



OVERVIEW

Harmonic and/or standard tremolo, pure analog warmth. This tremolo pedal features an all-analog signal path that can do any variety or shape of standard volume modulation, harmonic tremolo (inspired by vintage Brownface) or both simultaneously for a truly unique and beautiful tremolo sound that sits just perfectly in a mix. The first thing your guitar hits in the signal path is a gorgeous, transparent, discrete class A clean boost circuit, and is followed by buffering and tone shaping with famed Analog Devices AD823 opamps for perfect tonal clarity, and analog warmth. Further, every knob and switch is connected to a little digital brain while your guitar signal stays 100% analog the entire time and never gets digitally processed. Since the control of the effect is digital, it opens up

unprecedented effects and features that have never been heard or offered in analog stompboxes.

DRIVE (RAMP)

Simply put, this is a magical knob. When you don't have any dip switches assigned for ramping, this knob functions as a "Drive" control. "Drive" is a bit of a misnomer here, as it is the gain control of a very clean, beautiful and transparent boost. If you want more headroom and output out of the pedal, 18V operation is advised. Due to the digital control of this pedal, you can set this knob to control any of the five parameters individually or simultaneously (volume, tone, rate, depth, sway) and have it either modulate or ramp-and-hold (rise or fall) via dip switches in the back of the pedal. Essentially, this knob controls the ramp time in which this takes place.

VOLUME

This is a little different than my other volume knobs. It should pretty much always be dimed, and the level set with the drive control. If you are ramping this control for a 2nd trem, you can

set the depth with this knob.

TONE

This is a very musical, and wide ranging tone knob. When the pedal is at noon, the pedal is transparent. Clockwise for a brighter sound, and counter-clockwise for a smoother, mellow, dark sound. This circuit is also the basis for the harmonic tremolo, as that effect is achieved by modulating between high and low pass filters. In harmonic mode, this control sounds best when it is relatively high, it sets the top end of the harmonic modulation.

RPM

This controls the rate of the tremolo effect – can get super fast. Tap tempo overrides this control.

1/2/4 (3/6/8) (S/B/H) TOGGLE

If the "Mode" dip switch is engaged, this toggle transforms into the "S – B – H" switch. S = Standard Tremolo, H = Harmonic Tremolo, and B = both for standard and harmonic simultaneously. I'm really happy with the how this turned out. Otherwise, this toggle controls tap divisions. A dip switch in the back of the

pedal lets you access the "3 – 6 – 8" divisions, rather than "1 – 2 – 4" if you so desire. You can also select tap divisions for the RPM or for ramping parameters dependent on where the "tap control" dip switch is set. Note that divisions are 2x slower for ramping.

DEPTH

This controls the depth of the tremolo. Crank it clockwise for modulation going all the way to silence. In harmonic mode, this controls how dark the modulation gets, or how far it deviates from the tone knob's setting.

SWAY

This controls the center point of the modulation. Crank it to counterclockwise, the wave is going to ramp up quickly and ramp down gradually. If you crank it clockwise, the wave will ramp up gradually and ramp down quickly. If this knob is straight up and down at 12:00 it will give a perfectly symmetric wave.

LEFT WAVE SHAPE TOGGLE

This controls the shape of the first half of the wave modulation. Left for sine, middle for

triangle, and right for square.

RIGHT WAVE SHAPE TOGGLE

This controls the shape of the second half of the wave modulation. Left for square, middle for triangle, and right for sine. The depth, sway, and wave shape toggles comprise the ModuShape™ engine, which give unprecedented control over the shape of your modulation.

BYPASS STOMP

Activates or bypasses the effect. This can be changed to a momentary bypass via a dip switch in the back of the pedal if it is desired. This pedal is "True Bypass" via a relay, and is extremely quiet.

TAP STOMP

Sets tap tempo, always honors the last two stomps.

LOWER TOGGLE

This switch recalls presets. The right position recalls one preset, the left recalls a different preset. The middle will always reflect wherever the knob positions, toggle positions, and

dip switch positions are currently at. In order to save to the right preset slot, you hold down the right stomp (bypass) for 3 seconds and then hold down both stomp switches simultaneously for another 3 seconds. The LED blinks and your setting is saved. For the left slot, you do the same thing but hold the left stomp (tap) first. If you recall a preset, and move a knob, you will notice that the LED above the toggle goes dim. This is to signify that something has changed on the preset. If you want to save this change in the preset, you will have to save it again.

