

# KOMPLEX

SEQUENCER

## USER MANUAL



Dear KOMA user,

Thank you for purchasing the KOMA Elektronik Komplex Sequencer!

Some machines start with crazy ideas on paper but make much more sense when they are realised. The Komplex Sequencer is one of those machines: four sequencers that can cross modulate each other and the possibility to control all features over CV—why not?

Here at KOMA, we love sequencers. It has been a key tool for many musicians throughout the years, ranging from techno producers to experimental ambient artists, all using its repetitive character to create innovative music. Now, it's time for the ultimate sequencer, one that has so much power and connectivity, giving you the possibility to transcend the sequence from a repeating pattern into an ever evolving cadence of sound.

The Komplex Sequencer has no screens or submenus; all features have their own dedicated controls, inputs and outputs on a large 87-point front-panel patch bay inviting you to instantly interact with the machine. By patching both internal and external CV sources between the four individual sequencers and the CV recorder, you can "sequence the sequence" and create extremely complex patterns that further usual repetitious loops.

No matter if you have a small modular system or a studio filled with vintage synths, the Komplex Sequencer is compatible with almost all synthesizers that accept CV/Gate and/or MIDI. Open up a whole new world of playability and creativity, starting where all other sequencers stop. Now, hook the sequencer up and hit play!

All the best from Berlin,

The KOMA Elektronik Team

Wouter Jaspers

Christian Zollner

Robert Kunz

Hayden Moskowitz

Benjamin Hughes

## Getting Started

### 1. UNPACK YOUR MACHINE

The package contains the Komplex Sequencer itself, a dust cover, this manual and the power supply unit.

### 2. POWER UP

Use only the included 12V AC power supply included. The sequencer turns on automatically when it receives power.

### 3. CONNECT IT

Plug the CV OUT of the Komplex to your CV IN (V/oct, pitch or fm) of your synthesizer and the GATE OUT to the GATE or TRIGGER IN. Connect an external clock to the CLOCK IN of the Komplex if you are using another device as the master clock.

### 4. PLAY

Press PLAY and start moving the sliders and adjusting other parameters to begin creating a sequence.

### 5. PROGRESS

Make it more complex by patching and chaining the other sequences into one another! Remember to connect the CLOCK OUT of the running sequence into the others' CLOCK IN so they are in time with each other.

## Imprint

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is a subsidiary company of KOMA Elektronik B.V.

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Registration Number : HRB 145453  
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## Inputs & Outputs

Inputs are 0-5V but can also accept bipolar signals. If the input has a corresponding knob, then the knob becomes the bias of the input.

### 1 CV OUT (Output)

The CV output of the sequencer.

### 2 GATE OUT (Output)

Outputs a positive gate per step where gate is engaged.

### 3 SOS OUT (Start of Sequence Output)

Sends a pulse every time a Start signal is received by the sequencer.

### 4 EOS OUT (End of Sequence Output)

Outputs a pulse every time the sequence hits the end of its last step.

### 5 CLOCK IN (Input)

Set the speed of sequencer via an incoming clock signal. Overrides the SPEED rotary control.

### 6 CLOCK OUT (Output)

Outputs the clock per sequencer as set by SPEED or incoming clock.

### 7 REC CLK (Input)

Set the speed of the corresponding CV Recorder output via an incoming clock signal. The CLOCK OUT is normalised to this input.

### 8 REC OUT (Output)

CV output of the corresponding CV Recorder bank (A, B, C or D).

### 9 TRANSP (Input)

Offsets the whole sequence's CV output by the amount of CV applied. To transpose with V/oct use the QUANTIZER on the CV outputs.

### 10 START (Input)

When this input receives a positive pulse, the sequence starts playing or pauses.

### 11 STOP (Output)

An incoming pulse resets the sequence back to its sequence start point.

### 12 SKIP STEP (Input)

When positive voltage is applied to this input, the step is skipped in accordance with the SKIP MODE setting.

### 13 SSP (Input)

Sets the sequence start point.

### 14 REPEATS (Input)

Sets the amount of repeats for steps with repeat active with CV.

