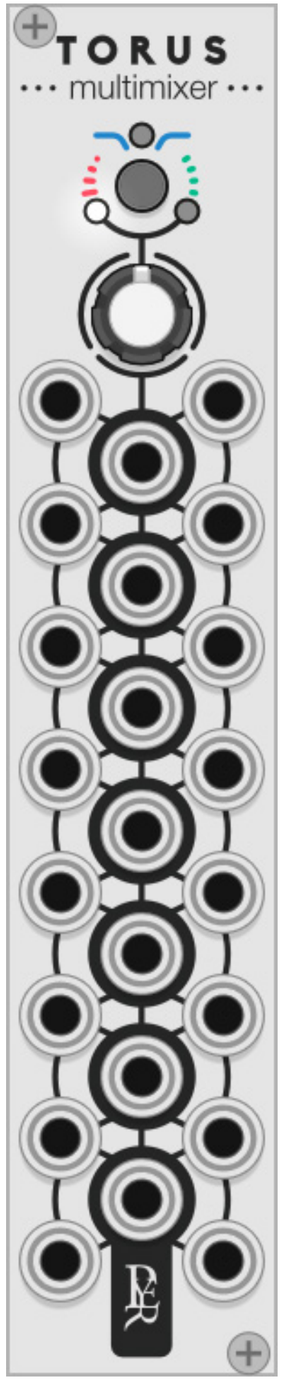
GEODESICS

A modular collection for VCV Rack by Pyer & Marc Boulé

User Manual

GEODESICS
BLACKHOLES
gravitational attenumixset
SPAGHETTIFICATION
GRAVITY
WORMHOLE
TORUS
multimixer
ENTROPIA
thermodynamic microstate sequencer
RANDOM
EXT SIGNAL
AUDIO
CV
FIXED CV
ENERGY
PLANCK CONSTANT
SWITCH
ADD
MACROSTATE MODE
INSERT MICROSTATE
CERTAIN CLOCK
UNCERTAIN CLOCK
LENGTH
RUN
MAGNETIC CLOCK
RESET
RUN ON RESET
PULSARS
neutron powered morphing
COSMIC VOID
REVERSE SPACETIME
SUPERNOVA
ROTATION
UNI
BI
ALL
ENERGY
ringmod oscillator
MULTIPLY
MOMENTUM
1V/OCT
ADD
PLANCK
AMP
MASS
SPEED OF LIGHT
IONS
atomic dual cv sequencer
QUANTUM LEAP
LOCAL CLOCK
STATE
GLOBAL CLOCK
PROBABILITY
UNCERTAINTY
FATE
event modifier
TRIGGER
FREE WILL
EVENTS
CHOICE
DEPTH
BRANES
colliding sample and hold
DUPLICATE
SPLIT
FLIP
ZAP



