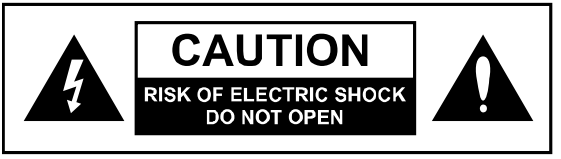
TIMEFACTOR

User Guide



WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE
AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.

WARNING

Use only with supplied power supply.
Avoid spilling liquids onto/into the unit.
Do not expose to excessive heat or moisture.
Do not open – there are no user serviceable parts inside.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of 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.



Complete TF UG Part # 159020 Rev F
TF UG Contents Part # 141131 Rev F
This manual covers software version 5.2 and above.
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Introduction

Congratulations on choosing an Eventide Effects Processor. For years we've dreamed of putting our rack mount effects in the hands of performing musicians and, in particular, at the feet of guitar players. TimeFactor is the realization of that dream; bringing true studio-quality audio, massive processing power, world-class effects, and unmatched flexibility to your live sound.

A Few Words of Advice

TimeFactor packs an unprecedented degree of processing and flexibility into a small package. Our goal in creating TimeFactor was to give you the power to transform your sound. From the start, we recognized that the key to realizing this goal was to give you the flexibility to bend and twist this power in the service of your creativity.

We've worked hard to make TimeFactor easy to use. We've done our best to design an intuitive User Interface to manage and control the awesome power and flexibility packed into every Factor Effects processor. We hope that you will take the time to master it.

We know that you're eager to get going and hope that you'll read this User Guide. However, if you read nothing else, please read The Basics.

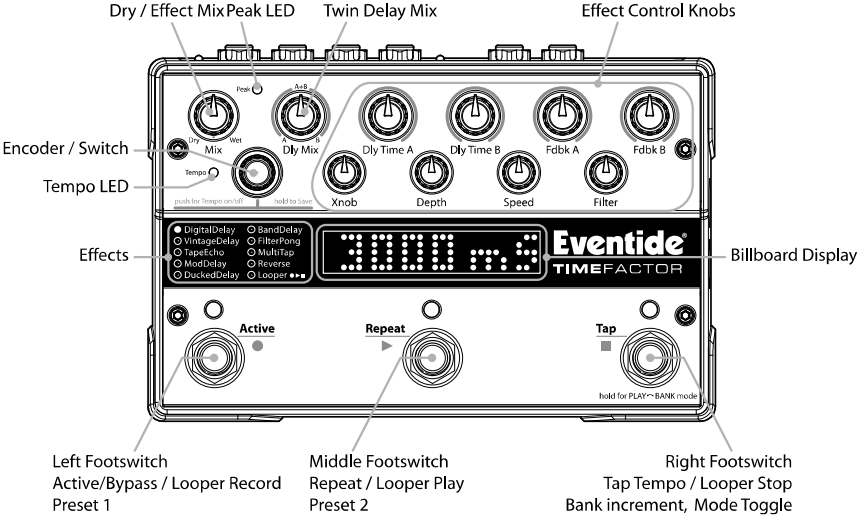
Key Features

- Eventide's 9 best delay effects plus a Looper
- Twin delays with up to 3 seconds of delay each
- Support for instrument and line level connectivity
- External Expression Pedal and Aux Switch for external control
- 100 User Presets - Instant access to any 2 Presets at a time
- Bright, easy-to-read Billboard Display
- Extensive MIDI functionality
- Software upgrades via USB

The Website

www.eventide.com/AudioDivision.aspx is where you'll find Versions of this User Guide in other languages, Frequently Asked Questions, accessories information, and Instructions for downloading software updates.

Overview



The Basics

There are a few basic concepts that you'll have to grasp to use TimeFactor successfully. If you read nothing else, please read this section.

The Effects

There are ten distinct delay types which we call "Effects." Select an Effect by turning the Encoder knob. Only one Effect can be active at a time.

Controlling the Effects

Each Effect has parameters that can be modified by turning the ten Control Knobs. The control knobs allow you to set delay time, feedback, mix levels and adjust other parameters that change the sound of each Effect. Also, certain aspects of the Effect can be controlled by the Footswitches.

Using the Footswitches

The Footswitches can be used in two ways- Play Mode and Bank Mode.

In Play Mode, the Footswitches are used to control certain aspects of the Effects, like Tap Tempo and Infinite Repeat. In Bank Mode, the Footswitches are used to instantly recall saved versions of the Effects.

Before we describe the Footswitch modes, we'll need to define some terms.

The Presets

TimeFactor lets you save an Effect after you've adjusted the Control Knobs. An Effect along with a particular setting of its parameters is called a "Preset." TimeFactor lets you save up to 100 Presets. Instructions on saving Presets are covered later in this User Guide.

The Banks

TimeFactor lets you quickly switch between two Presets. In Bank Mode, just press either the Left or Middle Footswitch to instantly call up your Preset.

Presets are stored in pairs and each pair of Presets is called a Bank. There are a total of 50 Banks to hold the 100 Presets. The Preset Banks are accessed by tapping the Right Footswitch in Bank Mode.

If you have updated the TimeFactor from an earlier software release, you may need to increase the number of banks in the UTILITY menu to make all of the banks visible.

Play and Bank Footswitch Modes

To switch between Play and Bank mode press and hold the Right Footswitch for a few seconds. Notice that the Billboard display changes.

In Play Mode, you'll see the name of the Effect that's currently loaded, for example DigitalDelay [DIGIDLY]. An ORANGE LED located above the Left Footswitch indicates that the Effect/Preset is Active (not Bypassed).

In Bank Mode, you'll see a number, a colon, another number, and the preset name. For example, [1:1 Prist] indicates Preset 1 of Bank 1, named Pristine Digital Delay. A RED LED over either the Left or Middle Footswitch indicates that an Effect/Preset is Active.

Each time that you press and hold the Right Footswitch, the mode will change from one mode to the other.

Using Play Mode

When you're in Play Mode, the Footswitches are used to control the Effect that's currently loaded. For all nine of the Delay Effects, the Left Switch toggles Bypass/Active, the Middle Switch toggles infinite Repeat On and Off, and the Right Switch lets you tap a Tempo. For the Looper, the Play Mode Footswitches are used as transport controls, Record, Play and Stop.

Using Bank Mode

Go to Bank mode. The Billboard displays the number of the current Preset - for example you might see [1:1 Prist]. This means that you're in Bank 1 and that Preset 1, named Pristine Digital Delay, is loaded. If the Preset is Active (not Bypassed), you'll also notice that the Left Footswitch LED is solidly lit. If Preset 2 is currently loaded and Active, the LED above the Middle Footswitch will be solidly lit.

Try alternately pressing the Left and Middle Footswitches to load the Presets in the active Bank. The Billboard displays either Preset 1 or Preset 2 from the same Bank and the associated Footswitch LED is lit RED.

To bypass the currently loaded Preset, press the Footswitch associated with the lit LED. The LED will turn OFF and the Billboard will briefly display [BYPASS] and then display the Preset #

that's in Bypass. Press the same switch again to enable the Preset. The Billboard briefly displays [ACTIVE] to indicate that the Preset is enabled.

Changing Banks

In Bank Mode, 2 of the 100 Presets are instantly accessible. In order to access the other 98 Presets, you'll have to change Banks. TimeFactor gives you the ability to turn Banks on and off. This ability is important for performance – you can choose to only activate the Banks and Presets that you'll need. TimeFactor ships with all Banks (1-50) Active.

Let's try changing Banks. First, be sure that you're in Bank mode. Now, tap the Right Footswitch. As you tap, the display will increment through the Bank numbers from 1 to 50. When a new Bank is displayed, the Bank is cued and 2 new Presets are ready to go. To load the new Preset though, you must press one of the other 2 Footswitches. Press the Left Footswitch to load Preset 1 from the new Bank or press the Middle Footswitch to load Preset 2.

While in Bank Mode, the Encoder knob can also be used to select banks in either direction if turned within 2 seconds of pressing a bank change footswitch.

TimeFactor Power Up

When TimeFactor turns on it remembers what it was last doing and powers up in the same mode, running the same Effect, with the same parameter values, same tempo, same system settings, etc. With power off, relays connect TimeFactor's inputs directly to its outputs.

Twin Delays

TimeFactor has two inputs and two outputs and gives you the ability to control two delays of up to 3 seconds each. These two delays are designated as Delay A and Delay B. Depending on the Effect and your Input/Output connections, the delays may work on independent inputs and outputs or the delays may be fed from the same input and the delay outputs combined.

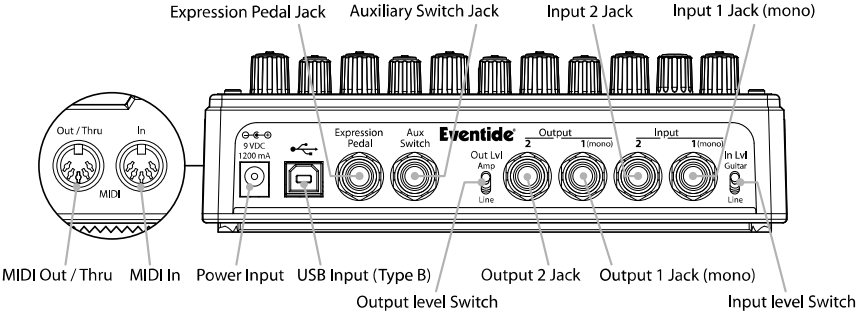
While having the ability to use two delays for your effects is a boon to mankind, it can also make life a bit interesting. When creating your sounds, we recommend setting Dly Mix to 100% Delay A to adjust Delay A's delay time and feedback first. Then set Dly Mix to 100% Delay B to adjust Delay B's delay time and feedback. By adjusting the delays independently, you'll be able to clearly hear what each is doing. Once each delay is set the way you like it, use Dly Mix to mix the delays and, if necessary, tweak the twin delays settings again.

Can Two Effects Be Used Simultaneously?

No. When you load an Effect it runs on both channels. Effects can be used as Stereo In/Stereo Out, Mono In/Stereo Out, or Mono In/Mono Out. (Looper is an exception – it's Mono In/Mono Out only.) TimeFactor is smart enough to know what cables are connected and to automatically route the twin delays for your set up.

Connections

TimeFactor is designed to be flexible and can support both instrument and line-level inputs and outputs. Rear panel toggle switches allow you to independently select input and output levels. Audio Inputs and Outputs accept standard mono (unbalanced) ¼" phone plugs.



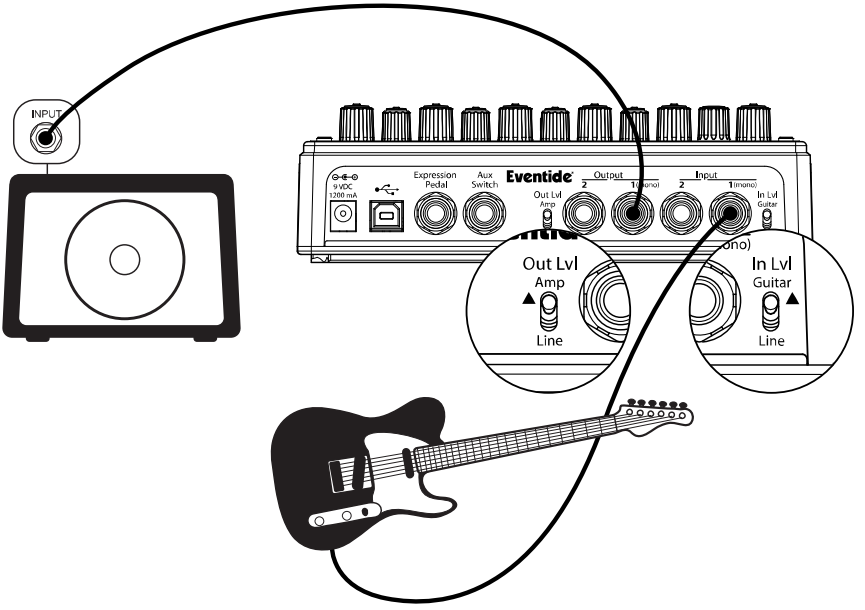
TimeFactor can be connected directly to your guitar, behind another pedal, in your Amp's effects loop or to your mixer's send/return or insert. Given the variety of guitars, effects pedals, amps and mixers, we can't describe a 'best' setup. The setup should be driven by you and the sound that you're going for. That writ, here are some suggestions and typical setups.

Note: It's best to connect TimeFactor **after** distortion effects, compressors, EQs, and noise gates.

Typical Setups

On the following pages are some suggested ways of connecting to your rig and suggested I/O level switch settings.

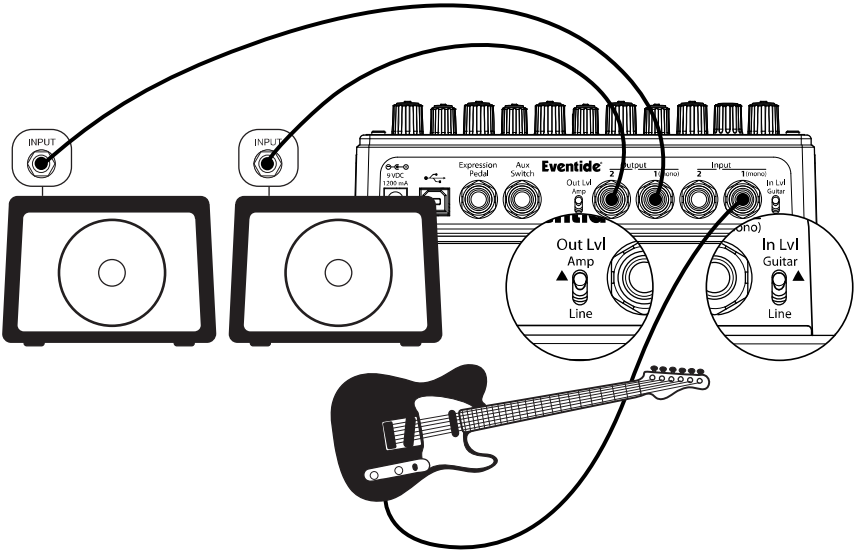
Guitar > TimeFactor > Amp - Mono In/Mono Out



This is the simplest way to connect TimeFactor. Connect your guitar cable to TimeFactor Input 1 and a cable from TimeFactor Output 1 to your amp. Input and Output Level switches (In Lvl & Out Lvl) should be set to GUITAR and AMP.

