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BASIC OPERATION AND SAFETY

1. Connect to an industry standard 9 Volt DC power supply! Incorrect voltage and AC power supplies will damage your pedal and void the manufacturer's warranty! We also recommend using our Malekko 9 Volt Wall Wart, available through our website.
2. Do not use this apparatus near water.
3. Clean only with dry cloth.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
6. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
7. Unplug this apparatus during lightning storms or when unused for long periods of time.
8. No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
9. **WARNING:**To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
10. Refer to labels on the unit, including bottom cover, or other markings and pertinent information.



DESCRIPTION

GOATKEEPER is a 2-stage polyrhythmic analog tremolo with tap tempo or external tempo sync input. Each stage is its own tremolo and they can operate together in four modes: SEQUENTIAL, SIMULTANEOUS + COMPOSITE, SIMULTANEOUS + MODULATION, SINGLE.

W1 selects the waveform for stage one, W2 for stage two.

Each stage is waveform selectable between SINE, SAW, RAMP, SQUARE, or PULSE, which changes the character of the tremolo. Single stage use is available for traditional tremolo.

The rate of each stage can be multiplied: W1 has x1 through x9 plus x12 (and random) settings, and W2 allows x1 through x11. Using the step multipliers is an easy way to create polyrhythms, and the RANDOM functions will add surprisingly fun results!

Features include:

- Two separate tremolo stages in one of four modes
- SEQUENTIAL mode
- SIMULTANEOUS plus COMPOSITE mode
- SIMULTANEOUS plus MODULATION mode
- SINGLE mode
- Individual waveform selection per tremolo stage
- Available waveforms: Sine, Saw, Ramp, Square, Pulse, Long Square
- Stage 1 multipliers; 1,2,3,4,5,6,7,8,9,12, Random
- Stage 2 multipliers; 1,2,3,4,5,6,7,8,9,10,11
- RANDOM waveform selection for W1
- RANDOM rate multiplier for W1
- Detented knobs for quick and accurate settings
- Tap tempo input via Malekko Lil' Buddy
- External tempo sync input
- Large analog headroom
- 100% dry to 100% wet
- All analog signal path using THAT Corp VCA
- LED intensity indicator per stage
- Relay true bypass with LED indicator



OVERVIEW 1

W1 MULTIPLIER SELECTOR:

Choose between 1 to 9 or 12 times rate.
RANDOM (R): allow random multiplier.

W1 MODE SELECTOR:

Choose mode plus its waveform:
SEQUENTIAL: alternates W1 with W2.
RANDOM (R): random SEQ or SIMUL waveform.
SIMULTANEOUS: W1 modified by W2.
Available waveforms:
SINE, SAW, RAMP, SQUARE, PULSE

RATE:

Manual speed control.

DEPTH:

Effect mix: 100% dry to 100% wet.

LEDs:

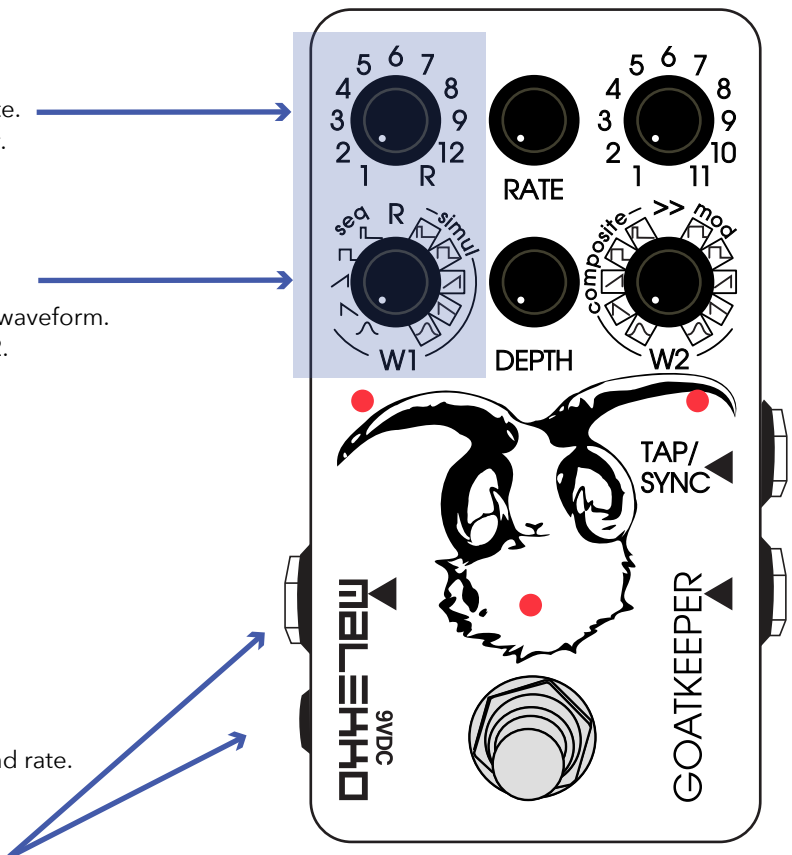
Effect on/off.
W1 and W2 LEDs display waveform and rate.

OUTPUT JACK:

1/4" mono out.

