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CHAPTER 2 WHERE IT ALL STARTS: THE GUITAR

Electric guitars come in hundreds of makes and models. In this chapter, we're going to discuss the materials, craftsmanship, designs, and sounds of some of the world's finest.

Different guitars excel in different areas. The high-pitched twang of a Fender Telecaster is perfect for country and blues but wouldn't fit easily into a traditional jazz set. The mellow, full-bodied tone of a Gibson Super 400 could handle the jazz set but not a Metallica tribute. The shimmering, futuristic spank of

a Parker Fly Deluxe is wonderful for fusion, pop, or rock, but it might not be your best choice in a traditional blues setting. So, consider the style of music you play most when choosing a guitar. Use the right guitar for the right job!

Your guitar is the first thing in your signal chain, and therefore, a crucial element of your tone. Take care not to unintentionally obliterate its unique sound with the misuse or overuse of effects.

Note: All the guitars in this chapter are demonstrated on the CD with the following lick:

♩ = 132

Swing Feel

First, you will hear the lick played with a clean sound through a Marshall JCM800 50-watt half stack (see page 15). Then you will hear the same lick played through the same amp set for high gain. The amp settings will stay the same for each test.

MINI LESSON

Metronome Markings

“♩ = 132” is a metronome marking that indicates a *tempo* (speed) of 132 beats per minute. Setting a metronome to 132 will give you the appropriate tempo for the example to the left.

Pickups

Pickups fall into three main categories: *single coil*, *humbucking*, and *active*.

Single-coil pickups are standard issue on stock Stratocasters and many other guitars. They produce that bright, snappy spank we all know and love. On the downside, they also produce hum. This annoying noise gets louder as more distortion is used. The advent of hum-canceling single coils has greatly reduced this problem. Single coils are usually used by players seeking a clean or slightly distorted sound. Since they have a relatively low output level, these pickups don't yield as much distortion as the other two types.

Humbuckers, or double-coil pickups, are standard issue on Les Pauls and most other guitars that don't have single coils. They were invented to "buck" the hum of single coils. They are louder, darker sounding, and much less noisy than single coils. Humbuckers work for styles ranging from warm, clear jazz to super high-gain metal. Detractors complain of the unpleasant "nasal" or "metallic" quality of the sound. Players seeking lots of distortion tend to use humbuckers. Many players mount single coils and humbuckers on the same guitar for added flexibility.

Single coils and humbuckers are available as active pickups. Active pickups are very popular among bass players and acoustic/electric players. These pickups incorporate circuitry that adds active equalization or boost (for example, when you back off the tone knob, you are actually adding bass, not just reducing treble). Extra rotary knobs and sliders are often installed on the guitar to control these features. Active pickups require batteries and usually require custom installation. They are for discriminating players who demand total control of their sound. Active humbuckers will yield the most distortion.

Amplification

Amps fall into two main categories, *tube* and *solid state*. Controversy rages over the woes and wonders of these two choices.

Early amps used vacuum tubes (valves) to boost amplitude and add gain. In the process, harmonic distortion was accidentally created. Players knew a good thing when they heard one. Soon, channel switching amps capable of delivering loud clear sounds or loads of sweet tube-driven distortion emerged. The resulting "classic" or "warm" tones are still revered by thousands of discriminating guitarists.

Even though tube technology is ancient by modern standards, nothing else seems to deliver exactly the same sound. Tubes sound great, especially with distortion, but they also have sonic faults like lack of "clean headroom." It's hard to get a loud, clear sound out of them. They're less reliable than the transistors of solid-state technology, as well as much heavier, larger, and more costly. The tubes also need replacement at regular intervals. But none of this seems to bother enthusiasts, who will endure it all to get that perfect tube tone.

It would seem that the goal of most solid state (non-tube) amp manufacturers is to emulate classic tube tones. Many even include the word "valve," or "tube," in the name, even if no tubes are in the amp. Some sound extremely close to the real thing. Only the sharpest ear can tell the difference. If you're looking for "clean headroom," solid state is the best way to go. Some players swear by the tight, cutting distortions of solid state amps, with their lightweight, compact, and reliable designs.

The following riff will be used for each amp test on the CD.

