the print edition of *Keyboard* magazine. There, you'll find music lessons from today's top players, how-to articles from experts including Jerry, and interviews with stars who put keyboards at the center of their music making. Now, dig into this book and start putting these instruments at the center of yours!

Stephen Fortner
Editor in Chief, Keyboard magazine

Introduction

It used to be simple; you could say, “I play the piano” or “I play organ.” That was pretty much it. Through the last few decades, thanks to technological advances, the world of keyboards has exploded. Now so many options are available that when you press down on those familiar black and white keys, any sound may come out. A small portable keyboard can have the sound of a nine-foot concert grand piano, and that baby-grand-piano-looking instrument can produce the sounds of a full orchestra and a rock band to boot! Anything is possible in the world of electronic keyboards today, and you don’t have to rob a bank to get a single keyboard that can do what took cape-wearing rock stars a circle of gear to do in the late ’70s.

And therein lies the reason behind *Keyboard For Dummies*. No one has adequately tackled this subject, explaining what all the keyboard options are and how to choose and use them. When I was approached to write the book, the task was more than a little daunting. I know the subject matter well; my whole career has been in keyboards — playing them, teaching with them, developing and marketing them, and enjoying them. But this field is such a wide area to cover, from simple little toys up through a wide variety of home and stage keyboards. So my goal is to make technology easy to understand, clearly explain the many types of keyboard available, and help you dive in and use and enjoy the features of these various instruments. I have only two requirements for covering an instrument in this book:

- ✓ It has the aforementioned black and whites keys
- ✓ It has a power cord or runs on batteries

Show me those two things and I’m in.

About This Book

Keyboard For Dummies makes sense of this wide world of electronic black-and-white-key instruments. I explain all the types of keyboards available today, grouping them into logical categories. You gain a basic understanding of how they work, what each is good for, and how to choose the right one for your needs.

I cover the basics of music so I can share some playing tips, and I introduce the fundamentals of synthesis so you can tweak your sounds and effects when you need to. You get into the basics of computer integration and even discover how to play songs by ear. My goals are to make things clear, interesting, informative, unintimidating, and most of all, fun! I don't care what type of music or which keyboard family is your favorite. I try not to let my personal taste color any of my writing. Though perhaps my age slips through now and again; I can't try to be any younger (or older) than I am.

Covering such a wide array of keyboards and topics means that not every chapter relates to your specific needs. *Keyboard For Dummies* is written so you can dive in to any chapter that interests you; you don't have to read it from front cover to back. In particular, you can skip over shaded sidebars and anything marked with a Technical Stuff icon. These bits are interesting but provide more information than what you absolutely need to know to understand the point at hand. But I think that if you're interested in keyboards, you'll find every chapter of some interest to at least expand your horizons about the possibilities that are out there.

Reading is all well and good, but I'm talking about sound and music here. I love this quotation, often attributed to comedian Martin Mull: "Writing about music is like dancing about architecture." I couldn't agree more, so I provide plenty of online audio examples that take the words and concepts in this book and translate them into sonic reality for you to absorb and enjoy.

Within this book, you may note that some web addresses break across two lines of text. If you're reading this book in print and want to visit one of these web pages, simply key in the web address exactly as it's noted in the text, pretending as though the line break doesn't exist. If you're reading this as an e-book, you've got it easy — just click on the web address to be taken directly to the web page.

Foolish Assumptions

I've made some assumptions about who you, the reader, are. If any of these is true about you, this book is for you:

- ✔ You're a beginner to music, keyboards, and technology and want guidance from the ground floor up, including tips to help you purchase the right keyboard for you and use its features to the fullest.
- ✔ You're a good pianist who wants to explore keyboard technology.
- ✔ You just love music and keyboards.

- ✔ You're a parent or other adult shopping for a keyboard for a child and need suggestions on what types and features are best for youngsters to practice with.
- ✔ You're curious and want to learn.

Icons Used in This Book

Throughout the book I use icons to help break up the text and to draw attention to points I'm making. Here's what each icon means:



This icon highlights helpful info that will enhance your keyboard skills. It may be a shortcut or another way of doing things. Think of it as a friend, adding to the information at hand.



This icon identifies important tidbits you should squirrel away for later use.



Potentially damaging or dangerous issues carry the Warning icon. Take them seriously.



At times, I go into greater background detail than what you need to grasp a basic topic, and I use this icon to identify that extra information. It isn't essential reading, but gives you a deeper understanding of a subject.



I've sprinkled a lot of audio examples throughout the text to bring all the subject matter in this book to life. When you see this icon, it indicates that you can find an online audio track related to what you're reading about.

