Radial Engineering ProRMP, Reamp JCR & X-Amp

By Ethan Rising

Reamping is an invaluable recording technique that has been used in major studios as a means to a number of ends. The basic concept is taking a recorded performance and outputting it through a loudspeaker, then re-capturing the same performance in a different context. Often this is to capture a room tone, ambience, or spatial effect not achievable with synthetic reverbs. There are many classic studios with built-in echo chambers for this very reason – most notable in my mind is Motown, where these chambers (one of which is located in a crawl space in the attic) had a great deal to do with establishing the "Motown Sound."

It is also common to route the signal through various effects and amps to find the perfect tone after the musician has left the studio. This can let the engineer/producer take his or her time in finding the desired outcome without the artist present.

It should come as no surprise that this has become a very popular technique with regards to electric guitar and bass. Some typical scenarios where reamping would be employed? The player "tweaked" his amp settings from one take to the next (making comping a nightmare); edits made obvious due to drastic ambience changes; or simply wanting a different tone from that "perfect" amp or pedal. In any such situation, a DI signal (recorded by putting a DI box in the signal chain, typically immediately after the guitar/bass or effect pedals) is used to keep the performance while the rest of the signal chain is decided by the engineer.

Technically, this can be achieved by running a line level output directly into an amp at very low levels. This is not a desirable method as the impedance of a guitar amp input is drastically higher and will cause tonality changes. Major studios in the past have relied upon handy engineers making their own impedance changers to do the job. The most notable of such situations involves John Cuniberti, who developed the Reamp circuit while working with Joe Satriani in 1994.

The circuit has been evolving from its original $5,000 custom-made design to the current Reamp JCR $200 design now being manufactured and sold by Radial Engineering (which purchased the brand and its circuits in 2011). Radial is known primarily for its industry-standard DI boxes and also has the widest range of reamping solutions available on the market. I've had the ProRMP, the Reamp JCR, and the X-Amp in my studio for the past month, using all three in different situations. I've found them to be indispensable.

The first two units (the ProRMP and the Reamp JCR) are both passive boxes retailing for around $100 and $200, respectively. They both use transformers for impedance and level matching while the ProRMP uses a custom-designed transformer that Radial picked for its mass-production style box in order to keep the cost attractive while maintaining a great sound.

In 2011, when Radial purchased the Reamp brand, the company released the Reamp JCR, which employs the same transformer that John Cuniberti used in his circuits – "a special custom-wound USA-made transformer with mu-metal can for extra shielding." In these types of circuits, transformers and the types of metals found within are significant in shaping the tone, especially at higher gain levels. I found slight differences between the two boxes and tended to prefer the more expensive one as it seemed to sound slightly cleaner. With the added functions of a 1/4" TRS input, a mute, and a 180-degree phase flip switch, it was my preferred reamper. Is it worth twice the cost of the ProRMP? I feel it is; however, there are some who would disagree as both boxes do essentially the same thing. Both have a level control and a ground lift, which I found are the most essential controls needed while reamping.

The X-Amp, on the other hand, is an active box retailing for about $200 that requires power from an included adaptor. It has a transformer for noise isolation but uses a Class-A buffer amp for level and impedance matching. Its other features include ground lift, level control, and phase reversal. I found this box to sound the cleanest when turned up, but preferred the sound of the JCR in most cases as I enjoyed the life-like character it had.

Reamping is a great production tool. If you keep your favourite pedals and amps handy, you can always achieve that special tone. I found myself getting a little more adventuresome with my tones – like adding radical distortions and then sending it out to the amp making for some really wild and neat textures or finding that strange room tone that just fits the material. Any line level signal will do: piano, drums, vocals...

Any way you slice it, $100-$200 for a rock-solid box that opens up a wealth of new options is worth a look.

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