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Octave HS-1 Product Manual

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Welcome to the Octave Family!

Introduction

Welcome to the Octave family! Thank you for choosing the Octave HS-1, a state-of-the-art Windows 11 VST host. The HS-1 is meticulously designed for audio professionals, combining robust hardware with intuitive software to create an exceptional tool for music production, live performances, and studio environments.

With its powerful processing capabilities, seamless integration of VST plugins, and real-time audio effects, the HS-1 enables artists and engineers to achieve their creative vision effortlessly. The device features a high-resolution touchscreen, multiple connectivity options, and a Bluetooth footswitch for hands-free control, making it the ideal choice for professionals who demand precision and reliability.

This manual will guide you through the setup, operation, and features of your new device. The HS-1 is certified under Class A EMC standards for both CE and FCC compliance, ensuring reliable operation in professional environments while meeting international electromagnetic compatibility requirements.

Package Contents

- Octave HS-1 Windows 11 VST Host, DAW and Audio Recording Interface
- Power Adapter (36W)
- USB-C Cable
- User Manual
- 4+4 Button Bluetooth Footswitch

Safety Information

Please read and follow all safety instructions to ensure safe operation of your Octave HS-1.

- **Electrical Safety:** Do not expose the unit to rain, moisture, or any liquid. Use only the provided power supply and keep it in a well-ventilated area.
- **Power Handling:** Unplug the unit during lightning storms or when unused for long periods.
- **Physical Safety:** Avoid inserting objects into the openings. Handle the device with care to avoid damage.
- **Service and Maintenance:** Refer servicing to qualified personnel only.
- **Electromagnetic Compliance:** This product complies with Class A EMC standards for CE and FCC certifications. It is designed to minimize electromagnetic interference (EMI) and is suitable for professional use. Note that Class A equipment may cause interference in residential areas; users are advised to take appropriate precautions.

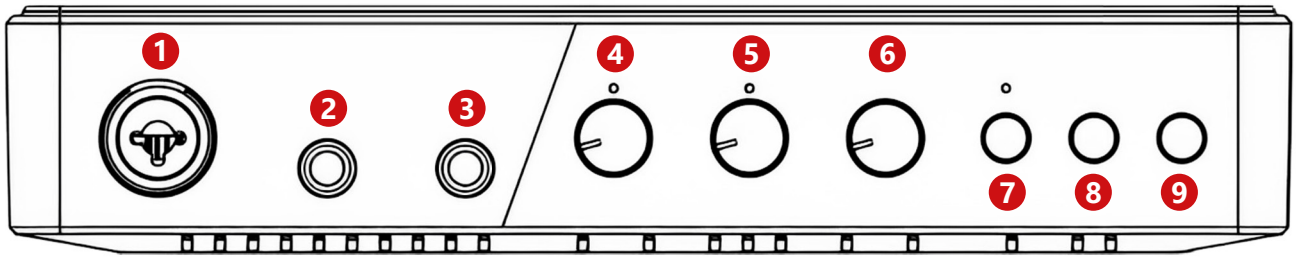
Technical Specifications

- Processor: Intel N5095 (11th Generation)
- RAM: 16GB
- Storage: 256GB NVMe M.2 SSD
- Operating System: Modified Windows 11 24H2
- Inputs: 1 x XLR Combo Jack, 1 x Line/Hi-Z Instr.
- Studio-quality sound at 24-bit/192kHz
- Outputs: 2 x 1/4" Unbalanced Mono Outputs
- USB Ports: 1 x USB-C (Power),
  1 x USB-C Fully Functional Port,
  2 x USB 3.0 (Rear Panel),
  2 x USB 3.0 (Right Panel)
- Headphone Output: 1 x 1/4" Stereo Jack
- Mini SD Card Slot: Up to 1TB
- Phantom Power: +48V
- Video Output: HDMI
- Network: Ethernet, Wi-Fi
- Bluetooth Footswitch: 4+4 Button Configuration
- LCD Screen: 10.1-Inch Full HD
- Battery: 4900mAh Removable Battery

Dimensions: 24.5cm (L) x 17cm (W) x 5cm (H)