### 15 SEQ LGTH (Input)

Set the sequence length.

### 16 GATE LGTH (Input)

Sets the gate length of the sequence of the current step.

### 17 PLAY M (Input)

Select the play mode of the sequence.

### 18 GLIDE (Input)

Control the glide time.

### 19 DIVISION (Input)

Set the division of the SPEED or CLOCK IN.

### 20 MIDI IN (Input)

Receives incoming MIDI clock.

### 21 MIDI OUT (Output)

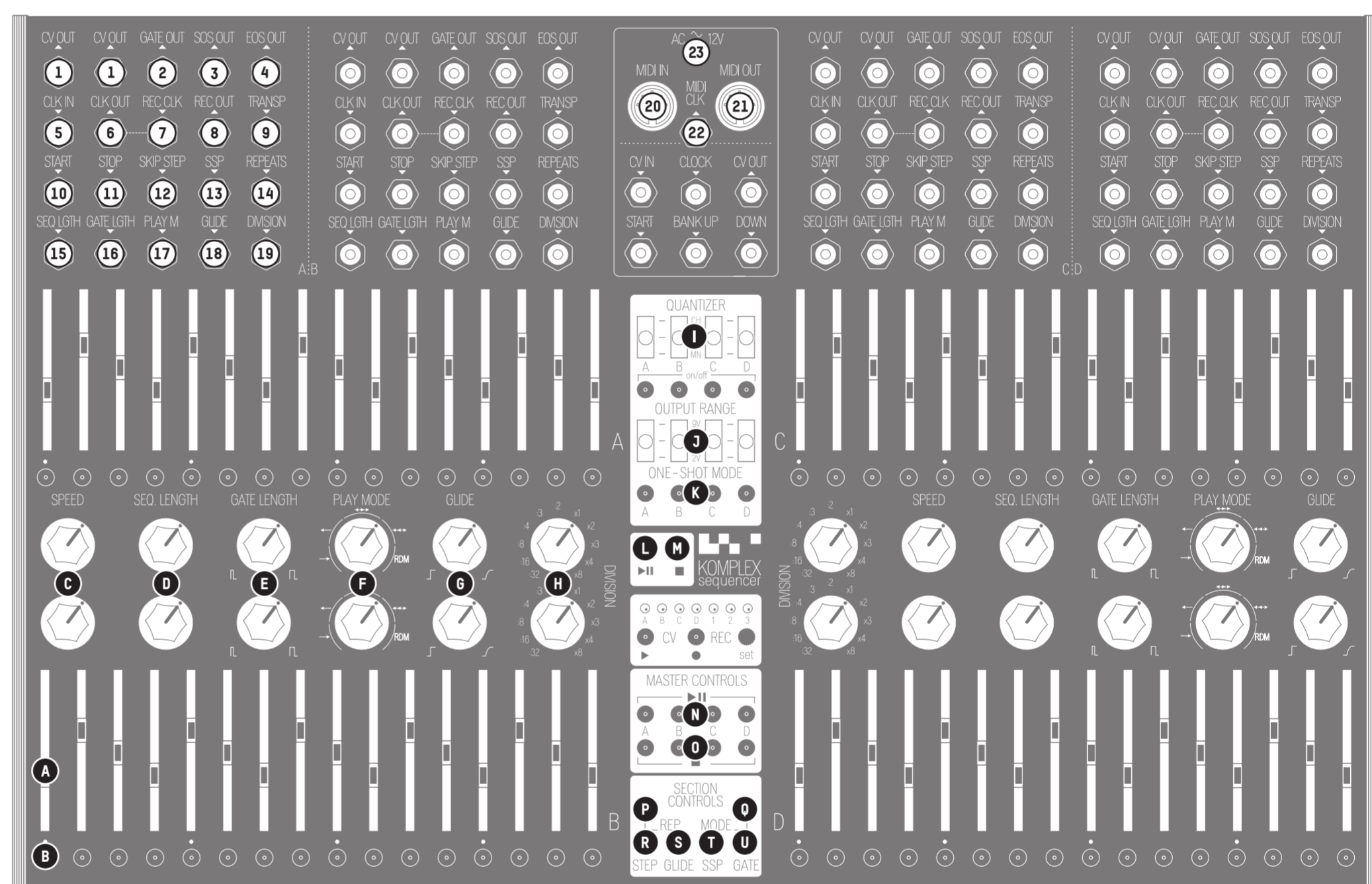
Sends MIDI information as assigned by the four sequencers.

