

## Landmine LC-1 by Rob Tardik

**T**his month a very dangerous little object landed on my doorstep. What, you may ask?

A Landmine! The new Landmine LC-1 Chorus guitar pedal, that is – the latest compact stomp box offering from a newer manufacturer based in Thorold, ON, headed up by guitarist Mike Palermo.

So what is the phenomena/science behind the sound? To produce the effect, either naturally or in simulation, individual sounds with roughly the same timbre (quality of sound) and nearly (but never exactly) the same pitch, converge and are perceived as one. When the effect is produced successfully, none of the constituent sounds are perceived as being out of tune. Rather, this amalgamation of sounds has a thick, rich, lush, shimmering quality which would be absent if the sound came from a single source. The effect is more apparent when listening to sounds that sustain for longer periods of time. The chorus effect is enhanced when the sounds originate from slightly different moments in time and/or from different physical locations.

Now the actual chorus effect which we musicians/guitar players know and love falls into the time-based/modulation effect category of effects and can be simulated by signal processing equipment. The signal processor may be a ROM-encoded effect in a digital effect processor/pedal, or an older-style analog effect processor/pedal, or (much more common today) a software effect running on a computer.

Regardless of the technology, the processor achieves the effect by taking an original audio signal and mixing it with one or more delayed pitch-modulated copies of itself. The pitch of the added voices is typically modulated by an LFO (low frequency oscillator), which makes the overall effect similar to that of a flanger, except with longer delays and without feedback. Chorus is typically the more subtle of the two effects, usually consisting of a delay of 1-50 milliseconds, often in stereo.

The stereo chorus effect processors produce the same effect, but it is varied between the left and right channels by offsetting the delay or phase of the LFO. The effect is thereby enhanced because sounds are produced from multiple locations in the stereo field. When used on instruments like “clean” (undistorted) electric guitar and keyboards, it

can yield very dreamy or swirly ambient sounds.

Braving my life, I stepped on the Landmine which I ran through both my electric amp (Bogner Shiva) and acoustic guitar rig (a pair of Roland KC 350s and Yamaha AG-Stomp preamp) for sound observations using a couple of Fender Stratocasters and a Godin Multiac. Now, once engaged, my life was actually spared, and I was treated so some of the coolest chorus sounds I have heard in a long while. The LC-1 is a handmade, all-analog, boutique-style pedal with quality components inside which retails for around \$249. It's housed in a solid steel, military-grade chassis which is built, as you probably guessed, just like a WWII landmine! This is one tank-like pedal, folks, that will last forever!

It features both mono and true stereo output, and I ran it both ways clean. It sounded very rich, spacious, full, and lush – very typical of a good chorus sound. One cool feature of the output is that it also features speaker cabinet emulation so you can run directly into the board without an amp. I personally found the chorus thick and dense in mono, and more open and spacious with less of the detuning effect in stereo. The circular pedal features four knobs: Effect Level with a wet-to-dry ratio; EQ that controls boost or cut of the effect; Rate, which controls the speed of the effect; and Depth – self-explanatory. The knobs were very responsive to subtle tweaks, especially the very usable EQ knob for frequency cut and boost and the Depth knob which allowed me to dial in some thickness to my taste. It runs on either a standard 9 V battery or 9 V power supply (not included) with an easy-to-see LED indicator, and an easily accessed quick-release battery compartment underneath the pedal.

The switch is solid for stomping on and will last a lifetime again, just like this heavy-duty bullet-proof pedal. I foresee a potential problem under normal road use because the four control knobs are mounted to the PC board



inside and had some play and movement to them as I tweaked. The circular design also puts the exposed knobs a bit too close for comfort to my foot at times, and in the heat of the guitar playing moment I could maybe see myself with my hefty foot stomping on the control knobs and possibly damaging them. Mounting them with separate pots and jacks directly to the chassis would help solve this problem.

Other than that, it's a simple, straight-ahead pedal that you can get great sounds from easily, and it sounds amazing with distortion or overdrive. This pedal is very clear and transparent with no tone-sucking qualities, so your guitar tone stays pretty much intact even in bypass mode. I played all the usual chorus effect-inspired tunes and they all sounded GREAT! It's very quiet as well, I must mention, as it's a usual thing we have to deal with concerning modulation-type effects, especially flangers – although it does have a cool retro sound vibe to it at times. I have to recommend this product if you're in the market for a new chorus pedal, so check out [www.landminepedals.com](http://www.landminepedals.com) for more info.

*Rob Tardik is a guitarist, contemporary artist, teacher, and clinician who performs regularly throughout the greater GTA and was voted 2007 Established Performing Artist of the Year in Mississauga, ON. Rob is currently working on his second follow-up CD to his debut Without Words and is also the inventor of the Music Stamp Series, a series of educational accessories for teachers/students and working musicians. For more information, visit [www.robtdik.com](http://www.robtdik.com) or e-mail [rt@robtdik.com](mailto:rt@robtdik.com).*