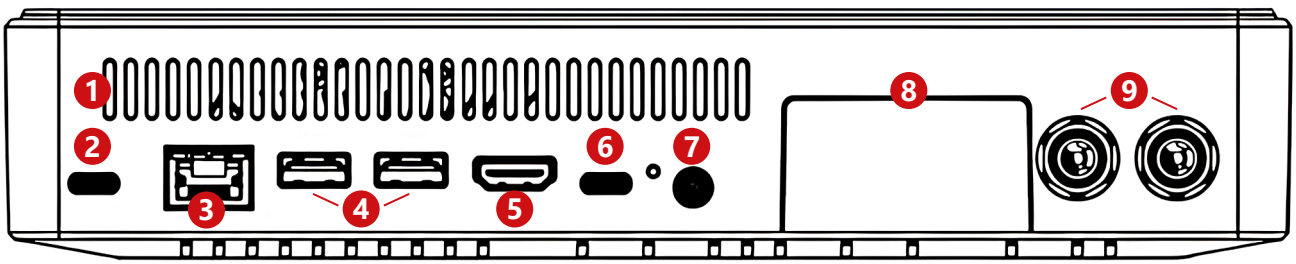
Front Panel

1. XLR Combo Input (1): For connecting microphones or line-level devices.
2. Hi-Z Instrument Input (2): For connecting instruments such as guitars.
3. Headphone Output: Connects headphones for monitoring.
4. Gain Knob for Input One: Adjusts the input level for the XLR combo input.
5. Gain Knob for Input Two: Adjusts the input level for the Hi-Z instrument/Line input.
6. Volume Knob: Adjusts the overall output volume.
7. 48V Phantom Power Switch: Activates phantom power for the XLR combo input (Red LED: active. Orange LED: deactivated).
8. Input 2 Selector Switch: Chooses between Hi-Z or Line input for the second input.
9. Direct Monitoring Switch: Enables direct monitoring for zero-latency input monitoring.



Rear Panel

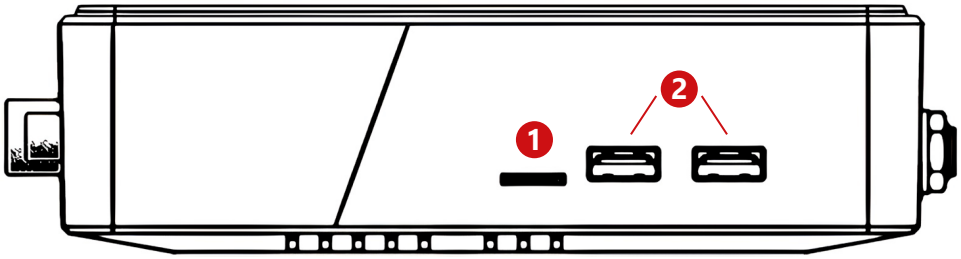
1. Air Vent
2. USB-C Power Input: Connect the power adapter (36W).
3. Ethernet Port: Connect to wired networks.
4. USB Ports: Two USB 3.0 ports.
5. HDMI Port: Connect to a monitor or TV.
6. USB-C Fully Functional Port: Additional USB-C port for connecting peripherals like an extra LCD screen, USB memory sticks, an external power bank, etc.).
7. Power ON Button and LED Indicator: Display the status of the PC (Blue - fully charged, Purple – charging in Windows, Red – charging when power is off).
8. Battery Compartment: 4900mAh removable battery.
9. Line Outputs (1-2): Unbalanced ¼-inch L/R mono outputs for connecting studio monitors or external gear. **Always use a DI box if you connect the line outputs to a console or mixer! An accidental phantom power sent from a mixer to the HS-1 can potentially damage the audio interface!**



Right Panel

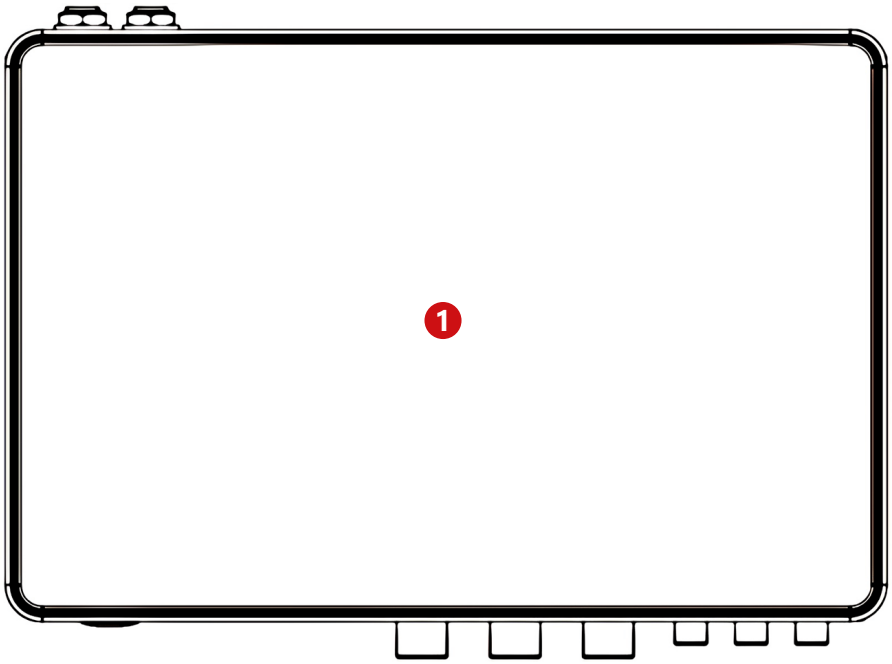
1. Mini SD Card Slot: Insert a Mini SD card (up to 1TB) for additional storage.

