Installation

1. Ensure your 16n Faderbank is set to i2c follow mode:
    a. Connect it via USB to a computer
    b. Visit https://16n-faderbank.github.io/editor/ in Google Chrome
    c. Click on Edit Config
    d. In the Device Options tab, make sure the I2C Leader/Follower setting is set to Follower (click the Update Controller button after making any changes)
2. Turn off your eurorack system before installing the module
3. Disconnect your 16n Faderbank from it's power supply
4. Connect the power ribbon cable with the red stripe nearest the text "RED" on the back of the module
5. Connect a stereo 3.5mm to 3.5mm cable between the nQuencer and 16n Faderbank i2c sockets
6. Power on your eurorack system and 16n Faderbank

** WARNING **
Always turn off your eurorack system and 16n Faderbank before connecting or disconnecting the i2C cable at either end. Failure to do so can cause damage.

Usage

When the nQuencer module receives a trigger at the Clock input it reads the state of the first 16n Faderbank fader and outputs a corresponding voltage at Output 1. At the next clock signal it will read the second fader and so on until it reaches the end and loops back to the start.

In the default 16 step mode, a trigger at the Reset input or pressing and releasing then Reset Button will move back to the first step and Output 2 will output a gate for the sequence. Other modes use Reset and Output 2 for different functions.

If a fader is at the very bottom no gate will be generated for that step in modes that output gates. The last fader that isn't at the bottom determines the length of the sequence. This behaviour can be altered in the settings.

Calibration

The module comes calibrated and ready to use but if you want to calibrate the nQuencer outputs, press and hold the Reset button down for 3 seconds while powering on your eurorack system. When you release the button, the LED will remain lit.

Use faders 1 and 2 on the 16n Faderbank to coarse and fine tune Output 1 and faders 3 and 4 to tune Output 2. Adjust them until 1 volt is output on both. Press the Reset button and repeat the process for a 3 volt output and then press the Reset button again to exit calibration and save the settings.

Jumpers

The two jumpers on the nQuencer module add pull-up resistors to the i2C bus. If communication with the 16n Faderbank is unreliable you can try removing the jumpers while the module is powered off.

Settings

Press and hold the Reset button for around 3 seconds until the LED remains lit to enter settings mode. Use the faders to adjust settings and press the Reset button again to exit settings.

Fader 1 - Mode

1. Sixteen Steps
   ○ Uses all 16 faders for a 16 step sequence
   ○ Output 2 outputs a gate for the sequence
   ○ The Reset input and Button move back to the first step
2. Two Eights
   ○ Two eight step sequences (faders 1 - 8 and 9 - 16)
   ○ Output 2 outputs voltages for the second sequence
   ○ The Reset input and Button move back to the first step
   ○ In Alternative Reset mode the Reset Input advances the second sequence instead of the Clock input
3. Transpose
   ○ Two eight step sequences (faders 1 - 8 and 9 - 16)
   ○ The value from the second sequence (up to 1v) is added to the value from the first sequence
   ○ Output 2 outputs a gate for the sequence
   ○ The Reset Input and Button move back to the first step
   ○ In Alternative Reset mode the Reset Input advances the second sequence instead of the Clock Input
4. DJ
   ○ Two eight step sequences but only one at a time
   ○ Output 2 outputs a gate for the sequence
   ○ The Reset Input moves back to the first step and the Reset Button toggles between the sequences
   ○ In Alternative Reset mode the Reset input toggles between the sequences and the Reset Button moves back to the first step

Fader 2 - Sequence Direction

1. Up
2. Down
3. Up Down
4. Random

Fader 3 - Probability

Sets the probability of a note firing from 100% at the bottom to 0% at the top.

Fader 4 - Output Voltage Range

The voltage output by nQuencer when the fader is at the top - 1v, 2v, 3v or 4v. Transpose mode adds up to 1v.

Fader 5 - Fader at Bottom

1. Note Off, Variable Length
   ○ Fader at the bottom doesn't generate a gate (in modes that output a gate)
   ○ Length of sequence determined by the last fader that isn't at the bottom
2. Note Off, Fixed Length
   ○ Fader at the bottom doesn't generate a gate (in modes that output a gate)
   ○ Length of sequence fixed at the max for the mode
3. Zero Volt, Variable Length
   ○ Fader at the bottom outputs 0v and a gate (in modes that output a gate)
   ○ Length of sequence determined by the last fader that isn't at the bottom
4. Zero Volt, Fixed Length
   ○ Fader at the bottom outputs 0v and a gate (in modes that output a gate)
   ○ Length of sequence fixed at the max for the mode

Fader 6 - Gate Length

Sets the length of the gate output on output 2 (for modes that support it) from a very short trigger at the bottom to 2 seconds at the top.

Fader 7 - Alternative Reset Input

Changes the Reset Input to alternative mode (see Mode for details). Alternative Reset Input is disabled if this fader is at the bottom and enabled when at the top.

Fader 13 - Quantiser Root

Sets the root note for the Quantiser:

Bottom | | | | | | | | | | | Top

C	C#	D	D#	E	F	F#	G	G#	A	A#	B

Fader 14 to 16 - Quantiser Mode

By default the output is quantised to the nearest semitone. This can be adjusted using faders 14 to 16 and the last fader changed determines the mode used.

	Fader 14	Fader 15	Fader 16
1	Chromatic (Semitone)	Dorian	Major Pentatonic
2	Ionian (Major)	Phrygian	Minor Pentatonic
3	Aeolian (Natural Minor)	Lydian	Blues
4	Harmonic Minor	Mixolydian	Disabled (Unquantised)

USB →

4
3
2
1

Mode:
4. DJ
3. Transpose
2. Two Eights
1. Sixteen Steps

Direction:
4. Random
3. Up Down
2. Down
1. Up

Probability

Output Voltage Range:
4. 4v
3. 3v
2. 2v
1. 1v

Fader at Bottom:
4. Zero Volts, Fixed Length
3. Zero Volts, Variable Length
2. Note Off, Fixed Length
1. Note Off, Variable Length

Gate Length

Alt Reset In

Root

4. Harmonic Min.
3. Aeolian
2. Ionian
1. Chromatic

4. Mixolydian
3. Lydian
2. Phrygian
1. Dorian

4. Disabled
3. Blues
2. Minor Pent
1. Major Pent