INSTRUŌ | SPECIALIST SYNTHESIZERS
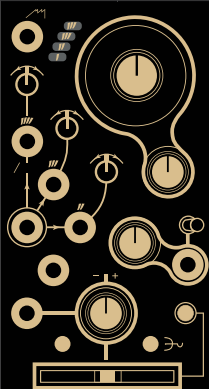
saïch
Quad Oscillator

Overview

OUTPUT

DETUNE CONTROLS

1V/OCT INPUTS

1V/OCT

PWM CV INPUT

CV INPUT &
ATTENUVERTER

SUB BUTTON

FADER
MIX PROFILE SCAN
INTERVALLIC OFFSET
GLOBAL DETUNE

VOICE AMPLITUDE INDICATORS

INSTRUō

COARSE

DETUNE

FINE

LIN   EXP

PWM

FM

CV   CTRL

sōfch

GLOBAL COARSE
FREQUENCY

GLOBAL FINE
FREQUENCY

LIN   EXP

CTRL BUTTON

MIX PROFILE BUTTON
CASCADE CROSSFADE
BASIC VCA
VOICE ARPEGGIATOR
VOICE SUBTRACTION
ODDS AND EVENS
SMART PAIRS
CONSTANT ROOT

Case Tuning

Because **saïch** incorporates four fully analogue oscillator cores with definable intervallic offsets, it can require a little assistance to acclimatise to a new home. With today's endless possible combinations of power supply and module options in Eurorack, variations in -/+ 12V power rail balance is something that might need to be compensated for. In other words, the **saïch** can need tuned on a **case-by-case** basis (Pun intended!).
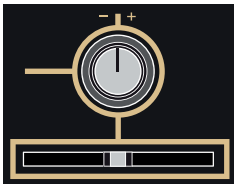
Once **saïch** is installed into the system, allow the system to warm up (10-15 min).

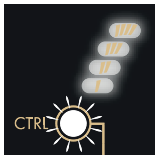Once the system is warm, run through the following tuning procedure.
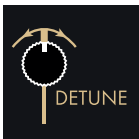
### Step 1

Centre all three **Detune** controls.

Step 2

Centre the **CTRL Attenuverter** and **Fader**. Ensure the **CTRL Button** is in its unlit state (press the **Mix Profile Button** to return from alternate controls).
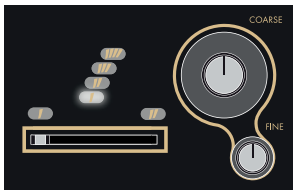
Step 3

Hold down the CTRL Button for 3 seconds until the Voice Indicators blink. The tuning procedure is now active and is indicated by a blinking amber/white CTRL Button and a flashing amber Fader.
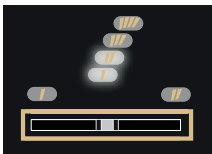
Step 4

Notice that the 1st and 2nd Voice Indicators are illuminated and moving the Fader crossfades between voices 1 and 2. Voice 1 is always the reference frequency.

Step 5

With the Fader fully left, allowing only voice 1 to be monitored, tune oscillator 1 to C5 (~523.25Hz / the octave above middle C) using the Coarse and Fine knobs.

Step 6
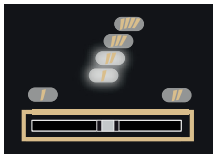
Now move the Fader fully right to monitor voice 2.

Step 7

Use the CTRL Attenuverter to tune voice 2 to C5 (523.25Hz / the octave above middle C).
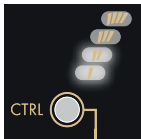

Step 8

Move the Fader to its centre position to confirm the tuning between voices 1 and 2. There should be little to no beating.

Step 9

When satisfied with the tuning between voices 1 and 2, press the Sub Button and Mix Profile Button at the same time to save the tuning.
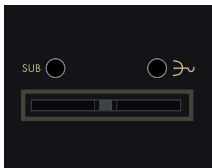

Step 10

Press the CTRL Button to go to the next step - tuning the octave of voice 2.
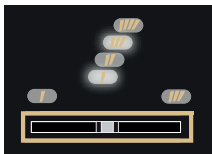
Step 11

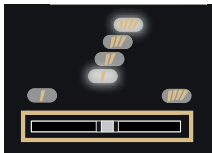Repeat steps 5-9, but instead of tuning voice 2 to C5, tune it to C6 (~1046.50Hz).

Step 12

When satisfied with the tuning between voices 1 and 2, press the Sub Button and Mix Profile Button at the same time to save the tuning.

Step 13

Now press the CTRL Button again to repeat this process tuning voice 3 to voice 1 and voice 4 to voice 1 at both unisons and octaves.

Step 14

Once you've saved the final tuning (the octave of voice 4), press the CTRL Button to exit the tuning procedure.

SUB Button

The Sub Button cycles through four waveform/sub options for oscillator 1. Selection is indicated by the **CTRL button** LED.

Sub Mode 1: Quick white upward pulse. Fundamental sawtooth wave.

Sub Mode 2: Slow white downward pulse. Inverted sawtooth wave dropped one octave.

Sub Mode 3: Slowly blinks white. Square wave dropped one octave.

Sub Mode 4: Slowly flashes between white and amber. Pulse wave with PWM dropped one octave.

CTRL Button

The CTRL Button is used to set the behavior of the Fader.

If the CTRL Button is unilluminated, the Fader sets the Mix Profile Scan position. (Primary Function)

If the CTRL Button is illuminated white, the Fader sets the Intervallic Offset of voices 2, 3, and 4. (Secondary Function)

If the CTRL Button is illuminated amber and an Intervallic Offset has been set, moving the Fader from left to right controls the Global Detune of each voice from unison to their fully spread position. (Secondary Function)

Mix Profile Button

Pressing the **Mix Profile Button** cycles through the seven mixing profiles. Profile selection is depicted in binary on the **Voice Indicators**.

To quickly default to the **Cascade Crossfade** mix profile, press and hold the **Mix Profile Button (1)** and then press the **Sub Button (2)**.

Mix Profiles

Once a mix profile is selected the **Fader** scans through the mix profile.

Cascade
Crossfade

Basic VCA

Voice Arpeggiator

Voice Subtraction

Odds to Evens

Smart Pairs

Constant Root