



Jam X User's Guide

Version 1.0



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In the Box

- Jam X
- Micro-USB B to USB-A cable, 1 meter
- Micro-USB B to USB-C cable, 1 meter
- Warranty Booklet
- Product Registration Link Card

System Requirements

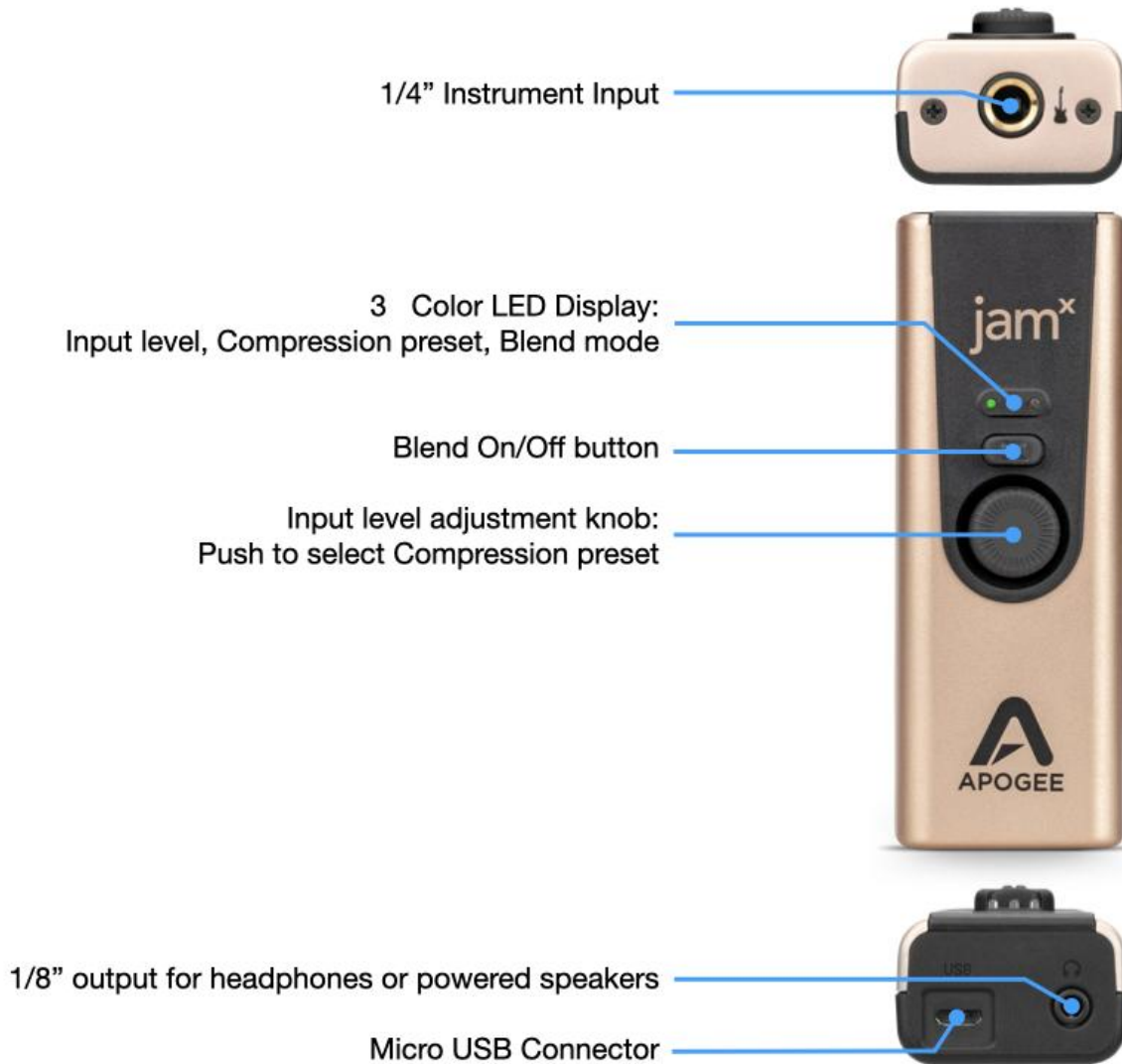
- macOS 10.15 or greater
- Windows 10 Anniversary update or later
- iOS 13 or greater
- Mac & Windows: 4GB minimum RAM, 8GB Recommended

Register your Product

- Receive links to free software!
 - Ableton Live Lite
 - Neural Archetype: Tim Henson Plugin Extended Trial
- Access Apogee's expert Technical Support for free
- Receive important product update information by email
- Take the Customer Satisfaction Survey for a chance to win Apogee gear!

