PITCHFACTOR

User Guide

⚡	**CAUTION**	⚠
	RISK OF ELECTRIC SHOCK **DO NOT OPEN**	

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.
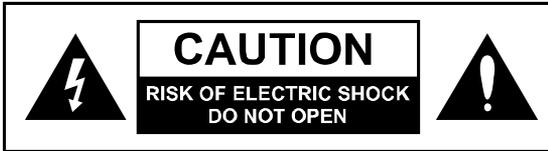
WARNINGS

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.

Eventide®
STOMPBOXES

Complete UG Part # 159022 Rev C
Contents Part # 141175 Rev C
This manual covers software version 5.2 and above.

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Introduction

Congratulations on choosing an Eventide Harmonizer brand 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. PitchFactor is the latest 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

Factor pedals pack an unprecedented degree of processing and flexibility into a small package. Our goal in creating the Factor family 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 PitchFactor 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 10 best pitch-based effects
- Up to four pitch-shifted voices
- Support for instrument and line level connectivity
- External Expression Pedal and Aux Switch for external control
- 100 User Presets - Instant access to any two Presets at a time
- Bright, easy-to-read Billboard Display
- Learn feature to automatically set musical scale
- Extensive MIDI functionality
- Software upgrades via USB or MIDI
- Built-in Tuner

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

Dry / Effect Mix   Peak LED   Pitch A & B Mix   Effect Control Knobs

Encoder / Switch

Tempo LED

Effects

Left Footswitch
Active/Bypass /
Preset 1

Middle Footswitch
Flex / Learn /
Preset 2

Right Footswitch
Tap Tempo /
Bank increment / Mode Toggle
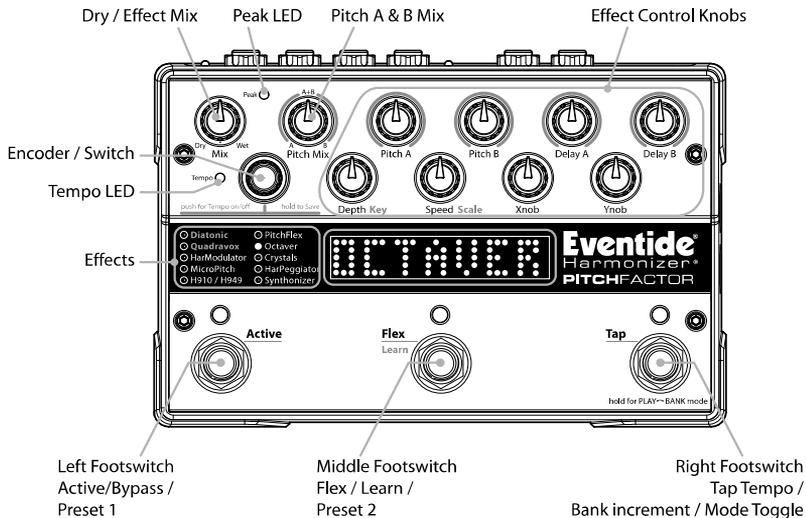
The Basics

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

The Effects

There are ten distinct effect 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 wet/dry mix, pitch ratios, delay, feedback, modulation and to 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, Learn and Flex. 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

PitchFactor 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." PitchFactor lets you save up to 100 Presets. Instructions on saving Presets will be found later in this User Guide.

The Banks

PitchFactor 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 Banks are accessed by tapping the Right Footswitch in Bank Mode.

Play and Bank Footswitch Modes

To switch between Play and Bank Modes, press and hold the Right Footswitch for two seconds. Notice that the Billboard display changes.

In Play Mode, the Billboard displays the effect name except for Diatonic and Quadravox which display the key that you're playing in.

In Bank Mode, you'll see the word "BANK", a number, a colon, and another number. For example, [BANK 1:1] indicates Preset 1 of Bank 1. 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 unit 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. The Left Switch toggles Bypass/Active. An ORANGE LED located above the Left Footswitch indicates that the Effect/Preset is Active (not Bypassed). The action of the Middle Switch depends on the effect type. For some effects, the switch engages the Learn mode. For other effects, the switch is used to "FLEX" the pitch. The Right Switch lets you tap a Tempo.

Using Bank Mode

Go to Bank Mode. The Billboard displays the number of the current Preset - for example you might see [BANK 1:1]. This means that you're in Bank 1 and that Preset 1 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. PitchFactor 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. PitchFactor 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 Foot-switch to load Preset 1 from the new Bank or press the Middle Footswitch to load Preset 2.

Note: See System Mode for setting active Bank range and for using AUX Switch to decrement through the Banks.

PitchFactor Power Up

When PitchFactor 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 PitchFactor's inputs directly to its outputs.

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. PitchFactor is smart enough to know what cables are connected and to automatically route the signals for your set up.

Connections

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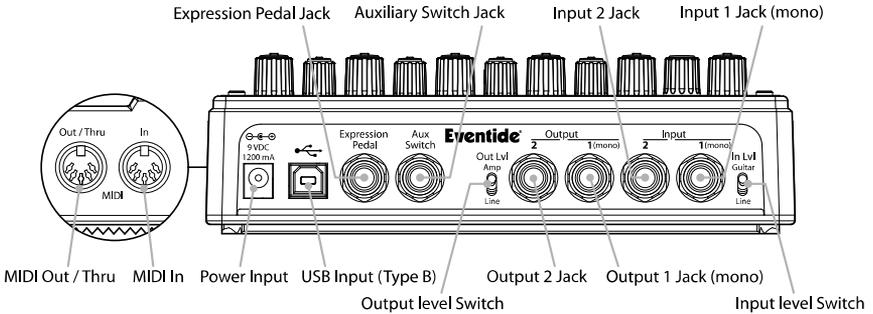
PitchFactor can be connected directly to your guitar, behind another pedal, in your Amp's effects loop or to your mixer's send/return or insert. Given the variety of guitars, effects pedals, amps and mixers, we can't describe a 'best' setup. The setup should be driven by you and the sound that you're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

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

Typical Setups

The following are some suggested ways of connecting to your rig and suggested Input and Output level switch settings:

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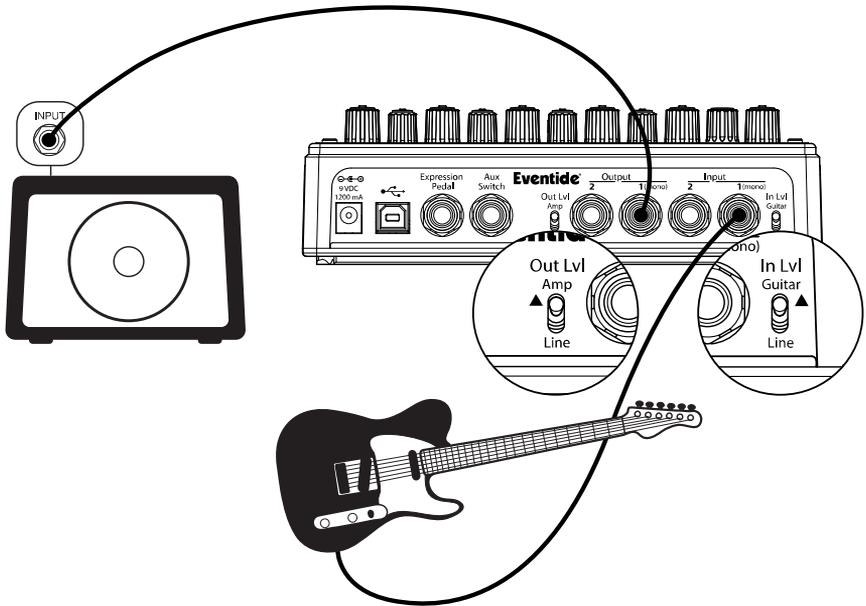
This is the simplest way to connect PitchFactor. Connect your guitar cable to PitchFactor Input 1 and a cable from PitchFactor Output 1 to your amp. Input and Output Level switches (In Lvl & Out Lvl) should be set to GUITAR and AMP.

