

Pro Tools[®] 7 Session Secrets

Professional Recipes for
High-Octane Results

Scott Hirsch

Steve Heithecker



Wiley Publishing, Inc.

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Best regards,

A handwritten signature in black ink that reads "Dan Brodnitz". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

DAN BRODNITZ
Vice President and Publisher
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About the Authors

In the recording studio, Scott Hirsch feels right at home behind the controls or playing the instruments. Whether he is engineering a session at his home studio, sound-designing a film, teaching digital audio classes, or composing his own music, there is always a use for Scott's masterful Pro Tools skills. After graduating from UCSB with a degree in film studies with an emphasis on sound, Scott was introduced to an early version of Pro Tools and never looked back. With a growing number of critically acclaimed records and several feature-length films and documentaries under his belt, Scott teaches audio as a Digidesign Pro Tools and Apple Logic certified instructor at the media hub Bay Area Video Coalition (BAVC) and at Pyramind, the institute for advanced digital audio training in San Francisco. Scott is also a member of The Court & Spark, a San Francisco rock band.

Steve Heithecker is a veteran San Francisco-based producer/engineer, keyboardist, and educator. Steve has written, produced, and recorded music for many albums of many genres, as well as live theater, film, and video. With a passion for keyboards and all things MIDI, he now lives in a world of virtual synths and samplers and may often be heard muttering, "More CPU, more CPU." He was cofounder of Digital Art & Music in San Francisco and now works and teaches out of Pyramind, where he is the Reason Resident as well as one of the valued Pro Tools instructors. Steve is also an accomplished graphic designer with more than 25 albums to his credit.

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Introduction

Digital audio workstations are becoming more powerful and less expensive, and a new breed of media producer is emerging—the independent audio engineer. Small independent/home recording studios can now compete on a professional level, thus breaking down the dominance of the big exclusive recording studio. For those of us already working in the field, this is old news. We’ve already been reaping the benefits of taking production out of the hands of the select few and putting it into the hands of the creative masses. Since so many budding audio enthusiasts can now take advantage of these new powerful tools, the demand for digital audio education is coming faster than books can be written.

There are many “How to use Pro Tools” books on the shelves out there. Rather than repeating what has already been said, we set out to make a guide that goes beyond the conceptual theories of using Pro Tools and concentrates on real-world scenarios for the working engineer, musician, or sound designer. As Pro Tools users with countless hours logged and many lessons learned, we brainstormed all of the things we do beyond the basic operation of Pro Tools that make our recordings special and the artists happy. We placed these tips and techniques in a step-by-step recipe format for quick access and maximum practicality.

Above all, this book’s goal is to simplify and reduce the technical demands of working in Pro Tools in order to inspire your artistic vision. We hope that our suggestions unlock the door to an endless flow of inspiration, creativity, and success.

What You Will Learn from This Book

Pro Tools 7 Session Secrets: Professional Recipes for High-Octane Results reaches beyond the scope of a traditional “how to” book by concentrating on Pro Tools working methods in real-world scenarios. The book takes a round trip through all the key stages of a Pro Tools session, including recording, MIDI, editing, mixing, postproduction, and mastering. Through this journey, you’ll learn the fastest workflow techniques, professional power user tips, ideas on how to get specific sounds, expert suggestions on how to work more efficiently, and advanced insight into the new features of Pro Tools 7.

The aim of this book is not to be an all-inclusive, comprehensive guide, but rather to broaden your creative horizon by turning your fundamental Pro Tools skills into real-world know-how. For example, we'll show you how to set up a headphone mix properly for a band, record specific instruments and vocals, employ the benefits of other audio programs like Logic and Reason, farm out to external effects properly, prepare your mix for a mastering house, and so on. All of these concepts require Pro Tools know-how but also extend far beyond what you would ever find in a manual.

Who Should Read This Book

This book is for anyone who has a basic understanding of Pro Tools but wishes to take these skills to the next level. Pro Tools users often hit an imaginary wall when learning the program. They get to the point that they theoretically understand how to work in Pro Tools but are not prepared to achieve actual results in a real-world situation. This book breaks down that wall by providing recipes and suggestions on why, how, and when to employ powerful working secrets of Pro Tools.

Pro Tools 7 Session Secrets spans a lot of territory. Any Pro Tools user with an elementary understanding of Pro Tools will find this book essential, ranging from beginner/intermediate-level users to audio professionals trying to break old habits.

