

loguePADS

Custom synths for KORG logue SDK 2.0 synthesizers

Operations Manual

v.0.2-0

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Introduction

loguePADS is a set of sample-based synths for KORG drumlogue synthesizer. loguePAD2/4 are synths for designing complex instruments with 2 or 4 element layers or alterations. loguePAD8/16 are synths for MPC-like performances. All variation supports both mono and stereo samples.

For information on how to upload a user synth to the synthesizer and how to activate it, please refer to the Synthesizer Owner's Manual for your KORG synthesizer model.

If you find a bug or wish to propose a new feature or improvement, don't hesitate to create a new issue at [GitHub](#) or just send me an email to dukesrg@gmail.com.

This user synth is open source and free. However you can support the development via [PayPal me](#) or [Revolut me](#).

Synth variations

For the enhanced creativity there are several synth variations with different sets of features. Numbers in synth names represent the polyphony level. Tuning possibilities are decreasing with the polyphony increase as a tradeoff for the limited number of parameters. The following table summarizes differences between variations:

Feature \ Synth	loguePAD2	loguePAD4	loguePAD8	LoguePAD16
Polyphony	2	4	8	16
Layers	2	4	–	–
Groups	1	1	4	4
Pitch / Tempo tune	+	+	+	–
Output level	+	+	–	–
Decay time	+	–	–	–
Start / end position	+	–	–	–
Sample modes	4	4	4	4
Group modes	7	7	6	6

Parameters

loguePAD2 parameters

Name	Value range	Description
NOTE	C-1...G9	Note for internal sequencer gate.
GROUP	0...6	Playback mode, refer to the Group playback mode section for details.
MODE 1	0...3	Sample playback mode .
MODE 2		
SAMPLE 1	0...384	Sample select, refer to the Samples section for details.
SAMPLE 2		
TUNE 1	C-1.00...G9.00 -60.00...+67.00	Pitch / Tempo tune, refer to the Tune section for details.
TUNE 2		
LEVEL 1	-100.0dB...+24.0dB	Output level.
LEVEL 2		
DECAY 1	R300.0s...R0.1s Off D0.1s...D300.0s	Decay / Release time, refer to the Envelope generator section for details.
DECAY 2		
START 1	L0.1%...L99.9% 0.0%...99.9%	Sample / Loop start position, refer to Sample position section for details.
START 2		
END 1	0.1%...100.0%	Sample end position, refer to Sample position section for details.
END 2		
LOW N1	C-1.00...G9.00	Low / High note range threshold, refer to the Thresholds section for details.
LOW N2		
HIGH N1		
HIGH N2		
LOW V1	0.00...127.00	Low / High velocity range threshold, refer to the Thresholds section for details.
LOW V2		
HGH V1		
HIGH V2		

loguePAD4 parameters

Name	Value range	Description
NOTE	C-1...G9	Note for internal sequencer gate.
GROUP	0...6	Playback mode, refer to the Group playback mode section for details.
MODE 1-2	0...15	Sample playback mode .
MODE 3-4		
SAMPLE 1	0...384	Sample select, refer to the Samples section for details.
SAMPLE 2		
SAMPLE 3		
SAMPLE 4		
TUNE 1	C-1.00...G9.00 or -60.00...+67.00	Pitch / Tempo tune, refer to the Tune section for details.
TUNE 2		
TUNE 3		
TUNE 4		
LEVEL 1	-100.0dB...+24.0dB	Output level.
LEVEL 2		
LEVEL 3		
LEVEL 4		
LOW 1	0.00...127.00 or C-1.00...G9.00	Low note or velocity range threshold, refer to the Thresholds section for details.
LOW 2		
LOW 3		
LOW 4		
HGH 1	0.00...127.00 or C-1.00...G9.00	High note or velocity range threshold, refer to the Thresholds section for details.
HIGH 2		
HIGH 3		
HIGH 4		

