

## CHAPTER 5

# Essential Groundwork

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### 5.1 STARTING AFRESH

For much of this book I'm discussing mixing as if you're working with other people's musical material, and in such situations it's usually easiest to start with a blank slate as far as mix processing and effects are concerned, rather than working from the client's rough-mix setup—even if you have a mixing system identical to theirs. There's more than just convenience to this, though, as it also allows you to bring some valuable fresh perspective to the production, responding to what's actually important without preconceptions. This is why, even if you're actually recording, producing, and mixing everything yourself, I strongly recommend that you still treat the mixdown stage as a separate task. "I deliberately define the point at which I start mixing," explains Fraser T. Smith. "I think it's helpful for my headspace.... I'll clear the decks, clean up the session, consolidate all the tracks, and look at the session purely from a mix point of view.... It feels like the session is set in stone, and nothing is going to be moved any more. It's a visual/psychological thing."<sup>9</sup>

My favored way of doing this is to prepare a set of unprocessed raw audio files, one for each track in your arrangement, much as you'd do if you were having your music mixed by someone else. Make sure to bounce down the output of any live-running MIDI instruments as audio too. This reduces CPU load (allowing you more power for mix plug-ins), discourages endless tinkering with synth settings during mixing (although you can still rebound an altered version of the part later if you really need to), and also avoids an insidious problem with some MIDI instruments where they respond slightly differently with every play-through—there are more than enough mind games to deal with at mixdown without this kind of thing going on. "I never run anything live, from a sequencer," affirms Tom Lord-Alge. "I don't want to have to worry about synchronization or issues of sound level."<sup>10</sup> Splitting out the individual sounds from virtual drum instruments and multitimbral samplers is a good idea too, because it gives you maximum mixing flexibility.

If there is some effect that is an essential musical feature of the track (perhaps a pitch corrector, a specific guitar-amp simulator, a synth-style resonant filter,

or some unique special effect), by all means leave that in when generating your bounced multitrack files, but bear in mind that it can save time later if you bounce out a clean version as well, just in case the effect needs remodeling to work properly in the final mix context.

## 5.2 ENHANCING NAVIGATION

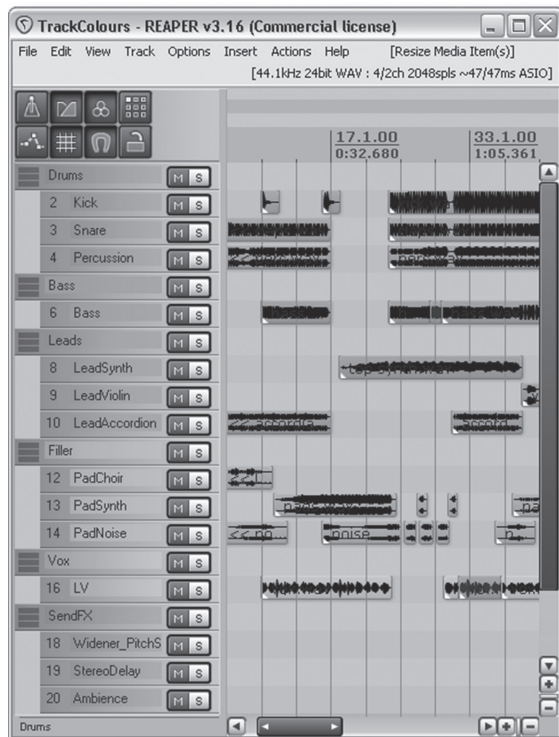
One way or another, you should end up with a fresh DAW project file containing a bunch of bounced audio tracks that all start at the same point. The first step is to make it as easy as you can to get around the place, and this is something many small-studio users seriously undervalue. It might seem petty, but the last thing you want to be doing when you're mixing is waste time working out where the blazes that second tambourine overdub got to. Or resetting the EQ of the wrong guitar part by mistake. Or editing the synth pad out of the wrong chorus. Creative thoughts are fragile little things, so any kind of delay between thinking them and acting on them while mixing is really bad karma. What was I going to do with that second tambourine now? Oh well. Never liked it anyway.

