The Home Recording Handbook

Written by Eric Scholz

Chapter 3: Techniques

You have the gear and you've gotten it up and running. There's just one thing left to do: get good. The best way to do so is to get lots of real experience, and I have a few words that'll give you an early advantage and enable you to learn quickly. This chapter is an assortment of the most commonly used techniques used to make recordings sound as awesome as possible. So, where do we start?

Create your guide tracks.

When you're recording any way other than *completely live*, you'll absolutely need a time and pitch reference to stay in time and in tune. 99% of the time, we accomplish this by using a MIDI file (.mid) for the notes and a click track (like a metronome) for the timing. MIDI files are excellent for guide tracks because you can choose what type of sound they play AND easily manipulate the tempo throughout the song.

If you're recording a song that's already been arranged in notation software like Finale, Sibelius, or Musescore, it's very straightforward to export your arrangement in MIDI format. If your software gives you options upon export, you'll usually want a multitrack, type 1 MIDI file. This can even contain the tempo information from the arrangement, but don't worry - you can easily change that in your DAW afterward. I will leave it up to you to research any necessary tutorials, but here are the proper steps:

1. Export MIDI file from your notation software (or request a MIDI file from your arranger)

2. Create a new blank session in your DAW - start with 44.1KHz, 24bit as a safe default

3. Import the MIDI file to your session and assign a virtual instrument to play it. This process varies from DAW to DAW, but as a rule you can save resources if you send all of the MIDI tracks to one virtual instrument rather than inserting a virtual instrument on every individual track.

Fine-tune your tempo map.

Was the tempo dead-on perfect when you imported the MIDI file? Maybe it was, but much of the time there's room for improvement.

Perhaps the overall tempo can be adjusted a few bpm in either direction to better achieve your goal aesthetic. For instance, if you're covering a song and you want it to sound bright and energetic, you might consider going a touch (1-3 bpm) faster than the original recording.

This is also the best time to consider any tempo changes that occur throughout the piece. Should there be a gradual accelerando or rallentando anywhere in the song? If so, create these now and make sure they're as perfect as you can manage. It is easy to change tempo now before you've recorded anything, and it'll be much more difficult to change tempo once the song has been recorded.

After you've set your tempo and are happy with it, make sure your session still starts perfectly on a bar line - this will make editing much more straightforward.

Create your click track.

Make sure there's a metronome keeping you in time! Some DAWs have this built into the playhead area, and some others require you to create a special track for it. Adjust to taste!

Get to recording!

Prepare yourself for a relentless barrage of tips, organized in almost no order at all! Just like music theory, once you understand the norms, feel free to break the rules to make your unique creative statement.

1. For the classic "pro a cappella" sound, record all voice parts (not including solo and percussion) TWICE and hard-pan them left and right. This means each voice/part will have a take on the left and a take on the right, giving you a thicker, fuller texture overall. We call this double-tracking, and no, you cannot copy and paste one track to create the same effect.
2. Going for a big pop sound? TRIPLE-track the lead vocal. A lot of pop songs will use a single-tracked solo in the verses and a triple-tracked solo in the choruses to

make it sound larger than reality. Usually in this case the main take stays in the center of the stereo field and the other two are panned out to each side.

3. Listen as you go. There aren't many things worse than realizing you left the air conditioner on after you've recorded an entire song with hum and fan noise in the background! Check to make sure everything sounds the way you imagined.

4. Be DRAMATIC. Make your pianissimos smaller, your fortes bigger, and your accents more intense than they've ever been. Or if your aesthetic is "apathetic," make it so blatantly apathetic that it's obvious to the listener. Whatever you do, make it over-the-top because you aren't live in a room with your listener and can't convey energy in all the same visual ways as you would live. Also, prioritize energy over tuning and timing (within reason) because tuning and timing can be changed, but energy can't. Especially if you hire a professional to edit and mix your songs, you'll be glad you went crazy after everything's been cleaned up.

5. Punch in as needed. This is recording language for "recording small sections of the song at a time" rather than going for one long continuous take. A lot of the time, you can do a lot more by punching in, so take advantage of that flexibility!

6. Crossfade as you go. When you're punching in, you'll often notice clicks or pops at the points where the audio cuts to a fresh take. It's a great habit to create fades at all these points. Listen as you do it and try to make the fades sound as invisible as possible. I use short fades (around 30 milliseconds) in silent areas and longer fades if I need to make one in the middle of a note. Fading in the middle of a note is tough to get right - it'll take some experimenting to avoid too much of a phase-y sound.

7. Play around with layering. Want to emphasize a line in the solo? Try adding whispery layers or octave doubles (up or down). These can often be mixed in subtly OR treated as their own special effect.

8. You can add more parts than you'd be able to sing live! Maybe the song would benefit from a sustained "pad" sound behind a sparse or homophonic part of the arrangement. If your song has three choruses that are the same each time, consider adding extra bits to the later ones to make them stand out. Maybe there's an extra horn part in the original that you had to leave out due to voice limits. Now's a great chance to add texture by taking advantage of multitrack recording!

9. Have a note that's too low for the bass singer to sing with proper resonance? Have them sing a slightly higher note instead and have your editor/mixer pitch it down (or try pitching it down yourself). It'll sound way better than a forced vocal fry!

Tips for vocal percussion

1. Point the microphone at the mouth, but do NOT point the mouth at the microphone. This will help you avoid excessive wind/air noise, and this tip applies way more to condenser microphones than dynamic microphones (where wind noise might be more desirable).
2. Triple-track fills and special moments!
3. Do separate takes for crash cymbals (often double-tracked sounds good), shakers, extra hi-hats, and auxiliary percussion.
4. Get weird with it. Play with different mic positions and body percussion if you want! Make sure to check your mic level when you're recording sharp sounds like claps because it's easy to overload your preamp.

Next steps

If you plan to send your songs to a pro for editing, mixing, and mastering, talk to them about the right way to send them sessions. In my case, I keep a working copy of most major DAWs (Pro Tools, Logic Pro, Studio One, Reaper, Garageband) so clients can send me sessions in whatever format they recorded them. Zeroed-out wav files (all are the same length and start in the same place) are also a great way to send all individual tracks to another engineer.

If you plan to edit and mix yourself, have fun and make sure you've allocated the proper amount of time! While learning to edit, I remember my first EP of songs taking 20-24 hours per song. There are a wealth of resources available on the internet but it helps to have a strong sense of vision first. Be patient with yourself, try things over and over again, and accept that your first few [dozen] projects won't be perfect. With a lot of time, experimentation, and practice, though, you can see progress!

Thanks for reading and happy recording!