Free
Modular

Quantizer

A quantizer rounds arbitrary control voltages to the closest option in a predefined scale. This lets you keep things musical by constraining the output of an LFO, random voltage generator, or even a sequencer to a given musical scale or even just a few notes. This module has two quantization channels which can operate on the same or different scales. It takes 1V/octave signals in and, after rounding, transposing, and some other processing. outputs 1V/octave signals again.

Note select

The 12 buttons correspond to the 12 semitones of an octave. The buttons are colored to match the keys of a piano, with C at the top, moving clockwise. Press a button to toggle whether or not that note is active in the scale. LEDs indicate which notes are active and which is currently being played.

Shift

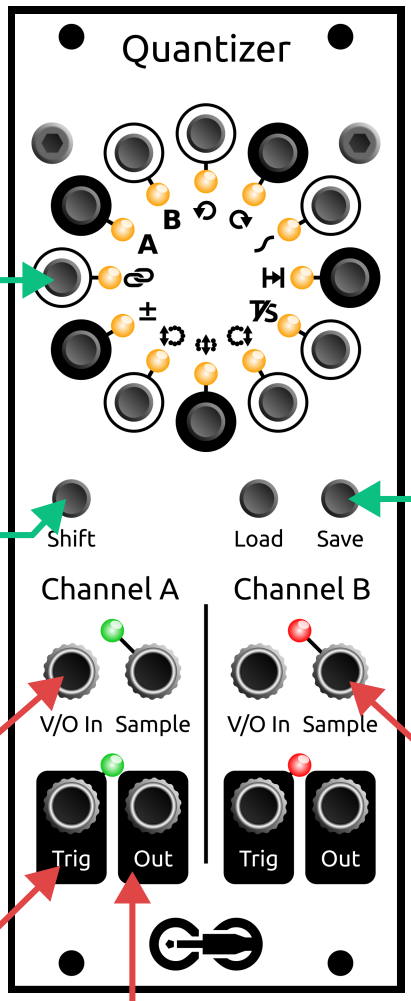
Each of the 12 note buttons has a secondary function. Hold down the Shift button while pressing one of them to access a different feature.

1V-per-octave input

CV input to be quantized. Accepts 0-10V. 0V is set to C.

Trigger output

Outputs a brief trigger every time the **output** note changes.



1V/octave output

Outputs the quantized CV. Output is limited to 0-10V.

Save & Load

Press Save or Load, then press one of the 12 note buttons to select one of the 12 save slots. This will save or load the scale for the currently selected channel.

If you hold Shift when you press Save/Load, then it will instead Save/Load the complete configuration: the scales plus all other settings for both channels. There are a separate set of 12 save slots for these complete configurations.

Hold Load and Save together for 2 seconds to clear all save slots.

Sample gate input

Accepts a trigger/gate input. When the input is high, the input is sampled and a quantization is performed. When low, the last output will be held, ignoring any changes to the input. This input is normalled high, so when no patch cable is connected, the channel will quantize continuously.

Menu

Each of the 12 note buttons has an alternate function, indicated by an icon. These functions can be accessed by holding down Shift while pressing the button. The functions are as follows:

Rotate counterclockwise/transpose down - translates the whole scale down by one semitone. This does not directly transpose the input or output; it only changes what notes are available in the scale to quantize to.

Rotate clockwise/transpose up - translates the whole scale up by one semitone.

Glide/portamento - determines the length of the transition between notes. Continue holding down Shift after pressing this button. Then press any of the 12 buttons to select a glide amount, starting at C = 0 and increasing clockwise. The LEDs will indicate the selected amount as long as you hold the Shift button.

Sample delay - sets a delay amount (0-11ms) to wait after recieving a trigger/gate before sampling the input voltage. Some sequencers and keyboards output a trigger before they have fully stabalized a v/oct value. Adding ~5ms of delay can make sure you get the right value. Can be set in the same way as glide.

Track/Sample toggle - Sets the behavior of the sample input. In track mode, the module functions like a track-and-hold, continuously updating the output as long as the sample gate is held high (this also works with no gate input since it is normalled high). In sample mode, the module functions like a sample-and-hold, only sampling the input once on the rising edge of the sample gate input (this will stop the module from doing anything without a trigger input). Just click this button once to toggle between modes. The LED will briefly indicate the new value (green for track, red for sample).

Post shift - Transposes the output up or down by a number of semitones. This happens after all quantization; it is equivalent to changing the tuning of your oscillator. Note that the output cannot exceed the 0-10V range, so it may be clipped. Dial in the shift amount in the same way as glide; continue holding down the shift button and press any button to set the level. Negative (counterclockwise) values are indicated in red, positive (clockwise) values are indicated in green.

Scale shift - Transposes the note up or down a given number of degrees in the scale.

Pre shift - Applies a given voltage offset (in 1V/oct semitones) to the input before quantization. Depending on the scale, this will sometimes have no effect on the output.

Relative pitch toggle - When off, channels A and B are completely independent. When on, the input to channel B's quantizer is the sum of CV inputs A and B.

Channels linked toggle - When off, channels A and B have separate scales and settings. When on, channels A and B use the same configuration; only the inputs are different. This is orthogonal to relative pitch mode. You can use either, both, or neither.

Select channel A - Both channels are always working, but the menu will only show and effect the selected channel. When channel A is selected, selected notes will be green and the active note will be amber. Does nothing when channels are linked

Select channel B - Selected notes will be red and the active note will be amber.