2. USB 3.0 Ports (2):
   For connecting additional peripherals such as external storage devices or MIDI controllers.



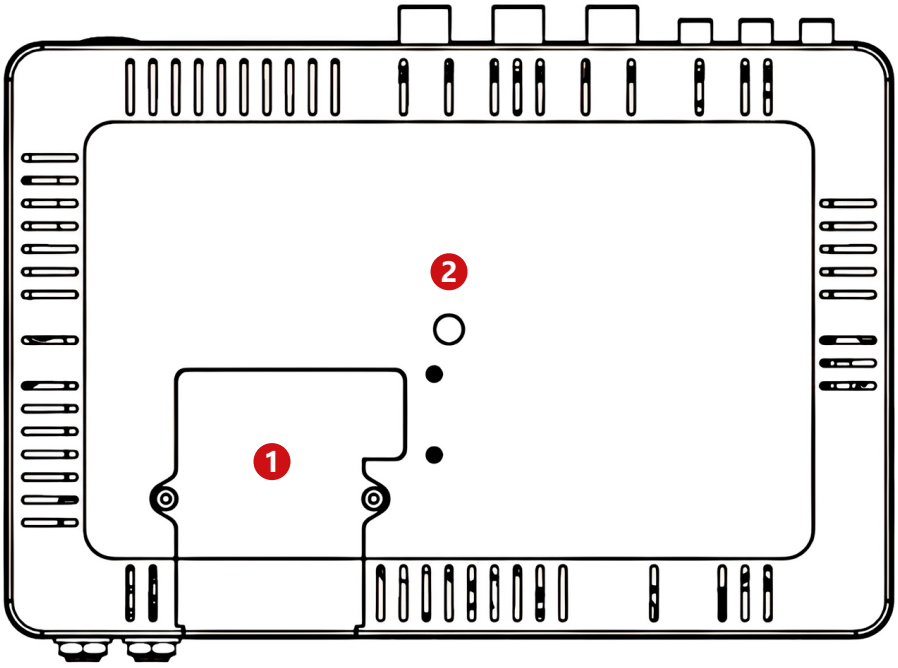
Top Panel

1. **10.1-Inch Full HD LCD Touchscreen:** Provides a high-resolution display for system information, VST host controls, and other interface functions.



Bottom Panel

1. Battery Compartment: Houses the removable 4900mAh battery.
2. Microphone stand thread: UNC 3/8-16 thread for microphone stand compatibility.



Setup and Installation

Step 1: Setting up Your Octave HS-1

1. Place the HS-1 on a stable surface.
2. Connect the power adapter to the USB-C power input on the rear panel and plug it into an outlet.
3. Connect any peripherals like a MIDI controller, keyboard and mouse to the USB ports.

Step 2: Powering On

1. Press and hold the power button at the back panelfor at least 2 seconds to turn on the device.
2. There is no initial setup of the Windows 11 operating system. The system boots straight up.

Step 3: Connecting Audio Equipment

1. Connect your microphones or line-level devices to the XLR combo input (1).
2. Connect your instruments (guitar, bass, etc.) to the Hi-Z instrument input (2). Make sure that the Input Selector Switch (no.8 Front Panel) is on the Hi-Z option.
3. Connect your monitors or external gear to the unbalanced L/R ¼ mono line outputs on the rear.

Step 4: Setting Up the Bluetooth Footswitch (see Using the Bluetooth Footswitch on page 9)

1. Turn on the Bluetooth footswitch by switching the power button (Blue LED should stay illuminated).
2. The footswitch is automatically paired to your device from the factory. Open 'BT Midi Connector' and click on 'connect device' (page 10). Your footswitch is now ready.
3. The footswitch is fully programmable (CC, Note, Program Changes) with various modes. Factory A, B, C and D buttons correspond to CC 24, 25, 26 and 27 (short press) and NoteOn (E1, F1, F#1 and G1) messages (long press). For further programming options contact: info@octavetech.eu

Basic Operation

Integrated Audio Interface

- **Adjusting Input Levels:** Use the gain knobs on the front panel to adjust the input level for each channel.
  - o **Gain Knob for Input One:** Adjusts the input level for the XLR combo input.
  - o **Gain Knob for Input Two:** Adjusts the input level for the Hi-Z instrument/Line input.
- **Phantom Power:** Press the 48V phantom power switch if using condenser microphones.
- **Input Selection:** Use the input selector switch to choose between the Hi-Z instrument input or a regular low impedance line input (*the switch is valid for the second input only*).
- **Monitoring:** Connect your headphones to the headphone output and adjust the volume using the volume knob.

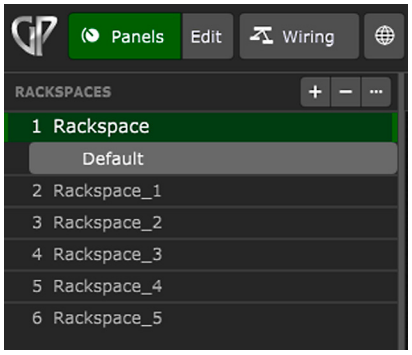
Direct Monitoring: Enable direct monitoring by pressing the direct monitoring switch for zero-latency input monitoring.