### 22 MIDI CLK (Output)

The MIDI-to-analog clock out sends a trigger (+5V) after 24 MIDI clock pulses are received corresponding to 1 clock trigger per quarter note.

### 23 AC 12V (Power Adapter)

Only use the KOMA adapter shipped with the unit. The Komplex powers on automatically when plugged in.



## Per Sequencer Controls

### A CV SLIDER

Sets the output amount of CV per step.

### B STEP SELECT BUTTON

Multi-function control for per step selection of the SECTION CONTROLS.

### C SPEED

Sets the tempo of the sequencer.

### D SEQ LENGTH

Sets how many steps the sequencer will play until it resets back to the sequence start point. The step select buttons show how long the sequence is when the control is touched.

### E GATE LENGTH

Sets the pulse width of the gate signal coming from the GATE OUT.

### F PLAY MODE

Sets the order in which the steps are played: Forward, Reverse, Ping Pong, Ping Pong Reverse and Random.

### G GLIDE

Sets the portamento time for steps in which glide is active. Can be used for acid-style slides!

### H DIVISION

Sets the division of the SPEED or incoming clock at which the sequencer will run.

### I QUANTIZER

Scales the sequencer CV output to V/oct, selectable in chromatic, major and minor scales. Use the on/off buttons to switch the quantizer on or off per channel.

### J OUTPUT RANGE

Sets the voltage range of the CV Output, choose between 2, 5 and 9 volts.

### K ONE SHOT MODE

When engaged, the sequencer only runs once until PLAY is pressed again.

### L PLAY / PAUSE

Starts the sequencer or pauses it at its current position until started again.

### M STOP

Stops and resets the sequence to its sequence start point.

### N GLOBAL PLAY / PAUSE

Starts all 4 sequencers or pauses them at once to their current position until started again.

### O GLOBAL STOP

Stops and resets all sequences at once to their corresponding sequence start points.

### P REPEAT SET (Green)

Use the step select buttons to select which steps will repeat. Once a step is selected, the position of the blinking step select button will indicate how many times it will repeat. Press step 1-16 to set how many repetitions the step will make.

### Q MODE

Press this button to access the mode menu. Here, you can change the step skip behaviour, repeat mode, unipolar/bipolar CV output mode and MIDI parameters. For more information, check out the EXTRA FEATURES section on the other side of this manual!

### R STEP (Orange)

The step select buttons indicate which steps are active. Ones that are deselected behave as set in the SKIP STEP MODE MENU.

### S GLIDE (Orange)

When a step is selected, the setting of the GLIDE control is applied.

### T SSP (Blue)

The step select button indicates the sequence start point.

