

# apollo | x4



## Apollo x4 Hardware Manual

Manual Version 240325



[www.uaudio.com](http://www.uaudio.com)

# A Letter from Bill Putnam Jr.

Thank you for choosing this Apollo x4 audio interface to become a part of your studio. We know that any new piece of gear requires an investment of time and money — and our goal is to make your investment pay off.

Universal Audio interfaces like Apollo x4 exemplify a commitment to craftsmanship that we've forged over the past 60 years — from our original founding in the 1950s by my father, Bill Putnam Sr., to our current mission combining the best of both classic analog and modern digital audio technologies.

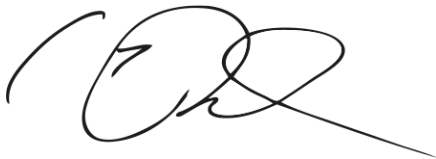
Starting with its high-quality I/O and superior A/D and D/A conversion, Apollo x4's superior sonic performance serves as its foundation.

This is just the beginning however, as Apollo x4 lets you power the full range of UAD plug-ins in real time, including classic mic preamps, EQs, dynamics processors, reverbs, guitar amps, and much more. With more than 100 acclaimed UAD plug-ins at your fingertips, the sonic choices are limitless.\*

At UA, we are dedicated to the idea that technology should serve the creative process, inspiring our customers to go further. These are the ideals my father embodied with his classic designs, and we like to think this spirit lives on today in products like Apollo x4.

Please feel free to reach out to us via our website [www.uaudio.com](http://www.uaudio.com), and via our social media channels. We look forward to hearing from you, and thank you once again for choosing Universal Audio.

Sincerely,

A handwritten signature in black ink, appearing to be 'BP', with a long, sweeping horizontal line extending to the right.

Bill Putnam Jr.

*\*All trademarks are recognized as property of their respective owners. Individual UAD Powered Plug-Ins sold separately.*

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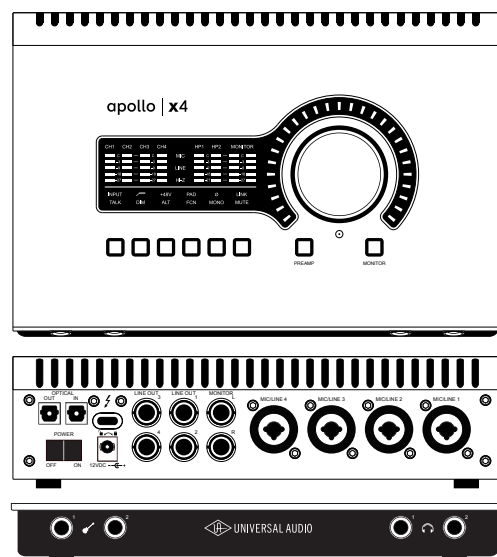
# Introduction

## Apollo x4 Thunderbolt 3 Audio Interface

### World-Class Conversion. Timeless Analog Sound.

UA Audio Interfaces are the world's most acclaimed professional recording interfaces for Mac and Windows — delivering enhanced audio conversion with the tone, feel, and flow of analog recording.

Built upon UA's 60-year heritage of audio craftsmanship, Apollo x4 starts with four Unison™-enabled mic preamps. Together with its included bundle of UAD analog emulation plug-ins — which you can track through in real time with UAD-2 QUAD Core processing — Apollo x4 is born to make records.



### Now You Can:

- Record with world-class Apollo A/D and D/A conversion — as heard on hundreds of hit records
- Cascade up to 4 Apollo interfaces and 6 UAD-2 devices over Thunderbolt, adding DSP and I/O as your studio grows
- Mix with UAD plug-ins like the included Teletronix® LA-2A and 1176 compressors, Pultec® EQs, and 610-B Preamp
- Track with near-zero latency through preamp emulations from Neve®, API®, Manley® and more using Unison™ technology\*

### Unison Technology: The Genuine Sound of Neve, API & Manley Preamps

Apollo x4 features four Unison-enabled mic preamps, letting you track through exacting mic preamp emulations from Neve, SSL, API, Manley, and Universal Audio. An Apollo exclusive, Unison technology nails the tone of these sought-after tube and solid state mic pres — including their input impedance, gain stage “sweet spots,” and the component-level circuit behaviors of the original hardware.

The secret to Unison is its hardware-software integration between Apollo's mic preamps and its onboard UAD-2 QUAD Core DSP Acceleration. Simply place a Unison preamp plug-in on your mic input in Apollo Console software, and it physically reconfigures the Apollo interface's impedance — so you can tap into the classic sounds of the world's most recorded mic preamps.

*\*Includes the “Realtime Analog Classics” UAD plug-in bundle. Other UAD plug-ins sold separately.*

## A Full Suite of Classic Analog Processing Onboard

Right out of the box, Apollo x4 provides a suite of incredible analog emulation plug-ins including the world's only authentic Teletronix LA-2A, 1176LN, Pultec EQs, and the Unison-enabled UA 610-B Tube Preamp. Developed by UA's world-renowned team of algorithm engineers, these Realtime Analog Classics plug-ins set the standard by which all other hardware emulation plug-ins are judged.

From the tube warmth of the Pultec EQ on guitars, to the gentle limiting of the LA-2A on vocals, your recordings will take a giant leap forward in rich, sonically complex analog sound.

## Access the World of UAD Powered Plug-Ins

Beyond the included Realtime Analog Classics plug-ins, Apollo x4 lets you tap into the full library award-winning UAD Powered Plug-Ins — including vintage EQs, Compressors, Reverbs, Tape Machines and more — at near-zero latency, regardless of your audio software's buffer size and without taxing your computer's CPU.

With exclusive emulations from Neve, Studer, Manley, API, Ampex, Lexicon, Fender, and more,\* it's like having an endless analog studio, right on your desktop. And unlike competing interfaces, these DSP-powered plug-ins are also available in your DAW for mixing.

## Next-Generation A/D and D/A Conversion

Of course, the heart of any audio interface is the quality of its conversion. Apollo x4 improves upon the original Apollo Twin's gold-standard audio quality with completely redesigned A/D and D/A conversion — giving you increased dynamic range and ultra-low THD. This next-generation conversion results in breathtaking clarity, depth, and accuracy in your recordings.



*\*All trademarks are recognized as property of their respective owners. Individual UAD Powered Plug-Ins sold separately.*

## **Apollo: The Choice of New-School Professionals**

Apollo is the confirmed choice of hit-making professionals, used to record landmark albums by many famous artists. The Apollo range of interfaces has earned numerous industry awards from Sound on Sound, Future Music, and Electronic Musician — as well as the prestigious 2016 TEC Award for computer audio hardware.

## **Improved Monitoring and Built-In Talkback Mic**

The Apollo x4 offers flexible monitor functionality — with Mute, DIM, Mono, and ALT speaker switching. It also includes dedicated monitor remote controls and a built-in Talkback mic for easy communication with talent and/or recording slate cues. These features, combined with Apollo x4's scalability, make it the standard for professional desktop recording.

## **Build a Networked Studio**

Apollo x4 offers up to 12 x 18 simultaneous input/output channels. Thanks to Apollo Expanded software, users of any Thunderbolt-equipped Apollo audio interfaces can combine up to four Apollos and six total UAD-2 devices — adding I/O and DSP as your studio grows. Apollo x4 makes the perfect intelligent desktop controller for a full Apollo system.

## **Now with Vintage Amps**

Apollo x4 also includes Unison technology on its front panel instrument inputs, giving you access to dead-on emulations of guitar and bass amps like the Fender '55 Tweed Deluxe, Marshall Plexi Super Lead 1959, and the Ampeg B-15N Bass Amplifier.

## **A Sleek, Low-latency App**

Console is Apollo x4's software control interface. Its intuitive, analog console-style design provides realtime tracking and monitoring with UAD Powered Plug-Ins, Channel Strip presets, Drag & Drop functionality, dynamically resizable windows, and more.

