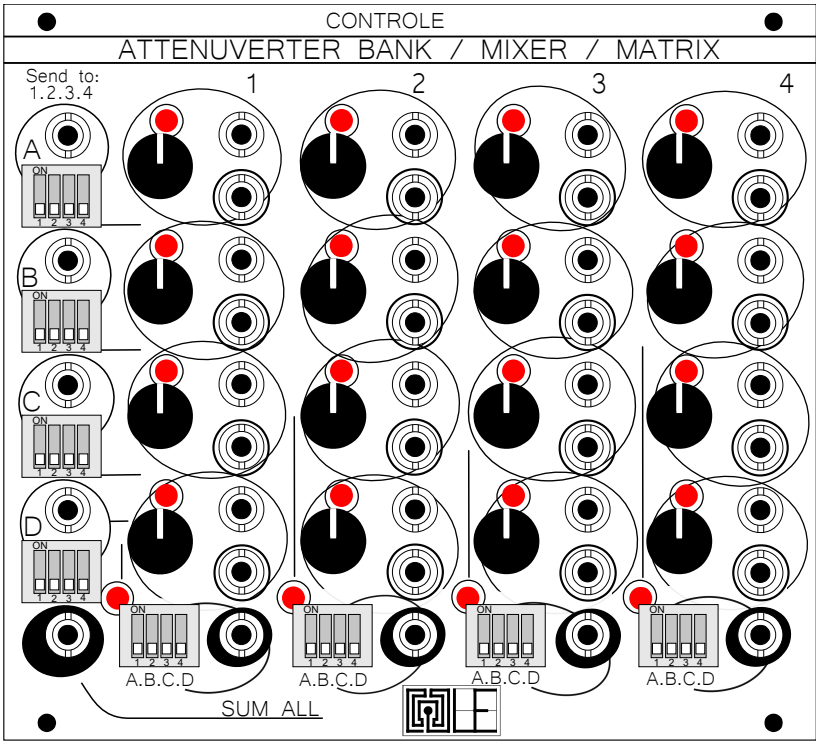
LARIX ELEKTRO

CONTROLE ATTV-4

WHAT'S THAT THING ?

This is a bank of 16 Attenuverters. That can be used as a **4 input mixer**, and/or as a **1 to 4 signal dispatcher**, and/or as a **matrix** up to 4 by 4. Or any combination of these functions.



KNOBS:
1.2.3.4 by A.B.C.D (16 knobs):
Attenuverter value for each circuits. (amplification and inversion)

JACKS I/O:
- IN & OUT per circuit.
- 1 common input per line.
- 1 common output per column.
- SUM ALL output.

DIP Switches:
- 4 Switches per line.
- 4 Switches per column.

Technical specifications:

+12V : 150 mA (without LEDs)
220 mA MAX. (when all LEDs are at maximum brightness)
-12V : 150 mA (without LEDs)
220 mA MAX. (when all LEDs are at maximum brightness)
(5V is not used)
28HP, 35mm deep (Approx.) with PSU connector

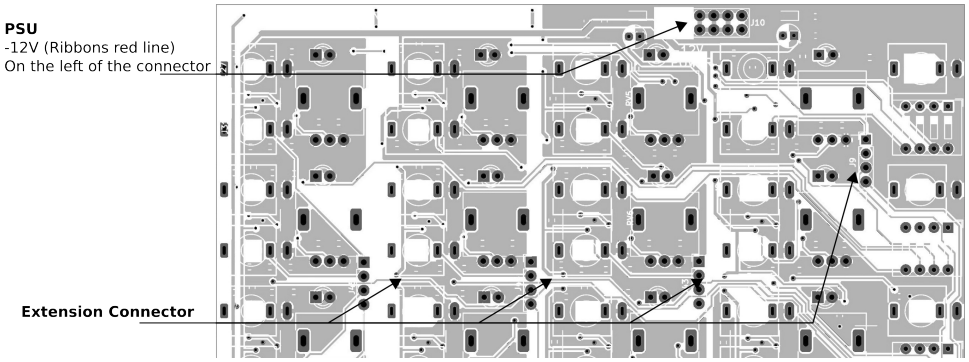
Installation:

At first, ensure that there is enough power to supply the module.
Beware of the orientation: the red strip on the ribbon cable should match the white line on the module, and on the PSU board (-12V).

Connect the PSU ribbon into the PSU connector, the small connector (2x5 pin) into the module, and the large one (2x8 pin) into the PSU Board.

It is better to have a **well-insulated box** because parasites can be added to the signal of the modules. If you are not familiar with electronics, prefer commercial boxes. This is especially true for power supplies: a poorly designed power supply can damage the modules.

