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PRODUCING & RECORDING ELECTRIC GUITAR STYLES

PAUL WHITE gives some foolproof step-by-step ideas for creating contemporary and vintage guitar sounds in the studio.

An enormous range of sounds can be coaxed from the electric guitar, just by changing such variables as pickup type, amp type, mic type and miking method, and choice of recording preamp. Add EQ, compression and effects to the equation and the sonic possibilities become almost infinite. In this article, I've included a few suggestions as to how to replicate the sounds of various popular playing styles for your recordings, but the most individual element in the end result will still be the person playing the guitar. Experiment with the techniques discussed here, however, and you should be able to come very close to conjuring up any sound you like.

JAZZ AGE

Jazz players traditionally go for a clean, warm sound, often played on semi-acoustic instruments, so to replicate this type of sound:

• Closely mic a clean amp, using a dynamic cardioid mic, or use a recording preamp with the overdrive either turned off, or turned down so far that all you hear is a hint of warmth when you play hard. Because you're using what is basically a clean sound, you can even manage by just using an active DI box straight into the console if you don't have a recording preamp, though my preference would be to mic up a small combo, because it really is hard to get that warm, loose bottom end when you DI.

• If you have a solid-body electric guitar, use the middle or neck pickup, and try cutting the mid-range a little to create more of an acoustic characteristic. However, you don't want the bright top of an acoustic, so be sparing with the treble and presence settings. Humbucker pickups will give a thicker, less toppy sound than most single-coil pickups.

• Compression can help even out the sound, and increasing the attack time slightly will let theattack of the notes come through, but they won't sound too bright. For a smooth sound, try the compressor after the EQ.

• Try to get as close as possible to the sound you want on the preamp or amp you're working with, then use the console EQ to fine-tune the sound.

• Finally, a spring reverb sound is more traditional than an electronic one in this application, but if you don't have a spring reverb, try a medium plate setting and roll off the top on the effects returns using your desk EQ to simulate a spring. If you're a real stickler for traditionalism, you'll want to use your reverb in mono!

WILD IN THE COUNTRY

You don't have to be a Country and Western buff to need a country guitar sound -- virtually all American west coast music, from Dylan to The Eagles, makes use of it. Country players generally go for a clean, single-coil sound with little in the way of deep bass, and plenty of energy at the top end.

• Adding a little presence and just dropping the bass a touch will usually do the trick -- and don't forget to use new strings!

• If you're miking an amp, set it to a clean sound but with the slightest hint of edge when you play hard. Valve amps are best for this.

• If you're DI'ing, either an active DI box or a recording preamp will work, but the preamp will give you far more flexibility of tone. Having said that, a good many electric guitars produce a superb clean sound via an active DI box.

• An aural exciter or a good parametric EQ will help you emphasise the top end more if you need it, and a compressor patched before the EQ is recommended if you want a snappy sound with plenty of sustain. As with the jazz setting, increase the compressor attack until your notes take on the right amount of bite, and use enough compression to let the notes hang on through the obligatory bends without becoming weedy.

• A fairly general reverb with a decay time of between two and three seconds will normally suffice, but once again, real authenticity would demand the use of a spring reverb or a short, single-repeat, 'slapback' echo using a delay time of around 80 to 100ms.

FUNKY STRUMMER

Funk rhythm guitar is usually sharp and incisive, as a foil to the solid drums/bass rhythm section. Again, single-coil pickups are easiest to deal with, and Strat out-of-phase positions can work very well too. Older guitar processors, such as the original Rockman or Axxeman, which often sound too artificial for some musical styles, can sound wonderful for bright rhythm sounds.

• Because the sound is best kept clean and bright, an active DI box or a recording preamp will do the trick, but you can also mic an amp, providing that the speakers produce a sufficiently articulate tone. A model with 10-inch speakers may work better than one with 12-inch speakers for this application, and a capacitor mic will produce a brighter tone than a dynamic model.

• You shouldn't need to do too much with the EQ, but bringing up the 3-6kHz range will add edge, and if the guitar's tone is still too woolly, cut the mid-range a little. Compression before EQ will keep the sound solid, with plenty of attack.

• Funk lead for hacking out riffs must also have a bright, percussive edge, and combining heavy pre-EQ compression with a playing style that really 'digs in' can produce the guitar equivalent of slap bass. Remember to juggle the compressor attack time to give the right amount of bite -- a release time of around half a second or a little less should work well.