# Apollo x4 Features

## Key Features

- Best in class audio quality with improved 24-bit/192 kHz conversion
- Realtime UAD Processing — monitor and track through vintage compressors, EQs, tape machines, and guitar amp/pedal plug-ins with near-zero latency
- Four premium mic/line preamps; four line outs; two front-panel Hi-Z instrument inputs, and two stereo headphone outputs
- Unison™ technology for stunning models of classic mic preamps and guitar amps
- Built-in talkback microphone for communication and recording
- Monitor remote functions can replace dedicated monitor controllers
- UAD-2 QUAD DSP processing onboard
- Thunderbolt 3 connection for blazing-fast PCIe speed on modern computers
- Uncompromising analog design, superior components, and premium build quality throughout
- Cascade up to four Thunderbolt-equipped Apollos and six total UAD-2 devices — adding I/O and DSP as needed

## All Features

### Audio Interface

- Sample rates up to 192 kHz at 24-bit word length (*96 kHz max on S/PDIF I/O*)
- Up to 12 x 18 simultaneous input/output channels
  - Four channels of analog-to-digital conversion via:
    - Four balanced mic/line inputs
    - Two Hi-Z instrument inputs
  - 10 channels of digital-to-analog conversion via:
    - Stereo monitor outputs
    - Two stereo headphone outputs
    - Four line outputs
  - Up to eight channels of digital optical inputs and outputs via:
    - Eight channels ADAT optical with S/MUX for high sample rates, or
    - Two channels S/PDIF optical with sample rate conversion

### Microphone Preamplifiers

- Four high-resolution, ultra-transparent, digitally-controlled analog mic preamps
- Unison™ technology for exacting emulations with Unison-enabled UAD plug-ins
- Front panel and software control of all preamp parameters
- Low cut filter, 48V phantom power, 20 dB pad, polarity inversion, and stereo linking

## Monitoring

- Independently-addressable stereo left/right monitor outputs
- Two independently-addressable stereo headphone outputs
- Four independently-addressable line outputs can be used for additional cue mixes
- Front panel control of level, mute, dim, mono, alternate speakers, and talkback
- Built-in talkback microphone for communication and recording
- All outputs are DC coupled

## UAD-2 Inside

- Four (QUAD) SHARC® DSP processor cores onboard
- Realtime UAD Processing on all analog and digital inputs
- Same features and functionality as other UAD-2 devices when used with a DAW
- Complete UAD Powered Plug-Ins library is available online

## Software

### ***Console application:***

- Enables tracking and/or monitoring with Realtime UAD Processing
- Remote control of Apollo x4 features and functionality
- Virtual I/O for routing DAW tracks through Console
- Two independent stereo Auxiliary buses

### ***Console Recall plug-in:***

- Saves Apollo x4 configurations inside DAW sessions for easy recall
- Facilitates control of Apollo x4 monitoring features from within the DAW
- VST, RTAS, AAX 64, and Audio Units plug-in formats

### ***UAD Meter & Control Panel application:***

- Configures global UAD settings and monitors system usage

## Other

- Attractive and durable desktop form factor
- Locking power supply prevents accidental disconnection
- Easy firmware updates
- One year warranty includes parts and labor

## Package Contents

- Apollo x4 unit
- Power supply with one region-specific AC cable  
(USA, EU, UK, ANZ, or Japan)
- Getting Started URL card



# Operational Overview

## Audio Interface

First and foremost, Apollo x4 is a premium 12 x 18 Thunderbolt 3 audio interface with world-class 24-bit/192 kHz audio conversion. Apollo x4 connects to the outputs and inputs of other audio gear, and performs analog-to-digital (A/D) and digital-to-analog (D/A) audio conversions on the gear's signals. The digital audio signals are routed into and out of the host computer via the high-speed PCIe protocol, which is carried on a single Thunderbolt 3 cable.

Apollo x4 leverages Universal Audio's expertise in DSP acceleration, UAD Powered Plug-Ins, and analog hardware design by integrating the latest cutting edge technologies in high-performance A/D-D/A conversion, DSP signal reconstruction, and connectivity. Apollo x4 acts as an audio interface with integrated DSP effects for tracking and monitoring, a fully integrated UAD-2 DSP accelerator for mixing and mastering, as well as a complete monitoring controller.

## About Realtime UAD Processing

Apollo x4 has the ability to run UAD Powered Plug-Ins in realtime. Apollo's groundbreaking DSP + FPGA technology enable UAD plug-ins to run with latencies in the sub-2ms range, and multiple plug-ins can be stacked in series without additional latency. Realtime UAD Processing facilitates the ultimate sonic experience while monitoring and/or tracking.

**Note:** *Apollo x4, as with other UAD-2 devices, can only load UAD Powered Plug-Ins, which are specifically designed to run on UAD-2 DSP accelerators. Native (host CPU-based) plug-ins cannot run on the UAD-2 DSP.*

## Console Software

The included Console companion software application runs on the host computer and is used to control Apollo x4 mixing and input monitoring with Realtime UAD Processing, access the audio interface I/O settings, and more. Console's analog-style workflow is designed to provide quick access to the most commonly needed features in a familiar, easy-to-use mixer interface.

Realtime UAD Processing is a special function that is available only within Console. All of Apollo x4's analog and digital inputs can perform Realtime UAD Processing simultaneously, and Console inputs with (or without) Realtime UAD Processing can be routed into the DAW for recording.

Console controls Apollo x4's digital mixer so you can monitor Apollo x4's inputs (with or without Realtime UAD Processing) without using any other audio software such as a DAW.

**Console is integral to unleashing the power of Apollo x4.** For complete details about how to use Console and Realtime UAD Processing, refer to the [Apollo Software Manual](#).

## UAD Powered Plug-Ins in a DAW

Apollo x4 and UAD plug-ins can also be used with a DAW without the use of Console. UAD plug-ins loaded within the DAW operate like other (non-UAD) plug-ins, except the processing occurs on the Apollo x4 DSP instead of the host computer's processor. In this scenario, UAD plug-ins are subject to the latencies incurred by I/O buffering.

For details about using UAD Powered Plug-Ins in a DAW, see the [UAD System Manual](#).

## Standalone Use

Although the Console application is required to utilize all Apollo x4 features, the hardware unit can be used as a digital mixer with limited functionality without a Thunderbolt 3 connection to a host computer.

All currently active I/O assignments, signal routings, and monitor settings are saved to internal firmware when Apollo x4 is powered down and persist when power is re-applied. Therefore the last-used settings are always available even when a host computer is not connected.

Note that UAD plug-in instantiations are not retained on power down, because the plug-in files reside on the host computer. However, if UAD plug-ins are active when Apollo x4's connection to the host system is lost (if the Thunderbolt 3 cable is unplugged), the current UAD plug-in configurations remain active for processing until Apollo x4 is powered down.

**Note:** *Standalone use is unavailable when cascading multiple Apollo units.*

# About Apollo x4 Documentation

Documentation for Apollo x4 and UAD Powered Plug-Ins are separated by areas of functionality, as described below. The user manuals are placed on the system drive during software installation. They can also be downloaded at [help.uaudio.com](http://help.uaudio.com).

## Apollo Manual Files

**Note:** All manual files are in PDF format. PDF files require a free PDF reader application such as Preview (included with macOS) or Edge (included with Windows 10).

### Apollo Hardware Manuals

Each Apollo model has a unique hardware manual. The Apollo hardware manuals contain complete hardware-related details about one specific Apollo model. Included are detailed descriptions of all hardware features, controls, connectors, and specifications.

**Note:** Each hardware manual contains the unique Apollo model in the file name.

### Apollo Software Manual

The Apollo Software Manual is the companion guide to the Apollo hardware manuals. It contains detailed information about how to configure and control all Apollo software features using the Console application, Console Settings window, Console Recall plug-in, and Talkback. Refer to the Apollo Software Manual to learn how to operate the software tools and integrate Apollo's functionality into the DAW environment.

**Note:** Each Apollo system connection type (Thunderbolt, FireWire, USB) has a unique software manual.

### UAD System Manual

The UAD System Manual is the operation manual for Apollo's UAD-2 functionality and applies to the entire UAD-2 product family. It contains detailed information about installing and configuring UAD devices, the UAD Meter & Control Panel application, buying optional plug-ins at the UA online store, and more. It includes everything about UAD except Apollo-specific information and individual UAD plug-in descriptions.

### UAD Plug-Ins Manual

The features and functionality of all individual UAD Powered Plug-Ins developed by Universal Audio are detailed in the UAD Plug-Ins Manual. Refer to this document to learn about the operation, controls, and user interface of each UAD plug-in title that is developed by UA.

### Direct Developer Plug-In Manuals

UAD Powered Plug-Ins includes plug-in titles created by our Direct Developer partners. Documentation for these 3rd-party plug-ins are separate files written and provided by the plug-in developers. The file names for these plug-in manuals are the same as the plug-in titles.

## Accessing Installed Documentation

Either of these methods can be used to access installed documentation:

- Choose Documentation from the Help menu within the Console application.
- Click the Product Manuals button in the Help panel within the UAD Meter & Control Panel application.

Manuals are also available online at: [help.uaudio.com](http://help.uaudio.com)

## Host DAW Documentation

Each host DAW software application has its own particular methods for configuring and using audio interfaces and plug-ins. Refer to the host DAW's documentation for specific instructions about using audio interface and plug-in features within the DAW.

## Additional Resources

For additional resources, or if you need to contact Universal Audio for assistance, see the [Technical Support](#) page.



# Quick Start

Before you can use Apollo x4, you need to complete these steps:

1. Connect to your computer with a Thunderbolt 3 cable (not included).
2. Connect to AC power.
3. Download and install the latest UAD software.
4. Register your Apollo hardware.
5. Authorize your UAD plug-ins.

Additionally, you'll want to learn these essential Apollo x4 operations:

- [Connect to Input Sources and Monitor System](#) – How to connect your audio gear.
- [Setting Hardware I/O Levels](#) – Learn how to adjust Mic/Line/Instrument input gain levels and monitor/headphone output volume levels.

This chapter will guide you through these steps. For assistance, see the [Technical Support](#) page.

