# Apollo Twin X Gen 2

Website: https://www.uaudio.com/audio-interfaces/apollo-twin-x.html

## Apollo Twin X

### Create music with timeless analog sound.

Hear every detail with our most advanced Apollo Twin ever. Featuring highest-resolution audio conversion, Unison™ mic preamps, and realtime UAD processing — which lets you record through plug-ins from Neve, API, Manley, Auto-Tune, and more without latency — Apollo Twin X puts decades of inspiring analog studio sound right on your desktop.

Produce music with elite-class Apollo X Gen 2 converters, and hear every detail with unprecedented dynamic range

Use dual Unison preamps to get the tone and feel of iconic analog gear from Neve, API, Manley, Fender, and more

Record through UAD plug-ins in realtime with onboard DUO or QUAD Core DSP

Work faster with new UAD Console features including Auto-Gain, Plug-In Scenes, Monitor Controller, Immersive Audio, and more

Mix with confidence in any room or through headphones using Apollo Monitor Correction by Sonarworks®*

Get included UAD plug-ins from Auto-Tune, Fairchild, Teletronix, and more with Essentials+ or Studio+ Editions

### 2 Unison Preamps Impedance-matched analog modeling

Unison technology recreates the sound and feel of classic analog gear with digital control of mic preamp impedance and gain staging.

### -120 dB THD+N Studio-grade D/A Converstion

Unison technology recreates the sound and feel of classic analog gear with digital control of mic preamp impedance and gain staging.

### 129 dB DNR Ultra low-noise recording

Unison technology recreates the sound and feel of classic analog gear with digital control of mic preamp impedance and gain staging.

### 1Elite-Class HP Out Professional headphone monitoring

Unison technology recreates the sound and feel of classic analog gear with digital control of mic preamp impedance and gain staging.

### Put Our Best Apollo Yet on Your Desktop

We built Apollo Twin X for the next generation of music producers looking to get the sounds used by the world's biggest artists. With elite-class 24-bit/192 kHz Gen 2 audio conversion and the widest dynamic range to date, Apollo Twin X puts the sound of the stars in your studio.

### Record Through Famous Preamps

Track through emulations of classic gear from Neve, Manley, API, and dozens more with Unison™ preamp technology, giving you the rich analog textures used on the greatest recordings of our time.

**Hear the Details Like Never Before**

Now in its Gen 2 design, Apollo Twin X features our highest-resolution D/A converters ever. This enhanced monitoring, paired with features like Apollo Monitor Correction by Sonarworks,* means you'll hear the most accurate representation of your recordings when mixing through monitors or headphones

**Mix with Authentic Analog Sounds**

Out of the box, Apollo Twin X gives you the same tools used by the world's biggest artists. Along with included LA-2A compressors, Pultec EQs, and amps from Marshall and Ampeg — you can tap into the entire library of over 200 UAD plug-ins to unlock proven hit-making sounds.

## See plug-ins included with Essentials+

Channel Strips & Preamps (6)
Century Tube Channel Strip
CS-1 Channel Strip
Helios Type 69 Preamp & EQ
Precision Channel Strip
UA 610-A Preamp & EQ
UA 610-B Preamp & EQ

Compressors / Limiters (7)
Fairchild 670 Legacy
Teletronix LA-2A Classic Leveler
Teletronix LA-2A Gray Classic Leveler
Teletronix LA-2A Silver Classic Leveler
Teletronix LA-2A Legacy Leveling Amplifier
UA 1176LN Legacy
UA 1176SE Legacy

Equalizers (6)
Helios Type 69 Legacy EQ

| Pultec | EQP-1A | Legacy | EQ |
|--------|--------|--------|-----|
| Pultec | EQP-1A | Passive | EQ |
| Pultec | HLF-3C | Passive | EQ |
| Pultec | MEQ-5 | Passive | EQ |
| Pultec | Pro | Legacy | EQ |

| Special | | Processing | | (4) |
|---------|-------|----------|-----|---------|
| Auto-Tune | | Realtime | | Access |
| Oxide | | Tape | | Recorder |
| Precision | | Enhancer | | Hz |
| Verve | Analog | Machines | | Essentials |

| Instruments | | (1) |
|-------------|-----------|--------|
| PolyMAX | Polyphonic | Synth |

| Delay | & | Modulation | | (3) |
|-----------|-------|------------|-----|------|
| Galaxy | | Tape | | Echo |
| Precision | | Delay | | Mod |
| Precision | Delay | | Mod | L |

| Reverbs | & | Rooms | | (3) |
|-----------|------|------------|-------|---------|
| Precision | | Reflection | | Engine |
| Pure | | Plate | | Reverb |
| RealVerb | Pro | Custom | Room | Modeler |

| Guitar | & | Bass | | (3) |
|----------------|--------|---------|------|-----------|
| Ampeg | SVT-VR | Classic | Bass | Amplifier |
| Marshall | Plexi | Classic | | Amplifier |
| Raw Distortion | | | | |

## See plug-ins included with Studio+

| Channel | Strips | & | Preamps | (9) |
|---------|----------|---------|---------|-------|
| Avalon | VT-737sp | Channel | | Strip |

Century Tube Channel Strip
CS-1 Channel Strip
Helios Type 69 Preamp & EQ
Manley Reference Microphone Preamp
Precision Channel Strip
UA 610-A Preamp & EQ
UA 610-B Preamp & EQ
V76 Preamplifier

Compressors / Limiters (17)
dbx 160 Compressor / Limiter
Empirical Labs Distressor
Fairchild 670 Legacy
Fairchild 660 Compressor
Fairchild 670 Compressor
Teletronix LA-2A Classic Leveler
Teletronix LA-2A Gray Classic Leveler
Teletronix LA-2A Silver Classic Leveler
Teletronix LA-2A Legacy Leveling Amplifier
Teletronix LA-3A Classic Audio Leveler
UA 1176 Rev A Classic Limiter
UA 1176AE Classic Limiter
UA 1176LN Rev E Classic Limiter
UA 1176LN Legacy
UA 1176SE Legacy
UA 175B Classic Limiter
UA 176 Classic Limiter

Equalizers (6)
Helios Type 69 Legacy EQ
Pultec EQP-1A Legacy EQ
Pultec EQP-1A Passive EQ
Pultec HLF-3C Passive EQ
Pultec MEQ-5 Passive EQ
Pultec Pro Legacy EQ

## Special Processing (7)

| | | | |
|---|---|---|---|
| Auto-Tune | | Realtime | Access |
| Auto-Tune | | Realtime | Advanced |
| Auto-Tune | | Realtime | X |
| Oxide | | Tape | Recorder |
| Precision | | Enhancer | Hz |
| Studer | A800 | Multichannel Tape | Recorder |
| Verve | Analog | Machines | Essentials |

## Instruments (6)

| | | | |
|---|---|---|---|
| Electra | 88 | Vintage Keyboard | Studio |
| Moog | | | Minimoog |
| Opal | | Morphing | Synth |
| PolyMAX | | Polyphonic | Synth |
| Ravel | | Grand | Piano |
| Waterfall | | B3 | Organ |

## Delay & Modulation (6)

| | | | |
|---|---|---|---|
| Brigade | | Chorus | Pedal |
| Galaxy | | Tape | Echo |
| Precision | | Delay | Mod |
| Precision | Delay | Mod | L |
| Studio | | D | Chorus |
| Waterfall | | Rotary | Speaker |

## Reverbs & Rooms (4)

| | | | |
|---|---|---|---|
| Lexicon | 224 | Digital | Reverb |
| Precision | | Reflection | Engine |
| Pure | | Plate | Reverb |
| RealVerb | Pro | Custom Room | Modeler |

## Guitar & Bass (3)

| | | | |
|---|---|---|---|
| Ampeg | SVT-VR | Classic Bass | Amplifier |

Marshall Plexi Classic Amplifier Raw Distortion

## Find Your Perfect Workflow

Just like many pro studios, where an analog console is the heart of the workflow, Apollo Twin X has a powerful mixing engine where you control plug-in routing and monitoring. And with the latest features like Auto-Gain, Bass Management, and Plug-In Scenes, it's easy to find a flow that fits your needs.

## A Hybrid System for Your Mission

Combine Apollo Twin X's DUO or QUAD Core DSP with native processing from your computer to produce large sessions with complex plug-in chains — a powerhouse hybrid workflow that outpaces any native-only recording setup.

## Expand Your Studio as You Grow

Build out your dream studio by linking up to four Thunderbolt Apollo interfaces for up to 128 channels of premium I/O, and control it all from your desktop using Apollo Twin X. So no matter how far your music takes you, an Apollo will always be in reach.**

10 x 6 Thunderbolt audio interface with DUO or QUAD Core DSP plug-in processing

Two Unison™ mic preamps, Hi-Z instrument input, optical Toslink input (ADAT or S/PDIF)

Two 1/4" monitor outs, two 1/4" line outs (ALT), one 1/4" TRS headphone out

Elite-class Apollo X Gen 2 converters with 24-bit / 192 kHz resolution

Enhanced D/A for critical monitoring and playback with 129 dB dynamic range

Calibrate your main monitor and headphone outputs with Apollo Monitor Correction powered by Sonarworks®

Fully-featured monitor controller with alternate speaker switching and integrated talkback for easy communication with talent

Updated UAD Console app featuring Auto-Gain, Plug-In Scenes, subwoofer integration with Bass Management, immersive audio support, and more

Onboard DSP supports over 200 UAD plug-ins via VST, AU, and AAX 64 formats in all major DAWs

Includes up to 50+ UAD plug-ins with Essentials+ or Studio+ Editions

Compatible with LUNA, Logic Pro, Pro Tools, Cubase, Ableton Live, and more*

Expandable with Thunderbolt Apollo interfaces or select models over Dante

Free industry-leading technical support from knowledgeable audio engineers

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Website: https://www.uaudio.com/uad-console

## **UAD Console**

**Unlock realtime workflows with Apollo.**

The **UAD Console application** allows you to record and monitor through UAD plug-ins with near-zero latency and work fast, just like an analog studio.This powerful digital mixing engine also controls all of your Apollo's I/O, monitor and headphone mixes, and so much more.

**Already own an Apollo?** Update your software today to get the latest version of the UAD Console app for Mac or Windows.

**Unison™ Preamp Control -** Classic analog sonics

Unison preamp technology recreates the sound and feel of classic analog gear, with digital control of mic preamp impedance and gain staging.

**DSP-Powered Routing** - Control all your I/O in one place

Unison preamp technology recreates the sound and feel of classic analog gear, with digital control of mic preamp impedance and gain staging.

**Realtime UAD Processing** - record and monitor through UAD plug-ins.

Unison preamp technology recreates the sound and feel of classic analog gear, with digital control of mic preamp impedance and gain staging.

**Artist Cues & Talkback** - Easily communicate with talent

Control your Apollo's onboard talkback mic for effortless session communication, and create up to four unique cue buses so artists hear exactly what they want.

## Work Like the Pros

Pro studios often use a mixing console to give engineers precise control over multiple inputs and outputs. It's essential for balancing and shaping sounds, adjusting levels or applying effects, and routing signals to monitors or artist cues.

**UAD Console** works in the same way. Sitting between your Apollo interface and DAW, it lets you route and monitor signals, add UAD plug-ins, and control all your Apollo's core functions right from your computer.

**Add Classic Analog Sound**

Control the Unison™ preamps on your Apollo to track through emulations of classic gear from Neve, Manley, API, and dozens more — giving you the rich analog textures used on the greatest recordings of our time.

**Use Plug-Ins Without Latency**

Apollo audio interfaces feature onboard DSP, controlled using the UAD Console app. This allows you to record and monitor through UAD plug-ins in realtime, freeing up your computer's host processing for running native plug-ins and instruments.

**Save Time with Auto-Gain**

New! Auto-Gain automatically adjusts your levels for consistent gain staging in seconds. No more manual tweaking of your input gain — simply turn this feature on when setting up to record, and get back to being creative.

## Correct Your Room's Acoustics

**New!** Harness Apollo Monitor Correction by Sonarworks® to apply custom profiles to your reference headphones, and studio monitors to correct your room's acoustics.
These calibration profiles run in realtime on Apollo's DSP using studio-grade precision filters and alignment delays for stereo or multi-channel speaker systems.

**Hear Extended Low-End**

New! If you use a subwoofer, you can control it using Bass Management with adjustable crossover slope and frequency. While the Speaker Utilities panel provides trim, mute, and solo per speaker output.

**Take Control of Your Monitors**

New! Use Alt Monitoring for Surround Modes to switch between stereo or immersive monitoring setups and keep up with today's mix format demands.

**Save & Recall Your Settings**

With Plug-In Scenes, Channel Strip Presets, and Console Sessions you can quickly save and recall entire plug-in chains across multiple sessions. This allows you to experiment with different setups or instantly restore your go-to configurations from one session to the next.

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Website: https://help.uaudio.com/hc/en-us/articles/25346293358100-About-the-UAD-Console-Manual

# UAD Console Manual

**About the UAD Console Manual**

This manual includes operating instructions for UAD Console, Apollo's companion software for Realtime UAD Processing, hardware control, and other functions. Complete Apollo documentation includes the following additional manuals:

- Apollo Hardware Manuals – hardware controls, connectors, and specifications for each model.

