HeadRush Core

Latest Firmware Version: 4.0.0

Release Date: November 2024

Minimum System Requirements

- Windows 10 or macOS 11
- Host USB 2.0 port

File Backup Instructions

Important: Please back up all of your current rig, setlist, model preset, clone, loop and/or impulse response (IR) files from HeadRush Core to your computer before updating the firmware.
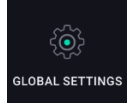
1. Connect your computer to HeadRush Core's **USB-B port** using a standard USB cable.

2. With your computer powered on, power on HeadRush Core using the **power switch**.

3. Tap the **Menu** (⊞) icon in the upper-left corner of the **Main** screen, and then tap the **USB Transfer** icon.

4. On your computer, HeadRush Core will appear as a mass-storage device called **HeadRush**.

   Windows users: If this is the first time you've connected it to this computer, you may need to wait a minute while it installs the class-compliant drivers.

5. Open the **HeadRush** drive. You can now freely click and drag contents between **HeadRush** and your computer. Note that any changes you make to the contents of your **HeadRush** are immediate and cannot be cancelled.

6. **IMPORTANT:** When you are finished transferring contents, you must **unmount/eject** the HeadRush drive from your computer. File corruption may occur if the drive is not properly ejected before continuing.

7. After the drive has been ejected, tap **Sync** on your HeadRush Core to "commit" any changes you made to the contents of the HeadRush drive.

   As HeadRush Core analyzes and imports the files, a meter on the display will indicate its progress. The last screen you were on before opening USB Transfer will reappear when the process is finished. Do not disconnect or power off HeadRush Core during the sync process.
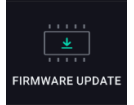
Firmware Update Instructions – Wi-Fi (if an update is available)

1. Tap the **Menu** (⊞) icon in the upper-left corner of the **Main** screen, and then tap the **Global Settings** icon.

   Note: To switch through each tab of the global settings, tap the tabs along the left edge of the screen.
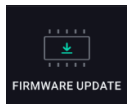
2. Tap **WI-FI** on the left edge of the screen.

3. Tap the **ON** button at the top of the screen. Then, tap the local network that you would like to connect to, and enter the password for the network when prompted.

4. Return to the **Menu** screen and select **Firmware Update.**

5. In the Firmware Update screen, you will be presented with three options: **Cancel, Via USB** and **Via WI-FI.** Tap the **Via Wi-Fi** button.

6. A screen will then open asking you if you would like to update to the latest version of the HeadRush Core firmware. Select **Yes** to download and install the latest version of the HeadRush Core firmware.

   A screen will appear with the status and programming of the firmware update.

7. Once your unit has finished updating, it will power off and then back on again. When HeadRush Core is powering on, you will see the version number of the firmware at the bottom of the screen. You can also check the version of the firmware in the **INFO** tab of the **Global Settings** page.

Firmware Update Instructions – USB

1. Download the latest Firmware Updater application for your PC or macOS from the **Download** section of HeadRush Core's webpage, from the **Download** section of the HeadRush Support webpage, or from your HeadRush account.

2. Connect the **USB-B port** on your HeadRush Core to your computer, and ensure both HeadRush Core and your computer are powered on.

3. On your HeadRush Core, and tap the **Menu** (⊞) icon in the upper-left corner of the **Main** screen, and then tap the **Firmware Update** icon.

4. On the Firmware Update screen, you will be prompted to shut down your HeadRush Core and update your firmware. Select **YES** to continue. After restarting, the screen will show **Update** at the bottom edge.

5. Open the **HeadRush Core Updater** application for your Windows or macOS operating system. (You may need to unzip an additional .zip file to access the actual application.)

6. When the updater window appears, click **Update HeadRush Core**. Do **not** disconnect or power off HeadRush Core or your computer until the update is completed.

7. When the update is completed, the updater window will display **Done**, and your HeadRush Core will restart. Click **Done** to close the updater window.

8. When HeadRush Core is powering on, you will see the version number of the firmware at the bottom of the screen. You can also check the version of the firmware in the **INFO** tab of the **Global Settings** page.

For additional help, visit **support.headrushfx.com**.

Changes

Firmware Version 4.0.0

New Features:

- **Introducing HeadRush Remote:**

Your HeadRush Core can now be conveniently edited via a web browser on a computer or tablet. This introduces an incredibly accessible way to use your HeadRush hardware without taking up valuable room on your studio desk, as well as reducing the need to bend and make edits directly on the hardware itself. Best of all, you don't need to install any special software!

To access HeadRush Remote and get started today, follow the directions below:

1. Connect your HeadRush Core to the same Wi-Fi network as your computer or tablet in the **Global Settings > Wi-Fi** menu.

