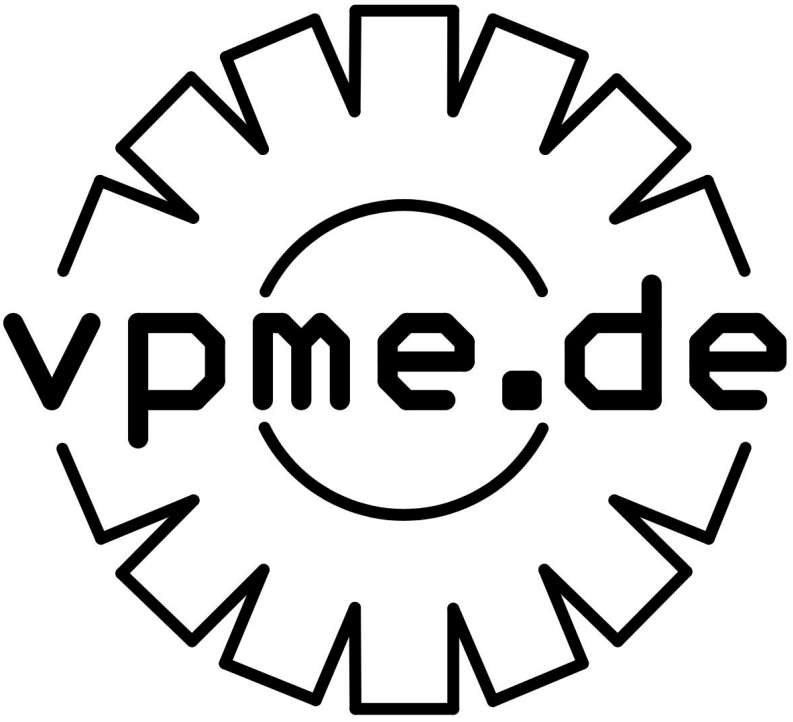
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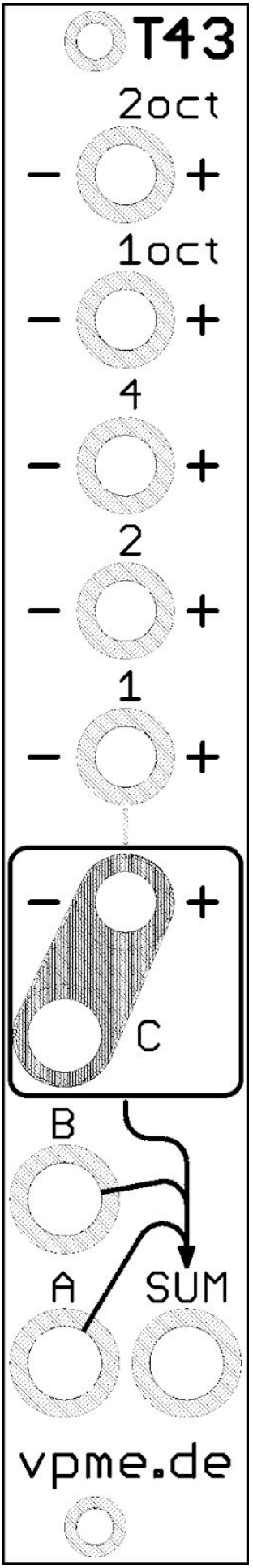
T43
2oct
1oct
4
2
1
C
B
A
SUM
vpme.de

## INSTALLATION

- T43 is a **4 hp** Eurorack **precision CV adder and transposer**
- The modules consumes **20 mA** from the +12V and **10 mA** from the -12V supply, it does not use the +5V rail.
- Carefully check the **orientation** of the 10-pin power connector, the **red stripe (-12V)** should be at the bottom of the module, see the labeling on the PCB.
- Further information and contact details at: http://vpme.de/t43/

## BASIC OPERATION

- Inputs**:**
  - **A:** CV/audio **input A** which gets added to the **SUM** output
  - **B:** CV/audio **input B** which gets added to the **SUM** output
  - **C:** CV/audio **input C** which can be added or subtracted from the **SUM**

- Controls:
  - **2 oct:** add or subtract **2 octaves** (2.000V) to or from the **SUM** output
  - **1 oct:** add or subtract **1 octave** (1.000V) to or from the **SUM** output
  - **4:** add or subtract **4 semitones** (0.333V) to or from the **SUM** output
  - **2:** add or subtract **2 semitones** (0.167V) to or from the **SUM** output
  - **1:** add or subtract **1 semitone** (0.083V) to or from the **SUM** output
  - **C:** add or subtract the **C** input voltage to or from the **SUM** output
  - in the switches' middle position, nothing is added or subtracted**.**
  - any number of steps between **-43** semitones and **+43** semitones can be added / subtracted with the right combination of switches. e.g. to add **7 semitones**, set **+4, +2 and +1**. To add e.g. **11 semitones**, set **+1 oct and -1 semitone**.

- Outputs:
  - **SUM** sum of **A + B +/- C** and the transposition switches

### Calibration

The module comes already calibrated, so there is no need to do this for normal operation. In case the calibration has been modified and needs to be redone follow these steps:

- power up the module and let it warm up for at least **10 minutes**
- **disconnect** all input signals and set all switches to the **middle position**
- set the **+2 oct** switch and measure the **SUM** output signal with a high precision voltage meter (a meter that can measure down to 0.1mV is recommended)
- adjust the multi-turn trim potentiometer on the back of the module until the **SUM** output signal reads **2.000V** (the exact voltage should be between 1.9995V and 2.0005V)

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