- Apollo Software Manuals – setup, workflows, and drivers for each connection type (Thunderbolt, USB, and FireWire).
- UAD System Manual – UAD-2 ecosystem and UAD Meter & Control app.
- UAD Plug-Ins Manual – features and functions of all individual UAD-2 plug-ins developed by Universal Audio.

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Website: https://help.uaudio.com/hc/en-us/articles/25347160337556-UAD-Console-Overview

## UAD Console Overview

UAD Console is the companion software application for Apollo audio interface hardware. UAD Console's analog-style workflow is designed to provide quick access to the most commonly needed features in a familiar, easy-to-use application.

UAD Console's function is to control up to four Apollo hardware units and their digital mixing and low-latency monitoring capabilities. You can configure Realtime UAD Processing and Unison with UAD plug-ins in UAD Console, or in LUNA.

**Important Fundamental Concept:** The primary function of UAD Console is to control Apollo's low-latency hardware input monitoring, Unison plug-ins, and Realtime UAD Processing when using third-party DAWs such as Logic Pro, Live, and Pro Tools. UAD Console replaces the software input monitoring feature of the DAW's mixer. UAD Console or LUNA Recording System must be used to take advantage of these Apollo features.

UAD Console remotely controls the digital mixing and signal processing functions that are performed within the Apollo hardware. Although UAD Console runs on the host computer, the computer's CPU is not performing these audio functions. All audio mixing and signal processing occurs on the DSP inside Apollo.

**Note:** Apollo interfaces use UAD DSP and memory resources for the internal DSP mixer. Therefore, the UAD Meters will show DSP and memory usage when Apollo is connected, even if UAD Console and/or Apollo plug-ins are not currently loaded.

## How to get UAD Console

In UA Connect, click the Apollo & UAD-2 tab.

Click the Download button next to UAD Console. If UAD Console is already installed, you can click the Update button (if an update is available).

After the software is downloaded, click Install to complete the installation.

## UAD Console Functions

UAD Console enables the following functionality when used with Apollo:

**Hardware control.** All of Apollo's front or top panel hardware controls (except headphone volume) can be controlled using UAD Console, facilitating easy hardware manipulation even if Apollo is installed in a location out of reach of the computer operator.

**Low-latency monitoring.** Using UAD Console eliminates the latency associated with DAW I/O buffering that makes monitoring problematic for the performer. By removing the DAW's software input monitoring feature from the monitoring signal flow altogether, the need to adjust I/O buffer sizes and latency is no longer an issue.

**Apollo Realtime Plug-Ins.** Realtime UAD Processing can be used with all UAD Console inputs and/or auxiliary returns (within available DSP resources), for the ultimate latency-free sonic experience while monitoring and/or tracking live performances. All processed (or unprocessed) inputs and stereo mix buses, including the monitor and auxiliary buses, can be optionally routed into the DAW for recording.

**Unison.** Apollo's Unison™ technology gives you the tone of the world's most sought-after tube and solid state mic preamps, guitar amps, and pedals — including their all-important impedance, gain stage "sweet spots," and component-level

circuit behaviors. Unison also features bidirectional plug-in adjustments using Apollo's hardware controls.

**Send/Return Auxiliary buses.** UAD Console has two pre/post stereo aux buses, with independent send levels per input, for grouped signal processing (conserving UAD DSP resources) or routing to the DAW.

**Flexible cue monitor mixing.** Up to four independent stereo cue mix buses are available (two with Apollo Twin) with per-input sends to ensure individual performers are able to hear "more me" if desired. Cue mixes can be easily routed to any available headphone or line outputs.

**Flexible signal routing.** Using UAD Console, any hardware input can be routed to available hardware outputs (rackmount models only). Additionally, cue mix buses can be optionally mirrored to available hardware outputs.

**Session management.** UAD Console configurations can be saved and loaded to/from disk as presets, for convenient and unlimited session management. Sessions can also be stored/recalled within the DAW project using the UAD Console Recall plug-in.

## Global Functions

Parameters within UAD Console Settings are available for configuring various global behaviors:

**Hardware.** Global interface settings such as sample rate, clock source, reference levels, and digital output mirroring.

**Software.** Global software settings for UAD Console such as metering and plug-in window behaviors.

**I/O Matrix (Thunderbolt only).** This powerful feature enables customized signal routing and I/O naming at the Core Audio (Mac) and ASIO (Windows) driver level. Custom driver routing tables can be saved and recalled as presets.

## When To Use UAD Console

The UAD Console application can be used without a DAW, simultaneously in conjunction with a DAW, or not at all. These scenarios are covered in greater detail in the Apollo Software Manuals.

## UAD Console without DAW

UAD Console can be used by itself without the use of a DAW or any other audio software for monitoring live inputs. Using UAD Console without a DAW provides access to all Apollo functionality and simplifies the use of Apollo's digital mixing, monitoring, and realtime processing features when a DAW's recording and playback features are not needed.

## UAD Console with DAW

UAD Console is used at the same time as a DAW when low-latency monitoring and/or recording of Apollo's inputs with (or without) realtime processing is desired. In this scenario, UAD Console is used as a front end to control input monitoring when recording, when the DAW's software input monitoring feature is disabled. This workflow completely eliminates the I/O buffering latencies associated with using software monitoring via the DAW.

**Important:** To eliminate doubled signals, software monitoring in the DAW must be disabled when UAD Console is used for input monitoring. Conversely, UAD Console inputs must be muted if the DAW's software monitoring feature is enabled.

UAD plug-ins can be used within UAD Console and a DAW simultaneously. In this scenario, Apollo's DSP resources are shared between the two applications. Realtime UAD Processing is available via UAD Console, and buffered (non-realtime) UAD processing is available via VST, AAX 64, or Audio Units plug-ins within the DAW. See the Apollo Software Manuals for more details about this scenario.

**Tip:** You can open or quit UAD Console at any time, whether or not a DAW is already running. UAD Console's settings and UAD plug-ins remain active after the application is quit.

## Interactions Between UAD Console and Apollo

UAD Console's settings mirror the Apollo hardware. Changes made to one are also made on the other, and vice versa. If changes are made to UAD Console when Apollo is not connected, and Apollo is subsequently connected, the UAD Console settings are sent to the hardware.

**Important:** If UAD Console is launched after changes are made to Apollo using the front panel hardware controls, the current UAD Console settings will overwrite the changes made using the hardware controls.

## Installing UAD Console

By default, UAD Console is not installed. To install UAD Console, click Download in the Apollo & UAD-2 tab within the UA Connect app.

## Accessing UAD Console

Any of the methods below can be used to open the UAD Console application.

**Mac**

- Open UAD Console from the Applications folder
- Click the UAD Console application icon in the Dock
- Click the UA diamond logo in the Menu Bar (upper right of screen) then choose Console from the drop menu

**Windows**

- Access the program from the Windows Start Menu
- Right-click the UA diamond logo in the Windows System Tray (in taskbar at lower right of screen), then choose Console from the contextual menu

## Quitting UAD Console

UAD Console can be closed using any of these methods:

**Mac:**

- Select Quit from the macOS Application Menu (upper left of screen) when UAD Console is the foreground application
- Use the standard macOS keyboard shortcut (Command+Q)
- Close the UAD Console window by clicking the "X" Close button in the Window Title Bar

**Windows:**

- Close the UAD Console window by clicking the "X" Close button in the Window Title Bar

## Resizing the UAD Console Window

The size of UAD Console's high-resolution window can be dynamically adjusted in realtime to fit any workspace. To adjust the window size, click+drag any corner or any edge of the window.

## UAD Console Width

Reducing the UAD Console window width reduces the number of visible input channels. Use the Bank Bar in the Meter Bridge to view input channels that may be currently out of view.

# Layout & General Operation

UAD Console's visual and control elements are designed with a layout similar to that found on typical analog mixers.

UAD Console always shows certain screen elements (see [Window Elements (Always Visible)). Other UAD Console elements can be shown, hidden, resized, or collapsed, with a wide range of flexibility.

## Window Title Bar

The Window Title Bar is the topmost strip in the UAD Console window.

**Window Name –** In the UAD Console window, the current session filename is displayed in the title bar. If the session has not yet been saved to disk, "UAD Console" is displayed here.

**Tip:** If the session has been modified, an asterisk* appears in the name.

**Window Buttons –** In the title bar, the UAD Console window includes standard Close, Minimize, and Maximize buttons.

**Close –** Click the "X" button to close the UAD Console window. Clicking this button quits UAD Console.

**Note:** UAD Console's current settings are saved to disk when quit. When UAD Console is subsequently launched, those settings are transferred to Apollo.

**Minimize –** Click the "_" button to reduce the window to the Dock (Mac) or Taskbar (Windows). The window can be restored by clicking the minimized window, or any method detailed in [Accessing UAD Console].

**Maximize –** Click the square button to expand UAD Console to the maximum size available on the screen where the window currently resides.

## Navigating the Mixer

The Mixer Navigation section is visible at the left side of the UAD Console window when View > Section > Mixer Navigation is checked. You can use the Mixer Navigation controls to show and hide rows in the input channel strips, and to scroll mixer rows to the top of the view area. All Mixer rows are visible at one time in the input channel strips, though you may have to scroll to view them all. Mixer rows can be individually collapsed and expanded, or completely hidden from view.

## Showing & Hiding Channel Strip Rows

Five channel strip rows can be made visible in UAD Console:

- Inputs
- Inserts
- Sends
- Output
- Sends Overview*

**\*Note:** Sends Overview is a separate view for the Sends and Cues row. If the Sends row is not displayed, clicking Sends Overview has no effect.

Each row displays related elements and associated functionality in the main area of the UAD Console window. Currently visible rows are highlighted in the Mixer Navigation panel.

- Click a section in the Mixer Navigation panel to scroll that section into the visible area. Rows that are visible are illuminated in the Mixer Navigation section.
- To hide a row, deselect the circle next to the row name.
- To show only one row, Command+Click (macOS) or Control+Click (Windows) the row name.
- To expand all mixer rows, click Open. To collapse all mixer rows, click Close.

- To show large inserts in the input channel strips, click Large. To show small inserts in the input channel strips, click Small.
- To show all possible insert slots for the input channel strips, click Fixed Slots. Click Fixed Slots again to only show the insert slots that are in use.

**Note:** Row switches and view options do not apply to Aux or Talkback channel strips. Aux and Talkback channel strips use context menus to change view options. See the Aux Returns and Talkback articles for more information.

## Opening and Closing Individual Channel Strip Rows

Each channel strip row can be opened (expanded) or closed (collapsed). When closed, the disclosure triangle points to the right, and the controls for the row are not available. A closed mixer row remains in the mixer, but is collapsed to a single row with no available controls. When a mixer row is open, the disclosure triangle points down, and the controls for that mixer row are available. Mixer rows can be globally or individually expanded or collapsed.

To open or close a mixer row, click the disclosure triangle at the left of the row in the Options column.

## Opening or Closing all Mixer Rows

You can open or close all mixer rows with the global control. In the Mixer Navigation area, click Open or Close Small to open or close all rows.

## Resizing Mixer Rows

In the UAD Console mixer, you can show a large or small view for the Inserts, Sends, and Cues rows. The large view generally shows more controls. For example, the large view of the Sends row includes a pan control and a full vertical fader. The Sends Overview shows faders ad pan controls for Sends and Cues.

**Note:** The large view for Inserts does not include more controls, but does reveal plug-in icons and the hover option controls. Large view for Inserts also applies to the Unison insert.

## Resizing Individual Mixer Rows

To switch a mixer row to the large size, click the icon at the left of the row in the Options column. When a mixer row is large, the icon to the left of the row is highlighted yellow.

## Resizing all Mixer rows

You can resize all mixer rows to small or large view with the global control. In the Mixer Navigation area, click Large or Small to resize all mixer rows.

## Using Fixed Slots

By default, UAD Console shows one Insert row, and expands to show an empty insert row each time an insert effect is added. For example, if you load insert slots into the first two slots, three rows are shown, and so on, until you reach the maximum of four insert slots.

If you want to toggle all insert slots, click Fixed Slots. When highlighted yellow, all insert slots are visible. When gray, only the insert slots currently in use, plus one empty row, are displayed, up to the maximum of four rows.

## Viewing the Sends Overview

Click the Sends Overview switch to show the Sends Overview for all mixer channels. See Sends for more information.

## Global Insert Effects Switch

These buttons globally switch all UAD Console's inserts to either pass all UAD insert effect processing to the DAW (print wet) or not (monitor wet but print dry).

Insert Effects can also be individually switched on a per-channel basis (see Individual Channel Insert Effects Switch). The Global Insert Effects switches override all the individual Channel Insert Effects settings.

**Important:** UAD plug-in processing in UAD Console's Unison and auxiliary inserts is always routed to the DAW (when recording the AUX channels), regardless of the current Insert Effects setting (Unison and aux insert processing is always recorded).

## Options Column

You can reconfigure the UAD Console view options. The Options column includes individual display controls for each input channel row, and the Clear Solo and Clear Over Limit switches.

## Popovers

Some Console functions that are not visible in the main window are accessed with popovers. Popovers are a special type of overlay that automatically close when any area outside of the popover is clicked.

**Note:** The size of popovers cannot be adjusted.

To close any popover, click anywhere outside of the popover, press the X switch at upper left of the overlay, or type the ESC (escape) key on the computer's keyboard.