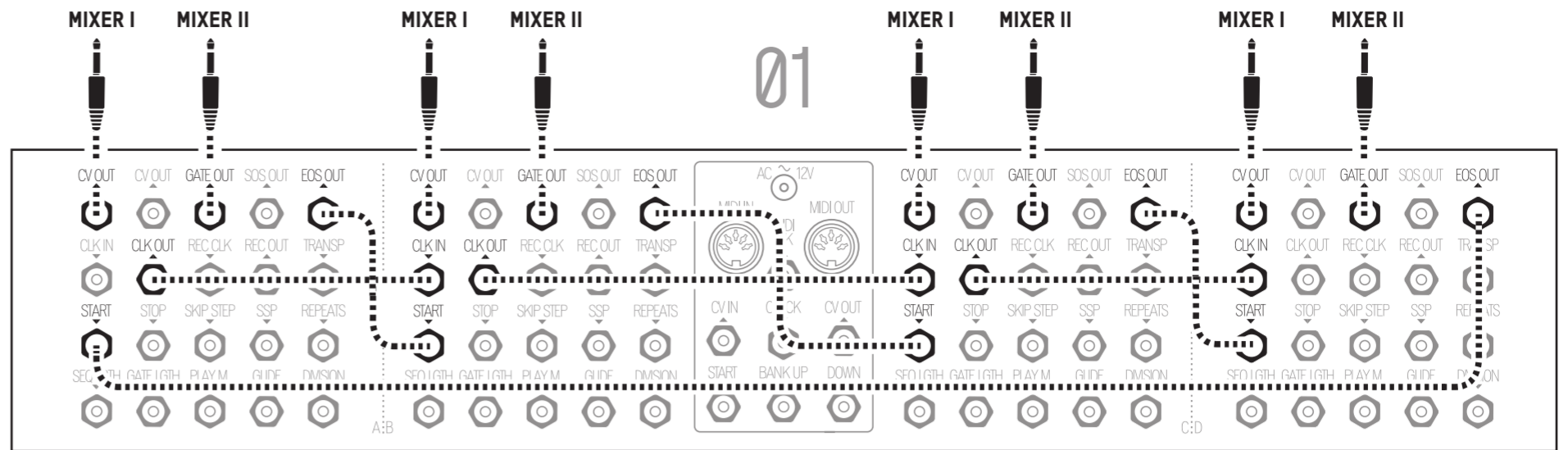
### U GATE (Blue)

Sets which steps output a gate at GATE OUT.

