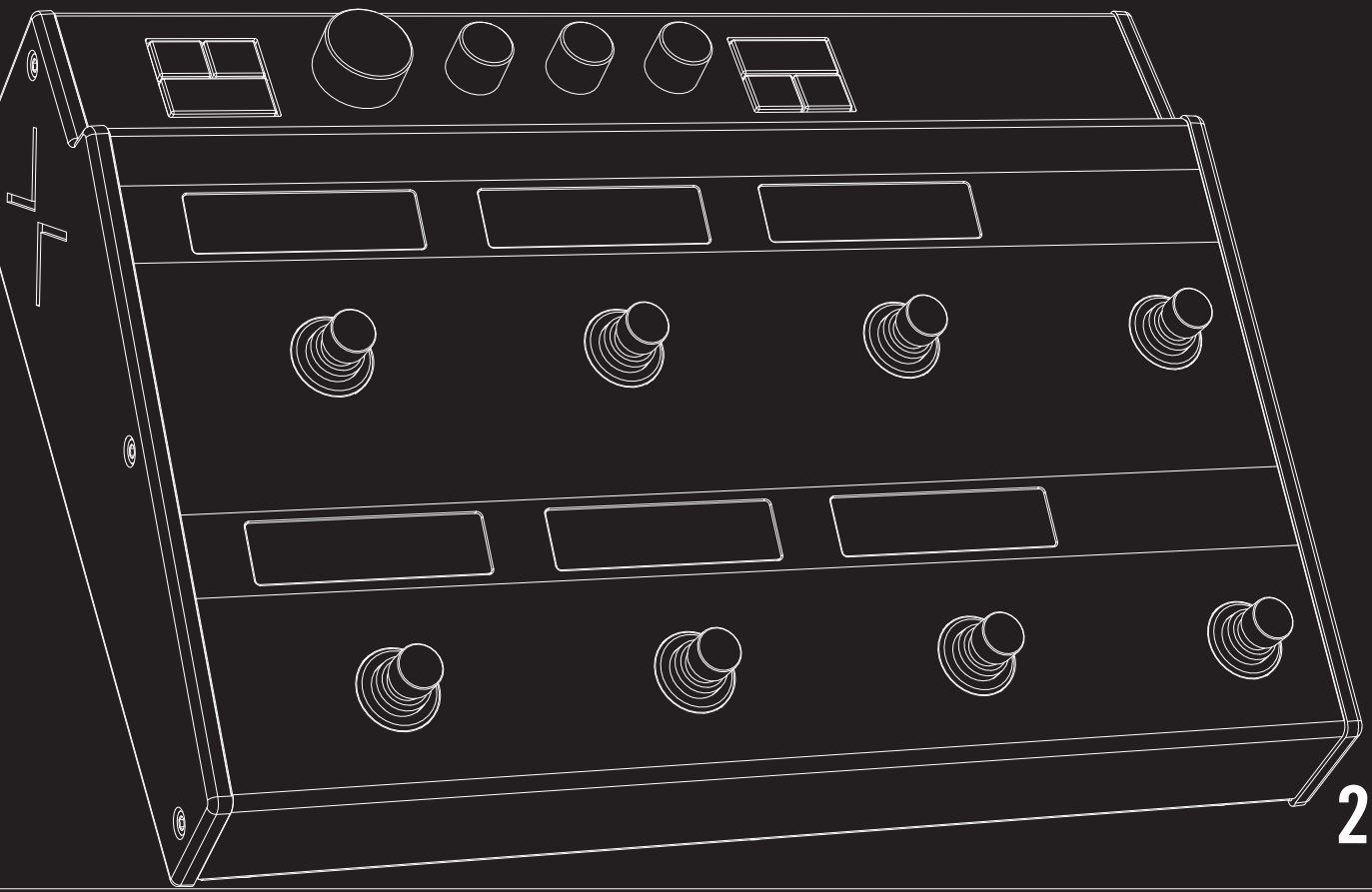
LINE 6

HX EFFECTS



2.50 OWNER'S MANUAL

40-00-0399 - A (For use with HX Effects Firmware 2.50)

Contents

Welcome

"I hate reading manuals!"

Us too. We're not overly fond of writing them either, especially when so few people read them. What if we were to make a handful of super-short videos that get you up and running with your HX Effects™ device in less than ten minutes, and you promise to not jump online and complain about having to read a manual? Agreed? Go here: line6.com/meet-hx-effects

"M'eh. Manuals are okay, I suppose."

All right (deep breath)... Thank you for purchasing the Line 6 HX Effects device, one of the most powerful and flexible audio processors ever created. We hope it helps drive your search for tonal bliss and spawns years of creativity, both on stage and in the studio.

Although the HX Effects unit may appear deep (and it is), it's designed to be used in two ways—one, like any ol' pedalboard where you choose your stompbox and turn the knobs, and two, like a highly editable and configurable effects workstation.

Although you're likely anxious to rip open the plastic and plug in, wait! At the very least, check out the *HX Effects Cheat Sheet* that came in the box, and keep it handy. Then read the "Quick Start" chapter of this manual and we'll have you up and shredding in no time. Be sure to also visit line6.com/videos where we're always adding new video tutorials covering the latest Line 6 gear!

Common Terminology

While reading this manual, you may encounter several unfamiliar terms. It's important to know what they mean. Be careful—we might toss a pop quiz your way.

Block *Blocks* are objects that represent various elements of your tone, such as individual effects, volume pedals, loopers, signal splits and merges, and Impulse Responses. Each preset can run up to nine simultaneous blocks, DSP permitting.

Model Each processing block can accommodate one model. The HX Effects hardware includes over 100 HX (Helix™) effects models, plus dozens of Legacy effects models from Line 6 DL4™, DM4™, MM4™, FM4™, M13®, M9®, and M5® multieffects devices.

Preset A *preset* is a collection of blocks. It consists of all effects, snapshots, footswitch assignments, controller assignments, and Command Center messages.

Controller *Controllers* are used to adjust various parameters in real time. For example, the expression pedal can be used to control a wah, or the mod wheel on your MIDI keyboard can be used to control delay feedback and reverb depth.

Send/ Return *Sends* and *Returns* are used to insert your favorite stompboxes anywhere in the signal flow or for connecting to your guitar amp via "4-Cable Method". The HX Effects device has two mono sends and returns, which can be paired for stereo operation.

IR *IRs* (Impulse Responses) are mathematical functions representing the sonic measurements of audio systems. The HX Effects hardware can store up to 128 custom or third-party IRs at a time. See "Impulse Response (IR)"

Updating your HX Effects Device's Firmware

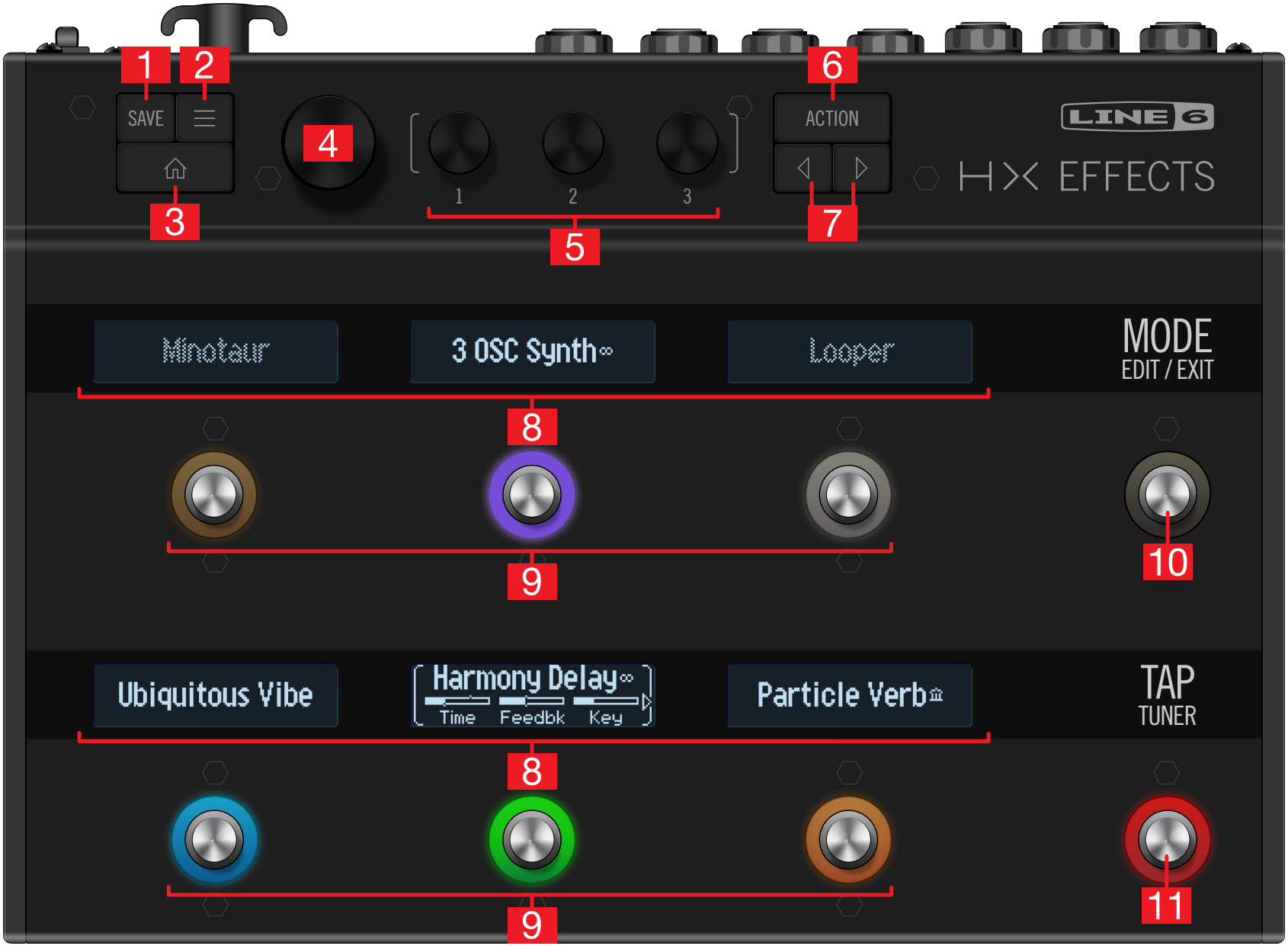
Line 6 is continually improving HX family products. Updating your HX Effects device's firmware will ensure you always have the newest effects models and features.

IMPORTANT! This manual assumes you've updated your HX Effects device to at least version **2.50**.

If you are using a Windows® computer - You'll need to first download and install the ***Line 6 HX Effects Device Driver***, available from line6.com/software. No driver installation is necessary for Mac computers.

1. **Download and install the latest version of the *Line 6 Updater* application from line6.com/software.**
2. **Connect your HX Effects hardware to your computer via USB and power the device on.**
3. **Launch the *Line 6 Updater* application, log into your Line 6 account and follow the prompts to install the latest available firmware version.**

Top Panel


1
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SAVE
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ACTION
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LINE 6
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Ubiquitous Vibe
Harmony Delay∞
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Feedbk
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Particle Verb
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11

1. **SAVE** Press this button to open the Save menu for renaming and saving changes to a preset. Press twice to quick save. See "Saving/Naming a Preset"
2. ☰ Press this button to dive deeper into the HX Effects device, and you'll find Signal Flow, Controller Assign, Command Center, and Global Settings menus.
3. ⌂ If you ever get lost, press this button to return home.
4. **BIG KNOB** From Stomp footswitch mode, turn this knob to change the selected block's effect. Press the Big Knob to open the model list. See "Choosing an Effect" From Preset footswitch mode, turn the Big Knob to select presets. See "Preset Mode"
5. **Knobs 1-3** Turn one of the three smaller knobs to adjust parameters for the selected LCD (the one flanked in white brackets); press the knob to reset the parameter's value.

   SHORTCUT: For most time-based parameters such as delay time or modulation speed, press the knob to toggle between setting the value in ms or Hz and note divisions (1/4-note, dotted 1/8-note, etc.).

   SHORTCUT: Controllers can be assigned to most parameters. Press and hold a parameter's knob to quickly jump to the "Controller Assign" page for that parameter.
6. **ACTION** Press this button to open the action panel for the selected block or menu. From Stomp footswitch mode, the action panel lets you copy/paste/clear effects and customize the footswitch's label and LED color. Other menus may have unique action panels. For example, the Global Settings action panel lets you reset all global settings at once.
7. ◁ / ▷ If the selected model or item has more than one page of parameters, arrows appear in the lower left and/or right corner of its LCD. Press ◁ or ▷ to view more parameters. In the model list, press ▷ to open the folder or ◁ to close the folder and go back one level.
8. **Scribble Strips** Each of the six LCD scribble strips displays the name of its assigned effect or item, so there are never any surprises during a show. You can custom label scribble strips. See "Customizing a Footswitch". (And don't forget to remove the protective film covering these strips on your new HX Effects device!)

   NOTE: If a particular footswitch has more than one block or item assigned, the scribble strip may read "MULTIPLE (X)," where X is the number of assignments. See "Assigning Switches in Signal Flow View"
9. **Footswitches 1-6** These capacitive, touch-sensitive footswitches have colored LED rings that tell you the current state of the effect or item. While in Stomp mode, briefly touch (but don't press) a footswitch to quickly select the assigned effect. Touch the switch repeatedly to cycle through multiple assigned items. See "Stomp Mode"

   SHORTCUT: While in Stomp footswitch mode, touch (but don't press) a footswitch for one second to spill all of its parameters across multiple scribble strips.

   SHORTCUT: While in Stomp footswitch mode, touch and hold (but don't press) two switches to swap all assignments between them (including any custom scribble strip names and LED colors).
10. **MODE/EDIT/EXIT Switch** Press MODE to toggle between Stomp and Preset footswitch modes. Hold MODE for one second to engage Pedal Edit mode, which lets you edit effects with your feet, allowing your hands can stay on the guitar where they belong. See "Hands-Free Editing (Pedal Edit)" Press MODE/EDIT/EXIT to exit Looper or Pedal Edit mode. See "Looper"
11. **TAP/TUNER Switch** Press TAP two or more times to set the BPM (beats per minute) of any tempo-based effects such as delay or modulation. Press TAP once to restart any LFO-based modulation effects. Hold TAP for one second to open Tuner view. See "Tuner"

    SHORTCUT: Touch (but don't press) TAP to briefly display the tempo panel. This lets you quickly fine-tune the current tempo without navigating to the Global Settings menu.

Rear Panel

12. PEDAL/EXT AMP 1-2 Two expression pedals can be connected to the HX Effects device and assigned to adjust a wide variety of parameters. By default, EXP 1 is automatically assigned to control and bypass Wah/Pitch Wham type blocks, and EXP 2 is automatically assigned to control Volume blocks, making them ready for use with your connected expression pedal(s). See "Assigning a Controller"

Alternatively, either jack can be connected to your traditional guitar amp to switch its channels or turn its reverb on and off. Use a TRS cable for dual operation (A=tip, B=ring). To set this jack's function. See "Global Settings > Preferences"

13. SENDS/RETURNS 1-2 These 1/4” ins and outs can be used as FX loops for inserting external stompboxes between specific blocks in the HX Effects device or as inputs and outputs for running 4-Cable Method rigs. See "4-Cable Method"

14. INPUT L/MONO, RIGHT Connect your guitar, bass guitar, or mono pedals to the L/MONO input. Connect stereo pedals, keyboards, synths, or modelers to both the L/MONO and RIGHT inputs.

15. OUTPUT L/MONO, RIGHT Use unbalanced 1/4" TS cables to connect to your guitar amp or other pedals. When connecting to a mono pedal or single amp, connect only the L/MONO 1/4" jack.

16. MIDI IN, OUT/THRU Connect the HX Effects hardware to your MIDI gear for sending and receiving program changes, continuous controllers, and other MIDI messages. (Note that MIDI communication is optionally also sent and/or received via USB.)

17. USB Connect the HX Effects device to your Mac or Windows computer for preset management and IR loading via the *HX Edit* application, updating to the latest firmware, receiving MIDI control messages, and sending remote Command Center messages to control various software. Use of a USB 2.0 or 3.0 port is required - Do not use an external USB hub.

