Lamb Overdrive

Overview, Features, and how to use the JET Lamb Overdrive

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Overview

Basic overview and features of the JET Lamb Overdrive

Overview

Description

Introducing the Lamb, a 100% all analog signal path, programmable overdrive pedal with onboard presets and full midi control. The Lamb is an op amp based overdrive circuit with soft clipping diodes placed inside the feedback loop of the op amp. While it is it's own unique circuit, it can be closely compared to similar type circuits like the Marshall BluesBreaker, Analog Man King of Tone, and JHS Morning Glory, etc. The Lamb features an internal 18V charge pump converting a standard 9V power supply to 18V for maximum headroom and responsive touch dynamics.

- 100% All Analog Signal Path
- Full MIDI Control Over Every Knob, Switch, Feature, etc.
- Internal 18V Charge Pump for Maximum Headroom & Responsive Touch Dynamics
- 3 Selectable Overdrive Circuits
- 3 Selectable Presets (knobs not active in preset mode)
- 100 On-Board Presets w/ the Use of a MIDI Controller
- Any Circuit Can Be Saved to Any Preset Location
- Live Mode (knobs always active)
- Preset Mode (knobs inactive)
- Quick access between Live Mode & Presets
- Multi-Colored LED's Showing the Status of Each Preset & Algorithm
- Double Tap the Preset Switch for an Instant Lead Boost
- Soft Click Bypass Switches
- Power via 9v (Negative Tip) DC Power Supply (power supply not included)
    - *Requires 200ma or larger power supply (anything less will result in performance issues)

- Dimensions L x W x H - 4.7 in x 3.7 in. x 1.66 in. (119 mm x 94 mm x 42 mm)

The Overdrive Circuits

The Lamb has three different circuits which offer different levels of compression and clarity. By default the Lamb loads up with quad symmetrical silicone diodes which offers the least amount of compression for maximum clarity and "tube" like breakup. Then we offer symmetrical clipping with dual silicone diodes, this offers a slightly more compressed sound creating a more complex tone with rich overtones and saturation. The last option removes the clipping diodes from the bottom half of the sign wave which creates asymmetrical clipping on the top half of the sign wave. This option has much more headroom than the other two and is great for running a low gain / high volume type of overdrive to really push your amp into natural saturation.

Overview

The Tone Stack

The tone stack of the Lamb offers complete flexibility for maximum tone shaping. Inside the Lamb is a trim pot that is adjustable to set the overall presence of the Lamb, use this to fine tune your sound based on which amp and/or guitar combo you are using. The Lamb has the standard tone knob (low pass filter) found on all BluesBreaker type pedals, allowing you subtract or add treble frequencies. The gain knob also provides a dual role, at lower gain settings it adds bass and at higher settings it removes bass to eliminate flub or unwanted overloading of the low frequencies at high gains. We've also added a unique feature to the Lamb, a Mid Boost knob, which allows you to dial in just the right amount of mids to help cut through the mix. Think of the Mid Boost knob as a volume control, all the way to the left is off, turning clockwise will increase the amount of mids introduced into the signal path.

Lead Boost

The Lamb has a hidden Lead Boost feature, this can be useful for adding just a touch of output volume or adding a significant amount of output volume for lead lines or solos (will not affect your gain/breakup).

Double tap the Preset switch to auto engage the Lead Boost, once engaged the Preset LED will begin to flash indicating the Lead Boost is engaged. To exit the Lead Boost, simply press the Preset Switch.

The volume of the Lead Boost is user definable and can be changed/stored in permanent memory via the configuration menu at startup, see "Using the Pedal" for more info.

Operating your Lamb Overdrive

How to use the Lamb Overdrive

Using the Pedal

Volume Knob

Used to set the overall output volume of the Lamb.

Gain Knob

Used to set the amount of gain/breakup of the Lamb.

Tone Knob

Used to add or remove high frequencies from the Lamb. Counterclockwise removes highs and clockwise adds highs to your signal path.

