

General

SEQ-02 is a programmable step-sequencer in module-format that allows creating synthesizer-sequences as well as rhythmic sequences. It offers twelve tracks that may either control six synthesizer voices (or 6 drum-tracks) with six CV-tracks or up to twelve trigger-tracks. Finally, SEQ-02 can also generate up to twelve CV-sequences at the same time – all on separate outputs.

The SEQ-02 has four operating modes that differ in the number of available tracks and outputs. Each mode has its proprietary memory area, so that the sequences are preserved when switching operating modes.

Set-up

SEQ-02 is fully compatible to Doepfer's A-100 modular system - in size, bus-power and CV/Gate voltage. Connect the 10-pin cable to a corresponding 16-pin jack on the Doepfer mainframe bus (or on the MIDI/CV circuit-board). Supply voltage needs to be +/- 12 volts, 5-volt connections are not required. The wattage is +60 mA/- 10 mA, the module size 20 TE (Teileinheiten) = 101.3 mm.

ATTENTION: Please, check for correct polarity! The colored side of the connector-cable needs to point downwards, so that the cable is not twisted.

Selecting the operating mode

The current active operating mode is displayed by the step-LEDs 9-12, when pressing and holding both **REC** and **SEQUENCE** for at least one second.

Step 09 = Mode 1	6 CV- and 6 gate-tracks, each CV-track is paired with a corresponding gate-track.
Step 10 = Mode 2	6 CV- und 6 gate-tracks, individual programming (unpaired)
Step 11 = Mode 3	12 CV-tracks with individual programming
Step 12 = Mode 4	12 gate-tracks with individual programming

To change the operating mode, press and hold **REC** and **SEQUENCE** plus the respective step-button 9 to 12.

Selecting the sequence

Select between the 16 memorized sequences by pressing **SEQUENCE** and one of the step-buttons. Do not hold the **SEQUENCE** button! The selection mode is indicated by a lit LED on top of the **SEQUENCE** button. Now, press the respective step-button. When stopped, the new sequence will immediately be loaded. During playback the selected sequence will be started after the active sequence is completed. Adjacent sequences can be called up by external triggers at inputs **SEQUENCE +** and **SEQUENCE -**.

Start/Stop

Use the **Start/Stop** button to start a sequence after selection. A second push of the button will stop the sequence. This function can also be controlled by a trigger-signal at **Start/Stop**. This jack can be used as input (min. +5 volts) as well as output (+5 volts). The first incoming trigger will start the sequencer, the next will stop it.

A, A/B, B

This function selects if a sequence will play sequence part A, part B or AB alternating (which equals two bars length).

Tip: When programming a two-bar-sequence it is often more comfortable to complete programming part A first, followed by part B. By this, you avoid a constant changing of the step-LEDs.

Sequencer-tracks

The turn-switch on the module's left selects the sequencer-track to be programmed/edited. The tracks are coded **CG1** to **CG12** with the following functions depending on the selected mode:

Mode 1+2	CG1...CG6 = CV1...CV6 CG7...CG12 = Gate7...Gate12 (CV1 corresponds to Gate7, CV2 to Gate8 etc.)
Mode 3	CG1...CG12 = CV1...CV12
Mode 4	CG1...CG12 = Gate1...Gate12

Steps

The steps in a track can only be set while the sequence is running, not while the sequencer is stopped. There are two ways to set the steps in a track:

1: To program a single step, press the respective step-button and enter the value using the **DATA**-knob. Press the **DATA**-knob to erase the step. If you erase part of a tied note, the other part will remain as a "new" note.

2: To set multiple steps at the same time (useful for CV-voltages in modes 2 and 3), press **REC** followed by the first respective step-button. Next, press the second step-button and release both **REC**- and step-buttons. Now, you can set all steps between the first and second step simultaneously.

Programming is slightly different, according to the mode selected.

Mode 1: After selecting the step(s), use the **DATA**-knob to define a control-voltage for tracks CG1...CG6 (0...5 volts following the 1 volt/octave standard). The corresponding gate information (9 volts) will automatically be set on the paired gate-tracks.

Mode 2: Set control voltages as described in Mode 1. The gate-tracks CG7...CG12 are set separately, using the **DATA**-knob. Adjustment ranges from 0 to approx. 9 volts.

Mode 3: After selecting the step(s), use the **DATA**-knob to define a control-voltage for tracks CG1...CG12 (0...9 volts following the 1 volt/octave standard).

Mode 4: After selecting the step(s), use the **DATA**-knob to define a gate-voltage for tracks CG1...CG12 (0...9 volts)

Hint: CV- and gate-voltages differ: CV-voltage lasts for a full 16th note while a gate-voltage is a combination of 1/32nd ON and 1/32nd OFF.

Reset

There are two ways to reset a sequence to step 1.

A fixed reset can be programmed in track CG1. Press and hold the step at which you want the sequence to reset and then press **Start/Stop**. The same procedure eliminates the reset point.

Secondly, the reset-function can be externally controlled by trigger-impulses sent to **Reset**-input (min. +5 volts), e.g. from another (free) track or from another sequencer.

Deleting a track

A track can be deleted by pressing **SEQUENCE** with the **REC**-LED being lit (see Programming multiple steps).

Tempo/Clock

Set the sequence-tempo with the **DATA**-knob, while holding **REC**. The corresponding clock-information is sent to **Clock Out** (+5 volts) in order to synchronize clock-dependent modules. The internal clock-resolution of SEQ-02 is 96 clicks per bar. It can be reduced to 16 clicks.

The current setting is displayed by pressing **REC** and **SEQUENCE** for at least one second

(LEDs 13 to 16):

- Step 13 = 96 internal clock
- Step 14 = 96 external clock
- Step 15 = 16 internal clock
- Step 16 = 16 external clock

To change the setting, press and hold **REC** and **SEQUENCE** plus the respective step-button 13-16. At any of the two “external” settings, the sequence-tempo is dependent on the clock-signal at **Clock In** (min. +5 volts).

Shuffle

The SEQ-02 module offers seven shuffle intensities. The current mode is displayed, when pressing and hold **REC** and **SEQUENCE** for at least one second (LEDs 1 to 8).

1 indicates the basic setting without shuffle, 2 to 8 represent active shuffle with increasing intensity.

To change the value, press and hold **REC** and **SEQUENCE** plus the respective step-button 1-8.

INFO: Shuffle is not available, when using a 16th-clock-resolution (internal/external)!

Saving sequences

In order to prevent data loss, sequences programmed in the SEQ-02 module must be saved prior to selecting other sequences or switching off the unit off.

A sequence is saved by pressing **REC** (the corresponding LED turns off). Saving is possible while the sequencer is stopped or during playback. However, saving during playback will cause a slight delay.



Operating Manual

SEQ-02 Module