

Players and producers convene for tools and techniques to get great guitar sounds

Gear Me Up, Scotty!

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I remember reading once about a young man who devoted his life to achieving Eric Clapton's guitar tone. Guitarists would come in to his studio with every type of amp and guitar pairing known to man, and he would pull out every trick in the book to achieve the mythical "Clapton Sound." But he never quite got it. He was always falling just a hair short of his goal of making someone other than Clapton sound like Clapton.

Sure enough, luck smiled on this young chap and, one day, Eric Clapton himself strolled through the door. Nervous, with a million thoughts going through his mind, this guy threw up the standard Shure SM57 on Clapton's amp, praying that he didn't offend the guitar god. Clapton hit the first note of a lick and, lo and behold, the elusive "Clapton Sound" was there. No damage done, and the session proceeded in the way we all wish our sessions would always go.

The moral of the story isn't that a SM57 is the key to a great guitar sound but, rather, that the player is ultimately what determines the sound, somewhat regardless of the gear used to record his/her instrument. Each musician has their own sound, something they've (hopefully) meticulously crafted before entering the studio — that's why Clapton sounds like Clapton no matter what an engineer grabs in way of mics, pres, compressors, etc. But good gear doesn't hurt, and a great recording technique is only going to help the artist sound their best. Whether that means doing nothing, or spending days setting up mics and pulling your hair out during a mix is dependant on the artist's vision which is, in the end, what you are working so hard to preserve.

We're not going to end the discussion there though — we want to get a good look at how everyone other than Clapton and his lucky engineer are making albums. From classical guitarists to rock and roll recording experts, we scoured the globe looking for players, and the producers who serve them, to see what their favorite setups and tracking techniques are. And here's what we found.

Michael Seifert (Guitarist/Producer for Tori Amos, Too Short, Bone Thugs-N-Harmony)

EQ: What have you been doing lately, in terms of recording guitar, besides just putting the usual suspects up on the cabinet?

Michael Seifert: I've been a big fan of the Reamp V2 lately. It's like a reverse direct box, but it has a gain knob on it to knock the signal back down to instrument level. It's awesome because you can play back something that's pre-recorded, and it's pretty much identical. It gives you a lot of flexibility.

I'm just finishing up a record right now, that I'm also playing on, for a guy named Will Bowman. What I've been able to do with the V2 is track the whole record using Amp Farm — just to get the parts down — and then go back later and worry about getting the tones. This has let me focus on the performance first, without having to lug gear around and spend a bunch of time getting tones.

Just before it was time to mix, we spent around two days actually re-amping the recorded signal. I borrowed a ton of equipment from friends (which I only needed for two days instead of two weeks, thanks to the Reamp). The other cool thing about this approach was that I could go through all of the songs and structure them in my head, picking which tones will be the same for different songs, and then dial the tones in and lay them back for each of these different songs all at the same time. This also gave me flexibility during the mix: If we ended up not liking a tone we had settled on, we could just use the Reamp and go back and change the sounds.

EQ: So what gear, besides the Reamp of course, do you find yourself using a lot?

MS: For dirty tones, I like to run through a Marshall JCM 900, or a custom-built amp called a Maximum, paired with a greenback Marshall 4x12. I also like using the Seymour Duncan Pickup Booster pedal, which is similar to a plain old overdrive, except it's actually boosting the output of the pickup so you can get more preamp distortion. I find that putting this in the chain while recording adds a lot of "focus" to dirtier tracks.

For more clean stuff, especially when I want more space to the sound, I'll close mic the cabinet and then put either a Neumann UM57 (tube) or an RCA 77 (ribbon), about 15 feet away from the amp, panned hard left and right. The trick is to make sure the

amp is in the same room that the drums were cut, because it seems to put the guitar tone more in the same sonic space as the drums. Does that make sense? The room sound makes it feel more like the instruments were performed and tracked together, even though they weren't.