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

Guitar > PitchFactor > Amp 1/Amp2 – Mono or Stereo In/Stereo Out
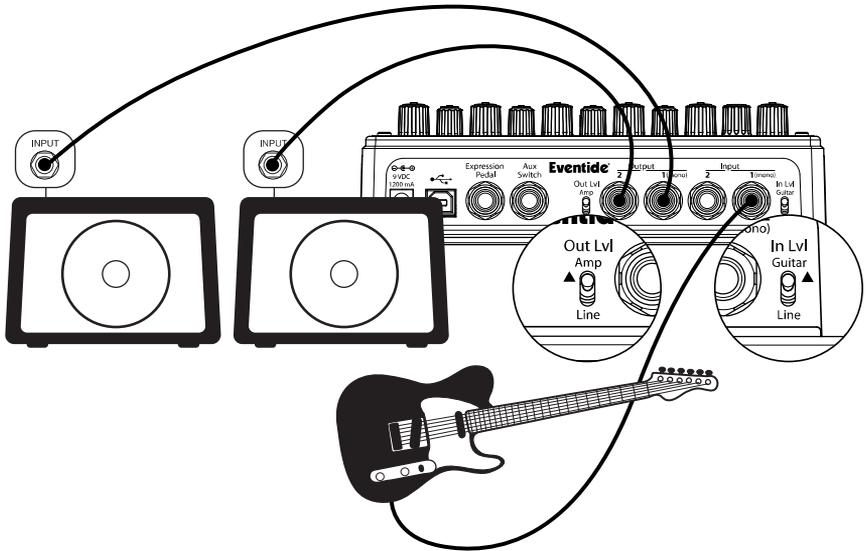
Connect your guitar cable to PitchFactor Input 1 and a cable from PitchFactor Output 1 to one amp and a second cable from PitchFactor Output 2 to the other amp. Input Level switch (In Lvl) should be set to GUITAR and Output Level switch (Out Lvl) set to AMP.

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

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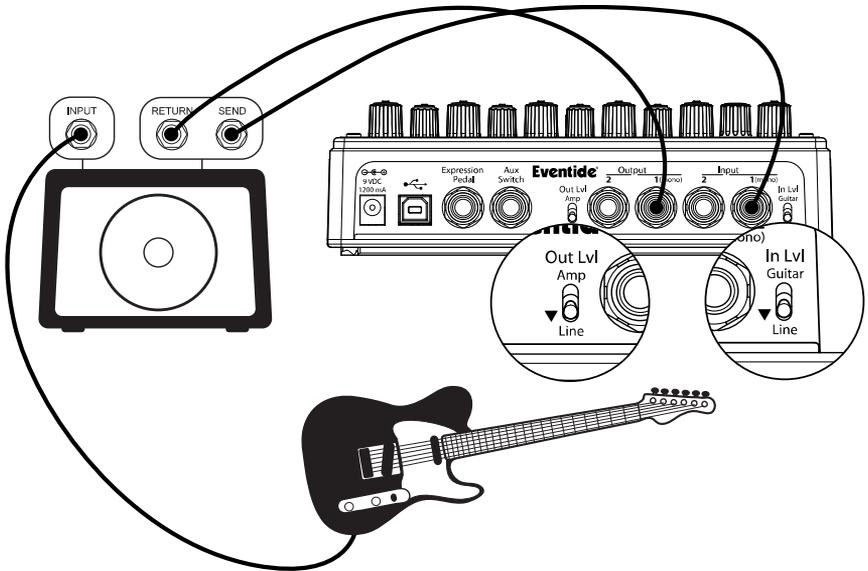
If your Amp has an Effects Loop, you can connect PitchFactor's Input to the Amp Effect Loop Send and PitchFactor's Output to the Amp Effect Loop Return. Most guitar amp's Effects Loops run at Line Level so set PitchFactor's Input and Output Level Switches to "Line."

Mixer Effects Send> PitchFactor > Mixer Effects Return
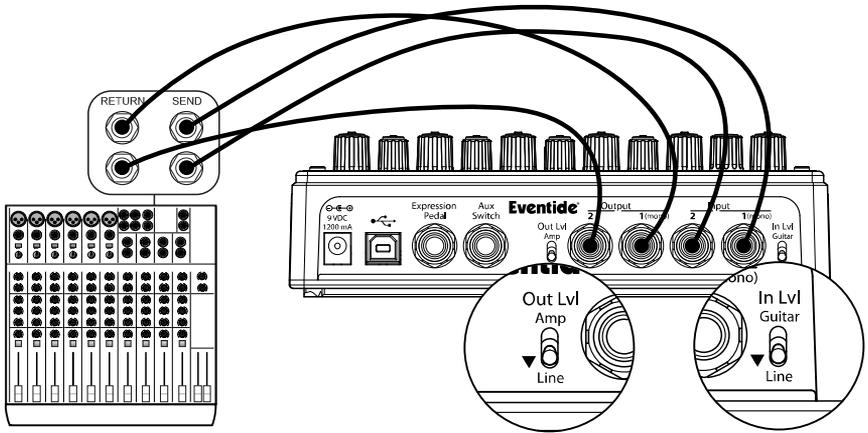
When connecting PitchFactor to a Mixer, set PitchFactor's Input and Output Level Switches to "Line."

Setting and Monitoring Levels

The PitchFactor'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 PitchFactor 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

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 (see p.41). 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 Encoder 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 PitchFactor Bypass function that works best with your setup. PitchFactor gives you the choice of Bypass type – DSP Bypass or Relay Bypass or DSP+FX Bypass. PitchFactor's default Bypass setting is DSP Bypass.

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, and protects against gain and tone change when bypassed.

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 PitchFactor uses relays to "hard wire" your inputs to your outputs. (In fact, whenever PitchFactor's power is off, the relays are disabled and PitchFactor's electronics are completely bypassed.)

Relay Bypass is not a good choice however if PitchFactor's input is your guitar and you've connected PitchFactor'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 PitchFactor 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, PitchFactor will not have unity gain. In this case, using Relay Bypass will result in a level change whenever you Bypass PitchFactor.

DSP+FX Bypass

When [DSP+FX] is selected, Bypass sends the audio at the DSP's inputs directly to the outputs with the decaying 'tail' of the current effect mixed in.

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] or [RELAY] or [DSP+FX].
7) Press and hold the Encoder and Right Footswitch simultaneously for a few seconds to exit System Mode.

Note: Using MIDI Program Change to control Bypass - MIDI Program Change is typically used to load a preset but it can also be programmed to directly control the unit's BYPASS setting. See the System Mode [MIDI] section for details.

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

Note: With PitchFactor's power 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 PitchFactor. 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

PitchFactor detects which input and output jacks have cables plugged in and routes audio I/O accordingly. 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 PitchFactor using an effect send/return loop (either your amp's or a mixer's), PitchFactor's Killdry feature can be enabled.

When Killdry is enabled, PitchFactor does not send any dry signal to the outputs; only the Effect. Note that when Killdry is enabled, Bypassing will mute the Effect rather than Bypass it when DSP Bypass is selected.

