Similis

Lo-fi synth/Tone generator

Contents:-

Layout.

Similis is a lo-fi synth that is capable of producing a wide range of sounds.
Similis has 6 different 'patches'. The controls change different parameters depending on which patch is selected.

Similis runs off a 9 volt battery. A battery clip is included. We do not supply wall adaptors with our products to keep the cost as low as possible. If you would like to run **Similis** off of a wall adaptor please ensure it is a 9V DC centre positive adaptor.

DO NOT USE A CENTER NEGATIVE ADAPTOR AS THIS WILL DAMAGE THE SYNTH. IF YOU DO RUN INTO PROBLEMS PLEASE GET IN TOUCH AS IT IS POSSIBLE THE SYNTH COULD BE FIXED OR REPLACEMENT PARTS SENT TO YOU TO EASILY FIX IT YOURSELF.

support@decadebridge.com

Patches (TYPE).

Similis has 6 different 'patches'. These are selected using the large button (TYPE) on the right of the synth. If the button is held down **Similis** will step through the patches automatically. The **TRIGGER IN** jack above the button allows you to switch patches using an external 5 volt gate or trigger. This can create some interesting, glitchy, rhythms and sequences as all the patches are different.
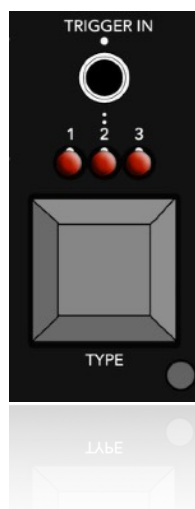
Patch 1. 3 voice stack:-
3 Oscillators with independent pitch. Waveform switch for voice A and, B and C together.

Patch 2. 3 voice detune:-
3 Oscillators. Linked pitch. Osc A sets the root note. B and C are detuned against A. Waveform switch for each voice.

Patch 3. Chords:-
3-5 Oscillators. Linked pitch. Osc A sets the root note. Waveform switch for voice A. Waveform switch for all other voices together. Select one of 10 different chords and the amount of voices in the chord. Set the level of the chords voices.

Patch 4. Quantised:-
3 Oscillators. Linked pitch. Osc A sets the root note. Voices B and C are quantised against this. Choose between semitone, major or minor quantisation.

Patch 5. Sequencer 1:-
2 Oscillators. Linked pitch. Osc A sets the root note. Set the note range and rate of the sequencer. Notes are quantised from the root pitch. Major scale, fifths and sevenths or minor scale. Switch between sequencer STOP, RUN with one voice, Run with 2 voices. Notes are selected at random.

Patch 6. Sequencer 2:-
This patch is the same as Patch 5 above with the following exceptions. Clock in to trigger the sequencer with 3 different settings. Volume control for voice 2.
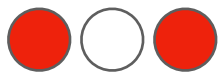
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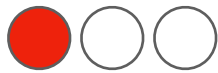
● ○ ○	○ ● ○	○ ○ ●
Stack. 3 Oscillators with independent pitch control.	Detune. 3 Oscillators. Linked root pitch. Detune for voices B & C.	Chords. 3-5 Oscillators. Linked root pitch. 10 different chord choices.

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Quantised. 3 Oscillators. Linked root pitch. Quantised pitch for B & C.	Sequence 1. 1 or 2 voices. Linked root pitch. Quantised sequencer with rate & range.	Sequence 2. 2 voices. Linked root pitch. Quantised sequencer with clock in & range.

Controls.

Similis has 3 main pots, 3 CV inputs and 3 switches. Each patch uses these in different ways depending on the '**TYPE**' selected.
The 3, 3.5mm, mono jacks directly above each control are inputs for each parameter with a couple of exceptions. Here you can connect a 0-5 volt control voltage source.
We'll start by looking at the pots and CV inputs for each patch.

Pots/CV inputs.
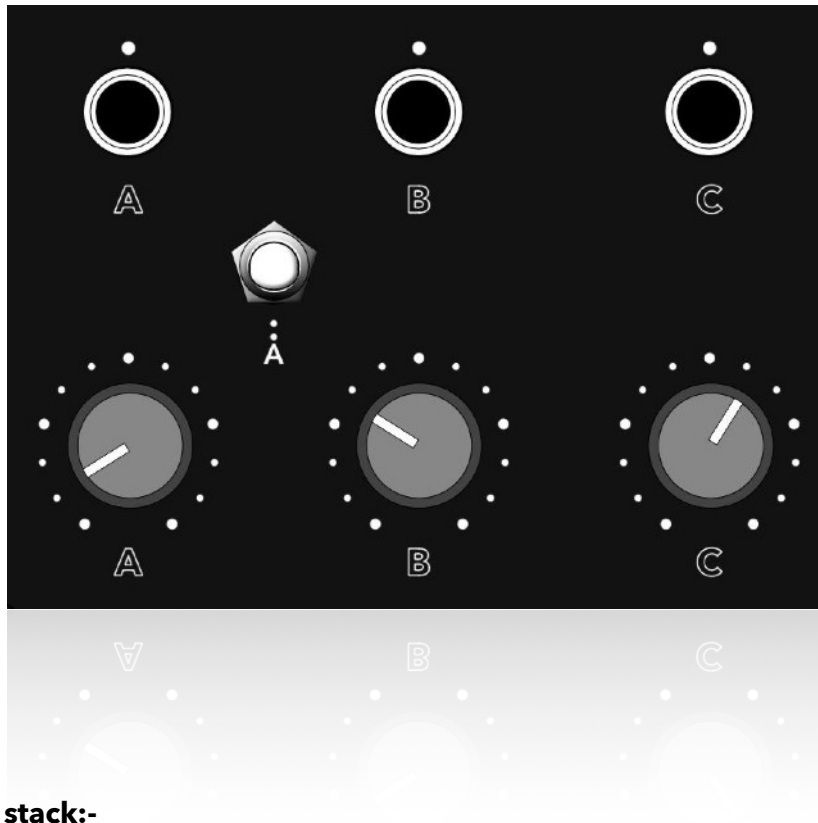
Patch 1. 3 voice stack:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A**. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** controls the pitch for oscillator **B**. CV input **B** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in C - Pot **C** controls the pitch for oscillator **C**. CV input **C** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.

