



FOUR
BRICKS ROOK 
User Manual

 **Shakmat**
MODULAR

Introduction

Tap your beat ! Far beyond basic step sequencing logic, the Four Bricks Rook brings a highly intuitive interface to all your rhythmic duties and provides a diverse array of features including CV addressable memory of 128 thirty-two steps tables where you can store your own sequences, precision timing to allow non-quantized/off-beat rhythms, an auto randomizer/pattern filler, and four modes defining the pad's behavior : play & record, recall patterns, play fills, or mute your sequences.

- | | |
|-------------------------------|------------------------------|
| 1 Clock input | F Shift potentiometer |
| 2 Reset input | G A/B button |
| 3 Fill All input | H Rec button |
| 4 Shift CV input | I Erase button |
| 5 Length CV input | J Quantize button |
| 6 Table CV input | K Function button |
| 7 Outputs | L Rec LED |
| A Menu potentiometer | M A/B LED |
| B Menu display | N Tracks status LEDs |
| C Menu LEDs | O Pads |
| D Length potentiometer | P Mode LEDs |
| E Table potentiometer | |



FOUR BRICKS ROOK



Quad Trigger Sequence Generator

1
2
3
A
B
C
D
E
G
H
I
L
O

4
5
6
7
F
J
K
M
N
P



CLOCK



RESET



FILL ALL



TABLE



LENGTH



SHIFT



OUT 1



OUT 2



OUT 3



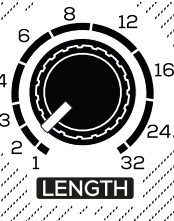
OUT 4



LP ST LF RA TL



TABLE



LENGTH



SHIFT



A/B



LD PTRN



SVTBL



LD FILL



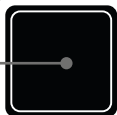
RNDM A



FNCT



STATUS



PLAY



PTRN



FILL



MUTE



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Modes

Let's start by feeding the module with a clock signal via the **Clock input**. There are four modes available which define how the pads affect the sequence.

01. Play Mode (FNCT + PAD 1)

The four pads act as manual triggers. If recording is engaged (**Rec button**) the associated LED lights on and the triggers performed on the pads will be recorded in the current buffer.

02. Pattern Mode (FNCT + PAD 2)

Pressing a pad will cause the module to read the sequence off a table (as defined by the **Table potentiometer** and **Table CV input**) instead of the current buffer. To show that a track is reading a table, the corresponding LED is now acting in an inverted way so that it stays lit & turn off while a hit is played. To return to the sequence in the buffer press the pad a second time. Pressing a **Pad** while in rec is on will import the table in the buffer of the corresponding track.

03. Fill Mode (FNCT + PAD 3)

Similarly to the pattern mode but the module reads the selected table in a more dynamic way : they are

read only while the **Pad** is pressed. This on-the-fly reinterpretation of the tables can be recorded. Sending a gate signal to the module's **Fill All CV input** will cause all the tracks to play fills for the duration of the gate signal.

04. Mute Mode (FNCT + PAD 4)

Mutes the track by pressing on the corresponding **Pad**. A muted track will have a slowly pulsating **Status LED**. Associated to recording, this mode also allows to erase parts of the sequence.

Sequences

Sequence length is adjusted by the **Length potentiometer** in conjunction with the bipolar **Length CV input**. Available sequence lengths are: 32, 24, 16, 12, 8, 6, 4, 3, 2 and 1 steps. By using the **Reset CV input** you can easily play sequences of different lengths.

The **Shift potentiometer** addresses parts of a recorded sequence : if you record a 32-steps sequence and then set the **Length potentiometer** down to 8 steps, the original 32 steps sequence will be divided into four 8 steps long segments. Using the **Shift potentiometer** allows to choose between these four 8 steps segments on the fly. The figure on the next page shows that specific exemple in a visual way.



Steps



Segments

PLAYING LOOP

Other example, length is reduced to three & shift is at max : the sequence is now divided in 11 segments.



