



3xATT

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This module is a triple passive attenuator in 2HP format, with linear or log(arithmetic) mode selector on two stages.

Linear mode will be used for logic signals (CV, LFO...)
The logarithmic mode will be preferred for audio signals.

What is the difference between a lin and log potentiometer and why we use it:

Linear:

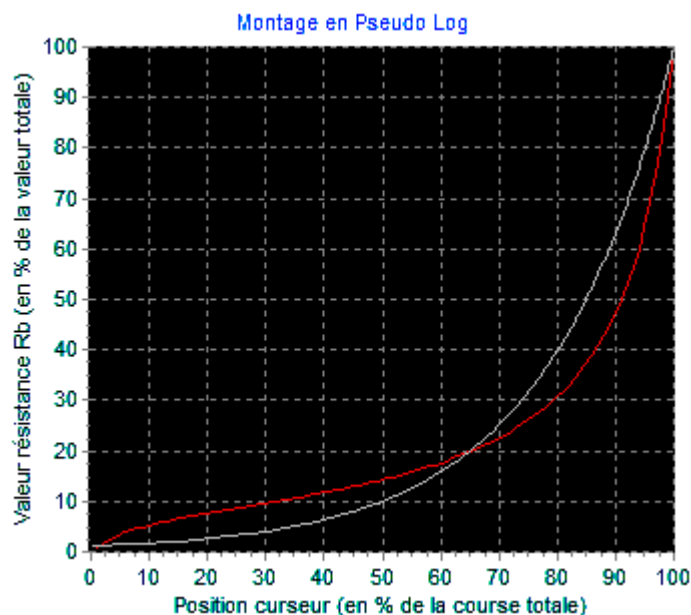
The resistance of this type of potentiometer varies linearly, that is to say that the value of its resistance increases (or decreases) proportionally when moving the slider. It is used for example in a variable voltage source. Ideal for logic signals, CV, LFO etc ...

Logarithmic:

The resistance of this type of potentiometer varies exponentially, that is to say that the value of its resistance increases (or decreases) more and more quickly when the slider is moved. Ideal for AUDIO sources, for sound volume adjustments, to adapt to the characteristics of the human ear, which has a logarithmic response to the pressure that air exerts on the eardrums.

In this graph (*source: "PotModCurve" software*):

- The white curve is the value of a classic logarithmic potentiometer,
- The red curve is the (theoretical) curve produced by the 3xATT module.



Presentation



- 1: attenuator (linear) linked to input 6
- 2: LIN/LOG selector linked to stage n°2
- 3: attenuator linked to input 8
- 4: LIN/LOG selector linked to stage n°3
- 5: attenuator linked to input 10
- 6: 3.5 jack connector (input 1)
- 7: 3.5 jack connector (output 1)
- 8: 3.5 jack connector (input 2)
- 9: 3.5 jack connector (output 2)
- 10: 3.5 jack connector (input 3)
- 11: 3.5 jack connector (output 3)

Explanations

The principle is very simple. You have 3 independent attenuators.

The first stage is a simple linear curve attenuator.

The second and third stages are linear curve attenuators, with the choice of switching them to a simulated logarithmic curve via the selector.

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Characteristics

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

Deep : 25mm with connector (skiff friendly).

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

Ribbon cable, M3 and nylon nuts inc.

No consumption (passive module)

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*

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<https://phmodular.com>