

VONGON

solarfaze



USER MANUAL

VERSION 1.0

FRONT PANEL

VONGON
solarfaze

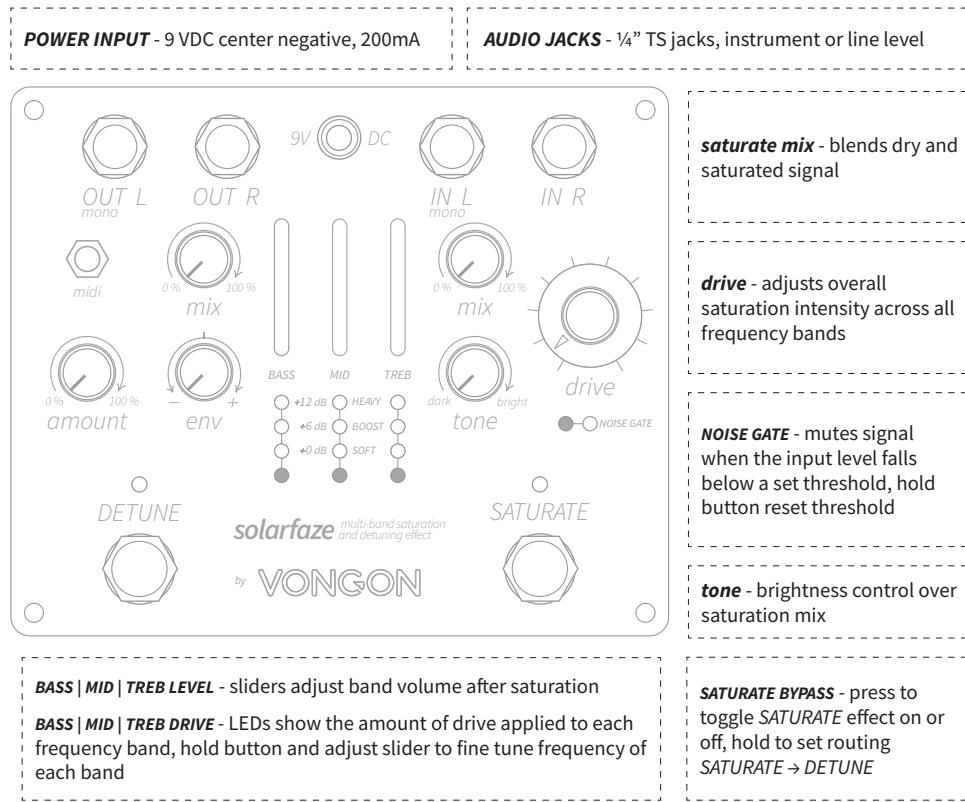
midi - 3.5mm Type B MIDI input

detune mix - blends dry and detuned signal

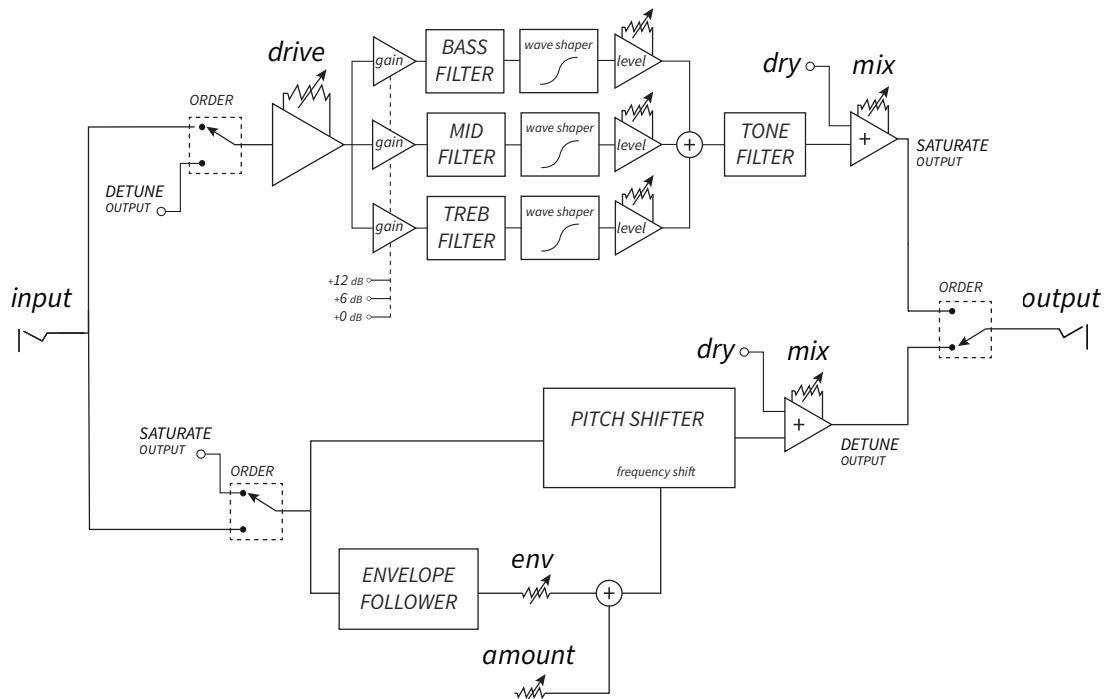
amount - sets pitch shift depth for detune

env - bipolar adjustment of detune amount with playing dynamics

DETUNE BYPASS - press to toggle DETUNE effect on or off, hold to set routing DETUNE → SATURATE



