

VP4

VIRTUAL PEDALBOARD

HOW TO INSTALL FIRMWARE: To install VP4 firmware, launch [VP4-Edit](#) and open **Fractal-Bot** from the Tools menu. The latest public release firmware is offered automatically if it isn't already installed. You can also use Fractal-Bot to manually send beta firmware, older firmware versions, or other files stored on your computer, such as presets or system backups.

VERSION 4.0 | December 9, 2025

NEW EFFECT TYPES

- **NEW “Surround Delay” type in the Delay block.** This stereo, psychoacoustic delay produces “rotating” echoes that seem to move around the listener. The Rotation parameter determines how rapidly the echoes rotate. With Rotation at 100% the echoes will rotate 180 degrees each time (front, back, front, etc). At 50% the echoes will rotate 90 degrees (front, right, back, left, front, etc.). Negative values will cause the echoes to rotate in the opposite direction.
- **NEW** Citrus Juicer compressor based on the Armstrong Orange Squeezer™
- **NEW** Drive Pedal types!
 - **PI Fuzz Bass** – based on a Deluxe Bass Big Muff Pi.
 - **NoAmp Bass DI** – based on a SansAmp™ BassDriver™ DI.
 - **NoAmp Bass Pre** – SansAmp™ BassDriver™ DI with speaker emulation bypassed
 - **Royal Bass DI** – based on a Noble Bass Preamp DI (with more gain and adjustable Low Cut
- **NEW** Graphic EQ types
 - **7 Band Pedal** – based on a Boss GE-7
 - **7 Band Bass Pedal** – based on a Boss GE-7B

PITCH DETECTOR UPDATES

- Added **Tracking Mode** parameter to **Synth** and **Ring Mod** blocks. When set to “BASS” the pitch tracking range is shifted down one octave with the lowest detectable note being approximately F#0.
- Enhanced pitch detection to track **higher notes** (approximately F#6).

ADDITIONAL UPDATES

- **Lowered CPU usage** for all presets!
- New Metronome On/Off switch with MIDI remote option.
- Tuned the filtering of expression pedals to allow faster response.
- Remastered the Blackglass 7k drive pedal model.
- A warning now appears when an incoming SPDIF signal is not running at 48k.
- Using a modifier on Tape Delay Motor Speed now works correctly.
- Fixed MIDI Learn Mode not working in some cases.
- Moving an empty block no longer resets the neighboring block.
- Improvements to Expert Edit for various blocks.
- Bank changes between AM4-Edit and footswitches now stay in sync.

FIXES

- USB Audio fix for macOS. The VP4 should now perform reliably in all cases.
- Modifier “dot” now updates correctly in all cases.
- Fixed Learn mode not working for External 2, 3, 4.
- Corrected the Input Gate to show “Release” instead of “Ratio”. (Ratio is available in Expert Edit.)
- Fixed a bug that could cause problems while saving if you changed presets WHILE the Overwrite? Prompt was displayed on screen.
- Fixed a rare case where the “Modern Gate” gate type could get stuck.
- Additional small fixes.

RELEASE NOTES HISTORY

VERSION 3.0 | September 9, 2025

UPDATES & NEW FEATURES

✓ **Improved shifting in the Pitch block.** The VP4 now features the latest pitch shifting from the Axe-Fx III.

To make the most of this new improvement, please review the following notes:

- Types including *Custom Shifter*, *Fixed Shift* types, *Octave Polygen* types, *Virtual Capo*, and *Whammy* offer a **Pitch Tracking** setting which selects between **Notes**, **Chords**, and **Off** modes.
 - **Chords** – greater stability for intricate chords, at the cost of increased latency.
 - **Notes** – Fastest tracking for individual notes at the cost of stability on complex chords.
 - **OFF** can be used to emulate vintage shifters without tracking intelligence.
- **Tracking Adjust** (in Expert Edit) lets you fine-tune the trade-off between stability and latency.
- For other Pitch types, tracking is set internally to required values and cannot be adjusted.

✓ **NEW! Send Scene MIDI Sync** - This new feature provides a simple, automatic way to send a **MIDI CC** message when you change the scene. Unlike the current **Scene MIDI** message system, this is a simple global option. You can use it to sync two VP4 units, change scenes on another Fractal Audio product, or control 3rd-party MIDI gear. Two new parameters under **SETUP > MIDI** are used to configure this feature.

- **Send Scene Sync Channel** – choose OFF, a specific channel (1–16), or OMNI.
 - **Send Scene Sync CC** – choose which CC# (1–127) will be sent. Note: For synchronous scene changes on another Fractal Audio product, change **SETUP > MIDI > Scene Select** to the same CC#.