Mid Boost Knob

Used to add the all important mid frequencies to the Lamb. The specific frequency has been fine tuned and is set to help your guitar cut thru the mix. Think of this knob as a volume knob for your mids, fully counterclockwise your tone is unaltered, as your turn it clockwise it will add more and more mids to your signal path.

Lead Boost

Double tap the Preset switch to auto engage the Lead Boost, once engaged the Preset LED will begin to flash indicating the Lead Boost is engaged. To exit the Lead Boost, simply press the Preset Switch.

The volume of the Lead Boost is user definable and can be changed/stored in permanent memory via the configuration menu at startup. The Lead Boost can be adjusted from 1 thru 4, by default it is set to 1 from the factory. This can be changed upon powering up the pedal. After applying power to the Lamb, hold down the Bypass switch while the pedal is in startup mode (Volume & Mid Boost knobs are white and the Bypass and Preset LED's are flashing). While continuing to hold down on the Bypass switch, the Preset LED will flash the number of times equivalent to the Lead Boost (set to 1 from the factory) and then will have a 2 second pause before flashing again. Simply press the Preset switch to increment the Lead Boost by 1, press as many times necessary to change to the desired setting. Once you've reached number 4 the next press will start over again at number 1. Once you have the right number selected, just release the Bypass switch to save this setting into permanent memory.

The Workflow

The workflow of the Lamb is similar to our Revelation Reverb, you have a "Live" mode and a "Preset" mode. When you press the Bypass switch, you will be in "Live" mode, the knobs will all be active and you can adjust to your desired sound. Pressing the Preset switch will jump into "Preset" mode, when here you immediately jump to the cue'd up preset and the knobs now become inactive. Pressing the "Preset" switch again will disengage the "Preset" mode and you immediately jump back to "Live" mode.

Just like our super popular Revelation Reverb, the Volume knob and the Mid Boost knob are illuminated with multi-colored LED's to indicate the status of which preset is cue'd up as well as which circuit the "Live" mode is in. To switch between circuits, simply do a long press (press and hold for at least ½ of a second) of the Bypass switch. Upon releasing the switch the LED on the Mid Boost knob will change colors indicating that you've changed circuits. To switch between presets, and/or cue up your desired preset while in "Live" mode, simply do a long press of the Preset switch. Upon releasing the switch the LED on the Volume knob will change colors indicating that you've either jumped to the next preset (while in "Preset" mode) or have cue'd up the next preset while in "Live" mode.

The colors of each knob are as follows:

- Circuit / Mid Boost Knob LED
  - Cyan - symmetrical quad silicone diodes
  - White - symmetrical dual silicone diodes
  - Yellow - clipping diodes removed from bottom half of sign wave

- Preset / Volume Knob LED
  - UV (purple) - preset #0
  - Red - preset #1
  - Green - preset #2

Using the Soft-Click Switches

Our soft click Bypass and Preset switches are smart switches which have several different timed based functions to control various features of the pedal. Please note the following time based functions

- To switch circuits on the fly, press and hold the Bypass switch for at least ½ of a second and upon releasing the switch you will cycle through to the next circuit. Once you've reached the end, the next long press will cycle back to the first circuit.
- To switch presets on the fly, press and hold the Preset switch for at least ½ of a second and upon releasing the Preset switch you will cycle through to the next preset, once you've reached the end, the next long press will cycle back to the first preset. You can cycle through your presets in any state that the pedal is in (off, on, or in preset mode).
- To enter "Preset Save Mode", press and hold both the Bypass and Preset switch until the Bypass LED will begin to flash, confirming you are in "Preset Save Mode".
  - A short press of the Bypass switch will cycle through the circuits
  - A short press of the Preset switch will through where to store the preset

