

Song of the Weekend

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From the Lee Jackson Audio Community Discussion Group

(<https://www.facebook.com/groups/ljackaudiodiscgroup>)

Entry: 20190804 – Future Military Conquests

This week's "Song of the Weekend" is Future Military Conquests, from the 3D Realms hit, "Duke Nukem 3D."

Future Military Conquests (a.k.a. FUTURMIL) is one of the later songs of the original Duke Nukem 3D, dating from around March of 1996. By that time, I'd managed to learn some of the more advanced techniques of MIDI composition, such as creating true slurs using pitch-bending and writing military-style drum lines using what has since been called the "weak left hand" technique. FUTURMIL showcases both of these techniques.

Let's tackle that last technique first, since it's the first one you hear in the piece. FUTURMIL starts off with a snare drum prominent in the mix. The snare plays a pattern that carries on throughout the piece. Now, to get a bit technical, the line starts off with a first measure that goes like this:

R RL RLRL RLRL RLRL R RL

That's an eighth note followed by two sixteenth notes, followed by two groups of sixteenth notes, finished up by another eighth note/two sixteenth note group. (The R stands for a right-hand stroke, while the L stands for a left hand stroke, although you can't specify these in my MIDI sequencer, Cakewalk.)

If I were to put these in at the default Cakewalk MIDI values, it would sound very robotic. What you've got to remember in order to humanize the pattern is that most right-handed people's left hands are going to tap the drumhead at a lower "velocity" than their right hands do. Therefore, when I put in the notes in Cakewalk, I had to make sure that the note velocity parameters for the "L" strokes were by default lower than the ones for the "R" strokes. The only exceptions would be where left-hand strokes would be accented. If you have questions about all of this, drop a comment in the thread.

(con't)

The pitch bending was a bit trickier. It used something called a "Registered Parameter Number," or RPN, something that is part of the General MIDI specification. The default pitch bend range is two half steps, but by adjusting the pitch bend RPN values, you can get it to go an octave either way. That's what I did, for two separate flute-like instruments. I won't go into the math here—again, if you're interested, drop a note in the thread. Anyway, they come in around 0:56 into the song.

Remember, if you've got any questions, drop a note in the thread and I'll do my best to answer it. With that, here's the link to Future Military Conquests. I hope you'll enjoy it, and thank you for voting!

https://www.youtube.com/watch?v=J_MQYPkofO8