Each time you change scenes, the VP4 sends the chosen CC number on the chosen channel. The value of the CC equals the scene number minus one (Scene 1 = 0, Scene 2 = 1, etc.). This works with scene changes from footswitches, Scene Mode, incoming MIDI, or the editor. The VP4 does not send a Scene CC message when you change presets. (By default, presets load whichever scene was selected when you last saved them.)

✓ **NEW! IR PLAYER BLOCK** – Fractal Audio Systems pioneered the use of installable **Impulse Responses** (IRs) in guitar gear with the original User Cab feature in the Axe-Fx – later refining the format with UltraRes™ for improved realism and performance. An IR is an audio snapshot that captures how a speaker, mic setup, or acoustic space shapes sound. It's most often used to recreate the tone of a guitar speaker cabinet, but also works for acoustic body modeling and other creative applications. Highlights:

- Load and mix up to two IRs per IR Player block.
- One IR Player block per preset.
- Store up to 256 IRs onboard.
- Manage IRs via “Manage Cabs” or Fractal-Bot in VP4-Edit.
- Adjustable level, pan, and length.
- Mute an un-used IR to silence it and save CPU.
- With Parallel/Stereo setting, IRs are processed as left and right.
- In Series mode, IRs are processed sequentially in mono.

DRIVE BLOCK UPDATES

- NEW “**Angry Chuck**” drive pedal model based on a JHS™ Angry Charlie™.
- NEW “**Guardian Photon Speed**” drive pedal model based on a Greer™ Lightspeed.
- Improved Drive block by modeling output buffer distortion where applicable.
- Fixed: Sunrise Splendour High Cut switch now works correctly (On = Cut)
- Fixed: Compulsion Distortion Mode switch now works correctly (LP = Low Pass, HP = High Pass)

ADDITIONAL UPDATES & FIXES

- Eliminated a click that could occur in some cases when bypassing/engaging the wah.
- “**PEDAL 2**” value now appears and functions correctly in **SETUP** menu scenarios.
- On the **Controllers > Tempo** page, the **ENTER** button now consistently maps to TAP TEMPO, regardless of which parameter has focus.
- **Reset Channel** no longer displays odd values upon initial load.
- The **Exit** button on the Tools Confirmation Dialog now works reliably in all scenarios.
- Improved MIDI compatibility with controllers from Morningstar and Roland.
- The type picker for effects is now smoother and more reliable. You can switch directly from the current type to any other type without cycling through each option in between. To set a type, turn **A/B** or **SELECT** to your desired type and press **ENTER**. Page right to edit parameters as usual.
- New **SPDIF In Level** setting under **SETUP > Audio** allows you to trim the level of incoming SPDIF signals.
- In the Drive block, the **Level** setting is no longer reset when changing **Mode**.
- Fixed an issue that could cause a crash when using **IR Player > Expert Edit**.
- The IR Player block should now consistently show channel names.
- Fixed an issue loading preset “Z4” after using press-and-hold to wrap from preset “A1”.
- Added support for compatibility with a future version of Cab-Lab.
- Various additional small fixes.

VERSION 2.02 | May 28, 2025

NEW FEATURES, UPDATES, FIXES

- Fixed Global Tap Tempo always changing to 120 BPM when changing presets.

Note: Global Tempo is a system-wide setting that updates whenever you tap or adjust the tempo manually. It remains set in the background and is used by any preset with "Tempo To Use" set to "GLOBAL". Presets can alternately use their own saved tempo by changing Controllers > Tempo > Tempo To Use to "PRESET".

VERSION 2.01 | May 20, 2025

NEW FEATURES, UPDATES & FIXES

- NEW: **"77 Custom OD"** Drive pedal type based on MXR M77 Custom Badass Overdrive.
- NEW: **"Reset All Channels"** feature in the **Home > Tools** menu.
Use this to set all channels in the designated block back to their default settings.
- Added **"Density"** to the Reverb block Basic Edit menu. Previously available only in Expert Edit, this setting can be lowered to reduce CPU load. TIP: For Plate types, reducing "Diffusion" further improves CPU performance. For Spring types, use the "Drip" control instead as "Density" is not available.
- Added modifier capability to the "Sensitivity" parameter for Touch Wah and Envelope Wah.
- Fixed: The "Output L" meter now correctly reflects the output of the "Pre-" Out in 4CM setups.
- Fixed: Using **VP4-Edit > Manage Presets** now works correctly while "Ignore Redundant PC" is enabled.
- **Setup > Audio > Output Mode > MUTE** now silences processed audio while allowing USB audio to be heard. This enables the VP4 to function as an audio interface e.g. for plugins, with a guitar connected to its input and speakers connected to its output(s).
- "Auto-Z" input impedance is only intended to work on the L/MONO input, and is therefore disabled (fixed at 1M) when Input Mode is set to "STEREO"
- Moving an empty effect to an occupied block location now works correctly.
- Plus additional small updates and fixes.

