

PAJEN-7, AN UNOFFICIAL UPDATE FOR THE KORG™ VOLCA SAMPLE™

Version 0.9

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Foreword: Hi, I'm robotunes (u/robotunes on Reddit; @robotunes on Gearslutz). I'm not affiliated with Pajen, the creator of this unofficial update for the Korg™ Volca Sample™. I just made this incomplete user guide for my own use and to share with you. This document is not perfect. I accept no liability for any incorrect information contained herein. Proceed with caution. If you find any errors or have something to add, please try to reach me at the addresses above.

Last but not least, many thanks to Pajen (u/pajen on Reddit; @pajen on Gearslutz). He's given us a new Volca Sample with his tireless efforts. I call his update PAJEN-7 because it's version 7 of his beta firmware. Any updates to this guide will reflect whatever he calls his future updates, e.g., PAJEN-8, PAJEN-9, etc.

Some PAJEN-7 features require an external keyboard, sequencer or MIDI CC box to use. Other features run right from the Volca Sample. By the way, Korg™ and Volca Sample™ are trademarks of Korg, Inc., which retains all rights to the names. Korg offers no support for this update. And neither do I or Pajen.

You can restore the Volca Sample to its factory state using the official Korg firmware available on Korg's website.

INSTALL THE PAJEN-7 UPDATE

- Connect a 3.5mm audio cable (stereo works best) from the output of your computer, tablet, phone or other audio player to the SYNC IN jack of the Volca Sample.
- While holding the FUNC and PLAY buttons, turn on the power. The Volca Sample will display "UPdt."
- Play the PAJEN-7 update file from the beginning.
- The Volca Sample's Step Button LEDs 1-16 will indicate the update progress
- When the update successfully completes, "End" will be displayed. Turn off the power.
- Turn on the power. "SAMPLE BETA 7" will scroll across the LED if the update is successful.

LAUNCH THE PAJEN-7 UPDATE

- While holding FUNC, turn on the power. You are now in GLOBAL mode
- Make sure Step Buttons 9 and 10 are both LIT. This enables **Advanced Features** (see “**CCs and Advanced Features**” below)
- Press REC to save your changes and enter LIVE mode.

EXTENDED MENU MODE gives you access to most of PAJEN-7’s new parameters

- While in LIVE MODE (Step Mode button is dark):
 - Hold FUNC while turning the SAMPLE knob (FUNC button blinks) to choose one of the parameters below.
 - Release FUNC (it should keep blinking) and set the parameter’s value
 - Press FUNC to save your changes (FUNC button goes dark)

PARAMETERS OF THE EXTENDED MENU

- **OMNI MIDI MODE:**
 - **OFF:** None of the options below are active
 - **SEL:** Volca Sample operates in the original way: Use the PART buttons to **select** the current part
 - **SAMP:** With your external MIDI keyboard on channel 11, play the first 100 keys to audition the 100 **samples** loaded in your Volca Sample. Use your keyboard’s Octave Up/Down buttons to audition the full range of samples.
 - **PAtr:** With your external MIDI keyboard on channel 11, play notes C to A to immediately launch **patterns** 1-10. In this way, you can create a song mode by using an external sequencer to record your key presses. Playing notes C to A in every octave will trigger patterns while you’re in this mode.
 - **Py2, Py3, Py4:** This activates **polyphony** on the Vocal Sample, played by your external MIDI keyboard. Up to 4 neighboring parts can be combined in this way.

- Turn the SELECT knob to choose how many voices of polyphony you want,
- Choose the neighboring parts that will be combined to create polyphony. The remaining parts will be monophonic and will operate as normal.
- Press FUNC to enter your changes.
 - Example: Let's create a 4-voice polyphonic Volca Sample.
 - Choose Py4
 - Tap a STEP BUTTON to select the first part that will be used to create polyphony. That part plus the 3 parts to the right will blink. Note: If you choose Part 8, only 3 parts (8, 9 and 10) will blink and you'll have only 3-voice polyphony.
 - Press FUNC to enter your changes
- **NOTE:** Each part is independent, so it will play its own sample and have its own settings for hi-cut, EG and other parameters. Use **COPY PART** (see "**CPrt**" below) to make parts identical.
- **NOTE:** Notes played higher on the keyboard will sound slightly different from notes played lower on the keyboard. That's because like most samplers, the Volca Sample plays higher notes faster than it plays lower notes. So lower notes will sound longer than higher notes. This is a function of the Volca Sample, not the PAJEN-7 firmware
- **PROB:** This sets the **probability** that any given step **in the current part** will sound
 - Select the Part whose step probability you want to change. You can press PLAY to start the pattern and hear the changes as you make them.
 - Hold FUNC and turn the SAMPLE knob to select PROB. Release FUNC.
 - The LED reads "P.100," indicating that all 16 blinking steps in the current part have a 100% probability of being played every time the pattern repeats.