Register Now: <https://apogeedigital.com/my-account>

Jam X Product Tour



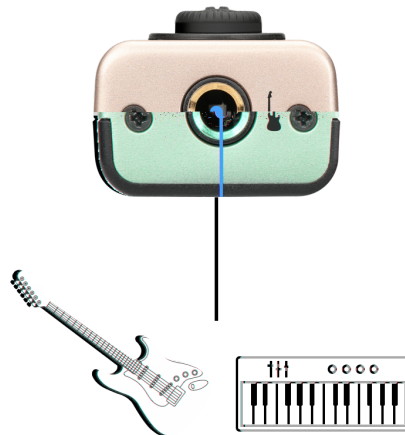
Connecting Your Studio

A wide range of devices, including dynamic microphones, electric instruments and keyboards, speakers and headphones may be connected to Jam X.

Connect your instrument

Connect Hi-Z instruments such as guitar, bass, keyboards, and synthesizers to the Jam X using a 1/4" instrument cable.

- Dynamic mics with XLR plug can be connected using a Hi-Z to Low-Z transformer converter.
- Condenser microphones require a separate external 48V phantom power supply.



Connect headphones or speakers

Connect headphones to the 1/8" stereo connector.

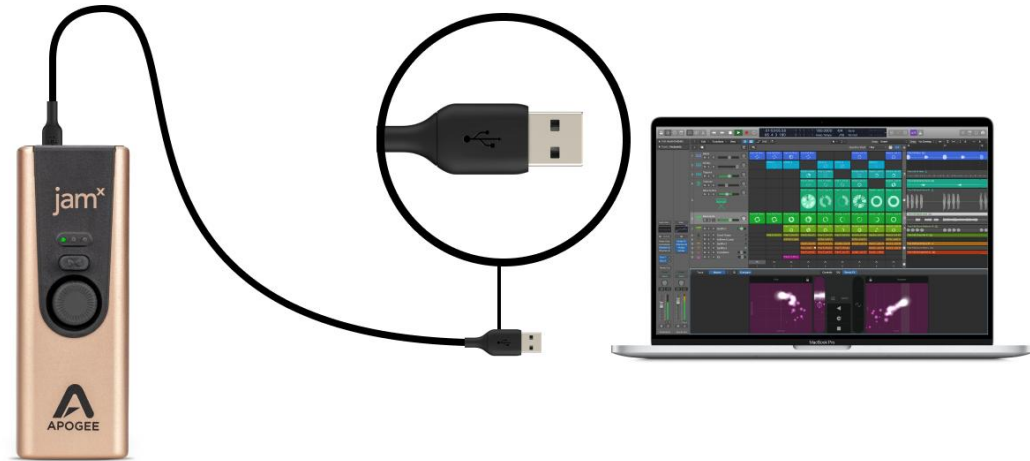
Powered speakers can also be connected to this jack.

- Adjust the output level using the volume controls on the computer or iOS device.



Connecting to a Mac or Windows computer

Using one of the supplied cables, connect Jam X's Micro-USB B port to any USB-A or USB-C port on your Mac or Windows computer.



Connecting to an iPad Pro (USB-C connector)

Using the supplied Micro-USB B to USB-C cable, connect Jam X's to your iPad Pro's USB-C connector.



Connecting to an iOS Device (Lightning connector)

Using the micro-USB B to Lightning Cable ([sold separately](#)), connect to the Lightning port on your iPhone or iPad:



Connecting Jam X to an iPhone with Lightning connector



Connecting Jam X to an iPad with Lightning connector

Installing Jam X Software

For Windows 10 & 11 users, download the Apogee ASIO Driver from the link below:

<https://apogeedigital.com/installer-downloads>

For macOS and iOS users, no software is required to connect Jam to your Mac, iPhone or iPad.

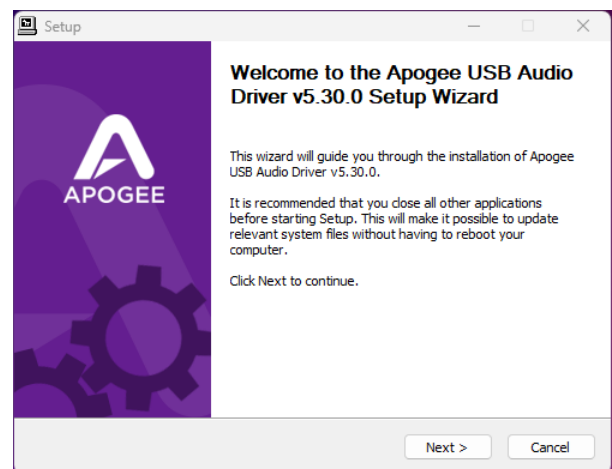
After registering your Jam X at the link below, you'll receive links to download accessory software:

- Ableton Live Lite, a digital audio workstation;
- Neural Archetype: Tim Henson, a virtual guitar amp/FX plugin.

<https://apogeedigital.com/my-account>

Windows 10 Installer

1. In your Downloads folder, double-click the .zip file to extract it, then double-click the .exe file to start the installation process.
2. Click Next through all steps, then click Finish at the final step.
3. You should restart your computer immediately.

