COVERS PRO TOOLS LE 6.1 FOR DIGI 002, DIGI 002 RACK, DIGI 001, AND MBOX

VISUAL QUICKSTART GUIDE

STEVEN ROBACK

PRO TOOLS

FOR MACINTOSH & WINDOWS

Teach yourself Pro Tools the quick and easy way! This Visual QuickStart Guide uses pictures rather than lengthy explanations. You'll be up and running in no time!

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INTRODUCTION

Pro Tools is a computer-based audio recording system that runs on Macintosh and Windows operating systems. Pro Tools TDM systems are considered the de facto standard for hard-disk audio recording in professional studios worldwide. Digidesign now offers a range of increasingly popular Pro Tools LE systems, which are designed for use in home studios and project studios.

Pro Tools' popularity is due, in part, to its successful migration of a traditional recording studio environment to the computer realm. It's also famous for its powerful recording, editing, mixing, automation, and real-time DSP effects.

What is Pro Tools LE?

Pro Tools LE is the software that comes with several of Digidesign's hard-disk audio recording systems, including Digi 002, Digi 002 Rack, Digi 001, Mbox, and Audiomedia III. These systems are designed primarily for use in home recording studios and project studios, or, in the case of the Digi 002 Rack and Mbox, to be taken on the road.

Pro Tools LE software is nearly identical to its higher-end Pro Tools TDM software counterpart. The main difference is how each version of Pro Tools handles DSP (digital signal processing): Pro Tools TDM systems include PCI cards with built-in DSP processing chips; Pro Tools LE systems rely entirely on the host computer's CPU for all DSP-processing tasks. Because Pro Tools LE systems are host-based, the number of tracks and plug-ins you can use simultaneously depends on your computer's CPU power. Generally speaking, faster computers perform better.

Sessions created with Pro Tools LE are compatible with Pro Tools TDM systems. This means that you can record tracks using a modest Pro Tools LE system, and then, when you're ready, take them to a studio and mix them on a Pro Tools TDM system. Because Pro Tools LE software is so similar to the TDM version, upgrading to the higher-end system has almost no learning curve.

Who should use this book?

This book is for musicians, engineers, producers, composers, soundtrack creators, film and video producers, music supervisors, broadcasters, Webcasters, students, audiophiles, MP3 addicts, vicarious listeners, and anyone else who wants a simple, clear, and complete explanation of how to use Pro Tools digital audio software. While this book focuses on Pro Tools 6.1 LE, the vast majority of software features discussed herein apply to all Pro Tools systems, including Pro Tools 5 LE, Pro Tools TDM, and Pro Tools Free. (For more information on Pro Tools Free, see www.digidesign.com.)

What's in this book?

This book contains comprehensive, step-by-step instructions on most aspects of Pro Tools 6.1 LE, including hardware setup, recording and playback, editing, mixing, effects plug-ins, automation, file management, MIDI, and CPU performance. I've also included recording-related sidebars to inspire you and help you make better-sounding recordings.

Structured like a recording session, this book includes the following sections:

Part I: Getting Started with Pro Tools LE. This section covers setting up your Pro Tools LE system. You'll also learn the basics of Pro Tools software, and the layout of the Mix and Edit windows.

Part II: Recording in Pro Tools. This section teaches you how to record and play back audio in Pro Tools. You'll learn how to create new sessions, and how to work with tracks.

Part III: Audio File Management. This section introduces you to Pro Tools' file management features. You'll learn basic functions, such as locating, importing, exporting, and backing up your audio files. You'll also learn how to use DigiBase, Pro Tools' new, comprehensive file-management utility.

Part IV: Editing Audio. This section shows you how to edit audio in Pro Tools. You'll learn how to select and move audio regions, and how to save time using edit playlists. You'll also learn a few advanced features such as creating fades and crossfades, and repairing waveforms.