VST Host Software

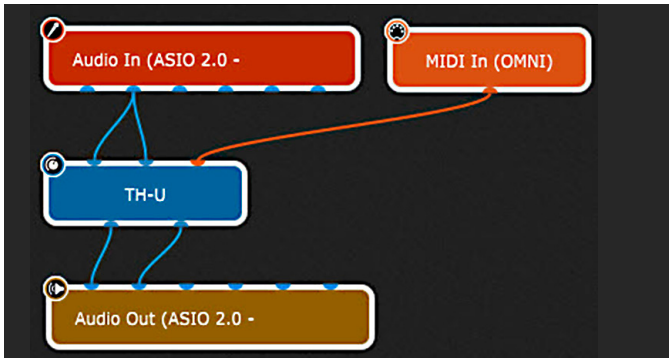
Using Gig Performer or Other VST Hosts

The HS-1 offers flexibility on how you manage your VST plugins. You can open any VSTs as standalone applications (preferably for lower latency), allowing you to use each software independently for specific tasks. Alternatively, you can utilize the **Deskew Gig Performer ("GP") Octave edition,** a dedicated software VST host that enables you to create intricate chains of VST software. With GP, you can load multiple VSTs, arrange them in any order, and save your configurations as presets for easy recall. Store up to ten Rackspaces with the Octave version. This setup allows you to tailor your audio processing workflow to your needs, whether you're recording, mixing, or performing live. GP is the industry-standard for stability when performing live. GP's user-friendly interface and seamless integration with the HS-1 ensure a smooth and efficient experience. Additionally, you can upgrade GP to the full version where special bundle options are available exclusively for our customers.

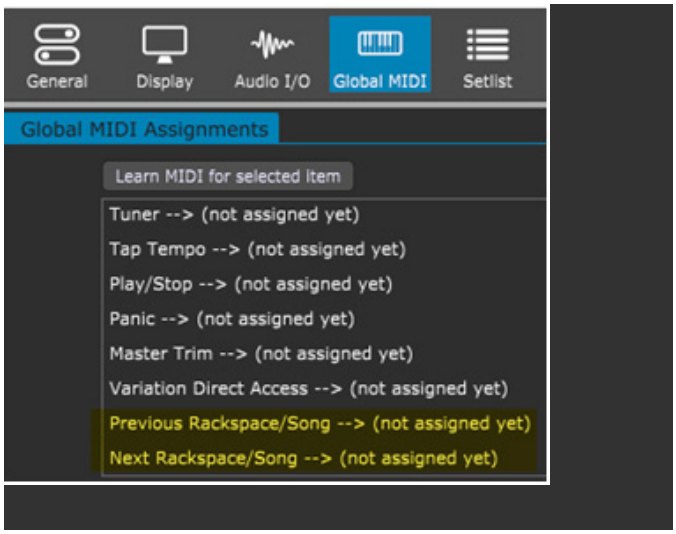
Note on VST software: Some software introduces excessive latency, other have unnecessary CPU load so be frugal with your choices. **Our solution to the issue** is the use of Gig Performer software. Using Rackspaces under Gig Performer can greatly reduce the CPU load. **The only Rackspace using CPU resources is the one being selected.** Compare this function with other VST host software (like Element) which loads ALL Racks/Graphs at the same time, we realise Gig Performer's potential. You can have almost unlimited Rackspaces with fast switching between various VSTs and by incorporating the Bluetooth footswitch, those changes can be integrated live on stage. With GP 'Octave' edition, you can load up to 10 Rackspaces. If you want to experience more advance options (like Global Rackspaces, Streaming Audio Player, etc.) you can upgrade to the FULL software version. Special discounts apply to our customers.



Routing and MIDI Assignments



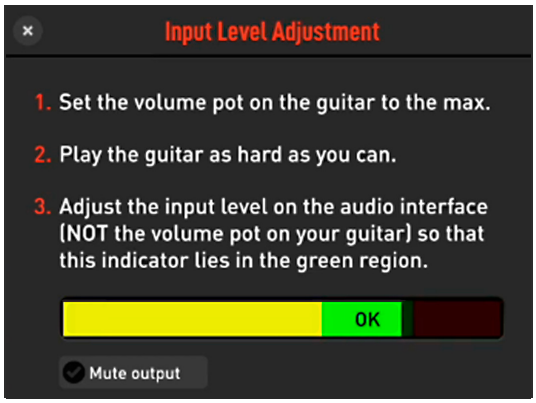
Here is an example of a proper guitar routing inside Gig Performer. The 2nd Audio input is connected to the TH-U software and the output of TH-U is connected to the Audio Out (1 and 2). Make sure that 'MIDI in' is also connected in case you want to control TH-U banks and presets inside GP. Alternatively, you can go to GP 'OPTIONS' and 'Global MIDI' settings and assign the NEXT and PREVIOUS Rackspaces to be controlled by the footswitch. This way, you can switch VST instruments and effect chains in an instance without worrying of mapped CC messages inside each individual VST software.



Furthermore, the HS-1 comes pre-loaded with some AIDA-X Captures, Decent Sampler Libraries and NAM (Neural Amp Modeler) + IRs profiles. You can further download up to 45,000 free user profiles from https://www.Tone3000.com/ and have them loaded in NAM on your HS-1 for instant playback. Scan the provided QR code to discover further resources.