IN/OUT:

¼" mono input jack.

EXP / CV

¼" TRS jack for expression pedal (parameter selectable via dip switch in the back of the pedal. Tip goes to wiper. We recommend Mission expression pedals (EP-1 or EP-25k). Can also be used to for 0-5V Control Voltage (CV) on tip – the ring should be left floating in this case. There are many expression pedals that work with Chase Bliss Audio products, the

Mission stuff is just what we have on hand.

TAP / MIDI

¼" TRS jack. This can be used as a tap input or output with a regular ¼" instrument cable. In addition, it can be used to interface the pedal with an Empress Effects Midibox. Much more information on this in the MIDI section of this manual (at the end).

POWER & OTHER INFO

This pedal consumes ~20mA and should be operated with an alkaline 9V battery or a standard 2.1mm 9V – 18V DC center negative adapter. If you want more output and headroom out of the pedal, we recommend powering it at 18V. We recommend Voodoo Labs Pedal Power. Input impedance of this device is 1M, and output impedance is less than 1k.

EXP / CV CONTROL & DIP SWITCHES

The Volume, Tone, Rate, Depth, and Sway dip switches in the left bank allow you to control parameters via ramping or an Expression Pedal / CV. Whenever you plug a ¼" in to the EXP / CV jack, the pedal automatically knows that you

will be controlling parameters via expression or CV, not ramping.

DIRECT CONTROL OF WAVEFORM WITH EXP / CV:

If you have something plugged in to the EXP / CV jack, but do not have any parameters selected via dip switch, you are allowed to control the waveform directly. For Gravitas, this equates to an analog "whammy" type of effect. The range of this effect can be limited by the position of the Depth knob. For a maximum sweep, set the depth knob to its full clockwise position.

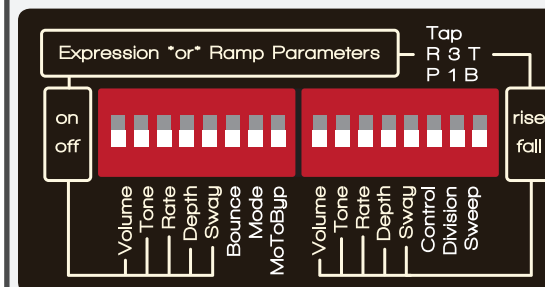
SETTING EXP / CV RANGE:

The range of the expression / CV is controlled by the parameter knob position and the "sweep" dip switch. For example, if you wanted an expression pedal to control the volume parameter from zero volume to unity gain, you would make sure the "sweep" dip switch is in the bottom position and set the volume knob at unity gain. If you need more volume you simply turn the volume knob up slightly. This will increase the maximum range

of the expression pedal. This allows you to control multiple parameters with an expression pedal, but you can fine tune the range that you want for each parameter.

UNDERSTANDING THE DIP SWITCHES

When you save a preset, all of this information gets saved. The parameters in **tan** below correspond to the ramp function *or* an expression pedal (if one is plugged in).



A very important thing to remember is that ramping always gets reset when bypassing. The parameters' current knob position control where the parameters ultimately will either start or stop ramping.

The Volume, Tone, Rate, Depth, and Sway dip switches on the left side simply turn that parameter on or off for ramping or expression / CV capability.

Volume, Tone, Rate, Depth, and Sway dip switches on the right side control whether or not the parameters will rise (go clockwise in ramp mode) or fall (go counterclockwise in ramp mode). It also controls how the parameters will behave with an expression pedal plugged in.

Bounce: When on (and no expression pedal), parameters will go back and forth (i.e. modulate), if it's off, parameters will ramp and hold.

Mode: When engaged, this transforms the "S – B – H" toggle. S = Standard Tremolo, H = Harmonic Tremolo, and B = both for standard and harmonic simultaneously. B is particularly novel and fun, it's a completely unique sound,

but at the same time it is immediately familiar and accessible.

MoToByp: Momentary-to-bypass. If on, the pedal is only activated when the bypass stomp is pressed in.