VERSION 2.00 | APRIL 8, 2025

NEW FEATURES & UPDATES

- **NEW BLOCK MOVE FEATURE**

On the home page in FX Mode, select the desired block, hold the ENTER button, and turn SELECT to move.

- **NEW DRIVE BLOCK MODELS & IMPROVEMENTS**

- NEW **"PI Fuzz"** model with classic, "Triangle", "Ram's Head", and "Russian" versions.
 - "Tone" switch which allows completely bypassing the tone circuitry.
 - "Wicker" switch which removes the feedback caps.
- NEW **"Colortone Booster"** based on a Colorsound Power Booster (with added **Master** control).
- NEW **"Colortone OD"** based on a Colorsound Overdriver (with added **Master** control).
- NEW **"MOSFET Distortion"** based on an Ibanez MT10 Mostortion.
- NEW **"Super Fuzz"** based on a Univox Superfuzz. The model features a **Tone** control.
Tip: Use the expert "Bias" setting to simulate the "Octave" control found on some clones.
- NEW **"Tube Drive 5-Knob"** model based on Butler Tube Driver.
- Improved **"Tube Drive 4-Knob"** model. If you are using this effect, change the drive "Type" from **Tube Drive 4-knob** to any other type and then back to "soft reset" the block.
- Improved **Blackglass 7K** model.
- Updated **"DS1 Distortion"** model to Second Edition specs.
- Added **1N5819 Schottky** and **Yellow LED** to drive Expert for types that support diode selection.
- General drive block improvements.

- **REVERB BLOCK UPDATES:**

- Reverbs based on real spaces have more natural sounding reflections and are more immersive.
- Improved all **Spring Reverbs**. A soft reset is recommended for these types to load new default values. You can perform this reset simply by changing the Type to a different reverb and then back. Note, the spring Drive control has been renamed "Dwell" as this is typically used on spring units.
- New type, **Spring: Vibrato-King Custom** type.
- For Expert Edit across all Reverb types, the "Q" is now adjustable for High and Low cuts when their slope is set to 12 dB.

- **NEW COMPRESSOR BLOCK MODELS & IMPROVEMENTS**

- NEW **Dynami-Comp** algorithms: There are four "flavors": Classic, Modern, Soft, and "Econo" which uses less CPU. Don't miss the "Tone" control which is great if you want the sound to be more or less bright while the compressor is engaged.
- NEW **"VCA"** Compressor types. These replace previous **"Studio"** types and include a new **VCA Bus Compressor** based on a classic feedback design (e.g., SSL Bus Compressor).
- NEW **Optical Compressor** based on classic optical rackmount compressors. The smooth attack and release make it ideal for acoustic instruments. Attack and release times are "doubly" dynamic due to design of the compressor and the response of the virtual photocell.
 - The minimum ratio is 4:1, but while hardware optical compressors typically have a fixed ratio and a separate limiter option, our version allows adjusting the ratio.
 - The **Emphasis** control replicates an internal "Limiter Response" control of some models.
 - The **Drive** control allows overdriving the output for added distortion.
- NEW **JFET Studio Compressor** type based on a classic rackmount compressor e.g. 1176. Perfect for fattening up your sound and adding grit.
 - The **Attack** and **Release** times are the "native" times of the detector, and the actual Attack and Release times will be much shorter (about 5x). Due to the very fast attack times these types of compressors can distort but this is part of their sound – and often used for effect. (Low frequencies are distorted more.)