Beyond the Book

In addition to the book content, you can find a free online Cheat Sheet that includes a glossary of common keyboard terminology, a helpful list of must-have and good-to-add accessories, and a who's who of keyboard companies. Go to www.dummies.com/cheatsheet/keyboard to access this handy reference material, and then print it out and keep it by your side when purchasing, studying, and playing your keyboard.

You can also access additional free articles that cover information I simply couldn't fit into the book. You'll find information on sixth and seventh chords, the General MIDI (GM) soundset, and entertaining educational features included on some keyboards. I also offer lists of songs that showcase each type of keyboard. You can find them at www.dummies.com/extras/keyboard.

Finally, www.dummies.com/go/keyboard is home to the more than 100 audio tracks that accompany this book. Head there to listen to me demonstrate the sounds of instruments, play all the exercises provided, use various keyboard features, and much more. Sometimes I even talk!

Where to Go from Here

You don't have to read *Keyboard For Dummies* in any particular order; I've written it to be modular, so jumping around is perfectly fine. You can turn to the table of contents, find the section you're most interested in, and get started. That said, starting with Chapter 1 will give you a great overview of what this book covers.

If you don't have a keyboard and want to learn about what's out there, be sure to read Chapters 2 and 3. Want to know more about music and playing basics? Skip right over to Part II. If you have an arranger keyboard or anything with automatic accompaniment, be sure to check out Chapters 10 and 11. Interested in synthesis? Chapter 14 is for you. Eventually, you'll want to read them all; I wrote this book to be a resource that you can keep coming back to for (hopefully) years to come. Enjoy!

Part I

Getting Started with Keyboards



For Dummies can help you get started with lots of subjects. Visit www.dummies.com to learn more and do more with *For Dummies*.

In this part . . .

- ✔ Meet the many kinds of keyboards that have been played throughout the years and the various types that are available today. They fall into logical families that help you to make sense of all the options.
- ✔ Determine what your music-making needs are and decide what type of keyboard is the best choice for you.
- ✔ Settle your keyboard into its optimal home. After it's there, a few common-sense safety precautions and bits of upkeep will help keep it in tiptop shape.

Chapter 1

Living in a Keyboard World

In This Chapter

- ▶ Grasping the basic attributes of a keyboard
 - ▶ Understanding the benefits of reading music
 - ▶ Perusing beginner and advanced keyboard effects
 - ▶ Looking at practice options
-

You've probably seen images and scenes of people wielding the power and majesty of playing a keyboard:

- ✔ Young genius Mozart driving his peer Salieri mad with his effortless brilliance (no, I wasn't there; I saw the movie *Amadeus*)
- ✔ Early rockers like Jerry Lee Lewis and Little Richard banging away like men possessed
- ✔ The ever-so-detached cool of the jazz pianist, playing with head close to the keys, cigarette dangling from his lips, lost in concentration
- ✔ Prog-rocker Keith Emerson stabbing knives into his Hammond organ and riding it across stages, and then, for a break, strapping onto a spinning grand piano *and playing*, in the ultimate feat of showmanship
- ✔ Countless music videos in the '80's featuring bands behind stacks of synthesizers or dancing around wearing strap-on keyboards (and sporting interesting haircuts to boot.)
- ✔ Singer-songwriters like Billy Joel, Elton John, Alicia Keys, John Legend, and Carole King spinning their tales of life and love from behind massive grand pianos

All these images (and more) have caused many a young boy and girl to embark down the road of playing keyboard. And many baby boomers and successful businesspeople have returned to this love after carving out their careers and want to pick up where they left off.

Beyond the familiar black and white keys, though, keyboards can be wildly different instruments, and looking at the front panels may not give you much of a clue as to what's inside. This chapter gives you an overview of what keyboards are and just what you can do with them. **Remember:** I provide online audio tracks throughout the book to help demonstrate the topics at hand, including the discussions introduced in this chapter.



If what you're interested in is the acoustic piano, I recommend *Piano For Dummies* by Blake Neely (Wiley). It's a wonderful guide to all things piano.

Distinguishing Basic Keyboard Characteristics

The first thing to realize is that all keyboards aren't the same. They may make different types of sounds by different methods of sound production and are meant to do different things for the needs of different players. The following sections help you navigate this potentially confusing terrain.

Examining keyboard designs throughout the years

I divide keyboards up into the following types based on how they produce their sound to make the differences among keyboards easy to understand; you can read more in Chapter 2:

- ✓ **Acoustic instruments:** These instruments require no power to make their sound, so I don't cover them here. But they include the acoustic piano, the harpsichord, and old pump pipe organs and such. Each produces its sound in different ways and sounds distinctly different from the others. And their sounds are certainly included in your electronic keyboard.
- ✓ **Electro-mechanical instruments:** These options produce their sounds mechanically or acoustically and then have amplifiers and electronics to make the sound louder. The classic Rhodes and Wurlitzer electric pianos fall into this group, as well as the funky Clavinet (clav) and the mighty Hammond organ. These sounds are important to know because they're included in almost every keyboard you try out today.

