

# P3 Pedal I/O



The P3 is a dual channel pedal interface. It can be used for pedal or line level in and out or as a guitar or bass input as the pedal in is a high-Z input that will not suck the life out of the tone of your instrument as low impedance inputs can do.

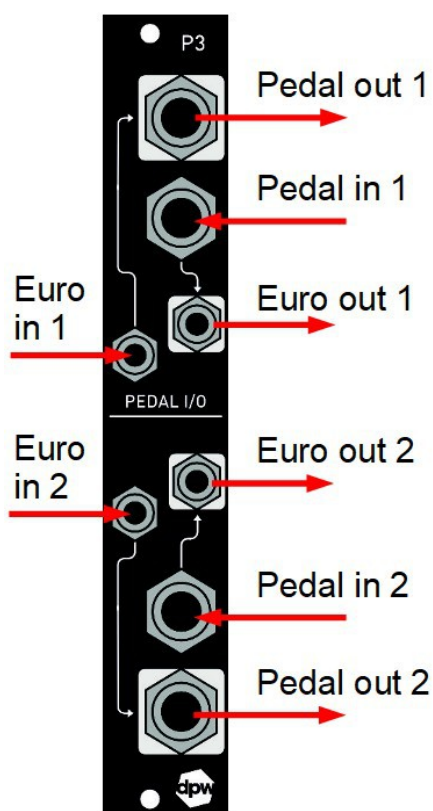
The module is designed to have more than 100kHz bandwidth in both directions to give you a very clean interface with in and out impedance to work well with pedals.

The two halves of the module are independent. You can use it as a dual mono or as a stereo interface.

Eurorack to pedal level is attenuating -18dB and pedal to Eurorack level is amplifying 18dB.

There is soft controlled symmetrical clipping in both directions through the module so if you are driving the inputs hard it will not sound harsh. You can use this as a creative effect.

The unit is AC coupled to be able to isolate your eurorack from whatever you connect on the pedal side.



## Eurorack to pedal

The Eurorack input has a symmetrical soft clipping at +/-10V. A 5V signal (+14dBV) will give you a -4dBV signal out on the pedal out side (0,6V).

## Pedal to Eurorack

The pedal input expects max -4dBV in to give a 5V signal out on the Eurorack side. However, the signal that comes from a pedal, the direct signal from a guitar or some line level equipment may have transients that are higher than this. This even if you are careful about the levels you put into it.

Because of this a limiter with a super soft long knee has been designed into the module so you don't have to worry about getting harsh distortion on the transients.

The limiter just starts touching the signal slightly at -4dBV in and reaches full compression and symmetrical brick wall limiting with +6dBV in (2V).

The output brick wall limits to +/-10V.

The limiter circuit is designed not to touch the signal at all under normal operations, it is there to add protection and maybe a bit of warmth when your signal is above -4dBV in.

It can of cause be driven as hard as you like for creative purposes.

## Device specs

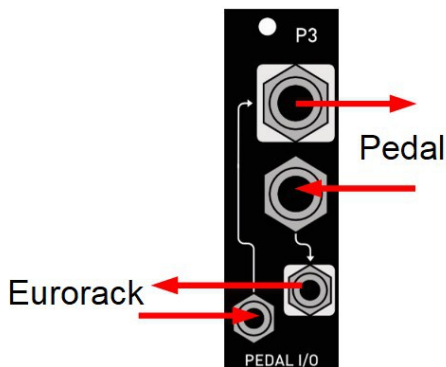
Module size:	4 hp wide, 30 mm deep with power cable connected.
Input impedance:	100 kohm on the Eurorack side. 1 Mohm on the pedal side.
Output impedance:	1 kohm
Bandwidth:	More than 10 Hz to 100 kHz in both directions through the module.

Power requirements: +/-12V. Max power consumption +/-19 mA  
Connect the power cable with the red stripe down towards the -12V marking.  
The unit is protected for reverse power.

## Use case examples

A few examples of use cases to get your imagination going. All examples below are in mono. Use both sides of the module for stereo.

### Pedals with Eurorack or Eurorack with pedals/guitar



To incorporate pedals in your eurorack system is the main use of this module.

But also remember that you can go the other way and incorporate a eurorack system with your pedal board. This way you can build never before heard sonic mangling of your guitar or synth.

If you connect a synth in, a good practice is to set the output volume of the synth to about half. This will probably give you a level of -6dBV out and, not get compression through the module and end up with a signal of about 5V on the eurorack side.

### Eurorack as studio outboard effect

As above. Connect your audio interface to the pedal side of the module. Set the peak level out to about -4dBV, or higher if you want the effect of compression on the pedal input.

Using your eurorack this way gives you hands on live tweakability and a workflow that can be hard to get inside the DAW.

### Overdriving the pedal input

You can put signals up to eurorack level into the pedal input for getting creative compression effects. It can be good to put an attenuator in front of input so you can control the compression colouring.

It can also be good to put an attenuator after eurorack output as the output can be +/-10V if you drive it hard and you may want to attenuate that to 5V before going into the module after so its input doesn't get overdriven.

This can also be a simple way to get any signal hotter in your system.

### Guitar or bass input

Don't forget that the pedal input works really well with electric guitar. Because of the high-Z input it doesn't load the pickups much and that way it doesn't suck the high end and brilliance of the tone out of your guitar.

Having the high-Z input can also be important when used together with some pedals that are sensitive to the input impedance.