- The **Drive** control allows overdriving the output stage for added distortion.
 - As with the new Optical compressor (see above) the minimum ratio is 4:1, but unlike an actual JFET hardware model, ours has a convenient **variable threshold** (and Automatic Makeup Gain).
- NEW **JFET Pedal Compressor** type (Replaces “*JFET Sustainer*”) based on a circuit design that is used in many compressor pedals.
- NEW **Rockguy Compressor** based on a Rockman; similar to the JFET Pedal but with dynamic release time and several other enhancements.
- NEW **Vari-Mu Tube Compressor** (replaces “*Tube Compressor*”). This type has big, swoopy curves and a warm tone making it useful for adding “glue” to sound.
 - The compression ratio is somewhat nebulous but ranges from about 2:1 to about 20:1.
 - Expert Edit includes a graph to assist adjusting interactive Threshold and Compression.
 - The “Drive” control allows overdriving the output stage for added distortion.
- **PHASER BLOCK UPDATES**
 - NEW **Modern Vibe** based on a classic UniVibe but with modern tone and modulation.
 - Updated “Vibe” algorithms. All types based on Univibe models have been improved. Existing presets are updated automatically. You may still wish to audition your presets.
 - New Phaser Expert Edit parameters:
 - **LFO Mode**; when set to UNIVIBE depth is roughly proportional to rate. When set to NORMAL the amplitude is constant, allowing deep phasing at slow rates.
 - **Low Cut** and **High Cut** for the wet path.
 - **VCR Shape** (not Sharp vs. Hitachi, this is the old “Exponent” control renamed ;-).
- **OTHER UPDATES & IMPROVEMENTS:**
 - NEW Tremolo block “**Ducking**” control reduces the intensity of the effect when you play louder. This can occur naturally on an amp as the tremolo circuit is influenced by playing dynamics.
 - NEW Plex Delay block Expert Edit “**Filter**” page.
 - Improved **Sweep Delay** type in the Delay block, now with a selectable “**Sweep Filter**” type.
 - Improved **Diffusor** types in the Multitap Delay block, now with stereo output, adjustable stereo spread, and LFO controlled filters.
 - Improved Plex and Multitap Delay blocks when changing channels or presets. Now, the delay is cleared when a Type change would cause “Glitchy” noises.
 - The tuner now shows a message when custom tuning offsets are active.
 - Tuner **Mute** now works while VP4 Analog bypass is engaged.
 - **Fixed:** Delay **Master Time** no longer attempts to set times longer than the maximum 8 seconds.
 - **Fixed:** Delay Lines are now cleared correctly when changing presets with spillover is turned off, or when changing to a preset with different time-based effects.
 - **Fixed:** Default Scene setting should now work consistently.
 - **Fixed:** Pitch Block octave divider pan and Dual Detune expert delay times not working correctly.
 - **Fixed:** Changing between presets with certain effect combinations no longer caused “clicking”.
 - **Fixed:** Input pad 18 dB setting no longer causing small gain drop.
 - **Fixed:** The first preset now loads correctly upon power up regardless of **Ignore Redundant PC**.
 - SPDIF clock sync improvements.

Various other fixes and improvements.

VERSION 1.02 NOV 27, 2024

NEW FEATURES & UPDATES

- **NEW! VP4 Custom Scene MIDI** - Each scene within every preset can be configured to send up to four MIDI messages – either Program Change (PC) or Control Change (CC)—to external MIDI devices. This feature enables seamless integration with other MIDI-compatible equipment, allowing for automated changes when switching scenes. To set up Scene MIDI messages:
 - Open the **Scene MIDI** page - From Home, press **PAGE RIGHT** 6x.
 - The Scene MIDI page shows four scenes, each with four slots for MIDI messages.
 - Turn **SELECT** to the desired Scene and message slot.
 - Use **Knob B** to select the message type (PC for Program Change or CC#0-127 for Control Change).
 - Use **Knob C** to choose the MIDI channel (1–16) on which the message will be sent.
 - Use **Knob D** to set the specific value for the PC or CC message.
 - Press **ENTER** on the selected row to test a single MIDI message.
 - Switch to **Scene Mode** and use the footswitches to test all four messages for any scene.
 - After configuring Scene MIDI, **save the preset** to retain your settings.
 - When a new preset loads, the MIDI payload for the default scene is sent automatically.
 - Note: Scene MIDI is sent only to the physical MIDI Out port. It is not echoed to USB MIDI.
- **NEW! Integral Pre** drive block type based on the TC Electronics Integrated Preamp.
- **NEW! Multitap Delay** models: Matterhorn, Centaurus X-3, Kilmanjaro, Strange Things, Camera Obscura.
- Improved the following effects based on the latest Axe-Fx III enhancements:
 - Delay: Sweep Delay is improved and offers new options.
 - Multitap Delay: “Diffusor” types now include **Stereo Spread** and **Mod Filter** options
 - Filter: Fine-tuned dynamic response for Envelope Filter and Touch Wah types.
- Adjusted the mix curve for some time-based effects so the dry level decreases more gradually as mix is adjusted above 50%.
- Fixed minor GUI issues in the Pitch Intelligent Harmony types.
- Fixed footswitch mapping not updating correctly after the preset is changed remotely.
- Plus additional updates and fixes.
- Beta 3 resolves an issue that could cause lockups, building on the improvements introduced in Beta 2.

VERSION 1.01 | OCT 9, 2024

- First public version. No notes.

Manufacturer names and product names mentioned herein are trademarks or registered trademarks of their respective owners, which are in no way associated with or affiliated with Fractal Audio Systems, LLC. The names are used only to illustrate sonic and performance characteristics.