KEEP IT CLEAN

There's a whole group of performers who've developed a relatively clean, sustained sound, ranging from Mark Knopfler and Chris Rea to Pink Floyd's Dave Gilmour on some of their less exuberant material. The majority of the sound comes from the players' fingers -- indeed, the same is true of all successful guitar players -- but you can get a good ball-park sound by following these guidelines:

• Use only a small amount of distortion, plus compression to get the required sustain.

• The brightness of the sound seems to come from the upper mid -- remember that guitar amps

seldom produce frequencies much above 2-3kHz, and that's why the tone seems to sing rather than scratch. Humbucking guitars sometimes work better DI'd, but for the authentic tone, you need a Fender Strat or a similar instrument equipped with single-coil pickups.

• A nice 'open' reverb patch works better than a spring with most of these styles, and you need to pick with confidence to make the sound convincing.

• For a more Floyd-like sound, try a little extra overdrive, and experiment with phaser effects and echo, particularly in stereo, with a different delay time for each side, as well as reverb. Place a compressor before the EQ for a bright, wiry tone, or after the EQ for a smooth, sustained effect.

INTO THE BLUES

Blues is nearly always most authentic when you mic up a small valve combo set so that the amount of distortion is controlled by the intensity of your picking. Some of the better recording preamps imitate this pretty well, but the purist will pick a real amp every time. Mic with a dynamic, close to the speaker grille, and use the internal spring reverb if available.

The actual blues tone can vary considerably -- some blues relies on a bass-heavy sound with very little top, while other players explore opposite extremes using Telecasters or Strats. In my opinion, the key is in how the sound responds to playing, not necessarily the basic tone: compression is useful for squeezing more sustain out of a sound when you want to use only a modest amount of distortion.

• If you're using a recording preamp, teaming it with a compressor can really help, and though some players swear by putting the compressor before the preamp, the vagaries of impedance matching usually mean that you have to patch the compressor in after your preamp.

• Having preamp EQ before the compressor, and console EQ after it provides plenty of scope for tonal tailoring.

• Because blues relies on distortion, a preamp with a speaker simulation setting is mandatory.

• Spring reverb, or a short ambient setting, work for most styles, though if you're after a vintage John Mayall-era sound, you may want to experiment with longer reverbs or live room simulations.

• Slide blues playing can be recorded in the same way, and here a compressor really helps if your guitar doesn't sustain too well. Use a guitar with a high action for slide playing, or you're likely to end up with a lot of string rattle on your recordings.

MAXIMUM R&B

When it comes to R&B, The Rolling Stones are a good source of inspiration if you're not sure what you're after, and you could also check out ZZ Top and classic '60s and '70s tracks like Steppenwolf's 'Born to be Wild' or Free's 'Alright Now'.

• The key is to use an amp that is driven well into distortion, but not so far that you lose the basic character of the instrument. Small valve combos with underpowered speakers are often easiest to work with on the amp front, but playing your regular amp through a small speaker cab can sometimes produce good results. If you're using an open-backed combo, it is worth experimenting with simultaneously miking from in front and behind. Remember to try reversing the phase of the rear mic -- in theory, this should be a requirement, but sometimes it actually sounds better out of phase! The rear mic will often add just the right amount of nasal 'honk' from the back of the speaker, plus a bit of cabinet resonance and rattle to convey a real sense of the amp and speaker being worked hard.

• As a rule, valve amps sound better than transistor amps for R&B, but there are exceptions. For my own setup, I use a Sansamp XXL pedal played through a small Fender valve amp, and the results are just right.

• Guitars with humbucking pickups usually produce the best R&B tones, but with R&B, everything makes a difference -- the amp design, the speakers, the type of mic and where you place it, the guitar, and most of all, how you play it. This means that you may have to experiment for a while to get just the sound you want, but once you hear it, you'll know!

• Compression and effects are optional -- the essential tone comes from the amp and the guitar.

FOR THOSE ABOUT TO ROCK...

Heavy rock was the forerunner of what we now call metal, and it was really an extension of R&B. Most of the sound came from tortured amplifiers rather than from pedals, but the level of distortion was usually such that you could still hear the character of the guitar coming through. Of course there were unique characters, such as Jimi Hendrix, who used a fuzz box and a wah wah pedal through a stack already driven to the brink of destruction, but even then, you could usually tell that he was playing a Strat.