Tap Control: "R" stands for ramp, "P" for parameter (RPM in this case). In the P position, tapping in a tempo will dictate the RPM rate. In the R position, tapping in the tempo will dictate the Ramp rate. This is great for modulating parameters. Remember, the "Bounce" dip switch needs to be on if you want to ramp parameters back and forth, rather than just ramping and holding.

Tap Division: In position "3" allows for 3, 6, 8 tap divisions. This is also important for selecting MIDI note divisions.

Sweep: this controls where ramp sweeps. In "T" (top) the ramping (or expression control) will occur between the current knob position and the max

position (fully clockwise). In "B" (bottom) the ramping (or expression control) will occur between the current knob position and the minimum position (fully counterclockwise).

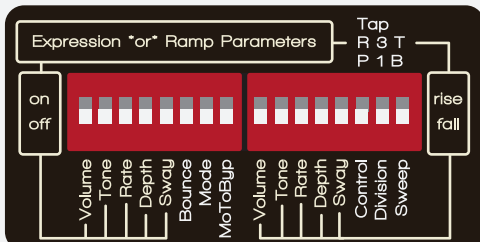
NOTE: It may seem overwhelming and difficult for users to take all this in at first. My suggestion is always to forget about the dip switches for a while when you get the pedal. Get to know the basic functionality of it, and then if/when you want to experiment with ramping or expression, it will likely be easier.

Some of these concepts are much easier to explain and demonstrate on video, and I have many tutorials available on my youtube channel at www.youtube.com/c/ChaseBlissAudio.

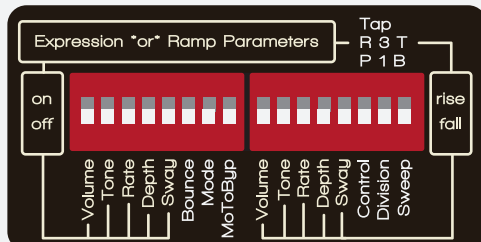
I also love to hear from customers and answer questions so feel free to write me anytime at joel@chaseblissaudio.com.

Thank you so much for purchasing this product and ENJOY!

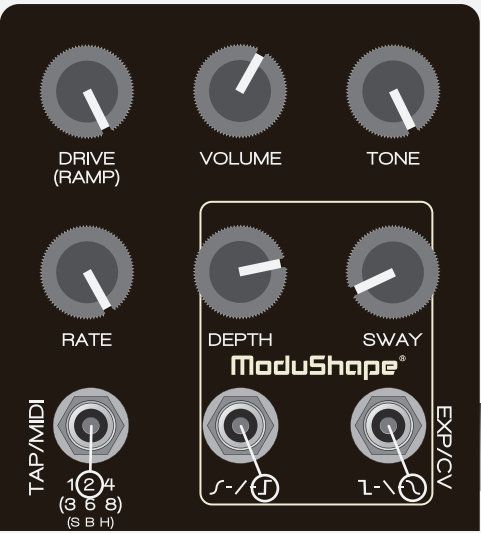
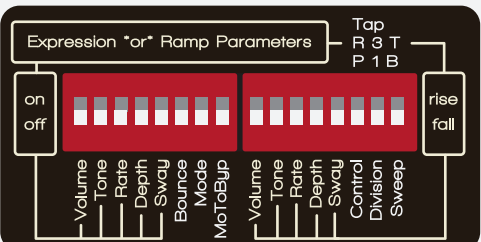
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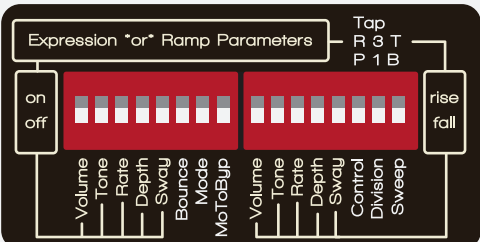
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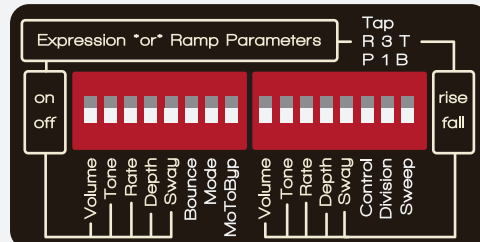
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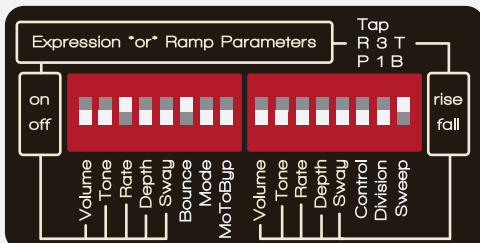


