BLACK HOLES

gravitational voltage controlled attenumixset

A black whole attracts everything that gravitates around its centre, even audio and CV signals…

BLACK HOLES is 8 VCAs in two groups of 4, it’s also two mixers with 4 channels each.
**BLACK HOLES**

Gravitational voltage controlled attenumixset

Signal IN can treat any CV or audio signal.

Signal OUT is the treated signal.

Gravity KNOB will attenuate completely at zero. Amplitude will increase by turning clockwise. Counterclockwise will do the same with an inverted phase.

CV IN controls the gravity knob.

Spaghettification is the most awesome of all scientific words; it describes the way you would be exponentially stretched if you come too close to a black hole. It will also treat your VCA's with exponential curves instead of linear.

The processed signals gravitate around the central singularity.

The centre of the black hole is a mix of the 4 signals.
**Mass control**

When no input is plugged in, the knob acts to the output as a fixed CV generator. The centre still acts as a mixer. The values of the gravity knobs are all summed up in the mixer.

**Gravity control**

The modulation input can be set to $-/+10$ volts for envelope and gate sources, or $-/+5$ volts for LFO and VCO sources.
The Worm hole

No one knows what is inside a black hole. Some people think there could be a worm hole to a ‘white hole’ that ejects everything the black hole has absorbed…

Black Hole 2 can become a white hole. The mixed signal from Black Hole 1 travels through the wormhole and feed the unused inputs of Black Hole 2. It then becomes a 1x4 multiplier. The signal can be treated differently by each output. The worm hole can be closed if needed with the button.

The mass control combined with the worm hole trick will manage both amp and offset of an external signal.
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, Ghaelebor, 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-BiqLi9rBcnCUTFm2Lk-ZMgVZ

Tutorials on Geodesics by Omri Cohen:
https://www.youtube.com/playlist?list=PLEh-5QLxa-Bir4dsurkwUehFsNi77tJv-

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