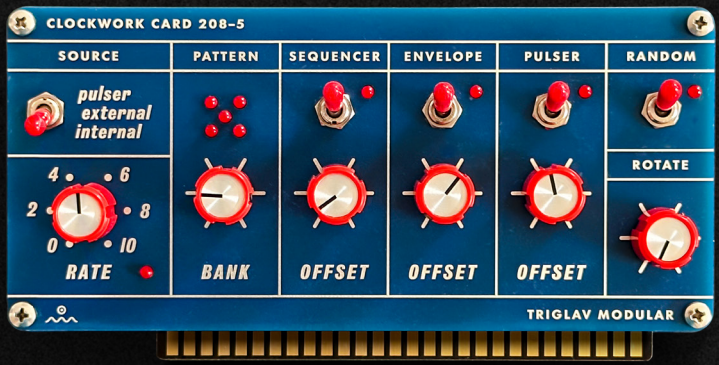
CLOCKWORK CARD

208-5



TRIGLAV MODULAR

USER GUIDE VER. 1

The Clockwork Card 208-5 is an expansion card designed to fit in the card slot of the *Stored Program Sound Source Model 208.*

It was inspired by Charles Cohen's techniques for getting interesting rhythms out of the Easel. I started out wanting to reproduce the various patterns of his original EHX 16-Second Delay which he was using to to drive the sequencer. Along the way the project evolved into a fairly complex but still simple to use center for controlling all the timing functions inside the 208.

CHARLES COHEN'S EXTERNAL CLOCK CARD

CLOCKWORK CARD 208-5

Connectivity
*The card interfaces with the 208's "to card" and "from card" banana jacks. The **inverter "to card"** jack serves as an external clock input, while the **inverter "from card"** output provides a switchable sum of the pulse outputs or the master clock.*

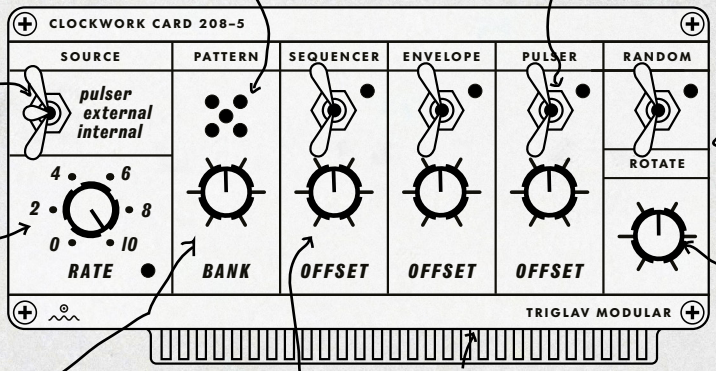
*The **preamp's "to card"** banana jack allows for voltage-controlled pattern rotation or resetting to the first step.*

Pattern LEDs
Indicates the current pattern bank.

Envelope switch
UNDER FRONT PANEL.
Routes the sequencer voltages to the Envelope Generator decay.

CV switch
UNDER FRONT PANEL.
Switches the CV input between controlling the rotation or acting as a reset.

Destination on/off switches



Clock output summer
DIP SWITCHES UNDER FRONT PANEL.
You can add up any of the four patterns or the main clock to the "From prog" jack of the 208.

Clock source switch

Clock rate
In pulser / external mode, this acts as a clock divider. In internal mode it's a free running clock source.