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

The Mix setting is always saved with each Preset. Often however, it can be useful to have the Mix setting uniform for all of the Presets that you're using. To do this, use the System GLOBAL MIX command. When GLOBAL MIX is ON, the Mix setting saved with the Preset is ignored and the current Mix setting is used for all Presets.

Turning GLOBAL 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 [GLOBAL] is displayed.
3) Momentarily press the Encoder.
4) Turn the Encoder until [MIX] 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.

Peak LED

The Peak LED lights to indicate that the input signal level is near clipping. Occasional flashing is OK. If the Peak LED is lit solidly, reduce the input level either by reducing the signal level fed to PitchFactor or by setting the rear panel input switch to the Line position. PitchFactor has a soft clipping circuit that will reduce nasty noises when overloaded.

Tuner

In Play Mode, press and hold the Middle and Right Footswitches simultaneously to enable the tuner. Press any of the Footswitches to exit the tuner.

When the tuner is enabled, audio is either Bypassed or Muted as determined by the setting in System Mode. The default setting is Muted.

PitchFactor supports two types of tuner display: a graphic display and a numerical (cents) display. Press the encoder to toggle between the two.

The tuner's default reference frequency is set to 440 Hz. See System Mode for instructions on changing the reference frequency.

The Effects

PitchFactor has ten distinct pitch-based Effects – Diatonic, Quadravox, HarModulator, Micro-Pitch, H910/H949, PitchFlex, Octaver, Crystals, HarPeggiator, and Synthonizer.
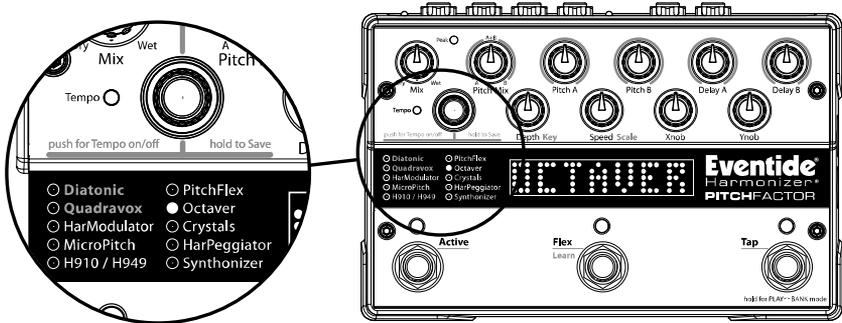
Selecting Effects

The Effects can be selected by turning the Encoder. Using the Encoder to select Effects is a good way to get a feel for what PitchFactor 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 - Adjusting the Effects

When an Effect is selected using the Encoder, the Effect's parameter values are set by the current position of the ten control knobs. Whenever 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.
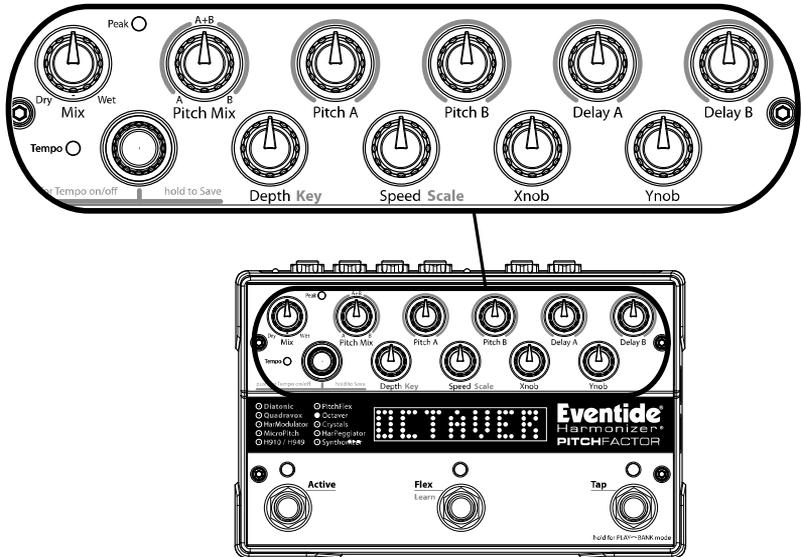
Mix Control

Controls the wet/dry signal ratio from 0 (dry signal only) to 100% (wet only). This control works identically for all the effects. See the earlier description of KILLDRY.

Diatonic

Diatonic pitch shifters track the notes that you're playing and shift the pitch by the selected harmonic interval based on the Key and Scale that you've selected.

PitchFactor's Diatonic Shifter features twin independently-controlled pitch changers (A & B) with independent delays and feedback. Diatonic tracks the notes that you're playing and automatically adjusts the amount of pitch shift so that the resultant note is in-key. Use the PitchA/B control knobs to set each pitch interval. Use the Control Knobs to select the key, scale and interval.

You can also use Learn mode to set the key by playing the tonic note while holding down the Middle Footswitch. You must be in Play Mode to use the Learn feature or, alternately, you can use the AUX switch option.

Note: Due to the limitations of Diatonic Pitch Shifting, the pitch tracking algorithm is monophonic and works best on single, isolated notes, and octaves.

Pitch Mix

Controls the ratio of the level of PitchA to PitchB.

Note: The A/B mix is set before the feedback delays so that feedback can continue on A or B and not be affected by new audio when the Pitch Mix control is turned completely to the opposite channel. This allows you to create a mini "looper" effect.

Pitch A/Pitch B

Selects the harmonic interval (pitch shift) for PitchA and PitchB.

Delay A/B

Controls the amount of time delay of the A and B pitch shifted outputs. With Tempo OFF, delay is displayed in mSec. With Tempo ON, delay can be sync'd to the tempo and is displayed as a rhythmic sub-division of the tempo beat value.

Key/Depth

Selects the key.

Scale/Speed

Selects the scale. The supported scales are: [MAJ]-Major, [min]-Minor, [DOR]-Dorian, [PHRG]-Phrygian, [LYD]-Lydian, [MLYD]-Mixolydian, [LOC]-Locrian, [Hmin]-Harmonic Minor, [Mmin]-Melodic Minor, [Wton]-Whole Tone, [ENIG]-Enigmatic, [NPLT]-Neapolitan, [HUNG]-Hungarian.

Xnob

Controls level of voice A Feedback. The feedback delay length is the length of either Delay A or Delay B, whichever is longer.

Ynob

Controls level of voice B Feedback. The feedback delay length is the length of either Delay A or Delay B, whichever is longer.

Quadravox

Quadravox is similar to Diatonic but delivers up to four pitch shifted voices (A, B, C, D) instead of two. You can select the interval of each voice independently. You can also turn OFF any of the voices.

NOTE: It's possible to select OFF for all four voices. If you do, and the Mix knob is set 100% Wet, there will be no output signal.

Pitch Mix

Controls the ratio of level PitchA+C to PitchB+D. With the knob set full counter-clockwise, PitchA + PitchC are set to equal level. Full clock-wise, sets PitchB + PitchD to equal levels. The ratio of level of PitchA to PitchC and of PitchB to PitchD are fixed at equal levels and cannot be changed.

Pitch A/Pitch B

Selects the harmonic interval (amount of pitch shift) for voices A and B. Turning the control to the full counterclockwise position will turn OFF the corresponding voice.

Delay A

NOTE: QUADRAVOX's delay controls work differently from those in the other effects. Quadravox's four delays are not independently variable. Instead, they are staggered with A having the shortest delay, B longer than A, C longer than B and D the longest. The Delay A control is used to set the last delay, D.

With Tempo OFF, delay is displayed in mSec. With Tempo ON, delay can be sync'd to the tempo and is displayed as a rhythmic sub-division of the tempo beat value.