18. DC In Line 6 recommends using only the supplied DC-3G power supply.

19. Cable Tie Wind the DC-3G's cable through one or both hooks to keep drunk punters from stopping the show.

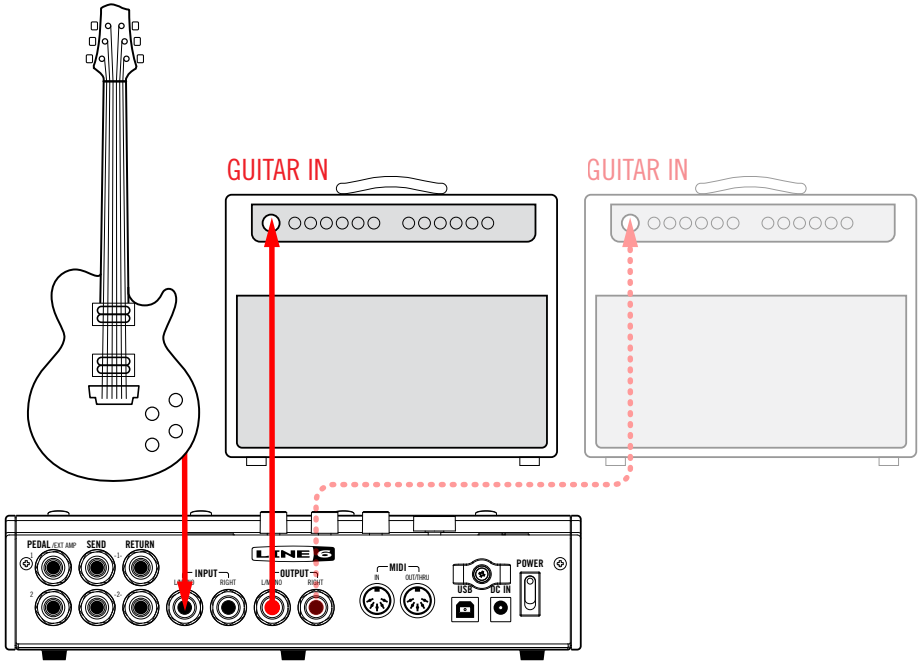
20. POWER switch It’s alive!

Quick Start

Hooking It All Up

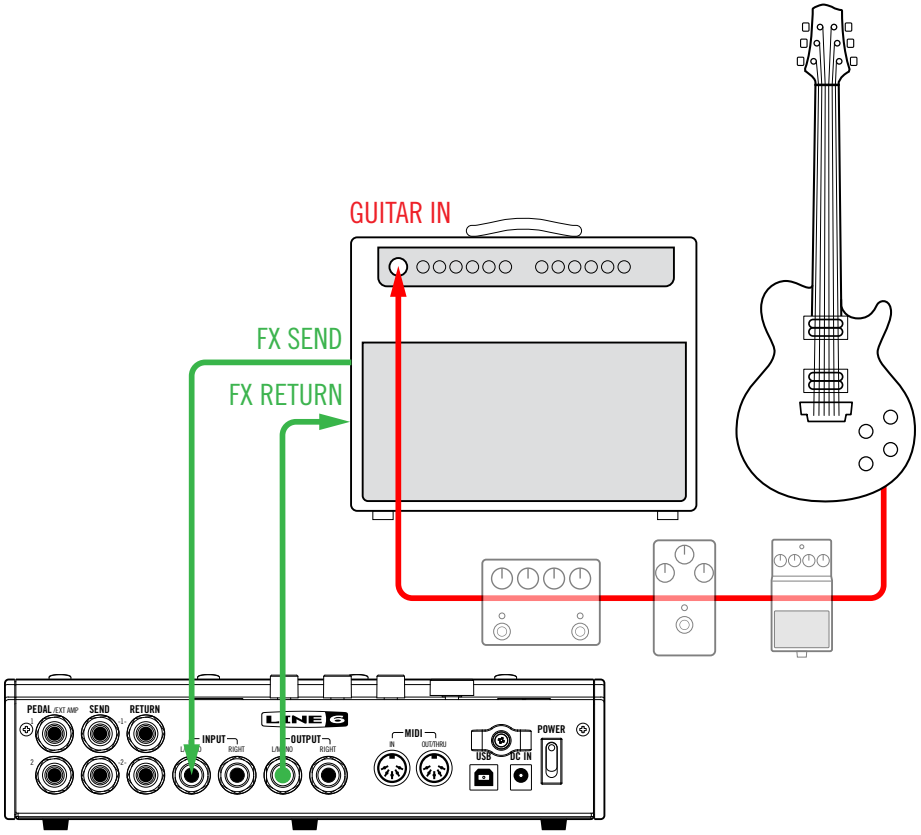
HX Effects as a Traditional Pedalboard (Pre Effects)

Most people will use the HX Effects unit as a traditional effects "pedalboard," straight into their amp. The HX Effects device can optionally feed a second amp for stereo operation.



HX Effects in your Amp's Effects Loop (Post Effects)

Some guitarists prefer to place time-based effects such as delay and reverb (sometimes called "post" effects) between the preamp and power amp sections of their amp. If your amp has an effects loop, the HX Effects device can accommodate these setups with ease, with or without additional pedals (such as overdrive, fuzz, and compression) before the amp.



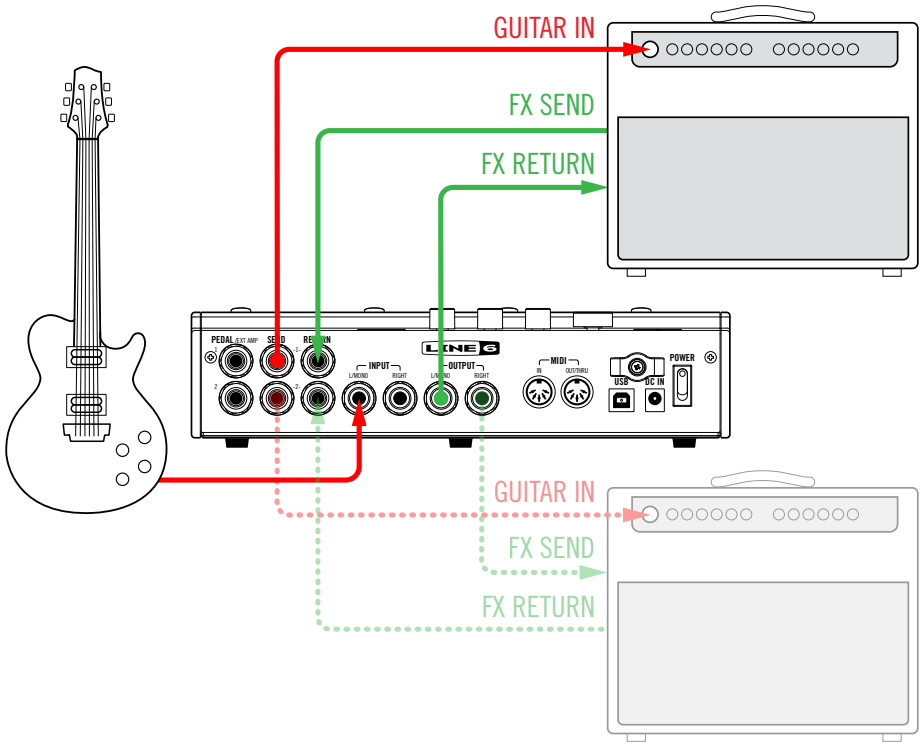
NOTE: The effects loops on most amplifiers run at instrument level. If your amp's effects loop happens to run at line level, you should set the inputs and outputs of your HX Effects device to line level as well. See "Setting Proper Levels"

4-Cable Method

Of course, the most flexible way to hook things up is with some effects (typically drives, wahs, and compressors) before your amp's preamp and others (the aforementioned delays and reverbs) in its effects loop. This is commonly called 4-Cable Method and, fortunately, your HX Effects device can do this too.

Look for the included factory presets titled with "4CM" to use as your starting template, or you can build your own by adding an FX Loop block (see "Choosing an Effect").

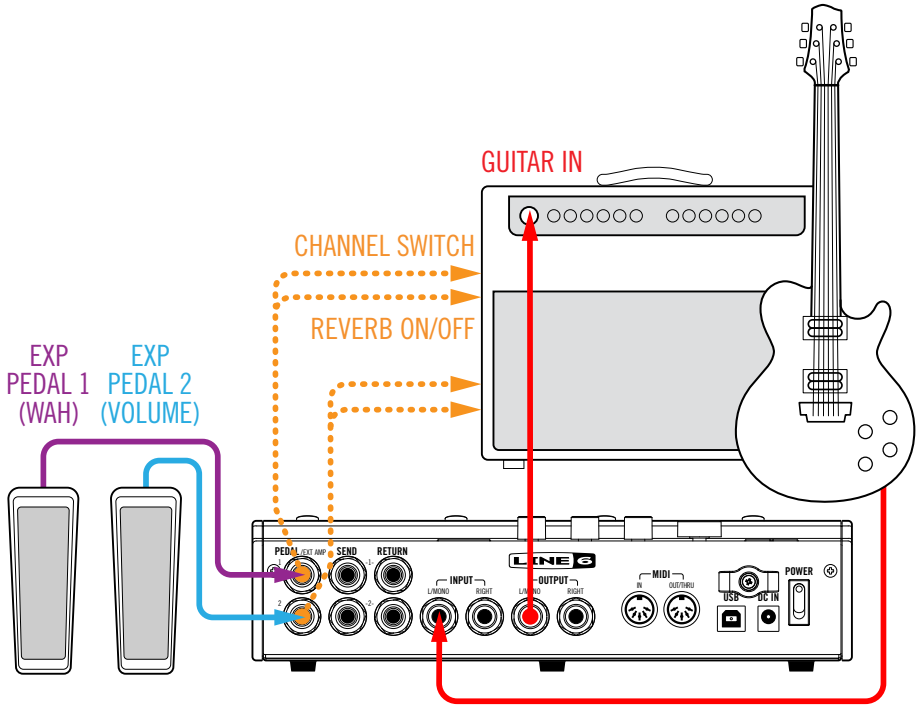
Oh, and if you have two amps, your HX Effects hardware can even do 7-Cable Method in stereo.



Expression Pedals and/or External Amp Control

By default, the two PEDAL jacks are set up to accommodate an expression pedal each, with PEDAL 1 automatically assigned to any Wah or Pitch Wham type blocks and PEDAL 2 automatically assigned to any Volume Pedal blocks. Alternatively, you can choose one or both PEDAL jacks to act as dual (A=Tip, B=Ring) amp control outputs for changing the channels of your amp or turning its reverb on and off.*

To determine whether each PEDAL jack functions as an expression pedal input or dual amp control output, see "Global Settings > Preferences"



⚠ ***IMPORTANT!** Connect EXT AMP 1/2 only to amplifiers that utilize "short-to-sleeve" footswitch inputs. Connecting to any other sort of input could cause permanent damage to both your amp and HX Effects hardware! If you're not sure if your amp has short-to-sleeve inputs, contact the manufacturer.

⚠ ***IMPORTANT!** Your ability to control external amp channel and/or reverb switching with the HX Effects device has been tested with many popular amps and heads. Unfortunately this does not guarantee compatibility with all products. Note that, depending on the circuitry of the channel switching jack in the guitar amp used, the EXT Amp function may not operate as expected.

Stomp Mode

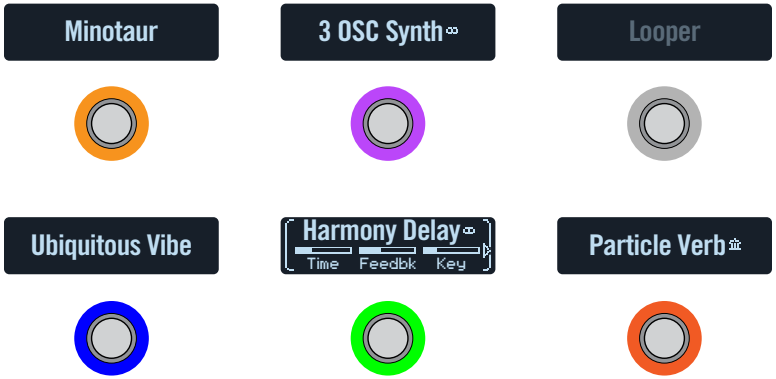
Stomp mode is where you'll spend most of your time, as it most closely resembles the feel and behavior of a traditional pedalboard.

While in Stomp mode, footswitches 1-6 can each do a number of things:

- Toggle one or more effects on and off
- Toggle between two values of one or more parameters
- Generate a MIDI message or switch channels on an external amp
- All of the above, even simultaneously

If not already there, press MODE to select Stomp mode.

Footswitches 1-6 display any assigned effects, parameter names, Command Center messages, and/or custom labels:



Bypassing an Effect

Press the assigned switch.

Bypassed effects display grayed out text and a dim LED ring:

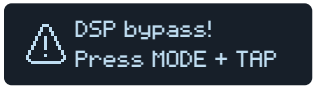
NOTE: Although most people will assign one effect per footswitch, the HX Effects hardware lets you turn multiple effects on and off simultaneously—or even toggle between two or more effects—with a single footswitch. Assigning more than one effect to the same footswitch is accomplished from the Signal Flow menu. See "Assigning Switches in Signal Flow View"

Bypassing All Effects

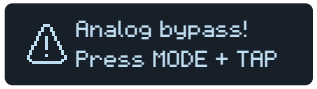
1. **Press MODE and TAP simultaneously.**

   While the HX Effects device is completely bypassed, a warning dialog slowly jumps across all six scribble strips:

   DSP BYPASS

   ANALOG BYPASS

   NOTE: There are two types of All Bypass for the HX Effects device: Analog bypass (sometimes called "true bypass"), where mechanically switching relays route your signal directly from the inputs to the outputs with no processing or A/D/A conversion, and DSP bypass, where any delay echoes and reverb tails decay naturally. By default, the HX Effects hardware is set for Analog bypass, but this behavior can be set from "Global Settings > Preferences"

2. **Press MODE and TAP simultaneously again.**

   The HX Effects device returns to normal operation.

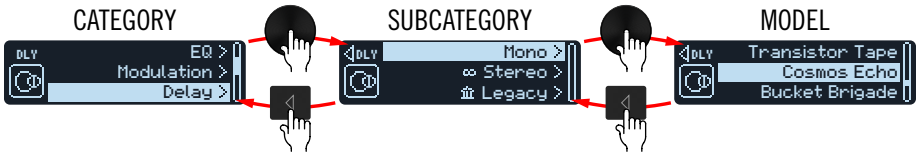
Choosing an Effect

To change an existing effect, briefly touch its footswitch and then turn the Big Knob.

To add an effect to an empty footswitch, briefly touch the switch and then turn the Big Knob.

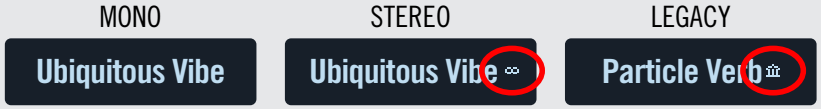
Selecting effects within the same category—say, changing a Simple Delay to a Reverse Delay—can be very quick. However, as the HX Effects device has almost 200 models to choose from, using this method to change a mono distortion (beginning of the list) into a stereo looper (end of the list) is very slow. Instead, you should open the model list:

1. **From Stomp mode, press the Big Knob to open the model list:**



Effects categories include one or more subcategories. Effects in the "Mono" and "Stereo" subcategories are HX (Helix) models. Effects in the "Legacy" subcategory are taken from classic Line 6 pedals, including M13, M9, M5, DL4, MM4, FM4, and DM4.

NOTE: Stomp switches with stereo or legacy models display small identifier icons to the right of the model name:



Turn the Big Knob to select items in a list.

Press the Big Knob (or ▷) to view a category or subcategory's contents.

Press ◁ to go back one level.

IMPORTANT! If certain items don't appear within the model list, this means the HX Effects device cannot accommodate that category, subcategory, or model. For example, if you've already added three reverbs and a pitchshifter, you may not be able to add another pitchshifter.