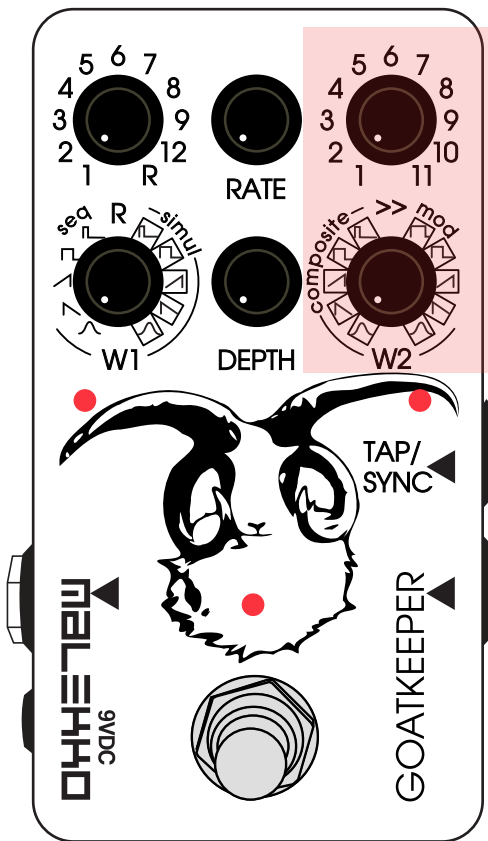
9VDC JACK:

Standard negative-tip 2.5mm barrel connector.





OVERVIEW 2



W2 MULTIPLIER SELECTOR:

Choose between 1 to 11 times rate.

W2 MODE SELECTOR:

Choose mode plus its waveform:

COMPOSITE: adds waveform to W1 waveform.

SINGLE (>>): this removes W2 from signal.

MODULATION: modulates W1 output.

Available waveforms:

SINE, SAW, RAMP, SQUARE, PULSE

LEDs:

Effect on/off.

W1 and W2 LEDs display waveform and rate.

TAP/SYNC JACK:

Use LIL BUDDY to tap in tempo.

Use click track, analog clock, gates, or triggers to sync tremolos to external sources.

On/off LED flashes when tempo received.

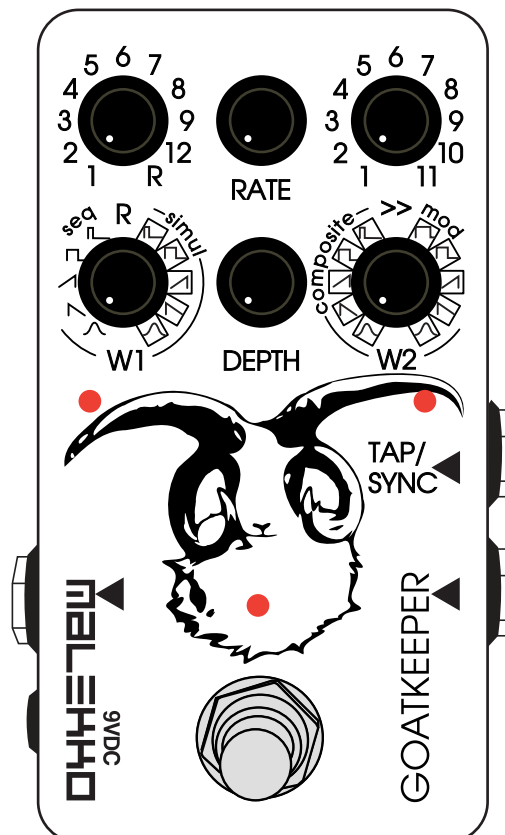
INPUT JACK

1/4" mono in.



GOATKEEPER OPERATION

1. GOATKEEPER is two tremolos, W1 and W2, with selectable waveforms and use options. The RATE applies to both W1 and W2, so they are always locked in time.
2. In SEQUENTIAL mode W1 plays before W2, then alternates between the two. The RATE defines the overall tempo of the pedal and the multipliers increase the number of times each tremolo cycles at that rate. Playing with a slower RATE yet setting the multipliers high will allow you to instantly create polyrhythms. W1 features RANDOM multiplier setting (R), resulting in constant rhythm variation. Available waveforms are: SINE, SAW, RAMP, SQUARE, PULSE. These waveforms all have their own characteristics. SINE creates the classic pulsing tremolo. SAW has an aggressive attacking feel. RAMP creates a volume swell. SQUARE is a hard on/off sound. PULSE is a chopping, short sound. Changing the waveforms per tremolo will result in interesting sequences. W1 has a waveform RANDOM (R) setting which allows variations in the sequence. In SEQUENTIAL mode, W2 can be in either COMPOSITE or MODULATION.
3. Note on W1 RANDOM (R) waveform: selecting R after SEQUENTIAL mode sets SEQUENTIAL RANDOM, and selecting R after SIMULTANEOUS mode sets SIMULTANEOUS RANDOM.
4. In SIMULTANEOUS mode, W2 plays at the same time as W1 and modifies W1. When W2 is set to COMPOSITE, its waveform is added to the W1 waveform. When W2 is set to MODULATION, its waveform will modulate the output of W1, acting as a master output modulation.
5. W1 SINGLE mode: set W2 to >>. This effectively skips W2.
6. SYNC to external gear using a steady pulse. This can be analog clock, gates, triggers, click track, etc. TAP tempo for live sync. Two pulses are needed to establish tempo.





WARRANTY

This product is covered by the Malekko Heavy Industry warranty, for one year following the date of purchase. This warranty covers any defect in the manufacturing of this product. This warranty does not cover any damage or malfunction caused by incorrect use - such as, but not limited to, power cables connected backwards, excessive voltage levels, or exposure to extreme temperature or moisture levels. The warranty covers replacement or repair, as decided by Malekko Heavy Industry. Please visit our website malekkoheavyindustry.com to obtain full warranty information and to register your product for coverage.