Playing with melodic loops – the Keyboard Loop Player

concept by Andras Haasz

Playing with loops is a great fun. You can get inspirations, catch the feels of the original sequence, and using the advanced features of Dr.Rex player you can simply build up different rhythmic grooves.

But what about the melodic instrument loops? Can we play a bass loop - for example - on the keyboard?
Yes, you can – but probably you won't be happy with the result. In Dr.Rex, when you play notes on the keyboard, it will trigger the slices of the loop, but will not change the pitch. It's not a fault; - it's a feature: Dr.Rex player was designed to work with drum sequences, not with melodic loops.
Using the keyboard we can not change the pitch on the fly,... not in Dr.Rex... we have to find another way!

The solution – what a surprise – is the sound designer's best friend: the Combinator!
Our mission is to construct an instrument that can play melodic loops, where the pitch can be controlled by the keyboard on the fly, like an arpeggiator in a real synthesizer!

OK, let's see step by step, what we need:

1)the loop must be playing continuously, but
2)it must sound only when a key is pressed, and
3)the keyboard must control the pitch of the loop

Step 1: playing loop continuously

When DR.Rex receives a D0 note, it starts playing the whole loop from the first slice to the last one. Matrix's sequencer can be used to exploit this feature for continuously triggering the loop. Since the Matrix note CV range is limited to C1 and above, we have to insert a Spider CV to transpose down the Matrix's “Note CV” signal by one octave *(picture 2)*.

Open the **KLP-tutorial.rps** file, and check the “Step 1” in the first track.

You can see that the Matrix pattern is already prepared to playing the loop, the first step is D1 (spider transposes it to D0), the others are set to C1.
Please note that we reduced the keyrange of Dr.Rex to D0-D0 on the Combi's key mapping panel as well, because we don't want to trigger the slices with the keyboard *(picture 1)*.

Now run the Combinator: you can hear the Rex loop triggered by the Matrix note events.

Picture 1

Picture 2

Step 2: sound only when a key is pressed.

When you run the Combinator, the loop starts playing infinitely, which is great, but will become boring after a while. We want to hear the loop only when we press a key on the keyboard, don't we? But how can we achieve this? The answer is an envelope generator, triggered by the midi note.

Let's load a Thor into the rack (by pressing “shift” will help to avoid auto routing). We will use its global envelope to control the amp of the loop. Initialize Thor, and connect the audio output of Dr.Rex to the audio in 1 and 2 of Thor (*picture 3*).
Now set up the modulation buses. Choose “Audio in1” as source, “Filt3 L.In “ as destination, set the amount to 100 and the scale to “Global Env”. Now repeat these steps with the right channel, source: “Audio in2”, destination:“Filt3 R.In “, scale:“Global Env” and amount is 100 (*picture 4*).
We still have to prepare the global envelope. Set attack to 0, sustain to maximum and choose an appealing short release.

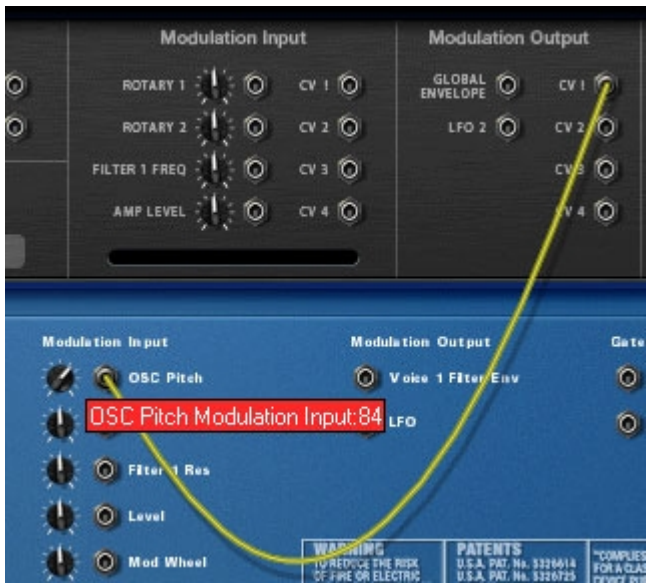
Let's run the Combinator. If you did everything properly, you can't hear anything until you press a key on the keyboard: now the Thor's envelope controls the amp of the loop. Cool, isn't it? OK, move on to the next step, let's play melodies!

Picture 3

Picture 4

Step 3: control the pitch of the loop

Nothing could be simpler! Just connect the Thor's CV1 out to Dr.Rex's “OSC pitch modulation input”. Now flip the panel, and set up the modulation bus. Choose “MIDI Note” as source, the destination is “CV Out1” and set the amount to 100.
Got it? Let's check out! Run the Combinator... wow, it works! Great... but... ooh dear, sounds like a charivari, it's false!
Yes, because we haven't set the sensitivity of the modulation input yet. Turn the little rotary encoder to the right on the Dr.Rex's back panel and set it to 84 *(picture 5)*. Let's check it again (step3 in the **KLP-tutorial.rps** song file). Sounds better, right?



picture 5

Well, we are almost ready, just a few final touches...
transposing: use the transpose keys or the osc octave switch of Dr.Rex
velocity sensitivity: connect Thor's CV2 out to the Amp level modulation input of Dr.Rex. To prepare the Thor's modulation bus: choose “MIDI Vel” as source, set amount to 100 and the destination to “CV Out2”.

OK, finished now, mission is complete! Check the last instrument in the tutorial rps song file.

Bottom Line

In this little tutorial I tried to give you a brief explanation of our new secret weapon, which enables you to play melodic loops on your midi keyboard in a very easy and creative way.
This example was very simple, if you like the concept and want to know more about these techniques, check out LEMON.
LEMON is the first refill that exploits the full feature of this “keyboard loop player” concept. Demo version is available on the LEMON product page.

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written by Andras Haasz