empress effects

tape delay

user manual

Introduction

During the development of our Vintage Modified Superdelay, we spent over 2 years perfecting the tape modes, painstakingly recreating some of our favourite analog tape machines. Empress is proud to have these tape modes available all on their own. We've added features like an all-analog dry path, soft touch switches, trails and true bypass, as well as an advanced configuration mode that lets you customize the functionality of the tape delay to suit your needs.

Thanks for your support!

- Steve Bragg

Quick Start

Basic tape delay: warm and dark repeats with wow and flutter

Dotted eights: rhythmic delay (tap quarter notes on the tap switch)

Quick Start ...continued

Ambiance: creates a continuous pad that sits under your playing

Slapback delay: a short delay that gives life to your sound

Clean repeats: the clarity of new tape, distinct repeats.

Lead Tone: a good delay for soloing that also boosts your volume

The Tap Stompswitch

The tap stompswitch does different things depending on which mode it's in.

Tap mode: When the delay time toggle is set to "tap", the Tape Delay is in tap mode. The tap stompswitch is used to tap in a tempo. The "d time|ratio" knob can be used to select various ratios of this tempo.

Preset mode: When presets are enabled (see "Using Presets" and "Advanced Configuration"), the tap stompswitch is used to toggle through presets.

Non-tap mode with presets disabled: When the delay time toggle is set to "slow" or "fast", and presets are disabled, the delay speed is controlled by the d time|ratio knob. If blips are disabled (which is the default behaviour), pressing the tap stompswitch erases the audio in the delay line. This is useful if you want to play chords that don't run into each other. If blips are enabled (see "Advanced Configuration"), holding this down leads to some blips and blops.

Using Presets

The Empress Tape Delay ships with presets disabled, but can be set to use either 2 or 3 presets, using the advanced configuration. Note that presets cannot be used while the Tape Delay is in tap tempo mode. The rest of this section will assume that presets have been enabled and that the delay time toggle switch is away from the tap mode.

To toggle through the presets, simply press the tap stompswitch. The color of the tap led indicates the current preset. All changes made to the controls of the Tape Delay will be automatically saved to the current preset.

You can lock your presets, to prevent them from being overwritten, by using the advanced configuration. When presets are locked, changes made while the preset is engaged will not be saved.

Controls a

delay time: sets the range of the d time|ratio knob to slow or fast. alternatively, set to tap to control the delay time via the tap stompswitch

Power: +—◉— -
2.1mm jack. 2

tape age:

new - lush, clean repeats. tape delay machine with a new tape and a full frequency response

vintage - added wow and flutter giving the rich, full bodied feel of a vintage tape machine

old - saturated, warm delay. lots of compression and dark, rolled off high end offered up by old tape and worn heads

mix: controls the level between the dry signal and the wet, delayed signal. counterclockwise is 100% dry, clockwise is 100% wet and center is 50% / 50%

d time | ratio: controls the delay time. in tap mode, it controls the ratio of the delay time relative to the tempo that is tapped

for example, at 1:2, the delay time will be twice as fast as the tempo tapped

tap stompswitch: in tap mode, this sets the delay time when tapped. it will change to the new delay time after 2 taps and will average the last 4 taps

at a Glance

9V DC negative tip
80mA or greater

filter: adds a high pass (hp) or a low pass (lp) filter to the delayed signal

modulation: applies modulation to the delayed signal
- the little setting is a slower, more subtle modulation
- the lots position is a faster, slightly deeper modulation

output: sets the overall output level(volume) of the pedal

feedback: controls how long the delayed signal takes to decay. If turned fully clockwise, the signal will swell instead of decay

bypass stompswitch: when the LED is shining, the delay effect is applied to the signal. when off, the pedal is being bypassed

Advanced Configuration at a Glance

Bypass Mode: Choose how the pedal is bypassed

left(default): buffered bypass with trails
right: true bypass

Blips: Choose how the delay time changes when the knob is turned

left(default): (blips off) smooth transitions between delay times
right: (blips on) tape head moved quickly, producing crazy pitch changes as the new delay time is established

Presets: Choose how many presets are used when in slow or fast mode.

left(default): no presets
center: 2 presets
right: 3 presets

Presets write protect: Choose if presets are write protected or adjust on the fly

left(default): presets rewritable
right: presets are write-protected

Advanced Configuration

The Empress Tape Delay ships with the following default behaviour: no presets, buffered bypass, and smooth delay time changes. You can modify this behaviour in the advanced configuration.

Entering the advanced configuration: Unplug the power from the Tape Delay. Plug the power back in while holding down both the tap and bypass stompswitches. The bypass LED should blink twice to confirm that you are in the advanced configuration.

