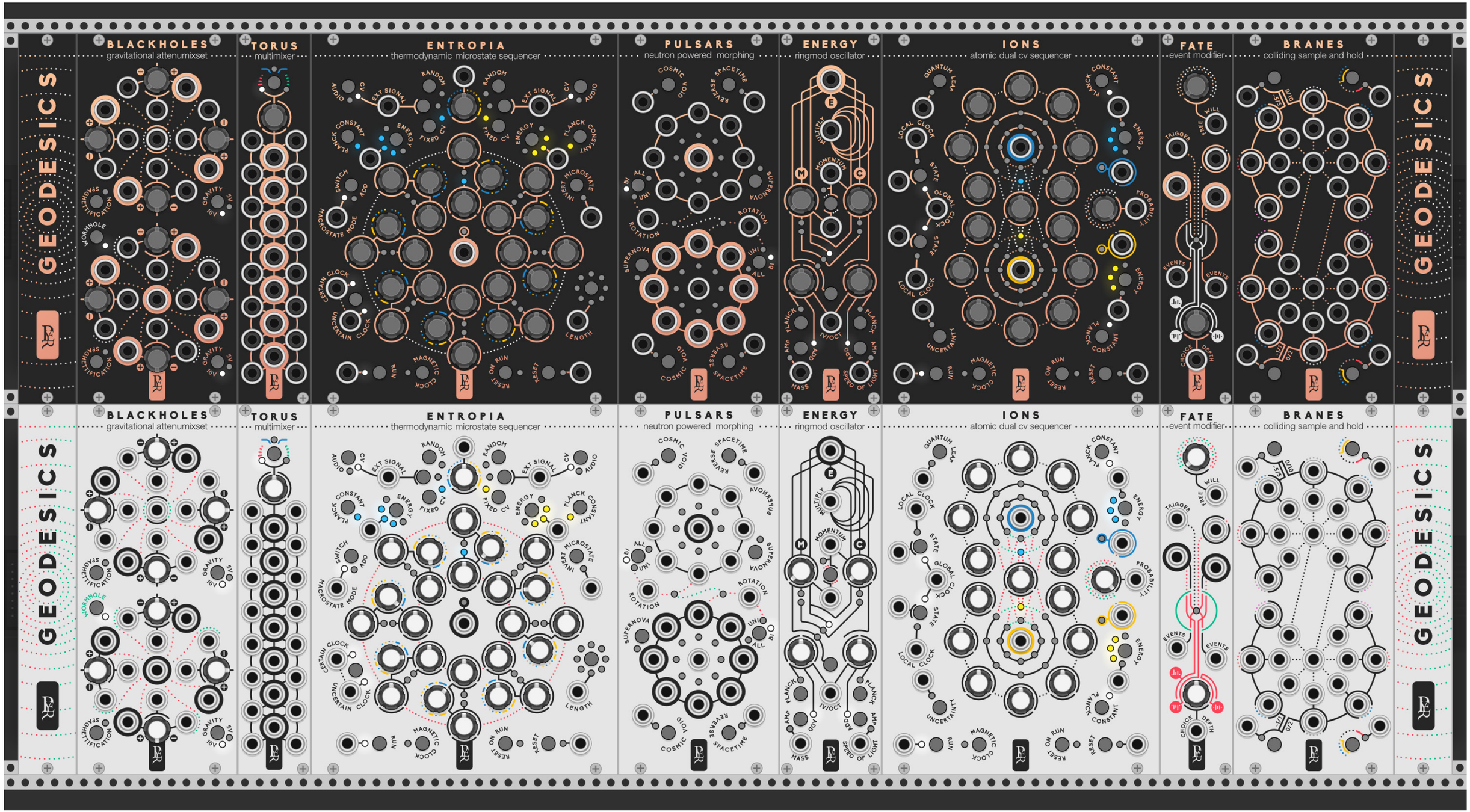
GEODESICS

A modular collection for VCV Rack by Pyer & Marc Boulé

User Manual


GEODESICS
BLACKHOLES
gravitational attenumixset
TORUS
multimixer
