

MEET YOUR MAKER Stewart Ward

Designer of the famed Session range of amplifiers, Stewart Ward knows a thing or two about guitar tone. He has strong views on the valves vs transistors debate and asks the question: tranny amps – do they deserve the slaggings?



Stewart Ward

As an Aquarian, I like change. And having an analytical mind means I'm suspicious of unproven, but generally accepted beliefs. So whilst I'm a musician and engineer who grew up using valves, valve amp folklore has no place in my world. I'm a realist who listens with his ears, not his eyes. Solid state fits nicely with my expectations from equipment: great tone, features that work well, reliability and low running costs. So why does the music business hold trannies in such low esteem? There are many reasons, some true others not, so we need to go back to the beginning of transistors to find the answers.

Back in the late 1950s, transistors became commercially viable and were later thought of as the way forward, providing musicians with greater performance and, mainly, lower cost products. Sadly, they were not yet ready for use in guitar amps, primarily because it was very difficult to design circuitry with a high input impedance, which electric guitars need and valves provide naturally. Their low impedance at the input, for example, made electric guitars sound hard

We raved about the natural-sounding clean tones from this all-transistor Session amplifier recently

and the volume died away quickly when you turned the guitar down – plugging into a PA amp produces the same effect, which is why PA amps are not suitable for guitar. Other drawbacks, far too complicated to explain here, made it a cumbersome technology with serious limitations...

As if that wasn't bad enough, many designers of the day understood little about electric guitars; a situation which has remained true until fairly recently. But under pressure from marketing personnel and accountants for cheaper and more easily made products, big company designers would have been powerless to compensate for those limitations within the budgets they were given. This resulted in a proliferation of horrible sounding amps that, unfortunately, earned solid state a bad reputation from the outset.

Even now, some 50 years later, musicians still hold the same prejudices. I can understand that to a certain extent – so many of those bad tranny amps were sold by household names which, one would expect, ought to have known better. This remained the case until the early 1980s.

Yet today much has changed. Solid state now offers so much flexibility and the chance to design circuitry with levels of performance which valves can only dream of. These changes came with the introduction of linear integrated circuits (ICs), the most well-known being the TL071 family, which is still the backbone of

many modern guitar amps. I realised then that these were a serious threat to valves, so I immediately switched to designing solid state amps. The first was called the Sessionette:75, which went on sale in April 1981 and achieved sales of 55,000 plus over its lifetime. Session was the first company to make trannies respectable and more top players used them than you could shake a stick at. Today's solid state amps owe a lot to that amp's design.

Solid state is a good reliable technology which can easily out-perform valves. Maybe in some amp designs this is part of the problem, leaving a cold, sterile tone. However, with a little more design care, the tone can be warmed. It may not be a big surprise to learn that many valve amp designers are not so hot when it comes to solid state design, so naturally they tend to put solid state down. Valve amplifiers exhibit all kinds of 'beneficial defects', which are largely overlooked when designing a solid state amp and only a complete understanding of both valve and solid state design enables them to be incorporated into solid state amps.

Nevertheless, a myriad of mediocre tranny amps still find their way onto the market, doing more to perpetuate the poor image of solid state than raise it. Laughable as it may seem, these iffy tranny amps sell well, for no other reasons than cheapness, the power of their badge and the fact that they are easily available in the shops. All the wrong reasons, don't you think?

Isn't it unusual for a player to dislike the sound of any particular amp, but if it's solid state, the reason given by default is... "because it's a tranny amp." That's crazy. I've plugged into hundreds of valve or tranny amps that I didn't like, but I would never blame the technology. Often it's simply because the designers designed them to sound that way, and if you don't like them, someone else will. We must accept that and try others until we find one we like – whether it's valve or tranny.

But how do you know what's the truth about amps? I mean, if valves make a unique kind of distortion, why has one amp

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maker used solid state distortion in its supposedly valve amps for the last 15 years? And what about the 'Class A' AC30 valve amps that are really AB1 push-pull? What's the reasoning behind 'point-to-point' wiring and military spec components when they cannot improve the tone? Not to mention the poor quality of today's valves. Why pay for all that and then plug in a tranny distortion pedal? Does it all really matter? Isn't it the sound that's important?



A teenage Stewart Ward in the early 1960s. Who'd have thought he'd still be doing it in the 21st century?

We constantly hear all sorts of weird ideas why valves are best... but never with any supporting evidence to back the claims. Because they believe it and speak with a low-slung John Wayne voice, it must be true? Nothing is done to move amplifier design forward. Technology alone is not the reason for the sounds you hear. It needs the intervention of a creative person with the specialist knowledge to make good use of the benefits it brings. It's where science meets art. Without the human input, technology is like a computer with no software... useless. For



example, all my amplifier designs use the same technology, so explain why they all sound different? The answer is easy; I designed them to sound different to each other. The technology is merely the bricks and mortar, the paints and canvas, and nothing more. When you buy an amp, you invest in the designer's knowledge and the sound that his knowledge brings. The credit for the success or failure of any amplifier to please guitarists can only go to the designers, not the technology.

I say transistors are not the ugly beasts that destroy the sound of guitar; if you don't like tranny amps, you just haven't

tried the right ones yet. When you next visit your music store, ignore the badges and technology and audition each amp with an open mind. Choose on the basis of sound quality, and if that turns out to be a valve amp, I won't get upset. Neither I nor any other manufacturer will ever please every guitarist, but there'll be plenty that will please. Just remember though, that the sound you hear from a tranny amp today will be the same as the sound it makes in 30 years' time. Solid state does not wear out or run down, and if designed to run cool, will last forever.

Keep music fun... whatever!



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