SIGNAL FLOW DIAGRAM



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INTRO

solarfaze is a stereo audio processor that carries your sound across a sunlit landscape of phase and tone. it combines multi-band saturation with an envelope-controlled detune chorus, creating warmth, shimmer, and stereo dimension

at the heart of the **SATURATE** circuit is a three-band processor designed to move smoothly from subtle warmth and compression to rich harmonic enhancement and heavy breakup. each band (*BASS*, *MID*, and *TREB*) features independent drive and output level controls, letting you shape harmonic content across the spectrum while maintaining balance in the mix. each band's frequency range is also adjustable, enabling precise tailoring to your instrument or voice

the **DETUNE** section delivers a wide stereo chorus by pitch-shifting the left and right channels in opposite directions. the detune amount can be dynamically modulated by the input envelope, so the stereo spread responds to your playing, ranging from gentle shimmer to dramatic detuning

solarfaze adapts easily to many contexts. on guitar, it acts as a powerful tone-shaping tool - drive each frequency band differently for stacked, multi-band distortion that stays articulate and clear. as an end-of-chain processor, it can blend flexible saturation and detune modulation across your entire mix, whether you want subtle harmonic lift or a bold creative effect. use a single band at a time to build layered loops, with each band occupying its own space in the spectrum for sonic clarity

additional features include a built-in **NOISE GATE** for high-gain settings and flexible effect routing that allows **SATURATE** to run before **DETUNE** or vice versa. the pedal supports both analog buffered bypass for zero-latency pass-through and DSP bypass for completely silent effect toggling. **MIDI** control extends the possibilities further, with nine onboard user preset slots and remote adjustment of every parameter

FEATURES

- stereo multi-band saturation with BASS, MID, and TREB bands
- independent drive, frequency, and level control per band
- soft-clipping waveshapers for smooth transition from subtle warmth to heavy breakup
- stereo detune chorus with independent left/right pitch shifts
- envelope modulation of detune amount for dynamic stereo animation
- built-in NOISE GATE with adjustable threshold
- flexible effect routing: SATURATE → DETUNE or DETUNE → SATURATE
- MIDI input for full parameter control and preset storage (9 slots)
- standard 9-volt, center-negative power supply compatibility
- housed in a single block of walnut, CNC routed, hand sanded & polished

SPECIFICATIONS

- 165mm x 140mm x 45mm
- ¼" TS jacks, instrument or line level compatible
- input impedance: 1MΩ
- output impedance: <1kΩ
- power supply: 9 VDC, center-negative
- current draw: 200mA
- 3.5mm MIDI input (Type B)
- analog buffered or DSP bypass
- soft-touch foot switches

GETTING STARTED

POWER CONNECTION

power **solarfaze** with a standard effect pedal power supply that provides at least 200mA of current. the power input is protected from reverse polarity and over-voltage power supplies

POWER REQUIREMENTS:

9 VDC, Center Negative, 200mA or greater

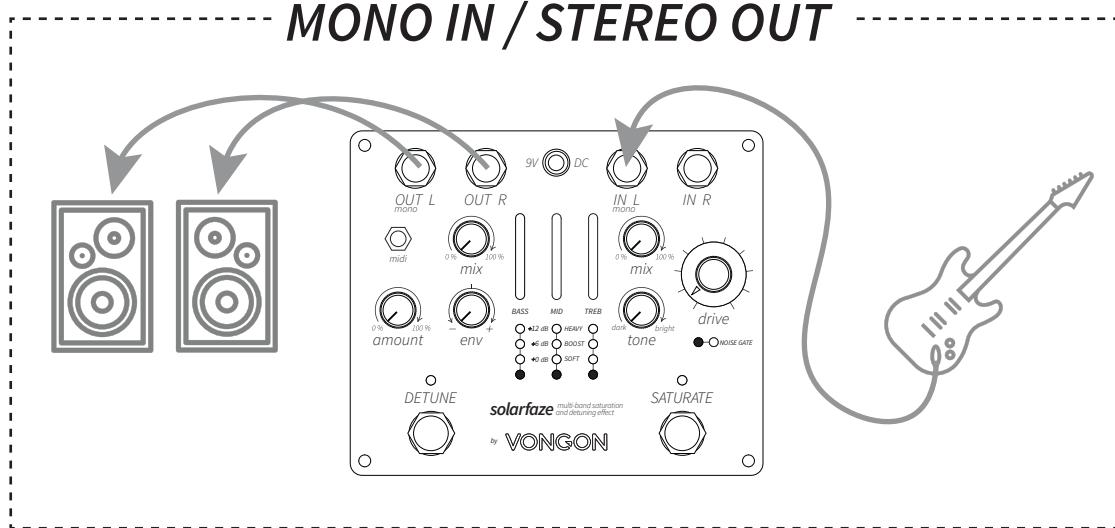
AUDIO CONNECTIONS

connect your instrument with 1/4" TS cables. **solarfaze** is compatible with both mono and stereo sources