Factory reset: While in the advanced configuration, press the following stompswitches in order: tap, bypass, tap, bypass. The LEDs will do a little dance to confirm that the Tape Delay has been reset to its factory settings. **Please note** that this overwrites the current presets with the factory presets.

Modifying the advanced configuration: Each toggle controls a configuration parameter. When a parameter is modified, the tap LED will blink to confirm that a change has been made.

Exiting the advanced configuration: Hold down both the tap and bypass stompswitches. The bypass LED will blink twice to confirm that the Tape Delay has exited the advanced configuration.

Buffered Bypass vs. True Bypass

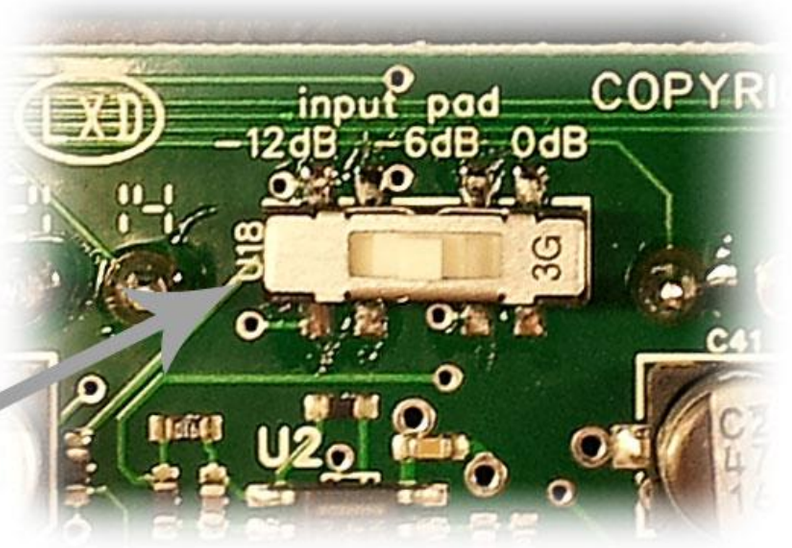
The Tape Delay can operate with buffered bypass or true bypass. It ships with buffered bypass enabled. This option can be changed in the advanced configuration.

Buffered bypass: When the effect is bypassed, the input to the delay line is disconnected and the dry signal is set to unity gain. The output of the delay line is still summed with the dry signal however, so the delay repeats (commonly referred to as "trails") will be heard.

True bypass: When the effect is bypassed, it is completely disconnected from the signal chain using a mechanical relay.

Adjusting the Headroom

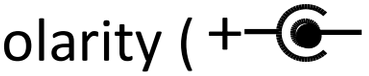
The Empress Tape Delay has an internal switch which allows for the adjustment of the input headroom. This switch is accessed by removing the back plate. The pedal ships with the switch in the -6dB position, which allows for an input level of +5.1dBu. If the input to the Tape Delay is especially loud, and you are noticing distortion, you can increase the headroom by moving the switch to the -12dB position. If the input is low, and you'd like to increase the signal-to-noise ratio, you can move the switch to the 0dB position.



headroom adjustment switch

Powering the Tape Delay

Go to www.empresseffects.com/power.html for a full list of compatible power supplies.

Please Note: The Empress Tape Delay requires at least 280mA of current to function properly. Any power supply rated at 9V DC, supplying negative tip polarity () and at least 280mA of current should work.

Popular options are the Boss PSA-120S or PSA-240 (not the PSA-120T because it only supplies 200mA). When powering with the Voodoo Lab Pedal Power 2+, you will need to use output 5 or 6 and the dip switch should be set away from the normal position.

If your Tape Delay is underpowered, symptoms could include: powering off, bypass turning on/off quickly, weird sounds and functions not working properly. If you have any questions on powering your Tape Delay, please call us at 888-676-1853 or email us at support@empresseffects.com.

Legal Stuff

FCC Compliance

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules

Specifications

Input Impedance:	1MΩ
Output Impedance:	1kΩ
Frequency Response (-3dB):	8Hz – 18.5kHz
Input Headroom with -6dB pad:	+5.1dBu
Input Headroom with -0dB pad:	+0.2dBu
Input Headroom with -12dB pad:	+10.8dBu
Output Headroom:	+10.2dBu
Distortion:	0.40%
Signal to Noise:	102.7dB
Input Voltage:	9VDC 
Required Current:	280mA
Power Input Connector:	2.1mm Barrel Connector
Height (enclosure only):	1.5”
Height (including controls):	2”
Length:	3.5”
Width:	4.5”
Weight:	12.5oz