How to Use This Book

Pro Tools 7 Session Secrets is presented in the natural progression of a Pro Tools session, beginning with recording and following through to mixing and mastering. However, the book is not necessarily intended for use in a linear fashion. The chapters are presented in a recipe-book style so you can look up any subject at any time. While some of the concepts are cross-referential, the chapters do not build on each other. Each chapter begins with the essentials and then evolves into the step-by-step techniques on how to achieve specific results. Along the way, you'll find sidebars that serve to demystify important aspects of digital audio and Pro Tools. Quick tips are also provided in each chapter as suggestions for a faster and more powerful workflow.

How This Book Is Organized

Chapter 1, "Recording and Microphones," shows you how to prepare your Pro Tools system's I/O setup for maximum efficiency while recording, including headphone mixes for multiple performers. The chapter explores a number of recording essentials like setting up a click track, dealing with phase, and punch techniques. Recipes are given for microphone techniques of common musical instruments.

Chapter 2, "MIDI with Confidence," outlines all of the new powerful MIDI features of Pro Tools 7, including Instrument tracks and Real-Time Properties. Power-user techniques are given to master MIDI in Pro Tools. The chapter also touches on integrating outside programs and machines via MMC and ReWire.

Chapter 3, “Editing: Slip, Shuffle, and Spot Your Way Home,” gives in-depth approaches to using and understanding all of Pro Tools’s editing tools so you can take full advantage of all the powerful new editing features in version 7. In addition, this chapter will focus on looping recipes, hidden power-user editing commands, and getting the most out of the four different editing modes to enhance productivity and speed.

Chapter 4, “The Way of the Insert: Inserts and FX,” describes how you can master inserts in Pro Tools and includes some awesome recipes for plug-ins and hardware-based FX. The chapter includes techniques on using Sound Replacer and Auto-Tune, side-chaining FX, printing FX, and more.

Chapter 5, “Mixing in Pro Tools: Directing Audio Traffic,” explains how to use Pro Tools mixing functions to masterfully command your mix. You will learn automation recipes, panning techniques, complex routing options, and EQ and compression recipes.

Chapter 6, “After the Bounce, or Life outside of Pro Tools,” expands on the endless possibilities of what to do after you have completed your mix in Pro Tools. The chapter shows you how to properly prepare for a mastering session or master yourself inside Pro Tools. The chapter also demystifies all of the different audio formats out there, as well as shows you how to properly encode MP3s and create podcasts.

Chapter 7, “Postproduction and the World of Surround,” provides essential instructions on how to use your Pro Tools system for video and film postproduction and how to use it in a multichannel surround environment. This chapter delineates some working methods and techniques for postproducing with Pro Tools, including how to prep an audio session from a video project, syncing to external video decks, calibrating monitors, working with stems, and using postproduction editing tricks and 5.1 surround setups.

The appendices, “Setting Up Pro Tools” and “Using Control Surfaces with Pro Tools,” provide you with hardware, software, and setup information for getting the right system for you in place.

Hardware and Software Considerations

Pro Tools is a hardware-specific program. This means that you must have an attached Digidesign or compatible M-Audio hardware interface for Pro Tools or Pro Tools M-Powered to run the software. This book is written for Pro Tools users with any of the three levels of Pro Tools hardware platforms: M-Powered, LE, or HD. A few of the sections of the book are platform-specific and are labeled as such, but for the most part, we attempted to keep the book valid for all three versions of Pro Tools.

Pro Tools is a cross-platform application, running on Macintosh OS X and Windows XP operating systems. The recommended system compatibility is ever changing. For the most up-to-date information, go to www.digidesign.com/support and click Compatibility for the latest system requirements and recommended configurations.

This book’s appendix has some more-specific suggestions on different tiers of Pro Tools systems.

Conventions Used in This Book

You'll find keyboard shortcuts presented throughout the book with the Mac shortcut followed by the Windows shortcut, as in this example:



⌘+Shift+A / Ctrl+Shift+A

If there is something new in Pro Tools version 7, you will see an icon next to the paragraph, as the one in the margin here.

Contact the Authors

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You can contact Steve Heithecker at Pyramind Studios in San Francisco: steve@pyramind.com.

Recording and Microphones

Digital audio recording is all about 1s and 0s. The binary system is used to encode all the glorious sound fed into the computer so you can tweak, manipulate, process, mix, and edit to your heart's delight.