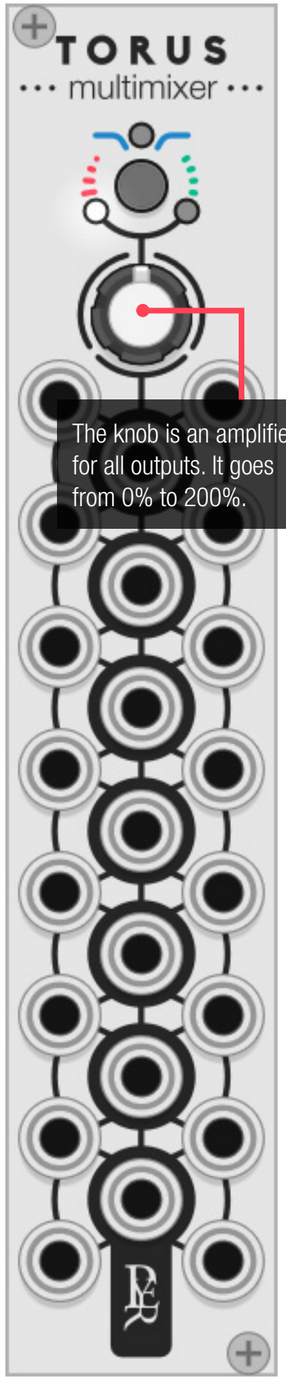
TORUS

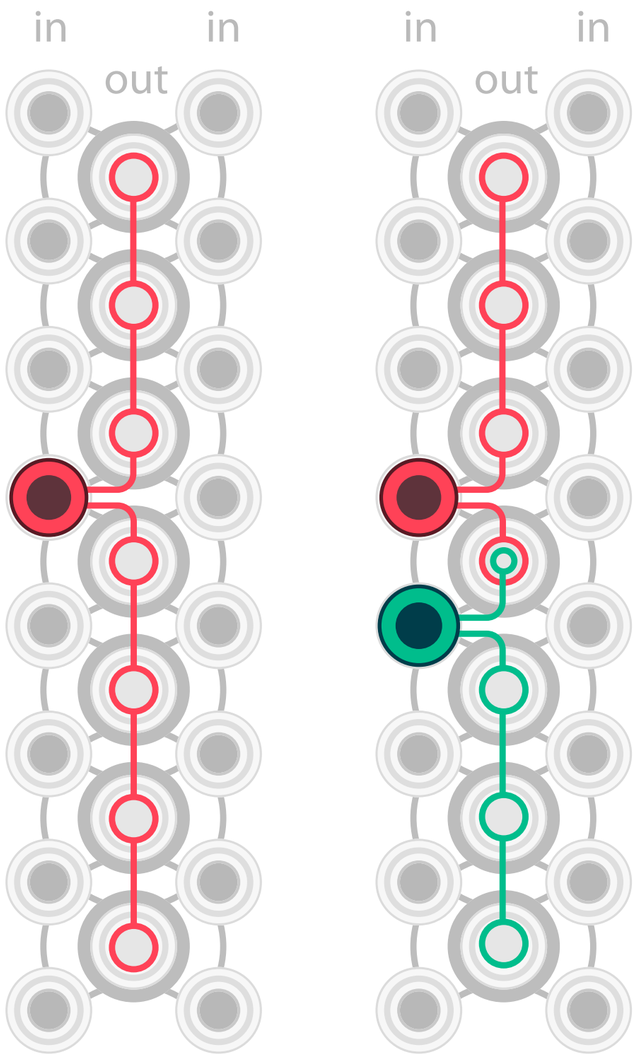
bi-dimensional multimixer

A torus is a 2-dimensional surface closed on itself. Some believe it could be the shape of the universe.

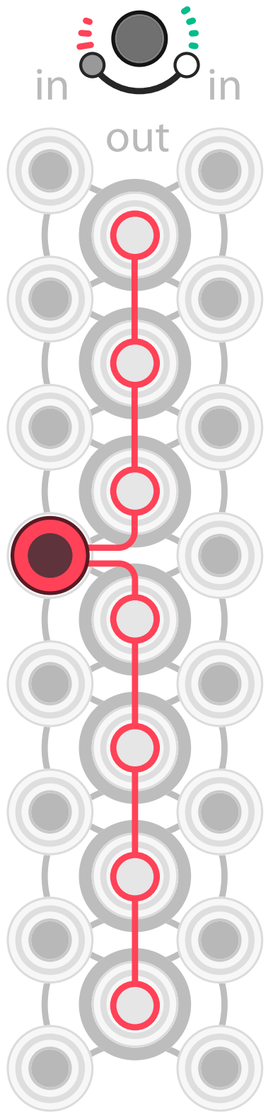
TORUS mixes and attenuates the incoming signal in different ways depending on the distance between the input and output jack.

Torus is a small module that can be many things: up to 6 4-channel adjustable mixers, 3 multipliers, 7 unity mixes with 4 channels, 7 attenuators … and all at the same time.