## Installation Notes

- Locate the interface on a flat surface so its feet will maintain airflow beneath the unit.
- The location should be sturdy enough to securely hold its weight and withstand the pressure of operating the top panel controls.
- Allow space at the front and rear of the unit for cable connections.
- Do not block the cooling vents on the bottom or sides of the unit.
- As with any sound system, the following steps are recommended to avoid audio spikes in your speakers and headphones:
  1. Power on the speakers last, after all other devices (including Apollo x4) are powered on.
  2. Power off the speakers first, before all other devices (including Apollo x4) are powered off.
  3. Remove headphones from ears before powering Apollo x4 on or off.

# Connection Notes

## Thunderbolt 3

- Apollo x4 must be connected via a Thunderbolt 3 cable (not included) to a computer that has an available Thunderbolt 3 port.\*
- Apollo x4 cannot be bus powered via Thunderbolt 3. The included external power supply must be used.

**\*Note:** With Mac computers only, Apollo x4 can be connected to Thunderbolt 1 and Thunderbolt 2 computer ports via the Apple Thunderbolt 3 to Thunderbolt 2 adapter. Visit [help.uaudio.com](https://help.uaudio.com) for details.

## About Thunderbolt 3 Ports and Cables

**Important:** Although Thunderbolt 3 always uses USB-C connectors, not all USB-C ports are Thunderbolt 3 ports. Similarly, not all USB-C cables are Thunderbolt 3 cables. Always connect Apollo x4 to a Thunderbolt 3 port with a Thunderbolt 3 cable.

### USB-C is not Thunderbolt 3

Thunderbolt 3 uses USB-C connections to transfer data and power. However, USB-C is simply a connector type; it doesn't determine the type of data used by the connector. For example, USB-C connections can be used for Thunderbolt 3, USB 3.1, and other data protocols, so USB-C connections are not always interchangeable.

### Does your USB-C connector support Thunderbolt 3?



To determine if a USB-C port or cable connector supports Thunderbolt 3, look for the Thunderbolt icon. The Thunderbolt icon on a USB-C port or cable means the connector supports Thunderbolt 3. Alternately, confirm Thunderbolt 3 compatibility with the device and/or cable manufacturer.



Thunderbolt icon on USB-C cable (left) and USB-C port (right)

## Apollo Expanded

- When more I/O and/or DSP is needed, up to four Apollo interfaces and six UAD devices total can be cascaded together via Thunderbolt in a multiple-unit configuration. For complete details about multi-unit cascading, refer to the Apollo Thunderbolt Software Manual.

**Note:** A maximum of one UA desktop audio interface (Arrow, Apollo Twin, Apollo Twin MkII, Apollo Twin X, or Apollo x4) can be combined within a single Thunderbolt system.

# Hardware Setup

## Connect to Computer\*

1. Connect a Thunderbolt 3 cable (not included) to the Thunderbolt 3 port on Apollo x4's rear panel.
2. Connect the other end of the Thunderbolt 3 cable to an available Thunderbolt 3 port on the computer.

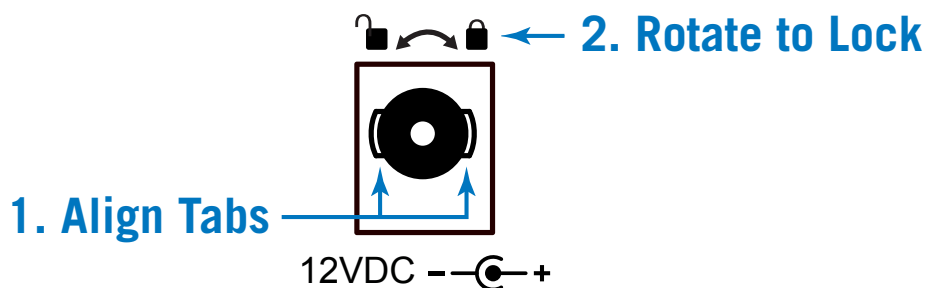
**\*Note:** With Mac computers only, Apollo x4 can be connected to Thunderbolt 1 and Thunderbolt 2 computer ports via the Apple Thunderbolt 3 to Thunderbolt 2 adapter. Visit [help.uaudio.com](https://help.uaudio.com) for details.

## Connect to Power

**Caution:** Before powering Apollo x4 on or off, lower the volume of the monitor speakers (if connected) and remove headphones from your ears.

1. Connect the included power supply to an AC outlet (Apollo x4 cannot be bus powered).
2. Connect the locking power supply barrel to the rear panel of Apollo x4. Align the two tabs on the power cable's connector to the notches on the input, then rotate the barrel clockwise to prevent accidental disconnection.

**Important:** After ensuring the locking barrel tabs are aligned with the chassis slots and the barrel is fully inserted, rotate the barrel to secure the connector.



3. Apply power to Apollo x4 using the rear panel's power switch. Apollo x4 is now ready for [Software Setup](#).



# Software Setup

**Note:** Items on this overview page are detailed in the Apollo Software Manual. See [About Apollo x4 Documentation](#) for related information.

## System Requirements

All system requirements must be met for Apollo x4 to operate properly. Before proceeding with installation, see the system requirements in the Apollo Software Manual.

## Software Installation, Registration, and Authorization

UAD software must be installed to use Apollo x4 and UAD plug-ins. The UAD Powered Plug-Ins software installer places the software onto the computer's startup drive. After installation, you'll register your hardware and authorize your UAD plug-ins.

**Important:** For optimum results, connect and power Apollo x4 before installing the UAD software.

## Our Web Pages Guide You

The Universal Audio website guides you through the initial process of UAD software installation, hardware registration, and UAD plug-in authorization. These procedures are also detailed in the Apollo Software Manual.

To begin the installation, registration, and authorization process, visit:

[www.uaudio.com/register](http://www.uaudio.com/register)

If you've already registered your Apollo x4 but want to update to a newer version of UAD software, the latest software is available at: [www.uaudio.com/downloads](http://www.uaudio.com/downloads)

## System Configuration

Complete details about setting up the Apollo x4 system, including how to integrate with a DAW and related information, are included in the Apollo Software Manual.

## Console Application

The companion Console application is the software interface for the Apollo x4 hardware. Console controls Apollo x4 and its digital mixing, monitoring, and Realtime UAD Processing features. Console is also used to configure Apollo x4's I/O settings such as sample rate, clock source, and reference levels.

For complete details about how to operate Console, refer to the Apollo Software Manual.

## UA Support Videos

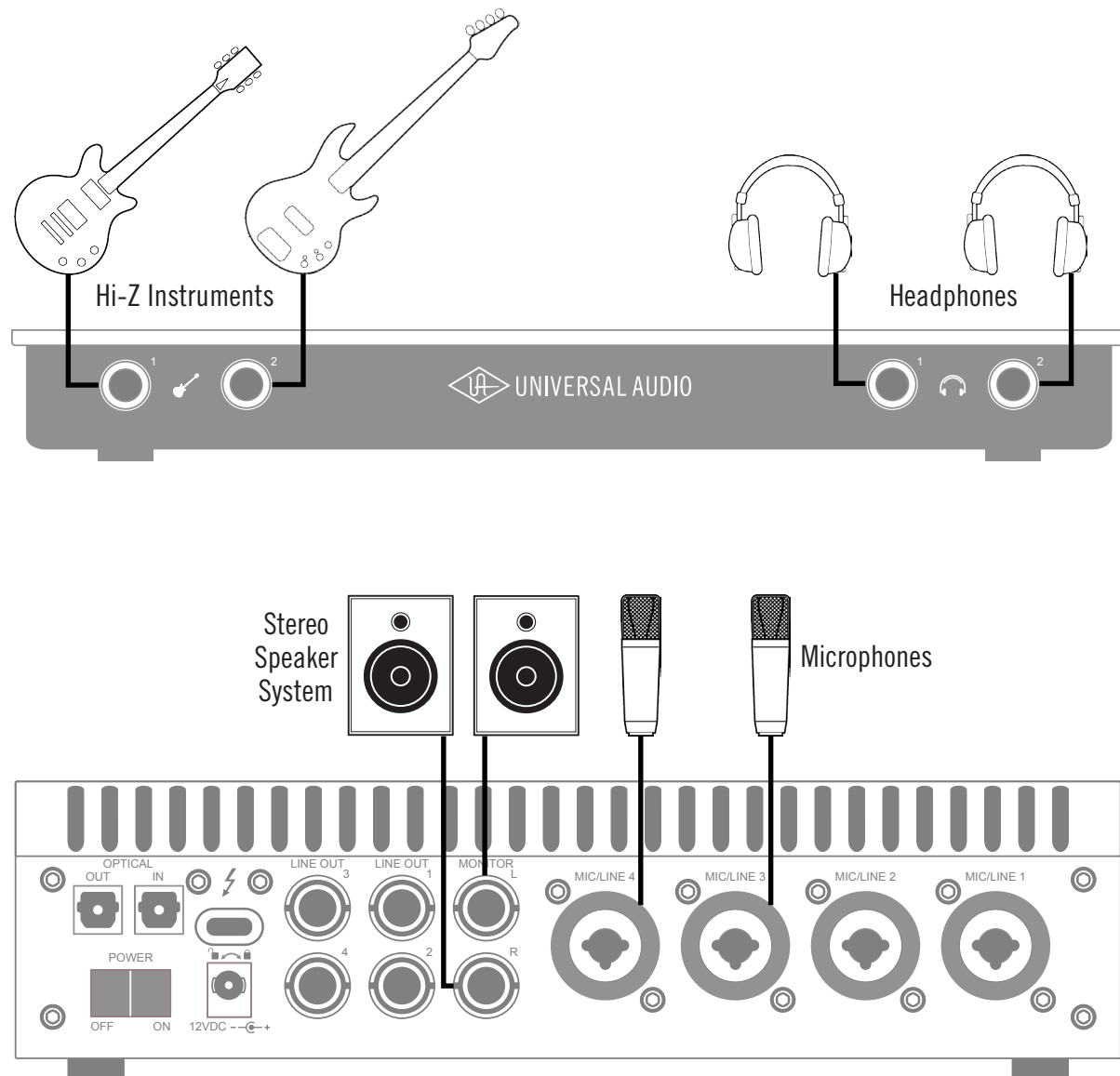
Many instructional videos are available to help you get started with Apollo x4. For assistance, see the [Technical Support](#) page.