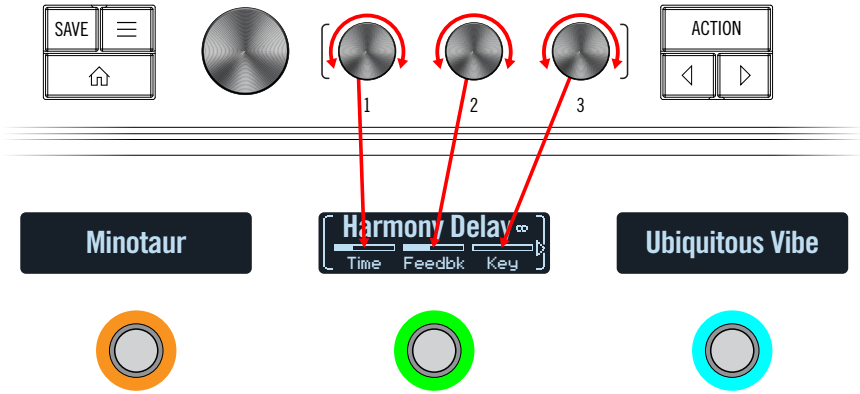
2. **Using the Big Knob, ◁, and ▷, select the desired category, subcategory, and model.**
3. **To close the model list, press ⌂.**

Editing Effects

1. **To select an effect for editing, briefly touch its footswitch.**

The first three parameters appear and the scribble strip displays white brackets, indicating its parameters are controlled by the knobs:

2. **Turn Knobs 1-3.**



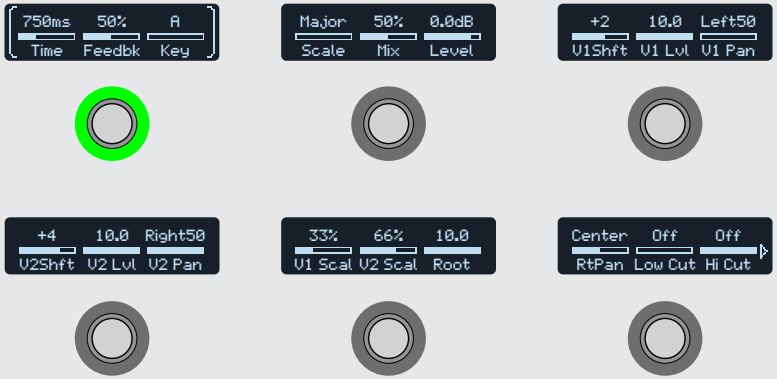
While adjusting parameters, their values briefly appear on the scribble strip:

If an effect or other item has more than three parameters, arrows appear to the right and/or left of the value bars (see above).

SHORTCUT: For most time-based parameters such as delay time or modulation speed, press the knob to toggle between setting the value in ms or Hz and note divisions (1/4-note, dotted 1/8-note, etc.).

3. **Press ◁ or ▷ to access more parameters (if available).**

TIP: **Touch a stomp switch for one second to spill all parameters across multiple scribble strip LCDs to view them more easily:**



Touch the desired footswitch to select its parameters and then turn knobs 1-3 to adjust them. If a block has more than 18 parameters, press ▷ to access more parameters. When finished, touch a switch for one second (or press ⌂) to exit.

Hands-Free Editing (Pedal Edit)

Effects can be edited without taking your hands off the guitar. If you hate having to reach down and twist knobs, Pedal Edit mode will be your new best friend. Although Pedal Edit is not intended to replace proper controller assignment, in a pinch, it can also be used to tweak one parameter at a time during a performance.

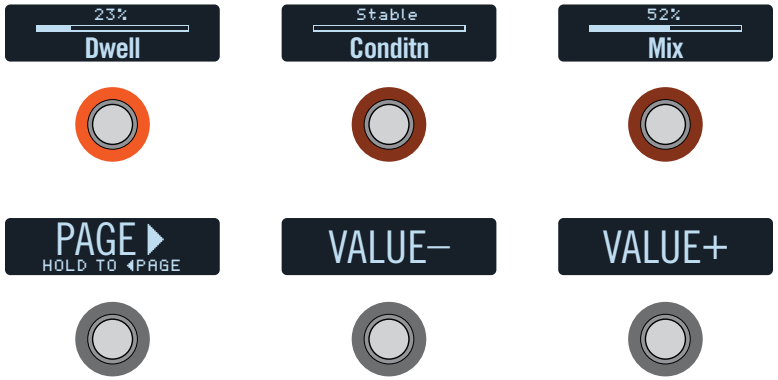
1. Hold MODE (EDIT) for two seconds.

The preset's processing blocks appear on the footswitches, flashing. If the preset has more than six blocks, FS3 displays "MORE..." **Press FS3 (MORE...) to view more blocks.**

NOTE: Selecting a block in Pedal Edit mode may not correspond to any footswitch assignment it may have.

2. Press the switch of the effect you want to edit.

The block's first page of parameters appear on footswitches 1-3:



If the effect has more than one page of parameters, **press FS4 (PAGE >) until you find the parameter.** To go back one page, **press and hold FS4**.

3. Press the footswitch displaying the parameter you want to adjust.

Press and hold a Time or Speed switch to toggle between setting the value in ms or Hz and note divisions (1/4-note, dotted 1/8-note, etc.).

Press and hold any other parameter switch to reset its value to default.

4. Use a connected expression pedal to adjust the parameter's value.

For fine adjustment, **press FS5 (VALUE–) and FS6 (VALUE+). Hold FS5 (VALUE–) or FS6 (VALUE+) for faster adjustments.**

5. When finished, press MODE (EXIT).

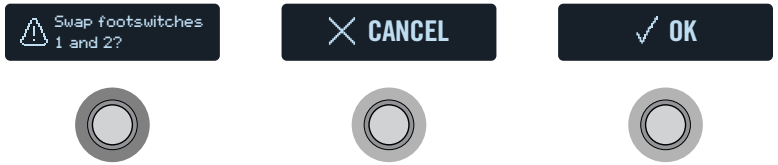
If you want to save any changes made to the preset, **hold MODE (EXIT) for two seconds.**

Swapping Footswitches

If you want to change the location of Stomp mode footswitches, you can quickly swap two footswitches.

IMPORTANT! Swapping footswitch locations does not affect the actual order of effects. To reorder your effects, see "Moving Blocks in Signal Flow View"

1. **Touch any two Stomp mode footswitches until the following options appear:**



2. **Press the OK switch.**

Copying/Pasting an Effect

Effects can be copied and then pasted onto another switch either in the same preset or an entirely different preset.

1. **Touch the stomp switch you want to copy and press ACTION.**
   Action switches appear around the selected effect.
2. **Press the COPY BLOCK switch.**
3. **Touch a switch you wish to paste the block onto—even in a different preset—and press ACTION.**
4. **Press the PASTE BLOCK switch.**

NOTE: There may be situations where a block cannot be pasted into the selected location. For example, the preset may already include the maximum 9 effects blocks, or may not have enough DSP horsepower to add another of the specific model type (see "Dynamic DSP"). In such case, the PASTE BLOCK switch will be grayed out.

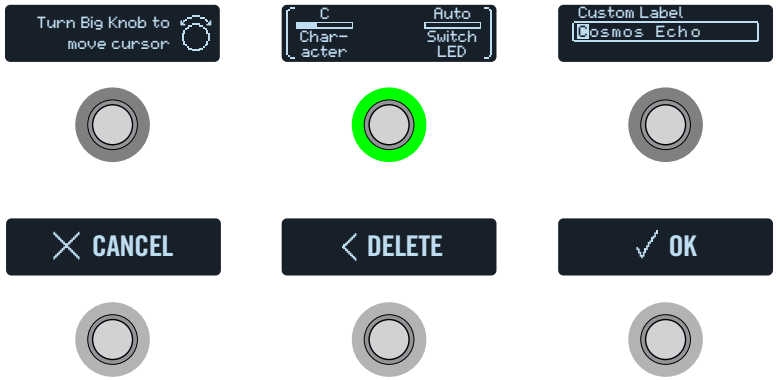
Clearing an Effect

1. **Touch the stomp switch you want to clear and press ACTION.**
   Action switches appear around the selected effect.
2. **Press the CLEAR BLOCK switch.**

Customizing a Footswitch

If you want to customize the text label displayed on a scribble strip, or change the footswitch's LED color, follow these steps.

1. **Touch the stomp switch you want to customize and press ACTION.**
   Action switches appear around the selected effect.
2. **Press the CUSTOMIZE switch.**
   The customize screens appear:



Turn the Big Knob to move the cursor.

Turn Knob 1 (Character) to change the selected character.

SHORTCUT: Press Knob 1 (Character) to cycle through upper case, lower case, 0, and [SPACE].

Press the DELETE switch to delete the selected character and shift all following characters to the left.

Delete all characters to remove the custom label, after which the footswitch label displays its normal assignment.

3. **Turn Knob 3 (Switch LED) to select the desired color for the footswitch's LED ring (or turn it off).**
   Normally, you should leave this set to "Auto."
4. **When finished, press the OK switch.**

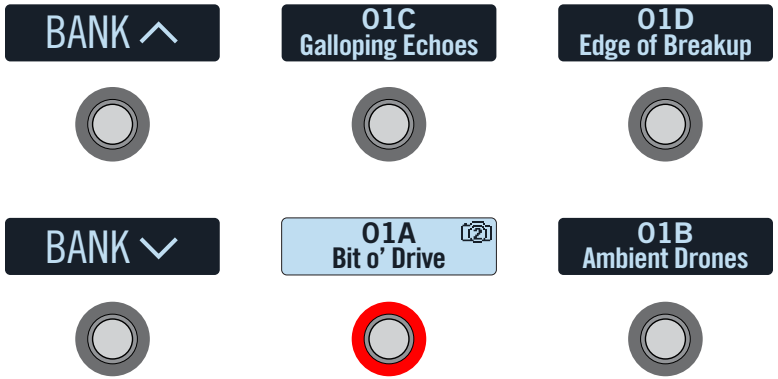
Preset Mode

Adding and editing effects is all well and good, but at that point, why not just get a bunch of separate pedals? One of the main advantages of boxes like the HX Effects unit is the ability to store many different "pedalboards"—each with potentially different effects, configurations, and settings—and recall them all with a single footswitch press. These pedalboards are saved as *presets*.

The HX Effects device stores up to 32 banks of four presets (A, B, C, and D) for a total of 128 presets.

If not already there, press MODE to select Preset mode.

Footswitches 1-6 are used for navigating banks and presets:



1. **Press BANK ^ or BANK v to choose the desired bank.**

   The banks' presets flash, indicating they're ready to load.

2. **Press one of the four preset switches to load the preset.**

NOTE: The HX Effects device can be set to automatically return to Stomp mode after pressing a preset switch. See "Global Settings > Switches"

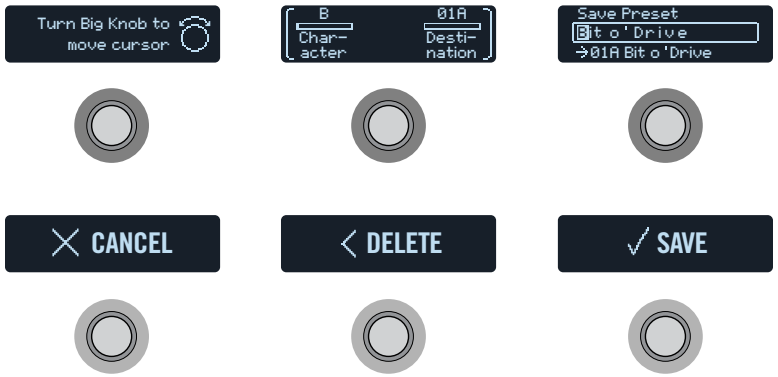
NOTE: The current preset switch displays a small camera icon in the upper right corner. The number indicates the current snapshot. Snapshots offer a whole additional level of capabilities within each preset! See "Snapshots"

Alternatively, when in Preset mode, turn the Big Knob to select a preset.

Saving/Naming a Preset

SHORTCUT: To quickly save any changes to the current preset, **just press SAVE twice**.

1. **Press SAVE to open the Save Preset screens:**



Turn the Big Knob to move the cursor.

Turn Knob 1 (Character) to change the selected character.

SHORTCUT: Press Knob 1 (Character) to cycle through A, a, 0, and [SPACE].

Press the DELETE switch to delete the selected character and shift all following characters to the left.

2. **Turn Knob 3 (Destination) to choose the preset location you wish to overwrite.**

   Any of the 128 presets can be overwritten.

3. **When finished, press the SAVE switch.**

TIP: You can use the *HX Edit* application to Export any presets from your HX Effects hardware - this is a great way to save unlimited backup copies of all your custom presets to your computer! Please see the current *HX Edit Pilot's Guide* for details, available from https://line6.com/support/manuals/

NOTE: HX Effects-exported preset files are not able to be imported and used with Helix family devices (Helix Floor, Helix Rack and Helix LT) nor with the Helix Native plug-in software. Likewise, preset and setlist files exported from Helix family devices or Helix Native plug-in are not able to be imported and used on HX Effects devices.

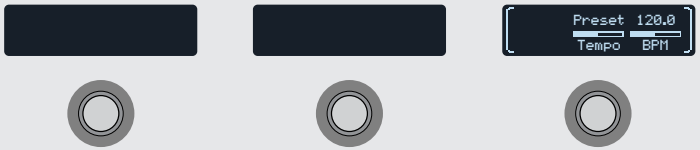
TAP Tempo

Press TAP/TUNER repeatedly to set the tempo in BPM (Beats Per Minute).

Certain Delay, Reverb and Modulation blocks' parameters, such as Time, Rate and Speed, can be represented with note values (1/4-note, dotted 1/8-note, etc.) or fixed numeric values (ms or Hz). When set to note values, the parameter will follow Tap Tempo. **Press the parameter knob to toggle between note or ms (or Hz) values.**

Also see the Tempo options available in "Global Settings > MIDI/Tempo" where you can fine-tune your Tap Tempo value, or configure your HX Effects device to sync tempo with external MIDI hardware and software via MIDI Clock.

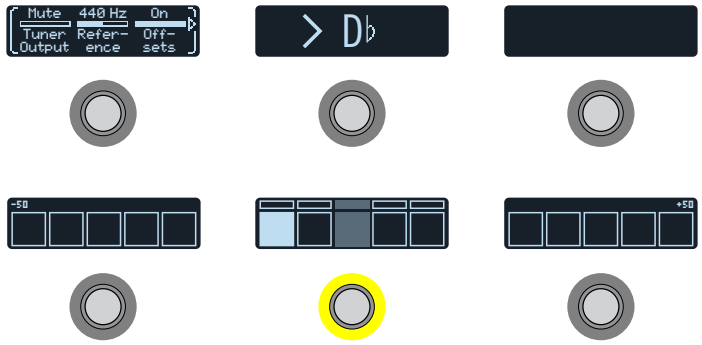
SHORTCUT: **Touch TAP/TUNER to briefly display Tempo parameters above Footswitch 6.**



Knob	Parameter	Description
2	Tempo	Choose whether the tempo is stored and recalled with each snapshot, recalled with each preset, or is applied globally across all presets and snapshots.
3	BPM	Depending on the Knob 2 (Tempo) setting, this value is saved per snapshot, per preset, or globally.

Tuner

1. **Press and Hold TAP until the Tuner screens appear:**



2. **Pluck an individual string on your guitar.**

   When a box left of center is lit, your string is flat. When a box right of center is lit, your string is sharp. When the center box on the lower row is lit, the top row of smaller bars can be used for more precision. When both arrows are illuminated, your string is perfectly in tune.

3. **To exit the Tuner, step on any footswitch.**

   All tuner settings are global.

TIP: If you have a favorite pedal tuner and wish to use it instead of the tuner within your HX Effects device, **connect Send 1 or 2 to your tuner's input and turn Knob 1 (Tuner Out) to select "Send12."** This way, every time you hold the TAP footswitch, the HX Effects device will automatically route the signal to your favorite tuner.

Tuner Settings

Page	Knob	Parameter	Description
1	1	Tuner Output	Determines the active output while the Tuner screen is active. If you prefer to hear nothing while tuning, choose "Mute." Normally, you should choose "L/R."
	2	Reference	If you'd like to tune to a reference other than standard 440 Hz, select from 425 to 455 Hz.
	3	Offsets	Enables the Tuner offsets displayed on Pages 2 and 3.
2	1	String6 Offset	Some guitarists feel that tuning certain strings slightly sharp or flat in relation to concert tuning can improve intonation. String offsets calibrate the tuner so that these slightly out-of-tune pitches appear as in tune. String 6 is low E and String 1 is high E. Tuning offsets won't be applied unless Knob 3 (Offsets) on Page 1 is turned on.
	2	String5 Offset	
	3	String4 Offset	
3	1	String3 Offset	
	2	String2 Offset	
	3	String1 Offset	

Effects

The HX Effects device includes all the effects of the Line 6 award-winning Helix guitar processors. These are found in the Mono and Stereo subcategories in the model list. In addition, the HX Effects unit includes selected effects from the classic DL4, DM4, MM4, and FM4 stompboxes as well as M13, M9, and M5 processors; these appear in the Legacy subcategory. Some Legacy models process the signal in mono, and others in stereo. See "Block Order and Stereo Imaging" on page 32 for more info.