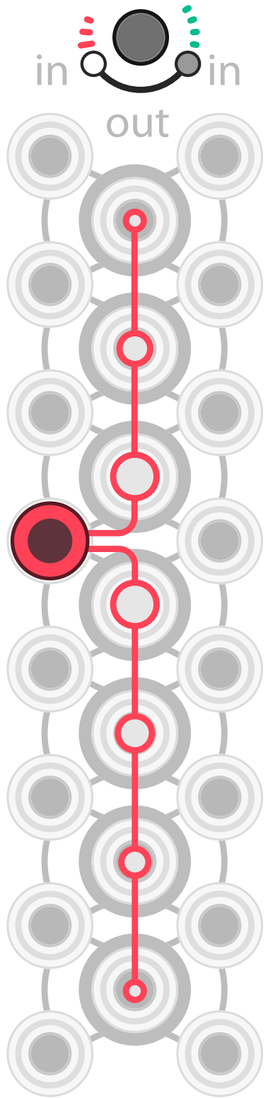




Torus works over a simple concept: the incoming signals are spread and mixed over the different outputs. Each output jack will produce a different mix depending on the proximity of the input jacks.

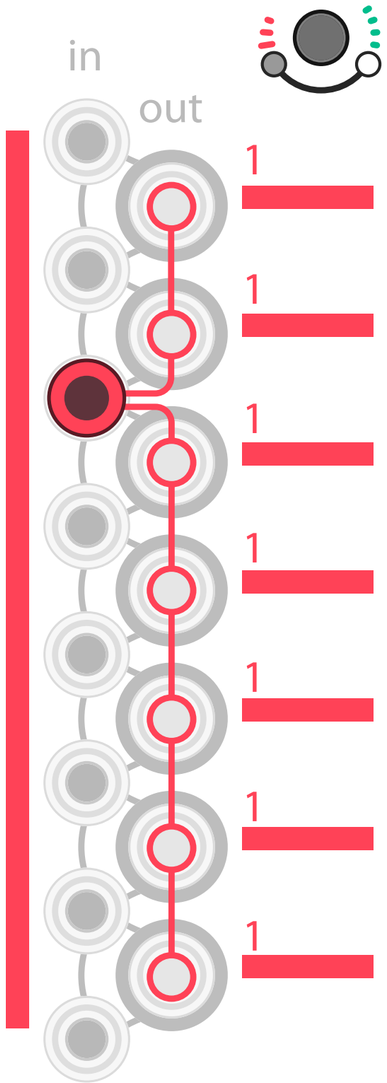


Constant mode gives back 100% of the original signal on each output. When mixed, the two signals are added together.

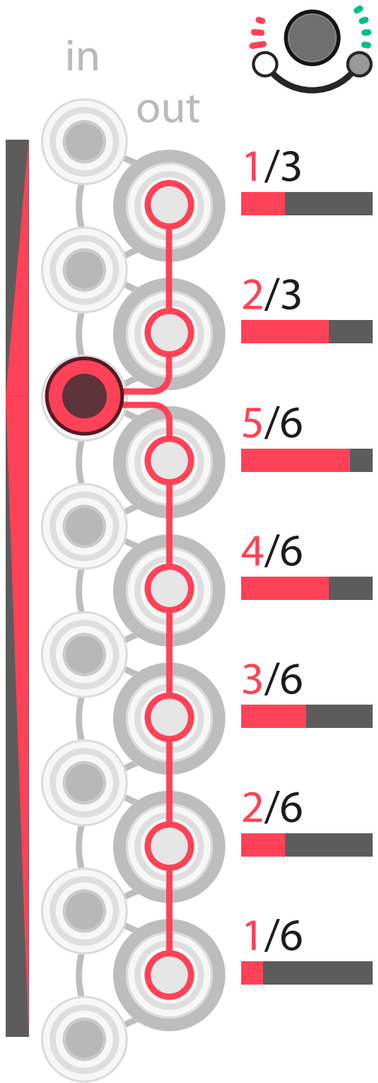


Decay mode: the level of the original signal gets faded away along the outputs. When mixed, the two signals are cross-fading together with different blends depending on the proximity of each input.