This chapter will take you beyond elementary recording setups in Pro Tools and focus on real-world techniques both inside and outside the software. The goal is efficiency. The faster you can get a solid sound coming through the monitors, the more time and energy you'll have for that moving performance. We will focus on the basic elements of mic placement for the most common instrumentation of a rock band, but most concepts apply to sound design, broadcast, or any type of recording.

1

Chapter Contents

Recording Preparation
The Headphone Mix
The Click Track
Punch Techniques
Recipes for Bass, Drums, and Acoustic
and Electric Guitar
Voice Recording

I/O Recording Techniques

Using Pro Tools to record a band can be a fun, creative, and rewarding experience for everybody involved. The streamlined virtual nature of the Pro Tools interface coupled with the instantaneous nature of hard disk recording is a godsend for those who want more time to create. And that's what it's all about, isn't it? In the old days of analog recording, we had to wait around for extensive patching, calibration of tape machines, setup of multiple headphone mixes, and so on. With Pro Tools, you can make all this happen in a fraction of the time. The key to all of this is preparation, preparation, preparation. We will illustrate how you can set up and manipulate the Pro Tools I/O, create lightning-fast headphone mixes, and record into your Pro Tools interface so that you have more time for the good stuff: recording the hits.

It's now time to introduce you to an imaginary band we'll use to help illustrate Pro Tools concepts throughout the book: The Condensers, a typical small rock band made up of a drum kit, a bass guitar, an electric guitar, and a vocalist.

Preconfiguring the I/O Setup

You need to be ready for the band before they even walk through the door. Here's how to preconfigure the I/O setup to accommodate the band:

1. Choose I/O from the Setup menu. Click the Default button that appears in the I/O Setup dialog.
2. Click on the Output tab at the top of the dialog to access the Output panel.
3. Double-click the default output names to highlight the field. Name your outputs as shown in Figure 1.1:
 - 1–2 MIX
 - 3–4 PHONES MIX 1
 - 5–6 PHONES MIX 2
 - 7–8 PHONES MIX 3
4. Press Enter to lock in the changes. This will provide you with a “control room” mix and three separate and distinct headphone mixes for the individual performers of The Condensers.



Note: These setup ideas are designed to work with at least an eight-channel Pro Tools interface. Users with a Digi 002, Digi 002 Rack, or any HD interface will be able to configure the I/O to resemble the examples in this chapter. Due to differences in the interfaces, there will be some variation in the dialog texts for different systems.

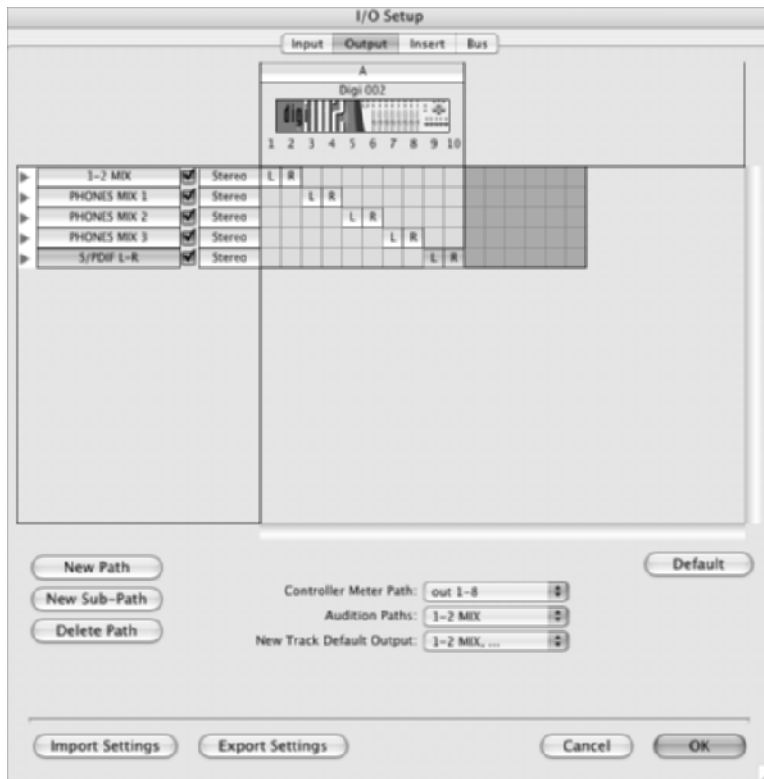


Figure 1.1 The Output tab for a 002 Rack

5. Click on the Input tab (Figure 1.2) to access the Input panel and rename inputs 1–8 to Mic 1–8. If you are tracking a combination of Mic and Line inputs, you can be more specific here by naming the first four inputs Mic/Line and the second four Line, for example. Click the disclosure triangles for each channel to have access to the mono paths.
6. Click on the Bus tab to access the Bus panel and assign names to the busses that follow the instrumentation. For The Condensers, the Bus panel will look like Figure 1.3.