2. In the same menu, ensure that the **HeadRush Remote** setting is turned **On**. You should then see an IP address here.

3. On your computer or tablet's web browser, enter your unique IP address into the URL field. Alternatively, you can enter **headrushcore.local** into the web address.

Note: For best results, we recommend using a computer or tablet with a 7" or larger screen, and using the native web browser for that device (e.g., Microsoft Edge for Windows-based devices, Safari for macOS/iOS-based devices, or Google Chrome for Android-based devices). You may find that other browsers are incompatible with the Remote Editor web UI.

Important: If the remote editor page is shown as "not found" in your browser, you may need to reset your Wi-Fi router when making the connection for the first time.

For more information on using the remote editor, consult the latest *User Guide*.

- **Added support for HeadRush SuperClones**

SuperClones are an enhanced version of HeadRush Clones that combine multiple clones of an amp or pedal captured with different gain settings, making gain adjustments much more realistic to the cloned amp or pedal. SuperClones can be assembled from existing clones using the included Amp Cloner desktop software for mac/PC.

Additionally, **10 SuperClones** have been added to the clone factory folders:

- o Famous Cobra Crunch.sc
- o Flathill TA Tweed.sc
- o Freeman DS.sc
- o Lead ACM800 ZW.sc
- o Marketbass TA501.sc
- o Morgen AC20.sc
- o Vagner Shiva Lead.sc
- o DT Monkey.sc
- o EH Soul.sc
- o Precise Drive.sc

Important: When auditioning SuperClones in existing rigs (either factory or user rigs), make sure to use the **Master Volume** control to find the best level first before adjusting other controls.

Improvements:

- **New Content and FX Block Improvements**

  Added two new FX in the new **Rhythmic** FX category:

  - Kill Seq
  - Splicer

  Added one new FX to the **Reverb** FX category:

  - Spring Guru

  Added the **Matched Cab** collection to the available factory IRs in the **/Impulse Responses** folder. These 48 guitar cabinet impulse response files were crafted for our ReValver plugin to provide a great sounding, easy starting point for each of the HeadRush and ReValver amp models.

  Added **Arpeggiator** controls for the **Hybrid Synth**, **DB-33 Organ**, and **Electric Piano** synth blocks.

  Added **Pedal Clone** to the available list of selectable blocks that can be added to a rig for better organization.

- **Main Rig Page Improvements**

  Added **Rig Output** level meters to the main edit page of the output block.

  Added two additional split signal path options for guitar-only signal chains:

  - **5 – 3/3 – 3** features five slots after the Input, a six-slot split Mix section, and then three slots before the Output.
  - **7 – 2/2 – 3** features seven slots after the Input, a two-slot split Mix section, and then three slots before the Output.

- **Block Edit Page Improvements**

  Added **Block Output** level meters to each block in a rig.

  Added an **Advanced Edit** page for each block in a rig, accessible by tapping the **settings icon** in the lower-right corner of the block edit page. This includes **Input Gain**, **Output Gain**, and **Touch EQ** controls for each block.

- **Hardware Assignment Improvements**

  Added an option in **Global Settings** to change all footswitches to **On Press**, which disables hold functionality and provides better timing with a snappier feel when using the footswitches.

  Added the **Hold Functions** category to the **Hardware Assign** footswitch assignment menu, giving the ability to assign **View**, **Hands-Free**, **Looper**, and **Tuner** to individual footswitches via press. This is especially useful if your footswitches are assigned to **On Press** in the **Global Settings**.

  Added the ability to easily assign a footswitch or scene to switch between two amps, cabs, or IRs located within a single slot. See the **Switch Doubling** section of the latest *User Guide* for more information.

  Added the ability to easily reassign a footswitch or scene to switch between the top and bottom paths of a split signal chain rig.

  Added the ability to assign an **A/B Mix** parameter to the expression pedal to easily blend between the top and bottom paths of a split signal chain rig.

  Added the ability to set an individual footswitch to **MOMNT**, like HeadRush Prime, where users can set the block to be enabled only while the footswitch is held.

  Added the ability to assign **Bank A/B** to a footswitch's press function in the Hardware Assign menu.

- **Amp Clone Improvements**

  Made improvements to the Amp and Pedal cloning process, particularly for low/medium gain pedals and amplifiers.

  Improved the efficiency of Amp and Pedal clones to use a lower percentage of DSP when loaded to a rig.

  Added the ability to demo an Amp Clone when browsing the HeadRush Cloud.

- **Looper Improvements**

  Added an **Unpeel** control, accessed by holding the **Peel** footswitch, which brings layers back in the order that they were removed.