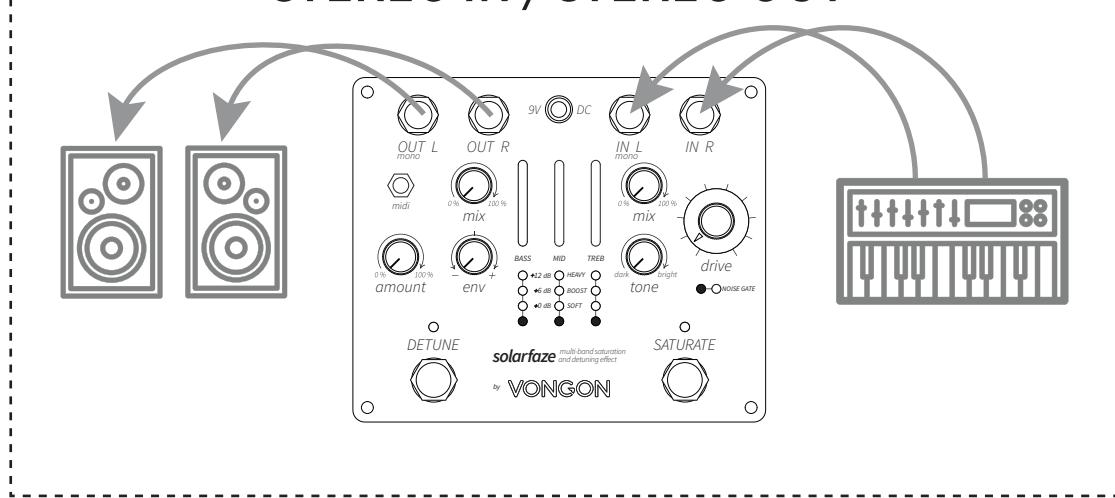


AUDIO CONNECTIONS (continued)

MONO IN / STEREO OUT

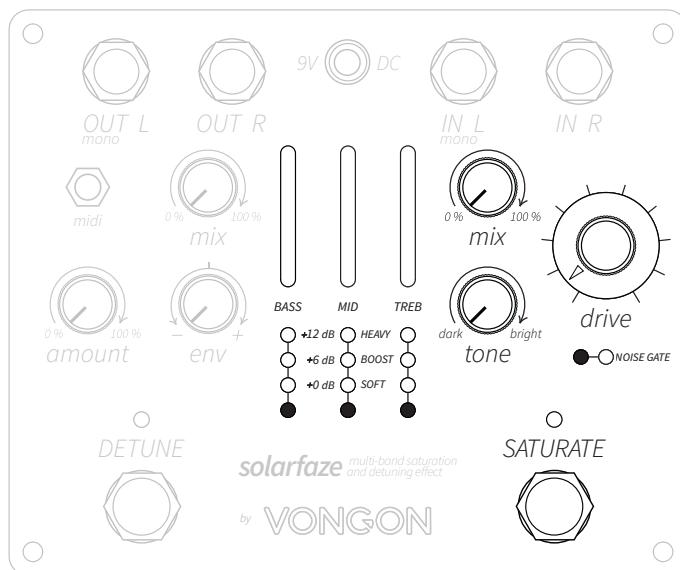


STEREO IN / STEREO OUT



SATURATE

the **SATURATE** section splits your input signal into three isolated frequency bands: *BASS*, *MID*, and *TREB*. each band is processed by a dedicated soft-clipping waveshaper, designed to transition smoothly from warm compression to distortion and heavy breakup. input drive can be switched between: *SOFT* (0 dB) for maximum headroom, *BOOST* ($+6\text{ dB}$) for added drive and sustain, or *HEAVY* ($+12\text{ dB}$) for intense saturation



BASS DRIVE | MID DRIVE | TREB DRIVE – adjusts the amount of drive (saturation) applied to the selected frequency band. the drive setting is indicated by the band's LEDs. lower settings provide subtle warmth and gentle compression, while higher settings add harmonics, distortion, and aggressive breakup

BASS LEVEL | MID LEVEL | TREB LEVEL – sets the output volume of each frequency band after saturation. the level is controlled by the band's vertical slider. use these to rebalance the overall tonal mix after adjusting drive

SATURATE MIX – blends the clean, unsaturated input signal with the processed signal. fully counterclockwise is 100% dry, fully clockwise is 100% processed

SATURATE (continued)