loguePAD8 parameters

Name	Value range	Description
NOTE	C-1...G9	Note for internal sequencer gate.
GROUP	0...1295	Group playback mode.
MODE 1-2	0...63	Sample playback mode.
MODE 3-4		
MODE 5-6		
MODE 7-8		
SAMPLE 1	0...384	Sample select, refer to the Samples section for details.
SAMPLE 2		
SAMPLE 3		
SAMPLE 4		
SAMPLE 5		
SAMPLE 6		
SAMPLE 7		
SAMPLE 8		
TUNE 1	C-1.00...G9.00 or -60.00...+67.00	Pitch / Tempo tune, refer to the Tune section for details.
TUNE 2		
TUNE 3		
TUNE 4		
TUNE 5		
TUNE 6		
TUNE 7		
TUNE 8		

loguePAD16 parameters

Name	Value range	Description
NOTE	C–1...G9	Note for internal sequencer gate.
GROUP	0...1295	Group playback mode.
MODE 1-2	0...63	Sample playback mode.
MODE 3-4		
MODE 5-7	0...511	
MODE 8-10		
MODE 11-13		
MODE 14-16		
SAMPLE 1	0...384	
SAMPLE 2		
SAMPLE 3		
SAMPLE 4		
SAMPLE 5		
SAMPLE 6		
SAMPLE 7		
SAMPLE 8		
SAMPLE 9		
SAMPLE10		
SAMPLE11		
SAMPLE12		
SAMPLE13		
SAMPLE14		
SAMPLE15		
SAMPLE16		

Sample playback mode

The Sample playback mode determines how each individual sample is played back. This parameter also controls the sample group assignment, which is only available for the synth variations with no Layer mode support.

Letter	N. Off	Vel.	CP	AT	Description
G	+	+	+	+	One-shot gate mode.
S	–	+	+	+	One-shot sustain mode. Note Off is ignored.
R	+	+	+	+	Loop repeat mode.
T	–	+	+	+	Loop toggle mode. Note On starts and stops playback.
1					Group mode. Sample playback mode is controlled with the group mode with the indicated number.
2					
3					
4					

Group playback mode

Group playback mode parameter supersedes the sample playback mode parameter for all samples in the group, except for the Layer mode.

Letter	Description
L	Layer mode. Note On triggers all samples playback with their own sample playback mode.
G	One-shot gate sequence mode. Note On triggers the next sample in the group.
S	One-shot sustain sequence mode. Note On triggers the next sample in the group. Note Off is ignored.
C	Chain mode. Note On toggles playback of all samples one by one in a loop.
g	One-shot gate random mode. Note On triggers a random sample in the group.
s	One-shot sustain random mode. Note On triggers a random sample in the group. Note Off is ignored.
c	Random chain mode. Note On toggles playback of all samples one by one in random order.

Samples

For sample parameters sample names will be displayed. For no sample and empty User and Expansion bank slots --- will be displayed. Such samples also will be skipped in any sequence mode. Raw sample number ranges and corresponding banks are listed in the following table:

Sample number	Bank
0	No sound.
1...16	Closed hi-hat factory samples bank (CH).
17...32	Open hi-hat factory samples bank (OH).
33...48	Rimshot factory samples bank (RS).
49...64	Clap factory samples bank (CP).
65...128	Miscellaneous factory samples bank (MISC).
129...256	User samples bank (USER).
257...384	Expansion samples bank (EXP).

Sample tempo detection

Samples named according to the following patterns **XXX_sample_name_100BPM.wav** or **XXX_sample_name_100.00BPM.wav** will stick to the specified BPM temp. For those samples synthesizer's tempo will affect the playback speed as well as the tuning will be shown in BPM in 0.01 resolution.

Tune

Pitch tune shows the note and cents of the root pitch which will be played at the native sample rate. The default root note is C4. Increasing the Pitch tune will lower the pitch.

Tempo tune shows the BPM offset relative to the BPM detected from the sample name. Increasing the Pitch tune will slow down the playback speed.

Envelope generator

The simple envelope generator has only a single exponential decay stage, which kicks in either with Note On (Decay) or with Note Off (Release). The value represents the amount in seconds needed to attenuate to -60dB. For sustain / toggle playback modes the Release setting is ignored.

Sample position

Sample position allows to set start and end sample position for playback. The sample start position at or beyond the sample end position is ignored and playback will start from the very beginning of the sample.

For loop modes, the loop start position can also be altered instead of the sample start position. In that case the sample playback will be started from the sample start position and then looped from the loop start position to the sample end position. The loop start position at or beyond the sample end position is ignored and loop playback will start from the very beginning of the sample.

