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.

THERMAE INSTRUCTIONS

CHASEBLISS™ AUDIO

DIGITAL BRAIN. ANALOG HEART.®

OVERVIEW

Public bathing never felt so good. Thermae™ represents a radically new approach to analog delay and harmonization. The pedal digitally manipulates the analog signal path created by 4 re-issued versions of the legendary MN3005 bucket-brigade delay chips. This creates the ability to change delay time in musically interesting intervals, which allows for innumerable options for harmonizing and other sonic madness. These intervals can be sequenced through automatically or triggered manually for ultimate usability in a musical context. Thermae™ can also be used as a more standard analog delay with unprecedented analog modulation options. Every knob and switch is connected to a little digital brain while your guitar signal stays 100% analog and never gets digitally processed.

MIX (RAMP)

Simply put, this is a magical knob. When you don't have any dip switches assigned for ramping, this knob functions as mix control between the dry, unaffected signal and the delay's repeats. Completely clockwise is 100% wet, full delay path, and in this scenario the signal will be boosted slightly. Completely counter-clockwise is 100% dry. In regards to the ramping functionality, the digital control of this pedal allows you to set this knob to control any of the five parameters individually or simultaneously (mix, rate, time, regen, depth), 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.

LPF

This controls a slightly resonant low pass filter (LPF) on the repeats (wet signal). Set it all the way clockwise for brighter, noisy repeats. Turn it counterclockwise to filter out high frequencies and get a resonant boost or hump in frequencies immediately preceding that drop-off. Due to the resonance on this control, it's highly interactive with the Regen control and can make the pedal self-oscillate or increase repeat numbers, even if the Regen knob is set relatively low.

REGEN

This controls the amount of repeats on the delay. If set carefully, it can regenerate seemingly forever, and can also regenerate into self-oscillating madness. The longer that a delay is regenerated, the sooner it will eventually devolve into a beautiful, smeary, tape-saturated blur.

GLIDE

This controls the pitch transition time from one interval to another. Completely counterclockwise has nearly instantaneous pitch shifting. As the control is moved clockwise, more and more transition time is gradually introduced. When completely clockwise, there may not be enough time for the pitch bend to complete its journey, so it'll sound like a bendy soup. Like an old man wandering around, never quite reaching his original intended destination because he is pointed in a new direction.

INT 1 (SPEED)

If Modulation dip is not engaged, this knob sets the first delay time interval change in sequence or in step mode. If Modulation dip is engaged, this knob sets the speed of the LFO (low frequency oscillator) for the pitch modulation on the repeats. Clockwise for fast modulation, counter-clockwise for slow modulation.

INT 2 (DEPTH)

If Modulation dip is not engaged, this knob sets the second delay time interval change in sequence or in step mode. If you are in step mode and only want to step between two intervals, turn this knob to "off." If Modulation dip is engaged, this knob sets the intensity of the pitch modulation on the repeats.

THOSE THREE NOTE TOGGLES

Ok, first things first. If you are using this as a normal delay (that is, you have both interval knobs set to "off" so there's no pitch shifting) the left toggle is a simple tap tempo note division switch; quarter note, dotted eighth, and eighth. If you have INT 1 and/or INT 2 set to something, that's when things get interesting. Let's say you tap in a tempo for one second (1000ms) delays, and all three toggles are set for quarter notes. That's the base time from which everything else derives from. Now let's say INT1 is set for +1 octave and INT2 is set for +1 octave. For the first 1000ms (first quarter note), the delay time will be 1000ms. For the second 1000ms (second quarter note), the delay time will jump up an octave to 500ms and you'll hear two repeats (and pitch shifting) during that interval. For the third 1000ms (third quarter note), the delay time will jump an octave to 250ms and you'll hear 4 repeats (and pitch shifting) during that interval. Then we go back to our original 1000ms delay time and start the sequence over. If this is difficult to understand you are not alone; it's best to check out the KNOBS

demo on YouTube for a video explanation. It's much easier to understand if you are able to see it rather than read it. TLDR; this whole manual is pointless, watch the knobs video.

SLOWDOWN MODE

While the pedal is sequencing like described above, you have the option to slow the speed of the sequence down 2x. Hold both stomps for 3 seconds and you'll notice the tempo LED is green now. This can be saved as well.

MODULATION TOGGLES

If the Modulation dip is engaged, you can use these two toggles for 9 types of modulation. The right toggle controls the shape of the wave for the pitch modulation on the repeats. Left for triangle, middle for sine, and right for square… nothing terribly unusual there. The middle toggle controls how smooth and/or random/glitchy the modulation is. Put in the left position for modulation that is completely representative of the right toggle (i.e. sine, triangle, and square). Things get interesting in the middle and right positons. They implement varying levels of randomness and glitch in half of the wave shape cycle. That is, half of the wave shape is smooth and half is glitchy and random. The depth knob controls this randomness in the modulation. Best to just try these out, they are fun.