The following functions are accessed via popovers:

- I/O Matrix assign
- Rename/link channel inputs
- Add Device (Console Settings)
- I/O Matrix presets
- Tempo
- Sends Overview
- Surround Monitor*

## Multiple Undo/Redo

UAD Console supports multiple levels of Undo and Redo for all edit operations. Undo and Redo operations can be performed repeatedly to step backwards and forwards through edit operations as long as the current session is open.

- To step backwards and undo (revert) edit operations, choose Undo from the Edit Menu or type Command+Z (macOS) or Control+Z (Windows).
- To step forwards and re-execute the edit, choose Redo from the Edit Menu or type Command+Shift+Z (macOS) or Control+Shift+Z (Windows) .

## Undo/Redo Cache

Edits are stored in the Undo/Redo cache. Edits within a particular session can be reverted with Undo/Redo until the cache is cleared. Both of these operations will clear the Undo/Redo cache:

- Console is quit
- A different Console session is loaded

**Important:** Prior Undo/Redo operations cannot be performed after the Undo/Redo cache is cleared.

## Keyboard Control

Many Console functions can be controlled without using a mouse. When elements on the screen have keyboard focus, they can be quickly navigated with the computer's keyboard.

## Focus Control

Focused items can be selected by using the up/down arrow keys and/or the Return/Enter keys.

## Adjusting UAD Console Controls

UAD Console uses typical software control techniques to adjust parameters.

**Switches:** Click to toggle the state.

**Knobs:** Click+drag to adjust, or use the [Controls Shortcuts]. UAD Console's rotary controls (and UAD plug-in knobs) can respond to Linear, Circular, or Relative Circular adjustments modes. The CONTROLS MODE preference is set in the Options panel within the Console Settings window.

**Faders:** Click+drag to adjust, or use the Controls Shortcuts.

Drop Menus: Click to view the drop menu contents, then click an item in the drop menu to select the item.

**UAD Plug-Ins:** Most UAD plug-in controls use the same methods as above. However, some plug-in parameters may have custom controls that are unfamiliar or not obvious. All custom controls are detailed for individual plug-ins in the UAD Plug-Ins Manual or the individual plug-in manual.


## Controls Shortcuts

In addition to the keyboard shortcuts below, several other shortcuts are available to simplify UAD Console control adjustments:

**Fine Control:** Continuous controls (knobs and faders) can be adjusted with increased resolution by depressing the Shift key while adjusting these controls.

**Scroll Wheel:** Continuous controls (knobs and faders) can be adjusted by using the computer input device's scroll function (e.g., mouse scroll wheel). Hover the cursor over the control and press Option (macOS) or Alt (Windows), and adjust the scroll wheel to modify the parameter value.

**Adjust All:** If the Command (macOS) or Control key (Windows) is held down while modifying any control, the same control on all inputs (or aux returns) will be simultaneously adjusted. The relative difference is maintained between the same controls until any control reaches its minimum or maximum value.

**Return To Default:** If the Option key (macOS) or Alt key (Windows) is held when a control is clicked, the control will return to its default value. Command+Option+Click (maOS) or Ctrl+Alt+Click (Windows) will return all controls of the same type to their default value.

**Mute/Solo All Toggle:** Option-click (macOS) or Alt+click (Windows) a Mute or Solo switch to toggle the state on all channels.

**Drop Menus:** Menus continue to display after a single right-click. The mouse button does not need to be held down to view the menu.

## Keyboard Shortcuts:

### Close

- Keyboard Command (macOS): Command + W
- Keyboard Command (Windows): Control + W
- Description: Closes UAD Console.

### Copy

- Keyboard Command (macOS): Command + C or C
- Keyboard Command (Windows): Control + C or C
- Description: Activates the COPY modifier in the mixer, or used to copy/paste channel names or custom names in the I/O matrix.

### Cut

- Keyboard Command (macOS): Command + X or X
- Keyboard Command (Windows): Control + X or X
- Description: Used to cut/paste channel names or custom names in the I/O matrix.

### Mixer Bank Left

- Keyboard Command (macOS): Command + ←
- Keyboard Command (Windows): Control + ←
- Description: Moves the onscreen mixer channels one bank to the left.

**Mixer Bank Right**

- Keyboard Command (macOS): Command + →
- Keyboard Command (Windows): Control + →
- Description: Moves the onscreen mixer channels one bank to the right.

**Mixer Far Left**

- Keyboard Command (macOS): Option + Command + ←
- Keyboard Command (Windows): Alt + Control + ←
- Description: Moves the onscreen mixer channels all the way to the left.

**Mixer Far Right**

- Keyboard Command (macOS): Option + Command + →
- Keyboard Command (Windows): Alt + Control + →
- Description: Moves the onscreen mixer channels all the way to the right.

**Mixer Scroll Left**

- Keyboard Command (macOS): ←
- Keyboard Command (Windows): ←
- Description: Moves the onscreen mixer channels one channel to the left.

**Mixer Scroll Right**

- Keyboard Command (macOS): →
- Keyboard Command (Windows): →
- Description: Moves the onscreen mixer channels one channel to the right.

**New Session**

- Keyboard Command (macOS): Command + N
- Keyboard Command (Windows): Control + N
- Description: Creates a new default session.

**Next Window**

- Keyboard Command (macOS): Command + `
- Keyboard Command (Windows): Control + `
- Description: Switches focus to the next UAD Console window.

**Open Session**

- Keyboard Command (macOS): Command + O
- Keyboard Command (Windows): Control + O
- Description: Opens an existing UAD Console session.

**Paste**

- Keyboard Command (macOS): Command + V or V
- Keyboard Command (Windows): Control + V or V
- Description: Pastes an item.

**Previous Window**

- Keyboard Command (macOS): Command + Shift + `
- Keyboard Command (Windows): Control + Shift + `
- Description: Switches focus to the previous UAD Console window.

**Quit**

- Keyboard Command (macOS): Command + Q
- Keyboard Command (Windows): Control + Q
- Description: Quits the UAD Console application.

**Quit All**

- Keyboard Command (macOS): Control + Option + Command + Q
- Keyboard Command (Windows): N/A
- Description: Quits the UAD Console application and UAD mixer. Your Apollo(s) will reconnect when you relaunch UAD Console after this command.

**Redo**

- Keyboard Command (macOS): Command + Shift + Z
- Keyboard Command (Windows): Control + Shift + Z

- Description: Reverts the last performed Undo. Multiple undos and redos are possible.

**Save A Copy As...**

- Keyboard Command (macOS): Command + Shift + S
- Keyboard Command (Windows): Control + Shift + S
- Description: Saves a copy of the session.

**Save Session**

- Keyboard Command (macOS): Command + S
- Keyboard Command (Windows): Control + S
- Description: Saves the session.

**Show Auxes**

- Keyboard Command (macOS): Command + A
- Keyboard Command (Windows): Control + A
- Description: Shows the Aux channel strips.

**Show Control Room**

- Keyboard Command (macOS): Command + R
- Keyboard Command (Windows): Control + R
- Description: Shows the Control Room strips.

**Show Settings**

- Keyboard Command (macOS): Command + ,
- Keyboard Command (Windows): Control + ,
- Description: Opens the Settings window.

**Show/Hide Channels**

- Keyboard Command (macOS): Command + I

- Keyboard Command (Windows): Control + I
- Description: Performs the Show/Hide command to show or hide channels in the mixer.

**Show/Hide Floating Windows**

- Keyboard Command (macOS): Shift + W
- Keyboard Command (Windows): Shift + W
- Description: Shows or hides all floating windows.

**Toggle Full Screen**

- Keyboard Command (macOS): Command + Shift + F
- Keyboard Command (Windows): Control + Shift + F
- Description: Toggles full screen view for UAD Console windows.

**Undo**

- Keyboard Command (macOS): Command + Z
- Keyboard Command (Windows): Control + Z
- Description: Undoes the last command. Multiple undos and redos are possible.

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Website:   https://help.uaudio.com/hc/en-us/articles/25347347551508-Meter-Bridge

# Meter Bridge

The Meter Bridge (illustrated below) is always visible at the top of the UAD Console window. It displays all non-hidden input channels, signal activity at these inputs, and the Bank Bar, which is used to scroll inputs that are out of horizontal view.

**Input Channels**

The Meter Bridge represents all Apollo input channels. When an input channel is hidden with the Show/Hide Inputs function, that channel is not displayed in the Meter Bridge.

## Channel Meters

Each vertical LED meter represents input signal activity in the channel. These small meters mirror the activity of each high-resolution Input Meter that is displayed next to each channel's Input Fader.

## Bank Bar

When the UAD Console window does not have enough available horizontal space to display all available input channels, the gray Bank Bar appears within the Meter Bridge.

The Bank Bar "floats" on top of all input channels in the Meter Bridge. The Bank Bar is used to change the channels that are visible within the Current Bank.

Note: The Bank Bar only appears when the UAD Console window is too narrow to display all input channels.

## Current Bank

The Current Bank is all input channels that are currently displayed in the main body of the UAD Console window (below the Meter Bridge) as shown in the illustration below. The Bank Bar only appears when the UAD Console window is too narrow to display all input channels. The gray Bank Bar is used to change the Current Bank.

## Changing the Current Bank

Any of these methods can be used to change the channels within the Current Bank:

Click – Click anywhere within the Meter Bridge outside of the Bank Bar. The Bank Bar jumps to the channel that is clicked in the Meter Bridge.

Drag – Drag the gray Bank Bar to slide it across available channels.

Hover Scroll – Position the mouse over the Meter Bridge, then scroll horizontally with the computer's input device.

Arrow keys – When the Bank Bar has keyboard focus, use the computer's left/right arrow keys to navigate the Current Bank.

## Meter Bridge Menu

The Meter Bridge menu provides access to various functions related to the Meter Bridge. To view the menu, right-click or control-click within the Meter Bridge.

Tip: All functions in the Meter Bridge menu are available elsewhere within UAD Console.

## Device Names

Shows or hides Apollo's Device Name in the Meter Bridge. Device Names can be changed in the Settings > Hardware panel.

This feature is intended primarily for use with multi-unit systems. When the Meter Bridge contains the inputs for more than one Apollo unit, this feature groups the input channels by device name for easier input identification.

## Show/Hide Offline Devices

By default, devices in the Hardware panel within the UAD Console Settings window that are not currently connected are displayed in the Meter Bridge. To show/hide offline devices, choose this item from the menu. Show/Hide Offline Devices is available exclusively within this menu.

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Website: https://help.uaudio.com/hc/en-us/articles/25348282201364-Mixer-Navigation-Modifiers

# Mixer Navigation Modifiers

Modifiers add several controls to UAD Console that make common workflow tasks much faster and easier to accomplish. With modifiers, you can easily power items on and off, remove items, copy and paste items, isolate channels, and set controls to their defaults. When you click a mixer modifier button, the control latches, and flashes to indicate it is active.

### Modifier Latch

When a Modifier switch is clicked, the switch flashes yellow, indicating that the function is latched and ready to be applied.

### Modifier Unlatch

The latched option is unlatched (the switch stops flashing) when:

- The Modifier switch, or another Modifier switch, is clicked
- No Modifiers are applied within the Modifiers Timeout period

### Modifiers Timeout

When a modifier is latched, it is automatically unlatched (times out) after the Modifiers Timeout period to prevent inadvertent modifications.

The Modifiers Timeout is a preference set in the Settings > Options panel. The default Modifiers Timeout period is six seconds/flashes.

### Swiping Across Modifiers

Modifiers can be adjusted quickly across many items in the mixer by swiping. When a Modifier switch is latched, click and hold the mouse, then drag vertically and/or horizontally across highlighted items to perform the function on multiple items.

**Tip:** Modifier swipe shortcuts are the fastest way to perform the same function on multiple items.

### Power Modifier

This option toggles a plug-in, send, or cue's power state, or all plug-ins, sends, or cues on a channel. When disabled, plug-ins no longer use UAD DSP resources, and sends or cues are disabled.

**To power items on/off**

- Click the Power button on the Modifiers panel. Power modifier icons appear on all items that can be powered off or on.
- Click individual power modifiers, or swipe horizontally or vertically across multiple modifiers, to toggle power on or off.
- To power on/off all items of the same type for a channel, click the power button next to the item name (Inserts, Sends, or Cues).

**Note:** Toggling power for all inserts on a channel does not toggle power to the Unison insert.

## Remove Modifier

The Remove Modifier removes a plug-in or all plug-ins from a channel.

- Click the Remove button on the Modifiers panel. Remove modifier icons appear on plug-ins that can be removed.
- Click individual remove modifiers, or swipe horizontally across multiple modifiers, to remove plug-ins. To remove all plug-ins from a channel, click the remove icon next to the Inserts label.

## Copy / Paste Modifier

The Copy and Paste Modifiers copy a plug-in, send, cue, or channel and paste it where you choose.

**To copy and paste items**

- Click the Copy button on the Modifiers panel. Copy modifier icons appear on all items that can be copied and pasted, including plug-ins, sends, cues, and entire channels.

- Click the individual copy modifie for the item you want to copy. After the modifier is copied, the copy modifier turns to a red Paste modifier. Destinations to which the copied item can be pasted are highlighted.
- Click individual paste modifiers, or swipe across multiple modifiers to paste multiple items.

