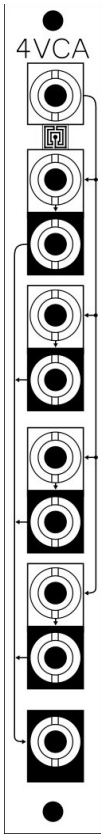
LARIX ELEKTRO

CONTROLE 4VCA

WHAT'S THAT THING ?

The **4VCA** is just four linear VCA, intended to be an extension for the **KNOBS** modules (and to a lesser extent, for the **SWITCH** module).



Module content :
- 4 VCA with signal IN and OUT jacks.
- One global INPUT
- OUTPUT, sum of all VCA outputs.

CV control of each VCA available on the back of the module, with a 4 pin connector.

Typical use :
- With the **KNOBS** module, adjusting the amount of a signal with a big knob.
- With the **SWITCH** module, activate/desactivate signal flows.
- CV controllable 4 IN mixer
- CV controllable distribution of signal, 1 IN to 4 OUT.

The module needs another module to access to its CV controls.
As explained, le **KNOBS** or the **SWITCH** module, but in fact, any module that can provide a signal between 0V to 5V (lower or higher voltages are clipped). You can use the **Mult.** Module for example.

Technical specifications:

+12V : 35mA
-12V : 35mA
(+5V is not used)
35mm deep (Approx.) with PSU connector
3HP

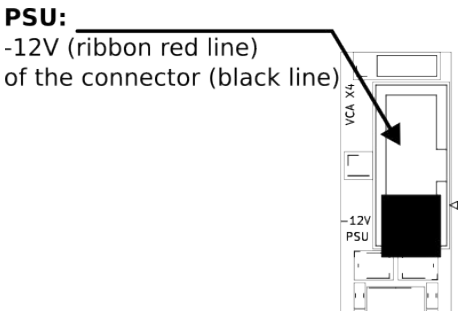
CV INPUT range : 0V to 5V (lower or higher voltages are clipped).

Installation:

PSU connection

At first, ensure that there is enough power to supply the module.

The package contains 2 cables, one for power and the other to connect the module that will provide the CV (**KNOBS**, **SWITCH**, or something else).
Do not confuse these 2 cables. For power, the cable is wider, and one of the connectors is larger than the other (as a lot of cables from other modules...).
In any case, you will have difficulty inserting the wrong cable into the module, and some pins will stick out on the side. You may have some problem and it may damage your 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).

! WARNING: DO NOT CONNECT PSU to the other connector!
It will damage the module.

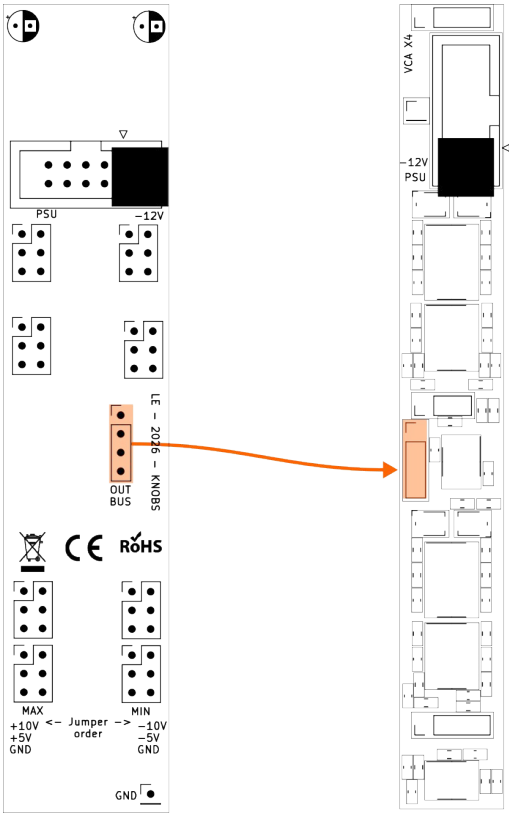
Connecting the 4VCA to its controller
Exemple with the KNOBS module

There are plenty of jacks, but the CV input is missing. Is this a design mistake? An oversight?
No, the 4 CVs are combined into a single connector at the back of the module.

The module was designed to be controlled by another module like the **KNOBS**.
The **KNOBS** has 4 potentiometers, with no jack output. But it has the same connector on the back of the module. This way, manual control is moved away from the cables.
The **KNOBS** package contains another module, the **EXT**, which is intended to receive these 4 CVs.
The **4VCA** is intended to replace this **EXT** module.
And technically, the wiring between the two modules is identical.

The intended way to connect the 2 modules together is to use the second cable provided in the package.

> ***WARNING**, it is not the same one used for the PSU. The cable in question here is thinner, and the connector is also smaller. Another detail, the cable has the same connector on both ends, unlike the PSU cable. If you reverse the cables for power, the module may malfunction or even be damaged. However, using a power cable to connect the 2 **KNOBS** and **EXT.** modules will not cause any problems.*
> ***In fact, if the length of the cable does not suit you, it is possible to use a power cable as a replacement.***



The cable is connected between the **OUT BUS** connector of the **KNOBS** module and the top connector of the **EXT.** module.
The connector on the cable has 2 rows, but the connectors on both modules only have one row. Why?
For the sake of rationality, a cable with 2 rows is used for other modules...

But anyway, it's not a problem. You just need to connect the cable to the same row on both sides. And if you made a mistake, it's not a big deal; you just need to switch to the other row on one side.

The connection is the same if you use another module.
For example the **SWITCH**, or even the **EXT**.

If the cable is not flipped (twisted), the CV from the top knob controles the top VCA, and so on for the other knobs + VCA. If you want to reverse this order, simply flip the connector before inserting it. No worries, there is no reason this would cause problems or damage your modules.

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