ENTROPIA
thermodynamic microstate sequencer
PULSARS
neutron powered morphing
ENERGY
ringmod oscillator
IONS
atomic dual cv sequencer
FATE
event modifier
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colliding sample and hold
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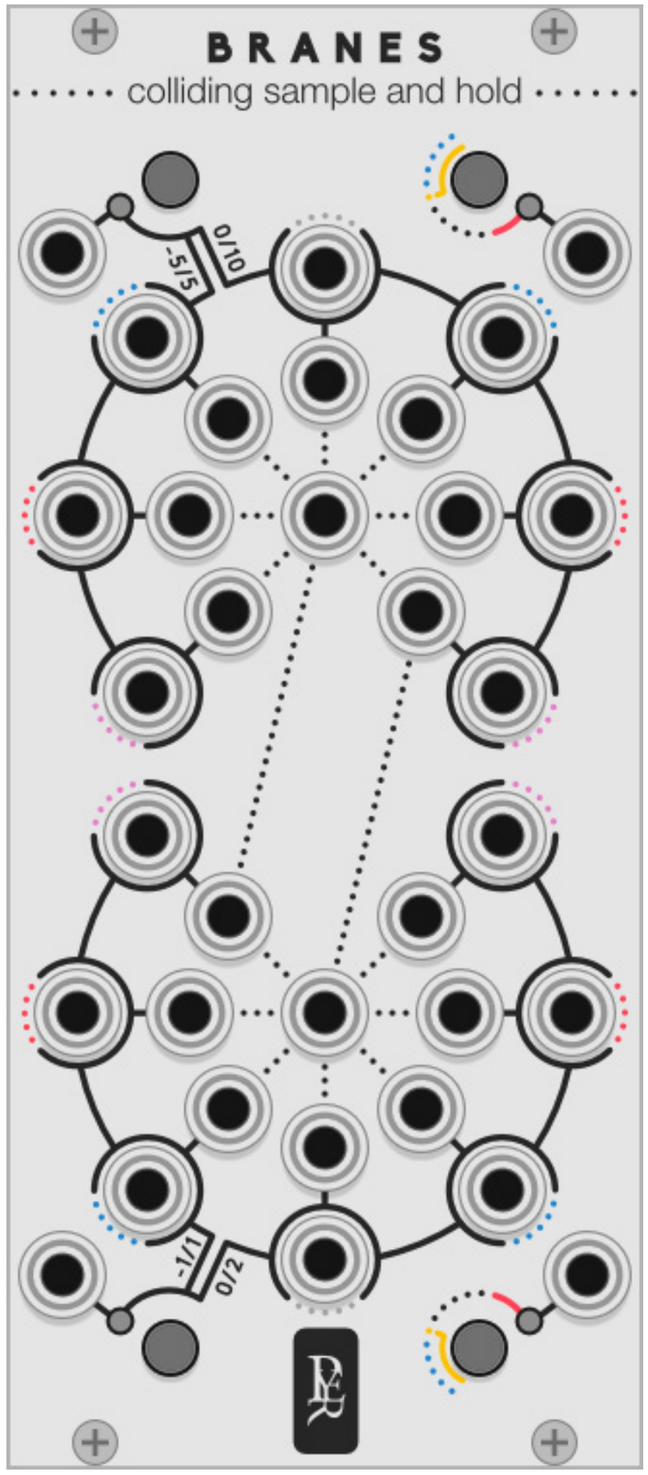
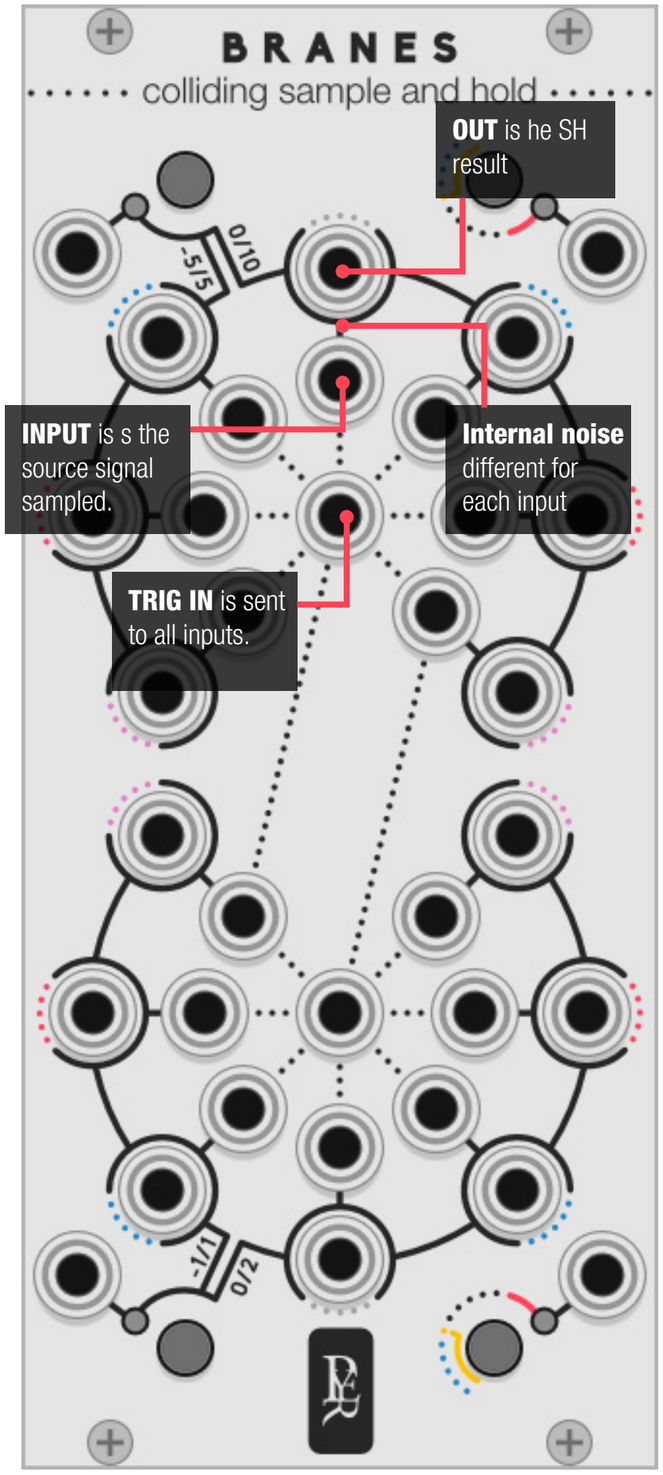