From Stomp mode, touch an effect's footswitch and turn the Big Knob to change its model.

Distortion Models

Model	Subcategories	Based On*
Kinky Boost	Mono, Stereo	Xotic® EP Booster
Minotaur	Mono, Stereo	Klon® Centaur
Teemah!	Mono, Stereo	Paul Cochrane Timmy® Overdrive
Compulsive Drv	Mono, Stereo	Fulltone® OCD
Valve Driver	Mono, Stereo	Chandler Tube Driver
Top Secret OD	Mono, Stereo	DOD® OD-250
Scream 808	Mono, Stereo	Ibanez® TS808 Tube Screamer®
Hedgehog D9	Mono, Stereo	MAXON® SD9 Sonic Distortion
Stupor OD	Mono, Stereo	BOSS® SD-1 Overdrive
Vermin Dist	Mono, Stereo	ProCo RAT
KWB	Mono, Stereo	Benadrian Kowloon Walled Bunny Distortion
Arbitrator Fuzz	Mono, Stereo	Arbiter® Fuzz Face®
Triangle Fuzz	Mono, Stereo	Electro-Harmonix® Big Muff Pi®
Industrial Fuzz	Mono, Stereo	Z.Vex Fuzz Factory
Tycoctavia Fuzz	Mono, Stereo	Tycobrahe® Octavia
Wringer Fuzz	Mono, Stereo	Garbage's modded BOSS® FZ-2

Distortion Models

Model	Subcategories	Based On*
Thrifter Fuzz	Mono, Stereo	Line 6 Original
Megaphone	Mono, Stereo	Megaphone
Bitcrusher	Mono, Stereo	Line 6 Original
Obsidian 7000	Mono, Stereo	Darkglass Electronics® B7K Ultra
Clawthorn Drv	Mono, Stereo	Wounded Paw Battering Ram
Tube Drive	Legacy	Chandler Tube Driver
Screamer	Legacy	Ibanez® Tube Screamer®
Overdrive	Legacy	DOD® Overdrive/Preamp 250
Classic Dist	Legacy	ProCo RAT
Heavy Dist	Legacy	BOSS® Metal Zone
Colordrive	Legacy	Colorsound® Overdriver
Buzz Saw	Legacy	Maestro® Fuzz Tone
Facial Fuzz	Legacy	Arbiter® Fuzz Face®
Jumbo Fuzz	Legacy	Vox® Tone Bender
Fuzz Pi	Legacy	Electro-Harmonix® Big Muff Pi®
Jet Fuzz	Legacy	Roland® Jet Phaser
L6 Drive	Legacy	Colorsound® Overdriver (modded)
L6 Distortion	Legacy	Line 6 Original
Sub Oct Fuzz	Legacy	PAiA Roctave Divider
Octave Fuzz	Legacy	Tycobrahe® Octavia

Dynamics Models

Model	Subcategories	Based On*
Deluxe Comp	Mono, Stereo	Line 6 Original
Red Squeeze	Mono, Stereo	MXR® Dyna Comp
Kinky Comp	Mono, Stereo	Xotic® SP Compressor
LA Studio Comp	Mono, Stereo	Teletronix® LA-2A®
3-Band Comp	Mono, Stereo	Line 6 Original
Noise Gate	Mono, Stereo	Line 6 Original

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Dynamics Models

Model	Subcategories	Based On*
Hard Gate	Mono, Stereo	Line 6 Original
Autoswell	Mono, Stereo	Line 6 Original
Tube Comp	Legacy	Teletronix® LA-2A®
Red Comp	Legacy	MXR® Dyna Comp
Blue Comp	Legacy	BOSS® CS-1
Blue Comp Treb	Legacy	BOSS® CS-1 (Treble switch on)
Vetta Comp	Legacy	Line 6 Original
Vetta Juice	Legacy	Line 6 Original
Boost Comp	Legacy	MXR® Micro Amp

EQ Models

Model	Subcategories	Based On*
Simple EQ	Mono, Stereo	Line 6 Original
Low/High Cut	Mono, Stereo	Line 6 Original
Parametric	Mono, Stereo	Line 6 Original
10 Band Graphic	Mono, Stereo	MXR® 10-Band Graphic EQ
Cali Q Graphic	Mono, Stereo	MESA/Boogie® Mark IV Graphic EQ

Modulation Models

Model	Subcategories	Based On*
Optical Trem	Mono, Stereo	Fender® optical tremolo circuit
60s Bias Trem	Mono, Stereo	Vox® AC-15 Tremolo
Trem/Autopan	Mono, Stereo	BOSS® PN-2
Harmonic Trem	Mono, Stereo	Line 6 Original
Bleat Chop Trem	Mono, Stereo	Lightfoot Labs Goatkeeper
Script Mod Phase	Mono, Stereo	MXR® Phase 90
Ubiquitous Vibe	Mono, Stereo	Shin-ei Uni-Vibe®
Deluxe Phaser	Mono, Stereo	Line 6 Original
Gray Flanger	Mono, Stereo	MXR® 117 Flanger

Modulation Models

Model	Subcategories	Based On*
Harmonic Flngr	Mono, Stereo	A/DA Flanger
Courtesan Flngr	Mono, Stereo	Electro-Harmonix® Deluxe EM
Dynamix Flngr	Mono, Stereo	Line 6 Original
Chorus	Mono, Stereo	Line 6 Original
70s Chorus	Mono, Stereo	BOSS® CE-1
PlastiChorus	Mono, Stereo	Arion SCH-Z chorus
Trinity Chorus	Stereo	Dytronics® Tri-Stereo Chorus
Bubble Vibrato	Mono, Stereo	BOSS® VB-2 Vibrato
Vibe Rotary	Stereo	Fender® Vibratone
122 Rotary	Stereo	Leslie® 122
145 Rotary	Stereo	Leslie® 145
Double Take	Mono, Stereo	Line 6 Original
AM Ring Mod	Mono, Stereo	Line 6 Original
Pitch Ring Mod	Stereo	Line 6 Original
Pattern Trem	Legacy	Line 6 Original
Panner	Legacy	Line 6 Original
Bias Tremolo	Legacy	1960 Vox® AC-15 Tremolo
Opto Tremolo	Legacy	1964 Fender® Deluxe Reverb®
Script Phase	Legacy	MXR® Phase 90 (script logo version)
Panned Phaser	Legacy	Ibanez® Flying Pan
Barberpole Phaser	Legacy	Line 6 Original
Dual Phaser	Legacy	Mu-Tron® Bi-Phase
U-Vibe	Legacy	Shin-ei Uni-Vibe®
Phaser	Legacy	MXR® Phase 90
Pitch Vibrato	Legacy	BOSS® VB-2
Dimension	Legacy	Roland® Dimension D
Analog Chorus	Legacy	BOSS® CE-1
Tri Chorus	Legacy	Dytronics® Tri-Stereo Chorus
Analog Flanger	Legacy	MXR® Flanger

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Modulation Models

Model	Subcategories	Based On*
Jet Flanger	Legacy	A/DA Flanger
AC Flanger	Legacy	MXR® Flanger
80A Flanger	Legacy	A/DA Flanger
Freq Shift	Legacy	Line 6 Original
Ring Modulator	Legacy	Line 6 Original
Rotary Drum	Legacy	Fender® Vibratone
Rotary Speaker	Legacy	Leslie® 145

Delay Models

Model	Subcategories	Based On*
Simple Delay	Mono, Stereo	Line 6 Original
Mod/Cho Echo	Mono, Stereo	Line 6 Original
Dual Delay	Stereo	Line 6 Original
Multitap 4	Stereo	Line 6 Original
Multitap 6	Stereo	Line 6 Original
Ping Pong	Stereo	Line 6 Original
Sweep Echo	Mono, Stereo	Line 6 Original
Ducked Delay	Mono, Stereo	TC Electronic® 2290
Reverse Delay	Mono, Stereo	Line 6 Original
Vintage Digital	Mono, Stereo	Line 6 Original
Vintage Swell	Mono, Stereo	Line 6 Original
Pitch Echo	Mono, Stereo	Line 6 Original
Transistor Tape	Mono, Stereo	Maestro® Echoplex EP-3
Cosmos Echo	Mono, Stereo	Roland® RE-201 Space Echo
Harmony Delay	Stereo	Line 6 Original
Bucket Brigade	Mono, Stereo	BOSS® DM-2
Adriatic Delay	Mono, Stereo	BOSS® DM-2 w/ Adrian Mod
Adriatic Swell	Mono, Stereo	Line 6 Original

Delay Models

Model	Subcategories	Based On*
Elephant Man	Mono, Stereo	Electro-Harmonix® Deluxe Memory Man
Multi Pass	Mono, Stereo	Line 6 Original
Ping Pong	Legacy	Line 6 Original
Dynamic	Legacy	TC Electronic® 2290
Stereo	Legacy	Line 6 Original
Digital	Legacy	Line 6 Original
Dig w/Mod	Legacy	Line 6 Original
Reverse	Legacy	Line 6 Original
Lo Res	Legacy	Line 6 Original
Tube Echo	Legacy	Maestro® Echoplex EP-1
Tape Echo	Legacy	Maestro® Echoplex EP-3
Sweep Echo	Legacy	Line 6 Original
Echo Platter	Legacy	Binson® EchoRec®
Analog Echo	Legacy	BOSS® DM-2
Analog w/Mod	Legacy	Electro-Harmonix® Deluxe Memory Man
Auto-Vol Echo	Legacy	Line 6 Original
Multi-Head	Legacy	Roland® RE-101 Space Echo

Reverb Models

Model	Subcategory	Based On*
Glitz	Mono, Stereo	Line 6 Original
Ganymede	Mono, Stereo	Line 6 Original
Searchlights	Mono, Stereo	Line 6 Original
Plateaux	Mono, Stereo	Line 6 Original
Double Tank	Mono, Stereo	Line 6 Original
Plate	Legacy	Line 6 Original
Room	Legacy	Line 6 Original
Chamber	Legacy	Line 6 Original

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Reverb Models

Model	Subcategory	Based On*
Hall	Legacy	Line 6 Original
Echo	Legacy	Line 6 Original
Tile	Legacy	Line 6 Original
Cave	Legacy	Line 6 Original
Ducking	Legacy	Line 6 Original
Octo	Legacy	Line 6 Original
'63 Spring	Legacy	Line 6 Original
Spring	Legacy	Line 6 Original
Particle Verb	Legacy	Line 6 Original

Pitch/Synth Models

Model	Subcategories	Based On*
Pitch Wham	Mono, Stereo	Digitech® Whammy®
Twin Harmony	Mono, Stereo	Eventide® H3000
Simple Pitch	Mono, Stereo	Line 6 Original
Dual Pitch	Mono, Stereo	Line 6 Original
3 OSC Synth	Stereo	Line 6 Original
3 Note Generator	Mono, Stereo	Line 6 Original
4 OSC Generator	Mono, Stereo	Line 6 Original
Bass Octaver	Legacy	EBS® OctaBass
Smart Harmony	Legacy	Eventide® H3000
Octi Synth	Legacy	Line 6 Original
Synth O Matic	Legacy	Line 6 Original
Attack Synth	Legacy	Korg® X911 Guitar Synth
Synth String	Legacy	Roland® GR700 Guitar Synth
Growler	Legacy	Line 6 Original

Filter Models

Model	Subcategories	Based On*
Mutant Filter	Mono, Stereo	Musitronics® Mu-Tron® III
Mystery Filter	Mono, Stereo	Korg® A3
Autofilter	Mono, Stereo	Line 6 Original
Voice Box	Legacy	Line 6 Original
V Tron	Legacy	Musitronics® Mu-Tron® III
Q Filter	Legacy	Line 6 Original
Seeker	Legacy	Z Vex Seek Wah
Obi Wah	Legacy	Oberheim® voltage-controlled S&H filter
Tron Up	Legacy	Musitronics® Mu-Tron® III (up position)
Tron Down	Legacy	Musitronics® Mu-Tron® III (down position)
Throbber	Legacy	Electrix® Filter Factory
Slow Filter	Legacy	Line 6 Original
Spin Cycle	Legacy	Craig Anderton's Wah/Anti-Wah
Comet Trails	Legacy	Line 6 Original

Wah Models

Model	Subcategories	Based On*
UK Wah 846	Mono, Stereo	Vox® V846
Teardrop 310	Mono, Stereo	Dunlop® Crybaby® Fasel model 310
Fassel	Mono, Stereo	Dunlop® Cry Baby® Super
Weeper	Mono, Stereo	Arbiter® Cry Baby®
Chrome	Mono, Stereo	Vox® V847
Chrome Custom	Mono, Stereo	Modded Vox® V847
Throaty	Mono, Stereo	RMC® Real McCoy 1
Vetta Wah	Mono, Stereo	Line 6 Original
Colorful	Mono, Stereo	Colorsound® Wah-fuzz
Conductor	Mono, Stereo	Maestro® Boomerang

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Volume/Pan Models

Model	Subcategories	Based On*
Volume Pedal	Mono, Stereo	Line 6 Original
Gain	Mono, Stereo	Line 6 Original
Pan	Stereo	Line 6 Original
Stereo Width	Stereo	Line 6 Original

Common FX Settings

Parameter	Description
Drive	Adjusts the amount of overdrive, distortion, or fuzz.
Bass	Adjusts the bass level.
Mid	Adjusts the midrange level.
Treble	Adjusts the treble level.
Speed	Adjusts the speed of the effect, with higher settings providing faster rates. **Press the knob to toggle between Hz and note values.** Choosing a Hz value provides a specific modulation speed in cycles per second; choosing a note value provides a time based on the current tempo. Not all Speed parameters can be synced to note values, as they may be non-linear and highly interactive.
Rate	Adjusts the rate of the effect, with higher settings providing faster rates. **Press the knob to toggle between numeric and note values.** Not all Rate parameters can be synced to note values, as they may be non-linear and highly interactive.
Time	Adjusts the delay/repeat time, with higher settings providing longer delays. **Press the knob to toggle between ms and note values.** Choosing a ms value provides a specific time in milliseconds; choosing a Note Division value provides a time based on the current tempo. With a note division value, this parameter's value is retained when changing models.
Depth	Adjusts the intensity of the modulation. Higher settings result in more extreme pitch bending, wobble, or throb, depending on the effect.
Feedbk	Adjusts the amount of delayed signal fed back into the effect. Higher settings can provide more dramatic textures.
Decay	Sets the length of time the reverb effect sustains.
Predly	Determines predelay—or the time before the reverb effect is heard.

Parameter	Description
Scale	On stereo delays, the Scale offers control over the left & right channel repeats proportionately. The left channel repeats following the Time value and the right channel will repeat at a time that is the percentage of the left time. For example, if a delay's Time is set for 1 second and the Scale set to 75%, the left channel will repeat at 1 second and the right at 750 milliseconds (ms).
Spread	Spread differs slightly among stereo delay effects. For most delay, it adjusts how widely the repeats bounce left and right. With the Ping Pong Delay, for example, 0 is in the middle (mono), and 10 is full left to right panning on the repeats. For modulated stereo delays, Spread affects the LFOs' (low frequency oscillators) stereo modulation behavior. At 0 the LFOs are in sync. At 10, the two LFOs are 180 degrees out of sync, so that when one side is modulating up, the other side is modulating down.
Headrm	Some mod and delay pedals' internal signal paths exhibit a bit of grit, especially when placed after a high-gain distortion block. Negative values increase the perceived amount of grit; positive values clean things up a bit. At 0dB, the model behaves like the original pedal.
Low Cut **Hi Cut**	Filters a portion of the block's bass and/or treble frequencies, which can help remove rumble and/or high-end harshness.
Mix	Blends the effected "wet" signal vs. the "dry" signal passed through the block. When set to 0%, the path bypasses the effect completely. When set to 100%, the entire path is fed through the effect, and no dry thru signal is heard.
Level	Adjusts the overall output level of the effects block. Be careful not to boost this parameter too high on multiple blocks, as digital clipping could occur. You should typically leave this at 0.0dB for most blocks. Where the original pedal's level or volume knob behavior doesn't really apply to dB values, 0.0-10 may be used.
Trails	*Trails Off:* Any delay repeats or reverb decays are instantly muted when the block is bypassed. *Trails On:* Any delay repeats or reverb decays continue to decay naturally when the block is bypassed or a different snapshot is selected.