BYPASS STOMP

This 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 allows for "True Bypass" via a relay, or buffered bypass with "trails" selectable via a dip switch in the back of the pedal.

TAP / HOLD STOMP

Sets tap tempo, always honors the last two stomps. If you hold down this stomp switch, the pedal will go into self-oscillating regeneration "runaway" mode. This is the same effect as if the regeneration knob is set completely clockwise. If the step dip is engaged, the next interval in the sequence is triggered when this stomp is pressed. If you are in step mode and you want to change the base tempo, hold both stomps for 3 seconds and you'll notice the tempo LED is green now. Now you can tap in a new tempo. Do the same process again to get back to typical step mode.

LOWER TOGGLE

This switch recalls presets. The right position recalls preset #1, the left position recalls preset #2. The middle position 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 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. Can also be used 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, contact us if you have questions.

MIDI

¼" TRS jack for expression pedal (parameter selectable via dip switch in the back of the pedal. Tip goes to wiper. Can also be used 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, contact us if you have questions.

POWER & OTHER INFO

This pedal consumes ~180mA and should be operated with a standard 2.1mm 9V DC center negative adapter with current supply capabilities of 200mA or more. If you use a "standard" outlet of 100mA, the pedal will not function properly. Input impedance of this device is 1M, and output impedance is less than 1k.

EXP / CV CONTROL & DIP SWITCHES

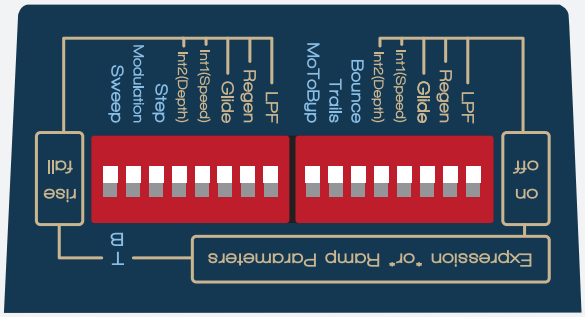
The LPF, Regen, Glide, Int 1 (Rate), Int 2 (Depth) dip switches in the left bank allow you to control parameters via ramping or an Expression Pedal / CV. Whenever you plug a ¼" in to the EXP / CV jack, the pedal automatically knows that you will be controlling parameters via expression or CV, not ramping.

SETTING EXPRESSION / 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 LPF parameter from totally filtered to a static filtered setting, you would make sure the "sweep" dip switch is in the bottom position and set the LPF knob to taste. If you need to open the filter more, you simply turn the LPF 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 an expression pedal (if one is plugged in).



The LPF, Regen, Glide, Int 1 (Speed), and Int 2 (Depth) dip switches on the left side simply turn that parameter on or off expression / CV capability.

The LPF, Regen, Glide, Int 1 (Speed), and Int 2 (Depth) dip switches on the right side control whether or not the parameters will rise (go clockwise with expression) or fall (go counter-clockwise with expression).

Continued on next page

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.

Trails: This switch allows you to select bypass type. With trails "off" the bypass is normal, true bypass. With trails in the "on" position, you have a buffered bypass where the delay trails spillover into your dry tone. It is important to remember that with trails mode engaged, and if you have the pedal set in a configuration that is causing self-oscillation, this will not stop simply because you are in bypass.

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

Step: When on, the pedal will not sequence through intervals by itself. It will only do so if the tap stomp is pressed. If you set the Int 2 knob to "off", it will only step through the Int 1 interval and whatever base time delay you have tapped in.

Modulation: When on, the Int 1 and Int 2 knobs become speed and depth knobs for the modulation, respectively. In addition, the toggles below those knobs allow you to choose what kind of modulation style you want.

Sweep: This controls where ramp sweeps. In "T" (top), the expression control will occur between the current knob position and the max position (fully clockwise). In "B" (bottom) the expression control will occur between the current knob position and the minimum position (fully counterclockwise).

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/ChaseBlissAudio.

We also love to hear from customers and answer questions so feel free to write us anytime at chaseblissaudio.com/contact.

Thank you so much for purchasing this product and ENJOY!

All presets created by Knobs.

This is the modulation setting he used on all of them, which can be set by engaging the "modulation" dip switch: using the right-most random setting, triangle & depth about 11:00 and speed about 10:00.