Delay B

The Delay B control is used to select the grouping of the four delays (A, B, C, D). The delays can be evenly spaced or spread out as represented by the graphical display. When the delays grouping is such that there is no space between the letters, all four delays are set to the same length.

Key/Depth

Selects the key.

Scale/Speed

Selects the scale.

Xnob

Controls the amount of pitch shift for voice C. Turn the control full counterclockwise to turn voice C OFF.

Ynob

Controls the amount of pitch shift for voice D. Turn the control full counterclockwise to turn voice D OFF.

HarModulator/Chromatic Shift

HarModulator combines twin chromatic pitch shifters with modulation to deliver an extremely wide range of effects from the subtle to the insane. Chromatic pitch shifters allow you to set the pitch ratio of each of the voices in semi-tone intervals (12 steps per octave). HarModulator features a six octave range (three up, three down).

To get a sense of how to use the modulation function, it's best to start simply by setting both PitchA and PitchB to UNISON, the delays to minimum, and the Ynob to minimum (zero feedback). Now use the Depth control to set the amount of pitch modulation and the Speed control to adjust the modulation rate. Turn the Xnob to try different modulation shapes and sources. Note that you can select ENVELOPE as a source and use the dynamics of your playing to drive the modulation.

OK, now try that with some pitch shifting, delay and feedback!

Pitch Mix

Controls the ratio of the level of PitchA to PitchB.

Pitch A/Pitch B

Selects the pitch shift interval in semitone increments from down three octaves to up three octaves.

Delay A/B

Controls the amount of time delay for voices A and B. With Tempo OFF, delay is displayed in mSec. With Tempo ON, delay can be sync'd to the tempo and is displayed as a rhythmic sub-division of the tempo beat value.

Key/Depth

Controls the amount (or depth) of pitch modulation displayed in cents over a four octave range (two octaves down, two octaves up). Fine control for micro-pitch modulation is available and displayed in cents, ranging from -30 to +30 cents. When the modulation is a positive value the two voices will modulate in sync with each other; when the value is negative they will modulate out of sync.

Scale/Speed

Controls the modulation rate.

Xnob

Selects the modulation shape. Turn the knob fully clockwise to select Envelop and your playing will drive the pitch modulation.

Ynob

Controls the amount of feedback for Delays A and B.

MicroPitch

Fine-resolution pitch shifter for subtle tone-fattening plus delays for interesting slap back effects.

Pitch Mix

Controls the ratio of the levels of PitchA to PitchB.

Pitch A

Controls the amount of pitch shift up for voice A from Unison to +50 cents.

Pitch B

Controls the amount of pitch shift down for voice B from Unison to -50 cents.

Delay A/B

Controls the amount of time delay for voices A and B in mSec.

Key/Depth

Sets the modulation depth.

Scale/Speed

Sets the modulation rate.

Xnob

Controls the amount of feedback.

Ynob

Controls the tone filter. Turn the knob counterclockwise to darken your tone, clockwise to brighten it and set it to 12 o'clock for no filtering.

H910/H949

This effect emulates the sound and functionality of Eventide's legendary H910 and H949 Harmonizer™ effects units. The H910 Harmonizer was the world's first real-time pro-audio pitch changer and introduced the word "glitching" to the pro-audio vocabulary. The H949 was the world's first de-glitched Harmonizer.

Unlike the Diatonic pitch shifters, pitch shifting is in the feedback loop allowing for arpeggiated repeats.

Note: For the purists in our audience, you may remember that the H910 and H949 were mono in, stereo out devices. In other words, they featured a single pitch shifter with independently adjusted delays. To best emulate these vintage boxes, we recommend that you set either PitchA or PitchB to unison (1.00) and use that output for feedback without pitch change. Also note that PitchFactor offers ten times the maximum delay of the original gear.

Pitch Mix

Controls the ratio of the level of PitchA to PitchB.

Pitch A/Pitch B

Controls the amount of pitch shift for voices A and B expressed as a ratio.

Delay A/B

Controls the amount of time delay for voices A and B. With Tempo OFF, delay is displayed in mSec. With Tempo ON, delay can be sync'd to the tempo and displayed as a rhythmic sub-division of the tempo beat value.

Key/Depth

Selects the type of Harmonizer emulated [H910], [H949-1], [H949-2] and [MODERN]. The H949 offered two splicing algorithms. Algorithm 1 created a 'soft' gradual splice. Algorithm 2 analyzed the audio and used an intelligent splicing algorithm that was successful in greatly reducing glitching. PitchFactor allows you to select each of these algorithms and emulate their classic sounds. Of course, given the many orders of magnitude increase in DSP power since the days of the H910/H949, even greater intelligence can be brought to bear in de-glitching. PitchFactor's [MODERN] pitch shifting algorithm takes advantage of its powerful DSP to further improve de-glitching. Each of these algorithms has a distinct quality and, when combined with various amounts of delay and feedback, offer a broad pallet of pitch-shifting effects.

Scale/Speed

Selects the type of pitch ratio control for PitchA and PitchB knobs. Normal allows continuous control as a pitch ratio. Micro allows for fine adjustments around Unison. Chromatic allows you to select intervals equal to the 12 note per octave scale.

Xnob/Ynob

Controls the amount of feedback for pitch shifter A/B.

PitchFlex

Use an Expression Pedal with this effect or use the Flex Switch.

Pitch Mix

Controls the ratio of the level of PitchA to PitchB.

Pitch A/Pitch B

Sets pitch shift of voices A and B in the heel position. When "OFF" is selected, the voice is muted at the heel position and the pitch is set to unison.

Delay A/Delay B

These parameters are for use when using the Flex footswitch to control the pitch change effect for voices A and B. The Delay A knob sets the time to move from the virtual "toe" to the virtual "heel." The Delay B knob sets the time to move from "heel" to "toe." In Tempo Mode maximum is $\frac{1}{2}$ note.

Key/Depth

A low pass filter to "darken" the effect.

Scale/Speed

Controls the "shape" that the pitch modulation follows when using the Flex Switch.

Xnob

Sets voice A's pitch shift in the toe position. When "OFF" is selected, the A pitch shifter is disabled at the toe position and toe is treated as unison.

Ynob

Sets voice B's pitch shift in the toe position. When "OFF" is selected, the B pitch shifter is disabled at the toe position and toe is treated as unison.

Octaver

Octavers traditionally use analog techniques to track the pitch of the input audio signal and synthesize a signal whose musical tone is an octave lower than the original. PitchFactor's Octaver creates a pair of sub-harmonics, one an octave below the note that you're playing and the other two octaves below. It also adds an Octave FUZZ generator. The sub-harmonics can be filtered and the filters modulated by the input audio level.

Octaver is a parallel (dual mono) rather than stereo effect.

Note: Tempo cannot be used with this effect.

Pitch Mix

Controls mix of 1st and 2nd sub-harmonics (A&B). Unlike PitchFactor's other effects, Inputs 1 and Inputs 2 are not mixed.

Pitch A/Pitch B

Controls the center frequency of the resonant filters for A/B.

Delay A/Delay B

Controls filter resonance for A/B.

Note: After adjusting the filter's center frequency and resonance, you may want to try modulating the filter. The next two controls set levels for envelope-controlled modulation.

Key/Depth

Octaver allows your playing to vary the center frequency of the filters. This control adjusts the degree to which the input signal's envelop shifts the filter's center frequency.

Scale/Speed

Controls the sensitivity of the frequency sweeps to the input signal level.

Xnob

Controls the amount of distortion (FUZZ).

