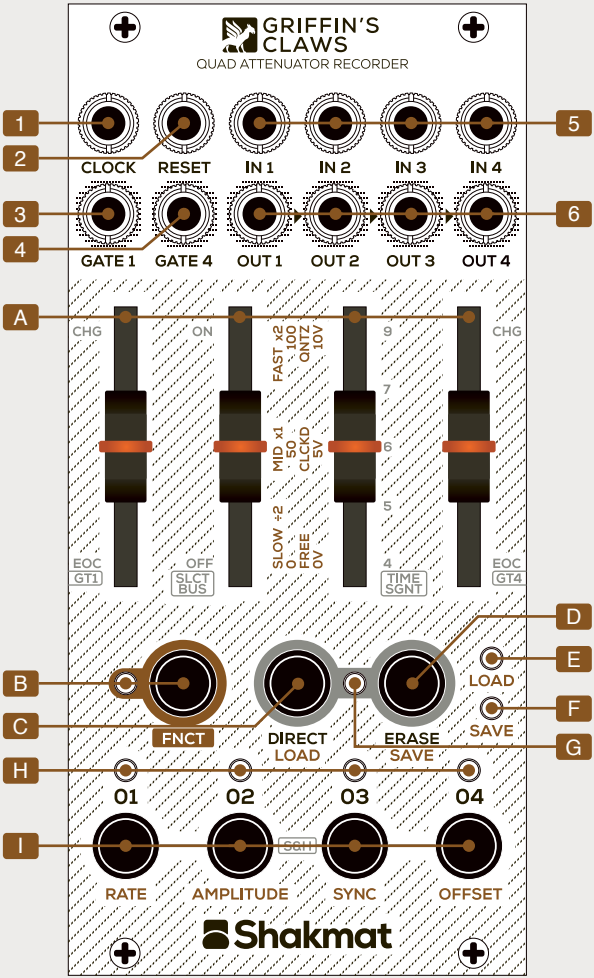
Shakmat
Griffin's Claws

- 12HP Eurorack Module
- Built & designed in E.U.
- www.shakmat.com


GRIFFIN'S CLAWS
QUAD ATTENUATOR RECORDER
1
2
3
4
5
6
CLOCK
RESET
IN 1
IN 2
IN 3
IN 4
GATE 1
GATE 4
OUT 1
OUT 2
OUT 3
OUT 4
A
CHG
ON
FAST x2
SLO
QNTZ
10V
MID x1
SLO
CLKD
5V
SLOW ÷2
FREE
0V
9
7
6
5
4
CHG
EOC
GT1
OFF
SLCT
BUS
TIME
SGNT
EOC
GT4
B
C
D
E
F
G
H
FNCT
DIRECT
LOAD
ERASE
SAVE
LOAD
SAVE
01
02
03
04
I
S&H
RATE
AMPLITUDE
SYNC
OFFSET
Shakmat

Introduction

Attenuators and VCAs are the secret sauce of every modular patch, providing opportunities for creative control and sonic movement. However, simple attenuators require constant adjustments, while voltage-controlled ones never offer precise attenuation throughout the evolution of your patch. Enter Griffin's Claws, a new way to automate attenuation in an intuitive yet detailed way in your system.

Griffin's Claws features four recordable attenuators with offset normalization, selectable linear or logarithmic response, and cascaded mixing on the outputs. Syncing with external clocks, gate outputs tied to fader movements, Sample & Hold, non-volatile memory of 16 presets, select bus compatibility and control on rate and amplitude complete this rich set of features. With such flexibility and precision, you will find that Griffin's Claws soon becomes indispensable in both live performances and studio setups.

1. Clock input
2. Reset input
3. Gate 1 output
4. Gate 4 output
5. Channels inputs
6. Channels outputs
A. Attenuation faders & LED
B. Function button & LED
C. Direct/Load button
D. Erase/Save button
E. Load LED
F. Save LED
G. Option LED
H. Channels status LEDs
I. Channels buttons

Installation

The Griffin’s Claws requires a standard 2x8 pin Eurorack power cable. Make sure the red stripe on the cable aligns with the -12V side of the module’s power header.

Basics

When a channel's recording buffer is empty, its status LED **[H]** remains off, and the channel’s attenuation corresponds directly to the fader position **[A]**. To record fader movements, press and hold the corresponding channel button **[I]**. The status LED blinks during recording. Release the button to begin playback, indicated by a solid LED with a blinking loop-start marker. Overdubbing is as simple as holding the channel button and recording again. The Griffin’s Claws supports three sync modes, accessible via the Sync menu:

Free:

Operates without a clock signal.

Clocked:

Synchronizes recording length to an external clock. The module keeps up with BPM changes in real-time, ensuring precise synchronization.

Quantized:

Quantizes length to a musical duration based on an external clock. Smart quantization ensures phase accuracy in recordings by aligning the start and end points of your recording to preserve the rhythmic structure of the sequence.

The Griffin's Claws Clocked or Quantized modes operate best with a steady clock within the range of 30 to 300 BPM. If the clock signal falls outside this range, it is ignored.

Each channel can record up to 32 bars or, by default, up to 80 seconds in Free mode. Additionally, the module includes a reset input **[2]** that resets recordings and indicates the first beat in Quantized mode.