BRANES

colliding sample and hold

Branes are multidimensional objects involved into the ekpyrotic universe theory that describes two parallel universes colliding to create our world…

BRANES is 2 groups of seven S&H driven by the same trigger source. Two of them receive added trigger clocks for polyrhythmic effects.



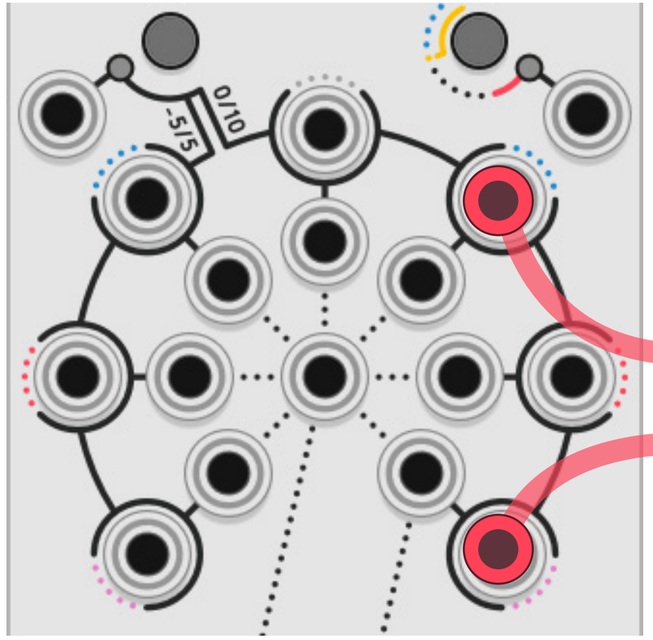
BRANES

colliding sample and hold

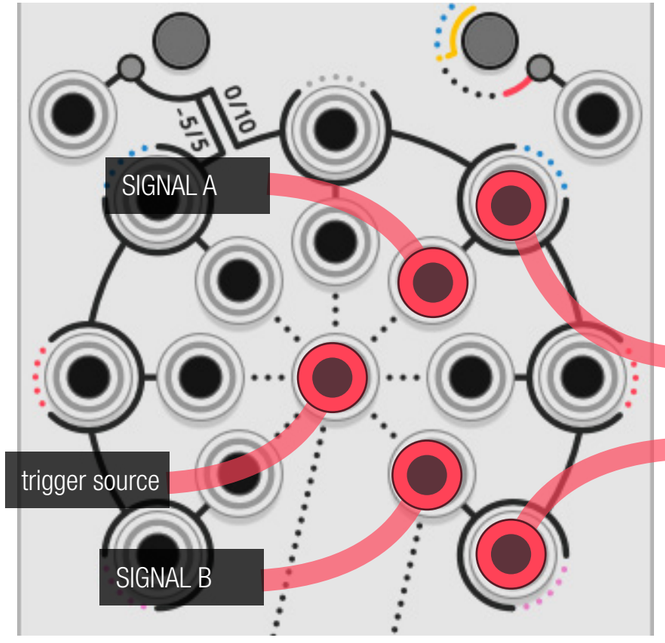
The Idea came from the Buchla Music Easel with its 4 uncorrelated random sources: random and different

Each output has its own internal noise generator, with different colours so you can have 7 different random CV driven by the same trigger without any external input.

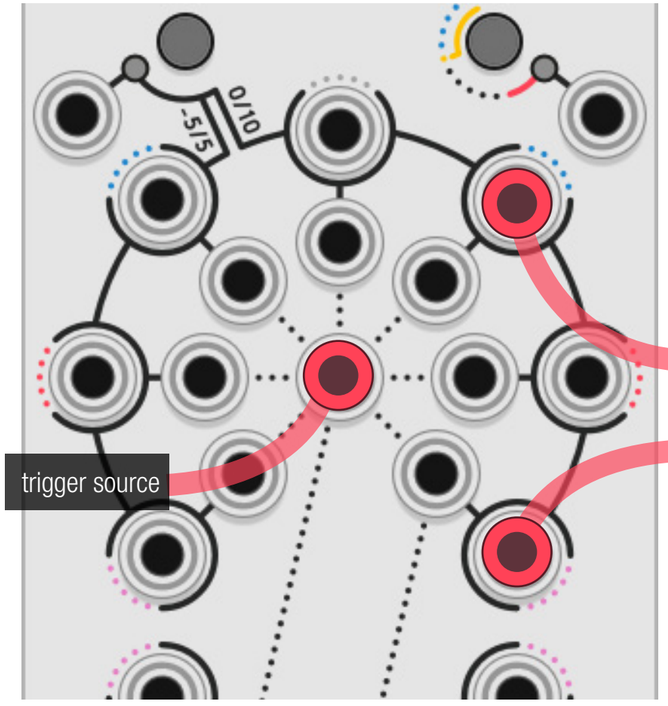
The noise generator is bypassed when an input source is connected.