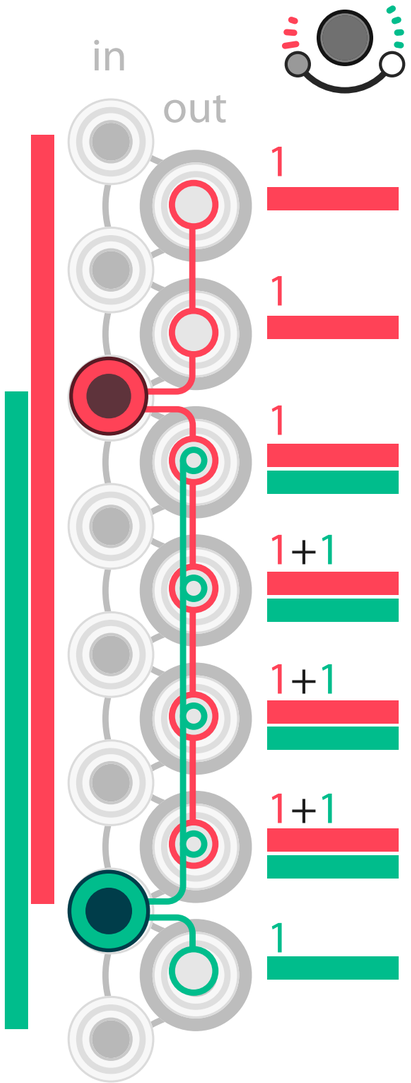
As there are a lot of jacks in Torus, it might be easier to split it in two parts for a better understanding.