# Example Patches

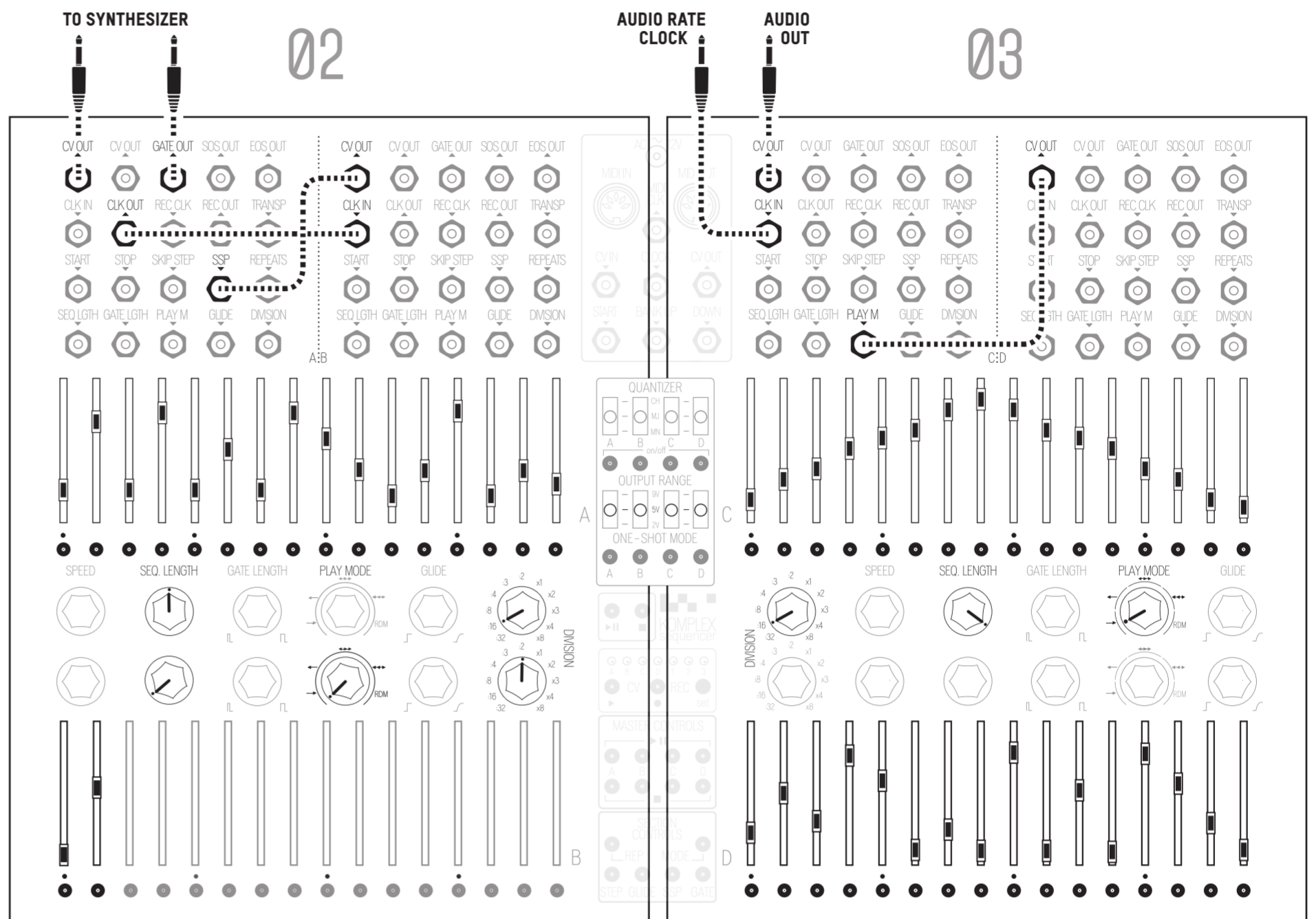
## 01 64 STEP SEQUENCE

Chain all 4 sequencers in ONE-SHOT MODE to create a 64 step sequence. Take the CLK OUT of each sequencer into the next one's CLK IN and also EOS OUT into START (don't forget SEQ D back into SEQ A). Mix all the CV OUTs into their own mixer or buffered multiple and all the GATE outs into their own as well. Set all SEQ LENGTHS to 16 steps.



## 02 SEQUENCER BANK

Use one sequencer to store two 8 step sequences and use another sequencer to switch between them. Set the first sequencer to a length of 8 steps and make sure the SSP is step 1. Set the next sequencer to a length of 2 and a :2 DIVISION of the clock from the first sequencer. Move the step 2 slider halfway with the output range set to 5V. So, every half step the first sequence will move to the second half of the 16 step sequence and then back again. Use the same logic to scan between four 4 step sequences, etc.



## 03 SEQUENCER OSCILLATOR

Send an audio rate pulse signal into the CLK IN. Different rates will also affect pitch. Take the CV OUT as your audio output. Shape the waveform with all 16 steps. Here, you see a triangle wave but create whatever you'd like. Try using glide for a smoother sound. Additionally sequence other parameters such as SSP, Play Mode and SEQ Length to create an even more complex waveform.

For more patches, visit : [koma-elektronik.com](http://koma-elektronik.com)

# CV Tables

The following tables provide a precise range of voltages to change between different parameters.

Table for Division

:32	:16	:8	:4	:3	:2	x1	x2	x3	x4	x8
0-	0.45-	0.91-	1.36-	1.82-	2.27-	2.73-	3.18-	3.64-	4.10-	4.54-
0.45V	0.91V	1.36V	1.82V	2.27V	2.73V	3.18V	3.64V	4.1V	4.54V	5V

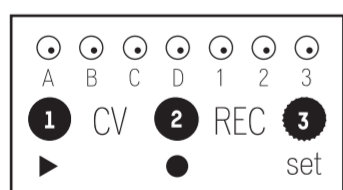
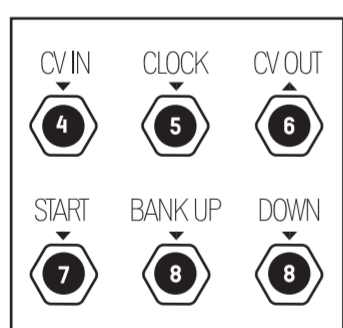
Table for Play Mode

Forward	Reverse	Ping Pong	Ping Pong Reverse	Random
0-1V	1-2V	2-3V	3-4V	4-5V

Table for SSP, Repeats and SEQ Length

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	0.31-	0.63-	0.94-	1.25-	1.56-	1.88-	2.19-	2.5-	2.81-	3.12-	3.44-	3.75V	4.06-	4.38-	4.69-
0.31V	0.63V	0.9V	1.25V	1.56V	1.88V	2.19V	2.5V	2.81V	3.12V	3.44V	3.75V	4.06V	4.38V	4.69V	5V

# CV Recorder



### 1 PLAY

Starts playing the selected CV Bank.