  Added a **Threshold** parameter to the **Looper Settings** page that enables the Looper to be automatically armed for recording when the set audio level is detected.

  Added a **Quantize Changes** parameter to the **Looper Settings** page that syncs the **Speed Change** function to the next downbeat of a measure when enabled and when the Looper has **Global Tempo Sync** enabled.

  Added **Rig Out** as a routing option for the Looper to allow it to play vocals and guitar out of both XLR and 1/4" Outputs at the same time.

- **Advanced Audio Output Settings**

  Added an **Advanced Audio Output** mode in the **Global Settings > Audio** menu that provides more flexibility in routing the audio output of your hardware. For example, this mode gives the ability to route a vocal output to the left **XLR + 1/4"** and a guitar output to the right **XLR + 1/4"**. Tap the **info icon** on this page in your HeadRush Core to learn more about how to adjust these settings.

- **Other Features, Performance Improvements, and Bug Fixes**

  Added external control by MIDI CC messages for the Practice Tool and Metronome.

  Removed the artificial latency that was added when a bypassed FX Loop block was present in a rig.

  Fixed an issue where the Pitch Delay's echoes were out of tune.

  Fixed a rare issue where synth effects could potentially cause dropouts or a glitch noise when changing rigs.

  Added an **IR Loader** to the **Amp Clone Comparison** page that appears after making a clone.

  Added the ability to import and load rigs created on HeadRush Flex Prime.

  Fixed an issue where the **Vocal Harmonizer** was not functioning correctly when the **Source** parameter was set to **MIDI**.

  Many other minor bug fixes, UI improvements, and performance improvements.

Firmware Version 3.2.0

6 New FX:

- Added 3 HeadRush original FX to the new **Synth** category:
  - o **Hybrid Synth**
  - o **Electric Piano**
  - o **DB-33 Organ**
- Added **Glorious Drive** to the **Overdrive** category.
- Added **White Bass Wah** to the **Wah/Filter** category.
- Added **Sustain** to the **Volume/Dynamics** category.

New Features:

- Added two new signal paths options for Dual Guitar & Vocal chains:
  - o **Dual Path 2-12**: 2 Vocal blocks + 12 Guitar blocks
  - o **Dual Path 4-10**: 4 Vocal blocks + 10 Guitar blocks
- Bluetooth and USB Audio On settings can now be retained through power cycles.
- Added an option to opt in or out of HeadRush's data analytics program.

UI improvements:

- Added contextual information dialogs to the block edit pages for **Sustain**, **Hybrid Synth**, **Electric Piano**, **DB-33 Organ**, and **Side Comp** effects. Tap the "**i**" icon located on the block's graphic to learn more about these effects.
- Moved the location of **Ambi Verb** to the new **Synth** FX category as this better reflects the effect since the reverb is generated via a synth.
- Other very minor cosmetic improvements.

Performance Enhancements and Bug Fixes:

- Significantly improved the Bluetooth pairing of devices.
- Fixed an issue where Bluetooth audio would sometimes jitter during playback.
- Fixed a rare macOS/iOS issue where the HeadRush device would not disconnect from the paired device.
- Fixed a rare Bluetooth issue on Windows computers where disconnecting would occasionally cause a freeze on the HeadRush device.
- Fixed an issue where the HeadRush device sometimes failed to establish a Wi-Fi connection after an external Bluetooth device was connected.
- Fixed an issue where a freeze would sometimes occur during power off and the unit would reboot.
- Fixed an amp cloner issue where loading certain clone types would sometimes sound different to when they were previously saved.
- Fixed an issue where the Cloud rig upload counter would be out of sync when using two separate HeadRush devices.
- Fixed an issue where an incorrect dialog was shown when attempting to upload a rig which included an IR with a file size greater than 1 MB to the HeadRush Cloud.

- Fixed an issue where the **Budda Zenman** effect had the incorrect labelling for the vintage and phat parameters.

- Fixed a rare issue where the incorrect LED color was occasionally shown if switching between two rigs that each had scenes with dual states.

- Fixed an issue where reordering rigs on the All Rigs setlist from Z-A would incorrectly impact the order of user created setlists.

- Fixed an issue on the amp cloner wizard where sometimes the wrong connection diagram would be loaded when using the push encoder.

- Fixed an issue where after a successful amp clone and file save, it would disable the footswitch mode if the page was left via the Exit button.

- Fixed an issue where an imported block preset could not be loaded in the file browser.

- Other very minor bug fixes and performance improvements.

Firmware Version 3.1.2

- Fixed an issue where clones that were created prior to v3.1.1 sounded different regarding low end and volume. Clones created prior to v3.1.1 will return to their original sound in v3.1.2, and clones created in v3.1.1 and later will continue to sound the same.