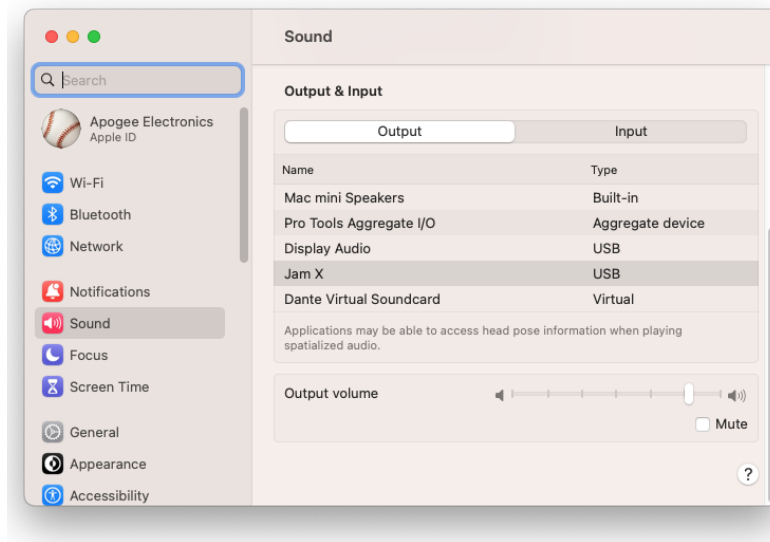
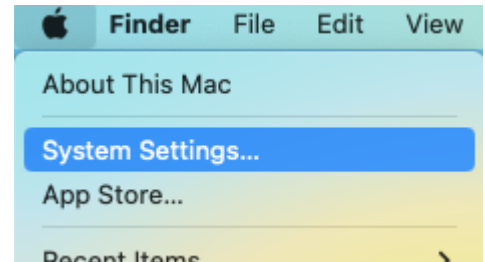


Configure the Computer's OS to use Jam X for Audio I/O

macOS

To choose Jam X as the audio interface for Mac applications that don't have specific audio hardware preferences, such as Safari, Spotify, Voice Memos and others:

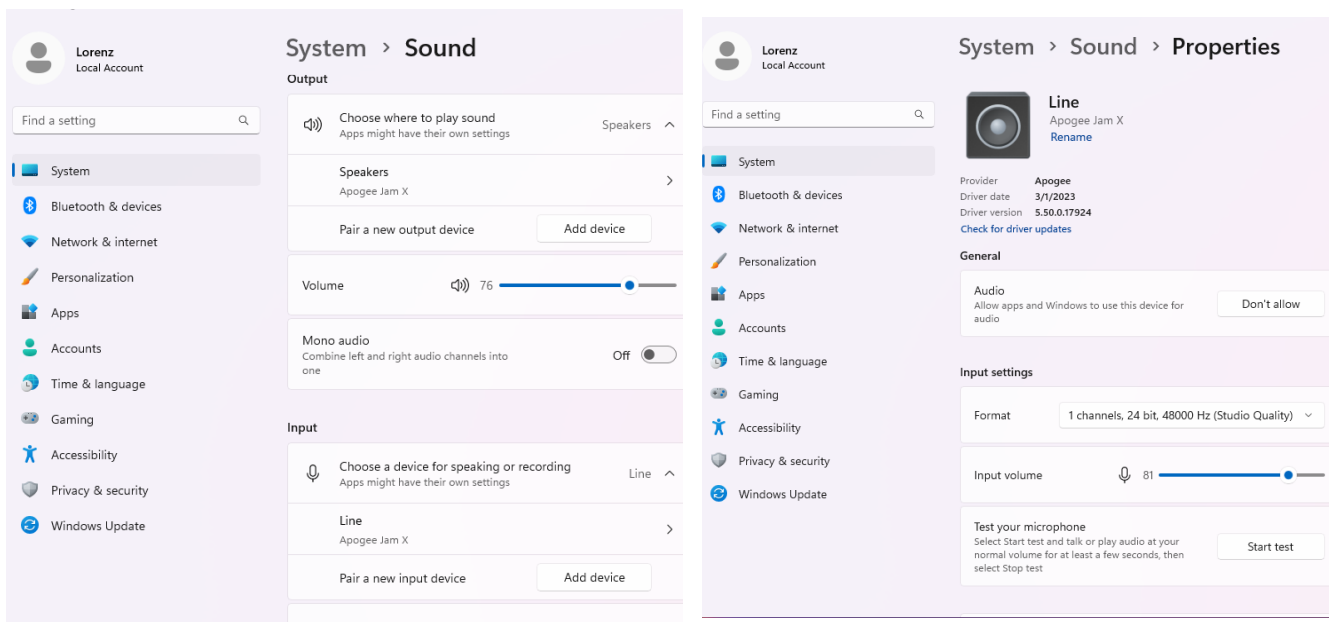
1. Open System Settings by choosing Apple menu > System Settings.
2. Click the Sound icon to open the Sound Settings panel.
3. Click the Output tab, then click Jam X in the devices list.
4. Click the Input tab, then click Jam X in the devices list.