## Connect to Input Sources and Monitor System

One typical Apollo x4 audio setup is illustrated below. For complete details about all of Apollo x4's connectors and controls, see [Controls & Connectors](#).

**Tip:** In the example below, the mics are connected to channels 3 and 4, so that the mics and the instruments (which are connected to channels 1 and 2) can be used at the same time.



*Typical Apollo x4 audio connections*

# Setting Hardware I/O Levels

This section explains how to set input gain levels for the hardware inputs (mic, line, and Hi-Z) and adjust volume levels for the hardware outputs (monitors and headphones). Refer to the [Top Panel](#) illustration for the control names and numbers mentioned below.

**Caution:** Before proceeding, lower the volume of the monitor speakers and remove headphones from your ears.

## Set Input Gains

1. Select the input channel to be adjusted by pressing the PREAMP button (8) repeatedly until the Channel Selection Indicator (1) displays the desired channel (CH1, CH2, CH3, or CH4).
2. Select the input type (MIC or LINE) by pressing the INPUT button (6-a) until the Input Type indicator (2) displays the desired input jack\* (see note below).
3. Adjust the input channel's gain by rotating the LEVEL knob (11) until the input meter for the channel (4) approaches maximum, but does not reach the red clip LED when the loudest input signal is present. If the level is too high to avoid clipping (when the red "C" LED illuminates), enable the PAD (6-d).
4. To set the input gain for the other input channels, repeat steps 1 – 3.

## Adjust Output Volumes

1. Select the output volume to be adjusted (monitor or headphones) by pressing the MONITOR button (10) until the desired output (HP1, HP2, or MONITOR) is displayed by the Selected Output Indicator (3).
2. Set the volume level by carefully increasing the LEVEL knob (11) until the desired volume is reached (you may need to adjust the volume of the speaker system).
3. To set the other output volumes (monitor or headphones), repeat steps 1 – 2.

## Mute (and Unmute) Monitor Outputs

1. Select the monitor outputs by pressing the MONITOR button (10) until MONITOR is lit in the Selected Output Indicator (3).
2. Press the MUTE button (6-l) to mute the monitor outputs. The MONITOR Indicator (3) is red when the monitors are muted. When in [MONITOR Mode](#), the Volume Level Indicator LEDs (12) are also red.
3. To toggle the monitor mute state, press the MUTE button (6-l) whenever MONITOR (3) is selected.

### Notes:

- \*Hi-Z inputs are automatically selected, overriding the channel's Mic and Line inputs, when a ¼" mono TS (tip-sleeve) plug is connected to the channel's Hi-Z Instrument jack (14) on the front panel.
- To control input channels 1+2 or 3+4 simultaneously when a stereo source is connected, press the LINK button (6-f) when an input is selected (1).
- Line outputs 1 – 4 are accessed and controlled via software only (Console or DAW).
- Refer to the [Apollo Software Manual](#) to learn how to configure the audio interface settings, use the Console application and Realtime UAD Processing, and more.

# Controls & Connectors

Complete details about the Apollo x4 hardware controls and all connector jacks on the front and rear panels are provided in this chapter.

**Note:** To learn how to set input gain levels (MIC, LINE, and Hi-Z) and output volumes (monitors and headphones), see [Setting Hardware I/O Levels](#) in the Quick Start chapter.

## Controls Overview

Some Apollo x4 controls have multiple functions. The function of each control depends on the current operating mode and the current settings within that mode. To control a particular function, the control must be activated.

### Operating Modes

Apollo x4's top panel has two operating modes: *Preamp* and *Monitor*. The function and availability of the top panel controls vary depending on the active operating mode. The active mode is selected with the PREAMP and MONITOR buttons. Each mode is explained in greater detail below.

**Note:** All top panel functions can be operated concurrently (without switching modes) from within the companion Console software application. See the [Apollo Software Manual](#) for details.

### PREAMP Mode

When Apollo x4 is in Preamp mode, the top panel controls are related to input functions only. To adjust input functions, press the PREAMP button to enter Preamp mode and activate the input channel controls.



**Important:** Apollo x4 must be in Preamp mode to change preamp gain levels and other input options.

**Note:** Output functions (monitor and headphone) cannot be performed in Preamp mode. Press the MONITOR button to perform output functions.

### Preamp Channels

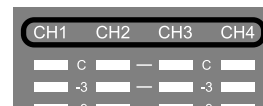
Apollo x4 has four independent analog input channels for A/D conversion. Each input channel has a preamplifier. The input channel preamplifiers are independently controlled when in Preamp mode.

### Preamp Controls

Apollo x4 has one set of preamp input channel controls. The input channel controls adjust all preamp functions for the currently selected input channel only.

## Selected Channel

The currently selected input channel (CH1, CH2, CH3, or CH4) is shown by the Select Channel Indicators at the upper left of the main display panel, above the input meters. When a channel is selected, its indicator is lit.



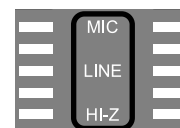
**Note:** The preamp controls adjust the functions for the currently selected channel.

## Changing Channels

When in Preamp mode, press the PREAMP button repeatedly to change the selected input channel so its controls can be adjusted.

## Input Source

The Mic, Line, or Hi-Z input source is routed into the channel's preamplifier. The active input source jack is shown by the indicators between the input meters. When an input is selected, its indicator is lit.



The MIC (XLR) or LINE (1/4") combo inputs on the rear panel are selected by the pressing the INPUT button when the channel is selected. The HI-Z input (available on channels 1 and 2 only) is selected automatically when an instrument cable is plugged into a Hi-Z input on the front panel.

**Note:** Only one input jack at a time (Mic, Line, or Hi-Z) can be used as a channel's input source.

## Preamp Gain

The Level knob adjusts the amount of preamp gain (input signal level) for the currently selected input channel.

## Preamp Options

Each input channel has a set of preamp options. The preamp options for the currently selected input channel are activated using the row of six buttons when in Preamp mode.



The current state of the preamp options are indicated in the upper row of the options display area above the six option buttons. Available options are dim when inactive, bright when enabled, and unlit when unavailable.

**Note:** Not all preamp options are available with all input types. For specific details, see the Top Panel Controls section later in this chapter.

## MONITOR Mode

When Apollo x4 is in Monitor mode, top panel controls are related to output functions only. To adjust output functions, press the MONITOR button to enter Monitor mode and activate the monitor and headphone controls.



**Note:** Input functions cannot be performed in Monitor mode. Press the PREAMP button to perform input functions.

**Important:** Apollo x4 must be in Monitor mode to change the volume of the monitor/headphone outputs and other output options.

### Stereo Outputs

Apollo x4 has three stereo outputs that can be controlled with the top panel hardware: Monitor, Headphone 1 (HP1), and Headphone 2 (HP2). The volume of these stereo outputs are controlled when in Monitor mode.

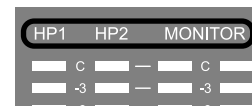
**Note:** Line outputs 3 – 6 are controlled with software only.

### Stereo Output Controls

The Level knob is used to set the volume level for each stereo output independently. The Level knob adjusts the volume for the currently selected stereo output. By switching the selected output with the MONITOR button, other output volumes can be adjusted.

### Selected Stereo Output

The currently selected stereo output is shown by the HP1, HP2, and MONITOR indicators at the right of the main display, above the output meters. When a stereo output is selected, its indicator is lit.



**Note:** The Level knob adjusts the volume for the currently selected stereo output.

### Changing Stereo Outputs

When in Monitor mode, press the MONITOR button repeatedly to change the selected stereo output so its volume can be adjusted.

### Monitor Options

Apollo x4 has monitor options that perform the functions of a dedicated monitor controller. The monitor options are controlled using the row of six buttons when in Monitor Mode.