If you are using other stompboxes or pedals, it's best to connect them in front of TimeFactor. Connect TimeFactor's Input 1 to the output of the last pedal. If TimeFactor's peak LED lights solidly, set TimeFactor's In Lvl to LINE.

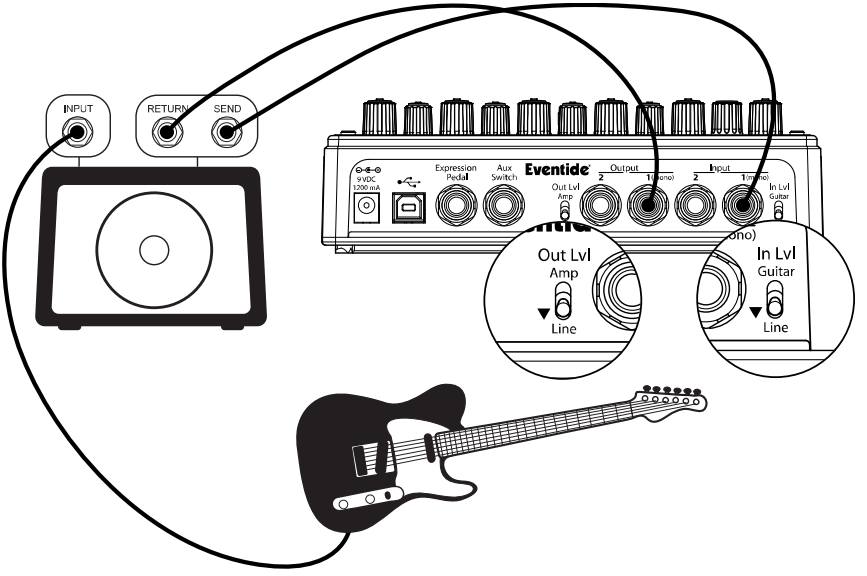
Guitar > TimeFactor > Amp 1/Amp2 – Mono or Stereo In/Stereo Out



Connect your guitar cable to TimeFactor Input 1 and a cable from TimeFactor Output 1 to one amp and a second cable from TimeFactor Output 2 to the other amp. Input Level switch (In Lvl) should be set to GUITAR and Output Level switch (Out Lvl) set to AMP.

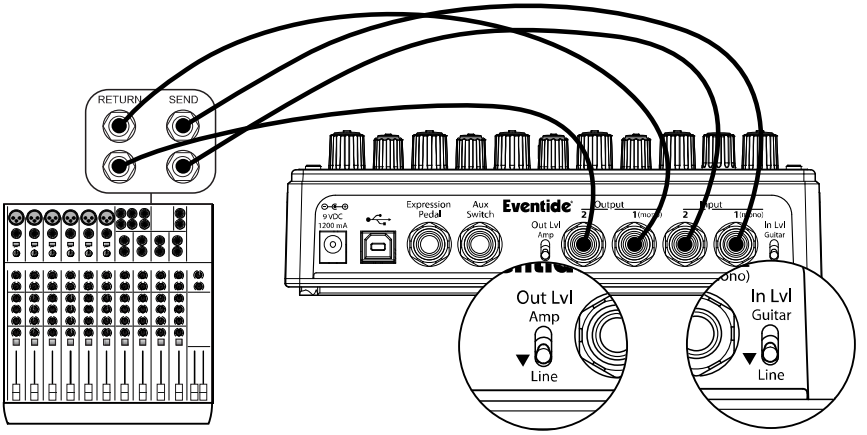
If you are using other stompboxes or pedals, it's best to connect them in front of TimeFactor. Connect TimeFactor's Input 1 to Output 1 of the other pedal. If the other pedal has stereo outputs, connect its Output 2 to TimeFactor's Input 2. If TimeFactor's peak LED lights solidly, set TimeFactor's In Lvl to LINE.

Guitar > Amp Effects Send > TimeFactor > Amp Effects Return



If your Amp has an Effect Loop, you can connect TimeFactor's Input to the Amp Effect Loop Send and TimeFactor's Output to the Amp Effect Loop Return. Most guitar amp's Effects Loop run at Line Level so set TimeFactor's Input and Output Level Switches to "Line."

Mixer Effects Send> TimeFactor > Mixer Effects Return



When connecting TimeFactor to a Mixer, set TimeFactor's Input and Output Level Switches to "Line."

Setting and Monitoring Levels

The TimeFactor's output levels can be adjusted to optimize performance in most setups.

It is sometimes desirable to adjust the output level of a given Effect/Preset. For example, an effect like DuckedDelay may have changes in amplitude and, depending on a given Preset's parameter settings, you may find it too quiet or too loud. This is a consequence of the effect and not a question of level matching to best fit in a setup. For this reason, Output Level settings can be tweaked and saved with the Preset.

Setting Preset Output Level

To set Preset Output Level in PLAY Mode, hold down the Left Footswitch for 2 seconds. This puts the unit into Preset O/P Level Adjust Mode. While the Footswitch is pressed and held, the display will show "OP 0dB" (default). While continuing to hold the footswitch down, you can optionally turn the Encoder Knob to adjust Preset Output Level from -20dB to +6dB in 1dB increments. Preset must be saved to store this setting.

To set Preset Output Level in BANK Mode, press and hold the active Footswitch (the one corresponding to the loaded preset).

Monitoring Input Level

To make it easier to control input noise (hiss), we have added an input signal level monitor.

To access the meter, make sure the TimeFactor is in PLAY Mode. Press and hold both the Left and Right Footswitches. A vertical bar will appear in the middle display, and a meter will light from left to right when there is an input signal present. For best signal-to-noise performance, each input signal peak should go past the bar in the middle. If it does not, it indicates that the input level is on the low side. In this case, a buffer or preamp should be used to boost the input level

SpillOver

SpillOver provides smooth transitions when changing Presets by fading the lingering echoes of one Preset into the echoes of the next Preset.
SpillOver [SPILL] can be turned ON or OFF from the Utility section of the System menu. Default is OFF. Here's how to change this:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [SPILL] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select [ON] or [OFF].
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Input and Output Swell

The expression pedal can be used to give a volume swell, either before or after the effect. This can be enabled either *globally*, meaning it is active all the time, or on a preset by preset basis. You might want to use it before the effect to disconnect or reduce the input, and listen to the effect die away, whereas after the effect it can be used as a volume control or to perform fadeouts. This swell is normally used for expression purposes, and only reduces the volume - it does not boost it.

You may want to disable any pedal parameter settings if you are using swell. This will be done automatically if using Global Swell.

To set the Swell value globally, see System Mode. If a Global Swell is active, the option of selecting it for presets will not be available.

Note that in Pre/Post and Wet/Dry Routing modes, Swell only affects the Wet channel.

Input and Output Swell are not active when the unit is Bypassed, but the unit will adopt the swell value on leaving Bypass. The Swell values are reset to maximum when a new preset is loaded.

Enabling/disabling Input Swell

1) Press and hold the active Footswitch as described above. The display will show the Output Level.
2) Press the ENCODER once. The display will show ISW.OFF (default) or ISW.ON.
3) Turn the Knob to set it to ON or OFF as desired.
4) Release the Footswitch - the Preset will return to its previous Active or Bypassed state.
5) Remember to save the preset, or the change will be lost.

Enabling/disabling Output Swell

6) Press and hold the active Footswitch as described above. The display will show the Output Level.
7) Press the ENCODER until the display shows OSW.OFF (default) or OSW.ON.
8) Turn the ENCODER to set it to ON or OFF as desired.
9) Release the Footswitch - the Preset will return to its previous Active or Bypassed state.
10) Remember to save the preset, or the change will be lost.

Bypass

It's important to select the TimeFactor Bypass function that works best with your setup. TimeFactor gives you the choice of three types of Bypass – DSP Bypass, Relay Bypass, and DSP+FX Bypass. TimeFactor's default Bypass setting is DSP Bypass.

DSP Bypass

TimeFactor's default is [DSP] Bypass. When set to [DSP] Bypass, bypassing sends the audio at the DSP's inputs directly to the outputs without any effects processing. This type of bypassing works well in most situations.

Relay Bypass/True Bypass

Some guitar players prefer a "true bypass" in which the pedal's electronics are completely disconnected from the signal path. When [RELAY] Bypass is selected TimeFactor uses relays to "hard wire" your inputs to your outputs. (In fact, whenever TimeFactor's power is off, the relays are disabled and TimeFactor's electronics are completely bypassed.)

Relay Bypass is not a good choice, however, if TimeFactor's input is your guitar and you've connected TimeFactor's output directly to a non-instrument level input device or have connected to your amp over a long cable. Non-instrument inputs are often low impedance (typically 10K ohm) and will load the guitar output and change its tone. DSP Bypass allows TimeFactor to act as a buffer, providing a low impedance output (500 ohm) capable of driving any device input or cable length.

Note: Relay Bypass should not be used if the Input/Output Lvl switches are set opposite to one another. Specifically, if the Input Lvl switch is set for GUITAR and the Output Lvl switch is set to LINE or the Input Lvl switch is set for LINE and the Output Lvl switch is set to AMP, TimeFactor will not have unity gain. In this case, using Relay Bypass will result in a level change whenever you Bypass TimeFactor.

DSP+FX Bypass

TimeFactor also supports a type of Bypass called DSP plus Effects ([DSP+FX]). When [DSP+FX] is selected, Bypass combines the audio at the DSP's inputs with the DSP's outputs AND stops feeding any new input signal to the DSP Effects inputs. DSP+FX makes it possible to Bypass an Effect without abruptly killing the tail of the Effect that you've been using.

Selecting Bypass Type

The Bypass mode is selected in System Mode under [BYPASS]. [DSP] is the default. Here's how to change it:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [BYPASS] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [BYP TYP] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select [DSP], [RELAY] or [DSP+FX].
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Note: TimeFactor has been carefully designed to not mess with your tone in any of the Bypass settings.

Note: When connecting TimeFactor to a computer, we suggest that you use a dedicated audio interface (e.g. a Firewire Interface) and to select the type of Bypass that works best for your application.

Note: When TimeFactor is turned Off, the relays automatically Bypass the unit. This means that if power should accidentally go down while you're playing, your guitar signal will not disappear because of TimeFactor. Of course, if power is down, you may have bigger problems.

Mix Control

The Mix control sets the relative levels of the input signal (Dry) and the Effect (Wet).

Mono/Stereo

TimeFactor detects which input and output jacks have cables plugged in and the action of the Mix Control behaves appropriately. With a Mono Input (Input 1) and Stereo Outputs, the dry contribution for both outputs comes from the Mono Input (Input 1). With Stereo Inputs, the dry contribution at Output 1 is from Input 1 and the dry contribution at Output 2 is from Input 2, thereby maintaining the original signal stereo image.

Killdry – Send/Return Loop

If you've connected your TimeFactor using an effect send/return loop (either your amp's or a mixer's), TimeFactor's Killdry feature can be enabled. With Killdry enabled, the Mix Control works as a Master Effects Level Control.

When Killdry is enabled, the Mix Control does not send any dry signal to the outputs; only the Effect. The Mix Control simply adjusts the Effect level. Note that when Killdry is enabled, Bypassing will mute the Effect rather than Bypass it.

Killdry's factory default is disabled. It can be enabled in the [BYPASS] menu of the System Mode. Here's how:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [BYPASS] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [KILLDRY] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select either [YES] or [NO].
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Global - Mix

Mix values are always saved with each Preset. Often however, it's useful to set the same Mix values for all of the Presets that you're using. To do this, use the MIX function under the System GLOBAL command. When MIX is ON, the Mix values saved with the Preset are ignored and the current Mix value is used for all Presets.

Turning MIX ON or OFF. The factory default is OFF.

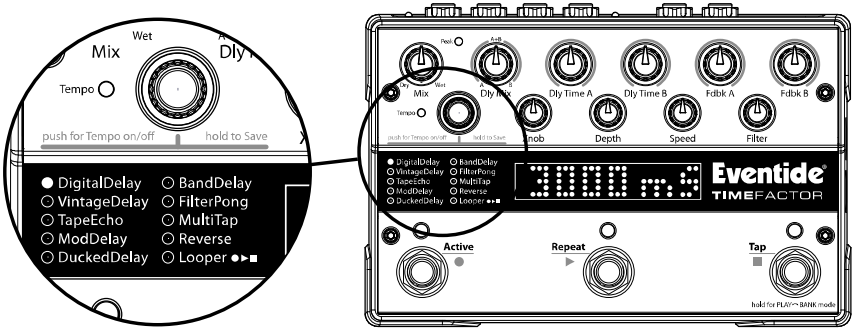
1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [GLOBAL] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder until [MIX] is displayed.
7) Momentarily press the Encoder.
8) Turn the Encoder to select [ON] or [OFF].

Peak LED

The Peak LED lights to indicate that the input signal level is near clipping. Occasional flashing is OK. If Peak LED is lit solidly, reduce the input level either by reducing the signal level fed to TimeFactor or by setting the rear panel input switch to the Line position.

The Effects

TimeFactor has nine distinct delay Effects – DigitalDelay, VintageDelay, TapeEcho, ModDelay, DuckedDelay, BandDelay, FilterPong, MultiTap, Reverse - and a Looper.



DigitalDelay –
Twin 3 second delays with independent delay time and feedback controls.
VintageDelay –
Simulates the sound of analog and digital delays from days gone by.
TapeEcho –
Simulates the saturation, wow and flutter of analog tape delay.
ModDelay –
Modulated delays – great for creating chorus effects and chorused delays.
DuckedDelay –
The delay levels are dynamically lowered while you're playing and restored to their normal levels when you stop playing.
BandDelay –
Delays are followed by user selectable modulated filters.
FilterPong –
The dual delays ping pong between the outputs with filter effects added for good measure.
MultiTap –
10 delay taps with controls for delay time, diffusion, tap levels and tap spacing.
Reverse –
Reverse audio effects.
Looper –
12 second Looper with Dubbing and speed control.