• Experiment by setting up an R&B sound, then increasing the amount of overdrive.

• Though some effects units and preamps include built-in wah effects, there seems to be no real substitute for the original manually (or footually) operated pedal.

• Cabinet miking for this type of sound usually works best with a combination of a vocal-type dynamic up close, about three to four inches from the cone, plus a more accurate condenser or electret model at about four or five feet. The close mic gives the sound definition, while the ambient mic conveys a sense of scale, making it appear much bigger.

MOSTLY METAL

Because metal sounds use so much overdrive, the character of the guitar and amp can become subverted, which is why most recording preamps make a better job of heavy metal than they do of blues.

• Humbucking pickups or high-power single-coil models are most responsive.

• Use an overdrive pedal plugged into an amp that's also set to overdrive, if it gives you what you want. The aim is to get a very responsive sound so that light picking and hammering produces the same level and intensity as a picked note. Of course, there's a fine line between that and a sound that feeds back by itself!

• As with my previous examples, a compressor patched after the preamp or in the insert point of the mic channel will help the notes sing out more. Try shortening the release time so that the sound just starts to pump -- this should give the track more energy.

There's a difference between British and American metal sounds, in that British sounds tend to be thicker, and the mid-range is pulled back to give a more hollow or 'scooped-out' sound. UK engineers also tend to record using dynamic mics, while US producers often opt for the brighter tones of a capacitor model. One tip when setting up metal guitar sounds in the studio is to compare the sound you're hearing over the monitors with CDs of typical metal bands, not with the sound of your stack. You'll never get that deep punch in the guts a stage stack gives you -- typical hi-fi speakers just can't reproduce it. Accurately double-tracked 'crunch' parts, panned left and right, can sound huge, however, more than compensating for the reduction in scale from the real thing.

STRINGING OUT

All the sounds I've talked about here include many variables, the biggest being the way you play, so they're only intended to get you off to a good start, not to provide a finished sound on a plate. You'll also need to take care, when recording with a single-coil pickup guitar, that you don't get too much interference. Usually you can move the guitar around to find the position of least hum, but computer monitors can be very persistent and may have to be turned off. Even guitars with humbucking pickups can be noisy unless they are particularly well screened internally, so make sure that you're actually touching the strings or a screen-connected part of the guitar (bridge or control plate), thus adding your body to the screening, when assessing the amount of stray pickup you're getting.

Hopefully, by exploring these ideas, you'll eventually come up with a sound you can call your own, and with a guitar, that's much easier to do than it is with a keyboard. Guitars may look low-tech, but you get all the benefits of physical modelling, without any of the technical hangups, just from a couple of pieces of wood and some wire!

ACOUSTIC ALCHEMY

A couple of years ago at a US trade show, I tried out a Rockman pedal that made an electric guitar sound like an acoustic, but to this day, I've not managed to track down a unit in the UK to try in greater depth. The key to how the pedal worked seemed to be in EQ -- all the mid-range was scooped out of the sound, and the bottom end was fattened up until it was almost woolly. A tight bite at the top end created the 'zing' of the strings. Of course, if you want the effect of an acoustic guitar, you could just use an acoustic guitar, but if you don't have one, or would like to try to do it all with an electric guitar:

• Use single-coil pickups, preferably the middle pickup or the out-of-phase positions on a Strat.

• Record using a simple active DI box rather than miking an amp, and don't use a speaker simulator.

• Boost the bass at around 150Hz, cut the 500Hz to 1kHz mid-range right back, then add a bright peak at between 4 and 6kHz. A good parametric will really help in this situation, though a decent third-octave graphic will do almost as well.

• Use an exciter to add even more edge, and finish off with gentle compression and a bright plate reverb setting. Place the EQ after the compressor for the brightest sound. If the instrument is to take a backing role, then you won't need as much bass boost. The final result won't sound exactly like an acoustic, but should get pretty close to the general character of one.

A GOOD SOAK

An alternative to miking an amp that I haven't discussed is to use a combined power soak and speaker simulator. My favourite is a passive Palmer model which simply connects to an amp in place of the regular speakers, but you can also get models from Groove Tubes, Rocktron and Marshall.

Europe's No1 Hi-Tech Music Recording Magazine
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