✔ **Electronic instruments:** Keyboards in this group produce their sounds by electronic means, either analog or digital, and are what this book covers most in-depth. Electronic keyboards use a variety of technologies to produce their sounds. Brochures and websites throw around terms like *sampling*, *analog synthesis*, *DSP*, and *modeling*, along with hundreds of seemingly meaningless acronyms. In Chapters 2 and 14, I describe and compare all these methods of sound production.

Touching on key weight

Those black and whites may look the same at first glance, but keys (or the key mechanism) can vary greatly from instrument to instrument. The first main distinction is whether the keys are weighted. *Weighted* keys give the feel of playing an acoustic piano. These keys may seem harder to play, but they offer you much more control over your *dynamics*, or ability to play more softly and loudly.

Non-weighted keys are often called *synth-action*; they're lighter to the touch and can be faster to play. The next step up is *semi-weighted* keys, which are firmer, more solid light-touch keys.

I discuss key weighting in greater detail in Chapter 2. The quality can vary from model to model and brand to brand, so it's an important aspect to consider when buying a keyboard; be sure to check out Chapter 3 as well.

Join the family: Grouping keyboards

Electronic keyboards fall into well-established families or categories of instruments. Each has a relatively standard set of features and is meant to be used for specific musical needs and playing situations. Within each family, you encounter entry-level models that are more basic and then step-up models that add to the quality and number of sounds, the number of features, the size and quality of the keyboard feel, and so on. The main keyboard “food groups” are as follows:

- ✔ **Digital pianos:** Acoustic piano wannabes or replacements.
- ✔ **Stage pianos:** Digital pianos intended for the performing musician, with additional sounds and pro features.
- ✔ **Portable keyboards:** Fun, lightweight, and full of features to help you sound better.

- ✔ **Arrangers:** Keyboards with sophisticated backing features to produce the sound of a full band from your simple chord input.
- ✔ **Organs:** Instruments dedicated to reproducing the sound, features, and feel of the legendary Hammond B3. They may include some additional sounds such as pipe organ, combo organs, and even other keyboard and synth sounds.
- ✔ **Synthesizers:** Keyboards that allow you to make your own sounds and adjust the sounds provided. They can sound the most electronic and imaginative but now often include imitative and natural sounds as well.
- ✔ **Workstations:** Basically, synthesizers with onboard recording systems to allow you to create complete works of original music. Very advanced and feature-rich.
- ✔ **Controllers:** Keyboards that don't make sound themselves but are used to trigger sounds from your computer and other keyboards. These options use the MIDI standard to communicate with the sound-producing devices. (Head to Chapter 17 for details on MIDI.)

Chapters 2 and 3 are your keys (pun intended) to getting more info on all these families of instruments. Deciding which one is right for your needs can be confusing, but I help you organize and prioritize your needs, thinking through what you want to do, where you want to do it, and what you can afford, in Chapters 3 and 18.

Speaking the Musical Language

Perhaps you can pick up simple melodies by ear and hunt and peck with a few fingers to play the notes, but eventually you're going to want to develop your skills more. Learning to read musical notation opens up a way to communicate so much about playing any type of keyboard. It allows you to read the examples in this book and others; to buy sheet music and songbooks of your favorite piano pieces, artists, and songs; and to tackle instructional courses. Chapter 5 is your friendly and easy-to-follow introduction to the language of music. Developing your finger facility and strength takes you from fumble to finesse. Chapter 6 gets things rolling and will have you playing with good posture and fingering technique in no time.

Some forms of print music use what are called *chord symbols* to indicate notes that can be played beneath a melody. They're usually intended for guitar players to strum along, but the keyboardist can also use them to

enhance his playing. A form of print music called a *fake book* provides only a melody and chord symbols, so you need to know your chords to follow along. And you need to understand chords to use certain backing features of some keyboards. Read up on chords in Chapter 7.

Making the Most of Your Keyboard's Basic Features

You can just turn on your keyboard and start playing, and you'll have a great time. But these are electronic keyboards, and they do so much more than that. Your keyboard is brimming with features and cool capabilities, like any self-respecting tech product these days is. I don't know of any that offer video games or let you video chat with your friends, but you never know what may come to pass!

Working with sounds

Some keyboards offer a small grouping of sounds; simple digital pianos may have 16 or so. But most offer at least 100 and sometimes thousands. Finding them, selecting them, and understanding whether they're simple single sounds or complex combinations of instruments stacked on top of each other or split between your hands takes some study. Chapter 8 breaks that all down and provides step-by-step instructions.