Selecting Effects

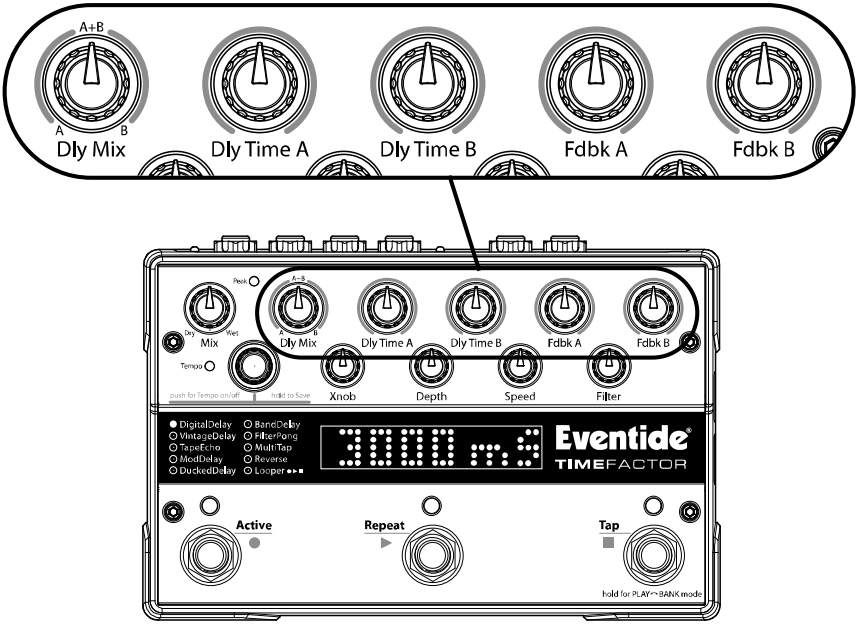
The nine delay Effects and the Looper can be selected by turning the Encoder. Using the Encoder to select Effects is a good way to get a feel for what TimeFactor can do.

Turn the Encoder to step through and load each of the Effects. As each Effect is selected, the Effect is loaded, the green LED to the left of the Effect name is lit and the Billboard displays the Effect name.

Control Knobs/Effect Parameters

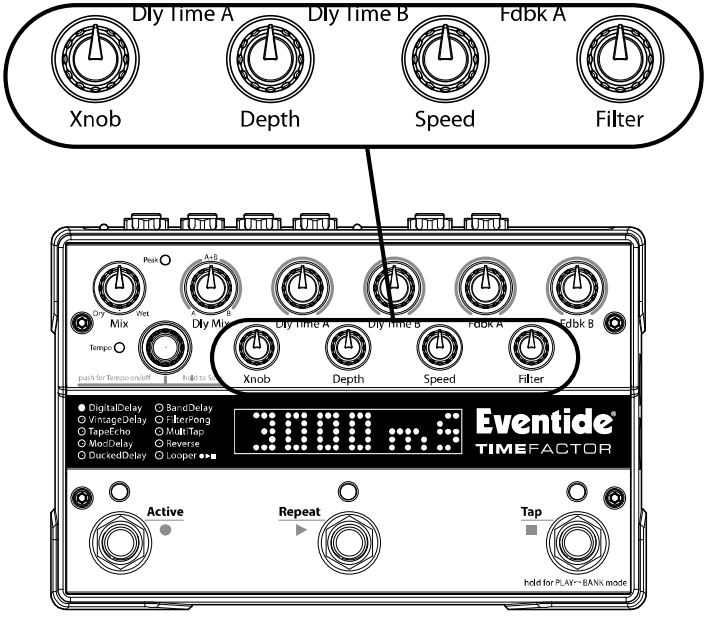
When an Effect is selected using the Encoder, the Effect's parameter values are set by the current position of the ten control knobs. When a control knob is turned, the Billboard displays the parameter's name and value. The controls are arranged in two rows and grouped according to their functions.

The control knobs located along the top row are the primary level setting, delay times and feedback controls. The top row knobs allow you to independently set delay and feedback for each of the twin delays.



The bottom row control knobs set modulation and filter parameters as well as parameters that are specific to each Effect. In most cases, the bottom row control knobs simultaneously set values for both delays and don't provide independent settings for each of the twin delays.

Note: The Encoder can be used to fine-tune all knob parameters if turned within 2 seconds of turning the parameter's knob.



The following describes the control knob functions for the nine delay effects. The Looper requires special controls that are described in the Looper Section of this User Guide.

Dly Mix

Dly Mix (Delay Mix) controls the relative level of the twin delays, Delay A and Delay B. TimeFactor has circuitry that detects which input/output jacks are being used and adjusts the routing of signals through the Effects algorithm accordingly.
Dly Mix's mixing behavior depends on whether you're using mono or stereo outputs. You only need to read the section that corresponds to your setup.

Mono Out (Output 1) – Typical for Guitar and Amp

With Dly Mix set to 0%, Output 1 will have only Delay A's contribution.
When set to 50%, Output 1 has an equal amount of Delay A and Delay B.
When set to 100%, Output 1 will have only Delay B's contribution.

Stereo Out – Typical for Guitar and Two Amps or Mixing Console

With Dly Mix set to 0%, BOTH outputs will have only Delay A's contribution.
When set to 50%, Delay A goes to Output 1 only and Delay B goes to Output 2 only.
When set to 100%, BOTH outputs will have only Delay B's contribution.

Dly Time A & Dly Time B

With Tempo OFF, these controls set delay time for Delay A and Delay B from 0 to 3000 ms (milliseconds). With Tempo ON, delay time can be sync'd to the tempo and is displayed as a rhythmic sub-division of the tempo beat value - changing this from 0 delay to a whole note in common note increments.

Fdbk A & Fdbk B

These controls set Delay A's and Delay B's feedback amount from 0 to 110% which, in turn, controls the number of repeats.

Note: High feedback values allow the TimeFactor to go into self-oscillation, resulting in some very interesting (and potentially LOUD) sounds. BE CAREFUL!

Note: For FilterPong, Fdbk B is used to control the diffusion (SLUR) of the repeats.

The action of the four Bottom Row Control Knobs - Xnob, Depth, Speed and Filter - are Effect dependent as follows:

DigitalDelay

Xnob/Crossfade: When delays change, TimeFactor performs a crossfade function to prevent abrupt changes that could result in glitching or clicking. Xnob sets the speed of the crossfade. Small values result in fast crossfades, larger values more gradual crossfades. Xnob sets the crossfade rate (XFADE) from 2 ms to 200 ms.
Depth: Selects the amount of delay modulation (0=OFF, 10=MAX).
Speed: Sets the delay modulation rate (0-5Hz).
Filter: A low pass/high cut filter variable from 0 (no filtering) to 100 (extreme hi cut) to change the tone of your delay repeats.

VintageDelay

Xnob/Bits: Selects the number of bits of resolution from 20 bits down to 5 bits. Early digital delays used analog to digital converters with limited resolution. Theory predicts that each bit equals 6 dB of resolution; so that an 8 bit converter would deliver, at best, a mere 48 dB of dynamic range. VintageDelay simulates the effects of limited resolution - the sound of nasty digital noise from years gone by.
Depth: Selects the amount of delay modulation (0=OFF, 20=MAX).
Speed: Sets the delay modulation rate.
Filter: Controls the filter to simulate the tone of band-limited old school delays.

TapeEcho

Xnob/Saturation: Simulates analog tape saturation. Ranges from '0' (none) to '10' (max). Tape recorders are treasured for their "warm" vintage sound characterized by slight compression and distortion, also known as saturation.
Depth/Wow: Simulates analog tape Wow. Wow is a term used to describe relatively slowly changing pitch and amplitude modulations caused by problems with the motor or tape transport that causes the tape's motion across the head to vary. A well maintained tape recorder should have no audible Wow. Ranges from '0' (none) to '10' (max).
Speed/Flutter: Simulates tape machine Flutter. Like Wow, Flutter is caused when the tape motion across the magnetic heads isn't constant. Flutter is a more rapidly changing variation than Wow. Ranges from 0 (no flutter) to 10 (max flutter).
Filter: Controls the filter characteristics to simulate tape recorder frequency response. As you increase the filter value, you'll hear a more pronounced tape tone.

ModDelay

Xnob/Wave Shape: Selects the modulation wave shape as displayed by the Billboard display. There are two choices for each wave shape. The single waveforms modulate the two delays in phase and the double waveforms modulate the two delays out of phase.
Depth: Selects the amount of delay modulation (0=OFF, 10=MAX).
Speed: Sets the delay modulation rate (0-5Hz).
Filter: A low pass/high cut filter variable from 0 (no filtering) to 100 (extreme hi cut).

DuckedDelay

Xnob/Ratio: Sets the ducking ratio or the degree to which the delay is attenuated.
Depth/Threshold: Sets the ducking threshold - the audio amplitude - at which ducking kicks in (-36 dB to -66 dB).
Speed/ReleaseTime: Sets the release time from 500 to 10 msec. With the release time set to short values, the delay will kick in quickly when you stop playing. With the release time set to longer values, the delay will stay ducked for a while. Longer release times are useful when you're playing a riff and don't want the delay to kick in between notes.
Filter: A low pass/high cut filter variable from 0 (no filtering) to 100 (extreme hi cut).

BandDelay

Xnob/Resonance: Sets the resonance ("RES") or sharpness of the filter. RES varies from 0 (subtle effects) to 10 (dramatic resonance effects).
Depth: Sets the amount that the filter cut-off or center frequencies are modulated/shifted.
Speed: Sets the rate of modulation for the filter center frequencies (0-5Hz).
Filter: Select filter type – Low Pass, Band Pass or Hi Pass.

FilterPong

Xnob/Wave Shape: Selects the 'shape' of the filter modulation as displayed by the Billboard.
Depth: Sets the filters' amount of frequency modulation.
Speed: Speed multiplier for filter modulation.
Filter: Controls the mix between the dry and filtered signal input to the ping-pong delay.
Fdbk B: The FilterPong Effect is created by cross connecting the feedback paths of the twin delays. As a result, only a single feedback control is needed - Fdbk A. Fdbk B is used to control the diffusion (SLUR) of the repeats. With low diffusion the repeats are discrete. Increasing diffusion slurs the repeats.

MultiTap

Xnob/Slur: Selects the amount of diffusion (SLUR) from '0' (none) to '10' (max).
Depth/Delay Tap Taper: Sets the relative level (taper) of the taps. With TAPR = -10, the 1st tap is the quietest and the last tap loudest. With TAPR = 0, all taps are equally loud. With TAPR = 10, the 1st tap is loudest and the last tap quietest.
Speed/Delay Tap Spacing: Sets the spacing between taps from 0 (spacing increases with increasing delay) to 5 (taps are equally spaced) to 10 (spacing between taps decreases with increasing delay).
Filter: A tone control filter that reduces high frequencies to darken the ambient sounds that you create.

Reverse

Xnob/Crossfade: In Reverse, the audio segments are read backwards and must be spliced. TimeFactor performs a crossfade at the splice point to prevent abrupt changes that could result in glitching or clicking. Xnob sets the rate of the crossfade. Small values result in fast crossfades and a more audible rhythm for the reverse effect, larger values more gradual

crossfades and a smoother reverse sound. Xnob sets the crossfade rate (XFADE) from 2 ms to 200 ms.
Depth: Selects the amount of modulation (0=OFF, 10=MAX).
Speed: Sets the delay modulation rate (0-5Hz).
Filter: A low pass/high cut filter variable from 0 (no filtering) to 100 (extreme hi cut).

Note: On certain Effect Types where changing delay time causes pitch fluctuations, these pitch effects have been removed for the operations of Tap Tempo and changing Presets, yet remain when the parameter is changed via the knob or expression pedal.

Looper

The Looper provides 12 seconds of mono recording. Salient features are: loop recording in seconds or beats, variable speed scrubbing during playback and dubbing (including reverse playback and dubbing), seamless dubbing, and real-time adjustment of the loop starting point and loop length.

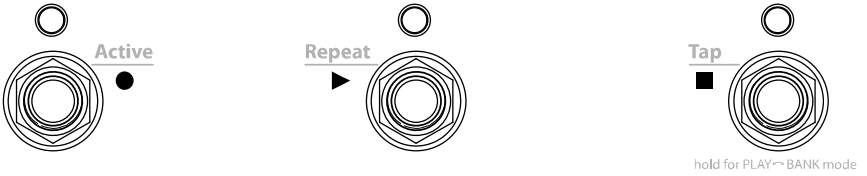
If your TimeFactor is connected to a stereo source, the inputs are automatically summed and the sum is the Looper's input. The Looper's output drives both outputs identically.

The Looper is controlled with the Footswitches while in Play Mode and also by the control knobs. Remember, to use the Looper, TimeFactor must be in Play Mode.

The Looper can be in one of the following states:

Empty
Recording
Playing
Dubbing
Stopped

The Footswitches work as transport controls: Record ●, Play ▶ and Stop ■.



The Footswitch LEDs indicate the current Looper status as follows:
● LED – Lit orange when recording or dubbing.
▶ LED – Lit orange when playing or dubbing.
■ LED – Lit orange when stopped and not empty, OFF when empty.

Here's what the Footswitches do in each of the Looper's states:

Empty

When the Looper is first loaded, the loop is Empty, the Billboard displays [EMPTY] and the Footswitches are used to:

● – Press to Start Recording. If autoplay mode is selected [AP:LOOP], loop playback will start when recording reaches the loop end.
▶ – No action.
■ – If Tempo is ON, and the ■ footswitch is pressed repeatedly, the Billboard displays the updated Tempo in BPM and the ■ LED flashes orange at the Tempo. When tapping stops the display reverts to [EMPTY].

Recording

While recording, the Billboard displays running record time [R>00.00] or beat count [R>(beats)] and the Footswitches are used to:

● – Press to create Loop End and start Dubbing. The Dub Mode setting determines if the new audio is added to or replaces the previously recorded audio.
▶ – Press to create Loop End and start Playing from Loop Start. The Play Mode setting determines if the Loop is played once or continuously. If Play Mode is set to [AP:RVDIR], pressing Play ▶ will start Playing continuously in the playback direction at which the Speed knob is set. The reverse playback direction action starts once the Loop is in the Playing State.
■ – End recording and stop.

