

Introduction

Thank you for purchasing the Korg **volca keys**. The **volca keys** is a 27-key analog lead synthesizer with built-in delay effects. You can enjoy wide-ranging synthesis, from chord playing or a crisp-sounding lead line detuned with unison, which are achieved by using the three VCOs, to a metallic sound using RING-MOD (ring modulation). In addition, the sequencer's FLUX function allows you to create loops with a groove not tied to steps. Knob adjustments can also be recorded so that resulting tone changes become a part of the loop.

Power switch

This switch turns the power on/off. To turn the power off, press and hold the switch for approximately one second.

Auto power-off

The **volca keys** has an auto power-off function. This function automatically turns off the **volca keys** after approximately four hours have passed since it last produced a sound. If desired, you can disable the auto power-off function. (See Specifying global parameter settings)

DC 9V jack

Connect the optional AC adapter here.

Only use the specified AC adapter. Using any AC adapter other than the specified model will cause malfunctions.

VCO (Voltage Controlled Oscillator)

The three built-in oscillators generate the sawtooth or square waves, which become the basis of the sound.

OCTAVE knob: This knob specifies the octave of the notes that will be produced when the keyboard is played.

VOICE knob: This knob sets the VCO operation mode.

POLY: Up to three chords of the sawtooth wave can be played.

UNISON: The sawtooth wave is produced at the same pitch by the three VCOs.

OCTAVE: The sawtooth wave is produced at the fundamental tone by two VCOs and at a pitch one octave higher by one VCO.

FIFTH: The sawtooth wave is produced at the fundamental tone by two VCOs and at a pitch a fifth higher by one VCO.

UNISON RING: The three VCOs are used to produce sound with ring modulation applied to the square wave.

POLY RING: Up to three chords are played with ring modulation applied to the square wave.

DETUNE knob: This knob sets the pitch shift for each of the VCOs 1 to 3. Shifting provides a thicker sound.

PORTAMENTO knob: This knob sets the portamento time.

EG INT knob: This knob sets the intensity with which the pitch is changed by the EG.

If you feel the pitch has drifted, please stop the sound for about 10 seconds. **volca's** auto-tuning function will correct itself automatically.

Keyboard buttons

Press a button to produce a sound at the specified tone.

MEMORY button

The **volca keys** is equipped with 8 memory locations that are used to save sequences. Press the MEMORY button, and then press a keyboard button between M1 and M8 to load the saved sequences. By pressing the FUNC button and MEMORY button, and then pressing a keyboard button between M1 and M8 will save the current sequence into the memory.

FUNC (function) button

The setting for various functions can be specified by holding down the FUNC button and pressing a keyboard button. The LED below the keyboard button will light up or turn off to indicate the setting.

Motion sequencing

This function records adjustments made to knobs while a sequence is being recorded. Once the sequence has made a full cycle from the step where a knob was used, this function is automatically deactivated. Knobs that are adjusted during recording will blink.

FUNC + ON/OFF: This turns motion sequencing on/off.

FUNC + SMOOTH: When motion sequencing is turned on, recorded knob adjustments will change smoothly at the beginning of the step. When motion sequencing is turned off, knobs will change to the settings recorded with each step.

FUNC + CLEAR: All recorded knob adjustments will be erased.

NOTE: Transparent knobs other than the PEAK knob (below VCF) and the TEMPO knob will be recorded with motion sequencing.

LFO settings

FUNC + SAW: This sets the LFO waveform to the sawtooth wave.

FUNC + TRI: This sets the LFO waveform to the triangle wave.

FUNC + SQR: This sets the LFO waveform to the square wave.

FUNC + TRIGGER SYNC: This resets the phase of the LFO waveform when a note is played.

Tempo settings

FUNC + 1/1, 1/2, 1/4: This sets the tempo to 1/2 or 1/4 the information from the TEMPO knob or MIDI IN or SYNC IN jacks. When set to 1/1, the tempo information is used as originally specified.

Metronome

FUNC + METRONOME: The metronome will sound while a sequence is being played back.

NOTE: The DELAY effect cannot be used while this function is being used.

Step triggering

FUNC + STEP TRIGGER: This force-triggers the EG at the beginning of the step. (Available only when the FLUX function is turned off.)

Tempo delay

FUNC + TEMPO DELAY: This links the delay time to the tempo to easily create rhythmical effects.

FLUX function

FUNC + FLUX: When turned on (button lit), the sequence will be continuously recorded and played back, regardless of the step.

When turned off, the performance will be recorded, quantized at the beginning of the step.

VCF (Voltage Controlled low-pass Filter)

This filter modifies the timbre (tonal character) by boosting or cutting specific frequency regions of the sound that's produced by the oscillator.

CUTOFF knob: This adjusts the cutoff frequency of the VCF. Turning the knob toward the left will darken the sound, and turning the knob toward the right will brighten the sound.

PEAK knob: This emphasizes the harmonic component of the cutoff frequency. The more that the knob is turned toward the right, the more of an emphasis will be applied to the harmonic component.

EG INT knob: This knob sets the intensity with which the cutoff frequency is changed by the EG.

LFO (Low Frequency Oscillator)

LFO is the low-frequency oscillator. With its cyclical changes, modulation can be applied to the VCO pitch and the VCF cutoff frequency.

RATE knob: This knob sets the LFO cycle. Turning the knob toward the right will shorten the cycle.

PITCH INT knob: This knob sets the depth (intensity) of the modulation applied to the VCO pitch.