Windows 11

To choose Jam X as the audio interface for Windows applications that don't have specific audio hardware preferences, such as Google Chrome, Spotify, and others:

1. Type Control Panel in the Windows search bar to open the Control Panel. Double-click the Sound icon.
2. Click the Output section and select Speakers-Apogee Jam X.
3. Click Speakers to show the Properties of the device.
4. Ensure the Audio - "Allow apps and Windows to use this device for audio" is Allowed. When using a DAW and apps like Spotify simultaneously, match the Default Format sample rate with the rate of the DAW session.
5. Go back to the main System > Sound window.
6. Click the Input Section and repeat steps 2-5 for Input.



Apple iOS

Apple iOS (iPhone and iPad) automatically chooses the most recently connected audio interface as the audio I/O device for all applications. Simply connect Jam X to your iOS device's Lightning or USB-C port as described on page 6-7.

Working with Jam X

Jam X LED Functionality

Use the Jam X's multi-color LED lights, buttons, and knob to adjust your audio signal level, monitor settings, and compressor presets.



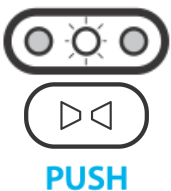
Jam X will display a blue LED when first connected via USB.
No sound will pass when in this standby mode.



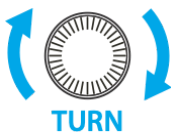
Audio input and outputs will activate when an audio application plays through the Jam X (such as playing Apple Music or Spotify), or attempts to record from Jam X's 1/4" instrument input (like Garageband or Ableton Live).



When the LED is green, it will pulse with the signal level.
Use the Input Level adjustment controls to change the input settings.



Push the Blend button to toggle Blend (direct monitoring) on/off.
When Blend is on, the 1/4" input signal is blended with playback from your audio app and routed directly to the headphone/speaker output. Use this for a low-latency direct signal that does not rely on the monitoring functions of your recording software. See [here](#) for more about low-latency direct monitoring.



Turn the Input Level adjustment knob to change the input recording level.
A good rule of thumb is to adjust this knob so that your strongest playing occasionally triggers the right LEDs to turn orange.
When compression is engaged, increasing the Input Level results in more compression rather than an increased input level. Use the Input Gain knob to control the amount of compression applied to the input signal.



Push the Input Level adjustment knob to toggle between Compressor presets.
A Blue LED displays for 1 second to indicate the compressor preset selected.

The Compressor has three presets:

Left LED:	Smooth Leveler	- Gentle and smooth compression
Center LED:	Purple Squeeze	- Medium compression
Right LED:	Vintage Blue Stomp	- Fast and Heavy compression
No LED:	Compression is Off	



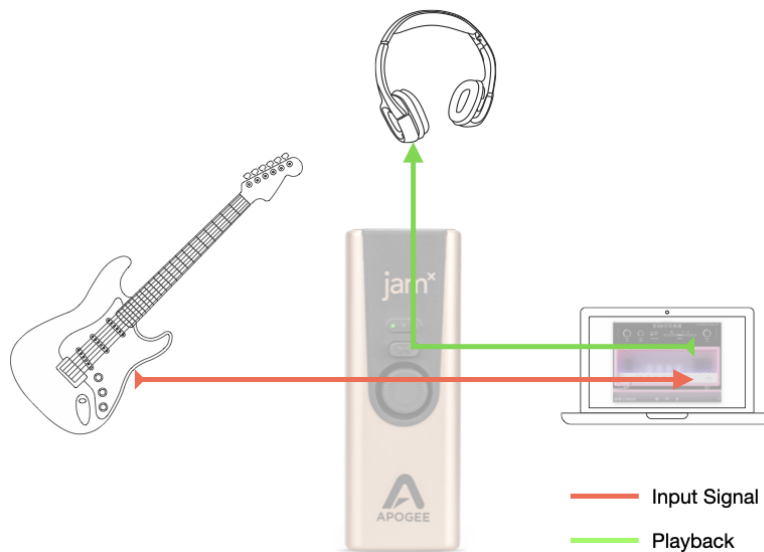
The Orange LED indicates the input signal is engaging the Soft Limit analog circuit.
Soft Limit engages when the input level reaches -4dBfs; this setting is fixed and permanent.

Blend Mode

The Blend mode button toggles Jam X's signal path between two workflows, Software monitoring and Direct monitoring. These workflows affect how you hear your instrument while recording.

Blend Off - Software Monitoring

When Blend is off, you hear your instrument AFTER it's been routed through your Amp Sim app or DAW, as shown below.



- Pros
 - Software monitoring is the simplest workflow, where most settings are made in the DAW window.
 - If you're using an amp sim plugin or app, you hear your instrument through the amp sim while recording.
- Cons
 - Depending on your system, you may encounter *latency* - a delay of your Instrument's audio in your headphones.

To configure your system for software monitoring:

1. Press the Jam X Blend button to turn Blend off.
2. Configure your DAW for software monitoring, as described [here](#).
3. Set up a DAW channel for recording, then use the DAW mixer to create the desired balance between the track being recorded and tracks being played back.