Direct Mode

Activate Direct mode by pressing DIRECT **[C]** and a channel button **[I]** simultaneously. In this mode, the channel bypasses playback, and amplitude directly follows to the fader position. The status LED dims to indicate Direct mode. Press the channel button to return to playback.

Erase

To erase a recording press the ERASE **[D]** and the channel button **[I]** together. Default values for Rate and Amplitude are restored.

Menus

Access the Griffin's Claws menus by holding FNCT **[B]** along with the corresponding channel button **[I]**. Each menu allows to adjust the specific setting of each channel using its associated fader.

Rate

RATE

Adjusts playback speed from continuous rates in Free mode, to clock-based divisions/multiplications in Clocked modes (/2, x1, x2).

Amplitude

AMPLITUDE

Controls loop amplitude dynamically or preset maximum levels for precise recordings.

Sync

SYNC

Select syncing modes with fader-based options: Free, Clocked, or Quantized. The fader LED is off in Free mode, blinks in Clocked mode, and follows a blinking pattern in Quantized mode.

Offset

OFFSET

Choose offset normalization for each channel, available options are 0V (logarithmic), 5V (linear) or 10V (linear).

These parameters are set per channel. To exit the menus, press FNCT **[B]**. As mentionned above, when a channel is erased, the default values for Rate and Amplitude are restored.

Options

Press DIRECT [C] and ERASE [D] simultaneously (the Options LED [G] lights up) to access the additional configurations that are available via the Options menu:

Sample & Hold S&H

To enable for a channel, click on the respective channel button [I]. The channel LED [H] turns on. In Clocked modes, the signal is sampled using the clock input [1]. In Free mode, each channel generates its own clock. Changing the playback rate speeds up or slows down the internal sampling clock.

Gate Outputs Modes GT1 & GT4

Channel one and four generate end-of-cycle triggers (EOC mode) or movement based gates/triggers (CHanGe mode) perfect for creating dynamic interactions. In clocked modes, the gate width of the CHG mode is quantized to the incoming clock. Combined with the Sample & Hold, the gate outputs deliver triggers which are synced to the incoming clock when working with the Clocked modes.

Select Bus SLCT BUS

Fader two toggles digital communication for preset management across compatible modules.

Time Signature TIME SGNT

Fader three defines bar lengths in Clocked and Quantized modes. Available time signatures are 4/4, 5/4, 6/4, 7/4, and 9/4.

To exit the options, press FNCT [B].

Memory

Griffin's Claws has 16 non-volatile memory slots across four banks. Presets store recording buffers and all settings.

Saving a Preset

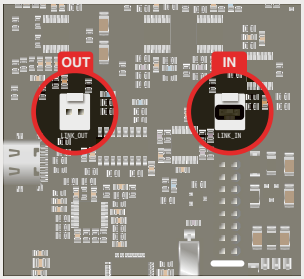
1. Press FNCT [B] and SAVE [D] together (Save LED [F] turns on).
2. Select a bank using any channel fader [A] (the fader LED turns on).
3. Select a slot using a channel button [I] (the channel status LED turns on [H]).
4. Confirm by pressing SAVE [D] or abort with FNCT [B].

Loading a Preset

1. Press FNCT [B] and LOAD [C] together (Load LED [E] turns on).
2. Select a bank using any channel fader [A].
3. Select a slot using a channel button [I].
4. Confirm by pressing LOAD [C] or abort with FNCT [D].

Loading or saving a preset takes a few seconds, during which the Load LED [E] or Save LED [F] blinks.

Griffin's Claws Linking



Multiple Griffin's Claws can be chained using the headers at the back. Connect the output header of the first unit to the input header of the second using the provided molex cable. This configuration extends the cascade mixing from channel four of the first unit to channel one of the second unit, allowing to chain an unlimited number of modules.

Applications Examples

1. Custom LFO Waveforms
Set all four channels to Free mode with a 5V or 10V offset leaving the inputs disconnected and record short fader movements. Now play with the modulation rate and depth via the Rate and Amp Menus. Use the Direct function to mute the created modulations.

2. Automated Audio Mixing
With offsets at 0V, faders respond logarithmically—ideal for mixing audio signals. Insert audio into each channel and only use the fourth output to sum signals, creating a mixer with automations. If the mix distorts, use the Amplitude menu to set the maximum levels.

3. Quadraphonic Panner
With offsets at 0V, send a multed mono or stereo signal into the inputs. Connect each output to a channel of the quadraphonic setup. Like in acousmatic spatialization, use the faders to position the sound within the space and, of course, record their movements.

4. Griffin's Claws & Drums
Set Channel one to Clocked or Quantized mode with gate output in CHG mode. Sample & Hold syncs triggers to the clock for drum sequencing. Use the channel one output to modulate drum parameters dynamically. For envelope-driven drums, use the first channel to attenuate the envelope and use the corresponding gate output to trigger it, shaping dynamic sequences.

Factory Reset

Restore the module to factory settings by holding DIRECT [C] while powering on your system.

Specifications

Size
12 HP
Depth
27 mm
Current Draw
75 mA @ +12v
45 mA @ -12v

Channels inputs & outputs
-10 to +10v
Gate outputs
0 to 5v