**To copy and paste entire Channel Strips**

- Click the Copy button on the Modifiers panel. Copy modifier icons appear at the bottom of each channel strip.
- When Copy is latched, click the copy modifier at the bottom the channel strip you want to copy. The Copy button switches to Paste.
- Click one or more channel strip destination icons to paste to available channel locations.

**Note:** You cannot swipe across multiple channels when pasting a channel strip. To paste multiple channel strips, click each destination individually.

## Isolate Modifier

The Isolate modifier allows you to quickly Isolate channels. Isolate allows you to seamlessly monitor live hardware inputs with Realtime UAD Processing, even when changing UAD Console and LUNA sessions. Isolated channels always retain their current settings when different UAD Console and LUNA sessions are loaded. Isolated channels are also not controlled by LUNA.

**Tip:** To quickly isolate an individual channel, right-click a channel's input label then choose Isolate from the Input Label Menu.

## Set Default Modifier

The Set Default modifier returns a parameter to its default value.

**Note:** The Set Default modifier is primarily for knob and fader values. It does not apply to any preamp settings, plug-in inserts, SOLO/MUTE switches, monitor levels, customized input names, and similar functions.

- Click the Set Default switch on the Modifiers panel. The Set Default button blinks.
- Click a control to return the control to its default value.

## Settings Switch

The SETTINGS switch is located at the bottom of the Mixer Navigation column. Click to open the UAD Console Settings window, where many global settings are defined. For complete details, see UAD Console Settings.

## Clear Switches

The Clear switches are located near the bottom of the UAD Console screen, in the Options column.

## Clear Solo

Whenever Solo is engaged on any channel input, the Clear Solo switch is highlighted. Click the Clear Solo switch to deactivate Solo on any channel inputs.

**Tip:** Click Clear Solo again to return all channels to their previous Solo states.

## Clear OL

This switch clears all over limit (clip) indicators and peak hold indicators on all meters.

You can also clear individual meters or all meters by right-clicking/Ctrl-clicking in the meter display, and choosing Meter or All Meters under Clear.

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Website: https://help.uaudio.com/hc/en-us/articles/25348339047572-Info-Bar

# Info Bar

The Info Bar is always visible at the bottom of the UAD Console window. It displays and provides access to several important functions.

The Tempo controls are only available in the Info Bar. The Sample Rate and Clock Source controls are also available in UAD Console Settings. The UAD Resource Gauges have no controls; they are visual indicators only.

## Offline Hardware Display

If the Apollo hardware unit(s) is not properly connected, the sample rate and clock source will display OFFLINE as shown below.

## Tempo Display

UAD Console's current tempo is displayed here in beats per minute (BPM). UAD Console Tempo is used for time-based UAD plug-ins (such as delays and modulations) within UAD Console that are set to use Tempo Sync. UAD Console Tempo can be modified by typing a text value, tapping a tempo, or via MIDI.

**Note:** UAD Console does not receive tempo information from the DAW.

The tempo value is saved within UAD Console session files, and also within DAW files when the UAD Console Recall plug-in is used within the DAW.

For details about how to use the Tempo Sync feature with UAD plug-ins, see the UAD System Manual.

## Tempo Popover

To display the Tempo window, click anywhere in the Tempo Display within the Info Bar.

The available tempo range is from 1.00 BPM to 999.00 BPM. The default tempo of a new session is 120 BPM.

## Adjusting Tempo

### *Text Entry*

- Open the Tempo window by clicking the Tempo Display in the Info Bar
- Click the tempo text field, then type a numeric tempo value
- Press Return or Enter, or click the close button with the mouse.

**Tip:** To leave the tempo unchanged after entering an (unwanted) value in the Tempo window, press the ESC key or close the window with the mouse.

### Tap Tempo

- Open the Tempo window by clicking the Tempo Display in the Info Bar
- With the mouse, click the TAP button at least four times to establish the tempo
- Press the ESC key on the computer keyboard, or click the close button with the mouse.

## Changing tempo via MIDI

Tap tempo can be used to set a new tempo from incoming MIDI data. This method requires any external MIDI hardware and/or MIDI software that is recognized by the OS.

**Note:** MIDI drivers for the MIDI device may need to be installed and/or configured.

## About external MIDI tap tempo control

- The MIDI device must be properly configured before it can be used by UAD Console.
- MIDI note values or MIDI controller values can be used as the data source.
- UAD Console cannot synchronize the tempo to incoming MIDI beat clock.

## MIDI configuration and setup

- Verify the MIDI output device or MIDI software is properly configured and active.
- In Settings > MIDI, set the values for DEVICE, TAP TEMPO CHANNEL, and TAP TEMPO EVENT to match the transmitted MIDI data.
- Transmit the MIDI note or controller (as specified in the previous step) at least four times to establish the tempo. The Tempo Display is RED during this period.
- After a new tempo value is established, the new tempo is used and the Tempo Display changes back to BLACK. Simply retransmit the MIDI data to apply further tempo updates.

## Sample Rate Display

Apollo's current sample rate is displayed here. Click this area to select a different sample rate from the drop menu when using UAD Console without a DAW. This area displays the current sample rate used for Apollo's A/D-D/A conversion and UAD Plug-Ins processing. When using UAD Plug-Ins, higher sample rates require more UAD DSP resources.

**Important:** When the Clock Source parameter is set to use any external clock source, the sample rate must be manually set to match the sample rate of the external clock.

## Sample Rate Menu

Clicking the Sample Rate Display presents the Sample Rate Menu, where the current sample rate can be changed.

**Important:** When a DAW is used with Apollo, the sample rate is typically changed within the DAW settings. If the sample rate is changed to a different value within

UAD Console when a DAW is active, digital artifacts could occur due to a sample rate mismatch.

**Apollo Twin Note:** If the current digital input setting is S/PDIF and the sample rate is changed to a rate higher than 96 kHz, the clock source is changed to Internal and the S/PDIF inputs are no longer available.

## Hardware Clicks

When the sample rate is changed, hardware relays that mute the outputs are temporarily engaged to prevent audio artifacts. This action causes an acoustic clicking sound that can be heard within the hardware. These clicks are by design and can be safely ignored.

**Note:** Hardware clicks are not heard with first-generation (silver) Apollo rack models, which do not feature hardware relay muting.

## Clock Source

The active clock source (Internal, ADAT, S/PDIF, or Word Clock) is displayed here. Click this area to select a different clock source from the drop menu. This area flashes red if the currently selected clock is unresolved (when digital audio is not synchronized).

**Note:** Word Clock is available with Apollo rack models only.

## Clock Source Menu

Apollo can synchronize to its internal clock or an external clock (word clock, ADAT, S/PDIF, or AES/EBU; available clock sources depend on the connected Apollo hardware). To select a clock source, click anywhere in the clock display area to view the Clock Source Menu, then select a clock source from the menu.

**Tip:** The clock source can also be specified in Settings > Hardware.

## No External Clock

If the Clock Source setting is not set to Internal and the external clock signal cannot be detected and/or resolved, then the text in the Clock Display display flashes RED (as shown at right) until a valid clock is detected and/or an alternate clock source is selected. If this occurs, verify connections and external device settings.

**Important:** Only one device in a digital audio system can be the master clock source. The Apollo clock setting, and the sample rate, must match the master device settings or audio artifacts could occur.

## UAD Resource Display

This area displays DSP and memory resource loads used by all loaded UAD plug-ins (UAD Console and DAW). UAD loads can be monitored as needed, for example when deciding which UAD plug-ins to load, based upon how much DSP is available.

Values displayed here are mirrored in the UAD Meter & Control Panel application. More detailed (per-SHARC) display of DSP usage is available in the System panel within the UAD Meter & Control Panel application.

### Averaged Loads

The load for each gauge represents the average for all UAD devices in use. For example, if one Apollo QUAD unit is connected, the UAD DSP load is an average of the four SHARC DSP processors in the unit. If two QUAD units are connected, then the eight processors are averaged, and so on.

### Individual Loads

Individual DSP loads within a single unit, and the loads of individual devices in a multi-device setup, can be viewed in the System Information panel within the included UAD Meter & Control Panel application.

### UAD Plug-In Loads

The amount of UAD resources used by UAD plug-ins vary with each individual plug-in; more complex algorithms require more resources.

### Instance Chart

The amount of DSP used by each individual UAD plug-in is available in the UAD instance count chart. The chart can help determine which plug-ins to assign with available resources. The chart is published online at:

- www.uaudio.com/support/uad/compatibility/instance-chart.html

## Static Loads

Apollo uses UAD DSP and memory for its internal DSP mixer, therefore the meters will indicate loads (when the hardware is connected) even if UAD plug-ins are not inserted.

## DSP

The DSP gauge indicates the amount of digital signal processing resources that are being used by all UAD devices in the system.

DSP is the primary hardware resource that powers the UAD Plug-Ins algorithms. When UAD plug-ins are disabled, DSP requirements are decreased.

**Note:** When UAD plug-ins are disabled, DSP requirements are decreased EXCEPT when the plug-in is disabled using the Power control within the plug-in window.

## Program

The Program (PGM) gauge indicates how much UAD program memory (PGM) is in use. Program memory is an on-chip memory that is specific to the UAD-2 DSP processor(s) and is used for certain UAD plug-in resources.

Each unique UAD plug-in uses a bit of program memory. If many different UAD plug-ins are loaded simultaneously, it is possible for this resource to run out before a DSP overload occurs. This point is considered and factored in by the automatic UAD load balancing routines.

## Memory

The Memory (MEM) gauge indicates the percentage of UAD RAM that is currently in use. It indicates the total available UAD memory available, regardless of the number of DSP processors that are installed.

Memory is used for echo, delay lines, reverb, and similar spatial processing. When UAD plug-ins are disabled but not unloaded, memory requirements are not decreased. In this case, the memory remains loaded so that reverb tails and delay lines are not cut off when the plug-in is disabled.

## Plug-In Scenes Display

The Plug-In Scenes display shows the current Plug-In Scene. Click this area to toggle the Plug-In Scenes browser. See Plug-In Scenes for more information.

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# Input Channel Strips

Each UAD Console channel input strip, as illustrated below, controls a corresponding Apollo hardware input. The output of all UAD Console channel inputs are always routed to UAD Console's monitor outputs (except when muted). Inputs can be optionally routed to other outputs via Flex Routing (rack models only) or the Cue Outputs window.

UAD Console's channel input strips are essentially the same for all inputs, however there are some differences among the analog and digital inputs as noted below.

## Signal Flow

Audio signals in a UAD Console channel flow through the inserts serially from top to bottom. Therefore, if more than one plug-in is inserted in a channel, the location of a plug-in within the inserts can impact the sound of the channel. Plug-ins can be reordered by dragging them to change the serial processing order.

## Input Types

UAD Console has analog, digital, and virtual inputs. The controls that are available in each strip depend on the type of input.

## Analog Inputs

### Preamp Inputs (except Apollo 16, x16)

Each of Apollo's preamp channels have multiple analog inputs (mic, line, and/or Hi-Z) that can be selected with the preamp controls.

The preamp channels are switched between mic and line inputs manually via UAD Console or Apollo's front panel. Channels are automatically switched to Hi-Z inputs when a ¼" mono (tip-sleeve) cable is connected to Apollo's front panel Hi-Z input jacks.

### Line Inputs

The analog line inputs reflect the number of A/D conversion channels that are available on the connected Apollo model(s).

## Digital Inputs

**Note:** Apollo Solo does not feature digital inputs.

### Apollo, Apollo 8, x8, x6, x4

The eight ADAT (TOSLink) and two S/PDIF (coaxial stereo left/right) input channels work just like the analog inputs, except they don't have the extra preamp and reference level settings that are only available on the analog inputs.

### Apollo 8p, x8p, Twin

The digital TOSLink inputs can accept ADAT or S/PDIF. The number of input channels change to reflect the digital input type currently in use (the digital input preference is set in the UAD Console Settings window).

The digital inputs work just like the analog inputs, except they don't have the extra preamp and reference level settings that are only available on the analog inputs.

**Apollo 16, x16**

UAD Console has two AES/EBU inputs (left and right). MADI inputs, if present on the hardware, are not functional.

**Virtual Inputs**

The virtual input channels in UAD Console do not reflect Apollo's hardware inputs. Instead, they receive digital signals from DAW outputs via Apollo's device drivers, enabling Realtime UAD Processing on any DAW output. This feature is especially useful when playing virtual software instruments live through UAD plug-ins because it reduces I/O buffering latency.

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Website: https://help.uaudio.com/hc/en-us/articles/25349542599956-Preamp-Controls

# **Preamp Controls**

UAD Console's preamp controls correspond to the equivalent preamp controls on the Apollo front/top panel. Adjusting Apollo's front/top panel updates UAD Console (and vice versa); see Interactions Between UAD Console and Apollo for details.

**Note:** The preamp controls are not available with Apollo 16 or Apollo x16, which do not feature mic preamps.

## **Unison Controls**

Some preamp hardware controls (Gain, Low Cut, 48V, Pad, Polarity) are Unison parameters that interact with Unison plug-ins placed in the Unison insert slot.

Unison preamp controls in this section are indicated by the Unison icon in the above paragraph. For complete Unison details, see Unison.

### Preamp Gain

The channel's preamp gain is adjusted with this knob. The input to be adjusted (Mic, Line, or Hi-Z) is determined by the state of the channel's Mic/Line switch or the Hi-Z input (if connected).