**FIGURE 5.1**

Laying out your tracks in a logical and consistent manner can seriously speed up your work, as well as freeing up your brain for more creative thinking during the mix.

### Organizing Your Tracks

One time-honored way of making your navigation of a project instinctive is to standardize the track layout of the instruments in your arrangement so that

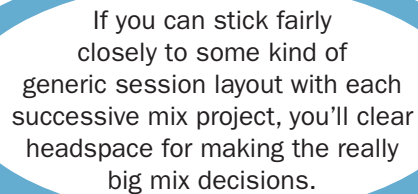


you instinctively know where to find your kick drum, bass guitar, lead vocal, or whatever when inspiration strikes. Part of this process involves putting the most important instruments where you can easily access them and submixing any large groups of subsidiary parts to fewer mixer channels so that controlling them en masse is easier. Michael Brauer's views are emblematic of most of the biggest names in mix engineering here: "Whatever the session is, it will be a maximum of 44 tracks.... I am not going to mix 200 tracks on the desk for you, so the best thing for you to do is to give me the stereo blends that you like.... I'm happy to mix 16 tracks. The simpler the better. I don't want to have to fight my way through a mix."<sup>11</sup>

Many engineers, including both Lord-Alge brothers, also limit their track count in a similar way, with certain sounds always arriving on the same mixer channels and the most important sounds closest to hand. "If everything is parked in the same place," explains Chris, "all you have to worry about is the song. When you're mixing you want to eliminate

all the things that make you think outside of the song.”<sup>12</sup> Tom elaborates on his own preferences: “I like to have my drums on tracks 6 to 14. The bass guitar will always be on 15 and 16. Channels 17 to 24 contain the main instruments: guitars, keyboards, or whatever they are. The lead vocal will be on 25 and any additional vocals go after that. Any music that’s left over will go on 33 and upward. [Percussion] will go to channels 5 and down. ... The faders for channels 17 to 24 are close to my left and 25 to 32 are close to my right. Tambourines can live on channel 1—I don’t want to have to move over there all the time; I don’t need that much exercise! Of course, by centering the most important instruments on the desk I can also remain in the ideal listening position between the monitors for most of the time.”<sup>13</sup>

Naturally, the “in the box” DAW mixing systems typical of many small studios make physical ergonomics less of an issue, but the general principle of standardized track setups still holds: if you can stick fairly closely to some kind of generic layout with each successive mix project, you’ll clear headspace for making the really big mix decisions. Practically every mixing program now has sophisticated organization systems for your tracks, so get busy with them to create a visual connection between all your drum tracks, say, or to provide easy global control over massed rhythm guitars or backing vocals.



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### Colors and Symbols Speak Faster Than Words

As part of organizing your tracks for mixing, you should also get into the habit of labeling your tracks sensibly. If you have 15 tracks just labeled “Guitar,” you’ll forever be tweaking the acoustic instead of the power chords. More mind games; less hair left. So do yourself a favor and try to make the track names mean something. On many DAW platforms, it’s also good practice to abbreviate the names as much as you can so that you can still read them when they’re truncated to fit across the width of the channel strip in your software mixer.

However, most software users have an even more useful tool for track identification: coloring. Our brains are much quicker at responding to colors than to words (which is why traffic lights use colors, for example), so the more you can color-code your tracks and audio files, the quicker you’ll be able to navigate around them. As Robert Orton has noted, “I’ll start my mixes by laying out the session in the way I like and color-coding everything, so it’s easier to orientate myself and I instinctively know where things are.”<sup>14</sup> If all your drum parts are yellow and all your bass tracks red, then you always know which type of audio you’re looking at even when you’ve zoomed right in to edit individual audio waveforms or when your track names are covered by other floating windows. Jochem van der Saag has another useful

suggestion: “[I] add colours to remind myself that I need to do something, so I may mark a section in a weird colour so next time I open the window I know I have to fix it.”<sup>15</sup>