Dubbing

If ● is pressed while recording, Dubbing begins and the Billboard displays running time [D>00.00] or beat count [D>(beats)]. While Dubbing, the Footswitches are used to:

● – Stop/Start Dubbing while Playing continues. The Dub Mode setting determines how the Loop is overdubbed.
▶ – End Dubbing and Start Playing from Loop Start. The Play Mode setting determines if the Loop is played once or continuously. If Play Mode is set to [AP:RVDIR], pressing Play ▶ will reverse the playback direction, but preserve the Dubbing State, and play continuously.
■ – End Dubbing and Stop Playing.

Playing

If ▶ is pressed while Stopped, Playing begins and the Billboard displays running play time [P>00.00] or beat count [P>(beats)] and the Footswitches are used to:

● – Start Dubbing at the current Loop time. The Dub Mode setting determines if the new audio is added to or replaces the previously recorded audio.
▶ – Start Playing from Loop Start. The Play Mode setting determines if the Loop is played once or continuously. If Play Mode is set to [AP:RVDIR], pressing Play ▶ will reverse the playback direction and play continuously.
■ – Stop Playing.

Stopped

If ■ is pressed while Playing, Recording or Dubbing, the Loop stops, the Billboard displays [STOPPED] and the Footswitches are used to:

● – Clear Loop and begin recording. If autoplay mode is selected, [AP:LOOP], loop playback will start when recording reaches the loop end.
▶ – Start Playing from Loop Start. The Play Mode setting determines if the Loop is played once or continuously. If Play Mode is set to [AP:RVDIR], pressing Play ▶ will start Playing continously in the playback direction at which the Looper was last Stopped. The reverse playback direction action starts once the Loop is in the Playing State.
■ – No action.

Emptying the Loop

Simultaneously press and hold both Right and Middle Footswitches to Empty the Loop.

Bank Mode

Pressing and holding the Right Footswitch, as usual, toggles between Play and Bank Mode. Bank Mode is for loading a new preset and, when using the Looper, you should remain in Play Mode. In Bank Mode, the Footswitches do not operate as Looper transport controls. Also, when in Bank Mode, TimeFactor is bypassed.

Looper Control Knobs

In the Looper, the Control Knobs function as follows:

Mix: Mix control between the Dry audio input and Looper playback.

Dly Mix/Loop Record-Length: When the Loop is Empty, sets the Loop Length. Note that audio recording quality is degraded at slower recording speeds (1/2X and 1/4X). The maximum loop length is determined by the setting of the Speed parameter as follows:

Speed	(+/-) 2X	(+/-) 1X	(+/-) 1/2X	(+/-) 1/4X
Max Loop Length	6 sec	12 sec	24 sec	48 sec

The negative signs on the speeds above are for automatically starting playback in reverse after recording a new loop. When the Loop contains audio, the Record-Length parameter is disabled.

Dly Time A / Loop Play-Start Point: When a Loop is in memory, Dly Time A sets the Loop Start Point from 0 ms (or beats) to Loop Length. The Loop Play-Start Point is automatically set to 0 at the beginning of a new loop. Note that Catchup is always enabled to prevent the Start point from changing abruptly. When the Loop is Empty, this parameter is disabled

Dly Time B / Loop Play-Length: When a Loop is in memory, Dly Time B sets the Loop Play-Length for playback that begins at the Loop Start Point. In other words, if a 12 second Loop is recorded and the Loop Start Point is set to 2 seconds and the Loop Length is set to 4 seconds, the recorded Loop will play from 2 seconds to 6 seconds into the 12 second Loop. The Play-Length value is automatically reduced in cases where the Play-Start Point moves past the currently set Play-Length.

The Loop Play-Length is automatically set to Loop Length at the beginning of new loop. Note that Catchup is always enabled to prevent the end point from changing abruptly. When the Loop is Empty this parameter is disabled.

Fdbk A / Loop Decay Rate: For the Looper, feedback is meaningless, so Fdbk A is used as a Decay Rate control for dubbing.

When dubbing you may want the original saved audio to persist as you add new sounds. Of course, indefinitely adding new signals will eventually result in 'mud' (the "Crayola" effect). The Decay Rate control allows the saved audio to fade as you dub new material. The Decay Rate is adjustable from 0% [DCY: 0] to 100% [DCY:100]. When set to 0%, the loop never decays. When set to 100% the previously saved audio decays completely each time through the loop when dubbing. In other words, the looped audio is only played once.

The Loop Decay Rate control has no effect on normal Playback, only dubbing.

Fdbk B / Dubbing Mode: For the Looper, feedback is meaningless, so Fdbk B is used to select the Dubbing Mode. There are four choices that determine the type of dubbing (Add or Replace) and the action of the Footswitch control (Latch or Punch).

To Dub, press the ● Footswitch while the loop is playing or recording. The action of the ● Footswitch when dubbing depends on the setting of the Fdbk B control.

If you want to simply press and release the switch to Dub, set this control to one of the two Latching modes. Dubbing will continue until you press ● (or press record again to turn dubbing off).

On the other hand, you may prefer to Dub only while you're pressing and holding the ● Footswitch. To do this, choose one of the two Punch modes.

The Dubbing Mode choices are:

[D:LATCH] – ● toggles Dubbing ON/OFF. Dubbed audio is added to the looped audio.
[D:PUNCH] – ● enables Dubbing while the footswitch is held. Dubbed audio is added to the looped audio.
[D:REPL-L] – ● toggles Dubbing ON/OFF. Dubbed audio replaces looped audio.
[D:REPL-P] – ● enables Dubbing while the footswitch is held. Dubbed audio replaces looped audio.

Xnob / Playback Mode: The Xnob is used to select the Playback Mode:

[P:ONCE] – ► initiates playing the loop one time from the loop's start point.
[P:LOOP] – ► initiates playing the loop continuously from the loop's start point.
[AP:LOOP] – When recording ends, loop begins playing automatically and plays continuously.
[AP:RVDIR] – When recording ends, loop begins playing automatically and plays continuously. In the Playing State, ► can then be used to toggle the playback direciton.

Depth / Varispeed Resolution: The Depth control selects Play Speed resolution. When set to [SMOOTH], resolution is 1%. The other Depth control settings allow you to select the Play Speed in musical intervals as follows (a negative value corresponds to Reverse Play, and all resolutions have 0% in the middle for a full Pause):

[OCTAVES] – From three octaves down to one octave up – (+/-) 12.5%, 25%, 50%, 100%, 200%
[OCT+5TH] – Octaves and fifths – (+/-) 12.5%, 25%, 37%, 50%, 75%, 100%, 150%, 200%
[DOM7TH] – Dominant 7th Chord (root, M3rd, 5th, m7th, representing common key modulations) – (+/-) 12.5%, 25%, 32%, 37%, 45%, 50%, 63%, 75%, 89%, 100%, 126%, 150%, 178%, 200%
[CHROMATIC] – Semi tones – (+/-) 12.5%, 25%, 26%, 28%, 30%, 32%, 33%, 35%,37%,40%, 42%, 45%, 47%, 50%, 53%, 56%, 59%, 63%, 67%, 71%, 75%, 79%, 84%, 89%, 94%, 100%, 106%, 112%, 119%, 126%, 133%, 140%, 150%, 159%, 168%, 178%, 189%, 200%

Speed / Varispeed: When the Loop is Empty, the Speed control lets you select the record speed. A negative speed with Empty causes playback to automatically start in the Reverse direction after the loop is closed, either through a ► Play button press or the [AP:LOOP],[AP:RVDIR] settings on the Xnob / Playback Mode. The choices are:

[SPD: +/- 2X] – Double speed. At this record speed, the maximum loop length is 6 seconds.
[SPD: +/- 1X] – Normal speed. At this record speed, the maximum loop length is 12 seconds.
[SPD: +/- 1/2] – Half speed. At this record speed, the maximum loop length is 24 seconds.
[SPD: +/-1/4] – Quarter speed. At this record speed, the maximum loop length is 48 seconds.

After a loop is recorded, Varispeed controls the speed of Loop playback AND dubbing over the full range of speeds allowing for continuous real-time scrubbing from one octave up in Reverse Play (-200%), to one octave up in Forward Play (200%), with a pause (0%) directly in

the middle (knob set to 12 o'clock). Play Speed resolution is dependent on the setting of the Depth control.

Filter: Controls the tone of the looped audio. Tone control filters are placed at both the input and output of the Looper. This allows you to control the tone of the audio that you're recording and then independently control the tone on playback. Turning to the left cuts low frequencies and turning to the right cuts high frequencies. For flat response, set the knob to 12 o'clock.

Tempo Mode and MIDICLK Sync

Tempo Mode allows beat-based recording and playback that stays in sync with TimeFactor's internal MIDICLK or as a slave to an external MIDICLK. Press the Encoder to toggle the Looper in and out of Tempo Mode.

MIDICLK Slave mode

To slave off an external MIDICLK you'll need to turn MIDICLK IN to ON in the TimeFactor's system menu under MIDI-> CLK IN-> ON or OFF, and you'll need to connect a viable MIDICLK master to your TimeFactor, either over the MIDI DIN5 input or USB.

While in MIDICLK Slave Mode, the Looper will respond to MIDI Start and Stop commands. These commands are sent by many Drum Machines, Sequencers and DAWs when used as MIDICLK masters. However, you'll need to reference your own device or software manual for specific MIDICLK master mode and start/stop command setup guidance. Looper responds to MIDI Start and Stop commands as follows for each Looper State:

Empty

MIDI Start – Resets the Looper's internal "beat counter" and causes a ● Record Footswitch press to sync up to the next beat (See the section on FootSwitch Quantization below for more info on this).
MIDI Stop – no action

Recording

MIDI Start – Stops Recording and starts Loop Playback.
MIDI Stop – Stops Recording and goes to the Stopped State.

Dubbing

MIDI Start – Ends Dubbing and Starts Playing from Loop Start.
MIDI Stop – Stops Loop Playback and Dubbing and goes to the Stopped State.

Playing

MIDI Start – Retriggers to start Playing from Loop Start
MIDI Stop – Stops Loop Playback and goes to the Stopped State.

Stopped

MIDI Start – Starts Loop Playback
MIDI Stop – no action

Tempo Mode Footswitch Quantization

MIDICLK is made up of a series 24 "ticks" per beat. Tempo Mode quantizes many of the Footswitch actions either to the next MIDI beat or the next MIDI tick. The quantization action of the Footswitches for each Looper State is as follows:

Empty

● – Starting a new recording syncs to the next beat ONLY if in MIDICLK Slave mode AFTER having received a MIDI Start command. Otherwise, this begins recording on the next tick.
►– No action.

■ – Only used for tap tempo

Recording

● – Record to Dub transition quantizes to the next beat.
► – Record to Play transition quantizes to the next beat.
■ – End recording and stop, quantized to the next beat

Dubbing

● – Dubbing in/out doesn't do any footswitch action quantization.
► – End Dubbing and Start Playing from Loop Start. This action quantizes to the next tick.
■ – End Dubbing and Stop Playing. This action quantizes to the next beat.

Playing

● – Start Dubbing, no footswitch quantization.
► – Start Playing from Loop Start. This action quantizes to the next tick.
■ – Stop Playing. This action quantizes to the next beat.

Stopped

● – Starting a new recording quantizes to the next beat ONLY if in MIDICLK Slave mode AFTER having received a MIDI Start command. Otherwise, this begins recording on the next tick.
► – Start Playing from Loop Start. This action quantizes to the next tick.
■ – No action.

Control Knob Tempo Mode Sync Features
The following control knobs have enhanced features for Tempo Mode and MIDI sync allowing for perfect MIDICLK beat sync even when they change.

Dly Time A / Loop Play-Start Point: In Tempo Mode, the minimum length of audio that can be played out is 1 beat so, the Play-Start Point will display in beats allowing you start playback from 0 beats up to Loop Length minus 1 beat. For example, if you recorded an 8 beat loop, this will range from 0 to 7 beats.
Changing the Play-Start Point during Playback will apply the next time the Loop comes around and will maintain perfect beat sync with MIDICLK.

Dly Time B / Loop Play-Length:
In Tempo Mode, the minimum length of audio that can be played out is 1 beat so, the Play-Length will display in beats allowing playback lengths of 1 beat up to the Loop Length. For example, if you recorded an 8 beat loop, the Play-Length will range from 1 to 8 beats. Changing the Play-Length during in Playback will apply the next time the Loop comes around and will maintain perfect beat sync with MIDICLK. Of course, new Play-Lengths that don't evenly divide the total Loop Length will cause the loop to "walk" the downbeat, thus creating interesting poly-rhythms against an existing pattern.

Speed / Varispeed: In Tempo Mode, the Looper always loops about the current Play-Length number of beats in the originally recorded time base, regardless of changes to the Speed. Thus, for slower speeds the loop length will be truncated, and for faster speeds the loop will play through more than once. For example, if you record an 8 beat loop at 1x, then play out 8 beats at a Speed of 50 (.5x), the Looper will loop beats 1-4. Alternatively, if you choose to play at a speed 150, the loop will complete one full cycle of 8 beats, then a half cycle of 4 beats, and continue to loop this 1.5x pattern against the original time base. Please note that this Speed-based sync feature is temporarily disabled while Dubbing, allowing you to dub through an entire loop, and once you exit Dub mode moving back to Play, this sync feature will resume. This ensures that the Looper always maintains perfect timing with external audio, drum machines, etc. while providing the option to layer expressive pitched and poly-rhythmic patterns or even minutely controlled drifts that always come back on the downbeat.

Catchup

You would expect that when you turn a Parameter Control Knob, the parameter's value would change instantly and, unless Catchup is enabled, it does. Instant changes, however, may not be desirable for all situations and users. Consider the following example:

You have just loaded a Preset and the Preset's value for Dly Time A is 10 mS. Now, let's say that the Dly Time A Control Knob happens to be at the full clockwise position corresponding to a delay time of 3000 mS. If you'd like to tweak the actual delay time by a small amount (for example, from the Preset's value of 10 mS to 20 mS), you would reach down and turn the knob only to find that the delay at first abruptly jumps from 10 mS to 3000 mS and then decreases to the desired value as you continue to turn the knob. If this happens as you're playing, it could be a tad distracting. (One mS is a thousandth of a second).