♩ = 126

CHAPTER
4

PEDALS, PROCESSORS, AND WHAT THEY DO

Fuzz

The first stomp box ever invented was a *fuzz* tone. The opening riff of “Satisfaction” by The Rolling Stones is a great example of fuzz. This buzzing, horn-like distortion cuts through the mix effortlessly. Fuzz is extremely radical and sounds somewhat strident. Think punk rock and psychedelia.



Track 17

- *Level* controls volume.
- *Fuzz* controls amount of fuzz.
- *Tone* controls balance between bass and treble.



Distortion

Distortion emulates the sound of an overdriven tube amp. Think heavy metal and hard rock. Tom Scholz’s tones on all of the Boston albums come to mind. Distortion sounds smoother and more musical than fuzz, but it still offers good sustain and enhanced harmonics.



Track 18

- *Level* controls volume.
- *Tone* controls balance between bass and treble.
- *Distortion*, or drive, controls amount of distortion.

SPECIAL
NOTE

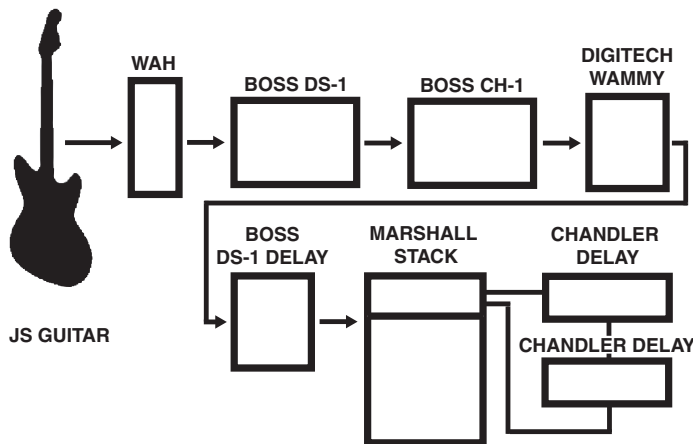
To see the riffs that were used on the CD to test the gear in this chapter, see pages 32 and 33.

The Joe Satriani Sound

Joe Satriani has been the champion of extreme instrumental guitar playing for over a decade now. Without compromising his vision, he has miraculously maintained solid success in this difficult market, never bowing to trends.

Satriani's incredible signature tone is a big part of his exhilarating musical persona. His fat, sustaining sound, with a slight vocal inflection on the attack of each note, is the product of lots of gear and much tweaking. His signature sound came into full bloom around the "Surfing With the Alien" period. Though Joe always sounds like himself, his tone has seen a lot of changes from song to song and album to album.

"Satch" uses D'Addario .09-.042 strings. He consistently uses Ibanez JS (Joe Satriani) model guitars and Marshall amps and cabinets, but the rest of his gear remains in a state of flux. He has been downsizing his rig for a number of years now. Below is a block diagram of his live/studio rig during the G-3 tour (circa 1997).



Joe's previous rigs have made use of the Eventide H-3000 Harmonizer, Chandler Tube driver, Rockman Sustainer, Wells amps, and many other units in various combinations. Since putting together such a rig would be impossible for most of us, we'll be looking at a more user-friendly alternative to copy his sound.

Try this riff in the style of Joe Satriani to test the setup on the next page.

♩ = 111

The musical notation is for a guitar riff in 4/4 time, with a tempo of 111 beats per minute. The key signature has one sharp (F#). The notation is written on a single staff with a treble clef. The riff consists of a series of eighth and sixteenth notes, with some triplets and sixteenth-note runs. The notation includes fingerings (1, 2, 3, 4, 5) and a "Full Dive with Bar" instruction. The notation also includes a "Nat. Harm." (Natural Harmonic) instruction. The notation is written on a single staff with a treble clef. The riff consists of a series of eighth and sixteenth notes, with some triplets and sixteenth-note runs. The notation includes fingerings (1, 2, 3, 4, 5) and a "Full Dive with Bar" instruction. The notation also includes a "Nat. Harm." (Natural Harmonic) instruction.

Start with bar down and then release.

Full Dive with Bar

Nat. Harm.