Operating TH-U Software by Overloud

The HS-1 comes pre-installed with TH-U 'Octave edition' by Overloud, a powerful guitar amp and effects suite. To begin, launch TH-U from the Start menu or desktop shortcut. You will be greeted with a 'Manage Licenses' window. Click on the bottom link to create an Overloud account. Click on the 'authorize a license' link and use your provided serial number for registration. Once you authorize your device, TH-U will download your FREE 'Octave' banks and presets.



Connect your guitar to the Hi-Z 2nd instrument input on the front panel and adjust the input gain knob for optimal input level (GREEN area).

Use the intuitive drag-and-drop interface to build your signal chain. The on-screen knobs and sliders allow precise control over each component. For hands-free control, assign the functions of the 4+4 button Bluetooth footswitch to switch presets, toggle effects, or control parameters in real time. **Short pressing** the factory A, B, C and D buttons of the footswitch corresponds to the BANKS and PRESETS (up and down) change (left photo). **Long pressing** the buttons correspond to the A, B, C and D (Scenes) of each preset (right):

Save your customized presets for quick recall during live performances or recording sessions, ensuring seamless integration into your workflow. Additionally, you can upgrade TH-U to the full version where special discounts are available exclusively for our customers.

AMP MODELS

Darkface '65 (US) modelled on Fender Twin
Jazz 12'o modelled on Roland JC-120
Modern (US) CH2 modelled on Mesa Dual Rectifier
Overloud Prog Rock '75 (UK) modelled on JCM800
Slo 88 (US) Lead modelled on Soldano x88r
Top30 (UK) Bright modelled on Vox AC30 Top Boost

CABINET MODELS

1x12 Clst UK
2x12 Slo 12K
2x12 Jazz 12'o (JP)
2x12 OB Darkface '65 (US)
2x12 OB Green (UK)
2x12 OB Top30 (UK)
4x12 Modern (US)
4x12 Vintage (UK)

OTHER EFFECTS

Octaver
Parametric EQ
Parametric EQ (4 bands)
Quiet
RSS Compressor
Cry Maybe Wah
Volume Pedal

DELAY REVERBS

D-Delay
Tape Delay
D-Reverb
Room Rev

OVERDRIVE

SDriveOne
Tube Nine

MODULATIONS

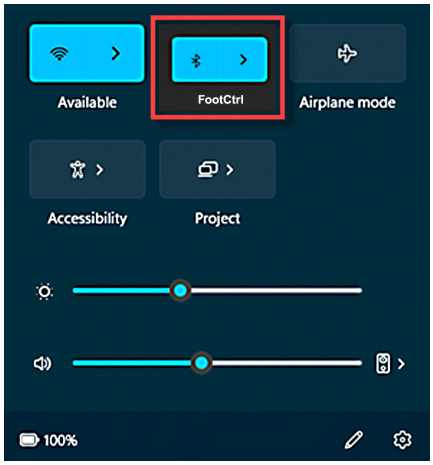
CHR-2
9-O'PHASER
Filter Flanger
UniVibrato

RIG PLAYER AND 10 RIGS & PRESETS

The Rig Player is the TH-U component which reproduces the captured Rigs. In addition to the Rig Player there are a batch of 10 Rigs created with various overdrive and amp combinations. There is a bank of 40 presets of various styles created from the models above.

OPERATING REAPER

The HS-1 comes pre-installed with Reaper DAW for evaluation purposes. The default starting template is setup so that you can use your 4-button footswitch to switch from one audio track to another by using some custom actions to arm the next track and disarm the previous one automatically (this is done for you from the factory). You can further explore other actions as Reaper is really flexible regarding scripting. 'ReaTune' is also used to conveniently tune your guitar by clicking on the 'Record Arm' button on the TUNER track. You can add backing tracks on the appropriate track as well as click on the FX button of each track to load any VSTs of your liking. Also, Reaper has excellent multicore support so it can load even more VSTs compared to other software.

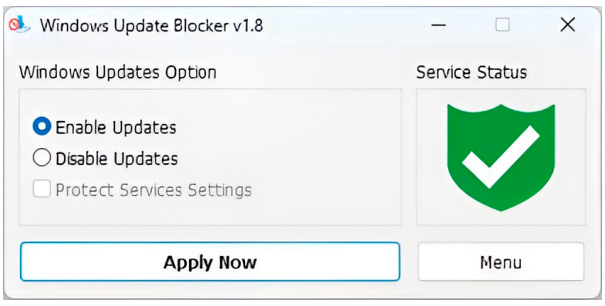


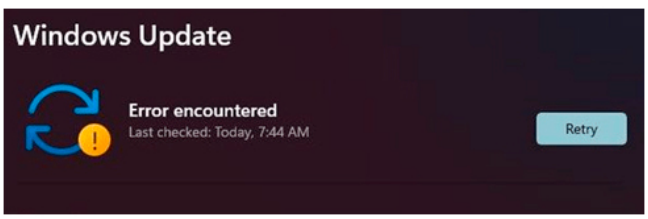
Using the Bluetooth Footswitch

The HS-1 includes a versatile Bluetooth footswitch, designed to provide hands-free control over your VST software. **Here's how to get started:**