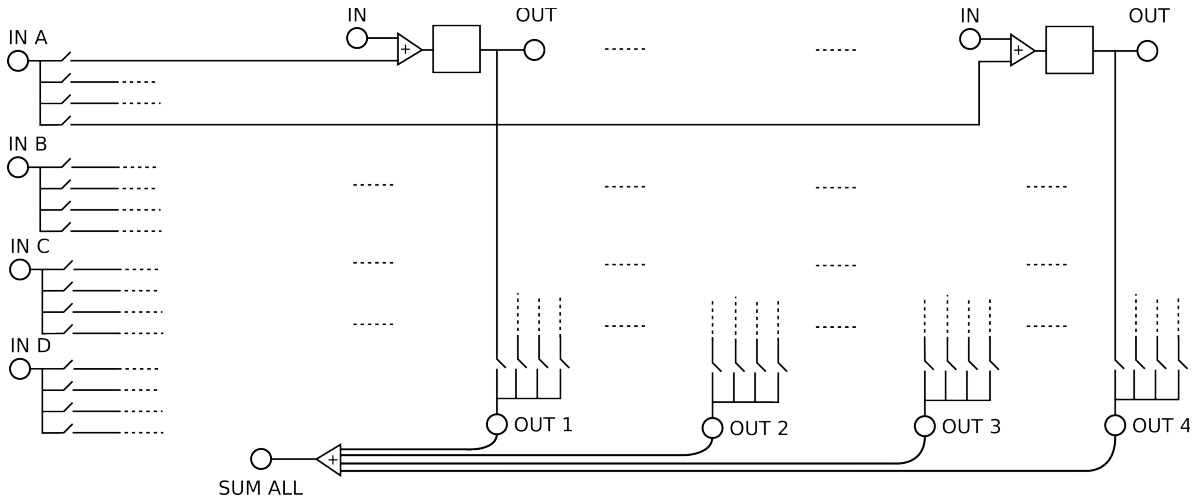
To avoid various problems, electromagnetic, but not only, **complete the empty spaces with blind front panels** (Blank panels).For more informations about the use of the Extension Connector: see below.



Extension Connector:

This is the four 4 PINS connector.
Each of these pin is directly connected to the corresponding attenuverter circuit output.
On all **Larix-Elektro** modules, all CV inputs have a parallele input on the back of the module.
This is on this connectore you can connect the **Attenuverter Bank**. It allows to adjust the CV value of the module.

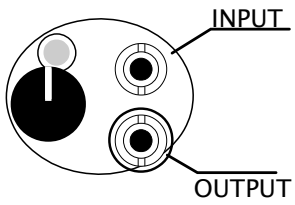
Technical explanation :



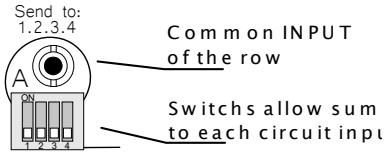
The basis:

Once again some boring Attenuverters !!!

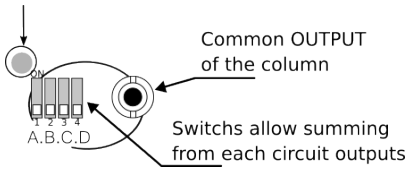
Firstly, what is an Attenuverter:
It's a way to modify the amplitude of a signal, like an attenuator.
But with one more feature: inverter ! With the same knob.
It means that at center position of the knob, output is 0 (nothing).
On the right, it progressivelly increase the amplitude.
And on the left, it will increase the amplitude too, but reversed.



The **Attenuverter Bank** adds some features:
- Each column has its own output, who can sum all inputs from this column.
A DIP switch is here to allow (or not) the input to goe to this output.



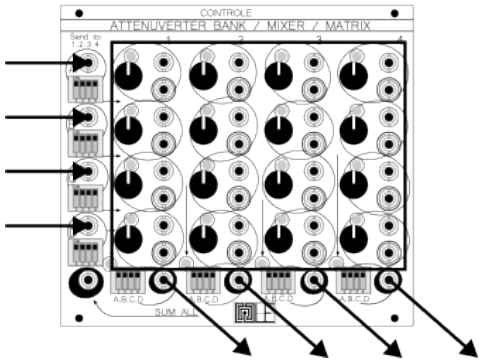
- Each line has its own input, who can be summed to each circuit.
As for the column, there is a DIP switch to activate this input for each attenuverter.
The attenuverter knob contrôle the sum of the two values.
Note that both entries will be summed together, befor being modified by the attenuverting circuit.
(input of the attenuverter + the common input)