TimeFactor's Catchup feature is designed to prevent parameter values from abruptly changing when the knob positions don't correspond to the Preset values. When Catchup is ON and a Control Knob is turned, the parameter value doesn't change instantly. Instead, the display alternates between the Preset value and the word "TURN" which is displayed accompanied by either a left or right pointing arrows as appropriate. The parameter (and hence the Effect) does not change until the knob position passes the current parameter value at which point TURN and the arrow disappear, the parameter name and value are displayed, and the knob becomes active.

Returning to our example, if Catchup is ON, Dly Time A would not change until the Control Knob is turned from its full clockwise position to nearly its full counterclockwise position where it corresponds to the 10 mS value. At that point, the Control Knob becomes "live," thereby avoiding any abrupt change in the sound of the Effect.

Catchup's factory default is OFF. To turn Catchup On/Off:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) [KNOBS] will be displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select [CATCHUP] (ON) or [NORMAL] (OFF).
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Expression Pedal

An external Expression Pedal can be connected to the rear panel ¼" phone jack. The Expression Pedal can be set up to control any combination of the eight parameters. For proper operation the Expression Pedal should be a simple resistive potentiometer with a maximum value of between 5k Ohms and 20k Ohms.
Refer to **www.eventide.com/AudioDivision.aspx** for information on recommended expression pedals.

Because different pedals can have different electrical characteristics, it is a good idea to "calibrate" your Stompbox to match the pedal. This can be done automatically, either all the time, or only when wanted. To turn calibration On/Off:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [PEDAL CAL] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select either ON or OFF.
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

When Calibration is ON, the unit will remember the highest and lowest values it sees and will use these as pedal up and pedal down. Typically you will turn it ON, move the pedal between its maximum and minimum values a few times, then turn it OFF. Be aware that some pedals can be a bit quirky and pressing hard and pressing gently may give different values. For this reason we suggest turning calibration OFF when you're happy with the setting. When Calibration is OFF, the values will be remembered and will not be changed by moving the pedal.

The Expression Pedal settings can be adjusted simply by pressing the Pedal to the full heel or full toe position and turning the Control Knobs. You'll notice that whenever you move the Pedal, the Green LED next to currently active Effect blinks. This indicates that Pedal programming is "live." To program, press the heel completely down and adjust the knobs to get the sound that you want for the heel down position. You must turn the knobs to create the assignment. Knobs that are not turned are not assigned. Now, press the toe completely down and change the settings of any or all of the knobs. Parameters associated with any knobs that are moved will be mapped to the Pedal. Now, when you rock the pedal back and forth, you'll hear the sound change between the two settings.

After a few seconds of pedal and knob inactivity, the LED will stop flashing. When the LED is solidly lit, you can turn any of the Parameter Control Knobs to change the sound without changing the Expression Pedal mapping.

When the Expression Pedal is used, the BillBoard will display the changing value. If the Expression Pedal has been set up to control a single parameter, the display will show the parameter name and value in the same way as if you were turning the Control Knob. If the Expression Pedal has been set up to control multiple parameters, the display indicates the pedal value (from 0 to 100) and the parameters that are changing. In this display, the ten parameter Knobs are shown as dots and, when the Pedal is used, the column above each dot is used to indicate that the Pedal is controlling that parameter.

Since any number of parameters can be programmed to respond to the pedal, it's important to learn how to un-assign parameters. Let's say that you've programmed the Pedal to control

Depth from 0 to 3 and Speed from 1.00 Hz to 2.00 Hz. Now, you'd like to un-assign Depth and have it fixed at 2 rather than have it change when the Pedal moves. Here's what you do:

1) Press the Pedal to full heel and turn the Depth knob to 2.
2) Press the Pedal to full toe. Turn Depth away from 2 and back to 2.

Remember, you must move the Parameter Control Knob to create the Pedal assignment. If a Parameter was previously assigned to the Pedal, the only way to un-assign it is to set the same value for the heel and toe by turning the knob.

The Expression Pedal settings are not saved automatically. If you want to be able to recall your Expression Pedal setting, you must perform the Preset Save operation.

If you load a Preset and the Expression Pedal is not connected, the parameter values will be same as they were the last time the Preset was used.

Note: Expression Pedal programming can be disabled in System Mode under the Utilities menu. Since programming the Expression Pedal is so easy, it is possible to inadvertently change settings that you've created. By setting Pedal Lock ([PDLOCK]) ON, accidental changes to the Expression Pedal settings are prevented."

Note: You can set the minimum value to be greater than the maximum value. When you do so, as the Pedal moves towards the toe, the Parameter value will decrease.

Note: The Expression Pedal input supports control voltage inputs from 0V to 3V. Care must be taken to avoid ground loops. If you hear a "hum" only when you've connected a control voltage source to ModFactor's Expression Pedal input jack, then it is likely that the device generating the control voltage is grounded to a different ground than your audio ins and outs. Ground loops are notoriously difficult to track down and beyond the scope of this User Guide to diagnose

To remove all pedal assignments

In PLAY Mode, hold down the Left Footswitch for 2 seconds. This puts the unit into Preset O/P Level Adjust Mode. While continuing to hold the footswitch down, press the encoder until you see NO EXP. Then, without releasing the footswitch, turn the encoder until you see SURE?. If you are sure, turn it a little further until you get back to OP LEVEL. If there are no pedal assignments, NO EXP will not be shown.

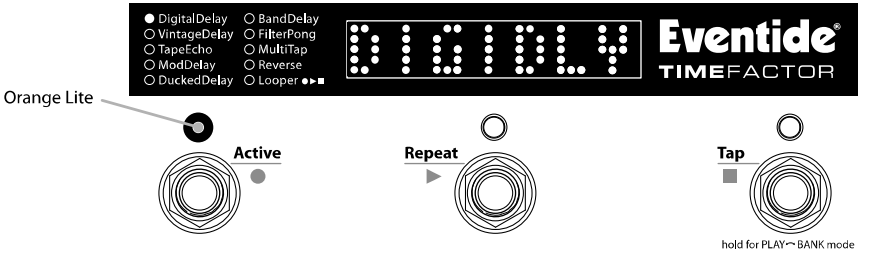
The Footswitches - Play and Bank Mode

TimeFactor's footswitches are multi-purpose and operate in one of three modes, Play Mode, Bank Mode, and System Mode. In normal use, TimeFactor is in either Play Mode or Bank Mode. These two operating modes are discussed in this section. System Mode is used to set up MIDI, external controls and various system parameters. See the System Mode section of this User Guide for details.

Pressing and holding the Right Footswitch switches between Play and Bank Mode.

Play Mode

In Play Mode, for the nine Delay Effects, the Billboard displays the Effect name and the three Footswitches are used to control the Effect. When the Looper is loaded, the Play Mode Footswitches are used as transport controls as described in the Looper section of this User Guide.



Active Footswitch

The "Active" footswitch is used to toggle between Active and Bypass. The Active LED is lit orange when the Effect is in use. When Bypassed, the Active LED is off.

Repeat Footswitch

The "Repeat" footswitch is used to toggle the infinite repeat function ON and OFF. Repeat captures the audio that is currently in the delays. The input to the delay is turned off and the audio in the delay is continuously repeated. When Repeat is switched ON, the Billboard briefly displays "RPT ON" and when Repeat is switched OFF, the Billboard briefly displays "RPT OFF." The Repeat LED is lit orange to indicate that the sound in the delay is captured and will repeat forever or until power is off.

Tap Footswitch

The "Tap" footswitch is used to tap tempo if Tempo is ON or to tap a delay value if Tempo is OFF. While tapping with Tempo ON, the updated tempo value is displayed by the Billboard in BPM. While tapping with Tempo OFF, the updated delay value is displayed by the Billboard.

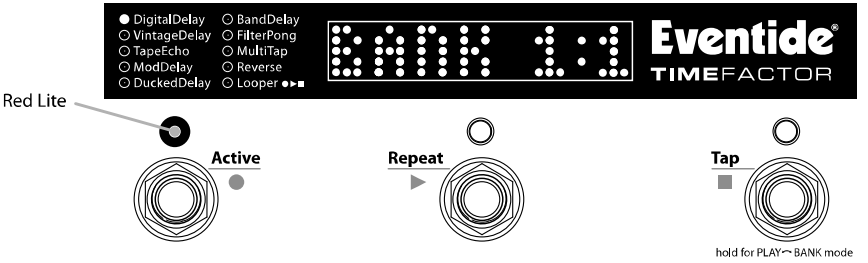
To turn Tempo ON or OFF, press the Encoder. When Tempo's state changes, the Billboard will briefly display the appropriate message either "TMP ON" or "TMP OFF." When Tempo is ON, the Tempo LED flashes at the current tempo.

Note: Tapping with Tempo OFF sets both Delays (A and B) to the same value.

Bank Mode

In Bank Mode, the Billboard displays the Bank and Preset Number of the currently running Preset. The Left and Middle Footswitches are used to instantly select or Bypass either Preset 1 or Preset 2. Presets are stored in pairs and each pair of Presets is called a Bank. There are a maximum of 50 Banks - a total of 100 Presets.

The Billboard displays the current Bank and Preset number. Banks are numbered from 1 to 50 and Presets are numbered 1 and 2.



Note: The 100 Presets can be based on any of the Effects. You can choose to have all 100 presets based on DigitalDelay, or any combination of the nine Delay effects.

Loading Presets

The Preset numbers correspond to the Left and Middle Footswitches.

To Bypass the Preset, simply press the Footswitch corresponding to the loaded Preset. Press again and the Preset becomes active.

The following attributes are saved with Presets and recalled when Presets are loaded:

1) Parameter knob values.
2) Mix value.*
3) Tempo/Tap value.*
4) Tempo On/Off status.
5) Expression pedal mapping.

* Note: TimeFactor can be set up to change the Mix and/or Tempo values when a Preset is loaded or to ignore the values saved with the Preset. While Mix and Tempo values are always saved with the Preset, you may prefer to have your current Mix and/or Tempo stay the same as you switch from Preset to Preset. Turn MIX or TEMPO ON in the Global menu to do that. With MIX or TEMPO ON, the values saved with the Preset are ignored and the current values are used. Global is described later in this User Guide.

Selecting Preset Banks

In Bank Mode, the Right Footswitch is used to select the current Bank. Tap the Right Footswitch to increment through the active Banks. When a Bank is displayed, the associated pair of Presets is cued but the new Preset is not yet loaded. The next time that either the Left or Middle Footswitch is pressed, the corresponding Preset will load from the cued Bank.

Note: If the previous loaded Preset is in Bypass when the footswitch is pressed, the newly loaded Preset will be Active.

Note: Edited Presets will be lost if they are not saved before loading another Preset.

Active Banks

If 100 Presets are more than you need, and you'd like to make it quicker and easier to find and load your Presets, the number of active Banks can be limited. Only the Banks that are active will show up when loading. While only active Banks can be loaded, Presets can always be saved to all Banks. Inactive Banks are not erased and can be made active at any time.

When limiting the number of Banks, you have the ability to deactivate both the lower Bank numbers and the higher Bank numbers. For example, if you only want 5 active Banks, but you want them to range from Banks 6-10, you can adjust the low number and the high number separately.

The factory default sets the number of active Banks to 50. To limit the number of active Banks:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [BANKS] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to adjust the high number of banks from H1 to H50.
7) Momentarily press the Left Footswitch to adjust the low number of banks from L1 to the high value indicated by the H.
8) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Tempo

Tempo ON/OFF

Tempo is turned ON or OFF by momentarily pressing the Encoder. When Tempo is ON, the Tempo LED flashes at the Tempo rate. With Tempo OFF, the Tempo LED is OFF.

When Tempo is ON, DLY Time A and DLY Time B are set in rhythmic sub-divisions of the beat i.e. note values from 0 delay to a whole note in common note increments rather than in ms.

When Tempo is OFF, you can set the delay time by tapping the Tap Footswitch in Play Mode. In this case, Delay Time A and B are set to the same value.

Tap Tempo

In Play Mode, the Tap Footswitch can be tapped to set the tempo. While tapping, the Billboard displays the updated Tempo.

Note: When using an Aux Switch to tap tempo, the Billboard will display the tempo value in both Play and Bank Modes.

Adjusting Tempo & Tweaking Delays

The Encoder can be used to set or tweak the Tempo value in BPM if Tempo is ON. To use the Encoder, first press the Tap Footswitch (you must be in Play Mode) so that the Billboard

displays the Tempo value in BPM. Whenever the Tap value is displayed, the Encoder can be turned to adjust the Tempo. While adjusting, the Billboard displays the updated Tempo and the parameter Control Knobs are disabled.

With Tempo OFF, the Encoder can be used to tweak delay time. To use the Encoder, first turn the Control Knob corresponding to the delay that you want to tweak; either Dly Time A or Dly Time B. Next, press the Tap Footswitch (TimeFactor must be in Play Mode) so that the Billboard displays the Delay Time value. Now turn the Encoder to adjust Delay Time. While adjusting, the Billboard displays the updated Delay Time and the parameter Control Knobs are disabled.

Global - Tempo

Tempo values are always saved with each Preset. Often however, it's useful to set the Tempo values for all of the Presets that you're using. To do this, use the TEMPO function under the System GLOBAL command. When TEMPO is ON, the Tempo values saved with the Preset are ignored and the current Tempo value is used for all Presets.

Turning TEMPO ON or OFF. The factory default is OFF.

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [GLOBAL] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder until [TEMPO] is displayed.
7) Turn the Encoder to select [ON] or [OFF].
8) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Edited Preset Indication

In Bank Mode, whenever a Preset's parameter values are changed, an LED dot is lit at the upper rightmost corner of the Billboard display.