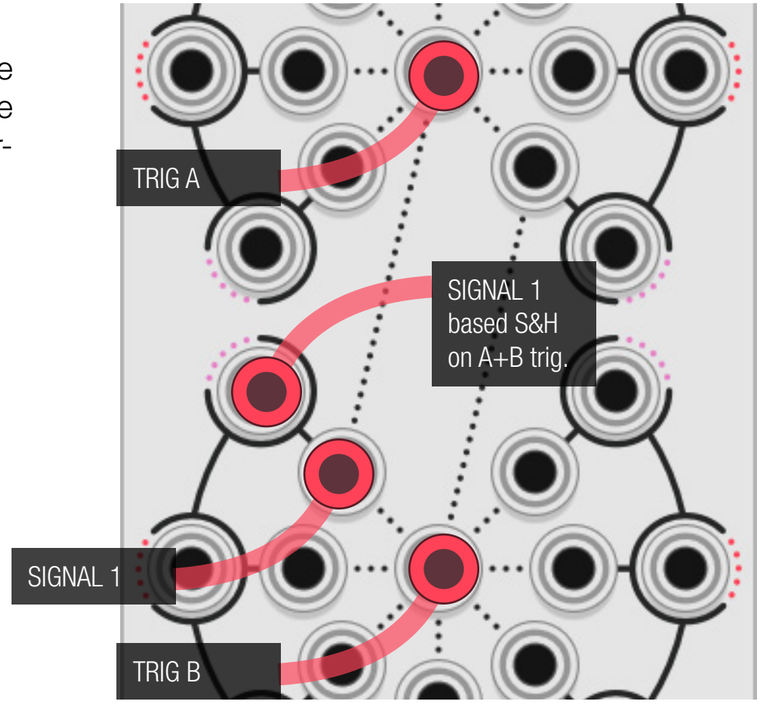
When no trigger or input source is connected: The outputs are just noise sources, different kinds of noise for each.



When a trigger and an input are connected, the noise generator is bypassed, and the S&H uses the input as material.

