

The MDK Socket

All MDK enabled effects have a TRS jack socket which accepts an expression pedal in order to control your MDK Module.

The **MXP-1 Expression Pedal** will let you switch the effect on and off as a true second effect, where a regular TRS expression will still work and sweep the effect fine, but it will be always on.

TS style expression pedals will not work at all.

Unplugging the MDK jack will bypass the internal effect.



Open Source

We're far from the first pedal company to create a daughter-board format, but ours stands out from past offerings for three reasons:

1. It is simple to use and straight-forward to design with
2. It is cheap to manufacture and doesn't require complex parts
3. It is truly open-source and well-supported

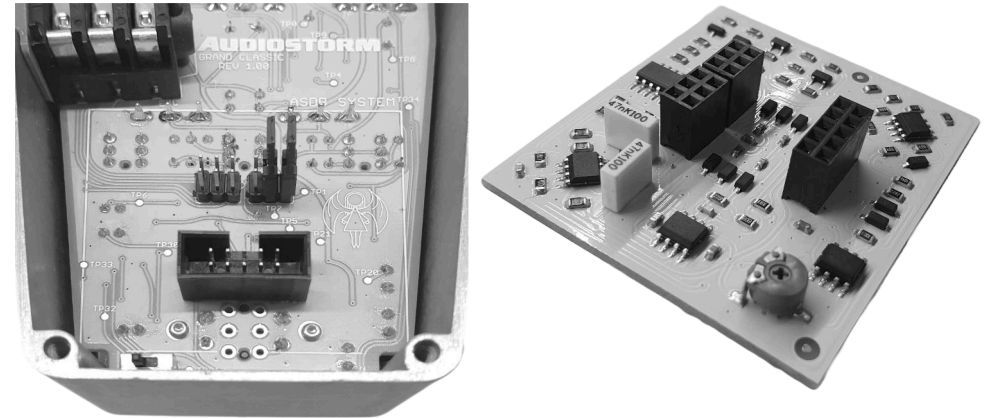
Make your own boards or include the MDK system in your pedals. No fees. No royalties. No limits. Find the full spec via our website.

Audiostorm.uk

MDK Mandrake System

The **MDK System** is an open-source format we created that lets you fit an expression based effect of your choice into your pedal.

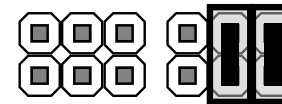
The advantage of this system is that it lets you customise your pedal with a unique additional effect, or enable a useful feature such as pedal remote control, without taking up any additional board space.



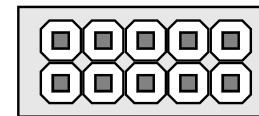
Fitting or swapping a module

In order to fit an **MDK Module** simply unscrew the back of your pedal, pull out the module and replace with another.

If you want to remove the module without fitting another you must fit the two jumpers as shown or else no audio will pass through.



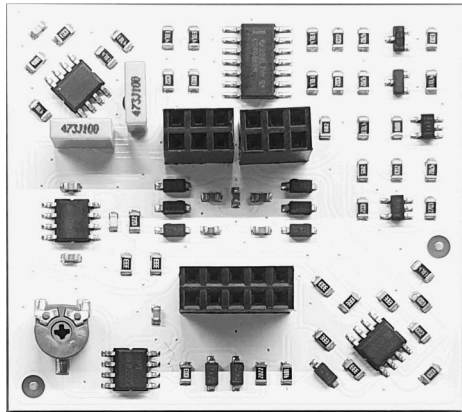
← Fit here to End Two



← Power block NEVER fit here!

!WARNING! If you fit the jumpers to the power block your pedal will not work and you may short-circuit the power and damage it!

MDK Moogy



The Moogy is a **Sweepable Low Pass Filter** with pre-settable resonance control. The design is based on a diode ladder filter. This gives an exciting, synth-like wah sound that's more of a wub-wub!

Setting the resonance

Your unit comes with the resonance set at the mid-point.

Increasing it will make the effect more extreme and exciting, turning it down will make it smooth and subtle.

If you turn it too far up the effect will go crazy and self-oscillate.

It is up to you to tune it how you prefer. Simply activate the effect and use the included micro screwdriver to increase or decrease while you play and seek your sweet spot.

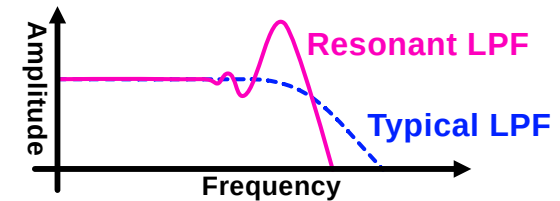
Do please be gentle: The tiny pot is delicate!



What is a a Low Pass Filter?

A Low Pass filter or LPF is simply a circuit that blocks treble and allows low bass frequencies to pass through. But a really fun thing happens when we try to make that transition from allowing sound to blocking it very sharp and sudden. We get a 'resonant peak' which actually boosts some frequencies and gives us exciting harmonics.

This gives a really cool, fat sci-fi like wah-wah-ish sound.



What is a Diode Ladder Filter?

Sweeping a frequency in a circuit is a pretty hard thing to do well. But Bob Moog came up with the idea of using transistors in a really clever and unusual way to make them misbehave and function as voltage-controlled resistors. It was genius, and was patented.

Eugene Zumchak, an ex-employee of Bob's, like many others, also wanted to use this sound so subsequently came up with the idea of using diodes instead of transistors in order to avoid patent issues.

The result is a really wild and dynamic sound as the diodes interact with each other to create a variable filter. Of course our version has now been altered, tuned and designed to sound the way we want it to, and so it really suits guitar and bass frequencies.

CV support for synth owners

Want to use our pedal with your modular synth? No problem!

Send 0-5V to the TRS tip for sweep.

Leave TRS Ring floating and the effect will be on, or connect Ring to Sleeve (earth) via a 4K7 resistor to turn the effect off.

You can also trigger a relay with a gate output for on/off control.