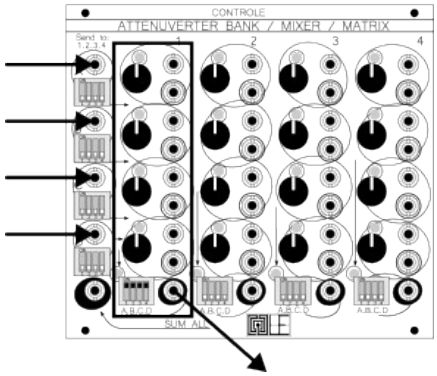
- Finally, there is a last output that mix the result of the 4 column outputs. **SUM ALL**
Do not expect a high quality 16 input studio mixer ! But it can be usefull in a lot of cases.

Use cases:

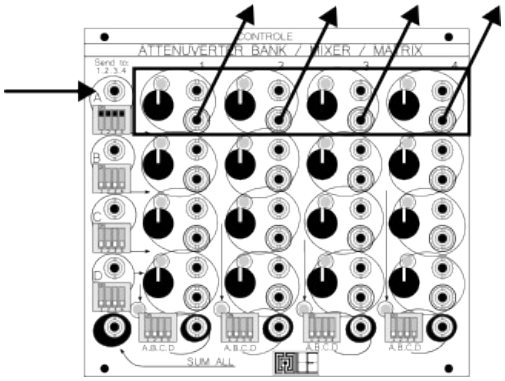
MATRIX



COLUMNS



LINES



Technical considerations:

- At max position, the signal is amplifier by **1.5** (approx.) into the individual output.
- Unlike the individual output, the Column output does not amplify the signal.
- The SUM ALL output reduce the amplification by **0.5** (approx.).

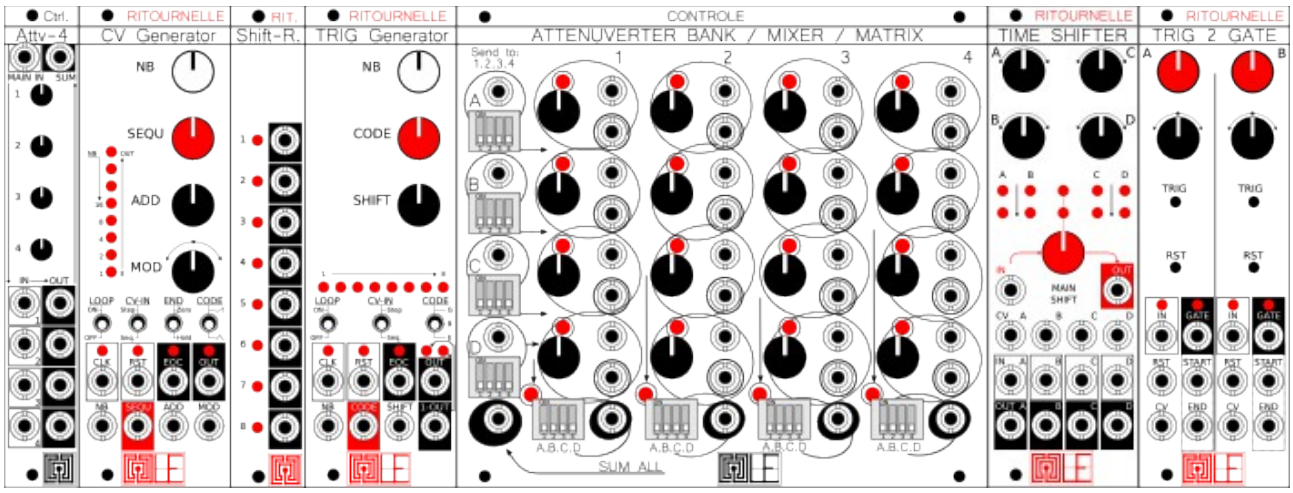
Extension connector: On the back, on the PCB, there is a 4x 4 pins connector. It provides the same signal as the 16 individual output jacks.

FULL RANGE MODULES :

–	RITOURNELLE	CV Generator	: CV sequence generator.
–	RITOURNELLE	TRIG Generator	: TRIG sequence generator.
–	CONTROLE	Attv-4	: 4 attenuverters / Mixer / Dispatcher.
	Extension.		
–	RITOURNELLE	Shift-R	: Adds 8 Trig to the CV Generator.
–	CONTROLE	Attenuverter Bank	: attenuverters / Mixer / Dispatcher/Matrix

SOON :

–	RITOURNELLE	Time Shifter	: Decay gates in time. Groove machine !
–	RITOURNELLE	Trig 2 Gate	: Any signal into Gate, + various improvements.



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