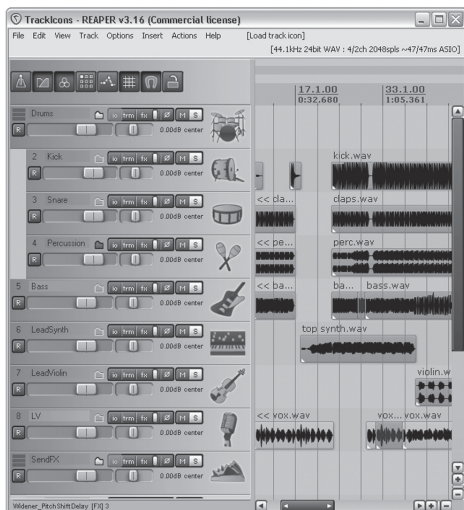
Graphical symbols are usually quicker to comprehend than text too, and they can be understood even when very small on screen. Therefore, if your DAW gives you the option to add track icons of any type, then these might also be a useful visual aid.

### Dividing the Timeline

Mixing typically involves a lot of listening to small sections of your mix, as well as a lot of comparing different song sections against each other, so you can save a lot of aggro by having a clear idea of the musical structure of the production and how it relates to the minutes and seconds of your playback timeline. On dedicated hardware recorders, you’d have had a scrap of paper with track times scribbled next to a list of the song sections, but in the software domain you normally have a much more elegant scheme whereby you can display song sections as bars or markers in the project’s main horizontal time ruler. Getting this chore out of the way at the first possible opportunity is especially important if you’re working on someone else’s production, because it significantly speeds up the process of getting to know the music. Again, naming and coloring these section markers will only help you zip about the place more swiftly.

If there’s any work to be done in terms of synchronizing your sequencer’s metric grid to that of the music, then that’s also well worth sorting out before any proper mixing starts. This kind of thing is usually tedious to do, and trying to tackle it right in the middle of the mix is a recipe for inspiration nosedive.

**FIGURE 5.2**  
Track icons can help you identify tracks much more quickly than text names.



## 5.3 PROJECT RECONNAISSANCE

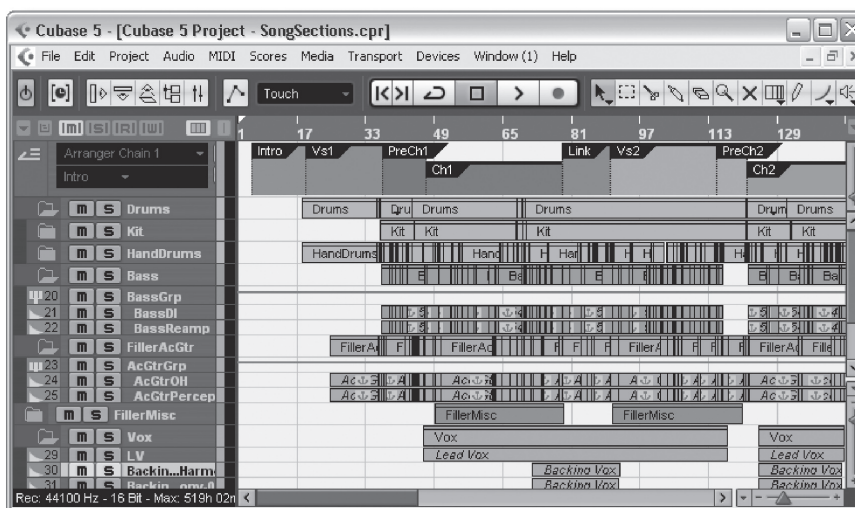
### Spotting Trouble and Hidden Gems

Once you’ve made sure you can find your way around your mix project as quickly as possible, it’s time to start listening through to the tracks individually so you can begin to build a picture of what’s there. Even if you recorded the whole production yourself or you’re already familiar with a previous rough mix, there’s a lot to be gained from listening to at least a snatch of each multitrack file on its own before you properly start work with the mixing. For a start, it’s a good opportunity to edit out any silences in your audio files, which not only reduces strain on your computer resources but also typically makes the spread of recorded material across the timeline clearer to see. Plus, you get the opportunity to deal with purely technical issues (such as unwanted background noise, audio glitches, and

lumpy audio edits), which might otherwise slip through the net when everything's going at once. "I will always begin a mix with cleaning up the session," says Demacio Castellon, "doing crossfades, making sure there's no headphone bleed or pops. I hate pops! I spend a lot of time making sure everything is smooth and clean."<sup>16</sup>

