THORNICUS

OCTAVE FUZZ

Manual

GUITARS I AMPLIFIERS I PEDALS I PICKUPS

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Overview

Design

The Thornicus is a dual-channel fuzz pedal designed in collaboration between Ian Thornley and Kevin Suhr. The goal was to create a thick, rich-sounding fuzz with the ability to switch in an octave mode for mind-bending expression. Ian Thornley, best known for his work with Big Wreck and Thornley, is no stranger to fuzzed-out, in-your-face guitar tones. During development, we found that the best way to use the octave circuit was to give it its own dedicated controls. This allowed the ability to have your own favorite settings for each channel, thus not having to sacrifice the sweet spots of either with a set of shared controls.

Circuit & Features

The Thornicus contains a multi discrete transistor fuzz circuit as its core tone. It also contains 2 channels, one named **Fuzz** that is controlled by the left half of the pedal, the other named **Octave** that is controlled by the right half of the pedal.

The foot switches are mutually exclusive, meaning only one channel can be active at a time. Pressing either foot switch will engage that channel and automatically turn off the other. Pressing the foot switch of the currently active channel again will bypass the pedal using the internal true-bypass relay.

The **Octave** side is identical to the **Fuzz** side, with the addition of an added octave fuzz circuit stacked in series before the core fuzz circuit. The Octave channel also includes individual **Sustain**, **Mids**, **Tone** and **Level** controls to dial the channel independently, allowing for finer control of the overall tone between channels. Channel selection can be controlled via MIDI with Program or Controller Changes for modern MIDI equipped pedal boards.

Quick Start

1. Plug your guitar into **INPUT** and your amp into **OUTPUT**.

2. Connect a 9V center-negative power supply to the **9V DC** jack.

3. Press either **FUZZ** or **OCTAVE** foot switch to turn the pedal on.

4. Start with all knobs at 12 o'clock and adjust to taste.

Controls

1. Sustain

The Sustain knob adjusts the overall gain of the Fuzz. Turn clockwise for more fuzzed out tones with longer sustain on held notes.

2. Mids

The Mids knob ranges from a full “mid-scoop” sound when fully counter-clockwise to a flat, full sound when fully clockwise.

3. Level

The Level knob sets the overall volume of the fuzz. 12 o’clock is the suggested starting point.

Note:

When running into the front of an amplifier, the level of the fuzz plays a big role in the overall sound. Lowering the level can give more definition at times. We recommend sweeping the level while playing for the best tone.

4. Tone

The Tone knob controls how bright / dark the fuzz sound will be. Turning clockwise reduces bass and adds clarity and top end. Rotating counter-clockwise will result in a darker sound with more bottom end.

5. Fuzz Foot Switch

Press on the Fuzz foot switch to engage the normal Fuzz channel, controlled by the Sustain, Mids, Level, and Tone knobs on the left side of the pedal

6. Octave Foot Switch

Press on the Octave foot switch to engage the Octave channel. This inserts an additional octave circuit in front of the Fuzz. This channel is controlled by the Sustain, Mids, Level, and Tone knobs on the right side of the pedal.

Inputs & Outputs

1. Input

Plug your guitar into the **INPUT**.