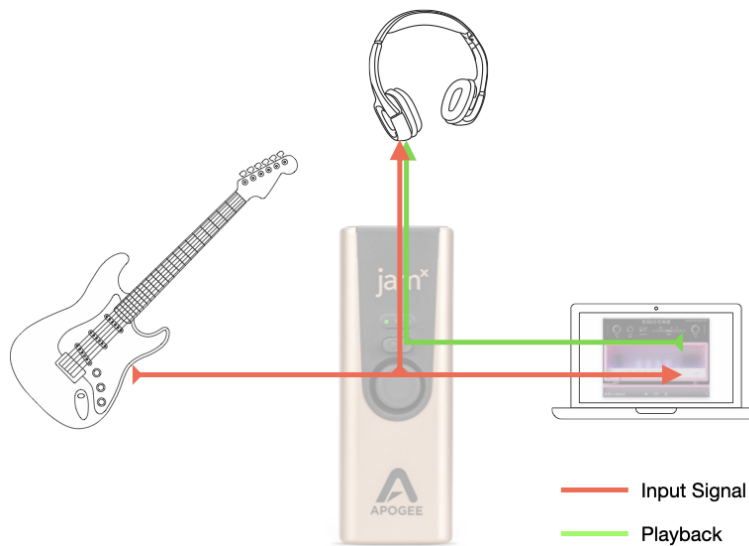
Minimize Latency with Software Monitoring

Here are a few ways to minimize the latency through your system:

1. Set your Amp sim or DAW software to a sample rate of 96kHz - this divides latency in half.
2. Lower the buffer setting on your software as low as possible while avoiding audio dropouts or glitches. If you have a powerful computer and your sessions use a moderate amount of plugin processing, you may be able to find a buffer setting that works.
3. If latency is still too high, turn Blend on to engage Direct monitoring.

Blend On - Direct Monitoring

When Blend is on, you hear your instrument BEFORE it's been routed through your Amp Sim app or DAW, as shown below.



- Pros - Low latency and maximum plugin power - the DAW IO Buffer may be set to its maximum value for the greatest number of native plugins without an effect on latency. Latency remains virtually non-existent to the headphone/speaker output.
- Cons - If you're using an amp sim app or plugin, monitoring options are the following:
 - Leave software monitoring on in the app, so you hear the unprocessed direct signal AND the delayed amp sim audio.
 - Turn software monitoring off in the app, so you hear ONLY the unprocessed direct signal.

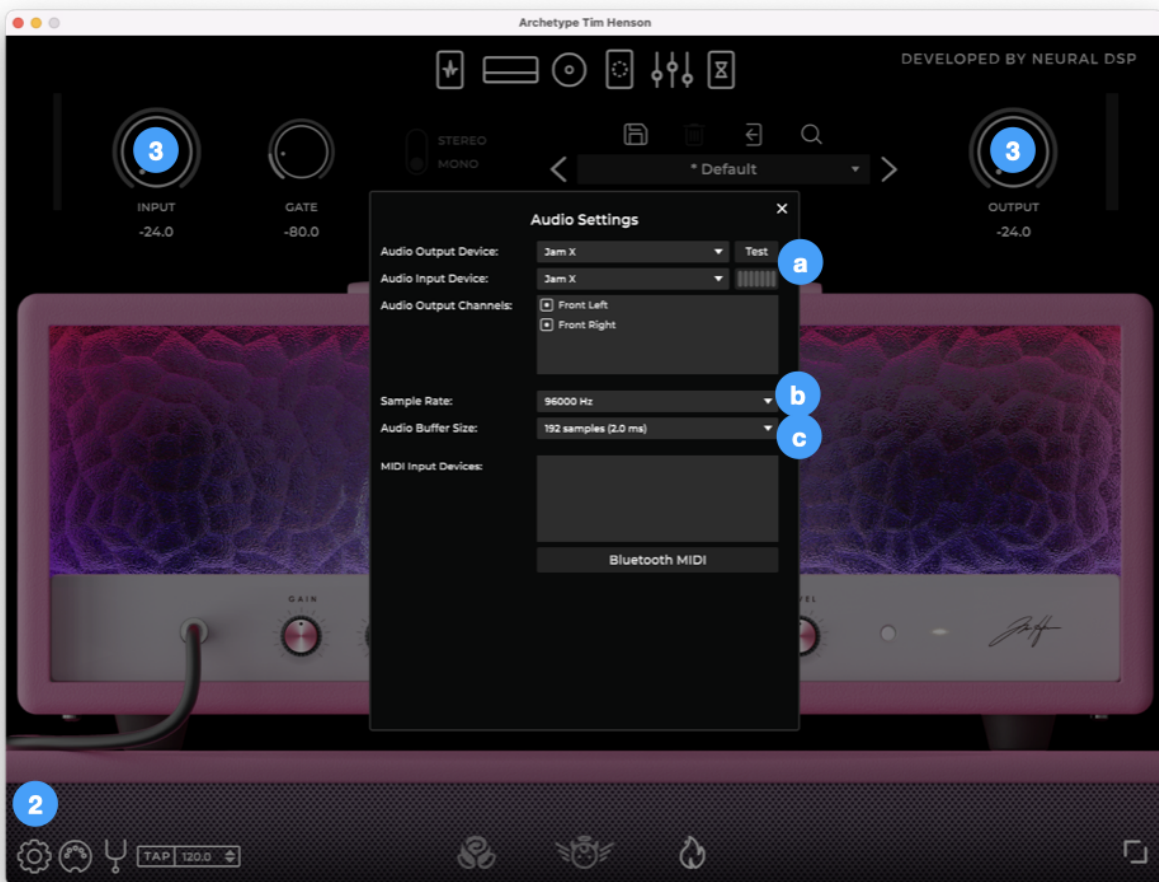
To configure your system for direct monitoring:

4. Press the Blend button to turn the Blend LED on.
5. Configure your DAW for direct monitoring or software monitoring, as described [here](#).
6. Set up a DAW channel for recording.

Configuring Neural Archetype:Tim Hensen - Standalone

The best way to get started quickly with Jam X is with the supplied Archetype: Tim Hensen guitar amp plugin running in Standalone mode on your Mac or Windows computer.

1. No DAW needed - After installing the Archetype:Tim Hensen plugin, go to the Applications folder (on Mac), find the Neural DSP folder, open it and click on the Archetype Tim Hensen icon to launch the application in Standalone mode.
2. Click on the Setting gear in the lower left corner of the app window.
 - a. Set Audio Output Device and Audio Input Device to Jam X
 - b. Set Sample Rate to 96000 Hz
 - c. Set Audio Buffer Size to 192 samples, for a latency of 2.0ms
3. Start with the Input and Output knobs set to 0.0.
4. Adjust Jam's headphone/speaker output level with your computer or iOS device's output level control.



Configuring Your DAW

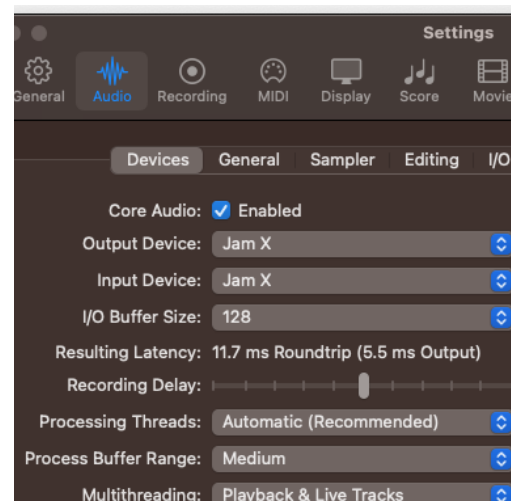
Find below detailed information to configure Jam X with popular DAWs:

- Configure the DAW to use Jam X
- Configure the DAW for Direct or Software monitoring
- Access Jam X inputs & outputs in the DAW
- Additional DAW-specific notes

Apple Logic Pro

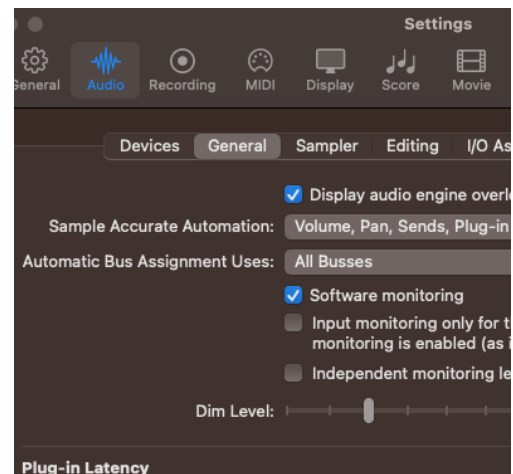
To configure Apple Logic Pro to use Jam X:

1. In the Logic Pro menu bar, choose Logic Pro > Preferences > Audio in the menu bar, then click the Device tab.
2. Check the Core Audio checkbox; set Output Device and Input Device to Jam X.
3. Set I/O Buffer Size
4. Click Apply.



To configure Logic Pro for Direct or Software Monitoring Workflow:

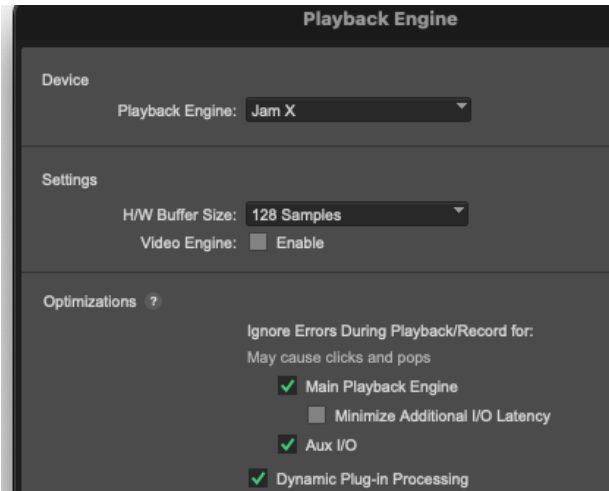
1. In the Logic Pro menu bar, choose Logic Pro > Preferences > Audio, then click the General tab.
 - Check the Software Monitoring box to monitor through Logic while recording.
 - Leave the Software Monitoring box unchecked for Direct monitoring through the Blend function of the Jam X
2. On the Jam X, press the Blend button:
 - Turn Blend off for Software monitoring.
 - Turn Blend on for Direct monitoring through the Jam X.