Patch 2. 3 voice detune:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A** and also sets the root pitch for the other 2 voices. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** and CV in **B** control the detune for oscillators **B** and **C**. Oscillator **B** is tuned down and **C** is tuned up from the root pitch.
Pot/CV in C - Pot **C** and CV in **C** control the level for oscillators **B** and **C**.

Patch 3. Chords:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A** and also sets the root pitch for the other 2-4 voices. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** and CV in **B** control the chord selection. There are 10 chords available.
Pot/CV in C - Pot **C** and CV in **C** control the level for chord voices.

Patch 4. Quantised:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A** and also sets the root pitch for the other 2 voices. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** and CV in **B** control the quantised pitch of voice **B** (relative to voice **A**).
Pot/CV in C - Pot **C** and CV in **C** control the quantised pitch of voice **C** (relative to voice **A**).

Patch 5. Sequencer 1:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A** and also sets the root pitch for the sequencer. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** and CV in **B** control the range of the sequencer notes (randomly selected).
Pot/CV in C - Pot **C** and CV in **C** control the rate of the sequencer.

Patch 6. Sequencer 2:-
Pot/CV in A - Pot **A** controls the pitch for oscillator **A** and also sets the root pitch for the sequencer. CV input **A** controls the pitch of the oscillator when a 0-5 volt control voltage is connected. The pitch is set to V/OCT.
Pot/CV in B - Pot **B** and CV in **B** control the range of the sequencer notes (randomly selected).
Pot C - Controls the level of voice 2.
CV in C - Is a clock input. The swing of the sequencer is affected by the duty cycle/length of the trigger/gate you input here.

Switches.

Similis has 3 switches that change different parameters for each patch depending on which is selected.

PATCH	Switch A	Switch B	Switch C
1 3 OSC STACK	Set the waveform for oscillator A. SINE, SAW, SQUARE	Set the waveforms for oscillators B & C. SINE, SAW, SQUARE	Set the level of oscillators B & C.
2 3 OSC DETUNE	Set the waveform for oscillator A. SINE, SAW, SQUARE	Set the waveform for oscillator B. SINE, SAW, SQUARE	Set the waveform for oscillator C. SINE, SAW, SQUARE
3 CHORDS	Set the waveform for oscillator A. SINE, SAW, SQUARE	Set the waveforms for oscillators B & C. SINE, SAW, SQUARE	Select the amount of voices in the chord. 2-4 additional to voice A.
4 3 OSC QUANT	Set the waveform for oscillator A. SINE, SAW, SQUARE	Set the waveforms for oscillators B & C. SINE, SAW, SQUARE	Set the quantise/scale of voices B & C. SEMITONE/MAJOR/MINOR
5 SEQ 1	Set the waveform for oscillators A & B. SINE, SAW, SQUARE	Set the sequencer mode. STOP/VOICE A/VOICE A & B	Set the sequencer scale. MAJOR/5THs & 7THs/MINOR
6 SEQ 2	Set the waveform for oscillators A & B. SINE, SAW, SQUARE	Set the clock input step reaction (**CV in C**). INPUT LOW/LOW AND HIGH/HIGH	Set the sequencer scale. MAJOR/5THs & 7THs/MINOR

VCA/LPG and output.

Similis' output section has a few simple controls to help shape it's sound.

You can use a CV source to control the output volume of **Similis** by connecting it to the 3.5mm mono jack input labelled **VCA**. With the relative switch in the up position, **Sn** will output audio continuously. With the switch in the down position, **Similis'** volume will determined by the **VCA** input signal.

The **LPG** (low pass gate) switch allows you to select between to different passive filter cutoff points. In the middle position no filter is used. In the up position there is a slight roll off of the top end to 'darken' the sound slightly. In the down position a slightly more 'darker' cutoff can be had.

When using the **LPG** and **VCA** together percussive sounds can be created. The **LPG** will implement the low pass filter as the control voltage drops. A strong CV signal is suggested here as this part of the synth is passive.

The resulting sound is then routed to the 3.5mm mono jack output. The overall level of the synth can be altered using the **LEVEL** pot.

The VCA has quite a quick, snappy reaction time. Interesting results can occur when running an audio rate square wave into it. This can create an AM effect.

info@decadebridge.com
support@decadebridge.com

https://www.etsy.com/uk/shop/DecadeBridge

Instagram and YouTube
@decadebridge