### 2 RECORD

When engaged, the CV Recorder records the incoming CV signal to the selected CV Bank.

### 3 SET

Rotary control selects which CV Recorder Bank is being played at the main CV Recorder output and being recorded to at the main CV Recorder input.

Try using the CV Recorder banks out of the box. They may be loaded with some presets!

### 4 CV IN (Input)

Send CV here to be recorded into a CV Recorder Bank.

### 5 CLOCK (Input)

Set the speed of the CV Recorder via an incoming clock signal.

### 6 CV OUT (Output)

The CV output of the selected CV Recorder Bank.

### 7 START (Input)

When this input receives a positive pulse, the selected sequence starts playback.

### 8 BANK UP/DOWN (Input)

Send a trigger (+5V) at these inputs to move the selected bank one position up or down.

# Extra Features

More detailed information for the MODE MENU and FIRMWARE UPDATES will be available in a separate document.

### MODE MENU

After pressing the MODE button, six options per sequencer are available.

#### 1. SKIP STEP

Either the step is skipped over normally, or the previous step is maintained for the period of the skipped step.

#### 2. REPEAT MODE

In normal repeat mode, the step length doesn't change. The step repeats as many times as set in the repeat menu. In ratcheting repeat mode, the step length fits into the step length without repeats, i.e., with repeats set to 4, the new step length is a fourth of the original step length but with 4 gates.

#### 3. UNIPOLAR / BIPOLAR CV OUTPUT

Set the CV outputs as unipolar or bipolar.

#### 4. MIDI MESSAGE

Set MIDI on or off and select between pitch, velocity or CC.

#### 5. MIDI CHANNEL

Select the MIDI Channel 1-16.

#### 6. MIDI CC

If MIDI CC is select, set the CC number here.

### FIRMWARE UPDATES

Firmware updates will be available online and can be easily sent to the sequencer.

### HOW TO KEEP YOUR KOMPLEX SEQUENCER CLEAN

Use the dust cover to keep your Komplex Sequencer clean and the controls functioning smoothly. Use some pure cleaning alcohol (e.g. isopropyl) to clean the sequencer. Make sure no solvents are mixed in.

# Warranty

KOMA Elektronik warrants its products to be free of defects in materials / workmanship and conforming to specifications at the time of shipment for a period of two years from the date of purchase. During the warranty period any defective products will be repaired or replaced at KOMA Elektronik's option on a return-to-factory basis. This warranty covers defects that KOMA Elektronik determines are no fault of the user.

### RETURNING YOUR PRODUCT?

You must obtain prior approval in the form of an RMA (Return Material Authorization) number from KOMA Elektronik before returning any product. Get in touch with us at [support@koma-elektronik.com](mailto:support@koma-elektronik.com) to request the RMA number. All products must be packed carefully and shipped with the KOMA Elektronik supplied power adapter. Sorry, the warranty will not be honored if the product is not properly packed. Once you have received the RMA#, write it on the box together with the word: WAREN RUCKSENDUNG and carefully pack your product, ship the product to KOMA Elektronik with transportation and insurance charges paid, and include your return shipping address.

# Technical Specifications

### CASING

Powder coated aluminum casing, silk screened printing and wooden side panels.

### DIMENSIONS

46.2 cm x 29 cm x 4 cm (L x W x H)  
18.2" x 11.4" x 1.6" (L x W x H).

### NET. WEIGHT

3.2 Kg / 8.8 lb

### SHIPPING WEIGHT

4.5 kg. / 9.9 lbs including power adapter and this instruction manual.

### POWER REQUIREMENTS

12V AC power adapter.  
Only use the KOMA adapter shipped with the unit.