2HP vactrol LPG

Manual V1.0

The Vactrol (LPG) module is a passive module which acts on a signal x entering “IN”.
An additional CV signal (essential for the sound to be audible), connected to the “CV” input, will affect the signal x coming out in “OUT”, by acting on a low-pass filter via a “vactrol”.
All CV signals are accepted, bipolar as well as unipolar ...

What is a "vactrol"?

More commonly called an optocoupler, it is an electronic component made up of two elements integrated into a single box:

- a light-emitting diode (LED) and
- a photoresistor (which has the particularity of having a very high resistance in the dark, and which drops when exposed to light).

In our case, the application of a voltage to the LED (via the CV IN input) causes an emission of light which is picked up by the photoresistor. This will therefore gradually “open” or “close” the path taken by the signal x, while acting on the low-pass filter.

The attenuator acts on the CV IN signal.

A selector allows to choose between the stand-alone mode ("default") with a filter setting that I have defined and the "user" mode.
The "user" mode is interesting because it allows a personalized filter setting as we will see below.

Presentation

1: Location to insert a capacitor (3 supplied)
2: "User" or "Default" mode selector
3: Backlit pattern with an RGB LED
4: Attenuator affecting the incoming CV signal
5: Connector for a CV IN signal
6: IN connector for the signal to be processed
7: OUT connector of the processed signal

On the back of the module:

- A jumper allows to activate or not the RGB LED

Activation/Deactivation RGB LED

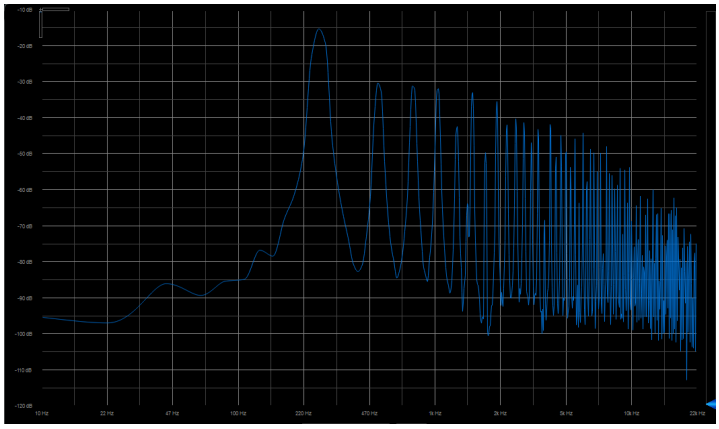
A removable jumper, on the back of the module, allows you to activate (jumper in place) or deactivate (jumper removed) the RGB LED which represents the presence of a voltage at CV IN and which influences the processed signal, in particular with higher voltages / octaves. This causes an interesting signal destabilization. To maintain a stable signal, remove the jumper.

MODES OF USE

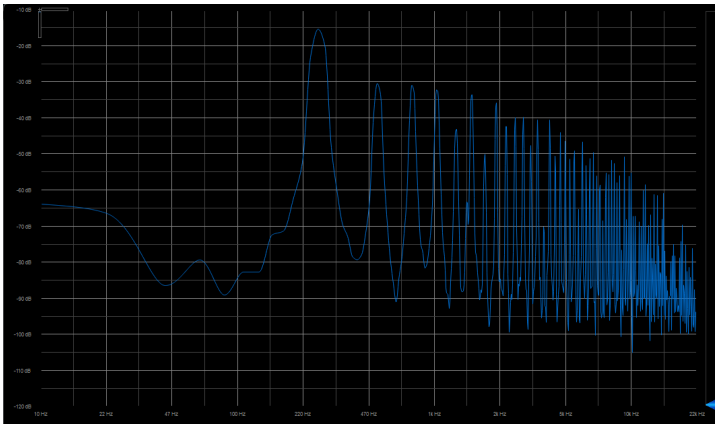
DEFAULT mode

This mode offers the use of Vactrol LP with its predefined settings
Example of a processed "SAW" signal:

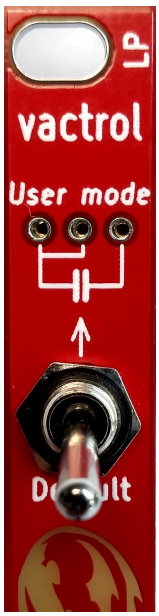
Dry :



Treated with internal mode :



USER Mode

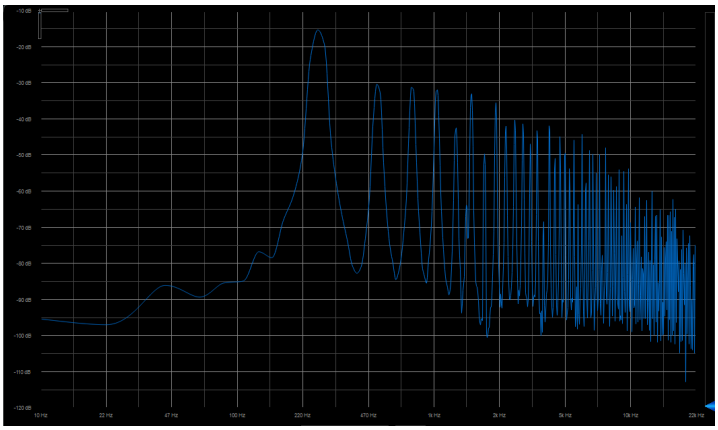


By placing the selector up, you access the user mode.

