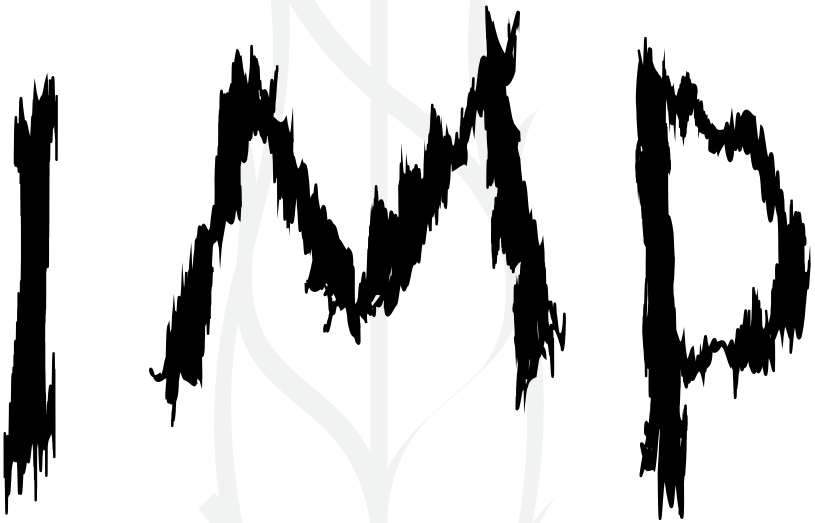


Eurorack Module
~rev1.0~

flight of harmony

Components

1	Assembled IMP noise module
1	DC power cable – 9" Ribbon cable (Doepfer standard)
4	M3x0.5x6mm Stainless-Steel machine screws
4	M3 Nylon washers

Specifications

Supply Voltage	±12VDC	
Supply Current (max draw @ ±12V)	I_{V+}= 40mA	I_{V-}= -5mA
Max. Output Voltage	±5V	
Input & Ouput (I/O) coupling	Direct	
Output Impedance	1kΩ	
Control Voltage (CV) inputs	0 to +5V	
CV input coupling	Direct	
CV input impedance	100kΩ	

Features

- Domains (frequency range groups)
  - 8 (two banks of four)
- Frequency adjustment
  - Coarse and Fine
  - Fine scaling adjustment (relative to Coarse)
    - 5:1 to 25:1
- Range adjustment (range of frequency variance within domain)
  - Coarse and Fine
  - Fine scaling adjustment (relative to Coarse)
    - 5:1 to 25:1
- "Tone" control
  - Variable between low-pass and all-pass
    - Adjustment also varies phase interaction
- Control Voltage (CV) inputs
  - Frequency, Range: 0 to +5V
  - Width: 0 to +5V

What is it?

The IMP is the noise core for the Infernal Noise Machine, now brought to eurorack module form for your pleasure. It works as a heterodyne noise generator, combining two oscillators to provide the sum and difference frequencies, resulting in non-harmonic tones. Translation: it makes a hell of a racket.

CONTROLS AND USAGE

• **Domain, Frequency, Range and Width:** Technically, all four describe the same Function: what frequency the Imp puts out. The total possible range of the Imp, however, is from subsonic to ultrasonic, and accessed in different ways requiring multiple controls for fine-tuning.

• **Domain:** The first stage of frequency selection. Domain selects one of four wide bands of the overall range. Four Domain is lowest, One is highest (in frequency). Four is audio, One is nearly ultrasonic. The One Domain is where you will find the oddest/most ethereal Noises: static, wind, the impression of voices. It has a lot of what seem to be dead spots, but it is worth the time to wander the Domain and see what can be found.

The toggle switch is used to select between two banks of Domains, High and Low.

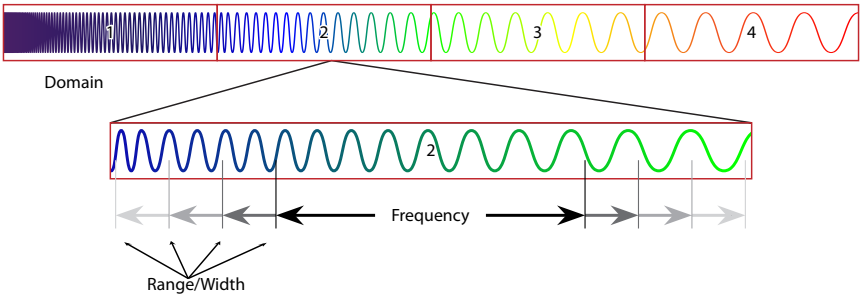
• **Frequency:** This is the main frequency control within the selected Domain - it sweeps over the entire Domain (depending on Range, see following). The Fine control sweeps up to 1/5 of the size of the band that Coarse does.

• **Range:** This controls how wide of a sweep Frequency covers. Fine control same as with Frequency.

• **Width:** This one is a bit more esoteric: it controls the "width" of the

band of the current domain that the Fine controls cover, hence the "up to 1/5". In the lowest Domains, wide open is best. In the higher Domains, the bands of sound are very narrow, so it is best to set the width all the way down to find the hidden sweet spots.

In other words, a quarter of the possible frequency range is selected by Domain, and the other controls select how much of that Domain the frequency control can sweep across. The Coarse joystick is for a broad sweep over the Domain, and the Fine joystick is for finding the perfect "sweet spot".



Tone: The Noise generator has two output amplifiers - a boost/buffer and a low-pass filter (LPF), the Tone knob controls the mix between these two outputs. The phase relationship between these two outputs varies depending on the Noise frequency; sometimes in phase, sometimes 90°, sometimes 180°, and everything in between.

Power

The power connector header is a 2x5 shrouded box header which accepts the standard Doepfer power cable. This header style is polarized, meaning the connector can only be inserted one way, to prevent connecting the power backwards and damaging the unit.

This assumes that you are using either the supplied cable or one manufactured by Doepfer.

Looking at the rear of the module, the negative supply (red stripe) is on the left.

Guarantee

All f(h) products are guaranteed against defects in manufacturing and workmanship for the lifetime of the product. Please contact us via email at: support@flightofharmony.com

Stuff

A big thank you to those who have sent in suggestions and comments, keep them coming!

Send samples to: samples@flightofharmony.com

Comments, suggestions, complaints to: flight@flightofharmony.com

http://www.flightofharmony.com

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