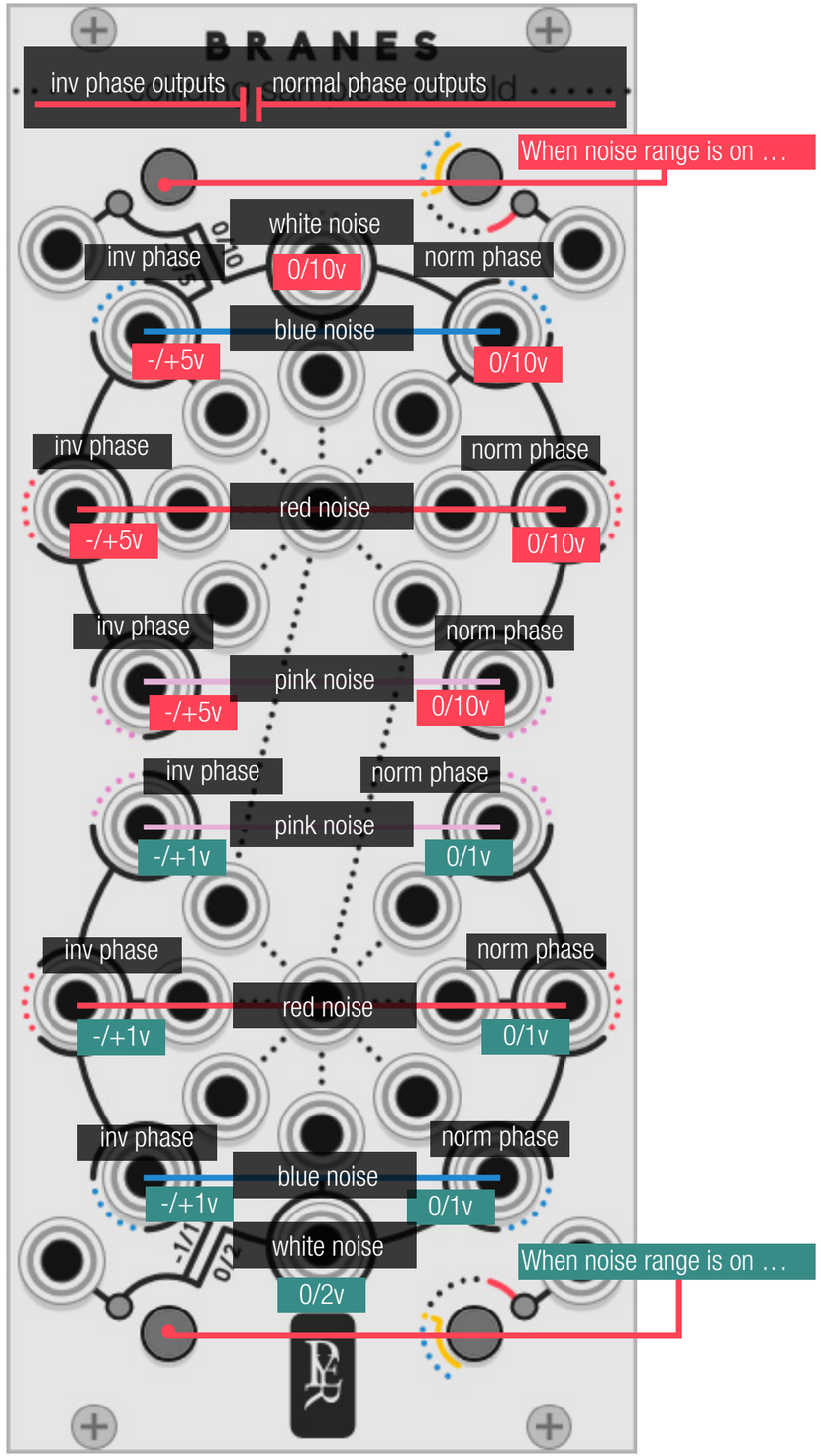


When a trigger is connected, the outputs use the trigger to sample and hold their internal noise generator and send random CV.



The two Colliding S&H

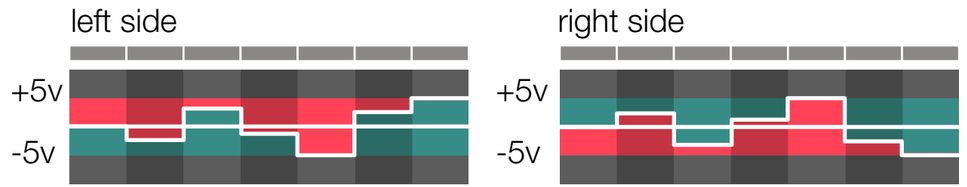
They work as expected, but their trigger source is an addition of the two trigger sources. It allows you to create polyrhythmic melodies.



The inverted phase noise generators

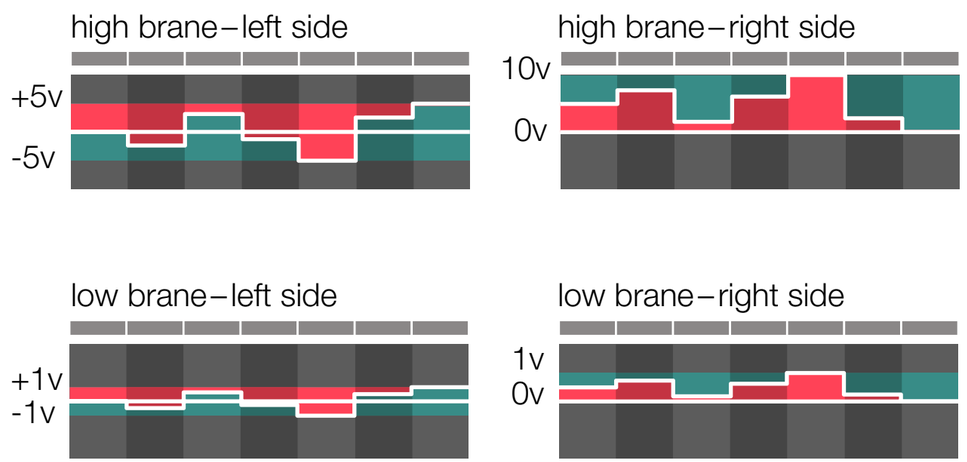
Every noise generator on the left-hand side is the inverted phase version of the right-hand side.