Impulse Response (IR)

Impulse Responses are mathematical functions representing the sonic measurements of specific audio systems (for the HX Effects device, acoustic guitar body resonance or speaker cabinet and microphone combinations). The HX Effects device can load and store up to 128 custom or third-party IRs at a time.

IRs can be utilized within your presets by adding an IR block to your Signal Flow, and then selecting any of the 128 IR index locations to which you've imported an Impulse Response .wav file. You can add a max. of one 2048-sample IR block, or up to two 1024-sample IR blocks to your Signal Flow within a preset.

Loading Custom IRs

Loading custom Impulse Responses requires connecting to the *HX Edit* software in your Mac or Windows computer. The *HX Edit* application is available as a free download from line6.com/software.

NOTE: **If you are using a Windows® computer** - You'll need to first install the *Line 6 HX Effects Device Driver*, which is included with the *HX Edit* application download or can be downloaded individually from line6.com/software. No driver installation is necessary for Mac computers.

1. **Connect the HX Effects device to your computer via USB and open the *HX Edit* application.**
2. **Click the Impulses tab.**

3. **Drag one or more IR files from the desktop or any Finder window directly into the HX Edit app's Impulses list.**

NOTE: The HX Effects device utilizes mono IR files up to 2048 samples in length. Upon import, the HX Edit app automatically shortens (or lengthens) all IR files to 2048 samples, but you may choose a less DSP-intensive, 1024-sample version from the IR block menu. Optionally, a stereo .WAV IR can be imported and the IR Manager will utilize only the left channel.

HX Edit updates the HX Effects hardware's IR list automatically. The HX Effects device can import and store up to 128 IRs at a time. 48kHz, 16-bit, mono, .WAV type IRs of up to 2,048 samples are natively supported, but the *HX Edit* app allows you to import IR .WAV files of different sample rate, bit depth, length and stereo format, and the app will convert these attributes automatically before sending to the HX Effects hardware.

IMPORTANT! IR blocks within the HX Effects device's signal flow reference an IR by its index number (1-128), not the actual IR file. For example, if you happen to replace or delete "IR 12" from the *HX Edit* application, it will affect any presets containing IR blocks with "IR 12" selected.

Impulse Response Settings

Page	Knob	Parameter	Description
1	1	**IR Sel**	Selects one of the 128 available IR index locations. As you turn knob 1, you'll see the file name of the IR .wav file that resides within the IR index slot.
	2	**Low Cut**	Filters a portion of the IR's bass and/or treble frequencies, which can help remove rumble and/or high-end harshness.
	3	**Hi Cut**	
2	1	**Mix**	Blends the IR signal with the dry signal passed through the IR block. When set to 0%, the path bypasses the IR completely. When set to 100%, the entire path is fed through the IR, and no dry signal is heard.
	2	**Level**	Adjusts the overall output level of the IR block.

NOTE: Just like a true speaker cab, IR blocks are mono. Therefore, an IR block will sum any stereo source that is fed into it to mono. See "Block Order and Stereo Imaging"

Send/Return

Each of the Send and Return jacks can be used independently, or used in combination as a mono or stereo FX loop.

FX loops let you dynamically insert your favorite external stompboxes (or rack effects) into any location in your preset.

NOTE: Each Send and Return pair can be set for Instrument level (for inserting stompboxes) or Line level operation. See "Global Settings > Ins/Outs"

Send Settings

Knob	Parameter	Description
1	**Send**	Adjusts the level sent to your external devices.
2	**Dry Thr**	Adjusts the level of the signal passed through the Send block, independent of the Knob 1 (Send) level. Normally, this should be set to 0.0dB.

Return Settings

Knob	Parameter	Description
1	**Return**	Adjusts the level received at the Return jack.
2	**Mix**	Blends the Return signal vs. the dry signal passed through the Return block. When set to 0%, the path bypasses the Return completely. When set to 100%, the entire signal is fed from the Return, and no dry thru signal is heard.

FX Loop Settings

Page	Knob	Parameter	Description
1	1	**Send**	Adjusts the level sent to your external device.
	2	**Return**	Adjusts the level received at the Return jack.
	3	**Mix**	Blends the FX loop signal vs. the dry signal passed through the FX Loop block. When set to 0%, the path bypasses the FX loop completely. When set to 100%, the entire path is fed through the FX loop, and no dry thru signal is heard.
2	1	**Trails**	*Trails Off:* An external stompbox would be instantly muted when the FX Loop block is bypassed. *Trails On:* An external delay or reverb stompbox would continue to decay naturally when the FX Loop block is bypassed or a different snapshot is selected.

Looper

The HX Effects device can add one mono or stereo Looper block per preset.

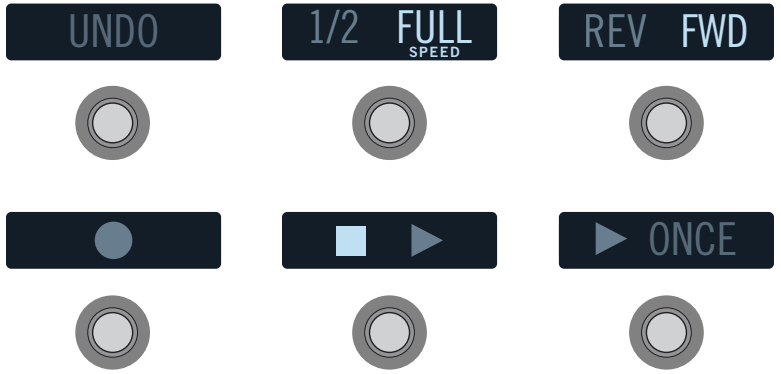
The Looper can exist anywhere on either Path 1 or Path 2.

Looper footswitch mode is only available if a Looper block has been assigned to a footswitch in Stomp mode. Many factory presets include a Looper block already assigned to a footswitch, but your custom presets may not.

Looper Type	Max. Loop Length (1/2 Speed)	Max. Loop Length (Full Speed)
Mono	120 seconds	60 seconds
Stereo	60 seconds	30 seconds

1. From Stomp mode, press the footswitch labeled “Looper” (if available).

Looper mode appears:



Switch	Description
● ■ ▶	Step on ● to start recording a loop. Step on ■ ▶ to end the loop and immediately start playback. Step on ● to overdub additional parts. Step on ■ ▶ again to stop playback.
UNDO	If you make a mistake on your last overdub, step on UNDO to erase it.
▶ ONCE	Step on ▶ ONCE to play the recorded loop once through.
1/2 FULL SPEED	Recording at full speed and then switching to 1/2 speed will also drop the loop down one octave. Recording at 1/2 speed will double your looping memory and switching to full speed will cause the loop to play at double speed (up an octave).
REV FWD	Step on REV/FWD to hear your loop backwards.

NOTE: If you press ● while loop playback is stopped, this will always record a new loop, and any previous recording will be discarded.

IMPORTANT! You may change presets while looping, but loop playback will stop unless the preset you select includes the same type of looper block (mono or stereo).

2. To return to the previous mode, press MODE (EDIT/EXIT).

Looper Settings

Page	Knob	Parameter	Description
1	1	**Playbk**	Adjusts looper playback level. You may find it useful to turn this down a bit so your live guitar can be slightly louder.
	2	**Ovrdub**	*Relatively* sets the level of your loop while overdubbing. For example, if your Overdub Level is set to 90%, each time your loop repeats, its volume will be reduced by 10%, sounding quieter and quieter with each overdub pass.
	3	**Low Cut**	Filters a portion of the loop's bass and/or treble frequencies, which can improve the mix with your live guitar.
2	1	**High Cut**	

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Snapshots

In Preset mode, the current preset's scribble strip displays a small camera icon. Its number indicates the current *snapshot*.

Why should I care about snapshots?

To be honest, maybe you shouldn't. Ask yourself these questions:

- Hey self, when performing live, does the small gap when switching tones drive me nuts?
- If my delay repeats and reverb trails don't seamlessly spill over when switching tones, does it drive me nuts?
- Do I secretly wish I were an octopus, so I can constantly change multiple effects settings throughout a song?

If you answered "M'eh" or "Huh?," stop reading this now, go play guitar, completely ignore the camera icon, and you'll never have to worry about snapshots again. Seriously. However, if you answered "Yes!" to any of these questions, keep reading.

Okay, I'm still reading

There's always going to be a small audible gap when switching presets in any box with this level of dynamic model allocation and routing complexity; that's just how advanced Digital Signal Processing (DSP) works. However, snapshots allow for a surprising amount of tonal control from within the same preset, and every change happens instantly and seamlessly.

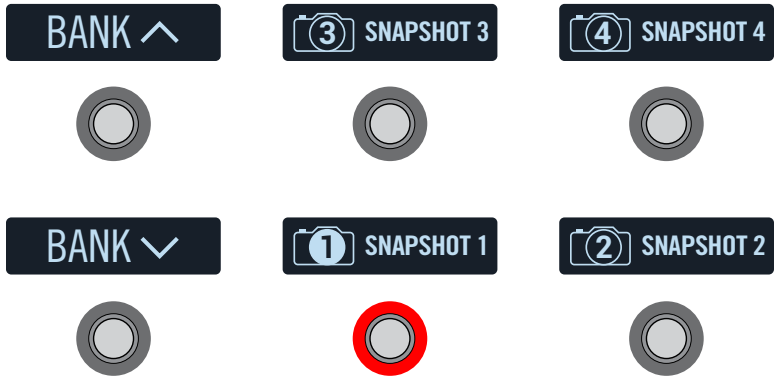
Each of the four snapshots within the HX Effects device stores and recalls the state of certain elements in the current preset, including:

- **Effect Bypass**—The bypass (on/off) state of all effects blocks (except Loopers).
- **Parameter Control**—The values of any parameters assigned to controllers (up to 64 per preset).
- **Command Center**—The values of any instant MIDI CC, Bank/Prog, and MMC messages, plus the state (dim or lit) of any Ext Amp messages. Also see "Command Center"
- **Tempo**—The current system tempo, if "Global Settings > MIDI/Tempo" > Tempo Select is set to "Per Snapshot." (By default, it's set to "Per Preset.")

Depending on how you set them up, snapshots can act as four variations of the same tone, four drastically different tones, or any combination thereof—all within the same preset. In many cases, a single preset's snapshots may accommodate all the various tones required for a song.

Using Snapshots

1. **From Preset mode, press BANK ^ and BANK v simultaneously to enter Snapshot footswitch mode.**



2. **Press one of the four snapshot switches to select a different snapshot.**

> ***NOTE:*** If you don't want Snapshot footswitches to disappear after selecting one, set "Global Settings > Switches" Snpsht Mode to "Latch[ing]." In this case, the HX Effects device stays in Snapshot footswitch mode until you press MODE/EDIT/EXIT.

3. **Adjust the preset by doing one or more of the following:**
   - **Turn one or more effects on or off by pressing stomp mode footswitches or pressing Footswitch 3 in the "Signal Flow" view.** Snapshots automatically remember every block's bypass state.
   - **To adjust a parameter AND have it automatically update per snapshot, *press and turn* the knob.** This creates a "Snapshot controller assignment" for this parameter. Snapshots can remember the values of up to 64 effects parameters. The parameter's value bar displays small nodes at the current value, indicating the Snapshot controller's assigned to it:

SHORTCUT: Hold ACTION and press a parameter knob to quickly remove any controller assignment (including the Snapshots controller). The small value nodes disappear, indicating no controller is assigned to it.

NOTE: You can also manually assign the Snapshots controller (see "Assigning a Controller"). **From the Controller Assign page, select the desired block and parameter and turn Knob 2 (Controller) to select "Snpsht."**

- On the "Command Center" page, **adjust the values of any Instant ⚡ messages or press a footswitch assigned to CC Toggle or Ext Amp.** Snapshots remember the values of any instant MIDI CC, Bank/Prog and MMC messages, plus the state (dim or lit) of any CC Toggle and Ext Amp messages.

4. **Switch back to the snapshot you started with.**

   The HX Effects device instantly and seamlessly returns to its previous state. Be sure to save to retain all your snapshot settings with the current preset.

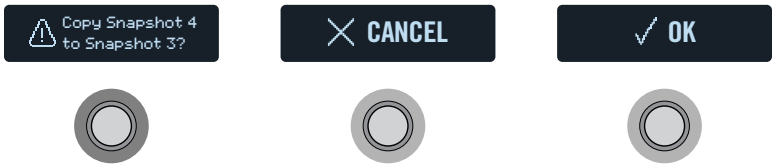
NOTE: If you've changed "Global Settings > Preferences" > Snpsht Edits to "Discard," you must save the preset before selecting a different snapshot; otherwise any edits will be discarded!

Copying/Pasting a Snapshot

Instead of creating a new snapshot from scratch, you may want to copy an existing one to another snapshot location and tweak just a few things.

1. **From Snapshot mode, while touch-holding the footswitch for the snapshot you want to copy, briefly touch and release the footswitch for the snapshot you want to overwrite.**

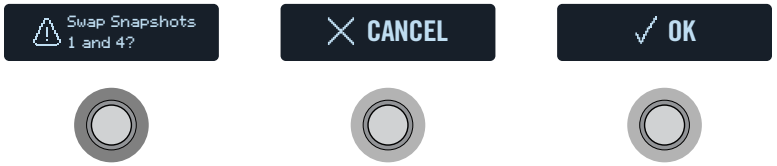
   A dialog panel appears:



2. **Press the OK switch.**

Swapping Snapshots

1. **Touch (but don't press) the two snapshot switches you want to swap until the following dialog appears:**



2. **Press the OK switch.**

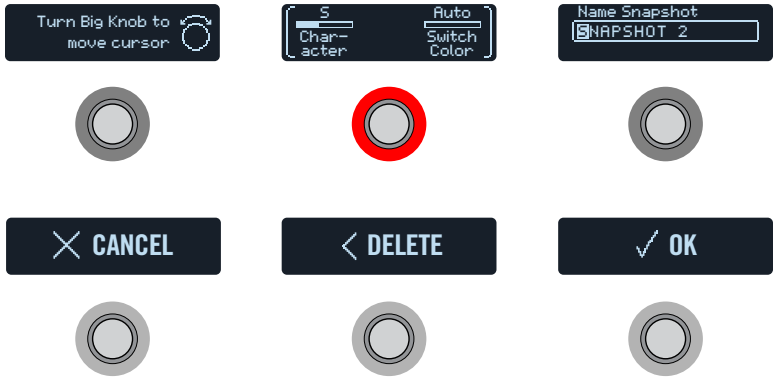
Renaming a Snapshot

Instead of having to remember the difference between "SNAPSHOT 1" and "SNAPSHOT 2," it's helpful to rename your snapshots something descriptive, such as “VERSE,” “BIG SOLO,” or “D. IGLOO.”

1. **From Snapshot mode, select the snapshot you want to rename and press ACTION.**

2. **Press the NAME SNAPSHOT switch.**

   The Name Snapshot screens appear:



Turn the Big Knob to move the cursor.

Turn Knob 1 (Character) to change the selected character.

SHORTCUT: Press Knob 1 (Character) to cycle through uppercase, lowercase, 0, and [SPACE].

Press the DELETE switch to delete the selected character and shift all following characters to the left.

Delete all characters to remove the custom label, after which the footswitch label displays its normal assignment.

3. **Turn Knob 3 (Switch Color) to select the desired color for the footswitch's LED ring (or turn it off).**

   Normally, you should leave this set to "Auto Color."

4. **When finished, press the OK switch.**

Saving Snapshots

Press SAVE twice to save the preset.

Saving a preset stores all of its 4 snapshots automatically.

NOTE: Selecting a preset recalls the Snapshot that was active when the preset was saved.

Determining Snapshot Edit Behavior

Say you're on Snapshot 2 (VERSE) and you change a few things—switch a delay block on, switch a mod block off, tweak a (Snapshot Controller assigned) parameter, etc. If you switch to Snapshot 4 (CHORUS) *and then back to Snapshot 2* for the second verse, should the HX Effects hardware recall those changes or return Snapshot 2 to its state when the preset was last saved? There's no right answer, therefore, the HX Effects device lets you choose.