Part V: Mixing Audio. This section covers mixing audio in Pro Tools. You'll learn about stereo imaging and audio signal flow, as well as how to add effects using real-time DSP plug-ins. You'll also learn how to automate a mix and how to bounce a final mix down to disk.

Part VI: MIDI Sequencing. This section introduces Pro Tool's MIDI sequencing features. You'll learn how to record, edit, and play back MIDI in Pro Tools.

Part VII: Getting the Most from Pro Tools. This section provides an overview of using Pro Tools to work with sound in digital video. It also suggests ways to maximize Pro Tools LE's performance. You'll learn how to set memory buffers and memory-intensive functions to achieve the best results during recording, editing and mixing, and you'll see how making tracks and other items inactive can free up valuable CPU power. You'll also learn how to use DSP plug-ins efficiently, and how to squeeze extra space out of your hard drive.

Appendices and Glossary. Appendix A shows you how to connect Digi 002, Digi 002 Rack, Digi 001, Mbox, and Audiomedia III hardware to your studio. Appendix B presents complete descriptions of all Pro Tools 6.1 preferences. A glossary provides a list of Pro Tools–specific and general recording terms.

About the sidebars

I've included a few sidebars to help you understand some important recording concepts. In creating these sidebars, I tried to present simple topics that I wish I had at my fingertips when I first started recording. Some of these topics include mic placement, gain staging, and monitoring a mix.

How to use this book

If you're new to Pro Tools, use this book as a visually oriented instructional manual to step you through each phase of the recording process. If you're already familiar with Pro Tools, use this book as a visual reference guide to quickly refresh your memory. Either way, there's lots of Pro Tools information within.

What's new in Pro Tools 6 LE ?

Pro Tools 6 LE (and TDM) is an entirely revamped version of Pro Tools, designed from the ground up specifically for Mac OS X's powerful and stable Unix-based operating environment. Pro Tools 6 LE software supports all currently available Pro Tools LE hardware systems, including Digi 002, Digi 002 Rack, Digi 001, Mbox, and Audiomedia III.

Building on the strong recording features of Pro Tools 5 LE, Pro Tools 6 LE adds several thoughtfully conceived new features that make working in Pro Tools easier, more creative, and a lot more fun. Pro Tools 6.0 LE (for Mac OS X only), includes the following new features:

- New windows and user interface
- DigiBase file management utility
- New editing features
- Relative Grid Mode
- Suspend Grid Mode
- Playback Cursor Locator
- Horizontal and vertical Selector tool
- New MIDI features

- Groove Quantize
- New MIDI Services
- More MIDI tracks (up to 256)
- Flatten and Restore MIDI Performance
- MIDI Time Stamping
- Trim Tool
- Pencil Tool
- Floating MIDI windows
- Virtual MIDI Pro Tools Inputs
- New Plug-ins and processing features
- iLok plug-in copy protection
- New DigiRack Click plug-in
- New plug-ins including DigiRack Chorus, Flanger, Multi-Tap delay, Ping-Pong delay, Pitch Shift; and D-Verb
- Inserting plug-ins during playback
- Track height enhancements
- Zoom Toggle Track Height
- Track height toggle with arrow keys
- 32 Voiceable Tracks (Digi 001, Mbox, and Audiomedia III)
- Increased track count (up to 128 audio tracks, 128 auxiliary inputs, 64 master faders, and 256 MIDI tracks)
- Inactive Tracks
- Time Trimmer (region time compression/expansion)
- Commands Focus Shortcuts (enables single key commands)
- QuickTime DV Playback

As of this writing, Pro Tools 6.0 (Mac OS X only) has been updated to Pro Tools Version 6.1, which runs on both Mac OS X and Windows XP. Pro Tools 6.1 incorporates the features introduced in Pro Tools 6.0 and adds the following new features:

- Up to 32 levels of undo
- DigiBase browser displays OMF video metadata
- Advanced Authoring Format (AAF) with DigiTranslator 2.0
- New plug-ins and processing features
- New DigiRack plug-ins interface
- New DigiRack ReWire plug-in
- Waves Time Shifter and TC/E Plug-in Preference
- Support for DigiTranslator 2.0 on Digi002 and Digi 002 Rack
- DV Toolkit Option for Pro Tools LE
- Scroll wheel navigation of Pro Tools windows

For more information on the new features in Pro Tools 6.1 LE, see Digidesign's Web site at www.digidesign.com.