Preset parameters can be changed by:

a) turning a Control Knob,
b) selecting an Effect by turning the Encoder,
c) receiving a MIDI command or,
d) moving the Expression Pedal

Saving Presets

To save a Preset:

1) Press and hold the Encoder for a few seconds. The current Bank# and Preset# are displayed. Release the Encoder.
2) Turn the Encoder to select the desired Bank# and Preset#. Preset locations are displayed as "BANK#:#" where the first number is the Bank number from 1-50 and the second number is the Preset number (or slot) either 1-2. When saving, all Banks are available even if you've limited the number of active Banks.
3) To save the Preset, press and hold the Encoder a second time. The Billboard displays "SAVED."
4) After a short time, the Save mode is exited.
5) To exit Save without saving, press and release the Encoder again without holding it or press any Footswitch at any time. Upon exiting SAVE Mode without saving, the Billboard displays "NO SAVE."

Note: You must press and HOLD the Encoder to save. If you press and release quickly, the new Preset will not be saved. This is intentional. When you save a new Preset, you overwrite the old Preset. TimeFactor is designed to assure that saving is a deliberate act. The Preset number corresponding to the currently running Preset will flash as a warning that saving in this location will overwrite the currently loaded Preset.

Naming Your Presets

TimeFactor gives you the ability to name your Presets. When you load a new Preset in Bank Mode, the entire Preset Name will scroll once. Then the Bank/Preset number will be displayed, followed by the first 4-6 letters of the Preset Name.

To edit the Preset Name:

1) After entering Save Mode, press the Right Footswitch and the first character of the Preset Name will flash. Turning the encoder will change this character. The available character set is 'A-Z', 'a-z', '0-9'.
2) The Left and Right Footswitch LEDs will be flashing green, to show that the TimeFactor is in Save Mode and that these switches can be used to navigate between edit fields.
3) Use the Left and Right Footswitches to traverse the display, selecting a field to be edited by the Encoder (the active field for editing is always flashing). Repeated pressing of the Right or left Footswitch will traverse through the name field one character at a time, flashing the selected character.
4) The cursor will "wrap around the display." Pressing the Left Footswitch will move the edit field to the left by one character at a time until it gets to the first character. Pressing the Left Footswitch from here will jump to the last character of the Preset Name.
5) A phantom space is always present at the end of the name to allow characters to be added past the end. The phantom space cannot be deleted but will be removed on exit.
6) When you are finished naming, either press and hold the Encoder button to save the Preset, or press the Middle Footswitch to exit without saving.

Special Footswitch Presses/Shortcuts for naming Presets:

1) Press and hold Left Footswitch to DELETE the current flashing character.
2) Press and hold Right Footswitch to INSERT a character before the current flashing character.

Organizing Your Presets in Banks

When you save a Preset, you should consider if there is a companion preset with which it will be used. For example, if you have a pair of Presets that you plan to use together in the same song – one for the verse, one for the chorus – placing them in the same Bank will let you instantly switch from one to the other.

Loading a Preset from a Bank is instantaneous (one tap) while getting to a Preset from different Bank takes at least two taps. Also remember that if you plan to limit the number of active Banks, you should store your most often used Presets in the lower Banks.

Note: When saving to a location other than the active slot, the saved Preset location becomes the active slot. In other words, if Bank 1:1 is currently active and, after changing the parameters to get a new sound, you decide to save the new sound to location Bank 9:1, Bank 9 becomes the active Bank.

Dumping (Backing-up) Presets and System Settings

The currently loaded effect, your stored Presets and your system settings can be dumped to a MIDI device or to a computer using the MIDI's SysEx facility. SysEx dump is a MIDI System Exclusive Message that can be sent from TimeFactor and recorded by a MIDI sequencer or computer. TimeFactor's Presets and System Settings can then be restored at a later time. This is a useful way to backup saved settings or to reconfigure the unit as it was on your previous project. The process takes a couple of seconds.

To Dump Presets &/or System Settings:

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [MIDI] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [DUMP] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select [ALL], [CURRENT], [PRESETS] or [SYSTEM].
7) Wait until dump is complete.
8) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Note: If [CURRENT] is selected only the currently loaded Preset is dumped. If [PRESETS] is selected, all 100 stored Presets are dumped. If ALL is selected all Presets and System settings are dumped. If SYSTEM is selected, only System settings are dumped.

Restoring Presets and System Settings

Presets and System settings are restored via MIDI's SysEx facility. TimeFactor must be set to the desired SysEx ID number (from 1 to 16).
To set the MIDI SysEx ID number (factory default is 1):

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode. Release the Encoder.
2) Turn the Encoder until [MIDI] is displayed.
3) Momentarily press the Encoder
4) Turn the Encoder until [SYS ID] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to choose SysEx ID from [1] to [16].

7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Auxiliary Switches

The rear panel Aux Switch stereo phone jack supports up to three independent momentary switches using Tip, Ring and Tip+Ring. Aux Switches do not disable TimeFactor's Footswitches – the local Footswitches are always active. Aux Switches can be programmed to perform a number of functions and they make it easy to connect a dedicated Tap Tempo switch or Repeat switch or Preset Switch.

As noted above, the TimeFactor has two operating modes, Bank and Play. An Aux Switch can be used to instantly toggle between the TimeFactor's Bank and Play Modes. Alternately, some users may want to have all six switch functions immediately available (3 from each Footswitch Mode). A set of three Aux Switches can be connected and assigned accordingly.

Aux Switches can also be assigned to parameter values allowing you to switch between two parameter values. For example, you could assign an Aux Switch to change Delay A's feedback level (Fdbk A) from 0 feedback when the switch isn't pressed to 100% when it is pressed. To program the Aux Switches see the System Mode section of this User Guide.

Notes:
1) You must use a stereo phone ¼" plug to connect Aux Switches.
2) Toggle switches are not supported. Only momentary switches will work properly.
3) Simultaneously pressing the switch assigned to the Tip and the switch assigned to the Ring will trigger the function assigned to the Tip+Ring. The Aux Switches should be pressed independently.

Refer to **www.eventide.com/AudioDivision.aspx** for information on recommended Aux Switches.

MIDI

TimeFactor supports MIDI In, Out, Thru. MIDI can be used to:

1) Load and bypass Presets
2) Select Banks
3) Toggle infinite Repeat On and Off
4) Change parameter values
5) Set tempo from MIDI clock
6) Enable TimeFactor's knobs and switches to control other MIDI devices
7) Dump (backup) Presets and/or system settings to a computer

TimeFactor automatically selects either USB or DIN5 as MIDI Inputs and Outputs. If USB is connected, DIN5 MIDI activity (including MIDI thru) is ignored. MIDI setup is described in System Mode and a MIDI implementation map can be found later in this User Guide.

Routing

In most cases, the H9 will be connected in one of the ways described earlier. For more advanced users, it offers a number of extra routing modes, which control the functions of the inputs and outputs. These are usually associated with dedicated wiring and amplifiers and can be selected from the UTILITY/ROUTING section of System Mode. These modes will usually be set to match your hardware configuration and will not normally be changed otherwise.

1) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter System Mode.
2) Turn the Encoder until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [ROUTING] is displayed.
5) Momentarily press the Encoder.
6) Turn the Encoder to select [NORMAL] or [PRE.PST] or [WET.DRY].
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

WARNING - depending on your external connections, changing routing modes can cause loud feedback !! Be sure that all amps are turned down before the change.

Normal

This is the normal mono/stereo connection scheme described earlier.

Pre/Post (PRE.PST)

PRE / POST mode allows you to change where your stompbox sits in your signal chain. For example, you may want it to at the beginning of your signal chain for a distortion effect (PRE), but for a reverb, you may want it to run at the end (POST). It can also be used to choose between placing an effect either before the amp or in an effects loop. This is set on a preset by preset basis by choosing between two options:

PRE - a mono signal sent to input 1 is routed through the effect to output 1, while input 2 is passed unchanged to output 2.
If KillDry is set, output 2 will be muted. When Bypassed, output 1 will always be dry.

POST - a mono signal sent to input 2 is routed through the effect to output 2, while input 1 is passed unchanged to output 1.
When Bypassed, if KillDry is set, output 2 will be muted. Output 1 will always be dry.

When in PRE/POST mode, you can pick from the above options:

11) Press and hold the active Footswitch (the one corresponding to the loaded preset). The display will show the Output Level.
12) Press the Encoder until the display shows PRE (default) or POST.
13) Turn the Encoder to set it as desired.
14) Release the Footswitch - the Preset will return to its previous Active or Bypassed state.
15) Remember to save the preset, or the change will be lost.

In PRE/POST mode, Input and Output Swell only affect the wet channel.

Wet/Dry (WET.DRY,STEREO)

In wet dry mode, either one or two inputs can be used. One output will be dry, meaning that the output is the same as the input (or mix if two inputs are used), whereas the other will be wet, using a mono output version of the effect. If only one input is used, this should be Input 1.

The wet connection can be selected on a preset by preset basis. This means that either output 1 will be wet, or output 2. A normal stereo output can also be selected.

When in Wet/Dry mode, you can pick from the above options:

1) Press and hold the active Footswitch (the one corresponding to the loaded preset). The display will show the Output Level.
2) Press the Encoder until the display shows WET1 (default), WET2 or STEREO.
3) Turn the Encoder to set it as desired.
4) Release the Footswitch - the Preset will return to its previous Active or Bypassed state.
5) Remember to save the preset, or the change will be lost.

WET1 – Physical Output 1 will be wet, Output 2 will be dry. When Bypassed, if KillDry is set, Output 1 will be muted, while Output 2 will always be dry.

WET2 - Physical Output 2 will be wet, Output 1 will be dry. When Bypassed, if KillDry is set, Output 2 will be muted, while Output 1 will always be dry.

STEREO – this is the normal operating mode where both channels are Wet unless bypassed. It is here to allow you to return to normal stereo mode on a preset by preset basis. For example, in a two amplifier setup, you might want a shifter to come from one amp, but a reverb to feed both.

In WET/DRY mode, Input and Output Swell only affect the Wet channel.

System Mode

System Mode is used for settings that cover the overall system such as the Bypass, Aux Switch, MIDI, Expression Pedal, etc.

To Enter/Exit System Mode

Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to enter and exit the System Mode. Upon exit you're returned to the previous mode, either Bank or Play. Upon entering System Mode, you're at the top-level menu selection. The Left and Right Footswitch LEDs will flash RED continuously to remind you that you're in this special mode. The Middle Footswitch LED, the Effect Indicator LED and Tempo LED are always OFF in System Mode.

At the top-level, turn the Encoder to scroll the choices, [BYPASS], [AUX SW], [MIDI] and [UTILITY]. Press the Encoder to select one of these choices.

System Mode Navigation

General navigation and access the System Mode menus/parameters are as follows:

1) **Push the Encoder** to step down into the menu tree.

2) **Turn the Encoder** to scroll thru menu items or parameter selections or values.

3) **Press the Middle Footswitch** to step up the menu tree to upper level menu options.

For menus with two fields, a **flashing arrow** pointing to the left or right indicates the default active field for editing. **Press the Left Footswitch or Right Footswitch** to select the active field. The **Left Footswitch** is used to select the left-hand field, the **Right Footswitch** is used to select the right-hand field.

Hint: While the Middle Footswitch can always be used to step up the menu tree, for menu items that are only one level deep, pressing the Encoder a second time will also step up to the top level.

System Menu Tree

The system mode is divided into four categories **[BYPASS], [AUX SW]**, **[MIDI],** and **[UTILITY]** which are the top-level menu items that appear when entering system mode.
In the following, factory default settings are indicated in **(bold)**

[BYPASS] – Select Bypass Mode

After entering System Mode, turn the Encoder to select [BYPASS], then press the Encoder to enter Select Bypass Mode. Turn the Encoder to select either [BYP TYP] or [KILLDRY].

[BYP TYP] – Choose Bypass Type (DSP, DSP+FX, RLY)

Press the Encoder to select. Turn Encoder to select DSP, Relay or DSP+FX.

When [DSP] is selected, Bypass sends the audio at the DSP's inputs directly to the outputs without any effects processing.

When [RLY] is selected, Bypass employs a pair of relays to "hardwire" the inputs to the outputs.

When [DSP+FX] is selected, Bypass combines the audio at the DSP's inputs with the DSP's outputs AND stops feeding any new input signal to the DSP Effects inputs. This is a handy way to Bypass an Effect without abruptly killing the tail of the Effect that you've been using.

Press the Middle Footswitch once to back-up one level to BYPASS menu.
Press the Middle Footswitch twice to go to top level System menu.

[KILLDRY] – Kill Dry Audio (ON, OFF)

Press the Encoder to select. Turn Encoder to turn Killdry ON or OFF.
When KILLDRY is ON, the dry signal is removed from the Wet/Dry Mix parameter and the Wet/Dry Mix controls only wet Level.

When using TimeFactor in a Send/Return loop, you may want to eliminate the dry contribution at TimeFactor's output and ignore the setting of the Mix Control Knob.

Press the Middle Footswitch once to back-up one level to BYPASS menu.
Press the Middle Footswitch twice to go to top level System menu.

[AUX SW] – Program Auxiliary Switches

Up to three Auxiliary Switches can be assigned as controls for the Effects parameters and system control. The three Aux Switches are connected to the rear panel ¼" stereo phone jack. TimeFactor detects closures by sensing whether the tip, the ring or both the tip and ring are grounded. Note that you must use a stereo phone plug when connecting three Aux Switches.

To assign the Aux Switches first press the Encoder to select AUX SW. You will see two fields (split display) of the Billboard display (left/right) showing Parameter destination and Control source assignments. An arrow pointing to the left (Parameter) is flashing (if it's not, press the Left Footswitch to select this field) showing this to be the selected field for editing.

To assign the switches, first select the TimeFactor parameter or function (the destination) that you want to externally control (Mix for example) and then select the Aux Switch that you want to control it with (the source).