Avid Pro Tools

To configure Avid Pro Tools to use Jam X:

- 1. Open Pro Tools, then choose Setup > Playback Engine in the menu bar.
- 2. Set Playback Engine to Jam X.
- 3. Set H/W Buffer Size to 128 to start, adjust for lower latency or more plugin power.



To configure Pro Tools for Direct or Software Monitoring Workflow:

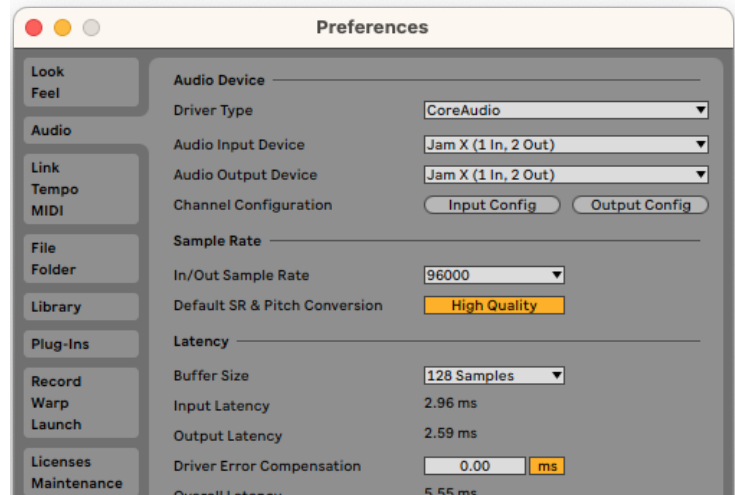
- 1. In the Pro Tools menu bar, set Options > Low Latency Monitoring.
 - Uncheck Low Latency Monitoring for Software monitoring.
 - Check Low Latency Monitoring for Direct monitoring.
- 2. On the Jam X, press the Blend button:
 - Turn Blend off for Software monitoring..
 - Turn Blend on for Direct monitoring through the Jam X.

Options	Setup	Window	Avid Link
Destructive Record			
Loop Record			⌘ L
✓ QuickPunch			⇧ ⌘ P
TrackPunch			⇧ ⌘ T
DestructivePunch			
Prepare DPE Tracks			
Transport Online			⌘ J
Video Track Online			⇧ ⌘ J
Pre/Post-Roll			⌘ K
✓ Loop Playback			⇧ ⌘ L
Dynamic Transport			⇧ ⌘ P
Edit Window Scrolling			▶
✓ Link Timeline and Edit Selection			
Link Track and Edit Selection			⇧ T
Insertion Follows Playback			
Tab to Transient			⌘ ⇧ →
Mirrored MIDI Editing			
✓ Automation Follows Edit			
Layered Editing			
✓ Click			
✓ MIDI Thru			
Auto-Spot Clips			⌘ ⇧ P
✓ Pre-Fader Metering			
Solo Mode			▶
Edit/Tool Mode Keyboard Lock			⇧ ⇧ T
✓ Delay Compensation			
Activate HEAT			
Low Latency Monitoring			

Ableton Live

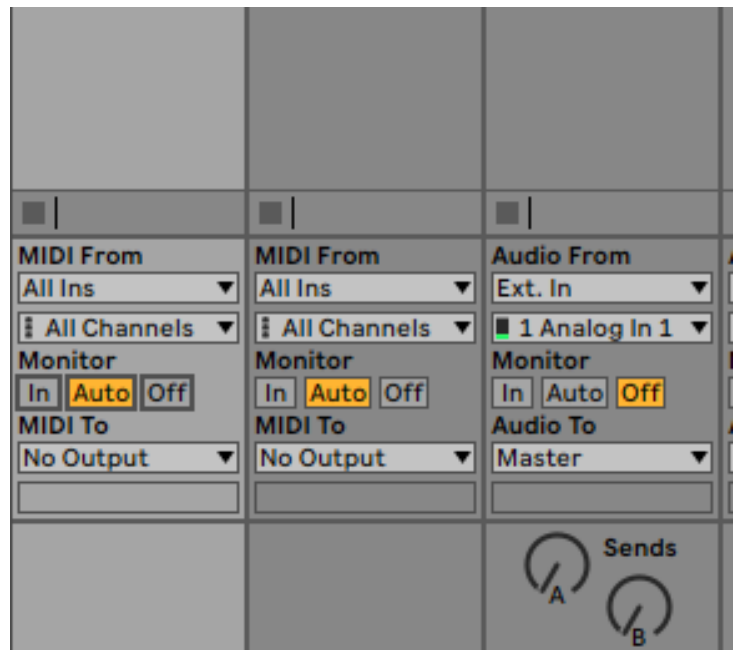
To configure Ableton Live:

1. In the Live menu bar, choose Live > Preferences and click the Audio tab.
2. Mac - set Driver Type to **CoreAudio**; Windows - set Driver Type to **Apogee ASIO Driver**.
3. Set Audio Input Device and Audio Output Device to Jam X.
4. Set Buffer Size. Adjust for lower latency or more plugin power.