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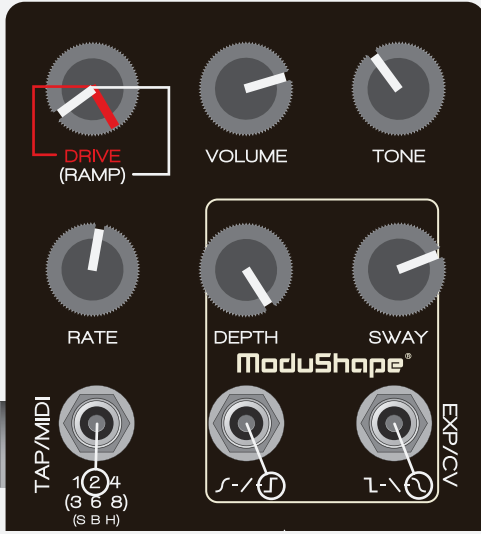
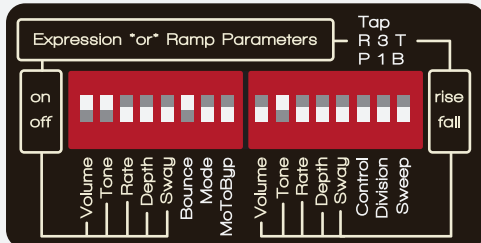


GRAVITAS INSTRUCTIONS

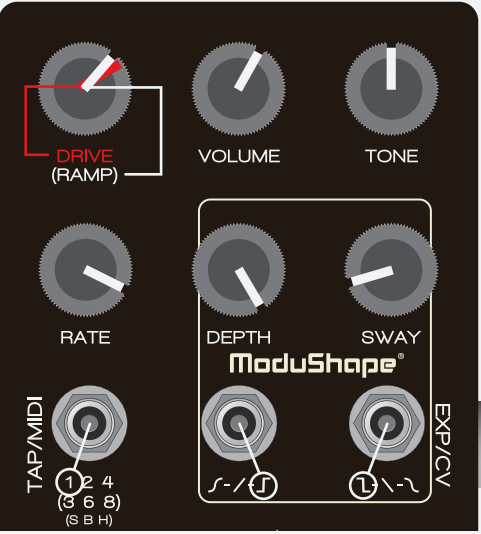
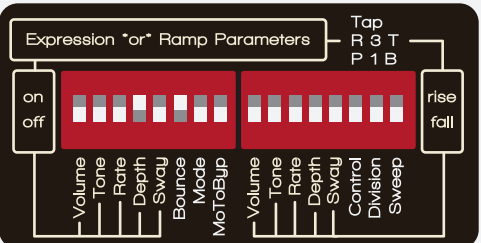
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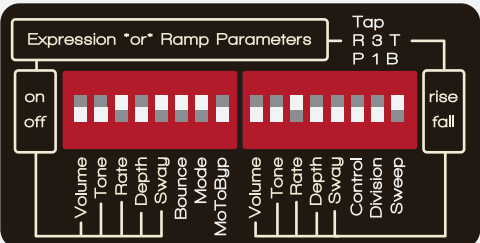
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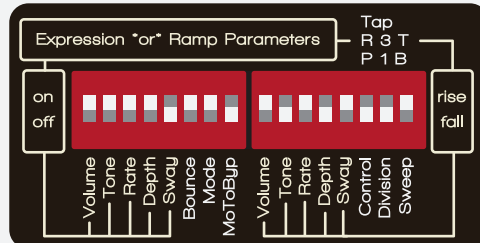
AFTER ALL



DUCHESSE



JACKRABBIT



DIGITAL BRAIN. ANALOG HEART.®

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All presets created by Mason Stoops. Hear them at soundcloud.com/chaseblissaudio



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, and (2) this device must accept any interference received, including interference that may cause undesired operation.