    - Once you've selected the right circuit and preset location, simply set the knobs to your desired positions and do a long press of the Preset switch. Once releasing the switch, the Preset LED will flash rapidly letting you know you've just saved that preset. Repeat as necessary to save your other presets
    - To exit "Preset Save Mode", press and hold the Bypass switch for longer than 2 seconds and upon releasing the Bypass switch you will exit the "Preset Save Mode"
- To engage the Lead Boost, simply do a double press of the Preset switch.
    - The Lead Boost is adjustable from 1 to 4 and is set from the factory at 1. To change the Boost level follow the steps below.
    - After applying power to the Lamb, hold down the Bypass switch while the pedal is in startup mode (Volume & Mid Boost knobs are white and the Bypass and Preset LED's are flashing). While continuing to hold down on the Bypass switch, the Preset LED will flash the number of times equivalent to the Lead Boost level (set to 1 from the factory) and then will have a 2 second pause before flashing again. Simply press the Preset switch to increment the Lead Boost level by 1, press as many times necessary to change to the correct number. The numbers available on the Lamb are 1 thru 4, once you've reached number 4 the next press will start over again at 1. Once you have the right number selected, just release the Bypass switch to save this setting into permanent memory.

Saving Presets

To enter "Preset Save Mode", make sure the pedal is engaged (Bypass switch on) and press and hold both the Bypass and Preset switch until the Bypass LED will begin to flash, confirming you are in "Preset Save Mode".

- A short press of the Bypass switch will cycle through the circuits
- A short press of the Preset switch will cycle through where to store the preset
- Once you've selected the right circuit and preset location, simply set the knobs to your desired positions and do a long press of the Preset switch. Once releasing the switch, the Preset LED will flash rapidly letting you know you've just saved that preset. Repeat as necessary to save your other presets
- To exit "Preset Save Mode", press and hold the Bypass switch for longer than 2 seconds and upon releasing the Bypass switch you will exit the "Preset Save Mode"

MIDI Features and Controls

Library of MIDI commands and how to program your Lamb Overdrive

How to Connect

Midi communication to the Lamb conforms to the specification for TRS to Midi adapters issued by the Midi Association. So what does this mean for me? In order to communicate via Midi you will need either a 5 pin to 1/4" TRS adapter cable that is wired to the TRS specification (link to a compatible cable found here) or if you wish to make your own patch cables, a link to the wiring diagram and the midi specification can be found here. You can also use a midi box that converts 5 pin Midi to multiple TRS patch cable connections and will need to conform to the TRS specification (currently only the Midi Box 4 by Disaster Area Designs), or a compatible Midi controller with TRS midi output's like the Futurist by Matthews Effects or various controllers by Disaster Area Designs and MorningStar Engineering.

Changing the MIDI Channel

From the factory the Lamb is set to receive Midi messages on Midi channel 1, however this can be changed upon powering up the pedal. After applying power to the Lamb, hold down the Preset switch while the pedal is in startup mode (Volume & Mid Boost knobs are white and the Bypass and Preset LED's are flashing). While continuing to hold down on the Preset switch, the Bypass LED will flash the number of times equivalent to the Midi channel (set to 1 from the factory) and then will have a 2 second pause before flashing again. Simply press the Bypass switch to increment the Midi channel by 1, press as many times necessary to change to the correct Midi number. The numbers available on the Lamb are channels 1 thru 16, once you've reached number 16 the next press will start over again at number 1. Once you have the right number selected, just release the Preset switch to save this setting into permanent memory.

Saving Presets via MIDI

You have two options for creating presets. The first option is to use a "smart" midi controller that can send multiple simultaneous midi messages. Just send individual CC messages to turn the Bypass switch on, select the algorithm, and set the values for each knob.

The second option is to use our revolutionary CC Snapshot feature. While in Live Mode, select your desired algorithm and then set all of the knobs to their desired positions. From there just send midi CC #28 with any Value from 3 thru 124. The pedal will then take a snapshot of its algorithm and knob positions, after that the knobs will flash green letting you know the preset has been saved into permanent memory. To recall this preset, just send a PC message with the same number used for the Value when sending CC #28.