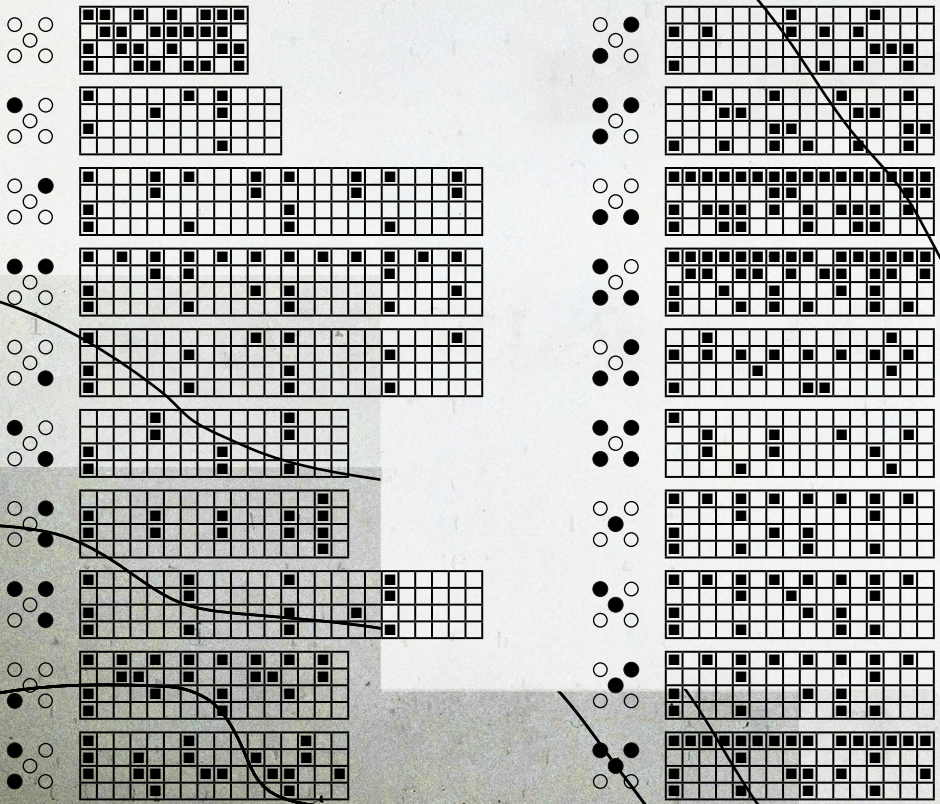
Rotation
Rotates the pattern to destination assignment .

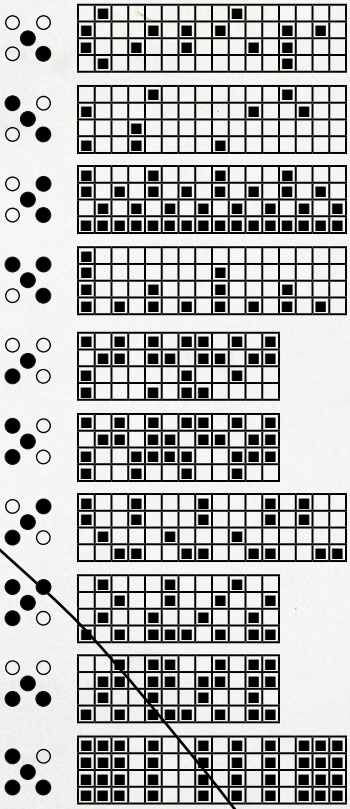
Pattern bank selector
Select from a set of 30 banks, each containing 4 different clock patterns. (One per destination.)

Offset controls
Shift the pattern to the right, changing its relative position from the downbeat. Turned fully clockwise the shifting is once again aligned to the starting postition.

5 V threshold for clock input
DIP SWITCH UNDER FRONT PANEL.
Set this to on if you want to use external 5 V trigger.

LIST OF PATTERNS





SPECIAL MODES

UNCERTAINTY MODE

Selecting this pattern puts the Clockwork Card into Uncertainty mode. In this mode each destination is an independent random pattern generator with various distributions and rates.

Turning the offset knobs adjust the probability of a trigger.

In this mode, the rotate knob selects from different distributions.

CLIX MODE

Selecting this pattern puts the Clockwork Card into CLIX mode. In this mode each destination is an independent click pattern generator based on the original EHX 16-second Delay CLIX patterns.

Turning up the offset knobs make the corresponding clix go faster.

In this mode, the rotate knob acts as the rate for the **RANDOM** output.

FIRMWARE UPDATE

1. Download the latest firmware from triglavmodular.hu/208-cards/clockwork-card
2. Download and install the Arduino IDE.
3. Remove the card from the 208.
4. Plug in the card to your computer with the USB-C port.
5. Open the downloaded firmware project.
6. Select the USB port in the IDE. Choose Arduino Nano if asked.
7. Press upload and verify.
8. Unplug the device from the USB port.
9. **You're done.**

Designed & built in Budapest
by Triglav Modular.

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Special thanks to Michael Jurczak
for digging up the vintage clix patterns.

Dedicated to Charles Cohen.

“Chips, picking chips off rocky thumbnail, chips.”

MACHINES FOR COLOUR MUSICK.