Krakli S5 User Guide

Organ, String Ensemble and Poly Synthesizer in one instrument. Version 1.0. © 2026 Krakli.com



What S5 is

S5 is a three-section ensemble keyboard in the spirit of the multi-section machines of the late 1970s and early 1980s, rebuilt for today. It has:

- **Organ**: a nine-drawbar tonewheel organ with percussion, key click, leakage and a vibrato/chorus scanner.
- **String Ensemble**: a true divide-down string machine with three footages, body voicings, a Choir voicing with a vowel filter, and a Free mode for looser strings.
- **Poly Synthesizer**: a 16-voice synth with a 64-wave S3 wavetable oscillator, a 13-wave analog and phase-distortion oscillator with hard sync and a pitch sweep, a sub oscillator, noise and ring modulation.

What sets S5 apart is **open routing**. Each section's signature processing is its default: the Rotary speaker for the Organ, the Ensemble for the Strings, the filter for the Synth. Every one of them is available to every section. Run the strings through the Rotary, give the organ a resonant filter sweep, or put the synth through the Choir.

Installing

Run `S5-1.0.0-mac.pkg`. The installer is signed and notarised by Apple, so it opens without warnings. You can choose any of:

- **VST3 plug-in**: `/Library/Audio/Plug-Ins/VST3/S5.vst3`
- **Audio Unit plug-in**: `/Library/Audio/Plug-Ins/Components/S5.component`
- **Standalone application**: `/Applications/S5.app`

S5 runs on macOS 12 or later, on Apple silicon and Intel Macs. Rescan plug-ins in your DAW after installing.

Quick start

1. Open S5. The first factory patch, **Jazz Organ**, is loaded.
2. Play. In the Standalone app you can use the on-screen keyboard or your computer keyboard (see *Playing from the computer keyboard*).
3. Click the red patch display at the top right to open the list of all 32 patches, and pick another.
4. Turn any knob: the display shows its name and value while you move it.

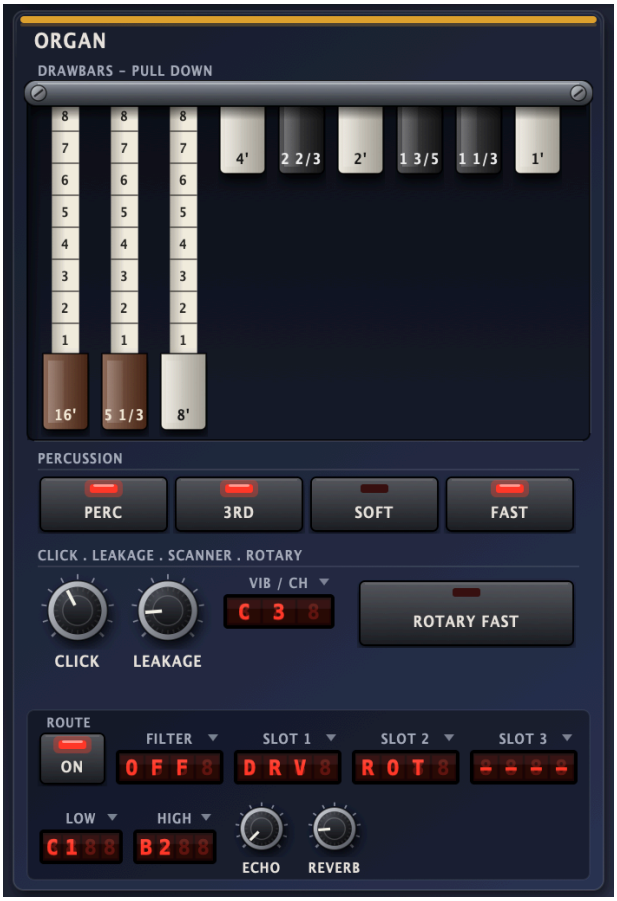
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Control	What it does
< and >	Step to the previous or next of the bank's 32 patch slots.
Load / Save	Load or save a single patch file (`.s5patch`). Saving also stores the sound in the current slot, named after the file. Files go in `Documents/S5` .
Bank Ld / Bank Sv	Load or save all 32 slots as a bank file (`.s5bank`).
Random	Opens a menu: randomise *Everything*, just the *Organ*, *Strings* or *Synth*, or the *Routing and effects*. Random choices stay within musical ranges.
Display	Shows the slot number and patch name, or the control you're moving. **Click it** for the list of all patches, and for *Reload factory bank*.