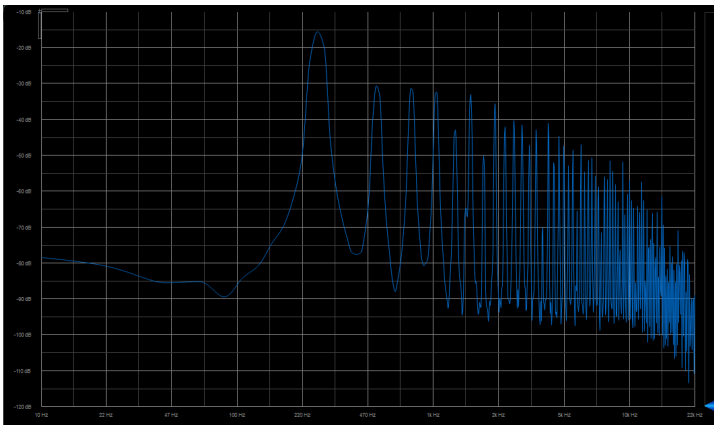
- Leaving the slot blank gives you unaffected, raw sound
- By placing a capacitor of your choice, you change the frequency of the LP filter.

You can test the 3 values provided or put others. All ceramic, monolithic, film or mylar capacitors are accepted.

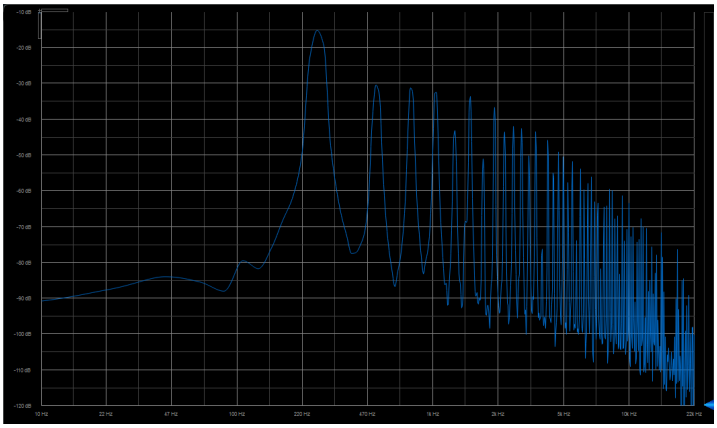
Dry:



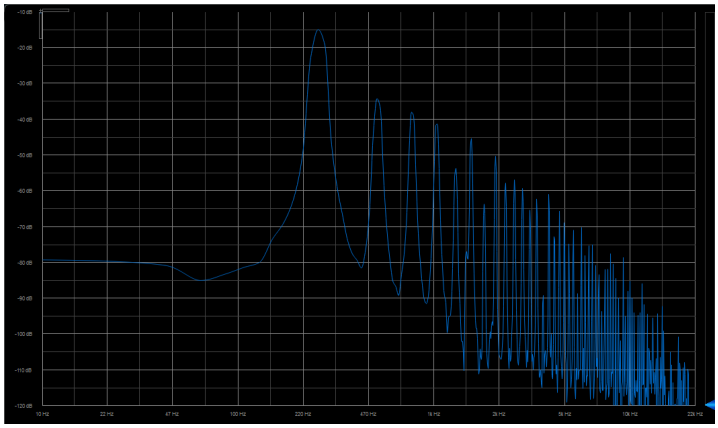
Treated with 10nF capacitor:



Treated with 68nF capacitor:



Treated with 1uF capacitor:



Characteristics

Size 2hp (1cm), epoxy black panel 1,6 mm.

Deep : 22mm with connector (skiff friendly).

PCB in epoxy FR4 dual layer, 1,6 mm. Surface finish HASL.

Ribbon cable, M3 and nylon nuts inc.

Consumption : ~0 mA (+12V) / ~0 mA (-12V)

Components tested and assembled by hand, in Brittany, France.

thank you for your trust
Feel free to give me your opinion, criticism or wishes ...
Other modules are coming

mail : phneutre56@gmail.com

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