Another benefit to be gained from checking through the individual tracks before getting down to mixing is that this process often unearths moments of magic that have been all but hidden by competing arrangement layers. Maybe it's a fantastic little string-bend fill from one of your guitarists, a cheeky little ad-lib tucked away at the end of a backing vocal track, or some choice words from the drummer as he spills coffee over himself—basically anything that makes you laugh, smile, boogie, or punch the air. One of the most surefire ways to win over most clients is to dramatically unveil forgotten gems like these in your final mix, because they can make the mix sound fresher without you actually having to add anything. In fact, several times I've been congratulated for "putting a new part" into a mix, when all I've done is dredge up one of the client's own buried sounds that had long since faded from their memory. The beauty of this trick when mixing other people's work is that it's low-risk, because anything in the original multitrack files implicitly bears the client's seal of approval, whereas there's nothing like that guarantee for any truly new parts you might add.

Again, do make use of your DAW system's coloring tools to highlight these kinds of special moments, because they're usually scattered thinly across a variety of tracks in most productions and you'll lose track of them all otherwise. There are few activities more soul-destroying mid-mixdown than searching laboriously through 24 tracks of vocals for that one killer vocal ad-lib. (It always seems to be on track 23, and after all that it actually turns out to have the wrong lyrics.)



**FIGURE 5.3** Use the markers within your own software to name the sections of your song; otherwise it's easy to confuse yourself about which chorus you're actually working on, especially when your view is zoomed a long way in for fine editing or automation work.



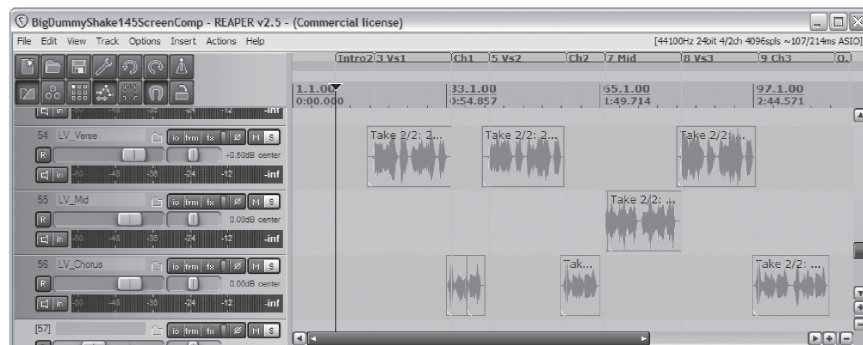
## Multing

The final thing that you can start doing during your project reconnaissance is any multing you think might be necessary. In the context of a DAW mixing system, the word “multing” primarily refers to the procedure of chopping up a single audio file and distributing the pieces across several different tracks, thereby allowing each file section to benefit from its own mix settings. This simple technique is a terrifically powerful ally of the small-studio engineer, and given the enormous track counts now available on modern computers, you can afford to go on multing till your nose bleeds!

The simplest application is where any instrument plays significantly different parts in different sections of a song. A single acoustic guitar, for example, may well need very different treatments for its verse finger picking and chorus strumming, so multing those sections to different tracks makes great sense. It’s also common for important parts such as lead vocals, rhythm loops, or bass instruments to be multed over several tracks so that their processing adjusts to adapt to section-by-section changes in the backing arrangement.

