Foreword by John Storyk

Since as long as I can remember (well, at least since I was 11), I have wanted to be a professional musician and practice architecture. These two worlds always have made me smile, and for more than 50 years, I have been able to live that dream—at least a good part of it. And to make it even more fun, somehow the career gods allowed me for 40 years to practice the art of recording studio design, which of course brings us to this moment, this subject, and this book.

Photo courtesy of Walters-Storyk Design Group.

John Storyk pictured in front of Antonio Gaudi’s Parque Guell.

Of course we all know the highlights associated with the brief history of audio recording—it kind of starts when we first were able to capture content to some kind of media and then replay this content. Barring mechanical devices, such as piano rolls or notched pieces of wood, our recording world started around the turn of the 20th century, reached great heights due to Hollywood in the middle part of the same century, flourished even more as the world stretched its cultural muscle in the ’60s and ’70s, and now I believe is about to have an even more amazing moment and its most democratic moment due to digital technology.

Simply stated, almost anybody can have a recording studio. These special environments are no longer multimillion-dollar investments owned and operated by a privileged few. They are at last able to be enjoyed by millions, and they can be created in the home! Is there a better place to have a recording studio than in your own home? Possibly not. Do we need another book about home recording? I say yes, if it sheds a few new insights into exactly how powerful and how wonderful this type of tool can be. A world with more music and a world with more recording is most definitely a better one—few should disagree.

Any introduction to this subject should start by agreeing to the goals and challenges of a home recording studio. All studios are a special combination of technology (think recording
equipment) and an environment. It is at this juncture where things get the most interesting for me personally, and I believe for Jeff and his readers. He has saved my favorite subject, acoustics, for last, but with good reason. I thank him for allowing me to contribute some thoughts. Recording starts with content creation and a capturing process that potentially involves a great deal of equipment. Think of this as the nervous system of any studio, and how these equipment components talk to each other (signal, power, and so on) is a combination of many systems. Arguably, one needs to understand this subject first, and, of course, our industry has brought this information to us in great detail. There are incredible recording solutions to choose from, but all of this is only possible with an understanding of the process. These systems have the potential to get complicated, but it is the task of this book to simplify this roadmap. Jeff manages this task and converts this map into words and illustrations. Bravo!

“Home is where the heart is.” We have heard this many times. In this new era of democratic music production and distribution, virtually anyone can consider designing, building, and installing a recording studio in his or her home. If Jeff’s book stopped right there, that would be enough, but he continues in very understandable terms to again review the recording process and to ensure that this new era of home studio construction allows its users to maximize the equipment and the creative powers of this wonderful machine.

Growing up, I had only a handful of architectural idols, including Frank Lloyd Wright, Antonio Gaudi, Frederick Kiesler, and, of course, Le Corbusier. It took half my life to finally visit Wright’s Fallingwater; my first studio for Jimi Hendrix was in the basement of Frederick Kiesler’s first major building (New York City’s 8th Street Cinema); Gaudi’s amazing buildings in Barcelona have been home to a number of dream visits. But in the words of Le Corbusier “a home is a machine for living ...”. Jeff gives a part of this machine new meaning and provides a wonderful manual for its inner workings.
If there has been a key player in the home studio revolution, it has most certainly been the computer. Moore’s Law, which essentially states that the transistor capacity of a computer chip doubles roughly every two years, has proven to be relatively accurate since the mid-'60s and seems to be continuing. This has led to faster processors and throughput, enabling audio and video content to be transferred among various devices at blazing-fast speeds. It has also enabled a great deal of continued innovation with DAWs (digital audio workstations).

For the home studio enthusiast—and indeed for the greater professional audio community—these developments have turned the cost/performance ratio on its head, making extremely high-quality audio achievable for the masses. In the past, both professional and amateur recordists relied on analog tape as their primary storage medium, but as hard drives became faster and cheaper, they have for the most part succeeded in dethroning their analog counterparts. As digital technology continues to improve, it is only a matter of time before those beloved, giant old multitracks become dusty relics of the past.
Computers are a home studio owner’s best friend. If you think about the way they have helped individuals and groups become more productive in their recording, it is nothing short of staggering. Through the use of digital converters, users can send and receive information to and from the analog world, making computers flexible, efficient, and able to complement almost any audio environment. Through MIDI (Musical Information Digital Interface), computers can help users gain control of almost their entire studio infrastructure and customize it to their own needs. By supporting literally thousands of customized software programs, computers enable the development of creative tools that were inconceivable to the audio world just a short time ago.

**Nuts and Bolts**

You don’t really need to know how a computer works to reap its benefits, but having a basic knowledge of what goes on under the hood will at least help you in your decision-making process. The following sections describe the basic elements you should know about.

**CPU (Central Processing Unit)**

This is the processor, or the “brain” of a computer, which enables it to execute software programs. The key thing you need to know is that faster is better. Currently, many consumer-based CPU chips, such as those found in the new iMacs, for example, can run at speeds of greater than 3 GHz. A faster CPU enables software to run more efficiently.

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RAM (Random Access Memory)
Think of this as the “active” memory that is required by software programs to perform tasks in real time. The RAM literally provides the resources for the DAW to do its job and respond to user commands. RAM is typically upgradable on most computers, and if you are planning on working with many tracks or sample-based virtual instruments, it is highly recommended that you max out the RAM and install as much as possible.

Hard Drive Memory (HD Memory)
The hard drive memory is very different from the RAM. It is where information is stored for later retrieval. The fundamental difference is that hard drive memory is not instantly accessible and therefore is not as critical as RAM when it comes to software performance. Still, you need lots and lots of HD memory. Even a short 24-bit audio file can take up many hundreds of megabytes. Hard drive space goes quickly if you have a 24-track (or more!) session with multiple songs. Most home studios need at least two large external hard drives to capture both session work and backups.

Do I Have to Get a Computer?
No, you don’t have to get a computer. But you don’t have to use a bicycle or a car to get around, either. Recording to analog tape can be a beautiful thing, but it is becoming less convenient by the day—and tape is getting harder and harder to find. Tape machines can consume an enormous amount of space, weigh a lot, be difficult to transport, and take lots and lots of time—time to maintain, time to put up a reel, time to rewind, and the list goes on. Eventually, this time adds up and quickly becomes a liability—especially if you are out to make a profit. Also, if you are waiting for any manufacturer upgrades or require technical support on your giant 24-track recorder, don’t hold your breath.