Additional information

For additional information on Pro Tools LE, Pro Tools TDM, or Pro Tools Free, see Digidesign's Web site at www.digidesign.com. The site offers a wealth of information on all Pro Tools-related topics, including downloadable software updates and product manuals, product support, and upgrade plans.

A (Very) Brief History of Multi-Track Recording

Thomas Edison invented the world's first recording and playback machine in 1877. But it wasn't until the 1930s, when renowned guitarist and electronics innovator Les Paul began overlaying multiple guitar tracks on acetate discs, that multi-track recording was born.

Les Paul: Recording Pioneer

Paul's contributions to the development of multi-track recording cannot be overstated. In 1949, he adapted a rare Magnetophone tape machine to create sound-on-sound recording—better known as overdubbing. Along the way, Paul literally invented most of the audio gear used in recording studios today, including equalizers, delays, reverbs, and many other audio effects processing devices.

Paul's experimentation with close-up miking techniques also left a lasting impact on vocal production. In 1951 he produced two widely acclaimed, million-selling songs, *How High the Moon* and *Mockin' Bird Hill*, which featured beautifully layered overdubs of his wife, vocalist Mary Ford.

The Beatles: A Multi-Track Revolution

By the 1960s, four-track tape machines were available, but it wasn't until producer George Martin and The Beatles began churning out four- and eight-track masterworks like *Rubber Soul*, *Revolver*, *Sgt. Pepper's Lonely Hearts Club Band*, and *Abbey Road* that the true creative potential of multi-track recording became widely apparent.

Between 1966 and 1970, the Beatles applied all of their energy to studio recording, and in the process, wrote the book on pop music recording. Things that today sound like ordinary elements of pop music—feedback, multiple vocal and guitar overdubs, backwards instruments, tape delays (flange), exotic instruments (sitar)—were used for the first time by Martin and The Beatles as they explored the limits of multi-track recording.

Eno and the Wizard

By the 1970s and '80s, recording on 16-and 24-track tape machines had become the professional standard. Musicians and producers such as Todd Rundgren and Brian Eno quickly took advantage of the expanded track count. Rundgren's 1973 album *Wizard/A True Star* showed the potential of multi-track recording in the hands of an artist with great musical inventiveness. The album features a stirring mix of electric guitars, pianos, organs, synthesizers, vocals, and percussion, strung together with surprising crossfades and creatively applied effects.

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A (Very) Brief History of Multi-Track Recording *continued*

Inspired by ambient pioneer John Cage, Brian Eno took multi-track into the realm of chaos theory. Eno used random analog tape loops to create unpredictable ambient soundscapes. His use of randomness to generate sonic atmospherics—best exemplified in his 1975 album *Another Green World* and his *Ambient* series—shows how random sound combinations can create a striking sense of place. Eno's evocative multi-track production has inspired a generation of musicians and producers across many genres of music, from rock and psychedelia to hip-hop and trance.

Today, recording on 24-track analog tape is still considered an excellent, if expensive, way to record.

Digital Audio: Bringing the Studio Home

Recording audio to a computer hard disk is now commonplace in professional studios. Perhaps the most important innovation of hard-disk recording is the ability to edit audio using a graphic interface. Computer editing has given musicians, engineers, and producers new freedom to move, shape, and rearrange sounds in virtually unlimited combinations.

Advances in digital recording have also led to an explosion in the number of home-based recording studios (often called *project studios*). Now anyone with a home computer can take advantage of the once prohibitively expensive features of recording studios, including effects processing and mix automation.

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