Ynob

Controls the mix of octaves [oct] and FUZZ [fz].

Crystals

Crystals is a classic Eventide effect – twin reverse pitch changers, with independently adjustable delays and feedback with added reverb.

Pitch Mix

Controls the ratio of the levels of PitchA to PitchB.

Pitch A/Pitch B

Controls the amount of pitch shift for A/B in cents (1 cent = 1/100th of a semitone).

Delay A/B

Controls the length of the reverse time buffers for A/B. With Tempo OFF, delay is displayed in mSec. With Tempo ON, delay can be sync'd to the tempo and is displayed as a rhythmic sub-division of the tempo beat value.

Key/Depth

Selects the Reverb Mix level.

Scale/Speed

Selects the Reverb Decay rate.

Xnob

Controls level of Feedback A.

Ynob

Controls level of Feedback B.

HarPeggiator

HarPeggiator creates dual 16-step arpeggios that combine three elements:
1) dual 16-step pitch-shift sequencer
2) dual 16-step rhythm sequencer
3) dual 16-step effect sequencer

HarPeggiator lets you choose from a list of pre-programmed sequences for pitch, rhythm and effect and using the many possible combinations gives you quite a bit of creative control. That writ, it's important to understand the underlying concepts or you're likely to spend quite some time scratching your head.

First off, we suggest that you experiment with only one voice (e.g. A) and the pitch sequence only. To do so, turn OFF the rhythm and effect controls (set Delay A and Xnob fully counterclockwise). This is important because, by definition, for many rhythms not every step in the sequence is played. For example, you could select a rhythm that divides the 16 steps into four bars of quarter notes and only sounds the first step (note) of each bar. As a result, although the pitch sequence is 16 steps long, only four notes will sound. Also, use the Scale/Speed control to set an appropriate length for each step so that you can clearly hear the pitch at each step.

Note: If MIDI clock and Tempo are both set to ON, the sequencer will not progress through the steps until a MIDI clock signal is applied to PitchFactor.

Pitch Mix

Controls the ratio of arpeggiatorA to arpeggiatorB.

Pitch A/Pitch B

Selects one of 27 pitch sequences for A/B. The pitch sequences are selectable presets numbered from [01] to [26] plus random [RANDM]. Turn the control full counterclockwise [Arp OFF] to turn off the pitch effect, full clockwise to select the random sequence. The pitch sequences are numbered and the display graphically indicates the 16-step progression.

Due to its limited resolution, the display can only give a general sense of the shape of the pitch sequence. There are 16 columns representing each of the 16 steps in the sequence and the 'solid' horizontal bar represents unison. Dots above and below indicate pitches above and below unison. For the majority of pitch sequences, each step is a fixed pitch however, PitchFactor has the ability to glide the pitch within any step and this feature is used in several of the sequences. The last sequence [RANDM] is a random sequence of pitches.

When selecting pitch sequences, it is best to first turn OFF both Rhythm and FX sequences so that the pitch sequence is unaffected by these parameters. As always, your ears are the best judge of what works.

The first several pitch sequences are fairly straightforward. Here's a general description of each of these sequences:

1. All steps are one octave up.
2. All steps are one octave down.
3. All steps are a fifth up.
4. All steps are a fourth down.
5. Unison & one octave down.
6. One octave down, unison, one octave up, two octaves up.
7. Two octaves down, one octave down, unison, one octave up.
8. One octave down, unison, one octave up, 2 octaves up.
9. Unison, one octave up, unison, one octave up.
10. Unison, one octave up, unison, one octave up, etc.
11. Unison and fifth up.
12. One octave down climbing to unison.
13. Unison, fourth down, one octave down, two octaves down, unison, one octave up.
14. Starts at two octaves down, swoops up to unison and at the 13th step jumps up one octave and ends at unison.
15. Mostly up one octave with a short swoop to unison in the middle, back to an octave up and ending by swooping to unison.
16. Starts at unison, swoops down two octaves, makes a couple of jumps up one octave and ends on unison.
17. Starts at unison, swoops down one octave, jumps back to unison, brief jump up one octave, brief jump to up a fifth and ends on unison.
18. Four quick jumps up one fifth, swooping back down to unison.
19. Swoops from up one octave up one octave and does it twice.
20. Swoops from up one octave down to unison and does it twice.
21. Starts at unison steps up one octave and steps back down to unison.
22. Staggers its way from unison to up one octave.
23. Similar to 22.
24. Swoops up from unison to one octave up and does it four times.
25. Jumps between unison and octaves and fifths and fourths up and down.
26. Similar to 25.

For those who find the above description less than satisfying the following tables may help. In these tables, the 26 sequences are labeled at the column heads and, for each sequence, the 16 steps are listed vertically. Pitch sequences marked with an asterisk glide the pitch within a step in the sequence and an arrow indicates the step in the sequence that glides and the direction of the glide.

Intervals are indicated as 1oct = one octave, 2oct = 2 octaves, M2 = major second, m2 = minor second, M3 = major third, m3 = minor third, P4 = perfect fourth, d5 = diminished fifth, P5 = perfect fifth, M6 = major sixth, m6 = minor sixth, M7 = major seventh, m7 =minor seventh.

	1	2	3	4	5	6	7
1	+1oct	-1oct	+P5	-P4	unison	-1oct	-2oct
2	+1oct	-1oct	+P5	-P4	unison	-1oct	-2oct
3	+1oct	-1oct	+P5	-P4	unison	-1oct	-2oct
4	+1oct	-1oct	+P5	-P4	-1oct	-1oct	-2oct
5	+1oct	-1oct	+P5	-P4	unison	unison	-1oct
6	+1oct	-1oct	+P5	-P4	unison	unison	-1oct
7	+1oct	-1oct	+P5	-P4	unison	unison	-1oct
8	+1oct	-1oct	+P5	-P4	-1oct	unison	-1oct
9	+1oct	-1oct	+P5	-P4	unison	+1oct	unison
10	+1oct	-1oct	+P5	-P4	unison	+1oct	unison
11	+1oct	-1oct	+P5	-P4	unison	+1oct	unison
12	+1oct	-1oct	+P5	-P4	-1oct	+1oct	unison
13	+1oct	-1oct	+P5	-P4	unison	+2oct	+1oct
14	+1oct	-1oct	+P5	-P4	unison	+2oct	+1oct
15	+1oct	-1oct	+P5	-P4	unison	+2oct	+1oct
16	+1oct	-1oct	+P5	-P4	unison	+2oct	+1oct

Pitch Sequences 1 - 7

	8	9	10*	11	12*	13*	14*
1	-1oct	unison	unison	unison	-1oct↑	unison↓	-2oct↑
2	unison	unison	+1oct	unison	-m7↑	-P4↓	-1oct↑
3	+1oct	+1oct	+1oct	unison	-m6↑	-1oct↓	-P5↑
4	+2oct	+1oct	unison	unison	-P5↑	-2oct	-m3↑
5	-1oct	+1oct	unison↑	unison	-P4↑	unison	unison
6	unison	+1oct	+1oct	unison	-m3↑	unison	unison
7	+1oct	+1oct	unison	unison	-M2↑	unison	unison
8	+2oct	unison	+1oct	unison	-m2↑	unison	unison
9	-1oct	unison	+1oct	unison	unison	unison	unison
10	unison	unison	unison	unison	unison	unison	unison
11	+1oct	+1oct	+1oct	unison	unison	unison	unison
12	+2oct	+1oct	+1oct	+P5	unison	unison	unison
13	-1oct	+1oct	unison	unison	unison	+1oct	-1oct↑
14	unison	unison	+1oct	+P5	unison	unison	unison
15	+1oct	+1oct	+1oct	unison	unison	unison	unison
16	+2oct	unison	+1oct	unison	unison	unison	unison