DRIVE – controls the overall intensity of the **SATURATE** effect across all three bands. turning it up increases the input level feeding the *BASS*, *MID*, and *TREB* wave shapers, resulting in more harmonics, compression, and distortion. lower settings keep the effect subtle, while higher settings push the sound into heavy breakup and sustain

TONE – adjusts the tonal balance of the combined saturated signal. turn counterclockwise for a darker, warmer tone. turn clockwise for a brighter, more present tone

NOISE GATE – mutes the signal when the input level falls below a set threshold. see the **NOISE GATE** section for details

SATURATE BYPASS SWITCH – toggles the effect on or off. hold the foot switch to place **SATURATE** first in the effect chain

ADJUST FREQUENCY BANDS

by default, the frequency bands are centered at **BASS** 100Hz **MID** 600Hz **TREB** 7.7kHz. you can adjust each band's center frequency by holding the band's **DRIVE** button as a shift control while adjusting that band's **LEVEL** slider. the band's LEDs will blink in a pattern indicating the selected frequency, as shown in the table below. the frequency adjustment is remembered between power cycles

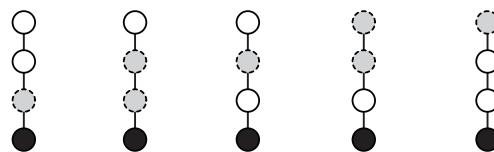
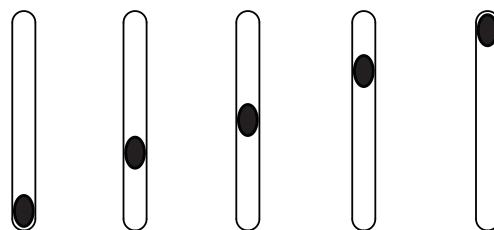
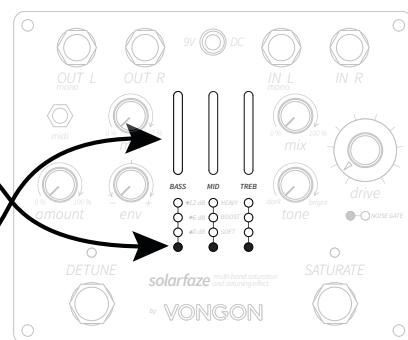
ADJUST FREQUENCY BANDS

Step 1:

Press and hold the band's **DRIVE** button until the LEDs above begin blinking.

Step 2:

While holding, move the **LEVEL** slider to select a frequency. The LED pattern will indicate the selected frequency (see diagram below).



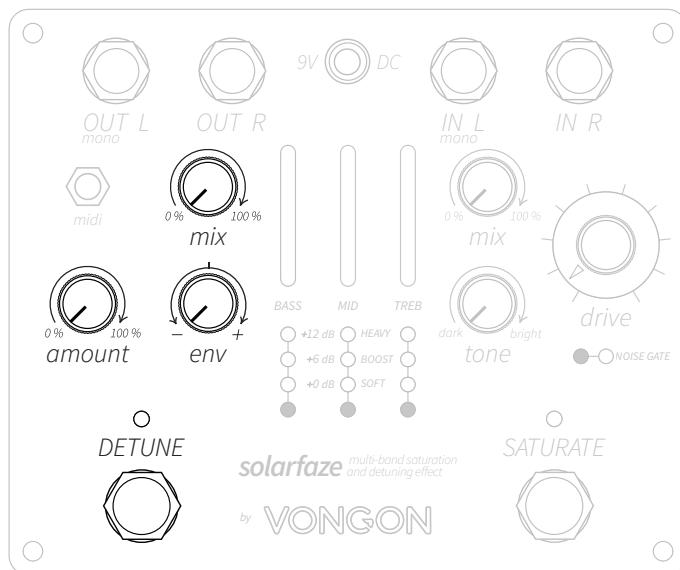
BASS	20 hz	50 hz	100 hz	175 hz	440hz
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MID	150 hz	345 hz	600 hz	1 khz	2.4 khz
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TREB	2 khz	4.5 khz	7.7 khz	13 khz	30 khz
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DETUNE

the **DETUNE** section applies a stereo pitch-shift effect to your signal, creating movement and width. each channel is shifted in opposite directions, producing a natural chorusing effect that can range from subtle shimmer to dramatic detuning. the amount of pitch shift can also be dynamically modulated by your playing via the **env** control



DETUNE MIX – blends the clean input signal with the detuned signal. fully counterclockwise is 100% dry, fully clockwise is 100% detuned

AMOUNT – sets the base pitch shift applied to the left and right channels. low settings add gentle stereo chorus-like sound. high settings produce a wide, detuned effect

ENV – modulates the **DETUNE** amount based on your playing dynamics. at the center position (12 o'clock) there is no modulation. turning the control to the left causes the **DETUNE** amount to decrease as you play louder, while turning it to the right causes the **DETUNE** amount to increase as you play louder

DETUNE (continued)