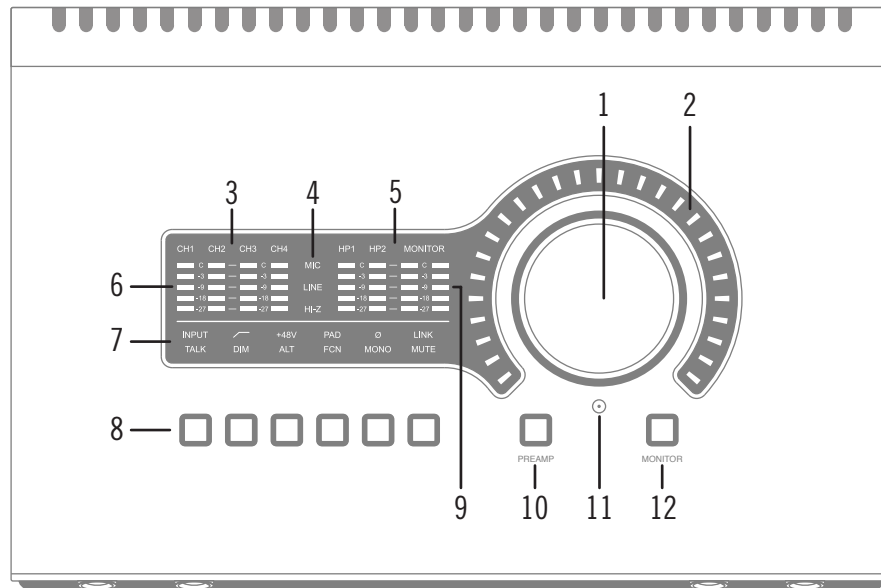


The current state of the monitor options are indicated in the lower row of the options display area above the six option buttons. Available options are dim when inactive, bright when enabled, and unlit when unavailable.

**Note:** Not all monitor options are always available. For specific details, see the Top Panel Controls section later in this chapter.

# Top Panel

Refer to the illustration below for numbered control descriptions in this section.



Top panel elements

## (1) Level Knob

The Level knob controls multiple functions. The knob's current function is selected with the PREAMP (10) and MONITOR (12) buttons.

When in **PREAMP Mode**, rotate clockwise to increase the amount of preamp gain for the currently selected input channel (3). When in **MONITOR Mode**, rotate clockwise to increase the monitor or headphones volume, depending on the stereo output currently selected (5) with the MONITOR (12) button.

## Unison Integration



The Level knob can also be used to control Unison-enabled UAD preamp, guitar/bass amp, and pedal plug-in parameters. See the Apollo Software Manual for complete Unison details.

## (2) Preamp Gain & Volume Level Indicator LEDs

The LEDs surrounding the Level knob indicate the relative level of the selected function (either input channel preamp gain or monitor/headphone volume).

**Note:** The Volume Level Indicator LEDs are RED when MONITOR (5) is selected and MUTE (8-1) is enabled.

### (3) Channel Selection Indicators

The currently selected input channel is indicated by the lit channel name (CH1, CH2, CH3, or CH4) above its input meter. Press the PREAMP button (10) to change the selected input channel.

### (6) Input Meters

The four input meters display signal levels for each of the analog input channels. Reduce a channel's preamp gain (see [Set Input Gains](#)) if its red clip LED illuminates.

### (5) Input Source Indicators

These indicators show which input source jack (MIC, LINE, or HI-Z) is active for the selected input channel. Use the Input Select button (8-a) to switch between the MIC (XLR) and LINE (¼") rear panel combo jack inputs. The Hi-Z input is selected automatically when an instrument cable is plugged into the Hi-Z jack on the front panel.

### (11) Talkback Microphone

The built-in talkback mic is located inside of this hole. The talkback function is configured in the companion Console software and can be activated with the TALK button (8-g) when Monitor mode is active.

**Caution:** *The talkback microphone is sensitive. To avoid equipment damage, do not insert any object into the mic hole, apply pressurized air into the mic hole, or use a vacuum over the mic hole.*

### (10) PREAMP Button

Press this button to enter [PREAMP Mode](#) and activate the input channel controls. Press again change the selected input channel (3).

### (5) Selected Stereo Output

These indicators display which stereo output (MONITOR, HP1, or HP2) is currently selected for volume control with the Level knob (1). Press the MONITOR button (12) to change the selected stereo output (you may need to push it more than once).

**Note:** *The MONITOR indicator is RED when the monitor outputs are muted.*

### (9) Stereo Output Meters

These meters display the main stereo signal output bus levels.\* The main output bus levels are independent of monitor and headphone volume levels. Reduce levels feeding the output(s) if a red "C" (clip) LED at the top of the Output Meters illuminates.

**\*Exception:** *If a HP output is currently selected on Apollo x4 and the HP Source within the CUE OUTPUTS window in Console is set to the same HP output, these output meters indicate the level being sent to the headphone bus via Console's headphone sends and/or the DAW.*

## (12) Monitor Button

Press this button to enter **MONITOR Mode** and activate the monitor and headphone controls. Press again to change the currently selected stereo output so it can be adjusted with the Level knob (1).

**Note:** The Selected Stereo Output Indicators (5) determine which volume (MONITOR, HP1, or HP2) can be controlled with the Level knob (1).

## (7) Options Display

This panel displays the state of the preamp and monitor options, which are controlled by the six Option Buttons (8).

In Preamp mode, the upper row displays the preamp options and the lower row is unlit. In Monitor mode, the lower row displays the monitor options and the upper row is unlit.

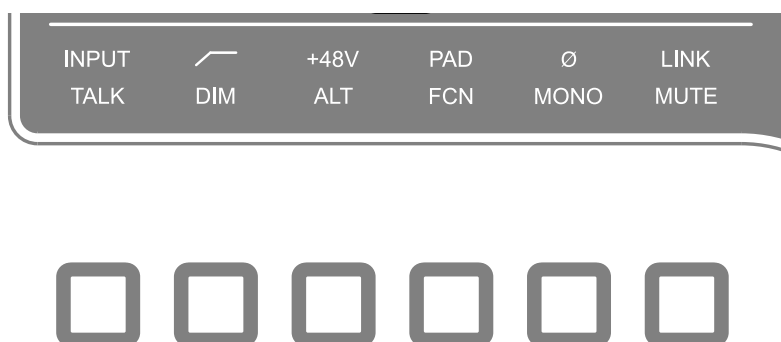
## (8) Option Buttons

Each of the six Option Buttons has dual functions. In Preamp mode, the buttons control the preamp options for the currently selected input channel. In Monitor mode, the buttons control the monitor and headphone options. The individual options for both modes are detailed in this section.

### Unison Integration



In Preamp mode, the Option Buttons can also be used to control Unison-enabled UAD preamp, guitar/bass amp, and pedal plug-in parameters. See the Apollo Software Manual for complete Unison details.



*Options Display (7) and Option Buttons (8)*



## Preamp Options

When in **PREAMP Mode**, the Option Buttons control the preamp options (described as a – f below) for an input channel when that channel is selected (3). Press the PREAMP button (10) to enter Preamp mode and change the preamp options for the currently selected channel.

A preamp option is active when its indicator in the upper row of the Options Display (7) is lit, and inactive when its indicator is dim. If the indicator is unlit, the option is unavailable.

**Note:** In **MONITOR mode**, the preamp options cannot be modified and the upper row of the Options Display is unlit.



*Preamp options*

### (a) **INPUT Select**

Selects the active input source jack for the currently selected channel. The current selection is displayed by the Input Source Indicators (4).

Press to alternate between the MIC (XLR) and LINE (¼") combo inputs on the rear panel. The Hi-Z input is selected automatically whenever a ¼" mono TS (tip-sleeve) plug is connected to the channel's front panel Hi-Z Instrument jack (13). If MIC/LINE cannot be selected, unplug the cable in the Hi-Z jack.

**Note:** Hi-Z input is available for channels 1 and 2 only.

### (b) **FILTER**

Enables a low cut (high pass) rumble filter with a cutoff frequency of 75 Hz.

### (c) **+48V**

Enables +48-volt phantom power for the mic input. Phantom power is typically needed for condenser microphones. +48V is available for the microphone (XLR) inputs only.

**Caution:** To avoid potential equipment damage, disable +48V phantom power on the input channel before connecting or disconnecting its XLR input.

### (d) **PAD**

Attenuates (lowers) the XLR mic input signal level by 20 dB. PAD is not available for the line inputs or the Hi-Z instrument inputs.

### (e) **POLARITY Ø**

Inverts the polarity (aka "phase") of the input signal. Polarity inversion can help reduce phase cancellations when more than one microphone is used to record a single source.

### **(f) LINK**

Links the controls of adjacent input channels (1+2 or 3+4) to create a stereo input pair. When channels are linked, preamp control adjustments are applied to both channels.

**Note:** Only the same type of inputs can be linked (Mic+Mic or Line+Line). The Hi-Z inputs cannot be linked.

## **Monitor Options**

When in **MONITOR Mode**, the Option Buttons control the monitor options (described as g – h below). Press the MONITOR button (12) to enter Monitor mode and enable the monitor options.

A monitor option is active when its indicator in the lower row of the Options Display (7) is lit, and inactive when the indicator is dim. If the indicator is unlit, the option is unavailable.

The TALK, DIM, ALT, and FCN functions are configured in the companion Console software application. See the Apollo Software Manual for details.

**Note:** In Preamp mode, the monitor options cannot be modified and the lower row of the Options Display is unlit.

| TALK | DIM | ALT | FCN | MONO | MUTE |
|------|-----|-----|-----|------|------|
| g    | h   | i   | j   | k    | l    |

*Monitor options*

### **(g) TALK**

Activates the built-in talkback microphone and the DIM function. Press and release the button quickly to latch the function. To momentarily activate the function and deactivate when the button is released, press for longer than 0.5 seconds.