Hear them at soundcloud.com/chaseblissaudio.com

HALF TO HALF

DISINTEGRATING LOOP

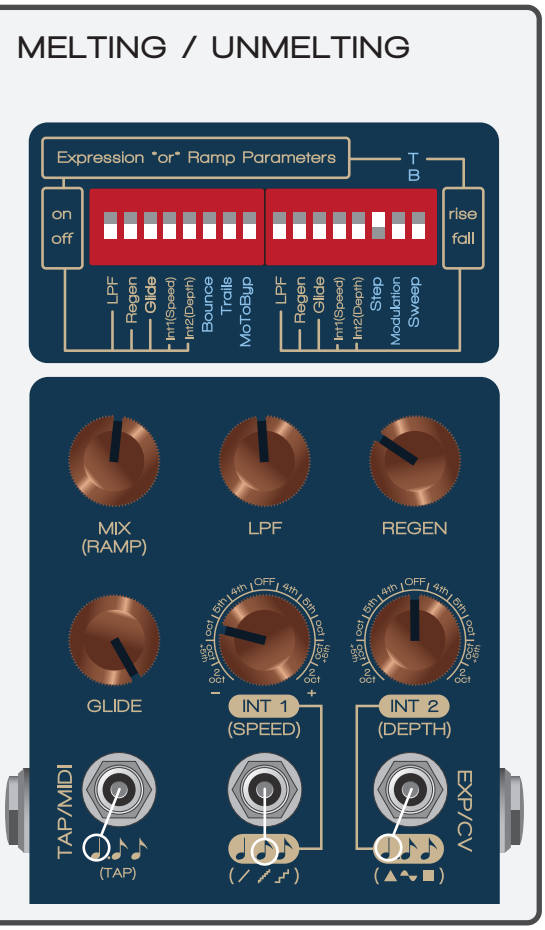
Example presets continued on next page

BENT SEQUENCE

GLIDE VIBRATO

MODULATED REVERB

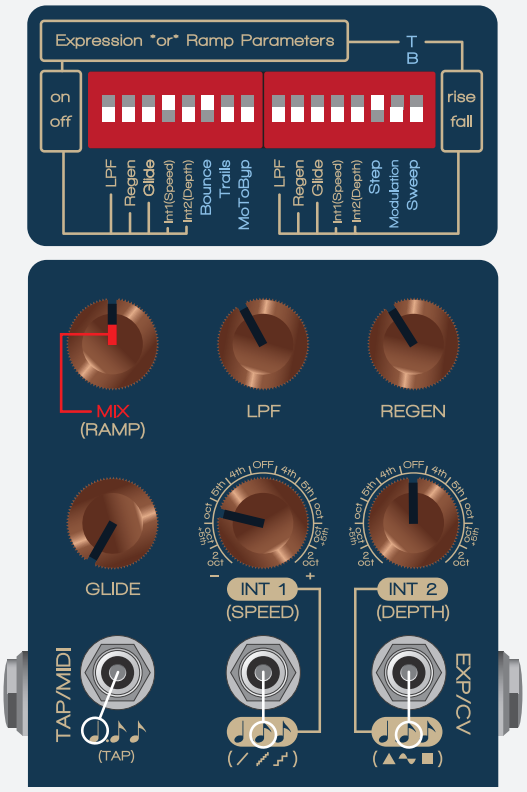
MELTING / UNMELTING



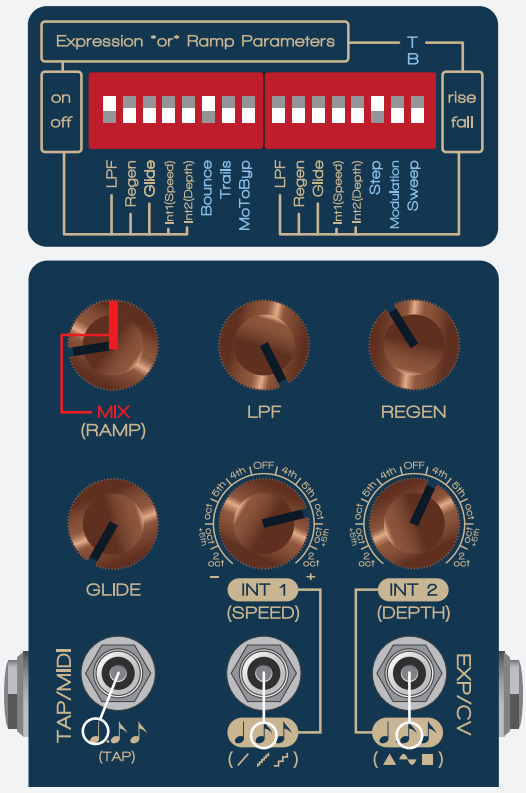
Example presets continued on next page

NORMAL DELAY

INTERVAL RAMPING



LFO RAMPING



BIRD ARP