EQ: Cool stuff. Any other neat tricks you would like to share with us?

MS: Here's one I've been using recently: I'll plug the guitar straight into a DI box and then into my Neve console pre. I then use the pre to overdrive the sound, instead of getting that amp or pedal overdrive sound. Then I double, triple, quadruple the take and bus it down. This is especially cool for single-note lines, as it gives the guitar a really thin, synth-like, horn sound. It's not for every guitar part, but it's a cool little signature.

Anthony Glise (Classical Guitarist/Composer)

EQ: Please explain how you get your sound out of a guitar in regards to live performance, and how you alter the means to achieve that sound when recording.

Anthony Glise: Classical musicians — and for that matter, all acoustic string players — are pretty obsessive about their production. We work for years to develop a trademark sound and while some of that has to do with the instrument itself, a majority of it has to do with how the string is displaced and released.

Though everyone knows the different ways to get timbre variants by shifting the right hand closer or further from the bridge, beyond that the concept of “sound production” gets pretty involved. Naturally this is more of a player's issue, but [the player's techniques] can help a producer to understand exactly how [players] produce sound on the instrument, so if there is a problem in the studio, they can make gentle suggestions to the guitarist.

To start, there are actually three distinct stages in sounding a string on all plucked instruments:

1. Touching the string
2. Moving, or displacing, the string, and
3. Releasing the string.

While touching the string obviously affects the articulation (how legato or staccato the sound will be), it doesn't affect the sound; however, the angle of the right hand fingernail (or pick) will cause more or less surface area to be in contact with the string during the displacement of the string just prior to release. The rule is: The greater the surface area, the richer and darker the tone color. In fact, in the last 15–20 years, many classical guitarists have begun shaping their nails at an angle in order to get a greater surface area on the string during displacement to darken the tone color. More advanced guitarists who use a pick do the same thing by keeping the pick at an angle so that the edge of the pick — rather than the flat side — is what actually displaces the string.

In addition, during this second stage of sounding a string, there's a little-known element that plays a tremendous role in tone color: The angle of the displacement of the string. If a string is plucked away from the soundboard (the top or “table”), you get a “snappy,” ugly sound typical of many beginners. More advanced players will displace the string completely parallel to the soundboard. However, the most advanced professional players push the string down slightly toward the soundboard at the same time as they move the string across, so that the string is displaced and vibrates back-and-forth at roughly a 30% angle to the soundboard. This causes the third stage, the release, to produce an even darker, richer sound.

As you can see, classical players work for years to develop their sound, so anyone recording them should never try to alter that sound — EQ or otherwise — without talking to the player first. Even limiting and compression can alter the inherent character of the sound and dynamic range and should be discussed with the artist before it's committed to the master. I once had a producer (who was actually the head of a college recording program) proudly tell me that he “fixed” my sound on a live recording by radically altering the EQ. He evidently liked my guitar to sound like a mandolin in a half-empty coffee can. I didn't appreciate it. Needless to say, we trashed the master and I never worked with him again.

EQ: Since so much of a classical guitar sound, even on a record, has to do with the slightest techniques he or she employs, how do you mic the instrument to get a very true representation of your performance?

AG: I've worked with American producer, Thomas Ransom, on a number of CDs. With my classical music — since I have very wide dynamic range — we've always used two Audio-Technica AT 4040s, which tend to have a tremendously dynamic response and don't color the sound. The first mic is placed at exactly the distance with my right hand held straight out, aimed at the soundhole, while the second mic is placed two meters away aimed at the 12th fret of the guitar (we've also used the Audio-Technica AE 5100 condenser for the ambient mic at times). This placement allows the mixing engineer to balance between the very present closer mic and the more ambient distance mic. Naturally, some players will hate having the first mic so close because even the slightest mistake will track, but — not to be hardcore — that's the player's problem [*laughs*]. If they can't get through a piece without gaffes, maybe they're not quite ready to be recording.