Thresholds

Note and velocity threshold allows split layers to zones with different note and/or velocity ranges. With a non-zero fractional part of a threshold, a level scaling will be applied. The fractional number represents the rate in semitone or velocity steps per -24dB attenuation.

Using external MIDI controllers

You can control sample playback with the external MIDI controller note events. The included loguePAD8/16 scene files for KORG MIDI controllers configured to use controller pads or buttons to send note events and require KORG drumlogue MIDI Routing Channel global setting is set to 1–12.

For information on how to connect the external MIDI device to KORG drumlogue, please refer to the KORG drumlogue Owner's Manual. For information on how to upload a scene file to KORG midi controller, please refer to KORG KONTROL Editor Owner's Manual.

Scene mapping for KORG nanoPAD

- loguePAD8
 - Trigger pads 1...8 – Samples 1...8 (C4...G4). Roll / flam enabled.
 - Trigger pads 9...12 – Samples 1...4 (C4...D#4) toggle.
 - X-Y Pad - X – Pitch Bend.
- loguePAD16 (also suits well for loguePAD2/4)
 - Trigger pads 1...12 – Samples 1...12 (C4...B4). Roll / flam enabled.
 - X-Y Pad - X – Pitch Bend.

Scene mapping for KORG nanoPAD2

- loguePAD8
 - Trigger pads 1...8 – Samples 1...8 (C4...G4). Gate Arp enabled for roll / flam.
 - Trigger pads 9...16 – Samples 1...8 (C4...G4) toggle.
- loguePAD16 (also suits well for loguePAD2/4)
 - Trigger pads 1...16 – Samples 1...16 (C4...D#5). Gate Arp enabled for roll / flam.

Scene mapping for KORG nanoKONTROL

- loguePAD8
 - Buttons 1-1...1-8 – Samples 1...8 (C4...G4).
 - Buttons 2-1...2-8 – Samples 1...8 (C4...G4) toggle.
- loguePAD16

- Buttons 1-1...1-8 – Samples 1...8 (C4...G4).
- Buttons 2-1...2-8 – Samples 9...16 (G#4...D#5).

Scene mapping for KORG nanoKONTROL2

- loguePAD8
 - Solo buttons 1...8 – Samples 1...8 (C4...G4).
 - Rec buttons 1...8 – Samples 1...8 (C4...G4) toggle.
- loguePAD16
 - Solo buttons 1...8 – Samples 1...8 (C4...G4).
 - Mute buttons 1...8 – Samples 9...16 (G#4...D#5).
 - Rec buttons 1...8 – Samples 1...8 (C4...G4) toggle.

Scene mapping for KORG nanoKONTROL Studio

- loguePAD8
 - Track Mute buttons 1...8 – Samples 1...8 (C4...G4).
 - Track Rec buttons 1...8 – Samples 1...8 (C4...G4) toggle.
- loguePAD16
 - Track Mute buttons 1...8 – Samples 1...8 (C4...G4).
 - Track Solo buttons 1...8 – Samples 9...16 (G#4...D#5).
 - Track Rec buttons 1...8 – Samples 1...8 (C4...G4) toggle.
 - Track Select buttons 1...8 – Samples 9...16 (G#4...D#5).

Scene mapping for KORG nanoKEY Studio

- loguePAD8
 - Trigger pads 1...8 – Samples 1...8 (C4...G4).
- loguePAD16
 - Trigger pads 1...8 – Samples 9...16 (G#4...D#5).

Demo programs

The synth is distributed with the following demo programs and kits for the easy start.

- H01_loguePAD2_demo

loguePAD2 demo with two layers of the same Stab factory sample, the second layer is detuned to +15 cents and has the lower velocity threshold to 100 with the low level scaling rate, resulting in more detuned sound with higher velocity played. The sequence contains a single note with a motion sequence gradually detuning both layers from 0 cents to +/-8 cents and back to 0 cents.

- H02_loguePAD4_demo

loguePAD4 demo with 4 note zones, each bound to different closed Hi-hat factory samples and cross-faded in pairs for the regions from C4 to G4 note range. The sequence contains 16 notes played one-by-one.