The bank is saved with your DAW project. Changing patch stops any held notes but never makes a sound itself. *Reload factory bank* replaces all 32 slots with the factory patches, so save your own bank first.

Organ



Drawbars. Nine drawbars set the tonewheel registration: 16', 5 1/3', 8', 4', 2 2/3', 2', 1 3/5', 1 1/3' and 1'. Drag a drawbar **down** to pull it out (0 to 8); each step is about 3 dB. Brown tips are the sub-octave and fifth below, white tips are octaves, black tips are mutations. All keys share 91 phase-locked tonewheels, with foldback at the top and bottom of the range as on the original instruments, so polyphony is unlimited.

Percussion.

- **Perc** switches percussion on. It adds a decaying tone to notes struck from silence. Notes added while others are held don't get it, but every note of a chord struck together does. With percussion on, the 1' drawbar is silent, as on the original circuit.
- **3rd** selects the third harmonic (2 2/3'); off gives the second (4').
- **Soft** lowers the percussion. With it off (normal), the drawbars drop slightly so the percussion stands out.
- **Fast** selects the short decay; off gives the slow decay.

Click, Leakage, Vib/Ch. *Click* sets the key click. *Leakage* adds the faint neighbouring tonewheels heard on real organs. *Vib/Ch* is the scanner: V1 to V3 are vibrato depths, C1 to C3 are the chorus settings, OFF bypasses it.

Rotary Fast switches every Rotary module in S5 between slow and fast. The horn and drum speed up and slow down at their own rates. The mod wheel does the same.

String Ensemble



Footage (16', 8', 4') sets how much of each octave sounds. This sets range and weight. All three footages are derived from the same oscillators, so the sound is locked in tune across the keyboard.

Shape: *Brill* (brilliance) tilts the top end; *Cresc* (crescendo) is the attack; *Rel* is the release.

Voicing sets the tone, not the range. Each voicing is a fixed body filter:

- **Violin**: bright, with a resonance near 3 kHz.
- **Viola**: a darker middle.
- **Cello**: a low body resonance and a soft top.
- **Full**: a broad blend.
- **Choir**: replaces the body filter with a three-formant vowel filter, turning the string machine into a choir ensemble. It also puts the Choir module in an empty Slot 3.

Wave and Mode. *Saw*, *Pulse* or *Mix*. **Free** gives every key its own oscillators, each detuned by up to the *Detune* amount, for a looser, wider sound. Off is the classic *Divide* mode.

Tone and Choir.

- **PW**: pulse width (Pulse and Mix only).
- **Detune**: Free mode only.
- **Vowel**: moves through A-E-I-O-U (Choir only).
- **Breath**: adds breath noise (Choir only).
- **Formant**: shifts the voice from deep (below a male choir) through male, female and child to tiny (Choir only).

Controls that do nothing in the current mode are dimmed and locked until they apply.