### **(h) DIM**

Reduces the monitor output volume level. The amount of DIM attenuation is set in the companion Console software.

Press and release the button quickly to latch the function. To momentarily activate the function and deactivate when the button is released, press for longer than 0.5 seconds.

### **(i) ALT (Alternate)**

Switches the main monitor mix to an alternate set of outputs. This function is only available when the ALT COUNT setting in the Settings>Hardware panel within the companion Console software is set to a non-zero value.

### **(j) FCN (Function)**

This switch can be assigned to control one of three monitoring functions. FCN is only available when Apollo x4 is combined with other Thunderbolt-equipped Apollo models in a multi-unit cascading configuration.

### **(k) MONO**

Sums the left and right signals of the stereo monitor mix into a monophonic signal. MONO applies to the monitor outputs only. It does not apply to the headphone outputs.

### **(l) MUTE**

Mutes the monitor outputs. When MUTE is active, the MONITOR Selected Indicator (5) is always lit RED (including when in Preamp mode). When MUTE is active in Monitor mode, the Volume Level Indicators (2) are also RED.

**Note:** MUTE does not apply to the headphone outputs. Headphone outputs cannot be muted.

## **Front Panel**

Refer to the illustration below for numbered control descriptions in this section.



*Front panel elements*

### **(13) Hi-Z Instrument Inputs**

These are the Hi-Z inputs for channels 1 and 2. Connect any guitar, bass, or other high impedance instrument here. These jacks automatically override the mic and line inputs for the channel.

Levels for the Hi-Z inputs are set using the same method as the mic and line inputs.

**Note:** These jacks accept a ¼" mono TS (tip-sleeve) plug only.

### **(14) Headphone Outputs**

These are the stereo outputs for headphones 1 and 2. The jacks accept ¼" stereo headphones. The volume of each headphone output is independently controlled with the Level knob (1) when HP1 or HP2 is selected (5) with the MONITOR button (12).

## **Side Panel**

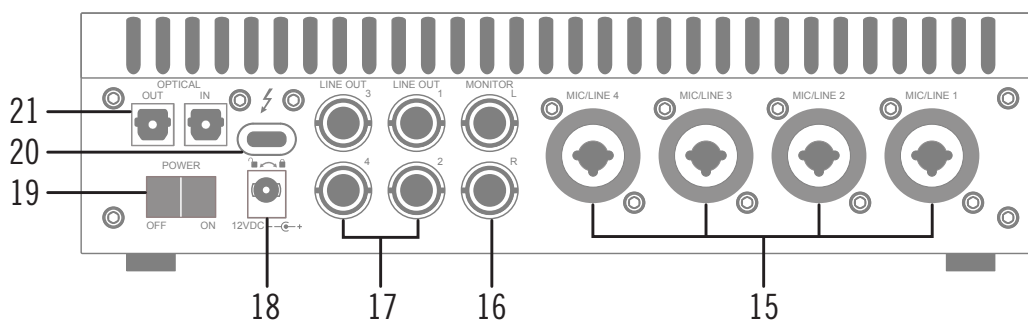
### **Kensington Security Slot (not shown)**

The anti-theft security slot on the side panel connects to any standard Kensington lock.

## Rear Panel

Refer to the illustration below for numbered control descriptions in this section.

**Note:** All rear panel ¼" jacks can accept unbalanced TS (tip-sleeve) or balanced TRS (tip-ring-sleeve) plugs.



Rear panel elements

### (15) Mic/Line Combo Inputs

The jacks for preamp channels 1 – 4 accept either a male XLR plug for connecting to the mic input, or a ¼" phone plug for connecting to the line input.

The input jack that is used for the preamp channel (mic or line) is specified with the Input Select button (8-a).

**Caution:** To avoid potential equipment damage, disable +48V phantom power on the channel before connecting or disconnecting its XLR input.

### (16) Monitor Outputs

Connect the powered monitor speakers (or speaker system amplifier inputs) here. Volume is controlled with the Level knob (1) when MONITOR is selected (8) with the MONITOR button (12). The Monitor Outputs are DC coupled.

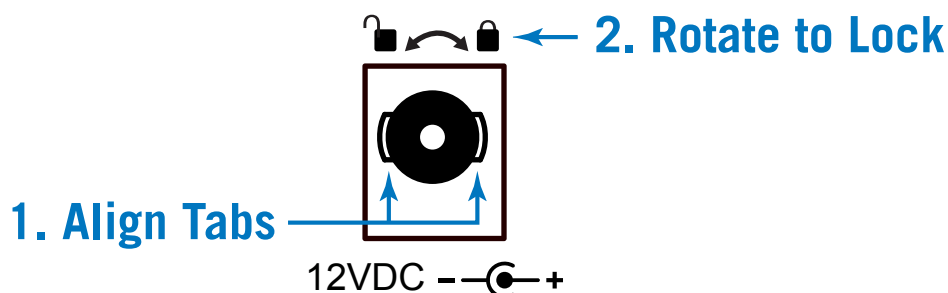
### (17) Line Outputs 3 – 6

These ¼" phone outputs are accessed via software (Console or DAW). Line outputs 3 – 6 are typically used to send audio to other equipment. The Line Outputs are DC coupled.

## (18) Power Supply Input

The included power supply must be connected here (Apollo x4 cannot be bus powered). Rotate locking connector to prevent accidental disconnection.

**Important:** After ensuring the locking barrel tabs are aligned with the chassis slots and the barrel is fully inserted, rotate the barrel to secure the connector to the chassis.



## (19) Power Switch

This rocker switch applies power to Apollo x4. Switch to OFF when not in use.

**Caution:** Before powering Apollo x4, lower the volume of the monitor speakers and remove headphones from your ears.

## (21) Optical I/O Ports

The TOSLINK optical ports are for interconnecting other audio hardware in the digital domain. One input port and one output port are provided.

The optical ports can use the ADAT or S/PDIF digital signal protocols. The protocol used by each port (ADAT or S/PDIF) can be individually set in the Hardware panel within the Console Settings window. By default, the ADAT protocol is active for both optical ports.

**Note:** The connection protocol for the optical ports (ADAT or S/PDIF) is specified in the Settings>Hardware panel within the companion Console software.

### ADAT Optical I/O

When set to ADAT, an optical port uses the ADAT Lightpipe Optical Interface protocol, which routes up to eight channels of digital audio.

The number of available ADAT channels depends on the current system sample rate. At higher sample rates, industry standard S/MUX is used to maintain high-resolution transfers, but fewer channels are routed.

- At sample rates of 44.1 kHz and 48 kHz, eight ADAT channels are available.
- At sample rates of 88.2 kHz and 96 kHz, four ADAT channels are available.
- At sample rates of 176.4 kHz and 192 kHz, two ADAT channels are available.

### ***S/PDIF Optical I/O***

When set to S/PDIF, an optical port routes two channels of digital I/O with resolutions up to 24-bit at 96 kHz.

Sample rate conversion can be performed on the S/PDIF input. This setting is enabled within the S/PDIF channel's input strip in the Console application. When the sample rate of the incoming S/PDIF signal does not match the sample rate specified in the Console application, the S/PDIF signal is converted to match Apollo x4's sample rate. If Apollo x4 is set to use external S/PDIF clock source, sample rate conversion is inactive.

**Tip:** *The S/PDIF output can be configured to mirror the Monitor Outputs, for routing the stereo monitor signals to the stereo S/PDIF input of other devices. This feature is set with the DIGITAL MIRROR menu in the Hardware panel within the Console Settings window.*

### **(20) Thunderbolt 3 Port**

Connect the Thunderbolt 3 cable (not included) from the host computer here. A Thunderbolt 3 connection to the computer is required to use all Apollo x4 features and UAD Powered Plug-Ins.

**Note:** *With Mac computers only, Apollo x4 can be connected to Thunderbolt 1 and Thunderbolt 2 ports by using the Apple Thunderbolt 3 to Thunderbolt 2 Adapter in conjunction with a Thunderbolt 2 cable. With Windows PC computers, connections to Thunderbolt 1 or Thunderbolt 2 ports are not supported.*

# Specifications

All specifications are typical performance unless otherwise noted. Tested with the Audio Precision APx555 Audio Analyzer under the following conditions: 48 kHz internal sample rate, 24-bit sample depth, 20 kHz measurement bandwidth, balanced input & output (except single-ended headphone outputs), and internal clock.