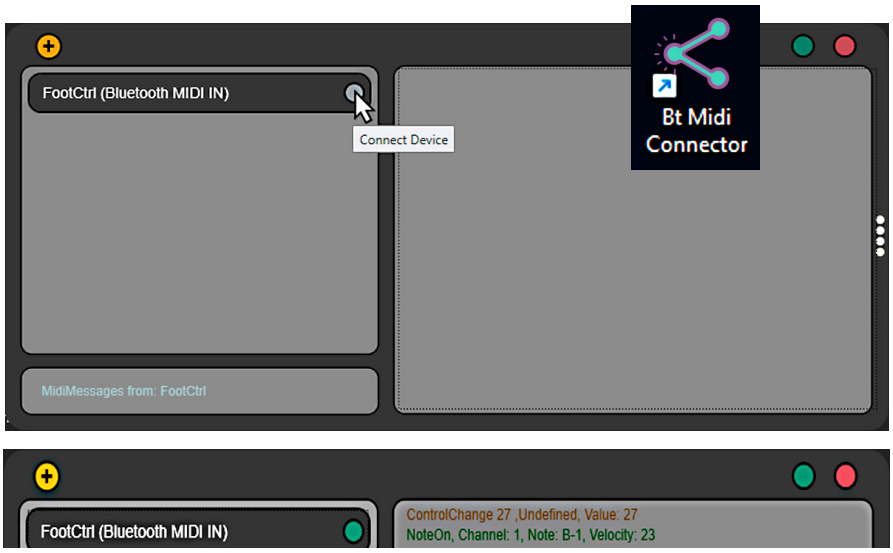
! The input voltage of the footswitch is **5V.** Do NOT charge the footswitch with the provided **12V** power adapter because **damage** will occur. Use the provided **USB-C cable** instead and charge it from a regular 5V USB port.

1. **Charge and Power On:** Ensure the footswitch is fully charged. Once powered on, it will automatically connect to your HS-1 as it has been already paired from the factory.
2. **Con irm Connection:** Click on the right bottom tray in the Windows 11 taskbar to verify the connection. The footswitch should appear as 'FootCtrl' under the Bluetooth icon.
3. **Initial Wi-Fi and Bluetooth Setup:** Do not upgrade the Bluetooth, Ethernet and WI-FI drivers of the device under any circumstances. These are specialised drivers that ensure optimal and stable operation of its WI-FI and Bluetooth signals. When performing LIVE, make sure that the device is in AIRPLANE MODE (with Bluetooth signal ON and WI-FI OFF). This option also establishes that no updates will happen during a performance. Furthermore, under 'Documents' (Windows Explorer) you will find two specialised software (Defender Control and Windows Update Blocker) that can further help enable or disable Windows Updates and the Windows Defender (antivirus software) at a click of a button. CAUTION: Please make sure that you have these ENABLED when you use your device online or you need to download security update. Also, if you want to install any language packs, please enable Windows Updates otherwise you will get an installation error. **Windows updates are disabled by default.** You can manually resume Windows updates by clicking on the 'Enable Updates' button and 'Apply Now' (see photo below). Then go to 'System', 'Windows Update' and check for updates. If you encounter an error when trying to update windows (see photo below), this is normal and you can resume updates upon restarting. Scan the QR Code, go to 'Windows Updates' and check the KB files that are confirmed to work with your device before updating.

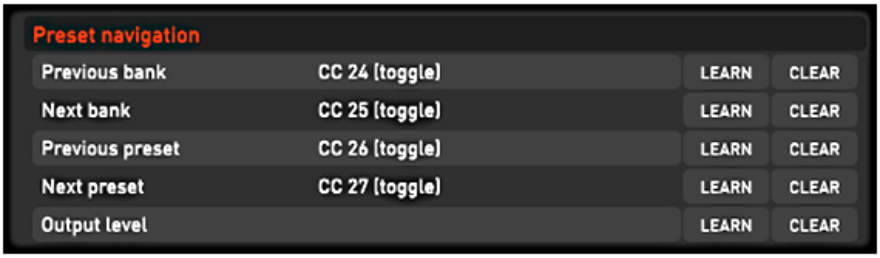




4. **Connect via Bluetooth Midi Connector:** Windows 11 has no native MIDI Bluetooth support. Therefore, after you have turned on and connected your Bluetooth footswitch to your device (blue LED always on), click on the 'Bt Midi Connector' icon on the desktop and click 'Connect Device'. When the light turns green, your footswitch is ready for use (1st time connections after a reboot might be a little slower. Please wait a little longer for the connection to utilize).
5. **Test the Footswitch:** Press each of the four buttons on the footswitch. MIDI messages should appear on the screen, confirming that the commands are being sent properly.