Poly Synthesizer



Osc 1 (S3 wavetable): eight detuned oscillators per voice playing one of 64 waves:

Group	Waves
Classic	Sine, Saw, Ramp, Soft Ramp, Peak Ramp, Square, Triangle, Peak, Octava, Cluster 1, Cluster 2
Shaped sines	Peaked, Half, Half peaked, Double, Double peaked, Double rectified, Double rectified peaked
Harmonic series	All, odd and even harmonics at several slopes; Organ 8' 4' 2'; Organ full
Formants	Formant 2 to 20, Resonant 4 to 32, Vowel A, E, I, O, U
Instruments and digital	Strings, Brass, Reed, Clarinet, Oboe, Flute, Pipe, Harpsichord, Glass, Metal, Fifths, Sync 2.5, 3.5 and 5.5, Digital 1 to 3

Width sets the detune spread of the eight oscillators. *Move* sets how much six slow modulators wander them. *Octave* sets the pitch in footage, 32' to 2'.

Osc 2: 13 waves: Saw, Pulse, Triangle, Sine, Saw+Square, and eight phase-distortion shapes (PD Saw, Square, Pulse, Double Sine, Saw-Pulse, Reso Saw, Reso Triangle, Reso Trapezoid).

- **PD/PW**: the pulse width, or how far a PD shape bends from a sine.
- **Octave, Coarse and Fine**: tuning.
- **Sync**: hard-syncs Osc 2 to Osc 1.
- **Sweep**: bends Osc 2's pitch by up to ±48 semitones on its own envelope, shaped by its **A** (attack) and **D** (decay) faders. The envelope restarts on every note. With Sync on, the sweep moves the harmonics while the note stays put, which gives the classic sync scream. Sweep at 0 switches it off.

Mixer, LFO, Glide. The levels of Osc 1, Osc 2, the Sub (an octave below Osc 1), Noise and Ring (Osc 1 × Osc 2). *Vib Rate* and *Vibrato* set the pitch vibrato. *Glide* slides between notes. *Spread* places successive voices left and right.

Amp envelope and Vel: the volume envelope, and how much velocity changes the level.

The filter (every section)

Every section has its own filter, with its own settings. One set of controls in the Synth section edits them all.

- **Edit (Org, Str, Syn)** chooses which section the filter controls adjust. The filter area is tinted in that section's colour: amber for Organ, blue for Strings, red for Synth.
- **Link** (shown while editing Organ or Strings) makes that section follow the Synth's filter settings instead of its own.
- **Type**: LP24, LP12, BP, HP, Notch, or **Vowel**, a formant filter where Cutoff moves through the vowels.
- **Cutoff, Res, Drive, Key** (key tracking), **Env** (envelope amount, ±4 octaves), **Vel** (velocity to cutoff).
- **Filter envelope** (A, D, S, R).
- **Filter LFO**:
  - *LFO Rate* and *LFO Depth* (up to ±2 octaves).
  - *Shape*: Sine, Triangle, Square, Saw or S&H.
  - The lamp above *LFO Rate* pulses with the LFO. **Click the lamp for tempo sync**: it turns amber, and the knob becomes *LFO Div*, a note division from 4 bars to 1/16, with triplets and dotted values. While the host plays, a synced LFO locks to the bar.

Whether a section uses its filter is set in its route strip. That's the filter **mode**, described next.

Routing

Each section has a **route strip** along its bottom edge.

Control	What it does
On	Switches the section on or off.
Filter	**OFF**, **PARA** or **POLY**. *PARA* runs the whole section through one filter and envelope, which restarts when you play from silence, for the classic paraphonic brass sweep. *POLY* gives every note its own filter and envelope.
Slot 1, 2, 3	The insert effects, in order. Each slot can hold any of the eight modules, or `----` for none. A module can be in only one slot of a section: choosing it again moves it.
Low / High	The section's key range. Drag up or down, or scroll, to change it.
Echo / Reverb	How much of the section goes to the master echo and reverb.

The signal path for each section is: sound source, then the filter (if PARA or POLY), then for the Strings the voicing (or the Vowel filter for Choir), then Slot 1, Slot 2 and Slot 3, then the section's Level and Pan in the Master mixer. All three sections then go through the master Echo, Reverb, Volume and a safety limiter at -1 dBFS.

LED selectors (wave, octave, slots, filter mode and so on) work three ways: click for a list, drag up or down, or scroll.