Note: When you are done with the I/O setup, you may save it as a recallable I/O setup file. These are located by default in the Hard Drive > Applications > Digidesign > Pro Tools > IO Settings folder on your computer and may be taken with you to other sessions on your FireWire drive, iPod, or other removable media storage devices. You also have the option to click the Export Settings button. This will allow you to save your I/O settings to a specific location, such as the desktop.



Setting Up the Mixer

Now that you have the I/O in place, you can set up the mixer with appropriate channels and input and output assignments needed to track the Condensers. Here you can configure the available I/O to be labeled to accommodate the recording configuration you use for The Condensers.

The TDM mixer will look something like Figure 1.4.

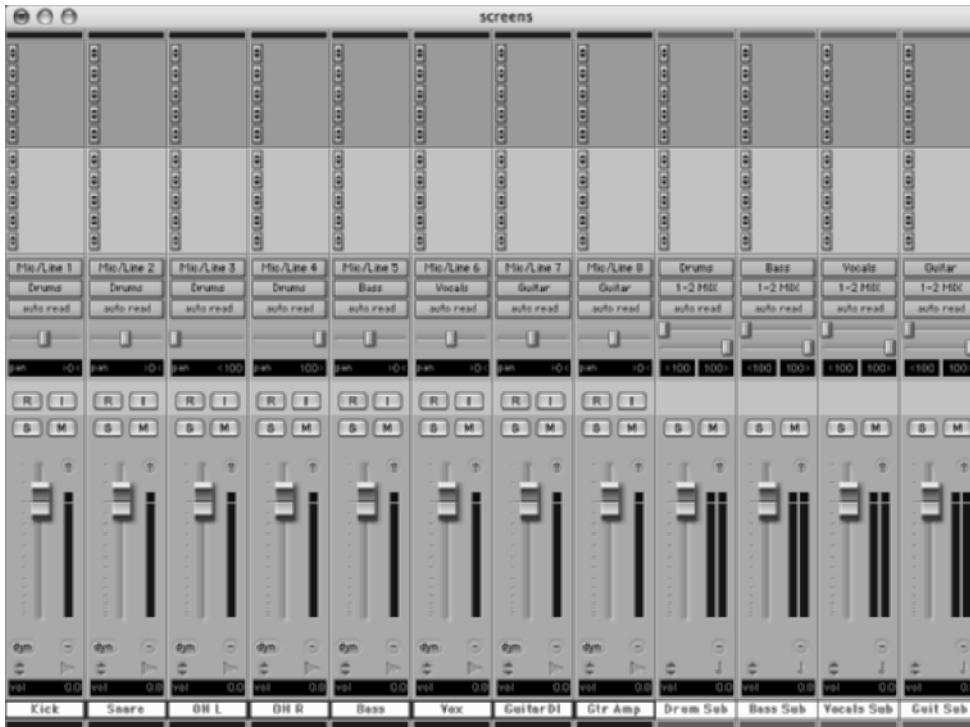


Figure 1.4 Note that the outputs are assigned to the corresponding busses you labeled in the I/O setup; this makes it easy to set up submixes across the auxiliary channels on the right.

Note: This is where the size and type of your Pro Tools hardware interface is crucial to how you proceed. TDM Pro Tools interfaces, such as the trusty old 888s or the newer HD systems, are going to have eight or more available inputs without microphone preamps. We are going to assume here that if you have a TDM system, you also have access to enough available mic pres to fill up at least eight channels of input and output (a single DIGI 96 I/O). For LE users, we will assume the use of a 002 system, using the four onboard Mic pres and the four Line inputs. The LE mixer will look like Figure 1.5.



Since the LE example uses only the four onboard mic pres shown in Figure 1.5, the stereo drum overhead was made into a mono channel, which opened up a mic pre for the vocal. If you can't part with the stereo overheads, it is possible to keep them with the use of an additional mic pre for the vocal, plugged into channel 8. Another option is to track the band sans vocals and overdub them later.