To Setup Parameter Destinations

Turn the Encoder knob to select an external control destination. Destinations include the TimeFactor parameters and functions that can be controlled by one of the Aux Switches. The choices are:

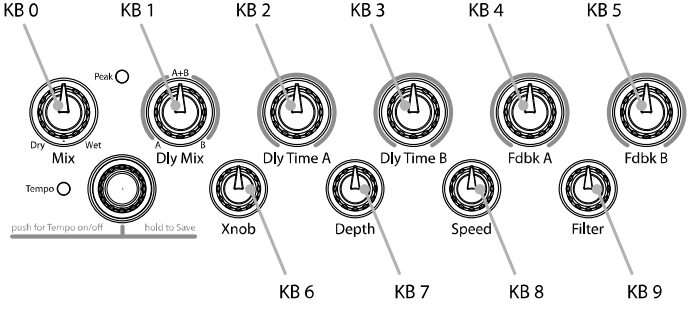
BYP – Toggle Bypass/Active. (Bypass type selected in BYPASS)

BK + – Increment Bank number switch function.
BK - – Decrement Bank number switch function.
TAP – Tap tempo switch function.
RPT – Repeat function.
P/B – Toggle between Play and Bank Mode.

REC – Looper Record
PLY – Looper Play
STP – Looper Stop
MT – Looper Empty
DIR – Looper Direction
OCT – Looper Octave

KB0…9 – Because of the limited space in the Billboard display, the Parameter Control Knob names cannot be meaningfully displayed. Instead, for display purposes, we've numbered the knobs from 0 to 9 shown in the image below.

FS1…3 – Alternate Mode (AUX Switches act as Play Switches when the Stompbox is in Bank Mode, and Bank Switches when the Stompbox is in Play Mode)
PDL – Use AUX Switch to access full value of Preset's Expression Pedal assignment while the switch is held



The notion of using an On/Off control source like an Aux Switch to control a variable parameter bears some explanation. Consider a variable parameter like Dly Mix. You may want to be able to use a remote switch to instantly change from 100% Delay A to 100% Delay B.

Or consider Delay Time. You may want to be able to use a remote switch to instantly change from 100 ms of delay to 250 ms.

After you've selected a Parameter Control Knob, you can set two values for the parameter; a minimum value [MIN VAL] and a maximum value [MAX VAL]. Each time the assigned switch is pressed, the parameter value instantly toggles between the minimum and maximum value.

When a Parameter Control Knob designator is displayed (KB0… KB9), pressing the Left Footswitch will display [MIN VAL]. Turn the associated Parameter Control Knob to set the minimum value. For example, if KB0 was selected, turn the Mix Control Knob to set the minimum value. The Billboard displays the knob value while you're turning the parameter knob and times out to display the selected [MIN VAL] when the knob is idle.

Push the Left Footswitch again to set the maximum value for the selected Parameter Control Knob. The Billboard will display [MAX VAL]. Turn the associated parameter knob to adjust the maximum value. The Billboard displays the knob value while you're turning the parameter knob and times out to display the selected [MAX VAL] when the knob is idle.

The parameters controlled in this mode are system-wide and will apply to all Effects and Presets. For example, if DigitalDelay was running when you entered System Mode, the Delay Mix Knob is used to set the relative levels of the two delays. You could assign an Aux Switch to DlyMix (KB1) with [MIN VAL] set to 100% Delay A and [MAX VAL] set to 100% Delay B. You can then set Delay A's delay time and feedback for one type of delay effect and Delay B's delay time and feedback for a totally different type effect. Pressing the switch will toggle between the Delay A effect and the Delay B effect. If another Effect or Preset is chosen, the Aux Switch will affect the delay mix for the currently loaded effect.

Now consider another example, if VintageDelay was loaded when you entered System Mode, you could assign a switch to the Xnob parameter to control the amount of "saturation" In this case, an Aux Switch can be set up to toggle between a little bit of saturation and a lot of saturation (e.g., 3 to 7). In this case, if another Effect is loaded, the Aux Switch will still control the Xnob parameter. If, for example, DigitalDelay is running, the Aux Switch will change the crossover length.

Note: When a Preset is loaded, the switches assume the MIN VAL for the assigned parameters. Pressing the switch for the first time after a Preset load, will toggle the parameter to MAX VAL.

Note: While it is possible to assign more than one external controller to any parameter, doing so is likely to cause confusion and is not recommended.

To Setup the External Control Source

Press the Right Footswitch to select one of three Aux Switches. There are two ways to select the Aux Switch - Manual Select or Learn Mode.

For Manual Select simply turn the Encoder to choose the Aux Switch. The choices are:

TIP - Aux switch jack tip connection
RNG - Aux switch jack ring connection
T+R - Aux switch jack tip + ring connection

There are also *momentary* (non-toggling) controls, named TI.P, RN.G and T+. R - these can only be used to control the Knobs

To use the Learn Mode to select the external control source, **Press the Right Footswitch again**. "**LEARN"** is displayed prompting you to press an Aux Switch for automatic assignment. Press the Right Footswitch again to exit LEARN mode and revert to manual source selection.

Press the Left and Right Footswitches to toggle between Source and Destination to make as many assignments as you wish.

The default patches for Aux Switch control are as follows:
[BYP<>TIP]
[RPT<>RNG]
[TAP<>T+R]
[REC<>TIP]
[PLY<>RNG]
[STP<>T+R]

The other Aux Switch Control destinations ([BK+], [BK-], [P/B], and [KB0]…[KB9]) are unassigned as indicated by [---].

Note: It is possible to assign the same Aux Switch to multiple destinations. In other words, you could assign [TIP] to control Bypass AND Tap AND Repeat AND etc. The benefit of having the same switch control multiple functions can be very useful however, you should keep in mind that, if you have previously assigned a Switch to a control destination, you may want to clear the assignment before setting up a new assignment. In fact, the default settings use this capability to provide both the normal Play functions and the Looper Play functions.

When done, **Press the Middle Footswitch** to go to top level System menu.

[MIDI] - MIDI Functions

After entering System mode, turn the Encoder to select [MIDI], then press the Encoder to enter the MIDI functions settings mode.

Turn the Encoder to scroll through the MIDI functions including MIDI Program maps, MIDI channel, MIDI Data Dumps, etc.

[RCV CH] – Set the MIDI Receive Channel (OFF, **OMNI**, 1-16)

Press the Encoder to select. Turn Encoder to set the MIDI Receive Channel option. You can select a MIDI Channel number, turn OFF MIDI receive or choose OMNI to receive on all MIDI channels.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[XMT CH] – Set the MIDI Transmit Channel (**1**, 2-16)

Press the Encoder to select. Turn Encoder to set the MIDI Transmit Channel.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[RCV CTL] - Receive Continuous Control Message

RCV CTL allows external MIDI Continuous Control messages to be used as assignable controls for the Effects parameters and system control.

The idea is to first select the TimeFactor parameter or function that you want to externally control (Mix for example) and then select either MIDI Bend or the MIDI CC with which you want to control it.

Here's how it works:
Press the Encoder to select RCV CTL. You will see two fields (split display) of the Billboard display showing Parameter destination and Control source assignments. An arrow pointing to the left (Parameter) is flashing (if its not, press the Left Footswitch to select this field) showing this to be the selected field for editing.

To Setup Parameter Destination

Turn the Encoder knob to select an external control destination - the TimeFactor parameter or function which will be controlled from an external source. The choices are:

BYP – Bypass the unit
BK + – Increment Bank number switch function
BK - – Decrement Bank number switch function
NXT – Load the next preset
LST – load the previous preset
TAP – Tap tempo switch function
RPT – Repeat function
P/B – Toggle between Play and Bank Mode
PDL – MIDI Expression Pedal
ACT – Make unit Active
TOG – Toggle Bypass/Active

REC – Looper Record
PLY – Looper Play
STP – Looper Stop
MT – Looper Empty
DIR – Looper Direction
OCT – Looper Octave

KB0…9 – Parameter Control Knobs
FS1…3 – Alternate Mode (AUX Switches act as Play Switches when the Stompbox is in Bank Mode, and Bank Switches when the Stompbox is in Play Mode)

ISW – Input Swell
OSW – Output Swell

After you've selected a Parameter Control Knob, you can set the parameter range that the MIDI CC will control by setting minimum and maximum parameter values.

When a Parameter Control Knob designator is displayed (KB0… KB9), pressing the Left Footswitch will display [MIN VAL]. Turn the associated Parameter Control Knob to set the minimum value. For example, if KB0 was selected, turn the Mix Control Knob to set the minimum value. The Billboard displays the knob value while you're turning the selected parameter knob and times out to display the selected [MIN VAL] when the knob is idle.

Push the Left Footswitch again to set the maximum value for the selected Parameter Control Knob. The Billboard will display [MAX VAL]. Turn the associated parameter knob to adjust the

maximum value. The Billboard displays the knob value while you're turning the selected parameter knob and times out to display the selected [MAX VAL] when the knob is idle.

MIDI CCs send values from 0 to 127. The minimum parameter value will be set when the MIDI CC sends a 0 and the maximum parameter value will be set when the MIDI CC sends 127. MIDI CC values between 0 and 127 are mapped to the selected parameter range.

The parameters controlled in this mode are system-wide and will apply to all Effects and Presets.

For example, if Looper was running when you entered System Mode, the Xnob would be used to select between Play Once and Play Loop. Using RCV CTL you could assign a MIDI Continuous Controller to Xnob (KB6). CC message values less than 64 will select Play Once and message values 64 or greater will select Play Loop. If VintageDelay is then loaded, the Xnob parameter sets the amount of "saturation." In this case, the MIDI CC value will control the amount of saturation.

Note: You can set the minimum value to be greater than the maximum value. When you do so, when the MIDI CC's sends an increasing value, the parameter value will decrease.

Note: You can assign more than one external controller to any parameter. For example, you can use MIDI CC10 to vary Delay Time A from 0 ms to 1270 ms with 10 ms resolution and MIDI CC11 to vary Delay Time A from 0 ms to 127 ms with 1 ms resolution.

Note: While it is possible to assign more than one external controller to any parameter, doing so is likely to cause confusion and is not recommended. Keep in mind that, if you have previously assigned a MIDI CC to a control destination, you may want to clear the assignment before setting up a new assignment. To clear, select the destination (parameter) and select the source (MIDI CC) as [---].

To Setup the External Control Source

Press the Right Footswitch to select the external control source field for editing. There are two ways to select an external control source - Manual Select or Learn Mode.

For Manual Select simply turn the Encoder to choose the MIDI Control Source. The choices are:

BND – MIDI Pitch Bend
CC0 - C99 - MIDI Continuous Controller messages from 0 to 99.

To use the Learn Mode to select the external control source, **Press the Right Footswitch again**. "**LEARN"** is displayed prompting you to send a MIDI message for automatic Control Source assignment. Press the Right Footswitch again to exit LEARN mode and revert to manual source selection.

Press the Left and Right Footswitches to toggle between Source and Destination to make as many assignments as you wish.

The default patch is unassigned [---] for all RCV CTL destinations.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[XMT CC] – Control knobs transmit MIDI Continuous Control

The default patch is as follows:

```
PDL>C15, KB0>C22, KB1>C23, KB2>C24,…,KB9>C31
```

XMT CC makes it possible to use TimeFactor's Expression Pedal and Control Knobs as MIDI controllers.

Here's how it works:
Press the Encoder to select XMT CC. You will see two fields (split display) of the Billboard display showing Control source and Destination assignments. An arrow pointing to the left (Control Source) is flashing (if it's not, press the Left Footswitch to select this field) showing this to be the selected field for editing.

To Select the Control Source
Turn the Encoder knob to select the Control Source. The choices are:

PDL – Expression Pedal.
KB0…9 – Parameter Control Knobs

To Assign the Control Source to a Destination
Press the Right Footswitch to select the MIDI Continuous Control that will be assigned to the TimeFactor Control Source. The choices are:

OFF – Control Source unassigned.
C0 - C99 - MIDI Continuous Controller from 0 to 99.

Press the Left and Right Footswitches to toggle between Source and Destination to make as many assignments as you wish.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[RCV MAP] – Create a MIDI Program Change Receive Map

MIDI maps are an efficient way to instantly recall any of TimeFactor's Presets using your favorite MIDI controller (pedal board, sequencer, etc.).

Press the Encoder to select and create a MIDI Program Change Receive Map. This function sets the corresponding Preset that is recalled when a MIDI Program Change message is received. (Referred to as Prg No. from here on.)

The left field displays the Prg No. (0-127) and right field displays either OFF, the Preset as Bank:Preset (1:1-50:2), TOG, BYP, or ACT.

TOG toggles the unit between bypass and active, BYP bypasses the unit, and ACT makes the unit active.

There are two ways to select the MIDI Prg No: manually or using Learn Mode. To select manually, with the left arrow flashing, simply turn the Encoder to select the desired Prg No. from 0 to 127.

To use Learn Mode, **press the Left Footswitch again.** In LEARN mode, the Prg. No. will be automatically set when a MIDI Program Change message is received. Pressing the Left Footswitch exits LEARN mode.

Press the Right Footswitch to select the Bank Preset field (indicated by a flashing right hand arrow) and **turn the Encoder** to select the Preset.

To map another Prg No. to another Preset, simply press the Left Footswitch again to select the desired Prg No. and then the Right Footswitch to map it to the desired Preset.

Default map: Prg No. 0-99 map to the 100 Presets starting with Bank 1:1.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[XMT MAP] – Create a MIDI Program Change Transmit Map

In Bank Mode, when a Footswitch is used to recall a Preset, a MIDI Program Change message can be transmitted from the MIDI Out jack or USB to control an external device (e.g. another Factor series Stompbox, an Eventide Eclipse, an Eventide H000FW, etc.).

To Create a MIDI Program Change transmit map **Press the Encoder** to access the MIDI transmit map for editing.

The left field displays the Bank Preset number (from 1:1 to 10:2). The right field displays either OFF or the Prg No. (0-127).

Press the Left Footswitch to select Preset/Effect field (indicated by a flashing left hand arrow pointing), **turn the Encoder** to select the Preset.

Press the Right Footswitch to select Prg No. field (indicated by a flashing right hand arrow pointing to MIDI Program Change #), **turn the Encoder** to select the corresponding number.

Default map: Prg No. 0-99 map to the 100 Presets starting with Bank 1:1.

Note: When a Factor Preset is recalled with a MIDI program change message, MIDI Program Change messages are not generated.