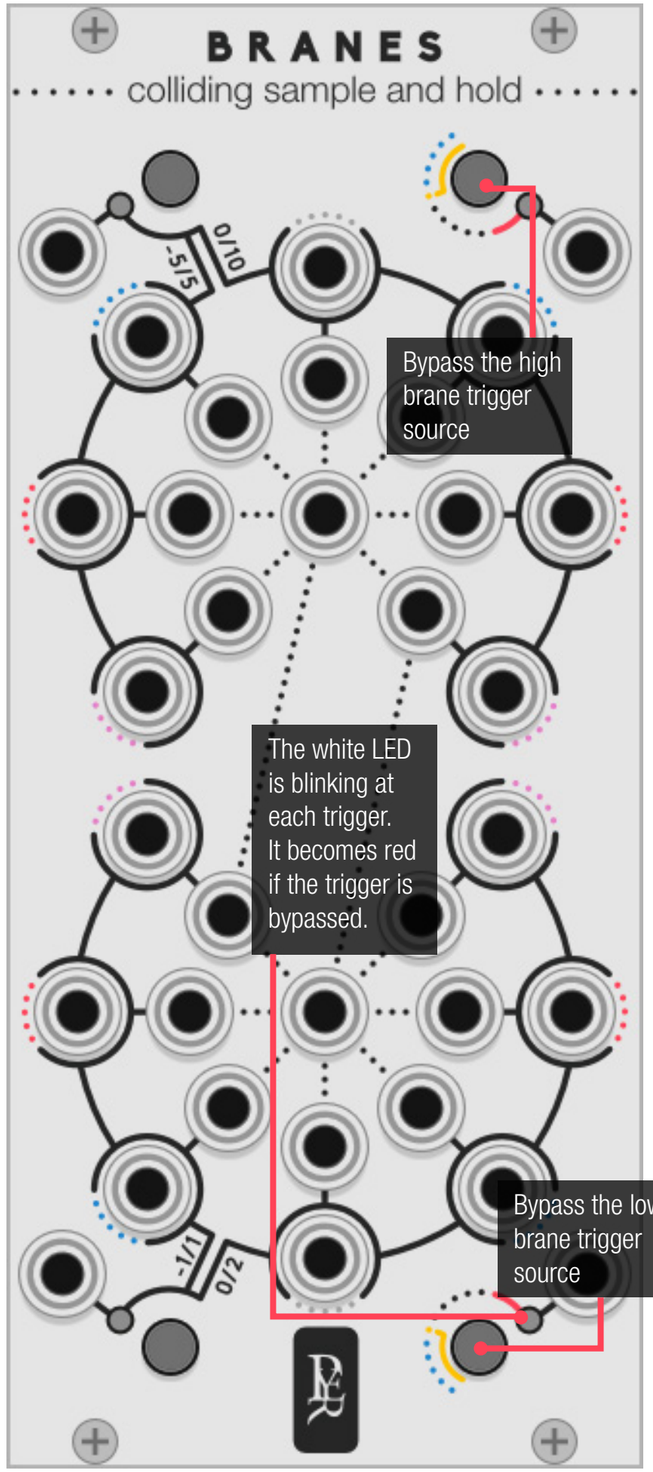
It is not really useful as a noise source, but when the noise is sampled, every left-hand side output will provide the opposite value of the right-hand side.



Range noise button

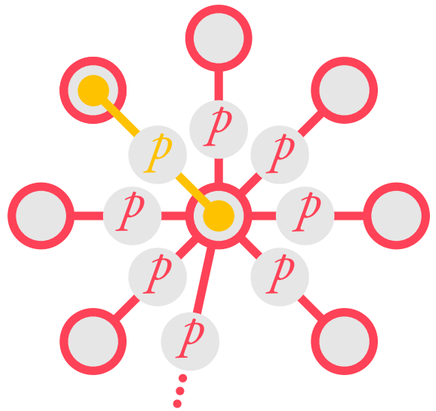
The noise generators are emitting signals from -5 to +5 volts, so will be the sampled signal. This can be too wide for pitch control, or too small for 0 to 10 volts modulation input. While this is usually fixed with an external VCA, the noise range button will change the range and offset of each noise generator according to the following rules:





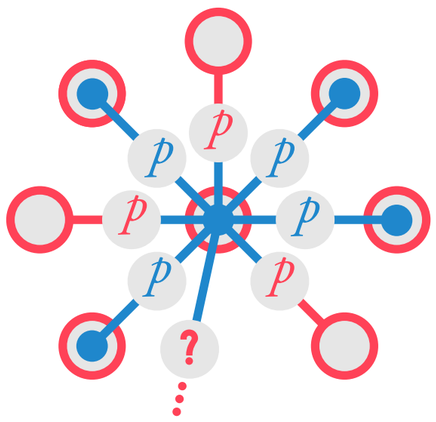
Yellow mode

The trigger can only be in one place, but the place can't be defined with certitude.



Blue mode

The trigger can be at several places at the same time, but it can't be known with certitude.



The vibrations button

When the trigger source connected, the vibration button lights on: the brane starts to vibrate and to sample the signals on every trigger. When the vibrations are bypassed, every output will send the unsampled source input or noise.

This is useful to switch between the original signal and the quantised one.

It can also be used to momentary bypass one of the two triggers of the colliding outputs.

Young Slits mode

This mode can be accessed by holding the button for 2 seconds. Holding it again will leave the mode. It can also be reached through the right-click menu. The trigger input toggles the state between yellow and blue.

This mode is inspired by a famous experiment by Thomas Young, who shot electrons thought a surface with two slits, to see how they would pass through.

In this mode, the integrated SH sections may or may not receive the trigger. In addition to generating randomness, Branes can now decide whether it will generate it or not. It can be useful for less systematic modulation, but also for complex polyphonic melodies (quantizer needed of course).

In the Yellow mode, only one connected output at the time will receive a trigger, the other ones will hold their own previous values. At each new trigger, every output has the same probability to be selected to receive the trigger. This mode has no effect when just one output is connected.

In the Blue mode, every output has its own 50% chance to receive a trigger or not. The ones that won't receive their trigger will hold their own previous values.

GEODESICS

A modular collection for VCV Rack by Pyer & Marc Boulé

Geodesics has been created in July 2018 by **Pierre Collard** (industrial and graphic designer based in Brussels) and **Marc Boulé** (developer and creator of Impromptu Modular based in Montréal).

Just like many projects within VCV Rack, Geodesics is also a community effort and it would not have been possible without the help of many users, composers and developers participating one way or another to enhance the quality of the project.

Among them we would like to address a special thank to those who helped us in the beta testing phases, who made tutorials, who proposed their help in any way and those who brought the collection to life with some great pieces of music: **Omri Cohen, Georg Carlson, Xavier Belmont, Steve Baker, Marc Demers, Adi Quinn, Ben De Groot, Latif Karoumi, Espen Storo, Synthikat, Dave Phillis, Carbonic Acid**, **Martin Luders**, **Ghalebor, Stephen Askew, Lars Bjerregaard, Richard Squires, Lorenzo Fornaciari, Adi Quinn, NO rchestra, Poxbox23** and **Ananda Bhishma.**

Geodesics links
www.pyer.be/geodesics
vcvrack.com/plugins.html#Geodesics
github.com/MarcBoule/Geodesics

Creations from composers using Geodesics:
https://www.youtube.com/playlist?list=PLEh-5QLxa-BlqLl9rBcncUTFm2Lk-ZMgvZ

Tutorials on Geodesics by Omri Cohen:
https://www.youtube.com/playlist?list=PLEh-5QLxa-Blr4dsurkkwUehFsNl7T_Jv-

Marc's work links
github.com/MarcBoule/ImpromptuModular

Pierre's work links
www.pyer.be

Coded and released by Marc Boulé – Concept and visuals by Pierre Collard