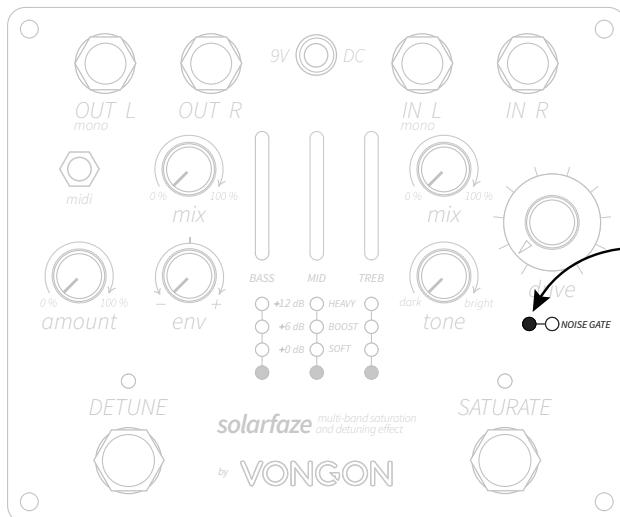
DETUNE BYPASS SWITCH – toggles the effect on or off. hold the foot switch to place **DETUNE** first in the effect chain

SIZE – adjusts the delay time of the detuned voices, affecting the stereo width and perceived smoothness of the **DETUNE** effect. lower settings yield a tighter, more immediate sound but may introduce more audible artifacts. higher settings produce a smoother, more spacious **DETUNE** at the cost of slightly increased latency

to adjust **SIZE**, hold any frequency band's **DRIVE** button until that band's LEDs begin flashing, then turn the **amount** knob. this adjusts the delay time within the **DETUNE** delay table. this setting is remembered between power cycles

NOISE GATE

solarfaze includes an onboard **NOISE GATE** that mutes the signal when the input level falls below a set threshold. it is designed to reduce background noise that can occur when using high gain on the **SATURATE** effect. to set the **NOISE GATE** threshold, hold the button for 2s until the **NOISE GATE** LED blinks several times. once the **NOISE GATE** is enabled, it will unmute the output when it detects you playing your instrument. the **NOISE GATE** threshold is stored in memory and is retained between power cycles



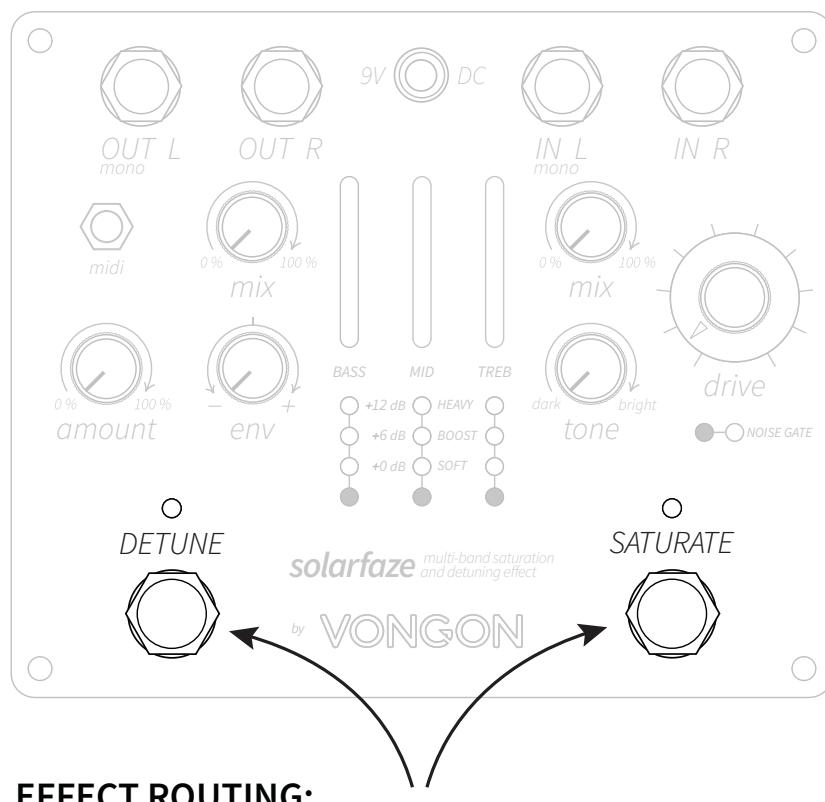
NOISE GATE:

Press the button to enable or disable the Noise Gate.

Hold the button for 2 seconds to set the threshold to the current input level. The LED will blink to confirm the new threshold is set.