Pitch Sequences 8 - 14

	15*	16*	17*	18*	19	20	21
1	+1oct	unison↓	unison↓	+P5↓	unison	+1oct	unison
2	+1oct	-m2↓	-d5↓	unison	+M2	+M7	+M2
3	+1oct	-M3↓	-1oct	unison	+M3	+M6	+m3
4	+1oct	-M6↓	-1oct	unison	+P4	+P5	+M3
5	+1oct	-P4oct↓	unison	+P5↓	+P5	+P4	+P4
6	+1oct	-2oct	unison	unison	+M6	+M3	+P5
7	+1oct	unison	unison	unison	+M7	+M2	+M6
8	+1oct↓	unison	unison	unison	+1oct	unison	+M7
9	+1oct	+1oct	+1oct↓	+P5↓	unison	+1oct	+1oct
10	+1oct	unison	+P5↓	unison	+M2	+M7	+M7
11	+1oct	unison	unison	unison	+M3	+M6	+M6
12	+1oct	+1oct	unison	unison	+P4	+P5	+P5
13	+1oct	unison	unison	+P5↓	+P5	+P4	+P4
14	+1oct↓	unison	unison	unison	+M6	+M3	+M3
15	+m6↓	unison	unison	unison	+M7	+M2	+m3
16	+M3↓	unison	unison	unison	+1oct	unison	+M2

Pitch Sequences 17 - 21

	22	23	24*	25	26*
1	unison	unison	unison↑	unison	-1oct
2	unison	unison	+P4	-1oct	unison
3	+M2	+m3	+P5	unison	+P5
4	unison	unison	+1oct	+1oct	+P4
5	+M3	+P4	+m3	unison	-1oct
6	unison	unison	+P4	-P5	+1oct
7	+P4	+P4	+P5	unison	-P4
8	unison	+d5	+1oct	+P5	-P5
9	+P5	+P5	+m6↑	unison	unison
10	unison	unison	+P4	-P4	-1oct
11	+M6	+P5	+P5	unison	unison
12	unison	unison	+1oct	+P4	+P5
13	+M7	+m7	+m7	unison	+P4
14	unison	unison	+P4	-m3	unison
15	+1oct	+1oct	+P5	unison	unison
16	unison	unison	+1oct	+m3	-2oct↑

Pitch Sequences 22 - 26

Delay A/B

Selects the rhythm/groove sequence for A/B. The rhythm sequences are a set of 21 selectable presets. The level of the signal at each step is graphically represented by the number of LEDs lit in each column.

Turn the control full counterclockwise [Grv OFF] to turn off the rhythm sequence, full clockwise to select a random sequence.

The pitch sequences are numbered from [01] to [20] and [RANDM] for the random rhythm.

With the rhythm sequence turned OFF, all sixteen steps of the sequence are played at full amplitude.

Key/Depth

Sets attack and release time for the dynamics of the Rhythm and Effects. At full counterclockwise the audio takes the entire step length to fade in, at 12 o'clock the audio is present for the entire step duration, and at full clockwise the audio is present for only 1/10th of the step's duration.

Note: This control has no effect when both Rhythm and Effect knobs are set to OFF.

Scale/Speed

With Tempo OFF, sets the length of each of the 16 steps in mSec. With Tempo ON, sets the length of each step relative to the tap tempo (length of note e.g. whole, quarter, etc.).

Xnob/Ynob

HarPeggiator lets you apply a sequence of filter, fuzz and/or glitch effects to each note of the 16-step sequence. Xnob/Ynob selects the effect sequence for A/B [FXA]/[FXB].

The effect sequences are a set of 25 selectable presets.

The effects are indicated by effect type - [FLT]=FILTER, [FZ]=FUZZ, and [GLT]=Glitch. [ALL] indicates that the preset uses all three effect types.

There are five filter effects, five fuzz effects and five glitch effects to choose from. Or, you can select one of four different types of random effect sequences – [RnFL]=random filters, [RnfZ]=random fuzz, [RnGl]=random glitches and [RnM]=random combination of filters, fuzz and glitches].

Turn the control full counterclockwise [FX :OFF] to turn Off effects for all steps in the sequence.

Synthonizer

Synthonizer tracks the pitch of the note that you're playing and generates a synthesized tone at the same pitch. Voice A is an additive synthesizer useful for creating organ or Theremin-style sounds; Voice B is a subtractive synthesizer for creating classic analog-style synth sounds.

Note: Tempo cannot be used with this effect.

Note: Synthonizer is mono In only. Use Input 1. Input 2 is disabled.

Pitch Mix

Controls the ratio of the two synthesized voices A & B.

Pitch A

Pitch A controls the mix of the various added waveforms to control the tone and perceived pitch of voice A.

Pitch B

Pitch B controls the blend between unison, 1 octave down, and 1 octave up synth voices to control the tone and perceived pitch of voice B.

Delay A

Controls the attack time for synthesized Voice A.

Delay B

Controls the attack time for the filter on synthesized voice B.

Key/Depth

Selects the reverb level.

Scale/Speed

Selects the reverb decay time.

Xnob

Selects voice A waveshape – sine (SIN), triangle (TRI) or sawtooth (SW).

Ynob

Controls the sweepable filter on voice B. Values from 0-50 sweep a low-pass filter, values greater than 50 sweep a high pass filter.

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 based on HarModulator and the preset's value for the modulation Speed is set to a value of 2 (very slow modulation). Now, let's say that the Speed Control Knob happens to be at its full clockwise position corresponding to a very fast modulation speed. If you'd like to tweak the speed slightly (for example, speeding it up from its current value of 2 to 3), you would reach down and turn the knob only to find that the Speed at first abruptly jumps to its maximum rate of 100 and, as you turn the control, the Speed slows down to its desired value of 3. If this happens while you're playing, it might be a tad distracting.

PitchFactor'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" (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, the Speed will not change until the Control Knob is turned from its full clockwise position to the position corresponding to the value of 2. At that point, the Control Knob becomes "live" allowing you to slightly increase the Speed without an 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 ten parameters. For proper operation the Expression Pedal should be a simple linear resistive potentiometer ("pot") with a maximum value of between 5k Ohms and 25k 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 then that whenever you move the Pedal, the Green LED next to the 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 Mix from 50% to 100% and Delay A from 10 mSec to 100 mSec. Now, you'd like to un-assign Delay A and have it fixed at 20 mSec rather than have it change when the Pedal moves. Here's what you do:

1) Press the Pedal to full heel and turn the Delay A knob to 20 mSec.
2) Press the Pedal to full toe. Turn Delay A away from 20 mSec and then back to 20 mSec.

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 when using this input with external control voltages. If you hear a "hum" only when you've connected a control voltage source to PitchFactor'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

PitchFactor's footswitches are multi-purpose and operate in one of three modes, Play Mode, Bank Mode, and System Mode. In normal use, PitchFactor is in either Play Mode or Bank Mode. System Mode is used to set up MIDI, external controls and various system parameters.