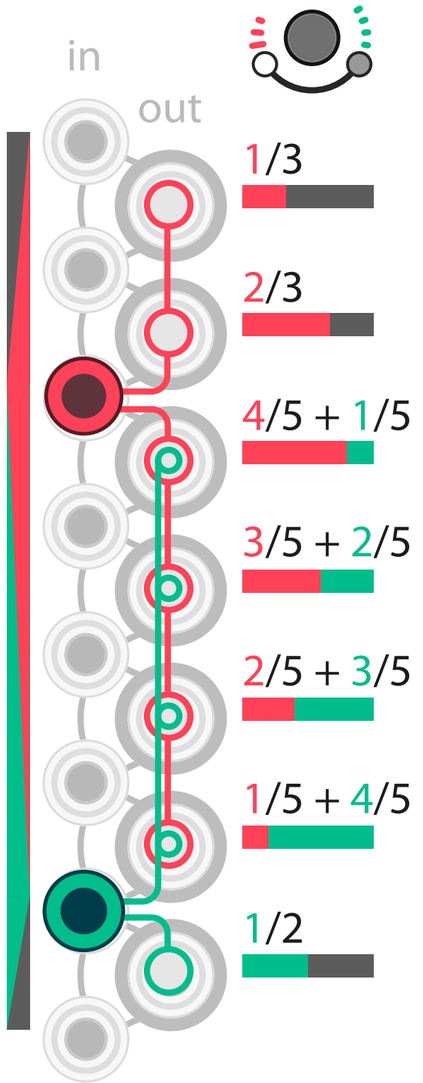
Constant mode: Multiplier



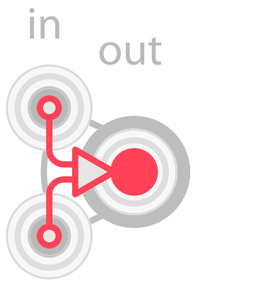
Decay mode: attenuator

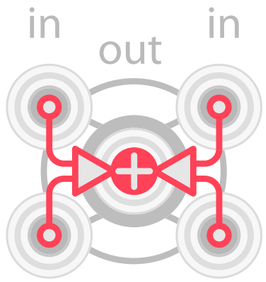


Constant mode: Unity adder



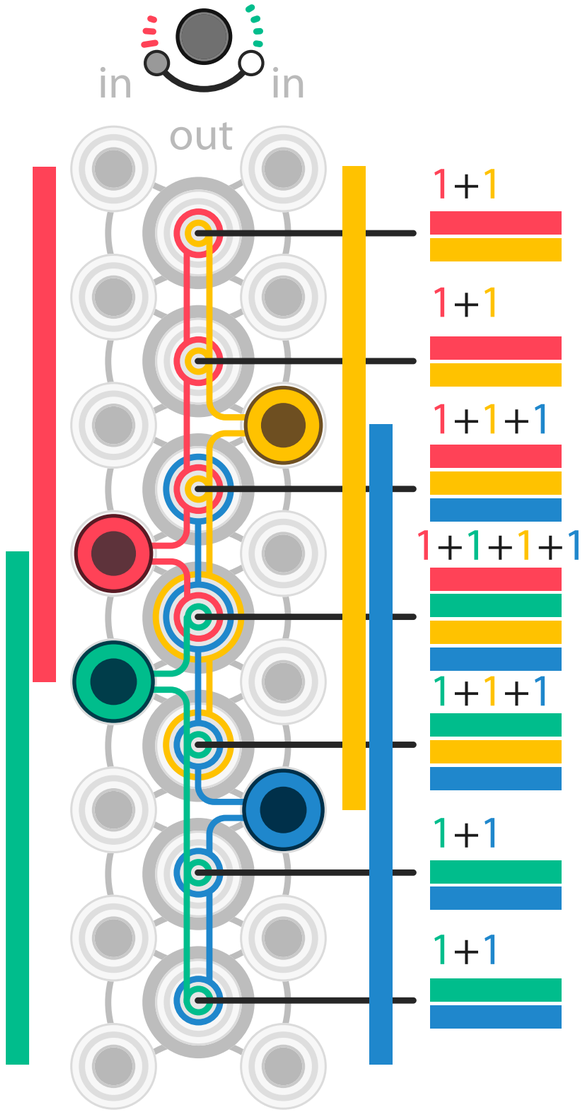
Decay mode: Cross fader

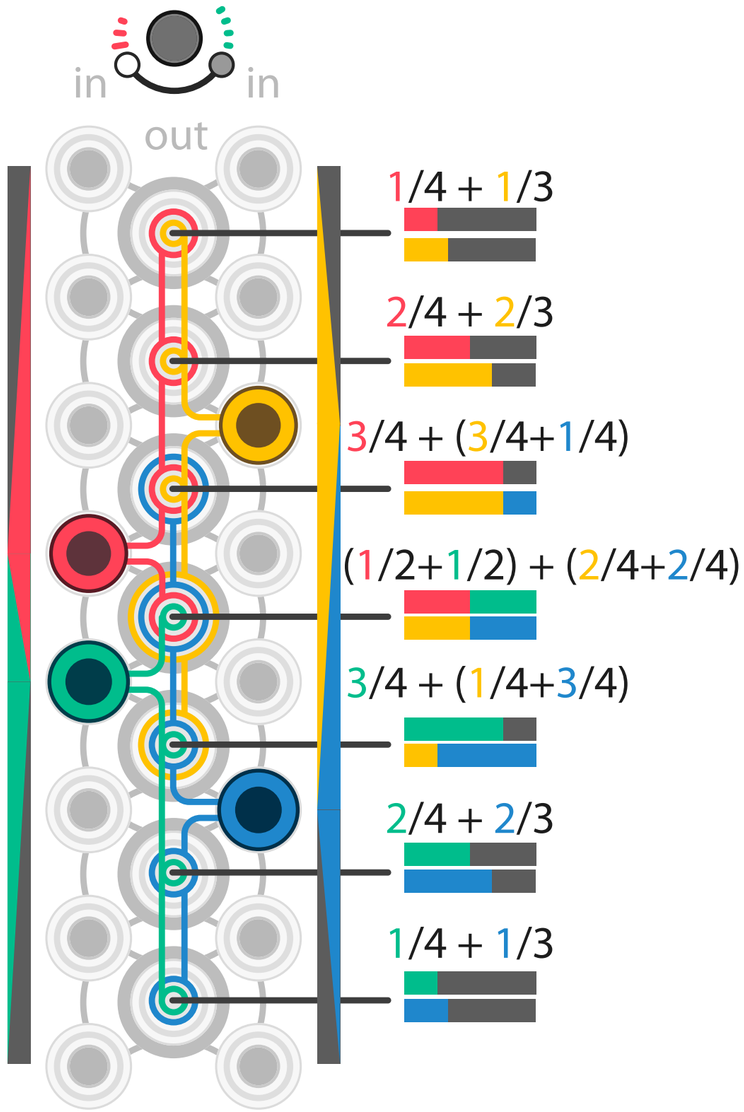


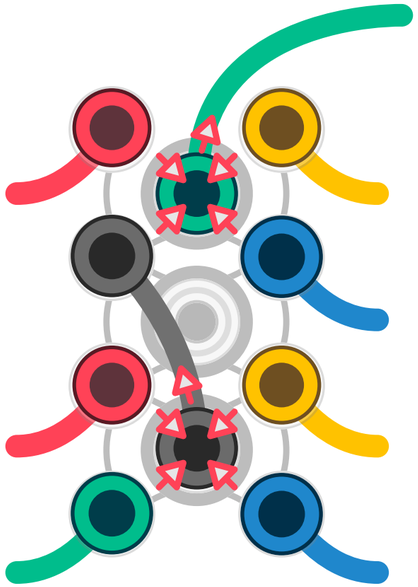