CUTOFF INT knob: This knob sets the depth (intensity) of the modulation applied to the VCF cutoff frequency.

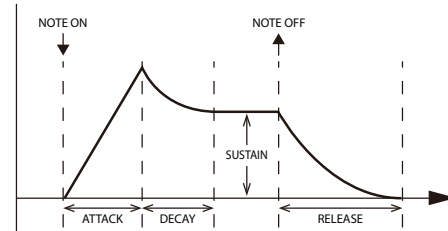
EG (Envelope Generator)

The EG functions by changing the VCA level over time. It can be used to apply volume dynamics to a performance.

ATTACK knob: This knob sets the time from note-on (the keyboard button is pressed) until the maximum of the envelope is reached.

DECAY/RELEASE knob: This knob sets the time until the sustain level is reached after the attack level has been reached. This simultaneously sets the time from note-off (the keyboard button is released) until the level becomes 0.

SUSTAIN knob: This knob sets the volume that is maintained while the keyboard button is pressed after the decay time has elapsed.



MIDI IN jack

This jack is where you can connect an external MIDI device to control the sound generator of the **volca keys**.

SYNC IN/OUT jacks

Use these jacks with the included cable to connect the **volca keys** to a monotron or other compatible equipment, such as an analog sequencer, and synchronize them. The SYNC OUT jack sends a 5 V pulse of 15 ms at the beginning of each step. If the SYNC IN jack is connected, the internal step clock will be ignored and the **volca keys** sequencer will proceed through its steps according to the pulses that are input to this jack. You can use this jack to synchronize the **volca keys's** steps with pulses that are being output from the audio output of a monotron, another analog sequencer or a DAW.

Headphone jack

Connect your headphones (stereo mini-plug) here. If nothing is connected, the sound will be output from the internal speaker.

TEMPO knob

This knob sets the playback tempo for the sequencer.

VOLUME knob

This knob sets the output volume.

DELAY

TIME knob: This knob sets the delay time.

FEEDBACK knob: This knob sets the amount of delay feedback as well as the mix level of the effect and dry sounds.

▶(PLAY) button

Press this button to play the sequence. Playback always starts from the beginning of the sequence. The ▶(PLAY) button will be lit up during playback. Pressing this button again stops playback.

●(REC) button

The performances in the keyboard buttons are recorded as a sequence. Press this button while stopped to enter record-ready mode (the button will blink), and then press the ▶(PLAY) button to start recording (the button will light up). Playing the keyboard while in record-ready mode will begin recording. Pressing the ●(REC) button during playback will begin recording from the point where the button was pressed.

Clearing

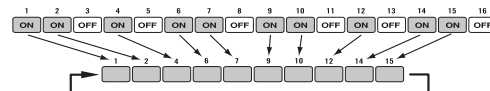
FUNC + ACT.STP: All steps in active step mode are turned on.

FUNC + ALL: All sequence data will be erased.

FUNC + ●(REC) during playback: Sound information will be erased while the buttons are pressed.

Active step mode

While holding down the FUNC button, press the ▶button (ACTIVE STEP) to enter active step mode (the ▶button will blink). Each step of the current sequence can be turned on/off. Steps that are turned off are disabled and will be skipped during playback and recording. The button for steps that have been turned on will light up. When you have finished specifying the settings, press the FUNC button to exit active step mode.



Returning all sequence data to the factory defaults

1. While holding down the FUNC and MEMORY buttons, turn on the **volca keys**.

The ●(REC) and ▶(PLAY) buttons will blink.

2. Press the ●(REC) button to return the sequences to the factory defaults and start **volca keys**.

Press the ▶(PLAY) button to cancel the reset operation and simply start **volca keys**.

Battery level indication

When the **volca keys** is turned on, the LEDs below the keyboard buttons indicate the remaining amount of battery power. If all LEDs are lit, the batteries are completely full. Fewer lit LEDs mean that the battery level is correspondingly lower.

If an AC adapter is connected, the remaining battery level will not be indicated correctly.

Either alkaline or nickel-metal hydride batteries can be used. In order for the remaining battery level to be detected and indicated correctly, the type of batteries being used must be specified in the global parameters of the **volca keys**. If the batteries are running low during usage of the **volca keys**, it warns you by blinking all LEDs below the keyboard buttons simultaneously. If the batteries run down completely, the **volca keys** automatically turns off.

NOTE: It's not possible to stop the low battery warning; however, you will be able to continue using the **volca keys** until the batteries have run down completely.

Main Specifications

- **Keyboard:** Multi-touch keyboard
 - **Sound generators:** 3 VCOs (saw, square), 1 EG, 1 VCF (12dB/oct LPF), 1 VCA, 1 LFO
 - **Connectors:** Headphone jack (ø3.5 mm stereo mini-phone jack), SYNC IN jack (ø3.5 mm monaural mini-phone jack, 20V maximum input level), SYNC OUT jack (ø3.5 mm monaural mini-phone jack, 5V output level)
 - **Power supply:** AA/LR6 alkaline battery ×6 or AA nickel-metal hydride battery ×6, DC 9V AC adapter (⚡)
 - **Battery life:** Approximately 10 hours (when using alkaline batteries)
 - **Dimensions (W×D×H):** 193×115×46 mm/7.60"× 4.53"×1.81"
 - **Weight:** 377 g/13.30 oz. (excluding batteries)
 - **Included items:** Six AA alkaline batteries, Cable, Owner's manual
 - **Options:** AC adapter (DC 9V ⚡)
- * Specifications and appearance are subject to change without notice for improvement.

Block diagram

volca keys