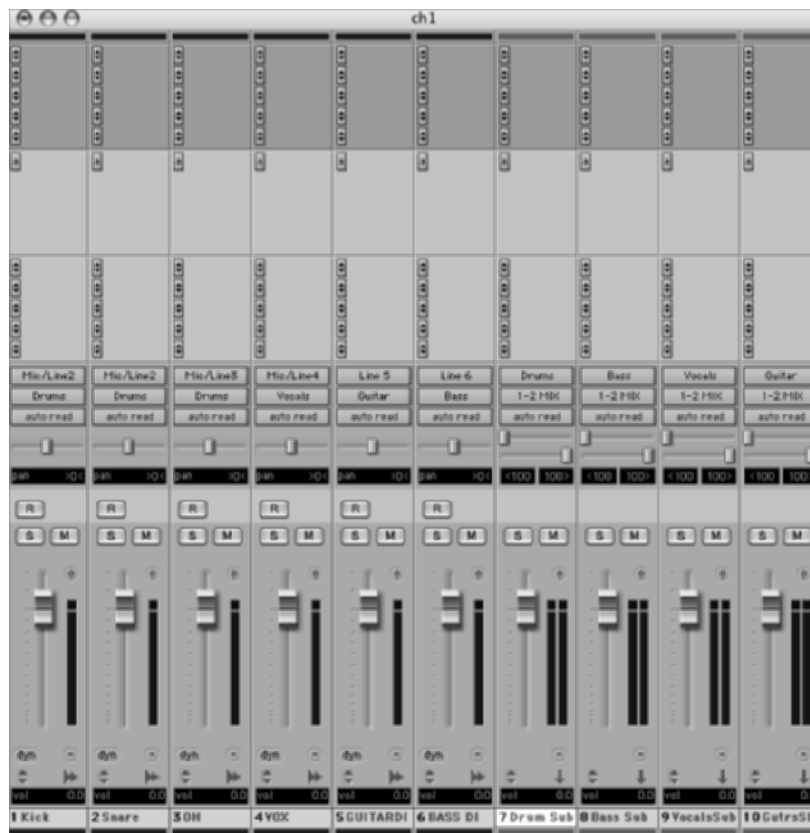


Figure 1.5 The LE mixer



Note: Remember also that this mixer and its I/O setup will be saved into the session. You may make this session a stationary pad (Mac) or a template (Windows). For Mac users, save the session, get info (⌘+I) on the session file, and check the Stationary Pad box. This will force you into a Save As when you open the file, making sure that you do not overwrite it. You may also lock the file here to prevent it from being erased. Windows users may right-click on the saved session file, choose Properties from the context menu, and check the Read Only box. This will ensure that the session will not be written over.

The Headphone Mix

There's nothing a band likes more than to have a good headphone mix. A lot of engineers say that the headphone monitoring is the number-one thing to get ready in a recording situation because no matter how good the sounds being recorded are, if the band isn't comfortable, the performances will suffer.

Since you labeled three separate outputs as CUE MIX in your I/O setup, you can now use sends on each submix track to give three mixes to the band and still have your own control room "main mix" coming from the 1-2 outputs. To take full advantage of the separate headphone mixes, you are going to need either three headphone distribution amps like the ROLLS HA43 Headphone Amp or a headphone matrix amp like the Mackie HMX 56 Six-Channel Headphone Matrix Mixer and the corresponding cables.

You now have the option of putting the three headphone sends on each individual audio track for the most flexibility (see Figure 1.6).