“I use many different EQ and delay settings in many different parts of the song,” says Spike Stent, for example. “So when you have one vocal that goes all the way through a track, it may be multitracked three or four times to different EQs and different effects.... You will normally find that the verse and chorus vocal sounds are entirely different.”<sup>17</sup> Mike Shipley is willing to push this concept to extremes if necessary: “It’s just a matter of making the voice sit in the right place, and if it takes ten channels to do it with different EQ for different parts of the song, then that’s what it takes.”<sup>18</sup>

Another frequent target for multing in my mixes is backing vocal parts. A single backing vocal track can easily have several phrases within it that all serve different purposes, especially within dense pop or R&B vocal arrangements: verse

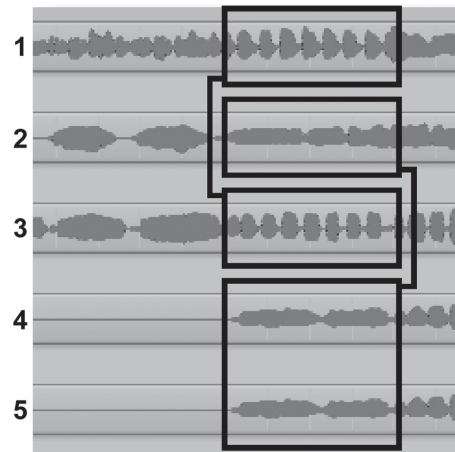


**FIGURE 5.4**

Multing the lead vocal part, as in this screen grab, is common practice, because it allows you to adapt your mix processing to different sections of the arrangement.

“oohs,” prechorus ad-libs, chorus harmonies, whispering in the middle section—the list of possibilities goes on. Multing out all these bits and grouping tracks of similar phrases together is often the only way to make sense of things at the mix.

It’s impossible to predict everything you might want to mult until you’re actually mixing, so be prepared to come back to it at any later stage, but if you can handle the bulk of obvious mults before the mixdown, it’ll not only speed up the process of familiarizing yourself with the material on disc, but it’ll also save unnecessary interruptions of your mixing flow later on.



**FIGURE 5.5** A section of a backing-vocal arrangement. Notice how the parts on tracks 2 and 3 are similar only to start with—track 2 then matches tracks 4 and 5, whereas track 3 matches track 1. Multing these parts would make sense here to allow similar parts to be processed together.

## 5.4 CORRECTION TIME!

If you’ve followed through all the steps in this chapter, locating the track and time location of anything you hear in the mix should be a no-brainer—which is exactly what you want it to be, because you’ve got much bigger fish to fry. You should also have a smattering of tracks and audio segments that you’ve colored to indicate that they need special attention, whether that’s corrective processing or just some added emphasis in the mix. The next stage is to attend to any timing and tuning concerns, an activity that warrants close scrutiny in the next chapter.

## CUT TO THE CHASE

- Small-studio mix engineers frequently overlook proper mix preparation, leading to a frustrating mixing experience and, in some cases, productions that are effectively unmixable. The only way to get on comparable footing with the professionals is to do your groundwork.
- It’s usually best to start a mix with a clean slate, working from raw multitrack audio files in a new DAW project, even if you’re engineering and producing everything yourself.
- Speed up your navigation of the mix project as much as you can so that you can concentrate more on critical balancing and processing decisions. Standardize your track layout to make finding the appropriate controls more instinctive, and make as much use of track naming and coloring as you can to avoid confusion. Set up timeline markers to indicate the main mix sections and deal with any synchronization issues as soon as you can.
- Listen through to the individual multitrack files to remove silent regions, fix purely technical problems, and highlight any audio sections that need timing/tuning correction or special emphasis in the mix. While you’re at it, mult out any sections of tracks that you suspect might benefit from independent mix settings, but don’t be afraid to carry out further multing later on during the mix process if required.

**Assignment**

- Find a mix that you can work on while progressing through the rest of this book, and create a fresh DAW project file for it.
- Use colors, icons, markers, and text labels to speed up project navigation and to highlight tracks or audio sections that need special attention.
- Use muting wherever appropriate.



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