Alan Moulder

(Producer for Nine Inch Nails, The Smashing Pumpkins, My Bloody Valentine)

EQ: For Year Zero, how did you manage to get those monster guitar sounds?

Alan Moulder: Contrary to what everyone likes to think, Trent [*Reznor*] likes to work really, really quickly. You want to get the sound as quickly as possible, so he's inspired. Very rarely would we mic up an amp. Sometimes we would have an amp ready like a Mesa Boogie Dual-Rectifier with a complementary 4x12 cabinet, that we would have set up and ready to go, but quite often we would run through Trent's pedals directly into the board, and then just use an amp simulator. Most guitarists will have his or her sound and be very specific about their setup, only running a Stratocaster into a Marshall. But with Trent, it always varies.

Tom Ransom (Ransomed Productions)

EQ: How do you get an acoustic guitar to sit right in the mix?

Tom Ransom: Getting an acoustic rhythm part to sit well in a mix — being both interesting and animated and yet not distracting — has always been my goal. Much has been said about mic placement, EQ settings, etc., but the first step is to find the right instrument. My technique of choice for recording rhythm acoustic guitar parts first came as a result of my own non-scientific listening tests in search of the right guitar. As a private guitar instructor, I had the privilege of hearing a multitude of guitar designs, strings, playing styles, and so on — and how that affected the sound.

One day, I set up a pair of Oktava MC 012 cardioid capsules, in an ORTF configuration about 10 inches from the guitar. I marked off some boundaries on the floor with masking tape and aligned the guitar neck with the marked line before each test. As a student would arrive, I asked to borrow his or her guitar and then played a simple medium tempo, dynamically controlled, 60-second long chord progression. When the next student arrived I repeated the progression, rhythm pattern, always using the same thin pick. This "test" group of guitars included a Larivee, an Ovation, an Alvarez Yairi, a Taylor 614 (maple back and sides), and a couple of generic Martin designs (one with a cedar top).

Later that same day, I positioned myself in front of my trusty near field monitors, and listened to the results of my experiment. Hearing any two audio examples back to back is certainly revealing, but not necessarily relevant or contextual. As I heard the various guitars played back, my jaw dropped when I heard the maple Taylor. To my ears, this was the sound I was looking for but had never quite achieved: bright, smooth and balanced, and not bass heavy — which is the first thing to be rolled off anyway. I was convinced this would sit perfectly in a pop mix, with very little, if any, EQ applied to it. In fact, I ended up buying a Taylor 614 just for use in a pop or country context.

So, to summarize, how to get an acoustic to sit right, naturally, has more to do with the instrument choice than any production technique.

EQ: Sure. But are there any standard techniques you use when recording?

TR: Equipped with my guitar of choice, preferably with light or medium gauge strings, I set up some sort of stereo mic array — XY, ORTF, or spaced pair. I should note that I use a thin pick, both for dynamic control and percussive enhancement. Then, I set up a click track or drum loop, turning the volume down to ensure that it won't leak into my mics.

Next, I reduce the song into short sections, usually verse, chorus, and bridge, and I record each section separately, using a part that can be easily repeated. Then I immediately replay the same section, using a separate stereo setup, while the part is still fresh. I go easy on dynamics here (the thin pick helps). My goal is to also avoid having to use excessive compression on the mixdown — let the beauty of the two guitar parts gently resonate and interplay with each other.

I continue until all parts have been replayed exactly. It's common knowledge that John Lennon loved the effect of this, but hated the double-tracking process of his vocals. Sometime later his engineer came up with an electronic doubling shortcut. Sorry, it may be easier, but it's just not the same thing to my ears.

After all the parts have been recorded, I pan the two parts to suit my tastes. By using the same stereo mic pattern and panning wide, I can achieve the same stereo separation of a single take but from different performances. The left mic is from one take, the right mic from the other. You can almost forget about the need to create space and depth using delays. If the parts are played together consistently, it's there in spades. Maybe a touch of reverb and it's done (except for the time spent listening back and marveling at the sound).