Note: MIDI Program Change Transmit must be enabled in order for TimeFactor to transmit Program Change messages. MIDI Program Change Transmit is turned ON or OFF in the MIDI menu. Default is OFF.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[CTL XMT] – MIDI Continuous Controller Transmit Enable (ON, **OFF**)

Press the Encoder to select. Turn Encoder to set MIDI Continuous Controller transmit ON or OFF.
This setting determines if Parameter Knobs transmit MIDI control messages.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[PGM XMT] – MIDI Program Change Transmit Enable (ON, **OFF**)

Press the Encoder to select. Turn Encoder to set MIDI Program Change transmit ON or OFF. If ON, a MIDI Program change message is transmitted whenever a Footswitch is pressed for Preset load.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[SYS ID] – MIDI SysEx ID (**1**-16)

Press the Encoder to select. Turn Encoder to choose the MIDI SysEx ID for Backup and Restore of Presets and System settings. This should normally be left at 1.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[OUTPUT] – MIDI Transmit/Thru Select (**XMT**, THRU, THRU+C, MERGE)

Press the Encoder to select. Turn Encoder to select MIDI output mode. This may be one of the following:

XMT to transmit TimeFactor MIDI data

THRU to pass incoming MIDI data to the MIDI outputs.

THRU+C to pass incoming MIDI data to the MIDI outputs, mixed with any MIDIclock generated by the TimeFactor.

MERGE to pass incoming MIDI data to the MIDI outputs, mixed with any MIDI messages generated by the TimeFactor.

If THRU is selected, the TimeFactor cannot generate any MIDI messages.
THRU+C and MERGE should NOT be used with heavy MIDI input.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[DUMP] – Dump Select (**ALL**, CURRENT, PRESETS, SYSTEM)

Press the Encoder to select. Turn Encoder to set what is being backed up via SysEx Dump or Dump Request.

If ALL is selected, all saved Presets and System settings are dumped.
If CURRENT is selected, only the currently loaded effect is dumped.
If PRESETS is selected, all 100 Presets are dumped.
If SYSTEM is selected, all System Mode settings are dumped.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[CLK IN] – MIDI Input Clock Enable (ON**, OFF**)

Press the Encoder to select. Turn Encoder to set MIDI Input Clock ON or OFF.
If ON, MIDI Clock is used as the Tempo source, instead of Tap.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[CLK OUT] – MIDI Output Clock Enable (ON, OFF)

Press the Encoder to select. Turn Encoder to set MIDI Output Clock ON or OFF.
If ON, TimeFactor can now be used as a MIDI Clock source.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[CLK FLT] – MIDI Clock Filter Enable (ON, OFF)

Press the Encoder to select. Turn Encoder to set MIDI Clock Filter ON or OFF.
If ON, TimeFactor can be used with an unstable MIDI Clock source.

Press the Middle Footswitch once to back-up one level to MIDI menu.
Press the Middle Footswitch twice to go to top level System menu.

[GLOBAL] - Global Functions

After entering System mode, turn the Encoder to select [GLOBAL], then press the Encoder to enter the Global functions settings mode. Turn the Encoder to scroll through the following Global functions. Press the Encoder to select and set:

[MIX] – Enable Global Mix (ON, OFF)

If Mix is ON, values are still stored with Presets, but not used. Instead, the current mix value is used for all Presets. If Mix is OFF, the value at the time the Preset was saved is used.

Press the Middle Footswitch once to back-up one level to GLOBAL menu.
Press the Middle Footswitch twice to go to top level System menu.

[TEMPO] – Enable Global Tempo (ON, OFF)

If Tempo is ON, values are still stored with Presets, but not used. Instead, the current tempo value is used for all Presets. If Tempo is OFF, the value at the time the Preset was saved is used.

Press the Middle Footswitch once to back-up one level to GLOBAL menu.
Press the Middle Footswitch twice to go to top level System menu.

[ISW] – Enable Global Input Swell (ON, OFF)

Press the Encoder to select. Turn the Knob to set Global Input Swell ON or OFF. If Global Input Swell is ON, Input Swell will always be active, whether or not it was enabled in the current preset.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[OSW] – Enable Global Output Swell (ON, OFF)

Press the Encoder to select. Turn the Knob to set Global Output Swell ON or OFF. If Global Output Swell is ON, Output Swell will always be active, whether or not it was enabled in the current preset.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[UTILITY] - Utility Functions

After entering System mode, turn the Encoder to select [UTILITY], then press the Encoder to enter the Utility functions settings mode. Turn the Encoder to scroll through the following Utility functions. Press the Encoder to select and set:

[ROUTE] – Set the Routing Mode (NORMAL, PRE.PST, WET.DRY)

See p.44 for information on Routing Modes.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[KNOBS] – Select how Knobs work (NORMAL, CATCHUP, LOCKED)

Press the Encoder to select. Turn the Encoder to select CATCHUP or lock the knobs.

In NORMAL mode, the Parameter Control Knobs are always active. With CATCHUP selected, the Parameter Control Knobs must be turned to the position which corresponds to their current parameter value before they become active. See p.34 for more info on CATCHUP.

The knobs can also be LOCKED, to prevent inadvertent changes to your sound.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[SPILL] – SpillOver Enable (ON, OFF)

Press the Encoder to select. Turn the Encoder to set SpillOver ON or OFF.

With Spillover OFF, changing Presets results in an abrupt change in the type of echoes. With SpillOver ON, the lingering echoes of one Preset will fade into the echoes of the next Preset.

The SpillOver feature is a good way to provide smooth transitions when switching between Presets.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[BANKS] – Select the Number of Active Preset Banks (1-10)

Press the Encoder to select. Turn Encoder to set the total number (from 1 to 10) of Preset Banks that are currently active. Only Presets saved in active Banks are available for loading using the Footswitches. All Presets may still be loaded using MIDI program change.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[PDLOCK] – Enable Expression Pedal Lock (ON, **OFF**)

Press the Encoder to select. Turn the Encoder to set Pedal Lock ON or OFF.

With Pedal Lock OFF, the Expression Pedal can be programmed live at any time. With Pedal Lock ON, Expression Pedal programming is disabled and all Expression Pedal settings are locked.

The Pedal Lock feature is a good way to ensure that Expression Pedal settings do not change.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[PDLCAL] – Auto-Calibrate Expression Pedal (**ON**, OFF)

Press the Encoder to select. Turn the Encoder to set Auto-Calibration ON or OFF. See p.35 for more info on Pedal Calibration.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[SER#] – Serial Number

Press the Encoder to display your TimeFactor's unique serial number. You'll need to know this number to request support and to download software updates.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

[SW VER] - Software Version

Press the Encoder to display your TimeFactor's software version.

Press the Middle Footswitch once to back-up one level to UTILITY menu.
Press the Middle Footswitch twice to go to top level System menu.

H9 Control

The versions of TimeFactor starting at version 5.0.0 make it possible to use TimeFactor with MACOSX and Windows versions of Eventide's H9 Control application. This application can be used to manage factory and user Presets, create multiple Preset lists, and adjust the system settings (although it cannot be used to purchase new algorithms for TimeFactor). Extensive information on downloading, installing and using H9 Control can be found at:

www.eventide.com/AudioDivision/Support/Stompboxes/h9.aspx.

In order to begin using H9 Control with your TimeFactor pedal, connect it to the computer via USB cable and launch the application. H9 Control will then ask for your Eventide user name to ensure that the device is registered to you (if you have not already registered your pedal or created an Eventide account, please do so at eventide.com). Once it has verified the device's registration, you can begin using H9 Control with your TimeFactor pedal.

Restoring Factory Settings/Software Updates

Restoring Factory System Settings

To restore System settings, power up TimeFactor while simultaneously pressing the Right Footswitch and the Encoder until [CLEAR SETUP] is displayed.

Restoring Factory Presets and System Settings

CAUTION: This function will overwrite any Presets that you have saved.

To restore Factory Presets and all System settings, power up TimeFactor while simultaneously pressing the Middle Footswitch and the Encoder until [INITIALIZING] is displayed.

Software Updates

Occasionally, Eventide will release software updates for its Factor series pedals. These updates can be installed to the TimeFactor via USB. To enable the software update, power up while pressing the Middle Footswitch until [UPDATE] is displayed.
TimeFactor's software can be updated with the Eventide Direct Updater application. This application comes bundled with the H9 Control desktop application, but it can also be downloaded individually from the website.

To update TimeFactor via H9 Control, please complete the following steps:

1) Download and Install H9 control for your appropriate OS from the H9 support page: http://eventide.com/AudioDivision/Support/Stompboxes/H9.aspx
2) Connect your TimeFactor Pedal to your computer using a standard USB cable (not provided by Eventide).
3) Launch the H9 Control application. If you have not yet registered your pedal, you will be prompted to enter your Eventide user account and password.
4) If H9 Control doesn't automatically launch the bundled application, Eventide Direct Updater, click the "Pedal" tab at the bottom of the window, select "Update Stompbox's Software," and launch the Direct Updater application. Follow the steps listed in the Updater. You will be prompted for your Eventide user account and password.

To update TimeFactor via the Eventide Direct Updater installed directly without H9 Control:

1) Download and Install the latest version of Eventide Direct Updater from the TimeFactor Support Page. You must log in to Eventide.com and register your TimeFactor to do this.
2) Connect your TimeFactor Pedal to your computer using a standard USB cable (not provided by Eventide).
3) Launch the Eventide Direct Updater application. This can take up to 1 minute as the software recognizes the pedal.
4) Select the System Version from the Available Updates list and click the Update button.
5) When prompted for a username and password, enter your Eventide.com username and password.
6) Review the Release Notes and License Agreement displayed by the Eventide Direct Updater.

Further information on software updating can be found at
www.eventide.com/AudioDivision.asp

MIDI Implementation Chart

Mode 1: Omni On, Poly Mode 2: Omni On, Mono O=Yes
Mode 3: Omni Off, Poly Mode 4: Omni Off, Mono X=No

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	
Mode	Default Messages Altered	3 X X	1 X X	
Note Number	True Voice	X	X	
After Touch	Key's Channels	X X	X X	
Pitch Bender		O	O	
Control Change	0 : 127	O	O	CC0 - CC99
Program Change	True#	O	O	
System Exclusive		O	O	ID: XXh Bulk Dump/ Rcv only
System Common	Song Pos Song Select Tune	X X X	X X X	
System Real Time	Clock Commands	O O	O O	 Looper - Start, Stop
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	X X X X	X X X X	

Specifications

Analog I/O

Input Impedance
500K ohms
Output Impedance
470 ohms
Recommended Load Impedance
10K ohms or greater

Connectors

Input 1 (mono) - ¼ inch mono phone jack
Input 2 - ¼ inch mono phone jack
Output 1 (mono) – ¼ inch mono phone jack
Output 2 – ¼ inch mono phone jack
Expression Pedal – ¼ inch mono phone jack
Aux Switch – ¼ inch stereo phone jack
USB – Type B Socket. Use USB 2.0 cables only.
AC Adaptor Jack
MIDI In – Five pin DIN (Female)
MIDI Out/Thru – Five pin DIN (Female)

Power Supply

9 VDC, 1200 ma, Tip hot (+)

Dimensions

English: 4.8" (H) x 7.5" (W) x 2.12" (D)
Metric: 122 (H) x 190 (W) x 54 (D) mm

Weight

TimeFactor 2.15 lbs, 1 kG

Specifications subject to change without notice.

LIMITED WARRANTY

Eventide Stompboxes are built to exacting quality standards and should give years of trouble-free service. If you are experiencing problems which are not cleared up or explained as normal in the manual, your recourse is this warranty.

What the warranty does and does not cover

Eventide Inc. warrants the above-identified unit to be free from defects in workmanship and material under normal operation and service for a period of one year from the date of purchase, as detailed below. At our discretion within the warranty period, we may elect to repair or replace the defective unit. This means that if the unit fails under normal operation because of such defect, we will repair the defective unit at no charge for parts or labor. We also assume a limited responsibility for shipping charges, as detailed below.

IN NO EVENT WILL WE BE RESPONSIBLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES CAUSED BY ANY DEFECT, AND SUCH DAMAGES ARE SPECIFICALLY EXCLUDED FROM THIS WARRANTY. Our sole obligation is to repair or replace the defective unit as described herein.

The warranty DOES NOT COVER any damage to the unit regardless of the cause of that damage. The unit is a complex piece of equipment that does not react well to being dropped, bounced, crushed, soaked or exposed to excessively high temperatures, voltages, electrostatic or electromagnetic fields. If the unit is damaged for these or other causes, and the unit is deemed to be economically repairable, we will repair it and charge our normal rates.

The warranty DOES NOT COVER shipping damage, either to or from Eventide.

Who is covered under the warranty

The warranty applies to the original purchaser of a new unit from Eventide or an Authorized Eventide Dealer. It is your responsibility to prove or to be able to prove that you have purchased the unit under circumstances which effect the warranty. A copy of your purchase invoice is normally necessary and sufficient for this.

Units with the serial number plate defaced or removed will not be serviced or covered by this warranty.

When the warranty becomes effective

The one-year warranty period begins on the day the unit is purchased from an Authorized Eventide Dealer or, if the unit is drop-shipped from Eventide, on the day shipped, plus a reasonable allowance for shipping delays. This applies whether or not you return your warranty registration form.

Who performs warranty work

The only company authorized to perform work under this warranty is Eventide Inc., Little Ferry, New Jersey. While you are free to give authorization to anyone else (or to work on it yourself), we will not honor claims for payment for parts or labor from you or from third parties.

Shipping within the 50 United States

You are responsible for getting the unit to our door at no cost to us. We cannot accept collect or COD shipments. We will return the unit to you prepaid, at our expense, using an expeditious shipping method, normally United Parcel Service.

Shipping outside the 50 United States

If you purchased the unit from a dealer in your country, consult with the dealer before returning the unit. If you wish to return the unit to us, please note the following:

1. The unit must be prepaid to our door. This means that you are responsible for all shipping charges, including customs brokerage and duties. When a unit is shipped to us it must be cleared through United States Customs by an authorized broker. You must make arrangements for this to be done. Normally, your freight forwarder has a branch in the United States which can handle this transaction.
2. All shipments will be returned to you collect. If this is impossible because of shipping regulations or money is due us, we will request prepayment from you for the appropriate amount. If you nominate a freight carrier, we reserve the right to select a substitute if necessary.

This warranty gives you specific legal rights and you may also have other rights which vary from location to location.

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