1. **Press ☰ and then the GLOBAL SETTINGS switch.**
2. **Turn the Big Knob to select Prefs, then touch the footswitch displaying "Snapst Edits" (FS2).**
3. **Turn the corresponding knob to set snapshot edit behavior:**
   - **Recall**—Any snapshot edits are recalled when jumping from snapshot to snapshot, and appear as you *last left them* (the default).
   - **Discrd** [Discard]—Any snapshot edits are discarded when jumping from snapshot to snapshot, and appear as the preset was last saved. If you want to save changes made to a snapshot while Snapshot Edits is set to "Discard," **press SAVE twice before selecting another snapshot**

Tips for Creative Snapshot Use

- The obvious use case for snapshots is designating them to specific sections of your song. For example, Snapshot 1 would be the Intro, Snapshot 2 would be Verse 1, Snapshot 3 might be the Chorus, and so on.
- Turn any Delay, Reverb, and/or FX Loops blocks' Trails parameter to "On" for seamless spillover between snapshots.
- "SNAPSHOT (X)" isn't very descriptive. Don't forget to name your snapshots—See "Renaming a Snapshot"
- Worried that further tweaking might make your tone worse, not better? Snapshots are a great way to compare minor changes within a preset without having to take your hands off the guitar.
- Want to save your footswitches for other uses? Command Center MIDI type Instant ⚡ messages are automatically transmitted when a Snapshot is recalled. (Note that, at this time, Amp control messages are not transmitted per snapshot when assigned to an instant command; only when assigned to a footswitch.)
- Set different keys in Harmony Delay blocks or intervals in Pitch blocks per snapshot.
- Having difficulty maintaining consistent volume throughout a song? Set one of the effects' Gain or Level parameter per snapshot.
- Remember to SAVE your current preset to retain any Snapshot settings you've created or edited before loading another preset!

Signal Flow

Although most users should expect to spend the vast majority of their time in Stomp and Preset modes, the Signal Flow menu is where you reorder effects (independent of footswitch location), assign multiple effects to the same switch, and create parallel routings.

Signal Flow view also provides a great way to see all nine effects at once.

1. **Press ☰ to open the Menu.**
2. **Press the SIGNAL FLOW switch.**

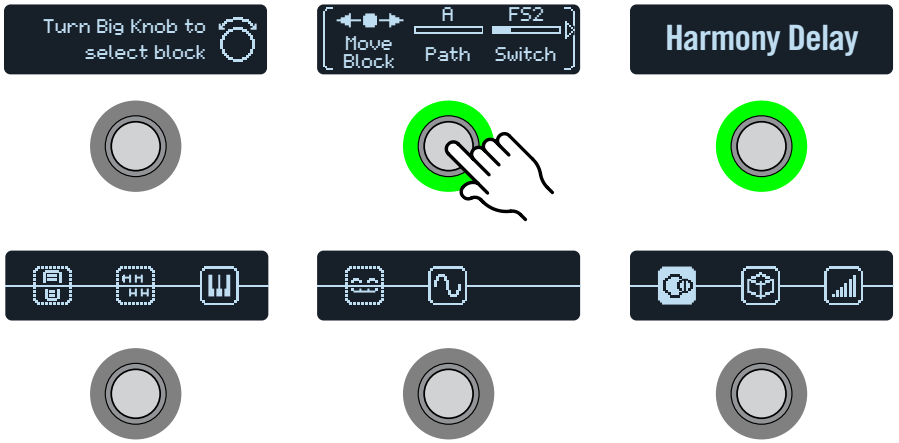
Up to nine simultaneous effects are represented by blocks spanning the bottom three screens. The currently selected block's model name appears at Footswitch 3.

To select a block, turn the Big Knob.

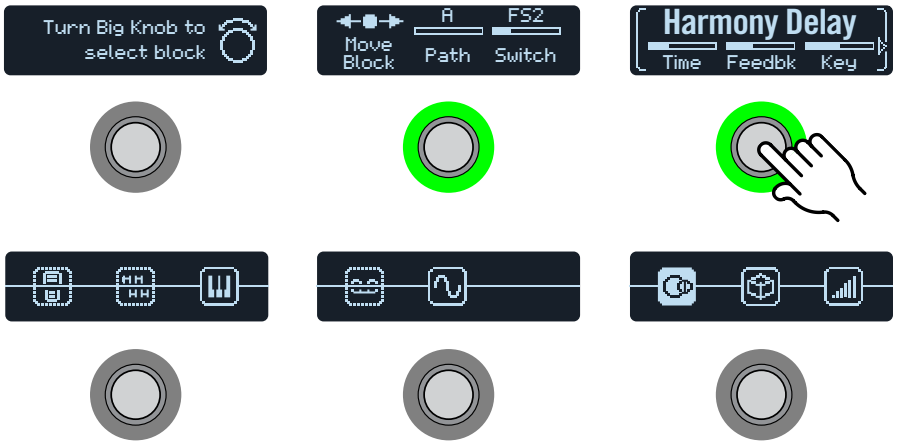
Moving Blocks in Signal Flow View

1. **Turn the Big Knob to select the block you want to move.**
2. **Touch Footswitch 2 and turn Knob 1 (Move Block) to move the selected block left or right.**

Touch FS2 *for block moving, routing, and footswitch assignment.*



Touch FS3 *to edit the selected block from within Signal Flow view.*



Bypassing Blocks in Signal Flow View

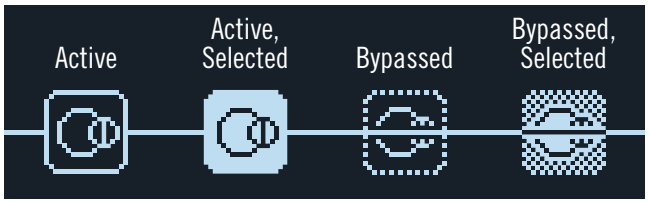
A Stomp mode footswitch is the most obvious method for turning an effect block on and off, but the HX Effects device can also engage or bypass a block automatically when moving an expression pedal. For example, if you add a Wah or a Pitch Wham block to your Signal Flow, you'll see that these block types are automatically assigned so that the block's Bypass is toggled via EXP 1 - moving EXP 1 forward past the heel down position enables the block, and returning EXP 1 to the heel position will bypass it again.

1. **Turn the Big Knob to select the block you want to bypass.**

   You'll see the LED ring for FS2 and FS3 appear lit if the selected block is active, or dimmed if bypassed.

2. **Press FS2 or FS3 to bypass the selected block.***

   An effects block's appearance changes depending on its state. For example, here are the various states of a Delay block:



   When a parallel path is created, you'll see "Split" and "Mixer" blocks added (see "Parallel Path Routing"). The Mixer block cannot be bypassed. If the Split block is bypassed, it behaves exactly like Split > Y, with both Balance parameters set to Center.

> ⚠ ***IMPORTANT!** Pressing FS2 or FS3 from the Signal Flow view bypasses only the selected block, even if other blocks share the same footswitch within Stomp mode. For example, if both a distortion (active) and delay (bypassed) block are assigned to FS1, pressing FS1 while in Stomp mode will toggle between distortion and delay. In such case while in Stomp mode, repeatedly touch the multi-assigned FS1 to cycle through the distortion and delay parameters.

Editing Blocks in Signal Flow View

1. **Turn the Big Knob to select the block you want to edit.**

2. **Touch Footswitch 3 and turn Knobs 1-3.**

   While adjusting parameters, the values briefly appear on the scribble strip:

   If an effect or other item has more than three parameters, arrows appear to the right and/or left of the parameter names (see above).

3. **Press ◁ or ▷ to access more parameters (if available).**

> 💡 ***TIP:** Just like in Stomp mode, blocks can be copied, pasted and cleared from Signal Flow view. **Press ACTION and then the desired function switch. See** "Copying/Pasting an Effect".

Assigning Switches in Signal Flow View

> ⚠ ***IMPORTANT!** The first six effects blocks added in Signal Flow view are automatically assigned to Stomp switches. Don't worry about the order in which you add blocks and in most cases, don't even bother attempting to reorder your Stomp switches from the Signal Flow view's Footswitch parameter. Instead, you should swap footswitch assignment by touching two Stomp switches. See "Swapping Footswitches".
>
> However, Signal Flow view's Footswitch parameter overwrites any automatic assignment and lets you assign multiple effects to the same switch, and even allows for toggling between two or more effects.

1. **Turn the Big Knob to select the block you want to assign to a footswitch.**

2. **Touch Footswitch 2 and turn Knob 3 (Switch) to select the desired footswitch or expression pedal:**

   None Removes the switch assignment.

   FS1-FS6 Stepping on the Stomp mode footswitch turns the block on and off.

   Selecting FS1-6 displays Knob 1 (Switch Type) on the second page. **Press ▷ and turn Knob 1 (Switch Type) to select "Latch[ing]" or "Moment[ary]."** When set to Moment, the block is bypassed (or enabled, if already bypassed) for as long as you hold the switch. When set to Latch, the block is bypassed (or enabled, if already bypassed) every time you press the switch.

EXP 1, EXP 2 Moving the expression pedal automatically enables (or bypasses) the block.

Selecting EXP 1 or 2 displays Knob 1 (Position) and Knob 2 (Wait) on the second page. Position determines where in the expression pedal's travel the block is enabled or bypassed. 0% is heel down; 99% is toe down. Wait determines how long the HX Effects device waits before bypassing the block; for example, you wouldn't want the wah to turn off every time you touched the heel down position in your big funk wah solo.

TIP: By default, bypass toggling for the effect via EXP 1 or EXP 2 is configured for "heel down = off" behavior. To reverse bypass behavior, **press FS3**. In such case, the block will be *bypassed* when moving the expression pedal past the configured Position location. Since it is possible to configure the bypass of multiple blocks to be assigned to an expression pedal, you can set each block's Position value differently - thereby allowing the pedal to turn some blocks on and others off at different positions in the pedal's travel.

You can change additional bypass behaviors for the selected block within Signal Flow view by touching FS2 and accessing the parameters on both pages.

NOTE: Footswitch type (momentary or latching) is determined *per footswitch*, not per assignment.

3. **If desired, press ▷ and turn Knob 3 (MIDI In) to assign an incoming MIDI CC message to turn the block on and off.**

   Incoming CC values 0-63 turn the block off; values 64-127 turn the block on. Note that some MIDI CCs are reserved for global functions and cannot be selected.

Parallel Path Routing

The vast majority of guitar tones are created with serial routing; that is, one stompbox or effect after another. For example, the Signal Flow view for most of the HX Effects device's presets looks something like this:

For more sophisticated tones, a parallel (two stereo paths) signal flow can be created. This lets you split the signal into two stereo paths, process each separately, and mix the two back together.

A couple advantages of parallel routing:

- If a reverb follows a delay on a serial path, the delay's echoes will have reverb applied. Likewise, if a delay follows a reverb on a serial path, the reverb's tail will have distinct echoes. Conversely, if a reverb and delay are on separate parallel paths, they won't affect one another and can sometimes result in cleaner, more defined notes (if desired).
- If your effect block types don't have Mix or Blend controls, adding them to a parallel path allows the dry guitar or bass signal to pass through unaffected and be blended with the effected signal.

Touch Footswitch 2 and turn Knob 2 (Path) to move the selected block down to Path B.

The block is dropped to lower path B, a Split block is created directly to the left of it, and a Mixer block is created after the last effect:

To remove path B, move all blocks on path B (lower) back up to path A (upper).

Setting Path B's Output

There may be situations where you want parallel Path B to be sent to a completely different set of outputs.

1. **In the Signal Flow view, turn the Big Knob to select the point where the two paths merge.**

   The Mixer block appears only when selected:

2. **Touch Footswitch 2 and turn Knob 2 (Path B Output) to select "Send12."**

   The Mixer block splits into two, indicating Path A is being sent from the HX Effects hardware's Main L/R outputs and Path B is being sent from its Send 1/2 outputs:

Configuring Split Block Options

It is possible to customize the options for a Split block to determine how your signal is fed into Paths A and B.

TIP: Remember that both Paths A and B are stereo signal paths, therefore, the same routing and block principles still apply to each Path - see "Block Order and Stereo Imaging" on page 32.

1. **In the Signal Flow view, turn the Big Knob to select the Split block, at the point where the two paths split.**

   The Split block appears only when selected.

   By default, the **Split Y** type block is selected, as displayed on FS3. Adjust the amount of signal fed to each path using the **BalnceA** and **BalnceB** parameters. Optionally, you can choose a different Split block type with different routing options.

2. **Touch Footswitch 2 and press the Big Knob.**

   The FS3 scribble strip now shows the menu where you can choose between **Split Y**, **Split A/B** or **Split Crossover** types. Parameters for each of these Split block types are described in the following tables.

Split > Y Settings

By default, a Split > Y appears any time parallel Path B is created.

Knob	Parameter	Description
1	**BalnceA**	Adjusts the left/right stereo balance of Path A.
2	**BalnceB**	Adjusts the left/right stereo balance of Path B.

Split > A/B Settings

The signal can be sent in different amounts to Paths A (upper) and B (lower).

Knob	Parameter	Description
1	**RoutTo**	Determines the amount of the signal sent to Path A vs. Path B. **Press the knob to set to Even Split.**

Split > Crossover Settings

Treble frequencies are sent to Path A and bass frequencies are sent to Path B.

Knob	Parameter	Description
1	**Freq**	Any signal above this frequency is sent to Path A (upper path); any signal below this frequency is sent to Path B (lower path).
2	**Reverse**	When on, reverses the path assignments (any signal above the crossover frequency is sent to Path B, any signal below the crossover frequency is sent to Path A).

Mixer Settings

Page	Knob	Parameter	Description
1	1	**A Level**	Adjusts the output level of Path A (upper path).
	2	**A Pan**	Adjusts the left/right stereo balance of Path A.
	3	**B Level**	Adjusts the output level of Path B (lower path).
2	4	**B Pan**	Adjusts the left/right stereo balance of Path B.
	5	**B Polar**	Inverts the polarity of Path B. Typically, this should be set to "Normal."
	6	**Level**	Adjusts the overall output level of the Mixer block.

Dynamic DSP

Like nearly all modern audio processors, the HX Effects engine is based on DSP (Digital Signal Processing). Some models require more DSP horsepower than others, so it makes logical sense that fewer of those models could exist within a preset. To work around this, some processors restrict you to one reverb, one delay, one pitch shifter, etc. With HX Effects hardware, we feel it's important to let you keep adding whatever you want to your Signal Flow, even if you may eventually run out of DSP.

As you approach the max. DSP limit for the current preset, the HX Effects hardware's "Dynamic DSP" functionality automatically hides effects models from the menus that would result in exceeding the DSP limit. To follow are some tips to get the most out of your device.

Tips to Optimize DSP

- Some block types use much more DSP than others, such as Reverbs, IRs, and Pitch Shifters. EQ, Dynamics, Volume/Pan, and Send/Return blocks use relatively little.
- Some models may use more DSP than others in the same category, therefore, you may find that choosing a similar type of effect within a category can reduce the DSP load, thus allowing you to utilize more blocks.

- The stereo version of an effects block will use roughly twice as much DSP as a mono version of the same block. Therefore, there is no sense to adding a stereo block before an IR or other mono type block (since the signal will be summed to mono anyway - see "Block Order and Stereo Imaging").
    - Some model categories have “Simple” blocks, which utilize less DSP than others.
    - Instead of toggling between two of the same effects blocks (with different settings), use controllers or snapshots to instantly adjust parameters within a single block.

Block Order and Stereo Imaging

The HX Effects device signal path is stereo, carrying two channels of audio. When the device is fed a stereo input source (i.e. - when discrete left & right signals are connected into the device's Left and Right input jacks), the source audio is processed discretely in stereo, wherever stereo blocks are used within the path. Whenever a mono block is added within a path, both channels of audio are combined and sent out of the block as mono.

Most effects models have both **Mono** and **Stereo** versions. The stereo imaging is highly dependent on the type of blocks you add, and in what order.

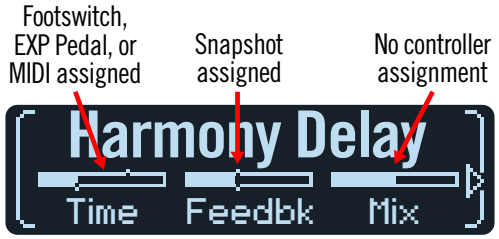
Legacy effects models vary in behavior, just as on the classic Line 6 effects from where these models originated.

