

## General

The MIDI/CV Power-Supply-module combines a power-supply, a bus-access-module and a MIDI/CV converter for MFB- and Doepfer A-100 compatible modules. Connect up to eight modules to the bus-circuit. The monophonic MIDI/CV converter allows MIDI-notes to be translated to CV-/Gate-voltages. Pitch-wheel-data and modulation-wheel-data are sent separately as well as MIDI clock and start/stop commands.

## Set-Up

The MIDI/CV-module is meant to be mounted in a modular frame. You may either use the 19"/3U frame offered by MFB and Schneiders Büro, a standard Eurorack or a self-constructed frame. The circuit board bottom has five screwholes with a diameter of 3mm each. The board can be screwed to the MFB or standard Euroframe rear cross brace using the slide nuts. MIDI jack and dipswitches need to point upwards, while the power-supply connector needs to point backwards. When self-constructing a frame, make sure there is access to these jacks (just like in the half-open MFB-frame).

With the circuit board fastened, mount the module with the jacks and on/off-switch to the frame using two M3 screws. Now, connect the module's 10-pin cable to the circuit board. The cable will fit in only one direction and is therefore protected from reverse connection.

## In Use

Use the included power-supply to supply AC-current (14-16 volts) to the module. Connect the power-supply cable to the power-jack on the rear of the circuit board. Two LEDs on the circuit board should light up when connecting power: The red LED indicates +12 volts; the green LED indicates -12 volts. Another LED on the module's front-panel also indicates the power status.

Connect the MIDI input to the MIDI out of any compatible keyboard or sequencer. Other modules need to be connected to the 16-pin sockets on the circuit boards, using their 16-pin connectors.

**ATTENTION:** Please, check for correct polarity! The colored side of the connector-cable needs to point downwards so that the cable is not twisted. The two outer jacks use sockets and therefore cannot be reverse connected.

**Note:** The power-supply delivers a maximum of 500 mA. All connected modules combined must not exceed this value to prevent the power-supply from overloading. Please find information on each module's current draw in the respective manuals.

## MIDI-Channel

Use the dipswitches located next to the MIDI-In jack on the circuit board to define the MIDI-channel. Set the four switches to the following positions.

Ch.	1	2	3	4	Ch.	1	2	3	4
1	ON	ON	ON	ON	9	ON	ON	ON	OFF
2	OFF	ON	ON	ON	10	OFF	ON	ON	OFF
3	ON	OFF	ON	ON	11	ON	OFF	ON	OFF
4	OFF	OFF	ON	ON	12	OFF	OFF	ON	OFF
5	ON	ON	OFF	ON	13	ON	ON	OFF	OFF
6	OFF	ON	OFF	ON	14	OFF	ON	OFF	OFF
7	ON	OFF	OFF	ON	15	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	16	OFF	OFF	OFF	OFF

## CV/Gate

The MIDI-note input is converted into analogue voltage supplied at the CV and Gate jacks. (Key)-CV equals the pitch and uses a range between 0 to 5 volts for five octaves. Following the 1 volt/octave standard, the MIDI/CV module is compatible to most analogue modular systems and -synthesizers. The 0 volt basic pitch equals MIDI-note C1 (note number 036).

Gate defines the note length. A dynamic gate voltage between 5 and 10 volts is extracted from the MIDI-velocity. The gate polarity is always positive. Key-CV and gate information are also transferred to the system bus. Modules with access to this bus will not need front side patching to use these functions.

Pitch- and mod-wheel data of a MIDI-keyboard (or equivalent controllers) are available at separate pitch and modulation outputs. The voltage for pitch is  $\pm 10$  volts with 0 volt at the wheel's center position. The modulation output delivers 0 to 10 volts.

**Note:** Although pitch wheel data are always related to a note information, this information is transferred neither to the Key-CV output nor to the system bus. For pitch-control by pitch-wheel, this connection needs to be patched to the oscillator separately.

## Start/Stop - Clock

Outputs Start/Stop and Clock carry synchronization signals that are extracted from the MIDI-clock und MMC-start/stop commands. Use dipswitches 5 and 6 to define the signal handling.

Switch 5 ON = start 0 volt, stop 5 volts

Switch 6 ON = clock resolution 1/96

OFF = start/stop impulse (SEQ-01/02)

OFF = clock resolution 1/16



**Operating Manual**

**MIDI/CV Power-Supply**