Rotating the knob clockwise increases the preamp gain for the channel. The available gain range for all preamp channels is 10 dB to 65 dB for the Mic, Line, and Hi-Z inputs.

**Tip:** This control can be adjusted with Apollo's hardware knob. For complete details, see Unison.

### Gain Value

The specific amount of preamp gain in decibels is displayed in gray text below the gain control. The relative amount of preamp gain is indicated by the green LED ring surrounding the gain control in UAD Console. The LED ring is a different color when Unison is active in the channel.

### Line Input Gain Bypass (Apollo 8, x8, 8p, x8p)

When a preamp channel's line input is selected and its Line Input Gain is bypassed, the Gain Value field displays BYP, its gain cannot be adjusted, and the Unison plug-in (if inserted) is disabled. For related details, see Line Input Gain (Apollo 8, 8p, x6, x8, x8p).

### Front Panel Channel Selection Indicator Dot

Apollo's channel selection can be changed using the hardware's PREAMP switch. The small colored dot that appears next to the gain control (as shown at right,

outlined in red) indicates the preamp channel that is currently selected on the Apollo hardware panel.

Tip: The indicator dot in UAD Console changes channels when the channel selection is changed with Apollo's PREAMP switch.

## Input Select

This switch switches between the mic and line inputs on Apollo's rear panel. Click the Input Select switch or Input Select display to change the input type. The currently selected input type is highlighted.

Note: Input Select has no effect if the channel's Hi–Z input is connected, because preamp channels are automatically switched to the Hi-Z input when a ¼" mono (tip-sleeve only) cable is connected to Apollo's front panel Hi-Z input jack.

## Low Cut Filter

When enabled, the channel's input signal passes through a low cut (high pass) filter. This 2nd-order coincident-pole filter has a cutoff frequency of 75 Hz with a slope of 12 dB per octave by default (the filter can change when a Unison plug-in is active in the channel).

The Low Cut filter is applied to the Mic, Line, and Hi-Z inputs. Low Cut is typically used to eliminate rumble and other unwanted low frequencies from the input signal.

## 48V Phantom Power

When enabled, the 48V switch is red and 48 volts of phantom power is supplied to the Apollo channel's rear panel Mic input. Most modern condenser microphones require 48V phantom power to operate. This option can only be activated when the Mic/Line switch is set to Mic.

Caution: Activate 48V only with compatible equipment such as phantom powered microphones. Incompatible equipment may be damaged by the applied voltage.

Depending on the current configuration of the Apollo and UAD Console, there may be a delay when changing the 48V state to minimize the clicks/pops that are inherent when engaging phantom power. The +48V LED on Apollo's front panel will flash during any delay.

## Pad

When enabled, the PAD switch is yellow and the channel's microphone input signal level is attenuated by 20 dB. Pad does not apply to the Line or Hi-Z inputs.

Pad is used to reduce signal levels when overload distortion is present at low preamp gain levels, such as when particularly sensitive microphones are used on loud instruments, and/or if the A/D converter is clipping.

Tip: Activate PAD when the input is clipping but preamp gain is at minimum. Alternately, reduce the output level (if available) of the device connected to Apollo's input.

## Polarity

When enabled, the polarity (aka phase) switch is yellow and the input channel's signal is inverted. Polarity applies to the Mic, Line, and Hi-Z inputs.

Tip: Polarity inversion can help reduce phase cancellations when more than one microphone is used to record a single source.

## Reference Level (Apollo 8, x8, 16)

The signal reference level for analog line inputs without preamps can be switched between -10 dBV and +4 dBu. Click the level display to toggle the setting.

The setting controls an attenuation pad for the input channel. When set to +4 dBu, the pad is engaged and the channel can accept a higher signal level before the A/D converter clips. Select -10 dBV when lower input signal levels are used.

## Tips

- To adjust signal incoming levels for Apollo's line inputs that don't have preamps, use the output level controls of the devices that are connected to those inputs.
- Additional gain can be added to input signals by inserting UAD plug-ins and adjusting the gain structure within the plug-ins.

The availability and behavior of the reference level control depends on the hardware model, as described below.

**Apollo** – The reference level for line input channels 5 & 6 and 7 & 8 are linked in Apollo's hardware. Therefore, the reference level in UAD Console can only be switched according to these stereo pairs.

**Apollo 8, x8** – The reference level for line input channels 5 – 8 can be individually switched.

**Apollo 16** – The reference level for all analog line input channels can be individually switched.

**Apollo 8p, x8p** – The reference level for line input channels cannot be switched.

## Sample Rate Convert

Realtime sample rate conversion ("SR CONVERT") is available on S/PDIF and AES/EBU inputs. This feature eliminates audio artifacts (clicks, distortion, etc) that can occur when the sample rate of external digital devices connected to the S/PDIF or AES/EBU inputs do not match Apollo's internal sample rate.

To enable real time sample rate conversion on Apollo's S/PDIF or AES/EBU inputs, click the SR Convert switch in UAD Console's associated channel strip. Click again to disable the feature.

***Sample Rate Conversion notes:***

- Available on S/PDIF or AES/EBU inputs only

- Applies to both L/R inputs (they can't be individually enabled)
- Applies to both L/R inputs whether or not they are stereo linked
- Unavailable when Apollo's clock source is set to S/PDIF or AES/EBU
- Unavailable on digital outputs

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Website: https://help.uaudio.com/hc/en-us/articles/30921736610836-Preamp-Auto-Gain

# Preamp Auto-Gain

Auto-Gain automatically adjusts gain on Apollo's preamp inputs (mic, line, and Hi-Z), according to detected input levels. To use Auto-Gain, you play audio sources at your loudest volume levels while running Auto-Gain in UAD Console, and the gain on all selected Apollo preamps is automatically adjusted.

**Note:** To get the most accurate levels for guitar amp and bass amp plug-ins, do not use Auto-Gain to set gain levels on electric guitar Hi-Z inputs. Set preamp gain at the minimum level when using the Hi-Z inputs with amp plug-ins.

## Auto-Gain Requirements

Auto-Gain is available on all Apollo X Gen 2 preamp channels, including rack and desktop models. The following Apollo X Gen 2 interfaces have preamps:

Apollo Twin X Gen 2

Apollo x4 Gen 2

Apollo x6 Gen 2

Apollo x8 Gen 2

## Using Auto-Gain

**CAUTION:** Auto-Gain automatically adjusts preamp levels for recording. To avoid damage to your hearing, confirm your monitor levels are set safely before proceeding.

- On any preamp channel, press the Auto-Gain button under the gain knob. The Auto-Gain floating window opens.
- By default, Auto-Gain listens and adjusts levels for 10 seconds. To increase or decrease the duration by ±5 seconds, press the -5 or +5 buttons. You can adjust the duration while Auto-Gain is listening.
- To detect gain levels, press the Start button and input your audio source at its loudest level. Auto-Gain is adjusted during or after listening, depending on the Apply Gain option under Show More.
- The Auto-Gain floating window closes after the listening duration completes. To close the Auto-Gain window, click Done.

**Tip:** You can set Auto-Gain on multiple preamps simultaneously. Simply click the Auto-Gain button for each preamp you want to adjust. The Auto-Gain options in the floating window apply to all Auto-Gain-enabled preamps.

## Auto-Gain options

In the Auto-Gain floating window, click Show More to see all Auto-Gain options.

**Tip:** To return Duration, Listening Threshold, and Peak Target to their default values, Option-click (macOS) or Alt-click (Windows).

**Duration:**

Sets the amount of time that Auto-Gain listens while setting gain levels.

The default setting is 10 seconds, which may be too short. To set a different duration, click and drag up or down in the box, or click the -5 or +5 buttons

to adjust the duration. You can also click in the box and type a new value, then press Enter.

**Note:** The maximum duration is 90 seconds.

**Apply Gain:**

Sets the Auto-Gain adjustment behavior.

WHILE LISTENING applies gain changes every two seconds for the Auto-Gain duration. You can only use WHILE LISTENING with one or two preamps enabled for Auto-Gain.

AFTER LISTENING applies the gain change after the Auto-Gain listening duration is complete.

**Listening Threshold**

The Listening Threshold determines the lowest level at which Auto-Gain detects a signal and begins adjusting gain. This setting ensures that Auto-Gain doesn't set very loud gains when no detectable signal is available. The default setting is -50 dBFS, which may be too quiet for low level sources. To set a different threshold, click and drag up or down in the box, or click in the box and type a new value, then press Enter.

**Peak Target**

The Peak Target determines the maximum peak level that Auto-Gain should set for your material. The default setting is -8 dBFS, but you can adjust it higher or lower. Be aware that higher settings (less headroom) increase the risk of digital clipping. To set a different peak target, click and drag up or down in the box, or click in the box and type a new value, then press Enter.

## Auto-Gain with Unison plug-ins

The following UAD plug-ins can be used in the Unison insert with Auto-Gain:

API Preamp

API Vision Channel Strip

API Vision Channel Strip Legacy

Neve 1073

Neve 1084

Neve 88RS

Neve Preamp

SSL 4000 E Channel Strip

If a Unison plug-in doesn't support Auto-Gain, the Auto-Gain button is grayed out after the Unison plug-in is inserted.

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Website:  https://help.uaudio.com/hc/en-us/articles/25350369296660-UAD-Plug-In-Inserts

## UAD Plug-In Inserts

The Inserts section of each UAD Console input strip is where UAD-2 plug-ins are selected and used for Realtime UAD Processing. Four standard (non-Unison) insert slots are available per UAD Console channel strip; therefore up to four UAD plug-ins can be serially chained (stacked) per input within the constraints of available DSP resources.

Apollo's analog preamp inputs have a special dedicated Unison insert in addition to four standard inserts. Line inputs, virtual inputs, and both auxiliary returns also have four standard inserts each. Therefore, up to five UAD plug-ins can be serially chained (stacked) per preamp channel within the constraints of available DSP resources.

**Note:** Only UAD-2 DSP plug-ins can be loaded in UAD Console (not native UADx or 3rd-party plug-ins). However, tracks with any plug-ins used within a DAW can be routed into UAD Console via Virtual I/O.

## Inserts Signal Flow

Audio signals in a UAD Console channel flow through the inserts serially from top to bottom, beginning with the Unison insert (if used), then proceeding through the following inserts. Therefore, if more than one plug-in is inserted in a channel, the location of a plug-in within the inserts can change the sound of the channel.

**Tip:** Plug-ins can be reordered by dragging them to change the serial processing order.

## Unison Inserts

Apollo's Unison technology is activated when a Unison-enabled UAD plug-in is loaded in the dedicated Unison insert located above the preamp options (as shown above, outlined in red).

**Note:** Audio on preamp channels is processed by the Unison insert (if active) before the channel inserts.

The Unison insert is only available on Apollo preamp channels. However, Unison inserts are operated exactly the same way as standard channel inserts. For complete Unison details, see Unison.

## Insert State Indicators

The state of loaded plug-ins within each insert can be determined by the background color of the slot:

**Active (light gray)** – The plug-in is active and processing audio. The UA 1176 Rev A insert in the illustration indicates this state.

**Disabled (dark gray)** – The plug-in has been disabled via the power switch in the header of the plug-in edit window (or via the disable function in the insert options menu). The API 550A insert in the illustration indicates this state.

**Offline (red)** – The plug-in is disabled because there are not enough UAD resources, it is unlicensed and the demo has expired, and/or the UAD authorization needs updating. The C-Suite C-Max insert in the illustration indicates this state.

**Empty (+)** – The insert is not populated with a plug-in. Click the space to open the Insert Browser.

**Yellow outline** – The plug-in editor is open. The UA 1176 Rev A insert in the illustration indicates this state.

## Insert Hover Options

Three commonly-used plug-in functions become available when the mouse cursor is hovered over any insert containing a plug-in. The function icons appear on top of the plug-in name in Small view, or at the bottom of the plug-in in Large View. To perform the function, click the associated hover switch.

**Assign** – Opens the plug-in browser so you can choose a plug-in. Choosing a different plug-in replaces the current plug-in.

**Open editor** – Opens the plug-in editor window, so you can edit the plug-in parameters.

**Bypass plug-in** – Toggles the plug-in bypass state (yellow when active).

**Show insert options menu** – Right-click to show a menu with insert options.

## Insert Options Menu

To display the Insert Options menu, right-click / control+click any insert.

The options available in the menu vary depending on the state of the insert (e.g., empty or loaded) and contents of the copy/paste clipboard. Each insert option is described below.

The menu has two sections under blue headings: Plug-in options that apply to the individual insert, and Channel options that apply to all channel inserts in the strip.

## Plug-In Options

**Copy –** Copies the plug-in that is in the insert so it can be pasted into another insert. This option does not appear if a plug-in is not loaded in the slot.

**Paste –** Pastes a plug-in that was previously copied into the insert. This option does not appear if a plug-in was not previously copied.

**Note:** All copy/paste functions also copy/paste the current settings of the plug-in.

**Assign –** Opens the Plug-In Browser where you can select an insert plug-in. If the insert already contains a plug-in, the loaded plug-in is replaced with the newly-assigned plug-in.