   IMPORTANT: Clones created or imported to v3.1.2 firmware will *NOT* be compatible with previous versions of firmware (e.g., v3.1.0 and v3.1.1). If you intend to revert to an earlier firmware, please make sure to back up your files from your current firmware *BEFORE* updating to v3.1.2, so that you can restore them when rolling back.

- Fixed an issue where the device would reset when quickly changing rigs with clones loaded.

- Fixed an issue where an Amp Clone's settings would not load correctly if the rig was reloaded when the footswitches were set to Rig Mode or Hybrid mode.

- Fixed a rare issue where the cloning process would freeze at 100%.

- Fixed an issue where the Wi-Fi status icon would appear as off incorrectly after a firmware update until user entered the Wi-Fi Settings page or the HeadRush Cloud page.

- Fixed an issue on HeadRush Cloud where clone and IR files were missing when a rig was downloaded while in demo mode.

- Added a dialog that informs the user of any issues related to HeadRush Cloud downloads.

- Fixed an issue on Setlist mode where footswitches 4 and 5 were incorrectly showing rigs from another setlist.

- Fixed an issue when editing a setlist where if the < button was used to exit the page, the "Save" dialog options would remain on the footswitches and display.

Firmware Version 3.1.1

Cloning Improvements

- Significantly removed latency from Amp Clones and improved overall system latency.

- Improved the amp cloner algorithm to provide better identification of overall distortion level and sustain during the measurement process.

- Improved Amp Clone quality when cloning a very clean amp connected directly to HeadRush Core.

- Fixed an issue where the Sag, Chug, and Master settings were not saved as part of a clone file, which could cause unexpected volume jumps.

- Improved switching between scenes that have Amp Clones assigned to each.

- Fixed an issue where the wrong clone icon type would be shown if the block was switched from an amp clone to a pedal clone.

- Fixed an issue where a reset could occur if a clone was loaded directly from a USB drive, then powered off, then powered back on with the USB drive disconnected.

- Fixed an issue where an externally corrupted clone file or a clone file moved to another folder in the internal storage could potentially cause a reset.

- Fixed a very rare issue where the device could potentially freeze if cloning an amplifier or other target device that has a noise gate enabled.

Wi-Fi/HeadRush Cloud Improvements

- Fixed an issue where a reset would sometimes occur when connected to a Wi-Fi mesh network.

- Fixed an issue where users could not connect to an open Wi-Fi network that did not have password protection.

- Fixed an issue where the user was not warned if they were trying to upload a rig with a missing amp clone, resulting in being stuck on the "Uploading" dialogue.

- Fixed an issue where the user was not warned if they were downloading the same rig multiple times.

- Fixed an issue on HeadRush Cloud where some genre filters were not sorting correctly.

FX Improvements

- Improved the UI of the Global EQ feature, as well as the Para EQ effect block, to use a new "touch UI" for easier adjustments.

- Fixed an issue where two instances of the Budda Comp in a rig would result in having no parameters appear for the second instance.

- Fixed an issue where the Harmony sound of the Vocal Harmony effect would go missing if the Mode parameter were set to Fixed and then the effect was bypassed and then turned back on.

- Fixed an issue with Auto-Tune where setting the Tune Speed parameter to 400ms and Humanize parameter to 100% would cause a reset.

- Fixed an issue where the Stutter effect would not correctly bypass when switching to another rig with the Stutter effect.

- Added the ability to assign the Mode parameter for the Vibe Phaser to a footswitch.

- Added the ability to assign the Voices and LFO Shape parameters for the Multi Chorus to a footswitch.

- Added the ability to assign the Chorus Mode and Stereo parameters for the 84 J-120H to a footswitch.

Other UI/UX Improvements

- Changed the "triple tap to rename" function for the top bar to only require a double tap to rename the current rig.

- Fixed an issue where missing rigs were not displayed in the setlist editor after being reimported unless the active setlist was changed and loaded again.

- Fixed an issue where the number of rigs in a setlist was not updated after adding a new rig.

- Fixed an issue where the Practice Tool feature would not play stereo audio files correctly through the 1/4" outputs.

- Fixed a very rare issue where USB Transfer would get stuck scanning files and not connect to the Mac/PC.

- Fixed an issue where if a doubled amp were deleted, the next amp added to the slot would also be doubled.

- Fixed an issue where a scene's LED indicator was not accurate if a second scene was added for a footswitch, deleted, and then added again.

- Fixed an issue where after a block preset was exported to a USB drive and then reimported to a new rig, its name was shown incorrectly.

- Fixed an issue where the "Sort" features for the "All Rigs" setlist was not working after entering/exiting the "Cloud" setlist.