Effects modules



Each section owns one of each module, with its own settings. Open them with the section's **FX** button in the Master mixer. Modules that are in one of that section's slots are outlined in red.

Module	LED	Controls
Rotary	ROT	Fast (all rotaries), Balance (horn and drum), Drive, Width
Ensemble	ENS	3-Phase or Lattice, Depth, Mix
Choir	VOX	Singers (2 to 8), Drift, Mix
Phaser	PHAS	Bypass, Rate, Depth, Feedback
Chorus	CHOR	Rate, Depth, Mix
Tremolo	TREM	Rate, Depth, Auto-pan
Drive	DRV	Valve, Transistor or Fuzz; Drive, Tone
Amp	AMP	Combo, British, Stack or Bass; Gain, Bass, Mid, Treble, Level; Cabinet: 1x12 open, 4x12 closed or Direct

Master



- **Echo, Repeats, Echo Time**: a tempo-synced ping-pong echo (1/16 to 1/2, with dotted values). Sections feed it through their Echo sends.
- **Reverb, Size**: the reverb, fed by each section's Reverb send.
- **Mixer**: each section's **Pan** and **Level**, and its **FX** button.
- **Meter**: the output level.
- **Volume**: the master volume.
- **Panic**: stops every note.

Keyboard and key ranges



The coloured bars above the keyboard show each section's key range: amber for Organ, blue for Strings, red for Synth. **Drag either end of a bar** to change that range. Overlapping ranges layer sections; separate ranges split the keyboard. Click the keys to play.

Playing from the computer keyboard

In the Standalone app (and in plug-in windows, where the host passes keys through):

- **Z S X D C V G B H N J M ,** play C3 to C4.

- **Q 2 W 3 E R 5 T 6 Y 7 U I 9 O 0 P** play C4 to E5.
- **Left and Right arrows** shift the octave.

MIDI

MIDI	Effect
Notes and velocity	Play the sections whose key range includes the note.
Sustain pedal (CC64)	Sustains Strings and Synth. The Organ ignores it, as on the real thing.
Mod wheel (CC1)	Past halfway, switches the Rotary to fast.
Pitch bend	Bends the Synth by up to 2 semitones.
All notes off	Stops every note.

Every parameter can be automated from your DAW.

Factory patches

No.	Patch	No.	Patch
01	Jazz Organ	17	Poly Brass
02	Full Organ	18	Sync Lead
03	Rock Organ	19	Soft Pad
04	Gospel Organ	20	Glass Bells
05	Ballad Organ	21	Digital Keys
06	Reggae Bubble	22	PD Bass
07	Theatre Tibia	23	Reso Sweep Pad
08	Wah Organ	24	Vox Synth
09	String Machine	25	Funky Clav Synth
10	Cello Section	26	Sync Sweep Brass
11	Disco Strings	27	Split Organ / Strings
12	Phased Strings	28	Strings + Brass
13	Choir Aah	29	Organ + Choir
14	Choir Ooh	30	Ensemble Stack
15	Brass Machine	31	Bass + Choir Split
16	Sweeping Strings	32	Strings Thru Rotary

The patches are level-matched, so stepping through them keeps the same loudness.

Tips

- **Strings through the Rotary**: set a Strings slot to `ROT`. The Rotary Fast button and the mod wheel move it too.
- **Paraphonic brass from the string machine**: set the Strings route's Filter to **PARA**, press **Edit: Str**, and use a low Cutoff with plenty of Env and a slow filter attack. See *Brass Machine*.
- **Talking organ**: Organ Filter on **PARA**, Edit **Org**, filter type **Vowel**, then a slow synced filter LFO.

- **Sync scream**: turn Osc 1 down and Osc 2 up, switch Sync on, set Sweep to about +24 with a short decay.
- **Same module in two places**: each section has its own copy of every module, so the Organ and the Strings can both use a Chorus with different settings.