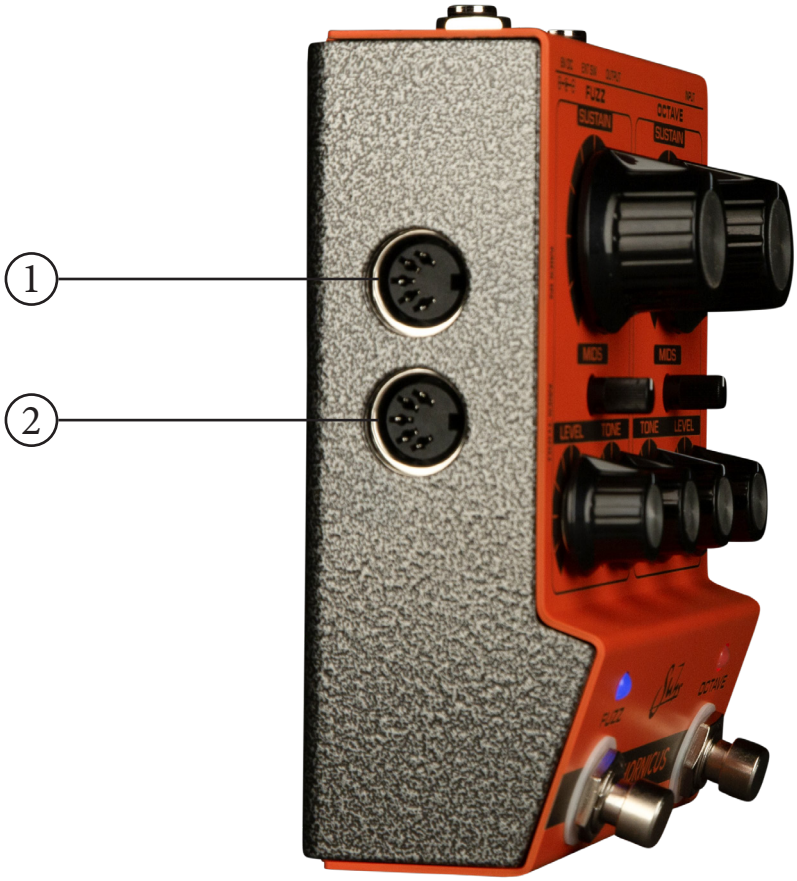
2. Output

Plug the **OUTPUT** into your amp or the next effect in your signal chain.

3. 9V DC Power (Center Negative)

Plug in a standard 9 volt, center negative, 2.1mm x 5.5mm barrel cable from your pedal power supply.

MIDI



Overview

The MIDI capabilities on the Thornicus are simple and designed to do one thing: recall which channel is active. This can be done using a Program Change (PC) or Controller Change (CC) message. All other parameters are not stored when saving a preset.

1. MIDI In

Plug a MIDI cable here from your previous MIDI device's MIDI OUT

2. MIDI Thru

Plug a MIDI cable here to your next MIDI device

Saving a Preset

Saving a preset allows you to recall whether the Fuzz or Octave channel is on using a MIDI Program Change.

To save a preset, follow these steps.

1. Hold the **FUZZ** foot switch for 10 seconds.

Note:

This will temporarily change the channel state. After 10 seconds, it will return to the channel (Fuzz / Octave) and bypass mode (On / Off) it was in before.

2. The foot switch LED will blink, indicating the pedal is ready to receive a Program Change (PC) from your controller.

Note:

While the Fuzz or Octave switch blinks, you can still switch channels and turn the channels on / off before the next steps. If the LED is illuminated longer than it is off, then the channel is in the On state and vice versa.

3. Send the program change from your controller.

Note:

Thornicus will adopt the MIDI Channel the controller used to send the Program Change.

4. Programming Complete. Thornicus will now load the Fuzz channel next time it receives the same Program Change number on the same channel.

Changing the MIDI Channel

To change the MIDI channel of Thornicus, send a Program Change while the pedal is in Program Mode. Refer to the previous section, "Saving a Preset". Thornicus will adopt the MIDI Channel the controller used to send the Program Change.

Controller Change (CC) Table

CONTROLLER CHANGES (CC#s)				
CC# (Decimal)	CC# (Hexadecimal)	Value	Function	Note
0	0x00	0 - 63	Pedal Off	Turns on / off whatever channel is currently active
		64 - 127	Pedal On	
1	0x01	0 - 63	Fuzz Off	Turns on / off the Fuzz channel (left side)
		64 - 127	Fuzz On	
2	0x02	0 - 63	Octave Off	Turns on / off the Octave channel (right side)
		64 - 127	Octave On	

Technical Specifications

Input Impedance: ~30KΩ (Fuzz Channel), ~450KΩ (Octave Channel)

Output Impedance: ~236Ω

Power Connector: 9Vdc, center negative, 2.1mm x 5.5mm

Current Consumption: 30mA max

Reverse Polarity Protection: Yes

Dimensions: 4.05” (W) x 5.33” (T) x 2.36” (H)

Weight: 1.2 lbs.

ROHS Compliant: Yes

*All specifications subject to change without prior notice

Warranty

For warranty information on the Thornicus as well as all other Suhr products, please visit https://www.suhr.com/warranty/

FCC Compliance

This product has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this product in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference. 2) This device must accept any interference received, including interference that may cause undesired operation.

Notice: The FCC regulations provide that changes or modifications not expressly approved by J.S. Technologies Inc. could void your authority to operate this equipment. These limits are designed to provide reasonable protection against harmful interference in a non-residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the antenna of the radio/television receiver.
- Increase the separation between this equipment and the radio/television receiver.
- Plug the equipment into a different outlet so that the equipment and the radio/ television receiver are on different power mains branch circuits.
- Consult a representative of J.S. Technologies Inc. or an experienced radio/ television technician for additional suggestions.