To configure Ableton Live for Direct or Software Monitoring Workflow:

1. Monitor settings in Ableton Live are configured for each channel individually.
2. In the Ableton menu bar, choose View and verify that In/Out is checked.
3. In each channel, set Monitor to Auto for Software monitoring or Off for Direct monitoring.
4. On the Jam X, press the Blend button:
 - Turn Blend off for Software monitoring..
 - Turn Blend on for Direct monitoring through the Jam X.



Troubleshooting

Q: The LED light stays blue and I can't turn it green

A1: Check if Jam X is recognized by the computer or iOS device. If it isn't, Your USB cable may be faulty and should be swapped out.

A2: The LED will not turn green until an audio application plays through the Jam X (such as playing Apple Music or Spotify), or attempts to record from Jam X's 1/4" instrument input (like Garageband or Ableton Live). Some apps will not do this until you actually start recording so make sure you check for this.

Q: Low sound through headphone/speakers, even though the input signal is peaking red.

A: The output volume may be turned down. This is a separate control from the input adjustment knob. To adjust output level, use the volume buttons on the side of your iPhone or iPad, or the volume controls on your Mac or PC computer.

Q: The input signal is noisy or has a hum or buzz

A1: This could be a bad cable. Try swapping out your instrument cable, output cable, or USB cable to see if there's improvement.

A2: Hi-Z (high impedance) input sources such as electric guitar pickups are notoriously noisy and susceptible to picking up interference from lights, radio transmissions, and other electronic devices. Turn your instrument to face another direction, or move to a different area away from electromagnetic sources to reduce the interference being picked up.

Q: Will Jam X work with my Android device?

A: Jam X was designed to work with standard drivers that are part of Windows and Mac PC's, and Apple iOS devices. You may try using Jam X with your Android device, but we cannot guarantee that it will work.

For more information

- Apogee KnowledgeBase and FAQs
- Informational Videos
- Apogee Product Registration
- How to contact Apogee Technical Support

Please visit:

www.apogeedigital.com/support

Warranty Information and Legal Notices

APOGEE ELECTRONICS CORPORATION warrants this product to be free of defects in material and manufacture under normal use for a period of 12 months. The term of this warranty begins on the date of sale to the purchaser from an authorized Apogee dealer (proof of purchase in the form of a receipt may be required). Units returned for warranty repair to Apogee or an authorized Apogee warranty repair facility will be repaired or replaced with a functional equivalent product that is new or refurbished at the manufacturer's option, free of charge. Please note this guarantee may be subject to other conditions as dictated by the customer's legal warranty rights under the applicable national legislation governing the sale of consumer goods.

Apogee reserves the right to change or improve design at any time without prior notification. Design changes are not implemented retroactively, and the incorporation of design changes into future units does not imply the availability of an upgrade to existing units. This warranty is void if Apogee determines, in its sole business judgment, the defect to be the result of abuse, neglect, alteration or attempted repair by unauthorized personnel. The buyer acknowledges and agrees that in no event shall the company be held liable for any special, indirect, incidental or consequential damages, or for injury, loss or damage sustained by any person or property, that may result from this product failing to operate correctly at any time.

Warranty details are subject to change. For the latest warranty information please visit www.apogeedigital.com.

Declarations of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. CAUTION: Changes or modifications not expressly approved by Apogee Electronics Corporation compliance could void the user's authority to operate the equipment.

Rating: 3.3-5V 100mA USB 2.0

Industry Canada Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity – CE

Apogee Electronics Corporation hereby declares that the product, Jam X, to which this declaration relates, is in material conformity with the following standards or other normative documents:

(EN50081-1/EN55022; 1995) and (EN50082-1/IEC 801-2, 3, 4; 1992)

following the provisions of: (73/23/EEC – Low Voltage Directive) and (89/336/EEC – EMC Directive)

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following the provisions of: (73/23/EEC – Low Voltage Directive) and (89/336/EEC – EMC Directive)

Declaration of Conformity – Japan

Apogee Electronics Corporation hereby declares that Jam X, to which this declaration relates, is in material conformity with the VCCI Class A standard.

Declaration of Conformity – Australia

Apogee Electronics Corporation hereby declares that the Jam X is in material conformity with AN/NZS standard requirements.

Use of the “Made for iPhone”, “Made for iPad”, and “Made for iPod” badge means that an accessory has been designed to connect specifically to the Apple product(s) identified in the badge, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with an Apple product may affect wireless performance.

User's Guide Version 1.0b