To complete the Torus, another set of input is also connected to the output system.

The result of left and right structure is added in each output.

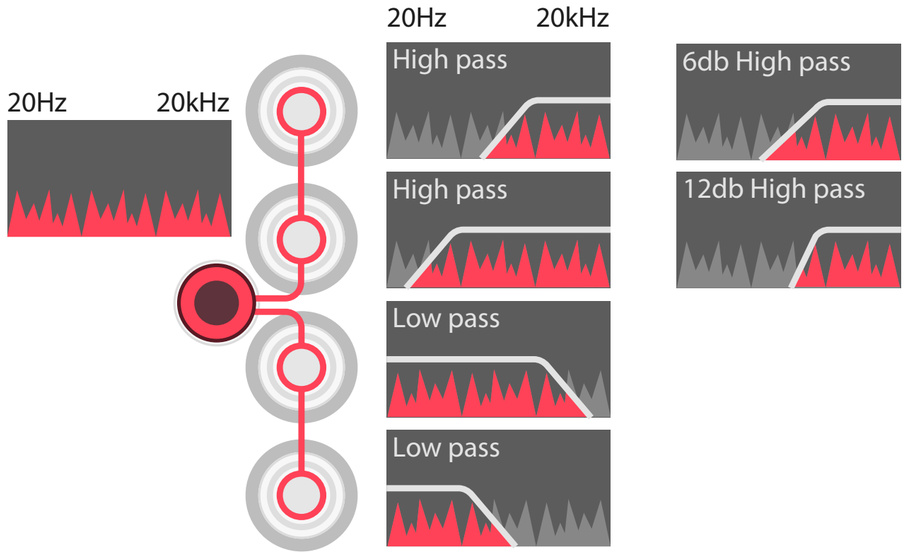






As always, self-patching is full of solutions.

By patching a group of 4 channels to another input, sub-mixes can be created to achieve up to 13 channel mix in one module.