Exploring effects

What you hear coming out of a keyboard is actually more than just a sound; it almost always has some extra sonic treatment called *effects* added to it. Effects are audio treatments such as reverb, chorus, EQ, and delay, and they add to the spaciousness, color, and tonality of each sound. Even in simple keyboards, you have the choice whether to use them, and many keyboards allow you to vary the settings of their effects to produce different results, sometimes completely changing what effect a sound uses. Chapter 9 has the details.

Getting into automatic playing features

Many of today's keyboards have some functions that can do some playing on their own (with your guidance, of course). You can sit back and let the keyboard do some of the work. The most common features are

- ✓ **Drum rhythms:** All portables and arrangers and many high-end digital pianos offer an on-demand drummer to add some groove to your performance. You can select the choices from the front panel, add fancy transitions called *fills*, and sometimes select progressively busier variations. Some stage pianos, synths, and workstations also offer these grooves, although they may be lurking within the arpeggiator feature (which I discuss in a moment). Visit Chapter 10 to find out more about getting your groove on.
- ✓ **Auto-accompaniment:** How about having a full backing band ready to play whatever style of music, song, or chords you think of? Portables, arrangers, and some high-end digital pianos can do that and more. If you haven't been around keyboards and music for some time, you may not realize just how good the backing bands on today's keyboards have become. In a word: amazing! But like anything in life, you get back what you put into it, so read Chapter 11 to bone up on all the ways you can lead your band to even greater heights and realism.
- ✓ **Arpeggiation:** With *arpeggiation*, you hold a few notes or a chord, and the keyboard repeats them over and over in a dizzying array of possible patterns — from simple up and down repetitions to pulsing grooves to complex rhythmic patterns. An arpeggiator is often what produces the fancy riffs you hear in pop and dance music. Many of the more advanced options can also produce realistic guitar strumming, harp flourishes, and even drum grooves. Chapter 12 has an introduction to this cool tool.

Delving into More-Advanced Digital Features

If you think of yourself as tech-savvy, you're probably looking for even more from this book, and I'm ready for you. Many of the keyboards have pretty advanced features — some that you would've thought you needed a computer to do. The following sections dive deeper into these digital waters.

Stepping into the virtual recording studio

Keyboards now commonly include some form of recording so that you can play and then listen back to yourself. Two forms of recording are available today:

- ✓ **Audio recording:** This method is the recording of the actual sound you produced. It's what you listen to from a CD, an MP3 player, or your favorite online music streaming service.
- ✓ **MIDI recording:** *MIDI* is the *Musical Instrument Digital Interface* standard, a fancy name for a digital way that musical products can talk to each other. It's not the sound you hear but rather a way of communicating the gestures, moves, and settings of your electronic device as you played it.

Each format has its own terms, capabilities, and benefits, and musicians at every level use each of them. Chapter 13 breaks them both down and helps you see what you and your keyboard can do in terms of creating and sharing your music with others. If you want to know even more about MIDI, check out Chapter 17 as well.

Shaping the sounds you play

So many of today's keyboards offer control over the sounds that are included, whether that's adjusting them a little bit or completely changing them, warping them, or building them from the ground up. For many musicians, creating the sound is as important as the music they play with it. The art of making sounds is usually called *programming* a keyboard, or *sound design*. If you've heard the terms *waveform*, *oscillator*, *filter*, *envelope generator*, or *LFO*, you know that they're the building blocks of this creative art. And Chapter 14 is your entry into this highly rewarding aspect of using an electronic keyboard.

Checking out the computer connection

Thanks to the development of MIDI, keyboards can connect to computers and tablets for a broad array of activities and enjoyment. In Chapter 17, I introduce you to all these categories of software, from recording and sound editing to playing additional sounds that are running on your computer to working with virtual teachers. This exciting world is the cutting edge of music making and study.

Practicing with and without Help

Whether you prefer to study keyboard playing with an electronic teacher or just want to hack out songs you love on your own, I have you covered.

Lurking inside many portable keyboards and digital pianos are patient music teachers, waiting to help you learn a few tunes and build your musical skills. They never yell, won't slap your wrists with a ruler, and are willing to go over things as slowly and as many times as you need. In Chapter 15, I explain and demonstrate both the Casio and Yamaha ways of giving you virtual keyboard lessons and provide practical advice on how to get the most out of them.

But sometimes you hear a song and you just want to sit down and play it right away at your keyboard. Why wait until you can buy the music or go to your next piano lesson? Learning to play by ear and to figure out songs from recordings is a great skill to develop. Some can do it naturally, but for most people, it takes some work. I have worked very hard at developing that skill, and I'm happy to share my best tips with you in Chapter 16.