**Remove –** Unloads the plug-in from the insert.

**Disable –** Disables plug-in processing and conserves UAD resources, but the plug-in remains in the insert.

Channel Options

**All Out (Bypass) –** Bypasses all plug-ins in the channel.

**All In –** Activates all plug-ins in the channel. Any bypassed plug-ins are unbypassed.

**Remove All –** Unloads all plug-ins from all channel inserts in the channel.

**Disable All –** Disables plug-in processing and conserves UAD resources for all plug-ins in the channel inserts, but the plug-ins remain in the inserts.

**Enable All –** Resumes plug-in processing for all disabled plug-ins in the channel inserts.

## Insert Effects Settings

The UAD REC/MON settings are used to specify whether or not Realtime UAD Processing in UAD Console is recorded (printed) in the DAW or just monitored without being recorded

**UAD REC –** UAD Console inputs are recorded with processing (wet). The UAD-processed signals are heard and recorded.

**UAD MON –** UAD Console inputs are recorded without processing (dry). The UAD-processed signals are heard, but not recorded.

**Important:** UAD plug-in processing in UAD Console's Unison insert and auxiliary inserts are always recorded in the DAW, regardless of the current Insert Effects setting (Unison and aux insert processing is always recorded).

Individual Channel Insert Effects Switch

This switch determines whether or not Realtime UAD Processing occurring within an individual UAD Console input is routed to the associated DAW input. For additional details, see Global Insert Effects Switch.

**Tip:** Insert Effects can be switched for all channels simultaneously with the Global Insert Effects switch.

Two channel insert effects switches are available in Console's inputs. Both switches are visible when the Inserts row is open. The smaller indicator switch is visible when the Inserts row is closed. Click either switch to change the REC/MON state.

## Global UAD REC (record with effects)

When Insert Effects are record-enabled (UAD REC lit), Apollo's channel input signals are processed by UAD Console's standard UAD plug-in inserts before being routed into the DAW.

In this mode, the post-insert (wet) state of all UAD Console inputs with Realtime UAD Processing is routed to the DAW inputs.

**Tip:** Use this setting to record all channels "wet" with Realtime UAD Processing.

## Global UAD MON (monitor with effects)

When Insert Effects is not record-enabled (UAD MON lit), Apollo's channel input signals are routed directly into the DAW before being processed by UAD Console's standard UAD plug-in inserts.

In this mode, the pre-insert (dry) state of all UAD Console inputs is routed to the DAW inputs, even if Realtime UAD Processing is occurring in the monitor mix.

**Tip:** Use this setting to record "dry" when Realtime UAD Processing is active.

## UAD REC and UAD MON (mixed state)

When both switches are lit YELLOW, some individual channels are recorded with insert processing and some are recorded dry, as determined by the individual Channel Insert Effects switches. You can click one of the global insert effects switches to override the individual channel insert effects settings.

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Website: https://help.uaudio.com/hc/en-us/articles/25350560618516-Inserts-Browser

# Insert Browser

Clicking any empty insert slot displays the Inserts Browser. Click any available UAD plug-in from the browser to load the plug-in into the insert.

## Adding Plug-Ins

When you click on an insert, your list of supported UAD-2 plug-ins opens in the Inserts browser. For example, only Unison plug-ins appear when you click a Unison insert.

Click on any plug-in to add it to the insert. Note that you can only add a Unison-enabled plug-in in the Unison insert.

The list of plug-ins in the browser changes depending on the context. Plug-ins are organized into two folders:

- **Universal Audio** displays your available plug-ins, including plug-ins that are licensed and plug-ins that still have available demos. Plug-ins that have available demos appear at the bottom of the list.
- **Universal Audio [inactive]** includes plug-ins that are not licensed and no longer have an available demo.

## Search Bar

You can easily search for and choose plug-ins in the Inserts browser. To search for a plug-in, after you click on an insert to open the plug-in browser, begin typing. As you type the browser shows the search results.

You can navigate through the list of plug-ins and apply plug-ins using the up and down arrow keys. As you select a plug-in, it is loaded into the insert.

## Categories

UAD plug-ins are organized into categories. Categories run across the top of the plugins list, and allow you to view a subset of plug-ins. You can expand and close the list of categories by clicking the disclosure triangle next to Categories.

Click a category to see plug-ins for that category. Deselect all categories to see all plug-ins.

## Favorites

You can favorite plug-ins, and filter the list of plug-ins by your favorites.

- To favorite a plug-in, hover over the plug-in name, and click the star to the right of the plug-in.
- To unfavorite a plug-in, hover over the plug-in and click the favorite star again.
- To show only favorites in your plug-in list, click Favorites.

## Edit a Plug-In

If the insert already contains an assigned plug-in, clicking the insert opens the Plug-In Editor Window, where plug-in controls can be adjusted.

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Website:    https://help.uaudio.com/hc/en-us/articles/25350616902548-Plug-In-Editor-Window

## Plug-In Editor Window

Click any insert that contains a plug-in to open the editor window, where UAD plug-in parameters can be adjusted and/or plug-in presets are managed. In Small view, click in the center of the plug-in insert.

Multiple editor windows can be open simultaneously. By default, each opened editor window is offset so one window doesn't completely cover another.

**Tip:** To open each editor window at the same screen location, shift+click the insert.

## Title Bar

The editor window's title bar is displayed at the top of each editor window.

**UAD Console Input –** The UAD Console input containing the insert is displayed.

**UAD Console Insert –** The insert slot number (1 – 4) or Unison is displayed.

**Close –** Closes the editor window.

## UAD Toolbar

The UAD Toolbar is located at the top of every UAD plug-in window. This toolbar contains convenient features that you can use with every UAD plug-in.

## Previous/Next Preset

Use the < > buttons to quickly select the previous or next preset in the Preset Browser without opening the browser window.

**Preset Title**

The active preset title is displayed here. If the preset settings have been modified, the title is displayed in italics.

**Tip:** Click the preset title to open the Preset Browser.

## Power/Bypass

Use the power button to compare plug-in processing with the original sound. To enable or disable audio processing, click the button above the plug-in's controls. When power is highlighted, the plug-in is enabled and processing audio. When not highlighted, the plug-in is bypassed.

Power is a soft bypass, equivalent to toggling the power button in the plug-in. This method keeps the plug-in loaded on DSP to prevent audio interruptions when toggling. When the plug-in is bypassed with the DAW's bypass control, the plug-in is unloaded from DSP which can cause playback glitches.

## Copy/Paste Settings

Use Copy and Paste to copy settings from the plug-in and paste them to a different instance of the same plug-in. You can use this to copy and paste settings between instances of the same plug-in within a session.

### Settings Compatibility

You can load/save and copy/paste settings between the same UAD plug-in title, as well as load/save/copy/paste between SE and standard plug-ins of the same title (for example, between Neve 33609 and Neve 33609SE).

**Note:** Presets and settings between Legacy titles and their newer equivalents with the same title are not compatible (e.g., Fairchild 670 Legacy and Fairchild 670).

## Plug-In Options

Click the **UAD-2 ●●●** button to open the plug-in options menu.

## Resize Plug-In

Select a resize value, from 75% – 200%, to immediately resize a plug-in.When you resize a plug-in, that resize level is shared immediately between all instances of that plug-in.

Choose Apply to All to immediately apply the current plug-in's resize level to all plug-in titles.

To reset all UAD plug-ins to the default size, choose the 100% option, then choose Apply to All. All UAD plug-ins are resized to their original size.

## Help & Video

Select Help & Video to access documentation and tips for the plug-in. You can then choose to open the online documentation page or a short video. The video gives quick tips on the operation of the plug-in, and the documentation page details the operation and controls of the plug-in.

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Website: https://help.uaudio.com/hc/en-us/articles/28354758319892-Plug-In-Scenes

## Plug-In Scenes

Plug-In Scenes provide a simple settings management tool that allows you to rapidly change plug-in settings across all of your UAD Console channels. With Plug-In Scenes, you can switch between Plug-In Scenes manually or by sending MIDI messages to UAD Console.

## What is a Plug-In Scene?

The main feature of Plug-In Scenes is the ability to recall plug-in settings quickly. A Plug-In Scene is a collection of settings applied across the plug-ins in your UAD Console session. Up to 128 Plug-In Scenes can be saved and recalled to capture and apply plug-in parameter changes across your UAD Console session. A Plug-In Scene can also be Primed (queued) before it is loaded.

When you save a Plug-In Scene, plug-ins that are included in the scene are highlighted with a pink bar under the plug-in icon or nameplate.

## Plug-In Scenes features

Plug-In Scenes recall settings within plug-ins. The following items can be saved and recalled with a Plug-In Scene:

- Parameter settings within a plug-in
- On and off or bypass states (with the switch within a plug-in, not the plug-in's global toolbar)
- UAD Console Tempo setting

**Notes**

- Preamp controls for a Unison plug-in in the Unison insert (48v, Pad, Polarity, and Low-Cut Filter) are not saved and recalled within a Plug-In Scene
- Plug-In Scenes don't add or remove plug-ins dynamically. See Adding and removing plug-ins from Plug-In Scenes for more information.
- UAD Console settings including faders, sends, cues, solos, mutes, and other controls are not recalled in Plug-In Scenes.You can use Console Session files to save and recall complete Console configurations (Console Sessions cannot be recalled via MIDI)

## Showing the Plug-In Scenes browser

There are four ways to show the Plug-In Scenes browser.

- Click the PLUG-IN SCENES switch to toggle the Plug-In Scenes browser. Plug-In Scenes are visible when the switch is illuminated. The PLUG-IN SCENES switch is only visible when the Mixer Navigation section is visible (View > Section > Mixer Navigation)

- Choose View > Section > Plug-In Scenes from the UAD Console menus
- Press Command + E (macOS) or Ctrl + E (Windows) to toggle the Plug-In Scenes browser
- Click the SCENE area in the info bar at the bottom of the UAD Console screen to toggle the Plug-In Scenes browser

## Using Plug-In Scenes

Plug-in Scenes initially appear as a list of empty scenes in the Plug-In Scenes browser.

## Saving Plug-In Scenes

After you have added the plug-ins you want in your Plug-In Scene configuration, save the first scene. Click on an empty scene, then click Save, or press Option+Command+S (macOS) or Alt+Ctrl+S (Windows). The scene is saved with the name Scene #[number].

The plug-ins that are included in the Plug-In Scene are indicated with pink highlights below the insert plates.

As you make changes to plug-in settings for different audio scenarios, save those changes in other Plug-In Scenes. When you have made changes to plug-in settings within a Plug-In Scene, the Scene name is italicized and prefixed with an asterisk (*).

You can save changes to an existing Plug-In Scene or an empty Plug-In Scene with these methods:

- Select a Scene and click Save. The current plug-in settings are saved to the Plug-In Scene you selected
- Select a Scene and Press Command + Option + S (macOS) or Ctrl+Alt+S (Windows)
- Right-click the current (italicized) Plug-In Scene and choose Save Scene
- Right-click an existing Plug-In Scene and choose Overwrite. Overwrite is not available with Empty Scenes. Overwriting a Plug-in Scene also renames it with the current Plug-In Scene name.

After changes are saved to a Plug-In Scene, the Plug-In Scene name is no longer italicized or prefixed with an asterisk.

**Tip:** Remember to select a new Plug-In Scene after you make plug-in parameter changes and before you save, to avoid overwriting your current Plug-In Scene.

## Renaming a Plug-In Scene

You might find it useful to give Plug-In Scenes names to indicate their function, role in a performance, or settings information.

**To rename a Plug-In Scene:**

- Right-click the Plug-In Scene, choose Rename, type a new name, then press Enter or Return
- Double-click the Plug-In Scene and type a new name, then press Enter or Return

## Clearing a Plug-In Scene

Clear a Plug-In Scene to remove any plug-in parameters from that scene, and set the scene as an Empty Scene.

**To clear a Plug-In Scene:**

- Right-click the Plug-In Scene in the list, and choose Clear

## Adding and removing plug-ins from Plug-In Scenes

When you save a Plug-In Scene, all currently instantiated plug-ins are saved in that Plug-In Scene.

### Adding a plug-in to a Plug-In Scene

When you add a plug-in to UAD Console after a Plug-In Scene is saved, the new plug-in is not saved in any scene unless the scene is saved again. However, the newly added plug-in and its settings remain in place, even if a different scene is subsequently loaded.

**Important:** You must re-save every Plug-In Scene in which you want to include the added plug-in. Otherwise, the plug-in retains only the settings from the last Plug-In Scene in which it was recalled, or its static settings if it is never saved in a Plug-In Scene.

### Removing a plug-in from a Plug-In Scene

When you remove a plug-in after a Plug-In Scene is saved, that plug-in is removed from every Plug-In Scene in the active Console Session. A warning dialog appears when you attempt to remove any plug-in that is currently used in a Plug-In Scene.

**Note:** The Plug-In Scene continues to recall plug-in parameter changes for any remaining plug-ins. Deleting one or more plug-ins from a Plug-In Scene does not clear the Plug-In Scene.

**Tip:** If you choose the "Don't show again" option in this dialog, you can reset these "don't show" options by clicking Reset in Settings > Options > Don't Show Again Dialogs.

## Recalling Plug-In Scenes

The main feature of Plug-In Scenes is the ability to recall plug-in settings quickly. To do this, you can recall Plug-In Scenes manually or via MIDI messages.

**Active Plug-In Scene**

The Plug-In Scenes browser indicates the active Plug-In Scene in the CURRENT field.