- Legacy Distortion, Dynamics & Pitch/Synth effects are mono.
- Legacy Modulation & Delay effects vary in that some are mono, some stereo, and some mono-in/stereo-out, where adjusting the effect's Mix parameter can narrow the stereo image that is fed into them. It is best to experiment with these effects and tweak the Mix parameter to achieve the desired stereo output results.
- Legacy Filter and Reverb effects are stereo.

Controller Assign

The HX Effects device provides a wide variety of tools for controlling your tone during a performance. The most obvious controller would be a connected expression pedal (often assigned to Wah, Pitch Wham or Volume), but you may also assign footswitches to toggle between two values of a given parameter or parameters, control a parameter from an external MIDI device, or even have parameters instantly change when selecting different snapshots within a preset.

If a controller has been assigned to a parameter, small white nodes appear above and below its value bar:

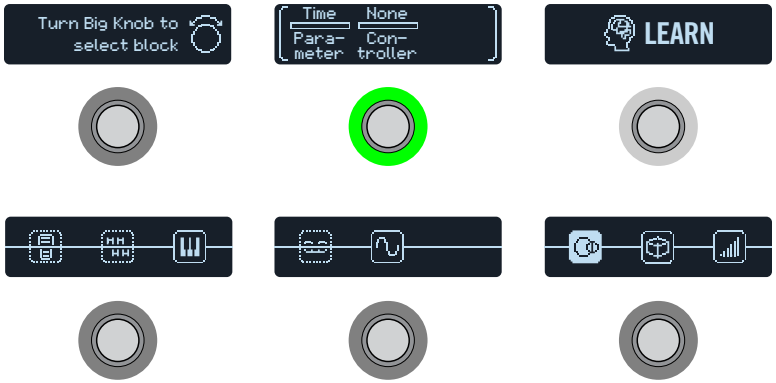


NOTE: Adding a Wah or Pitch Wham block automatically assigns it to be controlled and bypassed by EXP 1. Adding a Volume Pedal or Pan block automatically assigns it to be controlled by EXP 2.

Assigning a Controller

1. **From Stomp mode, press and hold the knob for the parameter you wish to control.**

   The HX Effects device jumps to the Controller Assign page and displays your parameter at Knob 1 (Parameter).



NOTE: To manually access the Controller Assign menu, **press ☰ and then the CONTROLLER ASSIGN switch**.

2. **Press the LEARN switch.**

   The button's brain icon glows blue and Footswitch 1 reads "Press switch, move EXP, or send MIDI..."

3. **Step on a footswitch, move a connected expression pedal, send a MIDI CC message from your keyboard, etc.**

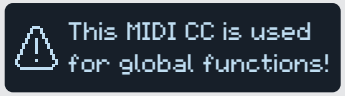
   The controller name appears above Knob 2 (Controller).

NOTE: To manually select a controller, **turn Knob 2 (Controller)**.

None	Removes the controller assignment.
EXP 1 or 2	Expression pedals are the most common type of controller. Used to control Volume, Wah, Pitch Wham, etc.
FS1-FS6	Stepping on a Stomp mode footswitch can toggle between a parameter's min and max values. Selecting FS1-FS6 will display Knob 3 (Switch Type). **Turn Knob 3 to select "Moment[ary]" or "Latch[ing]."** Momentary means the value will change for as long as you hold the switch. Latching toggles between Min and Max values every time you press the switch.
MIDI CC	Selecting "MIDI CC" will display Knob 3 (CC#). **Turn Knob 3 to select the desired MIDI CC number.**
Snpsht	Although all controller-assigned parameters are updated per snapshot, an additional "Snapshots" controller is available when other controllers are already used.

NOTE: Footswitch type (momentary or latching) is determined *per footswitch*, not per assignment.

NOTE: The HX Effects hardware has reserved specific MIDI CC messages for global functions; these CCs cannot be used as controllers. If you attempt to learn a CC message reserved for global functions, the following dialog appears:



See "MIDI" for more information.

4. **If desired, press ▷ and turn Knob 1 (Min Value) and Knob 2 (Max Value) to set the range you wish to control.**

> ***TIP:*** To reverse controller behavior, **swap the min and max values**.

5. **Press ⌂ to return to the Home screen.**

> ***SHORTCUT:*** To assign a parameter to the Snapshots controller, it's even easier—**just push and turn the parameter's knob**. The value bar displays small value pixels, indicating it's now assigned to a controller.

> ***SHORTCUT:*** Hold ACTION and press a parameter knob to quickly remove any controller assignment (including the Snapshots controller). The value bar's controller nodes disappear, indicating no controller is assigned to it.

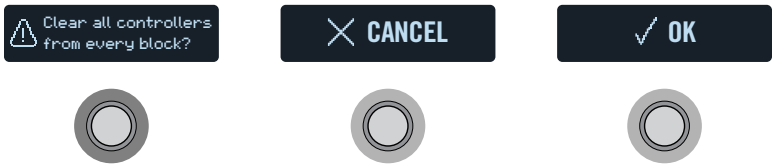
Clearing a Block's Controller Assignment(s)

1. **From the Controller Assign screen, select the block whose controller assignments you want to clear and press ACTION.**
2. **Press the CLEAR CONTROLLERS switch.**

Clearing All Controller Assignments

1. **From the Controller Assign screen, press ACTION.**
2. **Press the CLEAR ALL CONTROLLERS switch.**

   The following dialog appears:



3. **Press the OK switch.**

> ***IMPORTANT!*** Clearing All Controller Assignments removes ***all*** existing controller assignments in the preset, including Snapshot controller assignments and Wah, Pitch Wham and Volume assignments from EXP 1 and EXP 2. Use this function with caution!

Tips for Creative Controller Assignment

- If you assign a footswitch to more than one controller or other item, the default "MULTIPLE (X)" scribble strip label isn't really very descriptive. Don't forget to custom label it - See "Customizing a Footswitch"
- By default, a parameter's Min and Max values will be pretty extreme. It pays to play pretty conservative here, as subtle parameter adjustments go a long way.
- To smoothly blend between the tone on parallel paths A and B, select a Split > A/B block and assign the Route To parameter to an expression pedal. By default, a heel-down position means the signal passes fully through Path A. Moving the pedal toward the toe-down position will gradually crossfade into Path B. Alternatively, assign a footswitch to control the Route To parameter, for instantly switching back and forth.
- If you're looking for an ultra-clean boost, instead of adding a Volume/Pan > Gain block, try assigning a footswitch to increase the Level parameter of a Merge > Mixer or Output block.
- If you have a favorite delay or reverb pedal, use an FX Loop block to insert it into your tone. Assign EXP 1 or 2 to control the block's Mix parameter, which will smoothly blend the pedal into your tone.
- For extreme psychedelic dub delay squeals, assign a footswitch to both increase a Delay's feedback and decrease its time.
- Assign a footswitch to toggle between two Delay > Time parameter values, such as 1/4 and 1/8 dotted.
- Assign IR Select to a footswitch. Set the two IRs as min and max values. Now you can instantly toggle between them.

Command Center

The HX Effects device also just so happens to be a world-class master remote control for your entire pedalboard or live rig. Each of its Stomp mode footswitches and connected expression pedals can be used to send a variety of MIDI or External Amp commands to your guitar amps, vintage pedals, synths, or even other modelers. In addition, up to six "Instant" commands can be transmitted automatically when a the HX Effects device's preset is recalled, for starting your DAW, triggering a MIDI-controlled lighting system, or switching presets on external gear.

All Command Center assignments are stored per preset, but they can be copied and pasted to other presets. See "Copying and Pasting a Command"

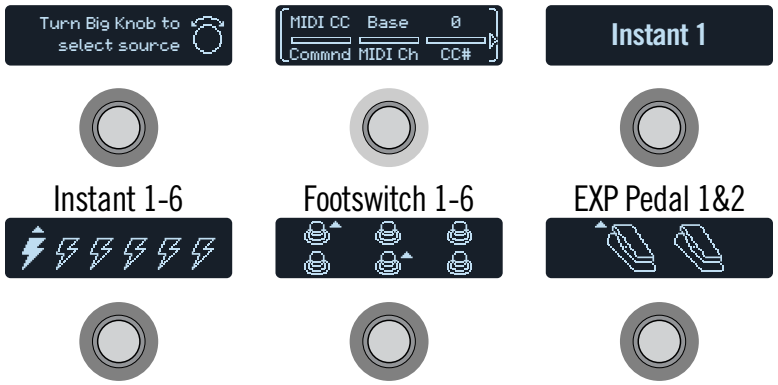
NOTE: The Value parameters of any instant MIDI CC, Bank/Prog, and MMC messages, plus the state (dim or lit) of any CC Toggle and Ext Amp messages are automatically recalled when selecting a snapshot.

NOTE: All MIDI-based Command Center messages are transmitted via MIDI Out and USB simultaneously. Also see "Global Settings > MIDI/Tempo" for MIDI configuration options.

Assigning a Command

1. **Press ☰ to open the Menu.**
2. **Press the COMMAND CENTER switch.**

   The Command Center screens appear, with the command sources in the HX Effects hardware represented by 14 icons along the bottom three screens:



3. **Turn the Big Knob to select the command source (Instant 1-6, Footswitch 1-6, or EXP Pedal 1-2).**

   The source name appears at Footswitch 3.

4. **Turn Knob 1 (Command) to select the type of command you wish to transmit.**

   Not all command sources can send the same types of commands.

   Select "None" to remove any existing command assignment.

5. **Press ◁ or ▷ and turn Knobs 1-3 to adjust the command's settings, which are determined by the type of command selected:**

MIDI CC (Continuous Controller)			
Page	**Knob**	**Parameter**	**Description**
1	2	**MIDI Ch**	Sets the CC message's MIDI channel (1-16). When set to "Base," the HX Effects device follows the Global MIDI channel, which is set from the "Global Settings > MIDI/Tempo" page.
	3	**CC #**	Sets the CC number (0-127).
2	1	**Value, Min Val[ue]**	Sets the CC number's value (0-127). For EXP Pedal 1 and 2, sets the minimum CC value controlled by the pedal.
	2	**Max Val[ue]**	For EXP Pedal 1 and 2, sets the maximum CC value controlled by the pedal.

CC Togl [Toggle]			
Page	**Knob**	**Parameter**	**Description**
1	2	**MIDI Ch**	Sets the CC messages' MIDI channel (1-16). When set to "Base," the HX Effects device follows the Global MIDI channel, which is set from the "Global Settings > MIDI/Tempo" page.
	3	**CC #**	Sets the CC number (0-127).
2	1	**DimVal[ue]**	Sets the CC number's value (0-127) when the footswitch ring is dim.
	2	**LitVal[ue]**	Sets the CC number's value (0-127) when the footswitch ring is lit.

NOTE: For CC Toggle commands, one of two values is automatically transmitted upon preset recall, determined by the footswitch's state (dim or lit) when the preset was saved. Subsequent presses of the footswitch toggle between the two states' CC values—Dim Value and Lit Value.

Bank/PC (Program Change)			
Page	**Knob**	**Parameter**	**Description**
1	**2**	**MIDI Ch**	Sets the Bank/Program message's MIDI channel (1-16). When set to "Base," the HX Effects device follows the Global MIDI channel, which is set from the "Global Settings > MIDI/Tempo" page.
	3	**CC00**	Sets the CC#00 (Bank MSB) value. Select "Off" if the receiving device shouldn't respond to Bank MSB.
2	**1**	**CC32**	Sets the CC#32 (Bank LSB) value. Select "Off" if the receiving device shouldn't respond to Bank LSB.
	2	**Prog[ram]**	Sets the Program Change (PC) value. Select "Off" if you only want to send a Bank MSB and/or Bank LSB message.

Note On			
Page	**Knob**	**Parameter**	**Description**
1	**2**	**MIDI Ch**	Sets the note's MIDI channel (1-16). When set to "Base," the HX Effects device follows the Global MIDI channel, which is set from the "Global Settings > MIDI/Tempo" page.
	3	**Note**	Sets the MIDI note value (C-1 ~ G9). Middle C is C3.
2	**1**	**Velcity**	Sets the MIDI note's velocity (0-127).
	2	**NoteOff**	Determines whether the MIDI note sustains until pressing the switch again (Latching) or sustains only while the switch is held (Momentary).

MMC (MIDI Machine Control)		
Knob	**Parameter**	**Description**
2	**Messge**	Determines the message type.

Ext Amp		
Knob	**Parameter**	**Description**
3	**Select**	Determines the Ext Amp connection [1 (Tip-to-sleeve), 2 (Ring-to-sleeve), or both] for switching an external amp's channel, reverb, or other functions. Only works when "Global Settings > Preferences" > EXP 2/EXT AMP is set to "EXT AMP."*

⚠ ***IMPORTANT!** Connect EXT AMP 1/2 only to amplifiers that utilize "short-to-sleeve" footswitch inputs. Connecting to any other sort of input could cause permanent damage to both your amp and the HX Effects device! If you're not sure if your amp has short-to-sleeve inputs, contact the manufacturer.

⚠ ***IMPORTANT!** Your ability to control external amp channel and/or reverb switching with the HX Effects device has been tested with many popular amps and heads. Unfortunately this does not guarantee compatibility with all products. Note that, depending on the circuitry of the channel switching jack in the guitar amp used, the EXT Amp function may not operate as expected.

***NOTE:** At this time, Ext Amp control messages are not transmitted per snapshot when assigned to an instant command; only when assigned to a footswitch.

Copying and Pasting a Command

1. **Turn the Big Knob to select the source containing the command you wish to copy and press ACTION.**
2. **Press the COPY COMMAND switch.**
3. **Select the destination to which you want to paste the command—even in a different preset—and press ACTION.**
4. **Press the PASTE COMMAND switch.**

Copying and Pasting All Commands

Setting up the same or similar set of Command Center commands across multiple presets can quickly become tiresome. Fortunately, the HX Effects device lets you quickly copy and paste all commands to another preset.

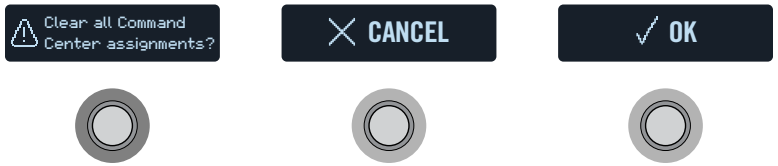
1. **From the Command Center page, press ACTION.**
2. **Press the COPY ALL COMMANDS switch.**
3. **Select the preset to which you want to paste the commands and press ACTION.**
4. **Press the PASTE ALL COMMANDS switch.**

Clearing a Command

1. **Select the source containing the command you want to clear and press ACTION.**
2. **Press the CLEAR COMMAND switch.**

Clearing All Commands

1. **From the Command Center page, press ACTION.**
2. **Press the CLEAR ALL COMMANDS switch.**
   The following dialog appears:



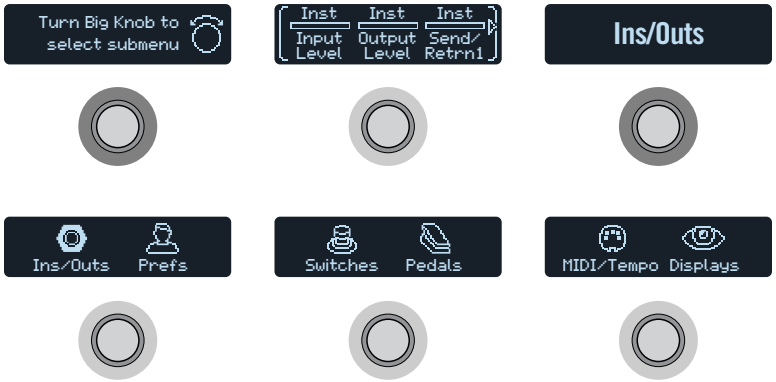
3. **Press the OK switch.**

> ***TIP:*** Be sure to SAVE your preset after adding, editing or clearing Command Center commands to retain your changes.

Global Settings

The Global Settings menu contains additional parameters that apply to all presets, such as input and output levels, footswitch configurations, etc.

1. **Press ☰ to open the Menu.**
2. **Press the GLOBAL SETTINGS switch.**
   The Global Settings screens appear:



3. **Turn the Big Knob to select one of the six submenus.**
   If necessary, press ▷ to view more parameters.