Specifications are subject to change without notice.

| SYSTEM   |   |
|--|---|
| <i>I/O Complement</i>  |   |
| Microphone Inputs  | Four  |
| High Impedance (Hi-Z) Instrument Inputs  | Two   |
| Analog Line Inputs   | Four  |
| Analog Line Outputs (DC coupled)   | Four (six including Monitor outputs)  |
| Analog Monitor Outputs (DC coupled)  | Two (one stereo pair)   |
| Headphone Output   | Two stereo  |
| Digital Input Port   | One (ADAT or S/PDIF, selectable)  |
| Digital Output Port  | One (ADAT or S/PDIF, selectable)  |
| Thunderbolt 3 Port   | One   |
| <i>A/D – D/A Conversion</i>  |   |
| Simultaneous A/D conversion  | Four channels   |
| Simultaneous D/A conversion  | Ten channels  |
| Supported Sample Rates (kHz)   | 44.1, 48, 88.2, 96, 176.4, 192  |
| Bit Depth Per Sample   | 24  |
| Analog Round-Trip Latency  | 1.1 milliseconds @ 96 kHz sample rate   |
| Analog Round-Trip Latency through four UAD legacy plug-ins (included) via Console software | 1.1 milliseconds @ 96 kHz sample rate (no additional latency via Realtime UAD Processing) |

*(continued)*

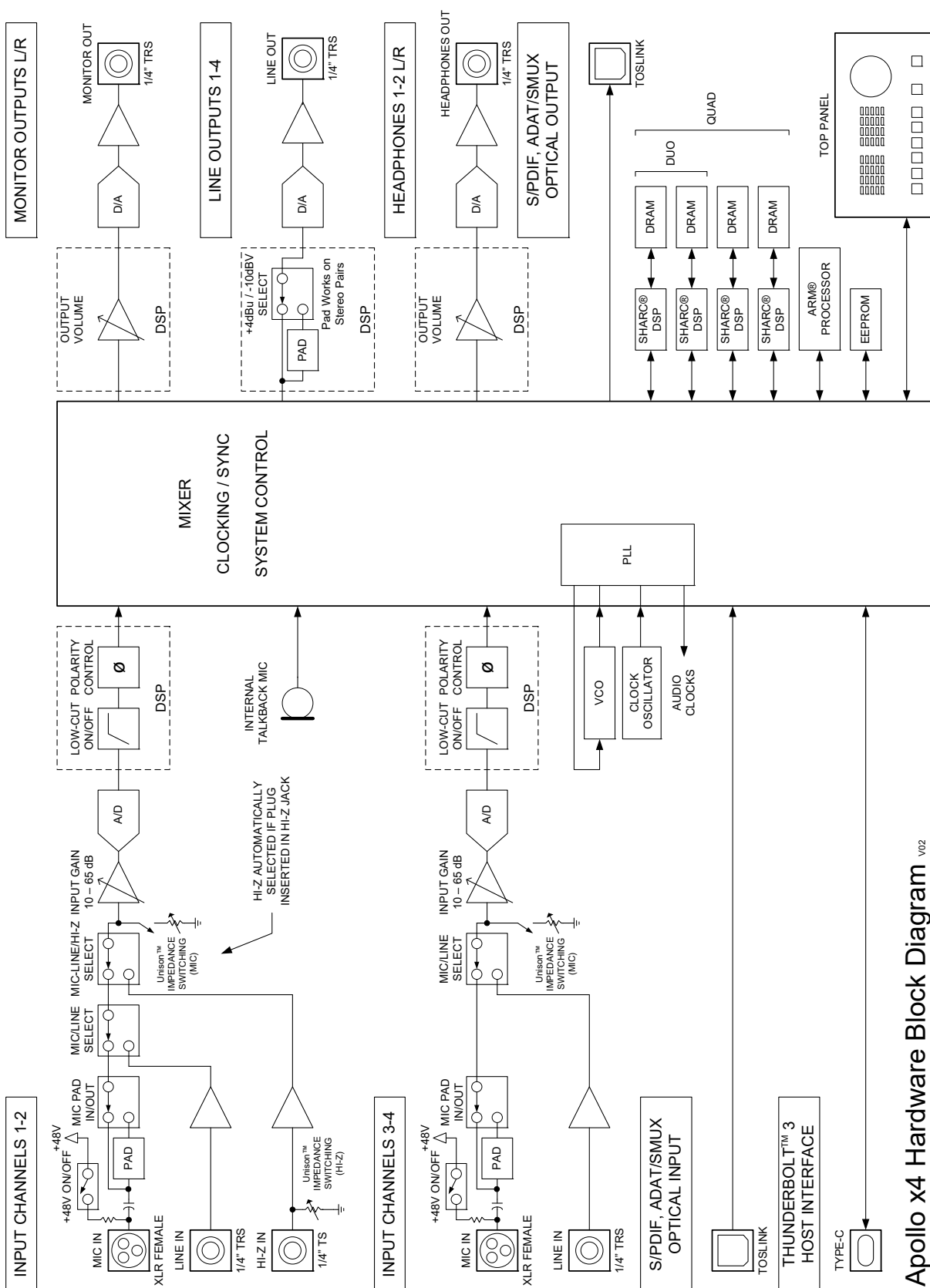
| <b>ANALOG I/O</b>                        |  |
|--|--|
| <b><i>Microphone Inputs 1 – 4</i></b>    |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.05$ dB              |
| Dynamic Range                            | 123 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -115 dB (1 kHz @ -1 dBFS)                  |
| Maximum Input Level (PAD on)             | 25.6 dBu                                   |
| Default Input Impedance                  | 5.4K Ohms (variable via Unison plug-ins)   |
| Gain Range                               | +10 dB to +65 dB                           |
| Pad Attenuation (switchable per input)   | 20 dB (variable via Unison plug-ins)       |
| Phantom Power                            | +48V (switchable per mic input)            |
| Connector Type                           | XLR Female, pin 2 positive (Combo XLR/TRS) |
| <b><i>Hi-Z Inputs 1 &amp; 2</i></b>      |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.05$ dB              |
| Dynamic Range                            | 122 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -108 dB (1 kHz @ -1 dBFS)                  |
| Maximum Input Level (at minimum gain)    | 12.2 dBu                                   |
| Default Input Impedance                  | 1M Ohms (variable via Unison plug-ins)     |
| Gain Range                               | +10 dB to +65 dB                           |
| Connector Type                           | ¼" Female TS Unbalanced                    |
| <b><i>Line Inputs 1 – 4</i></b>          |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.05$ dB              |
| Dynamic Range                            | 122 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -114 dB (1 kHz @ -1 dBFS)                  |
| Maximum Input Level (at minimum gain)    | 20.2 dBu                                   |
| Input Impedance                          | 10K Ohms                                   |
| Gain Range                               | +10 dB to +65 dB                           |
| Connector Type                           | ¼" Female TRS Balanced                     |
| <b><i>Line Outputs 1 – 4</i></b>         |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.05$ dB              |
| Dynamic Range                            | 127 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -117 dB (1 kHz @ -1 dBFS)                  |
| Maximum Output Level                     | 20.2 dBu                                   |
| Output Impedance                         | 100 Ohms                                   |
| Connector Type                           | ¼" Female TRS Balanced                     |
| <b><i>Monitor Outputs L &amp; R</i></b>  |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.1$ dB               |
| Dynamic Range                            | 127 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -116 dB                                    |
| Maximum Output Level                     | 20.2 dBu                                   |
| Output Impedance                         | 100 Ohms                                   |
| Connector Type                           | ¼" Female TRS Balanced                     |
| <b><i>Stereo Headphone Output</i></b>    |  |
| Frequency Response                       | 20 Hz – 20 kHz, $\pm 0.1$ dB               |
| Dynamic Range                            | 124 dB (A-weighted)                        |
| Total Harmonic Distortion + Noise        | -98 dB (1 kHz @ -1 dBFS)                   |
| Maximum Output Power (into 300 ohm load) | 96 mW RMS                                  |
| Connector Type                           | ¼" Female TRS Stereo                       |

(continued)



| DIGITAL I/O                                 |  |
|---|--|
| Connector Type                              | Optical TOSLINK JIS F05                                |
| <i><b>S/PDIF</b></i>                        |  |
| Format                                      | IEC 958  |
| Supported Sample Rates (kHz)                | 44.1, 48, 88.2, 96                                     |
| S/PDIF Channels                             | Two (Stereo L/R)                                       |
| <i><b>ADAT</b></i>                          |  |
| Format                                      | ADAT Digital Lightpipe with S/MUX                      |
| Supported Sample Rates (kHz)                | 44.1, 48, 88.2, 96, 176.4, 192                         |
| Channel Assignments @ 44.1 kHz, 48 kHz      | Channels 1 – 8   |
| Channel Assignments @ 88.2 kHz, 96 kHz      | Channels 1 – 4   |
| Channel Assignments @ 176.4 kHz, 192 kHz    | Channels 1 – 2   |
| <i><b>Clock Synchronization Sources</b></i> |  |
| Internal, ADAT, S/PDIF                      | Conditional per selected digital input type            |
| ELECTRICAL                                  |  |
| Power Supply                                | External AC-to-DC Power Supply, Level VI compliant     |
| AC Input Connector Type                     | IEC C8, non-polarized                                  |
| AC Requirements                             | 100V – 240V AC, 50 – 60 Hz                             |
| DC Connector Type                           | Male plug, 2.1 mm x 5.5 mm, center positive            |
| DC Requirements                             | 12 VDC, $\pm 5\%$                                      |
| Maximum Power Consumption                   | 19 Watts (when portable host computer not charging)    |
| ENVIRONMENTAL                               |  |
| Ambient Temperature Range                   | 32° to 104° F (0° to 40° C)                            |
| MECHANICAL                                  |  |
| <i><b>Dimensions</b></i>                    |  |
| Width                                       | 9.17" (23.30 cm)                                       |
| Height                                      | 2.60" (6.60 cm)  |
| Depth, Chassis Only                         | 5.95" (15.11 cm)                                       |
| Depth, Including Knob & Jack Protrusions    | 6.17" (15.67 cm)                                       |
| Shipping Box (Length x Width x Height)      | 10.75" x 8.11" x 4.9"<br>(27.3 cm x 20.6 cm x 12.5 cm) |
| <i><b>Weight</b></i>                        |  |
| Shipping Weight (with box & accessories)    | 3.5 lbs (1.59 kg)                                      |
| Weight (bare unit)                          | 3.2 lbs (1.46 kg)                                      |
| <i><b>Package Contents</b></i>              |  |
| Apollo x4 Unit                              |  |
| External Power Supply                       |  |
| AC Power Cable (IEC C7, non-polarized)      | Region Specific (USA, EU, UK, ANZ, or Japan)           |
| Getting Started URL Card                    |  |