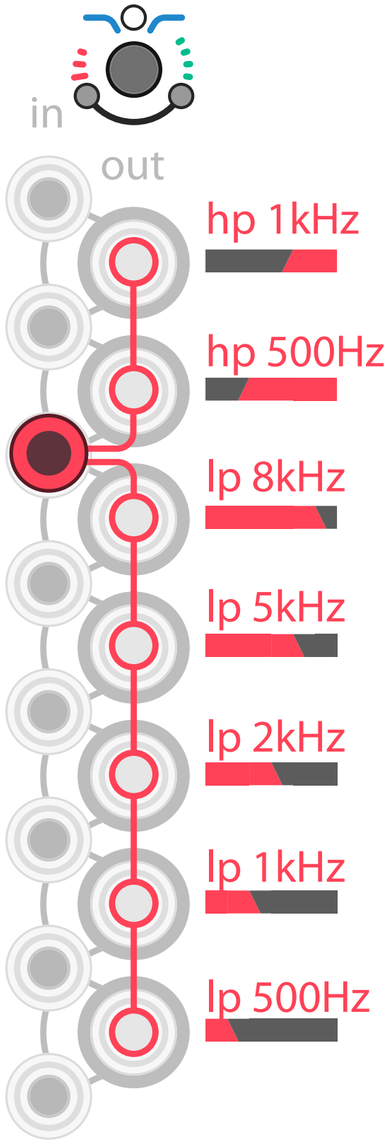
Low/High pass mode

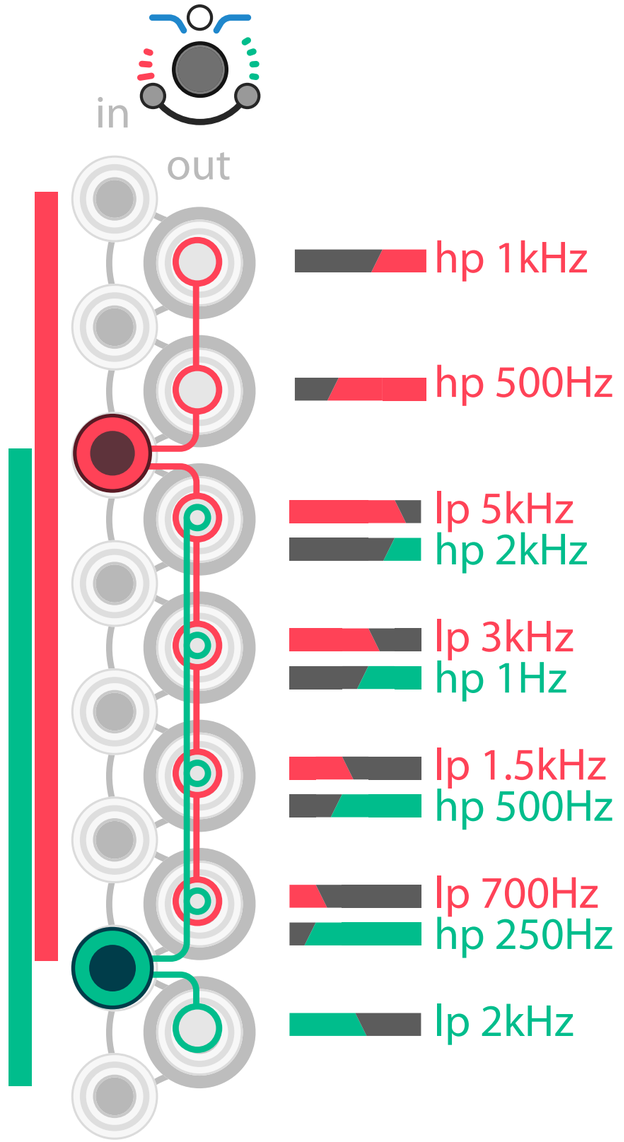
Torus has a third mode dedicated to filtering. The filters can be set in right click to 6db or 12db

For an incoming signal, any lower output will apply a low pass, and any upper output will apply a high pass.

The more distanced output will have a shorter passing range.

Unlike the other modes, the passing frequencies are not chosen on mathematical ratios, but on an arbitrary way, inspired by some hardware equalisers sweet spots.





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