EFFECT ROUTING

the **DETUNE** and **SATURATE** effects can be routed in series in either order - **DETUNE → SATURATE** for extra dissonance and pronounced frequency beating, or **SATURATE → DETUNE** for a more traditional routing that delivers a more open, cleaner chorusing sound. to change the effect order, hold down the bypass foot switch of the effect you want first in the signal flow. after 2s, the selected effect's purple LED will blink to confirm the change



EFFECT ROUTING:

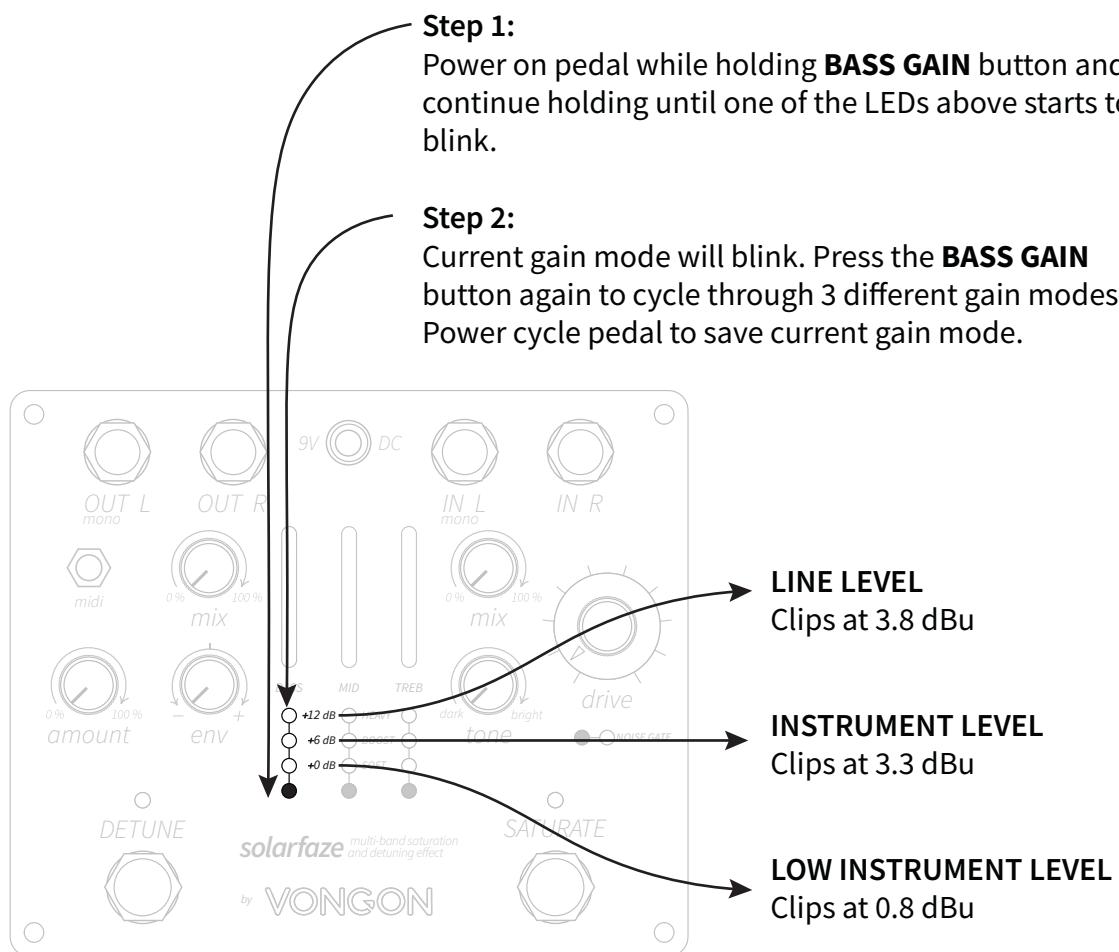
Hold the one of the bypass footswitches until the purple LED above starts to blink.