PLAYING LOOP

The default option of the **Menu potentiometer** is to act on the trigger length, this is indicated by the last **Menu LED** (labeled **TL**) being lit. A double click on the FNCT button allows to set the trigger length for each track individually. The display will show a "-", pressing a pad and turning the menu potentiometer simultaneously will act on the corresponding track trigger length. To exit this menu press the FNCT button.

Quantize & Erase Tracks

The Four Bricks Rook records non-quantized sequences which can be quantized to the incoming clock (**Quantize button + Pad**). Also, at any time the user can erase the current buffer content of a track by pressing the **Erase button + Pad**.

Loading Pattern, Save Table & Load Fill

The Four Bricks Rook contains two buffers (volatile memory) and a variety of tables (non-volatile memory). You can directly address 8 tables via the **Table potentiometer** and **Table CV input**, and you can load an other slot of 8 tables using the **Load Pattern** operation (**FNCT + REC/LD PTRN**) : the first **Menu LED** (labeled **LP**) will turn on, while the **Menu potentiometer** and **display** will help you choose between the 16 available slots.

The **Save Table** operation (**FNCT + ERASE/SV TBL**) saves the buffer content in the non-volatile memory. You can choose the tracks to be saved using the **Pads**, the destination table using the **Table potentiometer** and the slot using the **Menu potentiometer** and **display**.

The **Load Fill** operation (**FNCT + A/B/LD FILL**) allows you to choose a different slot for the **Fill mode** than the one used in **Pattern mode**.

For all these functions, you have to confirm your operation by pressing the **Rec, Erase, A/B button** alone. You can also leave the functions without keeping the changes by pressing the **FNCT button**.

Randomizer

The module contains an internal randomizer allowing to create random fills. The probability of playing a fill can be changed by pressing **FNCT + Quantize/RNDM A**. The **Menu potentiometer** and **display** help you set the value : from 0 to 9 only affect the probability of a fill occurring, values from A to E also affect the table value, whereas choosing F will cause the module to generate random triggers.

Random Amount can be set for each track individually : while in the random amount menu, press a pad and turn the menu potentiometer simultaneously, the corresponding track status LED will blink to notify that the track has an independant random amount. The random algorithm is not a pure random generator : the probability of a fill occurring gets higher near the end of the sequence, similar to how a drummer would do fills.

Store the current state

Buffers content, trigger lengths, random amount and pointed slots (for fills and patterns) can be

stored, so you can turn off your rack and keep all the current state in memory for your next noodling session.

Factory Tables

All the tables are user editable and can be restored by a factory reset of the module, while turning your system on, maintain the four pads pressed for 10 seconds. At release all the LED's will blink to confirm.

Musicians Tables

- | | |
|------------------------------------|--|
| 0 Shakmat's Basics | 5 Mudd's Metropolitan Usefull Drum Device |
| 1 Richard Devine's Beats | 6 Konstantine's Funky Patterns |
| 2 Ucture's Raight Tree | 7 Latin Classics |
| 3 Ripit's Nasty steps | 8 Old Time Classics |
| 4 Osica's Tech Fundamentals | 9 Weird Euclidean Combos |

Utility Tables

- | | |
|-----------------------------|----------------------|
| A Div / Mult Binary | D Mult 1 to 8 |
| B Div / Mult Ternary | E Swing 16th |
| C Div / Mult Mixed | F Swing 8th |

As some users might want to keep the utility tables (A, B, C, D, E & F) unchanged, you can also perform a partial reset : press the three first pads for 10 seconds while turning the module on, only the utility tables will be restored.

Installation

The Four Bricks Rook requires a standard 2x8 pins eurorack connector. Make sure the red stripe on the ribbon cable is oriented on the -12V side of the board.

Technical Information

Size

16 HP

CV Inputs

-5V / 5V

Depth

27 mm

Trigger Inputs

0 - 5V

Current Draw

30 mA @ 5V

20 mA @ 12V

20 mA @ -12V

Outputs

0 - 5V

Credits

We want to thanks our valorous team of beta testers and modular heroes : BJ_gzp, Nico Ripit, Hugo Ucture, Mudd Corp, Vincent Vanesse, Konstantine, Osica & Richard Devine.

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François Gaspard

Product and brand design :

Steve Hackx / MadelInside™