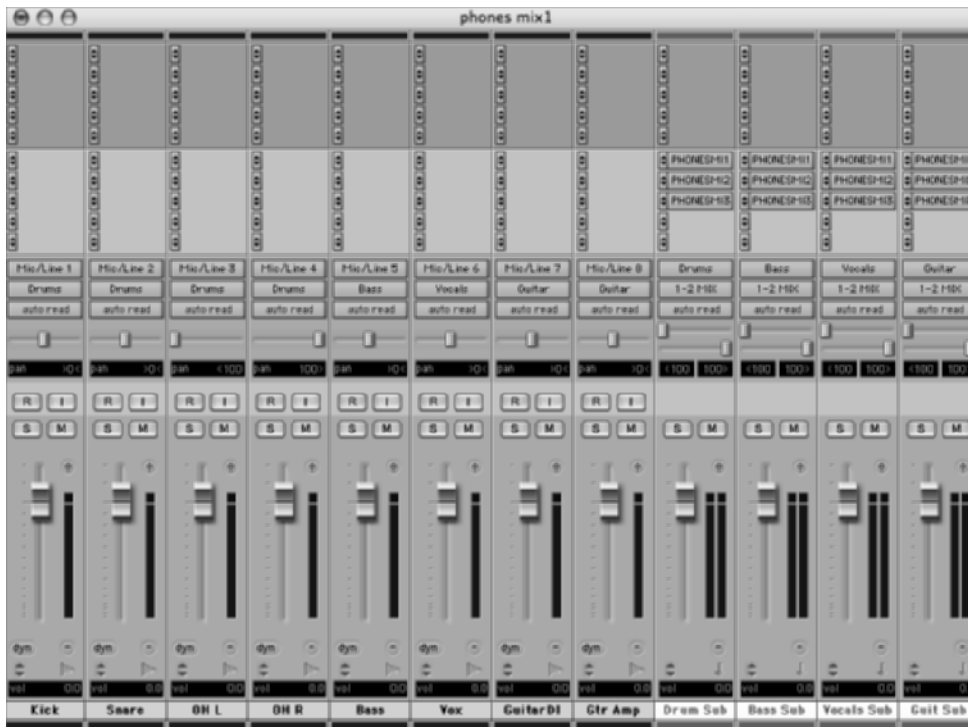


Figure 1.6 Headphone mix option 1

Or, you can put the headphone sends on the auxiliary submix channels (see Figure 1.7).

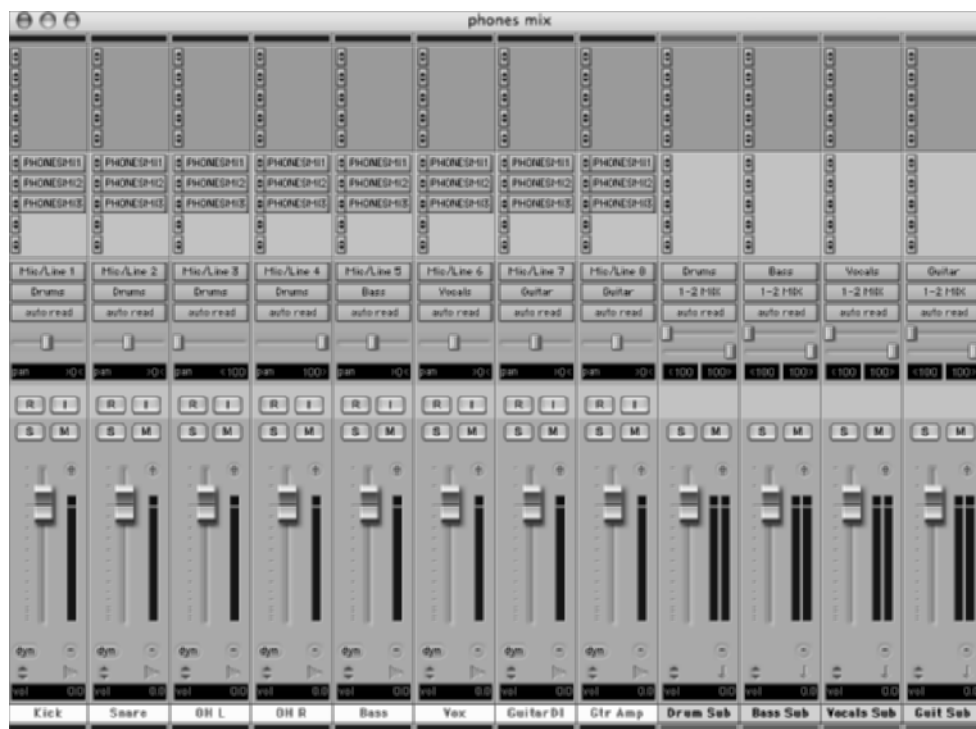


Figure 1.7 Headphone mix option 2

The outputs 3-4, 5-6, and 7-8 on the Pro Tools interface will now feed those headphone mixes. Typically, in this situation the drummer and vocalist prefer to each have their own mix, while the guitarist and bassist can agree on a third mix together.



Note: To assign and manage multiple track outputs quickly, select the tracks you wish to assign by (⌘+clicking / Ctrl+clicking) on each additional track name you want to select. Option+Shift+click / Alt+Shift+click on the output assignment and choose the bus or output you wish to send the tracks through. This will assign only the selected tracks to that bus. The same quick key works for send assignments, as in the headphone mixes in this chapter. Be careful not to only press Option/Alt here, because all tracks will be assigned regardless of selection. This is not undoable!