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

Play Mode

In Play Mode, the Billboard displays the effect name or, for Diatonic and Quadravox, the musical key. Three Footswitches are used to control the effect.
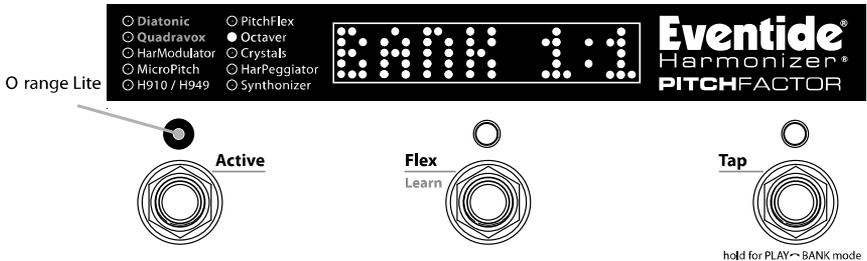
Active Footswitch

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.

Flex/Learn Footswitch

The action of the middle footswitch depends on which effect is currently running.

Diatonic/Quadravox

For the "scale aware" effects, Diatonic and Quadravox, press and hold the Learn switch while playing a note and PitchFactor will set the key to that note.

HarModulator

Shifts both voices up one octave.

MicroPitch

Doubles the pitch shift amount of both voices.

H910/H949

Press and hold for infinite repeat.

PitchFlex

Use this button in lieu of an expression pedal to sweep the pitch shift from heel to toe.

Octaver – Unused

Arpeggiator

Restarts the sequence from the beginning.

Crystals

Shifts both voices up one octave.

Synthonizer

Shifts both voices up one octave.

Tap Footswitch

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

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.

Tuner

The Tuner is accessed by pressing the Middle and Right Footswitches simultaneously. Press any footswitch to exit the Tuner and return to normal operation.

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.
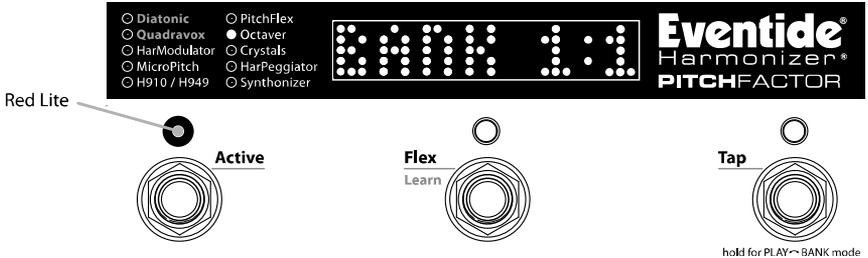
Note: The 100 Presets can be based on any of the Effects. You can choose to have all 100 presets based on Diatonic. Or, two based on Diatonic, three based on MicroPitch, five based on Crystals, etc. - or any combination.

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)   Tempo/Tap value.*
3)   Tempo On/Off status.
4)   Expression pedal mapping.

* Note: PitchFactor can be set up to change the Tempo value when a Preset is loaded or to ignore the value saved with the Preset. While Tempo values are always saved with the Preset, you may prefer to have your current Tempo stay the same as you switch from Preset to Preset. Turn GLOBAL TEMPO ON to do that. With GLOBAL TEMPO ON, the Tempo values saved with the Preset are ignored and the current Tempo value is 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. Immediately after pressing the Right Footswitch, the Encoder can be used to select Banks. The Encoder provides a convenient method to move up or down through the active Banks.

The Encoder can be used to set or tweak the Tempo value in BPM. With Tempo ON, first press the Tap Footswitch once (you must be in Play Mode) so that the Billboard displays the Temp

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 reduced. 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.

Active Banks can be limited to a range. The default is for all 100 Presets active, this corresponds to having the full range of Banks active - from 1 to 50. You can limit the number of active Banks, by setting the active range in System Mode. For example, if you set the lower Bank limit to 5 and the upper Bank limit to 10, Banks 5-10 will be active. By logically grouping your Presets, you can get through a song or set without having to click through all 100 Presets. Remember, when saving Presets, group them to best suit your needs.

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) Press the Left Footswitch and turn the Encoder to set the lower Bank limit.
7) Press the Right Footswitch and turn the Encoder to set the upper Bank limit.
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.

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.

Global Tempo

Tempo is always saved with each Preset. Often however, it can be useful to make the tempo uniform for all of the Presets that you're using. To do this, use the System GLOBAL Tempo command. When GLOBAL TEMPO is ON, the Tempo value saved with the Preset is ignored and the current Tempo value is used for all Presets.

Turning GLOBAL 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 [GLOBAL] is displayed.
  3) Momentarily press the Encoder.
  4) Turn the Encoder until [TEMPO] 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.

Fine-tuning Tempo and Delays

Tempo

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

Delay

With Tempo OFF, the Encoder can be used to tweak the delay time for effects that use delay. To use the Encoder, first turn the Control Knob corresponding to the delay that you want to tweak (A or B) so that the delay time is displayed by the Billboard. While the delay time is still displayed, turn the Encoder to adjust the delay time. While tweaking, the Billboard displays the updated delay time and the parameter Control Knobs are disabled.

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. PitchFactor 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.

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 nearby 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 PitchFactor and recorded by a MIDI sequencer or computer. PitchFactor'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 few 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. PitchFactor 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 PitchFactor'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 Speed/Brake switch or Preset Switch.

As noted above, the PitchFactor has two operating modes, Bank and Play. An Aux Switch can be used to instantly toggle between the PitchFactor'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 toggle between S-MOD value 0 and 5. 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.

Refer to eventide.com for information on recommended Aux Switches.

MIDI

PitchFactor supports MIDI In, Out, Thru. MIDI can be used to:
1) Load and bypass Presets
2) Select Banks/Presets
3) FLEX/Learn
4) Change parameter values
5) Set tempo from MIDI clock
6) Use PitchFactor as a MIDI clock source
7) Enable PitchFactor's knobs and switches to control other MIDI devices
8) Dump (Backup)/Load (Restore) Presets and/or system settings to/from a computer
9) Control BYPASS/ACTIVE status using MIDI program change

PitchFactor 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 PitchFactor 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 Knob until [UTILITY] is displayed.
3) Momentarily press the Encoder.
4) Turn the Knob until [ROUTING] is displayed.
5) Momentarily press the Encoder.
6) Turn the Knob 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:

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 PRE (default) or POST.
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.

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], [TUNER], [AUX SW], [MIDI], [GLOBAL] and [UTILITY]. Press the Encoder to select one of these choices.

System Mode Navigation

General navigation of 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], [TUNER], [AUX SW]**, **[MIDI]**, **[GLOBAL],** 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**, RELAY, DSP+FX)

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 [RELAY] is selected, Bypass employs a pair of relays to "hardwire" the inputs to the outputs, giving a "true bypass."

When [DSP+FX] is selected, Bypass sends the audio at the DSP's inputs directly to the outputs with the decaying 'tail' of the current effect mixed in.

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 (NO, **YES**)

Press the Encoder to select. Turn Encoder to enable/disable KILLDRY.
When KILLDRY is enabled (YES), the dry signal is removed from the output and PitchFactor only outputs a 100% wet Level. For some of the effects the Intensity control acts as a Wet/Dry Mix control. For these effects, if KILLDRY is YES, the Intensity control is disabled.

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.

[TUNER] – Tuner Settings

Press the Encoder to select. Turn the Encoder to select either [AUDIO] or [CALIBRT].

[AUDIO] – Choose audio function when Tuner is active (BYPASS, **MUTE**)

Press the Encoder to select. Turn the Encoder to choose BYPASS or MUTE. When BYPASS is selected, whenever PitchFactor's tuner is enabled, the audio input is connected to audio out. When MUTE is selected, audio is muted when tuning.

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

[CALIBRT] – Calibrate the Tuner (440 Hz)

Press the Encoder to select. Turn the Encoder to adjust the Tuner's reference frequency. 440 Hz standard is the default. This value will also establish the 'A' tuning for the pitch effects.