EQ: Elaborate more on recording yourself alone.

TR: While I have the convenience of recording in a separate room and operating my rig via wireless mouse and keyboard, it's still a hassle. The presence of (at least) two closely placed mics inches from my guitar can make any movement prohibitive. Even a slight deviation from my original playing position can make overdubs, well, sound like it.

One solution I've seen many players rely on is to use the onboard electronics on their guitar. This way they can remain in the control room, seated in front of their workstation and, move about unrestricted. Doing this helps avoid the hassles associated with miking and greatly speeds up the recording process. While I do own a Taylor complete with the "expression system," it

still isn't close to the sound I'm looking for. So I've learned to drop a small condenser mic equipped with an omni capsule inside the sound hole. What I do is take my small diaphragm Oktava MC 012, and change the capsule to omni. It's a bit strange to insert even a small mic through the sound hole of the guitar and have the inconvenience of a mic cable dangling at your feet and a fairly large object moving inside of your guitar, but by wrapping the mic in foam, and placing it at the lowest point inside the guitar, it won't move at all when you play. The omni capsule won't exhibit a bit of the dreaded proximity effect, so the resulting sound is "in your face" and pure. I do have to lower the volume of the monitors, but most of the time can get by without even having to use headphones.

You can sway when you play, and breathe as often and as loud as you want. If you perform on a chair with casters, you can freely move about, even performing edits with guitar still in hand. And if the chair squeaks a bit when playing, no problem!

EQ: You do a lot of work as an electric guitarist as well. Tell me about some of the sounds you find yourself going for, and how you achieve them.

TR: I admit it — I use guitar modeling stomp boxes. I also mic my amps, but when I need a big sound, and want to avoid multiple miking configurations and conserve track count, this technique will deliver. Following the same principle I described for recording acoustic parts, my trick is, again, to double-track parts. This is especially effective when building a driving wall of sound using two- and three-note power chords; but clean settings and full chords also can work great.

I use a Yamaha DG Stomp. At the core of myriad sounds is an eight-knob amp selector switch that offers two different versions of lead, drive, crunch, and clean amp models. Assuming you have already edited and customized your favorite patches, the intent is to record each rhythm part in mono, twice, using, say, a drive 1 and then playing it again using the drive 2 version. By using similar amp models, the repeated parts sound cohesive with just a slight timbre distinction, which helps them sit well in the mix. If both parts are played alike, and if the modeled amps sound similar, the results are extremely convincing, powerful and unique.

EQ: I suppose it's analogous to having a dynamic and a condenser on an amp.

TR: Yes, for the tonality — but by doubling you're getting a thicker sound; not at all the same sound that is obtained through copying, sliding, or delaying a single track alone.

You can use this technique on more than one part in a single song. If you carefully pan the multiple guitars, you can create a "guitarists' panorama of delight" [laughs]. Be sure to roll off the massive collection of low-end rumble. Put them all in your preferred space with multiple reverbs, and delays. Leave room in the center for vocals and bass and you're well on your way.

Bartek Michael (Guitarist for Waltz for Venus)

EQ: What's your studio setup looking like these days?

Bartek Michael: I have two main "axes" that I use. First is an Ibanez AR300, with a rosewood fingerboard set into a mahogany body. Large frets, Gibson-scale length — it's Korean made but flawlessly crafted. I had some Seymour Duncan [pickups] dropped into it that tighten up the tone across the whole spectrum. The bridge is a Custom with a ceramic magnet that gives it higher output and attenuates the front end drive to give it more crunch. It does a great job of translating the tone of the wood, actually hits the amp harder. The neck is a '59 with Alnico II magnets, providing a more "vintage" tone that really sings, making it great for soloing.