6. *Make sure that you keep your Bluetooth footswitch at a safe distance* (no more than **3 meters** from the device). If you are out of range, the blue LED light of the footswitch will start blinking. Bring it closer to your device and the LED will stop blinking and it will reconnect to the device automatically. Also, make sure that you periodically check the battery level of the footswitch (under 'Settings', 'Bluetooth & Devices'). The maximum battery life is around 12 hours. Do not connect the Bluetooth footswitch to another foreign device (for example your phone) as it will keep the last pairing every time you turn the footswitch on.
7. **Optional Wired Connection:** If preferred, connect the footswitch directly to one of the USB ports using the included USB-C cable.
8. **Optional Expression Pedal Input:** The footswitch has an expression input to connect a wah-wah or volume pedal. These are factory mapped on CC 11 under TH-U and can be used with any commercial expression pedal.



Next, open your VST software, such as TH-U or Gig Performer, and test your footswitch.

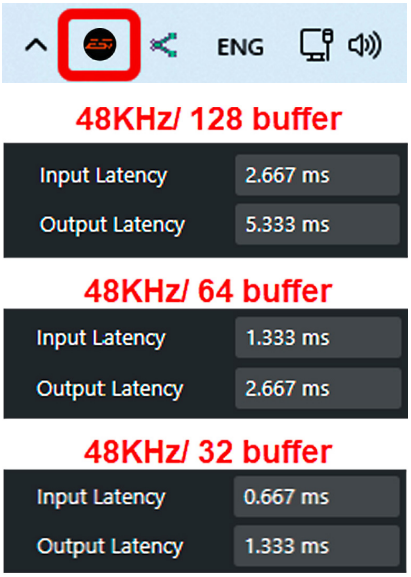
Each of the 4+4 buttons on the footswitch can be assigned to specific functions like switching presets, toggling effects, or controlling parameters in real time. In TH-U, the four buttons are factory-mapped to change Banks and Presets (CC 24, 25, 26, 27), as well as changing Scenes by long pressing the buttons for more than a second (A, B, C, and D Scenes).

This integration allows you to seamlessly incorporate the footswitch into your setup, enhancing your workflow during live performances or recording sessions. For more detailed instructions and customization options, please contact us at: info@octavetech.eu

Using the LCD Screen

The 10.1-inch Full HD LCD screen on the top panel provides high-resolution visuals for managing your VST host software, adjusting system settings, and monitoring performance metrics. If fonts are too big or too small, you can right click on the desktop, select 'Display Settings' and change the 'Scale & Layout' of your device.Notice that some VST software can be cropped at the bottom if you use the 125% scale.

Advanced Features



Audio Software

Open the Audio Interface Control Panel software on your PC taskbar to access the advanced audio settings such as sample rate, buffer size, and routing options. The recommended sample rate is 48KHz and buffer size (64) which ensures I/O latency of around 4ms (plus the added AD/DC conversion latency + safety buffers). The modified Windows 11 image ensures no audio artifacts up to 99% CPU load (perfect for switching presets under Gig Performer software) but if you want to experiment with lower buffer sizes, we recommend using the already installed TH-U software. Its low CPU load (only 6%) and high stability ensures that you will have worry free sessions.

However, you can experiment with plenty of other VST chains but make sure that the buffer will be increased to 64 or 128. Software like Helix Native (15-30% CPU load), Guitar Rig 7 (20-40% CPU load), NAM (30-50% CPU load for standard models), can be perfectly loaded on the device. Try to have some CPU headroom (around 40% CPU) if you want to switch from one Rackspace to the next with no issues under Gig Performer (60% is the MAX recommended CPU load).

You can use your preferred digital audio workstation (DAW) software to record and edit audio. DAW software like Cubase can be installed, however we have Reaper pre-installed on the device for evaluation purposes. Reaper's default template is also customized for guitar players to switch from one track to the next with the help of the Bluetooth foot-switch. Since Reaper is also utilizing multi-core support, it is possible to load even more VSTs inside the software.

Not all software is created equal. Some introduce excessive latency, others have unnecessary CPU loads so be frugal with your choices. For example, using Rackspaces under Gig Performer can greatly reduce the CPU load. The only Rackspace using CPU resources is the one being selected. Compare this function with other VST host software (like Element) which loads ALL Racks/Graphs at the same time, we realize Gig Performer's potential. You can have almost unlimited Rackspaces with fast switching between various VSTs and by incorporating the Bluetooth foot-switch, those changes can be integrated live on stage.

MIDI Integration

- Connect your MIDI devices using the USB ports on the rear panel or right panel.
- If your device uses a 5-DIN MIDI, a USB to MIDI cable can be used to connect your device to the HS-1.

Network Connectivity

- Connect to the internet using the Ethernet port for a wired connection or use the built-in Wi-Fi for wireless connectivity.

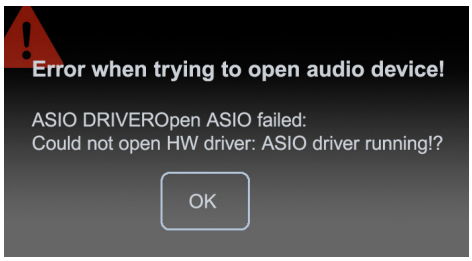
Direct Monitoring

- The HS-1 supports direct monitoring, allowing you to hear your input signal with zero latency. Activate direct monitoring through the Direct monitoring button (No.9 - Front View).