Hold DETUNE: DETUNE → SATURATE

Hold SATURATE: SATURATE → DETUNE

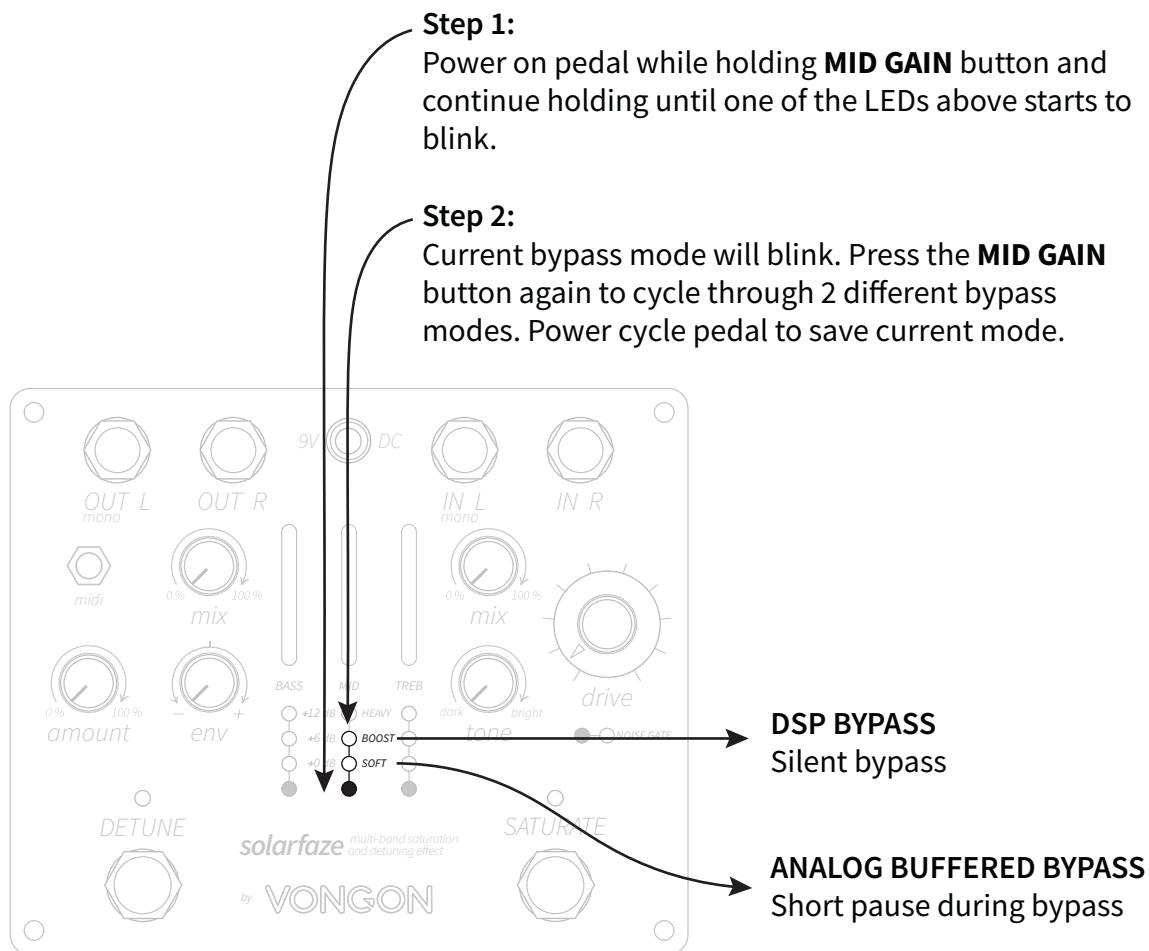
GAIN MODES

solarfaze supports three **GAIN** configurations, making it compatible with different audio sources. by default, the pedal is set to **INSTRUMENT LEVEL** mode. if your input signal is clipping or if you hear too much noise, try adjusting the mode by following the steps below. the pedal will always remember the most recently used mode



BYPASS MODES

solarfaze supports two modes that determine how your signal is handled when the effect is bypassed. in **ANALOG BUFFERED BYPASS**, your signal passes only through analog buffering circuitry for zero latency, though you may notice a brief volume drop for about 10ms when bypassing the pedal. in **DSP BYPASS**, your signal always passes through the digital converters, but there are no audible artifacts when engaging or disengaging the effect. the pedal automatically remembers the most recently used mode



MIDI

the **MIDI** input provides remote control of all parameters on the faceplate, and access to 9 onboard user preset slots. see implementation details below

MIDI ADAPTER

use a 3.5mm **TYPE B** style **MIDI** adapter. if you're unsure which type of adapter to use, you can reach out to us directly (support@vongon.com)

MIDI CHANNEL

by default, **solarfaze** listens to **MIDI** channel 1. you can change the **MIDI** channel by following the steps below

1. power on the pedal while holding the **SATURATE** foot switch and continue holding until all LEDs start blinking
2. now send a **MIDI** CC message on the desired channel. the LEDs will stop blinking and the pedal will now listen to messages on that **MIDI** channel. this setting will be remembered between power cycles

MIDI PRESETS

solarfaze has 9 onboard user preset slots that can be read and written to via **MIDI PROGRAM CHANGE (PC)** messages

EXAMPLE SAVE/LOAD PRESET 1:

- **SAVE PRESET 1:** adjust pedal to desired sound, send a **MIDI** PC# 11. that sound is now saved into preset slot #1
- **LOAD PRESET 1:** send a **MIDI** PC#1 message, the pedal will recall the sound stored in preset slot #1

PRESET	LOAD PRESET	SAVE PRESET
1	PROGRAM CHANGE #1	PROGRAM CHANGE #11
2	PROGRAM CHANGE #2	PROGRAM CHANGE #12
3	PROGRAM CHANGE #3	PROGRAM CHANGE #13
4	PROGRAM CHANGE #4	PROGRAM CHANGE #14
5	PROGRAM CHANGE #5	PROGRAM CHANGE #15
6	PROGRAM CHANGE #6	PROGRAM CHANGE #16
7	PROGRAM CHANGE #7	PROGRAM CHANGE #17
8	PROGRAM CHANGE #8	PROGRAM CHANGE #18
9	PROGRAM CHANGE #9	PROGRAM CHANGE #19