Example: send CC #28 Value 10 to save a preset in the 10th slot. Send PC #10 to recall the new preset.

The Lamb can save 100 onboard presets (0 thru 99).

Program Change Messages

- PC #0 - Recalls the first preset (UV)
- PC #1 - Recalls the second preset (Red)
- PC #2 - Recalls the third preset (Green)
- PC #3 - 100 Recalls the preset created by CC Snapshot (Blue)
    - In this mode all of the LED's will be blue and the knobs will be active in case you need to make changes on the fly. Since every preset 3-100 will be the same color, it may be hard to remember what's been saved to each preset location. No worries, if you move the knobs away from their original position, the color of the LED's will change and when moved back to the saved preset location the LED's light up blue again. For the Gain and Tone knobs (that don't have an illuminated knob) the Preset and Bypass LED's will flash when moved away from the saved position and return solid when you navigate back to the saved preset location.

Control Change Messages

Receiving CC messages will control the individual controls, knobs, and switches of the Lamb

- CC #19 with any value of 1 thru 8 controls the Volume knob. 1 is the equivalent of having the knob turned completely counter-clockwise and 8 is like having the knob turned completely clockwise.
- CC #20 with any value of 1 thru 8 controls the Gain knob. 1 is the equivalent of having the knob turned completely counter-clockwise and 8 is like having the knob turned completely clockwise.
- CC #21 with any value of 1 thru 8 controls the Tone knob
- CC #22 with any value of 1 thru 8 controls the Mid Boost 1 knob
- CC #23
    - Any value between 0 & 63 turns the Bypass switch off
    - Any value between 64 & 127 turns the Bypass switch on

- CC #24
    - Any value between 0 & 63 turns the Preset switch off
    - Any value between 64 & 127 turns the Preset switch on

- CC #25 any value between 0 & 127 increments the Preset number
- CC #26 any value between 0 & 127 decrements the Preset number
- CC #27
    - Any value between 0 & 42 activates the Cyan circuit
    - Any value between 43 & 85 activates the White circuit
    - Any value between 86 & 127 activates the Yellow circuit

- CC #28 any value between 3 & 124 activates CC Snapshot mode
    - This takes a snapshot of your current settings and stores it permanent memory at the appropriate preset location. An example would be to send CC #28 Value 3, this stores a preset in the 3rd slot and can be recalled anytime by sending PC #3

- CC #29
    - Any value between 0 & 63 turns off the Lead Boost
    - Any value between 64 & 127 turns on the Lead Boost
      (you can also exit the Lead Boost with the foot switches as well)

FAQ

Frequently asked questions

FAQ

How many presets can I save on the pedal

The Lamb can save up to 100 presets. The first three presets can be saved by using the buttons and knobs on the pedal. The remaining 97 presets can be saved using a MIDI controller.

FAQ

Is the Lamb analog or digital?

Yes, it's both! Your complete signal path is 100% all analog, while behind the scenes there is a digital brain that handles presets and midi features.

FAQ

Why is my Lamb not responding to MIDI messages?

Currently there are multiple types of wiring options for cables and connectors. We comply to the MIDI specifications for TRS standards, meaning the tip is active, the ring requires 5 volts and the sleeve is grounded. It is likely that the cable you're using does not meet these standards. Please contact us for recommendations on cables.

FAQ

Why is my Lamb acting funny when I plug it in?

If your Lamb is making a funny noise or the LEDs are flashing white, it is likely that your power supply isn't providing enough power. The Lamb requires at least 200ma to function properly. Please check your power supply and make sure you're not plugged into a 100ma port. Under powering your pedal for any period of time can damage the unit and will void your warranty.

FAQ

Why Doesn't the Preset Work

Make sure the pedal is engaged (Bypass switch turned on) and then press the Preset switch. Presets are only accessible when the pedal is engaged and provides a quick way to jump back and forth between sounds in presets and in live mode.