> ***NOTE:*** See next page for a description of all Global Settings.

Setting Proper Levels

The various inputs and outputs should be set to match that of your instrument, amp, and other pedals to ensure an ideal tone, low noise, and no ugly clipping distortion (unless, of course, you want ugly clipping distortion. Who are we to judge?). Just know that if you run to the Internet, screaming "HX Effects sounds bad!" the first thing people will ask is if you read this section of the manual. And if you didn't, they'll promptly revoke your Guitar Gear Guru status.

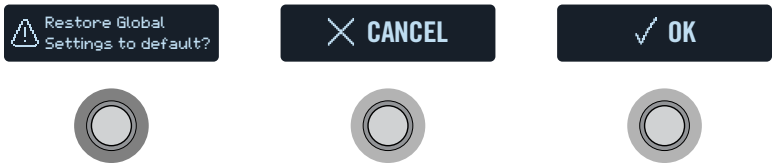
1. **From the Global Settings menu, turn the Big Knob to select the Ins/Outs submenu.**
2. **Using Knobs 1-3, set levels according to the following table:**

Jack	What are you connecting?	Then do this:
INPUT L/MONO, RIGHT	Guitar or bass with passive pickups	**Set Input Level to "Inst"**
	Guitar or bass with really loud or active pickups	**Set Input Level to either "Inst" or "Line" (trust your ears)**
	Keyboard, synth, or drum machine	**Set Input Level to "Line"**
OUTPUT L/MONO, RIGHT	To the Guitar In on a guitar or bass amp	**Set Output Level to "Inst"**
	To the guitar input(s) of a stompbox or other multieffect	
	To the instrument-level effects return of a guitar or bass amp for post effects or 4-cable method	
	To the line-level effects return of a guitar or bass amp for post effects or 4-cable method configuration	**Set Output Level to "Line"**
	To the inputs of a studio rack effect or mixer	

Resetting All Global Settings

Resetting the HX Effects device's Global Settings returns them to factory default. Performing this reset does not affect any presets you may have created.

1. **From the Global Settings menu, press ACTION.**
2. **Press the FACTORY SETTINGS switch.**
   The following dialog appears:



3. **Press the OK switch.**

Global Settings > Ins/Outs

Page	Knob	Parameter	Description
1	1	**Input Level**	Choose "Inst[rument]" when connecting a guitar, bass, or stompboxes to the HX Effects device's input jack(s); choose "Line" when connecting synths, drum machines, the sends from mixers, or other line-level sources. If your guitar or bass has really loud active pickups, try both "Inst[rument]" and "Line" and trust your ears.
	2	**Output Level**	Choose "Inst[rument]" when connecting the 1/4" outputs to stompboxes or the front of guitar amps; choose "Line" when connecting to mixers or standalone recorders. When using a single amp or mixer channel, connect only the LEFT/MONO 1/4" jack.
	3	**Send/Retrn1**	Choose "Inst[rument]" when using a Send/Return pair as an FX loop for stompboxes; choose "Line" when using a Send/Return pair as an FX loop for line-level rack processors.
2	1	**Send/Retrn2**	

Global Settings > Preferences

Page	Knob	Parameter	Description
1	1	**Bypass Type**	When pressing MODE and TAP together, the HX Effects device bypasses all effects. There are two types of All Bypass in the HX Effects hardware—Choose "Analog" if you want to your guitar's signal routed directly from the HX Effects device's inputs to its outputs with no processing or A/D/A conversion (also called "true bypass"). Choose "DSP" if you want delay echoes and reverb tails to decay naturally when the HX Effects device is bypassed.
	2	**Snpsht Edits**	Determines whether or not any edits made to a snapshot (block on/off, parameter control, Command Center, tempo) are remembered when returning to that snapshot. When set to "Recall," any snapshot edits are recalled when jumping from snapshot to snapshot, and appear as you last left them. When set to "Discrd," any snapshot edits are discarded when jumping from snapshot to snapshot, and appear as the preset was last saved. If you want to save changes made to a snapshot while Snapshot Edits is set to "Discrd," press SAVE twice before selecting another.
	3	**Tempo Pitch**	Determines how delay repeats behave when repeatedly pressing TAP to change the Tap Tempo value. "Authtc" [Authentic] respects the natural pitch fluctuations inherent when changing a real delay pedal's time knob; "Transpr" [Transparent] minimizes these artifacts.
2	1	**Pedal 1 Jack**	Determines whether the rear panel PEDAL/EXT AMP 1 jack acts as an additional expression pedal input (EXP 1) or as a dual amp control output for switching channels on external guitar amplifiers (EXT AMP 1 tip and/or sleeve).
	2	**Pedal 2 Jack**	Determines whether the rear panel PEDAL/EXT AMP 2 jack acts as an additional expression pedal input (EXP 2) or as a dual amp control output for switching channels on external guitar amplifiers (EXT AMP 2 tip and/or sleeve).
	3	**Numbering**	Determines whether presets appear as 32 banks of four (A B C D) or are numbered 000-127 (convenient when recalling presets via MIDI program change messages).

Global Settings > Switches

Page	Knob	Parameter	Description
1	1	**Stomp Select**	When set to "Touch," touching a Stomp mode switch selects its assigned item(s) but pressing doesn't. When set to "Press," pressing a Stomp mode switch selects its assigned item(s) but touching doesn't (helpful if you insist on playing barefoot). When set to "Both", either touching or pressing will select the assigned item.
	2	**Stomp Mode**	By default, Stomp footswitch mode displays 6 stomps. You may also choose "4 Switch", which replaces FS1 and FS4 with ^ and v switches.
	3	**Preset Mode**	When set to "Moment[ary]," the HX Effects device returns to Stomp mode as soon as a Preset (or Snapshot) switch is pressed. When set to "Latch[ing]," the HX Effects device stays in Preset (or Snapshot) mode and the user must press MODE to switch back to Stomp mode.
2	1	**Snpsht Mode**	When set to "Moment[ary]," the HX Effects device returns to Preset mode (or Stomp mode if Pg 1 > Knob 3 [Preset Mode] is set to "Moment[ary]") after selecting a snapshot. When set to "Latch[ing]," the HX Effects unit stays in Snapshot mode until pressing ^ + v to return to Preset mode (or MODE/EDIT/EXIT to return to Stomp mode).
	2	**Up/Dn Switch**	When set to "Preset" or "Snapsht," FS1 (BANK ^) and FS4 (BANK v) change to PRESET ^/v or SNAPSHOT ^/v, where pressing either switch instantly selects the next/previous preset or snapshot, without a bank queue. This is useful if you've programmed a fixed set list for your show, and just want to increment through presets or snapshots. At any time, press and hold both FS1 (^) and FS4 (v) to cycle through BANK ^/v , PRESET ^/v , and SNAPSHOT ^/v.

Global Settings > Pedals

Page	Knob	Parameter	Description
1	1	**EXP 1 Polrity**	If your external expression pedal appears to work backwards—for example, a Volume pedal block is loudest with the heel all the way down—set its polarity to "Invert."
	2	**EXP 2 Polrity**	
	3	**EXP 1 Position**	Determines whether each expression pedal position is recalled per snapshot, per preset, or applied globally. If you want a Volume Pedal or Wah to maintain its position when switching presets, set this to "Global."
2	1	**EXP 2 Position**	

Global Settings > MIDI/Tempo

Page	Knob	Parameter	Description
1	1	**MIDI Base Ch**	Sets the system base MIDI channel that the HX Effects hardware uses for both receiving and sending MIDI communication via MIDI and USB. Note that MIDI messages assigned from the Command Center page can be set to any MIDI channel.
	2	**MIDI Thru**	When on, MIDI OUT also acts as a MIDI THRU; that is, it passes through any MIDI messages received at the MIDI IN jack.
	3	**Rx MIDI Clock**	Determines whether the HX Effects device responds to incoming MIDI beat clock received at its MIDI IN port, via USB, or whichever it senses first ("Auto"). If you don't want your HX Effects device to respond to MIDI clock at all, set this to "Off."
2	1	**Tx MIDI Clock**	Determines whether the HX Effects device transmits MIDI beat clock from its MIDI OUT port, via USB, or both. If you don't want your HX Effects device to transmit MIDI clock at all, set this to "Off."
	2	**Tempo**	Choose whether the Tap Tempo value is stored and recalled with each snapshot, recalled with each preset, or is applied globally across all presets and snapshots.
	3	**BPM**	Depending on the Knob 2 (Tempo) setting, this value is saved per snapshot, per preset, or globally.
3	1	**USB MIDI**	When on, the HX Effects device receives and transmits MIDI data via USB in the same capacity as its MIDI jacks.
	2	**MIDI PC Rx**	Determines whether the HX Effects device responds to incoming MIDI program change (PC) messages from its MIDI IN port, via USB, or both MIDI and USB. If you don't want your HX Effects device to respond to PC messages at all, set this to "Off."
	3	**MIDI PC Tx**	Determines whether the HX Effects device automatically sends MIDI program change (PC) messages from its MIDI OUT port, via USB, or both MIDI and USB when selecting presets. This setting does not affect the sending of any MIDI commands manually assigned from the Command Center page.

Global Settings > Displays

Knob	Parameter	Description
1	**LED Ring**	Determines whether the Stomp mode footswitches' colored LED rings appear dim when bypassed ("Lo/Brt"), or off when bypassed ("Off/Brt"). When playing in bright sunlight, you may want to set to this to "Off/Brt" to increase contrast.
2	**Tap LED**	If you'd prefer to not see the red TAP footswitch LED constantly flashing, you can turn it off.

MIDI

The HX Effects device receives and transmits MIDI messages via its 5-pin MIDI In & Out connectors, as well as via USB, providing functionality with just about any MIDI hardware or software gear you may want to use with it. USB MIDI operation is functional with Mac & Windows computers, as well as with iPad or iPhone mobile devices.* Also see "Global Settings > MIDI/Tempo" for MIDI device options.

NOTE:** For USB MIDI operation on Windows computers, it is necessary to download and install the ***Line 6 HX Effects device driver, available from line6.com/software. There is no driver installation necessary for connecting to an Apple Mac computer or an iPad or iPhone mobile device.

For connectivity with iPad and iPhone mobile devices, an Apple Camera Connection Kit USB adapter is required (sold separately).

Preset Recall via MIDI

To recall a preset, send a program change (PC) message to your HX Effects device on MIDI channel 1, according to the table below.

***NOTE:** The HX Effects device responds to MIDI channel 1 by default, but this can be changed from "Global Settings > MIDI/Tempo"

Bank	Preset A	Preset B	Preset C	Preset D
01	PC: 000	PC: 001	PC: 002	PC: 003
02	PC: 004	PC: 005	PC: 006	PC: 007
03	PC: 008	PC: 009	PC: 010	PC: 011
04	PC: 012	PC: 013	PC: 014	PC: 015
05	PC: 016	PC: 017	PC: 018	PC: 019
06	PC: 020	PC: 021	PC: 022	PC: 023
07	PC: 024	PC: 025	PC: 026	PC: 027
08	PC: 028	PC: 029	PC: 030	PC: 031
09	PC: 032	PC: 033	PC: 034	PC: 035
10	PC: 036	PC: 037	PC: 038	PC: 039
11	PC: 040	PC: 041	PC: 042	PC: 043
12	PC: 044	PC: 045	PC: 046	PC: 047
13	PC: 048	PC: 049	PC: 050	PC: 051
14	PC: 052	PC: 053	PC: 054	PC: 055
15	PC: 056	PC: 057	PC: 058	PC: 059
16	PC: 060	PC: 061	PC: 062	PC: 063
17	PC: 064	PC: 065	PC: 066	PC: 067
18	PC: 068	PC: 069	PC: 070	PC: 071
19	PC: 072	PC: 073	PC: 074	PC: 075
20	PC: 076	PC: 077	PC: 078	PC: 079
21	PC: 080	PC: 081	PC: 082	PC: 083
22	PC: 084	PC: 085	PC: 086	PC: 087
23	PC: 088	PC: 089	PC: 090	PC: 091
24	PC: 092	PC: 093	PC: 094	PC: 095
25	PC: 096	PC: 097	PC: 098	PC: 099
26	PC: 100	PC: 101	PC: 102	PC: 103
27	PC: 104	PC: 105	PC: 106	PC: 107
28	PC: 108	PC: 109	PC: 110	PC: 111
29	PC: 112	PC: 113	PC: 114	PC: 115
30	PC: 116	PC: 117	PC: 118	PC: 119
31	PC: 120	PC: 121	PC: 122	PC: 123
32	PC: 124	PC: 125	PC: 126	PC: 127

***NOTE:** When navigating Presets from the HX Effects hardware (PRESETS encoder, preset footswitches, PRESET ^ / PRESET v, etc.), the HX Effects device automatically transmits a MIDI Program Change message corresponding to the selected preset. If you'd prefer to not automatically transmit PC messages, set "Global Settings > MIDI/Tempo" > MIDI PC Tx to "Off."

Snapshot Recall via MIDI

To recall a snapshot, send the HX Effects hardware a CC69 message according to the table below.

Snapshot	MIDI CC#	Value
1	69	000
2	69	001
3	69	002
4	69	003

Block Bypass via MIDI

1. **Press ☰ to open the Menu.**
2. **Press the SIGNAL FLOW switch.**
3. **Turn the Big Knob to select the block for which its bypass you want to assign to incoming MIDI.**
4. **Press ▷ and turn Knob 3 (MIDI Bypass) to assign an incoming MIDI CC message to turn the block on and off.**

   Incoming CC values 0-63 turn the block off; values 64-127 turn the block on. Note that some MIDI CCs are reserved for global functions and cannot be selected.

Parameter Control via MIDI

1. **From Stomp mode, press and hold the knob for the parameter you wish to control.**

   The HX Effects device jumps to the Controller Assign page and displays your parameter at Knob 1 (Parameter).

2. **Press the LEARN switch and then send a MIDI CC message from your foot controller, keyboard, etc.**

   The CC number appears above Knob 3 (CC#).

   NOTE: To manually select a MIDI, **turn Knob 2 (Controller) to select "MIDI CC" and Knob 3 to the desired MIDI CC number**.

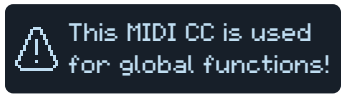
3. **If desired, press ▷ and turn Knob 1 (Min Value) and Knob 2 (Max Value) to set the range you wish to control.**

   TIP: To reverse controller behavior, **swap the min and max values**.

4. **Press ⌂ to return to the Home screen.**

MIDI CC

The HX Effects hardware has reserved specific MIDI CC messages for global functions; these CCs cannot be used as controllers. If you attempt to learn a CC message reserved for global functions (see "Controller Assign"), the following dialog appears:



MIDI CC#	Value	Function
		Pedal and Footswitch Assignments
1	0-127	Emulates EXP 1 Pedal
2	0-127	Emulates EXP 2 Pedal
49	0-127	Emulates Stomp footswitch mode's FS1
50	0-127	Emulates Stomp footswitch mode's FS2
51	0-127	Emulates Stomp footswitch mode's FS3
52	0-127	Emulates Stomp footswitch mode's FS4
53	0-127	Emulates Stomp footswitch mode's FS5
54	0-127	Emulates Stomp footswitch mode's FS6
		Looper Controls
60	0-63: Overdub; 64-127: Record	Looper Record/Overdub switch (FS4)
61	0-63: Stop; 64-127: Play	Looper Play/Stop switch (FS5)
62	64-127	Looper Play Once switch (FS6)
63	64-127	Looper Undo switch (FS1)
65	0-63: Forward; 64-127: Reverse	Looper Forward/Reverse switch (FS3)
66	0-63: Full; 64-127: Half	Looper Full/Half Speed switch (FS2)
67	0-63: Off; 64-127: On	Looper block on/off (if available); also enters/exits Looper footswitch mode

MIDI CC#	Value	Function
		Additional Controls
64	64-127	"Tap" in a Tap Tempo value
68	0-127	Tuner screen on/off
69	0-3	Snapshot select (0=Snapshot 1, 1=Snapshot 2, etc.)
70	0-63: Bypass; 64-127: On	All Bypass
71	0-127	Additional global MIDI commands (reserved for future use)
72	0-127	
73	0-127	
74	0-127	
75	0-127	
76	0-127	
128	0-63: Guilt; 64-127: Regret	The HX Effects hardware calls your family and informs them of every single poor life decision you've ever made

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LINE 6