# Hardware Block Diagram



Apollo x4 Hardware Block Diagram V02

# Troubleshooting

If Apollo x4 isn't behaving as expected, some common troubleshooting items to confirm are below. If you are still experiencing issues after performing these checks, contact [Technical Support](#).

| SYMPTOM   | ITEMS TO CHECK   |
|---|--|
| Unit won't power on   | <ul style="list-style-type: none"> <li>• Confirm power supply connector is fully inserted, then twist barrel to lock</li> <li>• Confirm Power switch is in "ON" position</li> <li>• Confirm AC power is available at wall socket by plugging in a different device</li> </ul>  |
| Unit is not recognized by computer                            | <ul style="list-style-type: none"> <li>• Confirm Thunderbolt 3 cable is fully inserted at both ends</li> <li>• Confirm the newest Apollo x4 software is installed (reinstall if necessary)</li> <li>• Power off system, power on Apollo x4, then start computer</li> <li>• Try a different Thunderbolt 3 cable</li> </ul>  |
| No monitor output   | <ul style="list-style-type: none"> <li>• Confirm connections, power, and volume of monitoring system</li> <li>• Confirm Apollo x4 monitor level is turned up</li> <li>• Confirm monitor outputs are not muted (push MUTE button when in Monitor mode)</li> <li>• Confirm monitor output LEDs are active (check signal flows)</li> </ul>  |
| Can't hear mic or line input(s)                               | <ul style="list-style-type: none"> <li>• Confirm mic/line select switch setting is correct for the channel (CH1/CH2/CH3/CH4)</li> <li>• Confirm mic/line setting matches the input plug for the channel (XLR or 1/4")</li> <li>• Confirm preamp gain is turned up for the channel(s)</li> <li>• For channels 1 and 2, confirm nothing is plugged into its Hi-Z input</li> </ul>  |
| Can't hear mic input(s)                                       | <ul style="list-style-type: none"> <li>• Confirm +48V phantom power is enabled if required by microphone</li> </ul>  |
| Can't hear Hi-Z input   | <ul style="list-style-type: none"> <li>• Confirm volume on connected device is turned up</li> <li>• Confirm Hi-Z input plug is 1/4" mono TS (TRS cables cannot be used with Hi-Z input)</li> </ul>   |
| Preamp controls have no effect on channel                     | <ul style="list-style-type: none"> <li>• Confirm desired channel is selected for control (push PREAMP button repeatedly to select CH1/CH2/CH3/CH4)</li> </ul>  |
| Can't adjust digital input levels                             | <ul style="list-style-type: none"> <li>• Signal levels for digital inputs are adjusted at the device connected to those inputs</li> <li>• UAD plug-ins can be used to add signal gain if desired</li> </ul>  |
| Audio glitches and/or dropouts during DAW playback            | <ul style="list-style-type: none"> <li>• Increase I/O Hardware Buffer (Mac: in DAW settings; Windows: in Console settings)</li> <li>• If syncing to external digital clock via optical input, confirm clocking setups (confirm optical cable connections, matching sample rates, and that all devices are synchronized to one master clock device)</li> </ul>  |
| Undesirable echo/phasing                                      | <ul style="list-style-type: none"> <li>• Confirm input monitoring is not enabled in both Console and DAW</li> <li>• Disable software input monitoring if monitoring via Console (recommended)</li> <li>• Mute all Console inputs if software input monitoring via DAW</li> </ul>   |
| Static and/or white noise is heard when nothing is plugged in | <ul style="list-style-type: none"> <li>• Mute or lower preamp gain to minimum on unused preamp channels (mic preamps can emit noise even when nothing is plugged in)</li> <li>• Some UAD plug-ins model the noise characteristics of the original equipment (defeat the noise model in the UAD plug-in interface, or mute the channel containing the plug-in to temporarily mute the noise)</li> </ul>   |
| Various LEDs inside the unit are blinking                     | <ul style="list-style-type: none"> <li>• This is normal operational behavior and can be safely ignored</li> </ul>  |
| Apollo x4 is behaving unexpectedly                            | <ul style="list-style-type: none"> <li>• As a last resort, perform a hardware reset on the unit by following these steps:               <ol style="list-style-type: none"> <li>1. Power off Apollo x4</li> <li>2. Press and hold the PREAMP, FILTER, and POLARITY buttons</li> <li>3. Power on Apollo x4 while continuing to hold all three controls</li> <li>4. After all front panel LEDs flash rapidly for several seconds, release the controls</li> </ol> </li> </ul> |

# Notices

## Warranty

Universal Audio provides a limited warranty on all UA hardware products. To learn more, visit [help.uaudio.com](https://help.uaudio.com). The limited warranty gives you specific legal rights. You may also have other rights which vary by state or country.

## Maintenance

- **CAUTION:** To reduce the risk of electric shock, do not open the unit.
- Apollo x4 does not contain a fuse or any other user-replaceable parts. The unit is internally calibrated at the factory. No internal user adjustments are available.
- Any modifications to the unit, unless expressly approved by Universal Audio, could void the User's authority to operate the equipment.

## Repair Service

If you are having trouble with Apollo x4, first check all system setups, connections, operating instructions, and the [Troubleshooting](#) chart. If that doesn't help, contact our technical support team.

To learn about repair service, or for technical support, visit [help.uaudio.com](https://help.uaudio.com).

## Important Safety Information



Before using this unit, be sure to carefully read the applicable items of these operating instructions and the safety suggestions. Afterwards, keep them handy for future reference. Take special care to follow the warnings indicated on the unit, as well as in the operating instructions.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use with attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use the caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### Description of symbols used



The lightning flash represented by the arrow symbol in an equilateral triangle is intended to alert users to the presence of high voltage within the unit that could cause an electrical shock hazard.



The exclamation mark in an equilateral triangle is intended to alert users to the existence of important instructions in the manual relating to the use and maintenance of the unit.

# Compliance

***Note:** Any modifications to the unit, unless expressly approved by Universal Audio, could void the User's authority to operate the equipment.*

**This product, Apollo x4, complied with the following requirements:**

- Subpart B of Part 15 of FCC Rules for Class B digital device
- Canada: Innovation, Science and Economic Development Canada Interference Causing Equipment Standard ICES-003, "Information Technology Equipment (ITE) – Limits and methods of measurement," Issue 6, dated January 2016 (class B)
- Japan: VCCI-CISOR 32:2016 "Technical Requirements" for multimedia equipment (class B)
- EN 55022:2010, "Information technology equipment – Radio disturbance characteristics – Limits and method of measurements (Class B)
- CISPR 22:2008, "Information technology equipment – Radio disturbance characteristics – Limits and method of measurement" (Class B)
- EN 55032:2012, "Electromagnetic compatibility of multimedia equipment – Emission Requirements"
- CISPR 32:2012, " Electromagnetic compatibility of multimedia equipment – Emissions requirements"
- EN 55024:2010 "Information technology equipment – Immunity characteristics. Limits and method of measurement"
- CISPR 24:2010 +A1:2015 "Information technology equipment- Immunity characteristics. Limits and method of measurement."
- TCVN 7189:2009 "Information technology equipment- Radio disturbance characteristics – Limits and method of measurements"
- Korea: KN32/KN35 2015 Multimedia Class B

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# Technical Support

## Universal Audio Knowledge Base

The UA Knowledge Base is your complete technical resource for configuring, operating, troubleshooting, and repairing UA products.

You can watch helpful support videos, search the Knowledge Base for answers, get updated technical information that may not be available elsewhere, and more.

**[UA Knowledge Base](#)**

## Universal Audio YouTube Channel

The Universal Audio YouTube Channel at youtube.com includes helpful support videos for setting up and using UA products.

**[UA YouTube Channel](#)**

## Universal Audio Community Forums

The unofficial UA discussion forums are a valuable resource for all Universal Audio product users. This website is independently owned and operated.

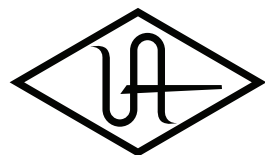
**[www.uadforum.com](http://www.uadforum.com)**

## Contact Customer Care

To contact UA support staff for technical or repair assistance, please visit:

**[help.uaudio.com](http://help.uaudio.com)**





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