**Primed Plug-In Scene**

When you select a Plug-In Scene that is not the current active scene, it appears in the PRIMED field.

**Recalling a Plug-In Scene manually**

To recall a Plug-In Scene, select it in the browser. The Plug-In Scene is now listed in the PRIMED field. Press the Recall button to recall the scene, or press Enter or Return on your keyboard.

The new Plug-In Scene is loaded and your plug-in settings are applied, and the PRIMED field now lists (NONE).

You can use the up/down arrow keys on the keyboard, or the up/down buttons on the Plug-In Scene browser, to navigate through the list of Plug-In Scenes.

**Recalling Plug-In Scenes with MIDI**

You can recall Plug-In Scenes with MIDI messages. When recalling a Plug-In Scene via MIDI, the settings for the selected Plug-In Scene are instantly loaded, and do not need to be primed and recalled.

To change Plug-In Scenes with a MIDI controller

- Connect your MIDI controller to your computer.
- In UAD Console, click the Settings button to open the Settings window, then click the MIDI tab.
- From the Device list, select the desired MIDI device that will send Plug-In Scene changes.
- To change the MIDI channel on which MIDI events are sent, type a value in the PLUG-IN SCENES CHANNEL field, then press Enter or Return.

- Select the event that will change Plug-In Scenes from the PLUG-IN SCENES EVENT list. If you select Note and you are using the same MIDI channel for Plug-In Scene Changes as for Tap Tempo Events, a warning message appears.

After you have configured MIDI settings, you can send MIDI messages with your controller to quickly change Plug-In Scenes. The Plug-In Scene switches instantly when UAD Console receives the MIDI message, with no need to recall or Prime.

- If the controller is sending MIDI Program Change messages, Scenes 1–128 correspond to MIDI program change messages 0–127. Your controller may label these as 0–127 or 1–128, so it is important to check that your scenes are switching correctly.
- If the controller is sending Note data, Scenes 1-128 correspond to MIDI notes C(-1)–G(9).

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Website: https://help.uaudio.com/hc/en-us/articles/25350711003924-Using-UAD-Plug-In-Presets

## UAD Plug-In Presets

UAD plug-ins include a preset browser that provides deep and comprehensive ways to work with presets.

Click the preset name (for example, Default) in the UAD Toolbar to open the preset browser. When the preset browser is open, the search bar takes keyboard focus so you can find presets and tags.

**Note:** Preset Tags are not currently available.

To close the preset browser, press the Esc key.

## Using a preset

Click a preset to load it.

## Navigating presets

Press the up and down arrow keys to navigate through the list of presets and load presets.

## Searching for a preset

To search for a preset by name or tag, type in the search bar. The list of presets is filtered as you type. Press Enter to use the first preset in the list, or navigate up/down with the arrow keys, then press Enter.

## Setting a default preset

You can set a default preset that will load automatically when you instantiate a UAD plug-in.

- To set a default preset, right-click/ctrl-click the preset name and choose Set Default Preset to [preset name]. The current default preset includes [DEFAULT] after the preset name.
- To clear the default preset, right-click/ctrl-click the preset name and choose Clear Default Preset.

## Favoriting presets

You can favorite presets, and filter the list of presets by your favorites.

- To favorite a preset, hover over the preset name, and click the star to the right of the preset name, or right-click the preset name and choose Favorite.
- To unfavorite a preset, hover over the preset name, and click the favorite star again, or right-click the preset name and choose Unfavorite.
- To show only favorites in your preset list, click Favorites in the Tags bar.

## Working with User Presets

You cannot edit, delete, or move factory presets. However, you can edit a factory preset and save it as a user preset. You can organize user presets into folders, import user presets, and locate and share user presets from your system. Preset files can be shared between macOS and Windows operating systems. When you load a preset into the system, it is automatically added to the user preset list in the plug-in preset manager.

## Editing presets

You can edit a preset you have loaded in a UAD plug-in, and save that preset with the Preset browser.

You can also delete and rename presets that you have created. If you save changes to a factory preset, the preset is saved as a user preset with the same name. Factory presets cannot be edited.

**To save a UAD plug-in preset:**

- Select a preset.
- Make changes to the plug-in as required. If the preset browser is not open, click the preset name to open the preset browser, then click Save. The Save dialog opens.
- Click Save to save the changes to the existing preset. To save the preset with a new name, type a name for the preset, then click Save As.

If you save a preset that is based on a factory preset, the preset is saved in the User list with the original preset name. You cannot overwrite factory presets.

**To rename a preset:**

- Select a preset from the User list, and click Rename, or right-click on the user preset and choose Rename. The rename dialog opens.
- Type a new name for the preset and click Rename.

The preset is renamed. Factory presets cannot be renamed.

**To delete a preset:**

- Select a preset from the User Presets list, and click Delete, or right-click on the user preset and choose Delete.
- The Delete dialog appears. Click Delete again.

The preset is deleted from the User Presets list. Factory presets cannot be deleted.

## Sharing user presets between systems

UAD plug-ins make it easy to find and share user presets. You can locate a user preset on the file system, and you can manually install presets to the plug-in's user presets location. You can use this feature to share presets with another user or between machines.

**To locate a user preset:**

- Right-click on the user preset and choose "Show in Finder" (Mac) or "Show in Explorer" (Windows). A window opens with the preset selected. UAD plug-in presets can be freely shared between macOS and Windows systems.

**To import a preset:**

- Place the preset file in the location that opens when you select "Show in Finder" (Mac) or "Show in Explorer" (Windows).
- Close and open the plug-in preset browser to show the new presets.

## Organizing user presets

You can organize user presets into folders.

**Note:** You must have created one or more user presets to create a preset folder.

**To create a user preset folder:**

- Right-click on a user preset or on the user presets folder, and choose New Folder.
- Type a name for the folder, and click New Folder.

You can save presets from within folders, or organize the presets into the folders on your computer operating system's file system, and they will appear with the folder organization within the plug-in. You can also click on a User folder, then save a preset, to save the preset in that folder.

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Website: https://help.uaudio.com/hc/en-us/articles/25350821938580-Channel-Strip-Presets

# Channel Strip Presets

A Channel strip preset is a complete collection of plug-ins within a single channel, and all parameter settings within those plug-ins. Channel strip presets are saved as a disk file so they can be subsequently recalled into the same or a different channel. Channel strip preset files have the ".uadchannel" suffix.

**Tip:** To open the Channel strip preset browser, click the + next to the Inserts label on a mixer channel, or right click the channel label and choose Channel Presets.

**Channel Strip Presets Folder**

All channel strip presets reside in the Channel presets folder.

Note: Channel strip presets can only be saved to the Channel strip presets folder.

**Channel Strip Presets Sub-Folders**

The Channel Strip presets folder can contain one level of sub-folders for additional channel strip preset organization capability. The contents of sub-folders (if any) is displayed in the SUB-FOLDER column when a folder in the CHANNEL PRESET column is selected.

**Load, Save, Rename, Delete Channel Strip Presets**

Channel Strip Preset files can be manipulated using the same methods as Plug-In Preset files.

Website: https://help.uaudio.com/hc/en-us/articles/26485044036756-Unison

# Unison

## What is Unison?

Unison™ is Universal Audio's exclusive analog/digital integration system that's built into every Apollo microphone preamplifier. It's the first and only way to truly emulate classic analog mic preamp, guitar amp, and pedal behaviors in an audio interface.

Unison is an audio processing breakthrough that starts right at the source, the input stage, allowing Apollo's mic preamps to sound and behave like the world's most sought-after tube and solid state preamps, guitar amps, and pedals — including

their all-important impedance, gain stage "sweet spots," and component-level circuit behaviors.

Apollo's mic preamps are designed for high resolution, ultra-transparent translation from microphone to converter. This clean hardware design is the foundation for adding software color with UAD realtime plug-in processing.

Unison-enabled UAD-2 preamp, guitar amp, and pedal plug-ins reconfigure the physical input impedance, gain staging response, and other parameters of Apollo's mic preamp hardware to match the emulated hardware's design characteristics.

Because the hardware and software are intricately unified, Unison provides continuous, realtime, bidirectional control and interplay between Apollo's physical mic preamp controls and the software settings in the Unison plug-in window.

Controls on Apollo's front panel dynamically adjust the Unison plug-in's parameters to match the target preamp/guitar amp/pedal behavior. Correspondingly, changing a setting in the Unison plug-in window will modify Apollo's front panel settings.

Because Unison can be active on more than one mic channel, a complement of premium emulated hardware is available concurrently.

## Unison Features

Unison technology enables these Apollo features via UAD Console, all with Realtime UAD Processing:

- Alternate microphone preamplifier sound – Apollo's ultra-transparent mic preamps inherit all the unique sonic and input characteristics of the emulated hardware preamp, guitar amp, or pedal, including the mic, line, and Hi-Z inputs.
- Realistic tandem control – Unison facilitates seamless interactive control of Unison preamp plug-in settings using Apollo's digitally-controlled hardware and/or the plug-in window. All equivalent preamp controls (gain, pad, polarity, etc) are mirrored and bidirectional. The preamp controls respond to adjustments with precisely the same interplay behavior as the emulated hardware, including gain levels and clipping points.

- Hardware input impedance – All Apollo mic preamps feature variable input impedance in analog hardware that can be physically switched by Unison plug-ins for physical, microphone-to-preamp resistive interaction. This impedance switching enables Apollo's preamps to physically match the emulated unit's input impedance, which can significantly impact the sound of a microphone. Because the electrical loading occurs on input, prior to A/D conversion, the realism is faithful to the original target hardware preamp.
- Tactile gain staging – Apollo's hardware preamp knob can independently adjust all gain and level parameters available within the Unison plug-in via Gain Stage Mode. The gain stage being adjusted can be remotely switched via Apollo, so multiple gain levels and their associated colorations can be tuned from the hardware knob for precise physical tactile control, all without using the Unison plug-in's software interface.

## Unison Plug-Ins

**Note:** In all descriptive text, "Unison plug-in" is defined as any Unison-enabled UAD mic preamp plug-in, UAD guitar/bass amp plug-in, or UAD pedal plug-in.

Unison-enabled UAD plug-ins are uniquely coded for Unison integration. Only UAD plug-ins that are Unison-enabled can be loaded in UAD Console's Unison insert.

## Activating Unison

Unison is activated by inserting any Unison-enabled plug-in into the special Unison insert available on all Apollo mic preamp channels in UAD Console and LUNA. Click the UNISON insert to select a Unison-enabled plug-in from the plug-in browser.

**Tip:** Unison can be active on more than one preamp channel.

### Unison Insert Location

The Unison insert is located between the preamp gain knob and the standard channel inserts, and labeled UNISON.

**Note:** To see the Unison insert, Inputs must be enabled in the Mixer Navigation section.

## Unison Availability

Unison inserts are available on UAD Console and LUNA input channel strips with Apollo models that feature microphone preamplifier inputs.

The Apollo Twin X Gen 2 interface includes Unison preamp input channels on inputs 1 and 2.

## Unison Processing

**Important:** Unison processing in the Unison insert is always active on the channel's input signal, regardless of any subsequent channel routing options (Flex Routing, DAW I/O, etc). Therefore Unison processing is always recorded in the DAW, even if UAD Console's Insert Effects switches are set to MON.

### Unison plug-ins in channel inserts

UAD plug-ins that support Unison can also be loaded and used in any standard inserts available on all UAD Console input channels and/or within a DAW via VST/AU/AAX 64 (as with any UAD plug-in). However, there is no physical or electrical hardware interaction with channel inserts, so Unison plug-ins operate like other (non-Unison) UAD plug-ins in this configuration.

**Important:** Unison features are available only when Unison-enabled UAD plug-ins are loaded within UAD Console or LUNA in the dedicated Unison inserts.

## Unique Behavior of Unison Inserts

UAD Console's Unison inserts have some operational differences compared to standard inserts, as described below.

**Available UAD plug-ins**

Only Unison plug-ins are available for selection from the insert browser when loading UAD plug-ins into the Unison insert. Non-Unison plug-ins are not visible in the insert browser with Unison inserts.

**Notes**

- All available Unison plug-ins are installed during the normal UAD Powered Plug-Ins software installation process (they are not separately installed).
- Native UADx plug-ins are not Unison-enabled.

**Disabled Unison plug-ins**

When a Unison plug-in is unintentionally disabled (for example, when UAD-2 DSP resources are exceeded upon insertion), the red disabled indicator (see Insert State Indicators) does not appear as it does with non-Unison plug-ins. However, in this situation (unlike standard UAD-2 plug-ins) the following indications do occur:

The power switch within the Unison plug-in window is switched off.

The Unison insert's enable button is switched off.

Apollo's front panel preamp gain level indicator color reverts to green.

**Note:** The above functions can be re-enabled after adequate UAD resources are made available.

**Line Input Gain Bypass (Apollo 8, x8, 8p, x8p)**

When a Unison plug-in is active on a line input and Line Input Gain for the preamp channel is set to BYPASS in UAD Console Settings, the Unison plug-in is disabled. All preamp functionality is disabled with Line Input Gain Bypass. For related information, see Line Input Gain (Apollo 8, 8p, x6, x8, x8p).