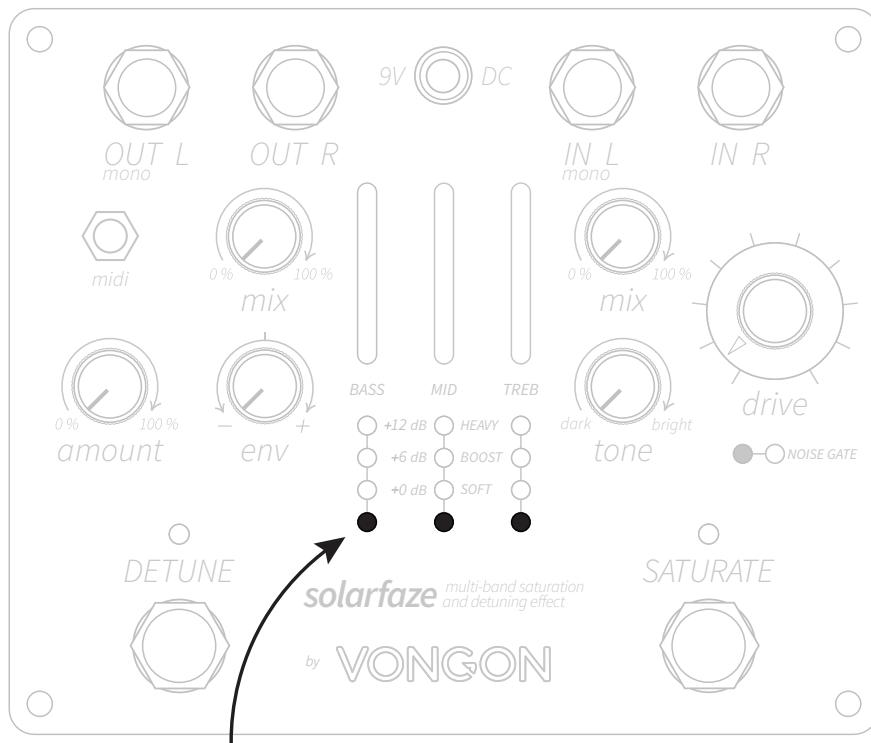
MIDI CONTROL CHANGE (CC) PARAMETERS

when the pedal receives **MIDI CONTROL CHANGE (CC)** messages on its assigned **MIDI** channel, it will internally set parameters to the new CC value. manually adjust the faceplate parameter to reset the value to the physical faceplate control

MIDI MESSAGE	PARAMETER	VALUE
MIDI CC #13	DETUNE BYPASS	0-63: OFF , 64-127: ON
MIDI CC #14	SATURATE BYPASS	0-63: OFF , 64-127: ON
MIDI CC #80	DETUNE MIX	0-127
MIDI CC #81	DETUNE AMOUNT	0-127
MIDI CC #82	DETUNE ENV	0-127
MIDI CC #96	DETUNE SIZE	0-127
MIDI CC #83	BASS BAND OUTPUT LEVEL	0-127
MIDI CC #84	MID BAND OUTPUT LEVEL	0-127
MIDI CC #85	TREB BAND OUTPUT LEVEL	0-127
MIDI CC #89	BASS BAND DRIVE	0-42: +0 dB , 43-85: +6 dB , 86-127: +12 dB
MIDI CC #90	MID BAND DRIVE	
MIDI CC #91	TREB BAND DRIVE	
MIDI CC #93	BASS BAND FREQUENCY	0-127
MIDI CC #94	MID BAND FREQUENCY	0-127
MIDI CC #95	TREB BAND FREQUENCY	0-127
MIDI CC #86	SATURATE MIX	0-127
MIDI CC #87	SATURATE TONE	0-127
MIDI CC #88	SATURATE DRIVE	0-127
MIDI CC #92	NOISE GATE BYPASS	0-63: OFF , 64-127: ON
MIDI CC #98	NOISE GATE THRESHOLD	0-127
MIDI CC #97	EFFECT ORDER	0-63: DETUNE → SATURATE , 64-127: SATURATE → DETUNE

FACTORY RESET

reset all **solarfaze** settings by performing a factory reset. this will restore all settings remembered between power cycles - such as the band frequencies, **GAIN** mode, **BYPASS** mode, **NOISE GATE** threshold, and **MIDI** channel - but will not affect presets. to perform a factory reset, power on the pedal while holding all three **DRIVE** buttons (*BASS*, *MID*, and *TREB*). after a few seconds, all LEDs will blink several times to confirm the reset



FACTORY RESET:

Power on the pedal while holding all three **GAIN** buttons. After a few seconds, all LEDs will blink several times to confirm the reset.

EXTENDED WARRANTY & SUPPORT

VONGON will repair or replace any malfunctioning product within one year from the purchase date. problems resulting from modification or misuse may void this warranty. this warranty applies only to the original owner of the product - proof of purchase is required. we will happily diagnose and repair any **VONGON** product, even if it is out of warranty - shipping and repairs are at the owner's expense

CONTACT

please feel free to reach out with any questions or concerns
support@vongon.com

CHANGE LOG

VERSION	DATE	DESCRIPTION
V1.0	AUG 15, 2025	Initial commit