Troubleshooting

No Sound

- Ensure all cables are securely connected to the proper inputs and outputs.
- Check that the power adapter is plugged in and the unit is turned on.
- Ensure that the volume and gain knobs are not at zero point.
- Verify that your PC recognizes the audio interface in the sound settings. In the unlike situation of having an error stating that the ASIO Driver has failed to initialise, please restart the device. This is due to the fact that A.) the user has erroneously tried to open up two instances of the same or different software that shares the ASIO driver and B.) for an unknown reason the ASIO driver has stopped responding. For both reasons, a shut down of the system and a quick restart will resolve the issue.



*If an XLR condenser microphone is connected on input 1, make sure that the 48+ phantom power button is activated (no.7 – Front Panel) and that proper routing inside software is achieved.

Distorted Sound

- Lower the gain control knobs to prevent clipping (LED illumination below the gain knob must be either green or orange. A red indication means that the signal is clipping.
- Check your software settings for a sample rate (preferably @ 48kHz) and buffer size (preferably @ 128 or 64). You might have the buffer way too low (32) and with a considerable high CPU load. Either increase the buffer to 128, reduce your VSTs in your chains or switch to a more efficient VST plugin. 96kHz is not recommended for complicated VST chains.
- Check that the CPU load of the loaded VSTs is at average levels (max CPU load around 60%).
- Under Gig Performer, the CPU load is shown on the top right corner. If you are not planning of switching rackspaces/presets live, the CPU load can be even higher but it is not recommended as you need some headroom for the instantaneous load which happens during preset switching. Switching between a heavy VST plugin and an efficient one is not an issue and it is recommended to do so. You can further experiment with this and find what works best to avoid audio artifacts.

Connectivity Issues

- Restart your PC and check your network settings if experiencing internet connectivity problems.
- In the unlike scenario that your WI-FI is not connecting properly or shows that is connected but there is no internet, an uninstall and re-install of its driver will solve the issue. Right click on the START icon, go to Device Manager, find the Network adapters, right click on the Realtek 8821CE Wireless LAN driver and select Uninstall Device. A restart and re-input of your WI-FI password will solve the WI-FI issue. Do not try to update the drivers as these are specialised drivers specifically made for our units.

Footswitch Issues

- Ensure the footswitch is fully charged and powered on.
- Check the Bluetooth settings to ensure that the footswitch is paired with the HS-1and that you have a solid blue LED on the footswitch.
- If for some reason you have reassigned different CC or NoteOn messages under any software, the footswitch buttons will not function as expected in TH-U nor Gig Performer. Factory A, B, C and D buttons correspond to CC messages 24, 25, 26 and 27 (short press) and NoteOn (E1, F1, F#1 and G1) messages (long press). Please restore these and try again.

Regulatory Compliance

Please read and follow all safety instructions to ensure safe operation of your Octave HS-1.

- CE Compliance: Certified under Class A electromagnetic compatibility (EMC) standards, ensuring the HS-1 meets European Union regulations for electromagnetic emissions.
- FCC Compliance: Certified under Class A EMC standards, conforming to the Federal Communications Commission requirements in the United States.

This certification underscores the HS-1's suitability for professional environments, ensuring stable performance with minimal electromagnetic interference.

Power Requirements

For powering the device, please use an external power supply with ES1 (12V DC; 3A) and PS2 (Limited Power Source) output.

Input: 12 Vdc +/- 5%; Max. 3 A
Ambient temperature range: 0-40°C

Legal Terms and Conditions

By using the HS-1 Windows 11 VST Host, you agree to the following terms and conditions. The HS-1 and all associated software, including but not limited to TH-U by Overloud and Gig Performer, are provided "as is" without any warranties, express or implied. OctaveTech, the manufacturer of HS-1, disclaims all warranties including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. OctaveTech does not warrant that the functions of the device will meet your requirements or that the operation of the device will be uninterrupted or error-free.

OctaveTech shall not be liable for any direct, indirect, incidental, special, or consequential damages resulting from the use or inability to use the HS-1, including but not limited to damages for loss of profits, loss of data, or business interruption. By using this device, you assume all risks associated with its use.

Any unauthorized reproduction, distribution, or modification of the HS-1 software or hardware is strictly prohibited and may result in legal action. The included software may be subject to additional licensing terms and conditions as provided by their respective licensors.

By using the HS-1, you agree to comply with all applicable local, state, and federal laws and regulations regarding its use. OctaveTech reserves the right to modify these terms and conditions at any time without prior notice. For the most current terms and conditions, please visit our website at octavetech.eu.

For support, warranty claims, or any legal inquiries, please contact us at info@octavetech.eu

Warranty and Support

Warranty

The HS-1 comes with a one-year limited warranty. This warranty covers defects in materials and workmanship under normal use.

Support

For technical support, please visit the OctaveTech.eu website or contact our customer service team at info@octavetech.eu