Press the Middle Footswitch once to back-up one level to TUNER 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. PitchFactor 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 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 PitchFactor parameter or function (the destination) that you want to externally control (Intensity for example) and then select the Aux Switch that you want to control it with (the source).

The default settings for the Aux Switches are:
TIP - BYPASS
RING - LEARN/FLEX
TIP+RING - TAP

To Setup Parameter Destinations
Turn the Encoder knob to select an external control destination. Destinations include the PitchFactor 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.
FLX – Toggle FLEX/LEARN function
P/B – Toggle between Play and Bank Mode.
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 as indicated below.
FS1 – Left footswitch in alternate mode (i.e. if in PLAY, operates in BANK)
FS2 – Middle footswitch in alternate mode
FS3 – Right footswitch in alternate mode
PDL – Expression pedal
TUN – Enable/disable Tuner

KB 0   KB 1   KB 2   KB 3   KB 4   KB 5

KB 6   KB 7   KB 8   KB 9
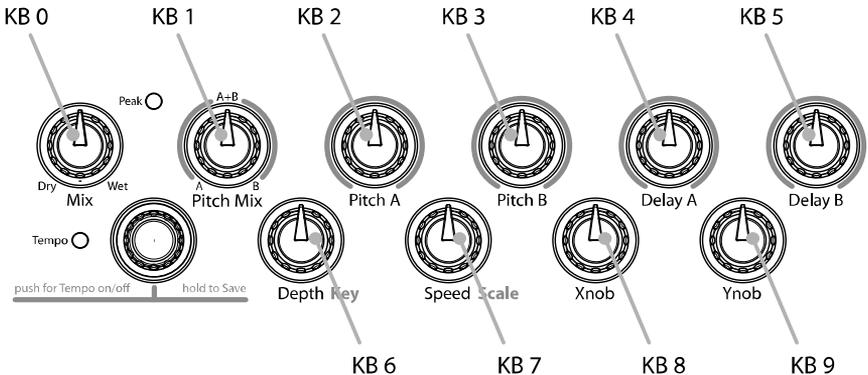
The notion of using an On/Off control source like an Aux Switch to control a variable parameter bears some explanation. Consider a variable parameter like Intensity.

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 Intensity 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, you could assign an Aux Switch to Delay A (KB4) with [MIN VAL] set to 20 mSec and [MAX VAL] set to 200 mSec. Pressing the switch will toggle between these two delay settings. If another Effect or Preset is chosen, the Aux Switch will affect the parameter controlled by KB4 for the currently loaded effect.

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 settings for Aux Switch control are as follows:
[BYP<>TIP]
[FLX<>RNG]
[TAP<>T+R]

The other Aux Switch Control destinations ([BK+], [BK-], [P/B], [KB0]…[KB9], FS1, FS2, FS3, PDL, TUN) 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 Flex 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.

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], and 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 PitchFactor parameter or function that you want to externally control (Intensity 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 it's 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 PitchFactor 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
> TAP – Tap tempo switch function
> FLX – Toggle FLEX/LEARN function
> P/B – Toggle between Play and Bank Mode
> KB0…9 - Parameter Control Knobs
> FS1 – Left footswitch
> FS2 – Middle Footswitch
> FS3 – Right Footswitch
> PDL – Foot pedal
> ACT – Active (Enable Effect – unBypass)
> TOG – Toggle between Active and Bypass
> TUN – Enable/disable Tuner
> 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 Intensity 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.

Note: You can set the minimum value to be greater than the maximum value. If you do so, when the MIDI CC sends an increasing value, the parameter value will decrease.
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
> C0 - 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 PitchFactor's Expression Pedal, Control Knobs and Aux Switches 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 its 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
> TIP   Aux Switch Tip
> RNG   Aux Switch Ring
> T+R   Aux Switch Tip+Ring

To Assign the Control Source to a Destination
Press the Right Footswitch to select the MIDI Continuous Control that will be assigned to the PitchFactor 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 PitchFactor'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.)

Note that if a Preset is saved "Bypassed," when it is loaded by using a MIDI Program Change command the Preset will load but the pedal will be Bypassed.

The left field displays the Prg No. (0-127) and right field displays either the Preset as Bank:Preset (1:1-50:2), one of various Bypass options described below, or OFF.

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.

As well as using MIDI program change to load a preset, it can also be programmed to directly control the unit's BYPASS setting. When the flashing right hand arrow is visible, turn the Encoder counter-clockwise to select one of the following:
> BYP   BYPass the unit
> ACT   Make the unit ACTive, i.e. not bypassed.
> TOG   TOGgle the between bypass and active.

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 50:2). The right field displays either OFF or the Prg No. (0-127). Default map: Prg No. 0-99 map to the 100 Presets starting with Bank 1:1.

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.

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

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

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.

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 only PitchFactor 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 PitchFactor .

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

If THRU is selected, the PitchFactor 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 Clock Receive ON or OFF. If ON, MIDI Clock is used as a Tempo 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 OUT] – MIDI Output Clock Enable (ON, OFF)

Press the Encoder to select. Turn Encoder to set MIDI Clock Transmit ON or OFF. If ON, PitchFactor can 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 Filtering ON or OFF. If ON, PitchFactor can be used with an unstable MIDI Clock source, but will be slower and less precise at tracking clock speed changes.

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 Settings

[MIX] – Enable Global MIX (ON, OFF)

Press the Encoder to select. Turn Encoder to set Global MIX.

Mix is always stored with Presets, but the stored value is not used if Global Mix is ON. With Global ON, the current Mix is used for all 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.

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

Press the Encoder to select. Turn Encoder to set Global Tempo.

Tempo is always stored with Presets, but the stored value is not used if Global Tempo is ON. With Global ON, the current Tempo is used for all 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.

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

Press the Encoder to select. Turn the Encoder 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 Encoder 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.50 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.39 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] – Spill Enable (ON, OFF)

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

With Spill OFF, when a new preset or effect is loaded, any audio in the previous preset is instantly cleared. With Spill ON, audio from the previous preset fades.

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 range of Active Preset Banks (1 - 50)

Press the Encoder to select. Press the Left Footswitch to select the lower limit and the Right Footswitch to select the higher limit. Turn Encoder to set the lowest and the highest active banks. 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.

[SOURCE] – Select Source Instrument (GUITAR, BASS, SYNLEAD, SYNBASS)

Press the Encoder to select. Turn Encoder to select the type of instrument. Each instrument setting optimizes the pitch algorithms and adjusts the ranges of filter knobs to best complement the selected source instrument.

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] – Expression Pedal Lock (ON, OFF)

Press the Encoder to select. Select ON to disable Expression Pedal programming.

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.40 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 PitchFactor'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 PitchFactor'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 ModFactor starting at version 5.0.0 make it possible to use PitchFactor 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 PitchFactor). 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 PitchFactor 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 PitchFactor pedal.

Restoring Factory Settings/Software Updates

Restoring Factory System Settings

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

Restoring Factory Effects 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 PitchFactor 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 PitchFactor via USB. To enable the software update, power up while pressing the Middle Footswitch until [UPDATE] is displayed.
PitchFactor'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 PitchFactor 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 PitchFactor 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 PitchFactor via the Eventide Direct Updater installed directly without H9 Control:
1) Download and Install the latest version of Eventide Direct Updater from the PitchFactor Support Page. You must log in to Eventide.com and register your PitchFactor to do this.
2) Connect your PitchFactor 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.aspx

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 X	O X	
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 (mono) 1 Meg (stereo)
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
PitchFactor 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 affect 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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