- Swipe the blinking Step Buttons to deselect the steps in the current part that you DON'T want affected. Now select only the steps that you DO want to be affected by the probability setting.
- Turn the SELECT knob to choose the probability that the lighted steps WILL sound each time the pattern repeats.
- Use the PART < > buttons to select a different part and use the probability feature if you want.
- Press FUNC to save your changes
- **brFL**: The **Bar Filter** automatically mutes/unmutes the playback, an alternative to muting/unmuting parts yourself.
 - For the current part, turn the SELECT knob to choose one of 16 mute/unmute patterns to make your pattern sound like it's longer than 16 steps. Use PART < > buttons to select parts
 - **br00** — All 16 LEDs are lit, so the current part will play its pattern 16 times then repeat.
 - **br01** — The current part will be muted for the first 16 steps, then will play 3 consecutive times (as indicated by the unlit and lit LEDs) then it will mute, then play 3 times, then mute ... etc.
 - **br02-15** — Different mute/play patterns, as indicated by the LEDs
- **ntFL**: Note Filter determines what incoming MIDI notes will influence on the current part — whether the external MIDI device will **Trigger** the part's sample, play a **Note** or determine **Velocity**. Each part can have its own Note Filter setup. Use the SAMPLE knob or PART < > buttons to select whose Note Filter you will edit.
 - The LED reads "**tnv**" — trig, note and velocity. Use the first three Step Buttons to turn MIDI reception on/off of each aspect independently. Press FUNC to return to LIVE mode
 - Now your external keyboard MAY or MAY NOT cause the Volca Sample to make a sound. In some cases, you will press your MIDI keyboard THEN touch Volca Sample's Step Buttons 1-10 to hear the effect of the Note Filter. Some example settings may clear this up:
 - If "**tnv**" is selected pressing a MIDI key will:

- **Trigger** the part's sample
- Determine the sample's **Note** each time you touch a Step Button
- Determine the sample's **Velocity** each time you touch a Step Button

- If "**-nv**" is selected, pressing a MIDI key will:
 - NOT **Trigger** the part's sample
 - Determine the sample's **Note** each time you touch a Step Button
 - Determine the sample's **Velocity** each time you touch a Step Button

- If "**--v**" is selected, pressing a MIDI key will:
 - NOT **Trigger** the part's sample
 - NOT determine the sample's **Note** each time you touch a Step Button
 - Determine the sample's **Velocity** each time you touch a Step Button

- **CPrt: Copy Part** copies the settings of one part to other parts. This is very helpful when using Polyphony (see above) and for creating parts with slightly different settings for more sound variety.
 - Select a part
 - Edit it to taste
 - Hold FUNC and turn the SAMPLE knob to select the "**CPrt**" parameter
 - Tap the Step Buttons to light the parts tht you want to copy to. Parts do not have to be next to each other, unless you want to play parts polyphonically.
 - Press FUNC to enter your changes.

- **Rb.ty**: Reverb Type. The Volca Sample comes from the factory with 3 **reverb types**, but Korg activated only one of them. The PAJEN-7 update reveals the remaining 2 filter types. Choose Reverb Type 0, 1 or 2 (2 is the standard one). There are no other settings.

- **dron**: Turn the current part into a **drone**, using the old Volca Sample trick of setting Amp EG Decay to 127 for infinite looping.
 - Turn on the part's Loop parameter (FUNC + Step Button 11).
 - Turn "**dron**" ON

CCs and ADVANCED FEATURES

If you enabled Step Buttons 9 and 10 in GLOBAL mode (Turn power on while holding FUNC), you can use advanced features such as:

- Using MIDI **channels 1-10** to send an expanded range of CCs (see below) and play parts chromatically while simultaneously using **channel 11** to trigger each part (that probably makes more sense if you try it while rereading those instructions)

KORG VOLCA Channels 1-10 CCs (Additional PAJEN-7 CCs are in italics):

<i>Sample Select</i> 50	Start 40	Length 41	Hi Cut 42
Speed 43	Pitch EG Int 44	Pitch Attack 45	Pitch Decay 46
Level 7	Pan 10	Amp Attack 47	Amp Decay 48
<i>Part Select</i> 54	<i>Reverse Part</i> 56	<i>Mute Part</i> 58	<i>Solo Part</i> 59
<i>Loop</i> 55	<i>Reverb Type</i> 52	<i>Reverb Level</i> 51	<i>Reverb On/Off</i> 57

- **Using channel 11** to replace the Volca Sample sequencer, triggering each part while simultaneously sending the original set of CCs to each part. Not all sequencers can do this. See IMPORTANT NOTE below.
 - **How to read the CC chart below for Channel 11 CCs**
 - $n = \text{part number plus 1}$. So:
 - cc00 changes Part 1's level ... cc09 changes Part 10's level
 - cc52 changes the speed for part 3
 - **PAJEN-7 Channel 11 CCs**
 - 0n = level
 - 1n = pan
 - 2n = sample start
 - 3n = sample length
 - 4n = hi cut
 - 5n = speed
 - 6n = PEG int
 - 7n = PEG att
 - 8n = PEG dec
 - 9n = amp attack
 - 109 = amp decay ch 9(+1) etc...
 - Using either of the above methods to create an **unlimited library of patterns** on your sequencers. The Volca Sample can save/restore only 10 patterns and 6 songs unless you add a MIDI out mod and send the following sysex messages:

- F0 42 30 00 01 2D 10 F7 to dump the current pattern
 - F0 42 30 00 01 2D 1C XX F7 to load pattern XX
- **IMPORTANT NOTE:** Not all sequencers send the full range of CCs to remotely control the Volca Sample's knobs on MIDI channel 11. Some sequencers won't let you control CC 32 or any CCs above 96. While those sequencers CAN use the first method mentioned above (using channels 11 and 10 simultaneously), they won't be able to use the second method (using channel 11 only).