My second guitar is a custom Gretsch that is especially good in a studio setting. The sustain is ridiculous due to its neck-through construction. Again, it's a mahogany body with a bound rosewood fingerboard. This guitar is equipped with Gibson high output pickups — a 500T ceramic magnet pickup in the bridge and a 496R in the neck, both high output. The pots for the tone and volume knobs are Gibson as well. I also had a high-pass filter installed in the volume knob so when I knock the volume down 80% it cleans up the high end without sacrificing gain and volume.

EQ: And what are you running those through?

BM: An Ibanez TS-9 and/or Boss Blues Driver, both with custom mods from Analogman, straight into the [Marshall] JCM 900. For rhythm tracks, my recording chain is a [Neumann] U47 through a Neve 8108 console, then through a [Empirical Labs] Distressor (3:1 ratio; 6dB gain reduction with mid boost and high pass filter engaged). Lead tracks are a [Shure] SM57 through the Neve 8108 to a Universal Audio 1176 (set 4:1 ratio; 6–8dB gain reduction).

EQ: Words of advice for guitarists getting ready to cut tracks in the studio?

BM: Give your strings a day of playing before you track. Too old is, of course, too dull sounding, but too new will increase the probability of fret buzz, so give them a day before you record.

David Cole (Producer for Cake, Bob Seger, Melissa Etheridge)

EQ: You're stranded on a desert island, and you can only have a pocket's worth of mics to track Gilligan's guitar with. What do you bring?

David Cole: Stranded on a desert island, I would put a Shure SM57 in front of any cabinet and work with the guitar player to get the tone we are after.

EQ: Alright . . . something other than a 57.

DC: I've found adding a second mic to the second speaker adds a nice alternate color and depth to the sound. I gravitate toward ribbon mics here for their warmth and thickness, Figure 8 patterns, and contrast to the dynamic 57. Both mics would be placed about three inches off the grille cloth, three inches away from the center of the cone, and slightly angled toward the center. Moving the mics closer to the grille, more or less angle, and popping the phase of the second mic before adding them together make huge differences. If I put the ribbon around the back of an open cabinet, I'll reverse the phase.

I tend not to use distance mics on cabinets because, invariably, the sound is never 100% ideal to the finished record and you are locked in. I'll make space around the amps, if needed, with effects.

EQ: You can bring one pre. What is it?

DC: I grew up on Neves and will always gladly use one — the 1073 or one of its clones is a nice, fat choice. But the API pre/EQ combo works too. I tend to brighten up the 5kHz region, or point up the 700Hz region, depending on the overall tone and vibe of the part.

EQ: And compression?

DC: We're talking tracking? I try not to kill the guitar with compression upon recording. I can always do more later — and it's impossible to do less. I'm a sucker for that thing called "dynamics," Anyone remember that?

EQ: So . . . I'm an acoustic guitar player and I'm coming into your studio. What can I expect?

DC: For acoustic guitar, I use two mics: one on the 12th fret, and one down by the bridge, about 1half-way way toward the bottom of the guitar. These are two distinct colors and both have their strengths. The Audio-Technica 4051 is my first choice at the neck position. And I'll use a 4050 on the body. These two get EQed and compressed pretty good: Lots of top for clarity and percussion (+6 at 8kHz), scoop out some boxy/boomy-ness at 400Hz if needed, and maybe boost the bottom a little, around 150Hz. UREI 1176s at 4:1 compression, pulling maybe 6dB of gain reduction is not unlikely. I'll grab a dbx 160A compressor with similar results if the rack is short on 1176s. I'll print the two mics separately, and often pan them a bit in the finished record. If the part is doubled, I'll spread them hard left and mid-right for the main guitar, mid-left, hard right for the double. Or hard pan them if the track needs more space in the center.

Bear in mind, these settings, this gear, those instruments will sound completely different in the hands of another guitarist. It takes an experienced ear to make choices to dial in the sound coming from the artist. There is no "set and forget" setting for anything!

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