## Controlling Unison Plug-Ins with Apollo Hardware

When a Unison plug-in is inserted in UAD Console's Unison insert, Apollo's hardware preamp controls and the Unison plug-in's equivalent preamp controls are

mirrored. Adjusting Apollo's hardware preamp controls adjusts the Unison plug-in's preamp controls, and vice versa.

**Apollo Hardware Indication**

### Unison Active:

When a Unison plug-in is inserted in a Unison insert and Apollo's hardware channel select function is set to the same channel, the color of Apollo's front panel preamp gain level indicator (the LED ring around the knob) is orange instead of green.

**Note:** Apollo's hardware channel selection indicator must match the Unison-enabled channel to see the front panel Unison indication.

The orange-colored ring indicates that the currently selected preamp channel is using a Unison plug-in within UAD Console, and that Apollo's hardware knob is controlling the first gain stage of the preamp plug-in (with pedal plug-ins, the knob is controlling the primary effect parameter, e.g., distortion).

### Additional Gain Stages:

More than one gain parameter within the Unison plug-in can be adjusted using Apollo's hardware knob by activating Gain Stage Mode. When Gain Stage Mode is active, the color of Apollo's gain level indicator, and the target parameter within the Unison plug-in's window, changes depending on which parameter is currently being controlled by the knob, and the parameter being controlled can be navigated remotely by pushing the hardware switch. See Gain Stage Mode for details.

**Plug-In Parameters**

Unison plug-ins may contain parameters that are unavailable for hardware control via Apollo. For example, the UA 610-B has EQ settings, but there are no EQ controls on Apollo's hardware. To adjust these extra parameters, the Unison plug-in window must be used.

**UAD Console Indications**

**Gain Level Indicator:**

When Unison is active in the channel, the color of UAD Console's preamp gain level display (the colored ring around the gain knob), and the channel selection dot on the gain knob, is orange instead of green.

If the Unison plug-in is inactive (either via the insert disable switch or the power switch in the plug-in window), the color reverts to green.

**Note:** UAD Console's preamp gain control only adjusts the first gain stage of any Unison preamp plug-in, even when Apollo is in Gain Stage Mode.

**Gain Level Display:**

The preamp gain level display (the gain value readout under the knob) shows the current value of the main parameter within the Unison plug-in. Additionally, the display is adapted to the parameter value and range of the first gain stage within the plug-in.

For example, when the UA 610-A Tube Preamp plug-in is in the Unison insert, this field displays either "Hi" or "Low" because these are the only two values available in the first gain stage of this plug-in.

**Notes**

The readout under the knob is only visible when you are adjusting the knob.

This display shows "---" if Apollo hardware is not detected when a Unison plug-in is in the Unison insert and the insert is not disabled.

## Hardware Selection Switch

A switch on the Apollo hardware unit can be used to change the currently selected channel when in Channel Select Mode, or the Unison plug-in preamp parameter when in Gain Stage Mode. The switch used to change these functions depends on the Apollo model, as described below:

- Apollo Solo, Apollo Twin MkII, Apollo Twin X, Apollo x4 – Pressing the hardware PREAMP button changes the currently selected channel when in Channel Select Mode, or the Unison plug-in preamp parameter when in Gain Stage Mode.
- All models except Apollo Twin MkII, Apollo Twin X, Apollo x4 – Pressing the hardware rotary level knob changes the currently selected channel when in Channel Select Mode, or the Unison plug-in preamp parameter when in Gain Stage Mode.

**Channel Select Mode (standard operation)**

Hardware channel selection determines which input channel can be adjusted with Apollo's hardware preamp controls. This is the standard behavior when a channel is not in Unison mode (hardware channel selection is unrelated to Unison functionality).

The method used for hardware channel selection depends on the specific Apollo hardware model (see Hardware Selection Switch). The method for each model is described briefly below, in order to differentiate the standard behavior from the Unison behavior.

**Note:** Standard channel selection is also explained in the hardware manual for each Apollo model (the channel selection methods are used without Unison).

### Apollo Rack Models:

Pressing the hardware rotary level knob cycles the selection of Apollo's available preamp channels. A channel is selected for adjustment when its channel select indicator LED (located above the channel input meters) is lit. If stereo linking is active, the stereo pair LEDs are lit.

### Apollo Desktop Models:

These methods are used for hardware channel selection with Apollo Solo, Apollo Twin and Apollo x4:

- Preamp Button – After the PREAMP button has been pressed at least once to switch the unit to Input mode, pressing the PREAMP button alternates the currently selected input channel (e.g., CH1 or CH2).

- Level Knob (first generation silver model only) – After the PREAMP button has been pressed at least once to switch the unit to Input mode, pressing the Level knob alternates the currently selected input channel (e.g., CH1 or CH2).

An Apollo desktop channel is selected for adjustment when its channel selection indicator LED (CH1 – CH4, above the hardware input meters) is lit. If stereo linking is active, both indicator LEDs of the paired channels are lit.

**Gain Stage Select (Unison operation only)**

When the currently selected Apollo channel is in Gain Stage Mode, pushing the rotary level knob (all rack models and Twin MkI) or the PREAMP button (Solo, Twin MkII, Twin X, and Apollo x4) changes the Unison plug-in's parameter that is being controlled.

The color of Apollo's front panel preamp gain level indicator (the LED ring around the knob) changes to reflect the gain stage being controlled, and the gain stage is also indicated by the matching color of the indicator outline within the Unison plug-in's window. For complete details, see Gain Stage Mode.

## Gain Stage Mode

Unison plug-ins have either two or three gain parameters. By activating Gain Stage Mode, each of these preamp plug-in gain stages can be independently adjusted using Apollo's hardware rotary level knob.

**Note:** Gain Stage Mode can only be active on one preamp channel (or one stereo linked pair) at a time.

Initially, when Unison is activated (before entering Gain Stage Mode), Apollo's hardware rotary level knob controls the first gain parameter within the Unison plug-in. However, when Gain Stage Mode is active, pressing Apollo's Hardware Selection Switch cycles through the available gain parameters in the plug-in.

**Activating Gain Stage Mode**

To enable Apollo's Gain Stage Mode when using a Unison plug-in:

- In UAD Console, confirm a Unison plug-in is inserted in the Unison insert of the Apollo preamp channel to be controlled.
- On Apollo's hardware, select the preamp channel to be controlled using the standard method for your hardware model (for methods, see Hardware Selection Switch).
- Press AND HOLD Apollo's Hardware Selection Switch for at least two seconds.

The state of Gain Stage Mode is indicated on Apollo's hardware and in the Unison plug-in, as detailed below.

**Gain Stage Mode – Apollo Hardware Indication**

Apollo's hardware channel selection indicator LED flashes when Gain Stage Mode is active for the currently selected preamp channel. The indication varies with the specific Apollo model.

**Apollo Rack Models:**

The channel selection number LED above its input meter flashes when Gain Stage Mode is active, as shown below.

**Apollo Desktop Models:**

The channel selection number LED (e.g., CH1 or CH2) above the input meters flashes when Gain Stage Mode is active, as shown below.

**Gain Stage Mode – Unison Plug-In Indication**

A colored outline appears within the Unison plug-in window on the target parameter being controlled, as shown below.See Gain Stage Colors for related information.

**Deactivating Gain Stage Mode**

Gain Stage Mode can be deactivated with any of these methods:

- Press and hold Apollo's Hardware Selection Switch for at least two seconds (desktop models must be in Input mode by pressing the PREAMP button at least once)
- Disable the Unison plug-in via the plug-in editor window within UAD Console
- Disable the Unison plug-in via the on/off parameter within the plug-in window
- Remove the Unison plug-in from UAD Console's Unison insert

When Gain Stage Mode is deactivated, the following changes occur:

- The gain stage select function (pushing the Hardware Selection Switch) reverts to the channel select function
- The channel selection indicator on Apollo's hardware panel stops flashing
- If a gain stage other than the first gain stage was being controlled, Apollo's gain level knob reverts to control of the first gain stage of the Unison plug-in, and the level indicator color reverts to orange.

## Controlling Individual Gain Stages

### Selecting Gain Parameters For Control

When the currently selected Unison plug-in channel is in Gain Stage Mode (when its channel selection indicator is flashing), push Apollo's Hardware Selection Switch to cycle through the available gain parameters within the Unison plug-in.

**Note:** Unlike Apollo's hardware rotary knob, UAD Console's preamp gain control only adjusts the first gain stage of any Unison plug-in when Apollo is in Gain Stage Mode. To adjust other gain stages from within UAD Console, use Apollo's hardware rotary knob or the Unison plug-in's window.

**Gain Stage Colors**

The gain stage being controlled is indicated by unique, matching indicator colors on Apollo's front panel and within the Unison plug-in's window.

The color of the gain level indicator on Apollo's hardware panel (the LED ring around the knob) changes with each gain stage, and the matching color outline within the Unison plug-in's window moves to the targeted parameter being controlled.

The gain stages available for control, and their associated colors, are:

- Orange – Gain stage one; the Gain parameter
- Yellow – Gain stage two; the Level parameter
- Green – Gain stage three, the clean (non-modeled) output control

**Note:** Some Unison plug-ins have only two gain stages.

**Matching Gain Stage Indicators**

In Gain Stage Mode, Apollo's preamp level indicator (the colored ring around the rotary knob) matches the colored outline on the target gain parameter in the Unison plug-in's window, as shown below. The hardware and software controls are mirrored and the gain stage can be adjusted using either control.

The color of Apollo's preamp gain level indicator changes to reflect the gain stage being controlled

**Available Gain Stages**

Unison plug-ins have up to three gain stage parameters. With Unison plug-in that contain two gain parameters, only the available gain parameters are cycled and controlled in Gain Stage Mode.

**Note:** For details about the unique gain stage parameters available within individual Unison plug-in titles, refer to the UAD Plug-Ins Manual or individual plug-in manuals.

**Multi-Unit Operation**

To control a Unison plug-in with Gain Stage Mode in a system containing multiple Apollo units, the hardware controls on the unit containing the preamp channel must be used.

For example, to control a Unison plug-in inserted in an Apollo x8 preamp channel, the Apollo x8 hardware knob must be used. To control a Unison plug-in in an Apollo Twin X preamp channel, the Apollo Twin X hardware must be used, and so forth.

## Unison Load/Save Behaviors

**Caution:** Apollo hardware preamp settings (including +48V phantom power) may change when UAD Console sessions are loaded. Details are explained in this section.

**Loading Unison Plug-In Settings**

When Unison plug-in settings are loaded in UAD Console, the effect upon the currently active Unison plug-in settings varies depending on how the settings are loaded. It is important to understand the distinction, because critical preamp settings can be affected.

**Note:** When Unison plug-ins are used in Console's standard inserts and/or within a DAW, this section does not apply. Settings load behavior outside of the Unison insert is like all other (non-Unison) UAD plug-ins.

There are two ways Unison (and non-Unison) plug-in settings can be loaded in UAD Console:

- **Plug-In Presets** – UAD presets are loaded whenever a UAD plug-in is inserted (the default preset loads). Presets can be loaded from disk files via the Preset Browser. Preset files are used to save and load all settings of individual plug-in titles.
- **UAD Console Sessions** – UAD Console sessions are loaded from disk via the Sessions Browser, the UAD Console Recall plug-in in a DAW, or by double-clicking UAD Console session files on disk. UAD Console sessions are

complete Apollo configurations, containing all hardware and plug-in settings (effectively., UAD Console sessions are UAD Console presets).

**Loading Presets: Hardware settings are inherited**

Apollo's hardware preamp settings always override a Unison plug-in's settings when a preset is loaded or the plug-in is inserted. This is done to prevent the plug-in's settings from switching the hardware to values that could cause extreme level changes and/or other unwanted circuit changes such as +48V phantom power.

For example, if the PAD is ON in the Apollo preamp, when the Unison preset is loaded, the pad setting in the plug-in is enabled to prevent unexpected level increases.

**Loading Sessions: Hardware settings are overridden**

UAD Console sessions always override Apollo's preamp settings, even if potentially harmful preamp settings are contained in the session file. This is done because the very concept of UAD Console session recall is to reproduce all settings in the session.

For example, if the PAD is ON in the Apollo preamp, when the UAD Console session is loaded, the pad setting in the plug-in is disabled and sensitive equipment could be affected, such as speakers (level increases) and/or ribbon mics (+48V phantom power).

# Unison Operation Notes

The operating notes in this section only apply to Unison functionality (when a Unison plug-in is loaded in UAD Console or LUNA's dedicated Unison insert).

The notes do **not** apply to Unison plug-ins that are used in UAD Console's standard inserts, or via VST/AU/AAX 64 within a DAW, even when a Unison plug-in title is used. In this scenario, Unison plug-ins function the same as all standard (non-Unison) UAD plug-in titles and there is no physical or electrical hardware interaction.

**Important:** Unison functionality is available only when Unison-enabled UAD plug-ins are loaded within UAD Console or LUNA in the unique Unison inserts.

- When a UAD Console session is loaded (via the Sessions Browser, the UAD Console Recall menu, DAW sessions containing the UAD Console Recall plug-in, or double-clicking UAD Console or LUNA files on disk), ALL UAD Console settings are overridden (changed) by the saved session, including all Apollo hardware input settings such as +48V and PAD. See Loading Sessions: Hardware settings are overridden for additional details.

- Unison insert processing is always recorded in the DAW (regardless of the current Channel Insert Effects setting) because Unison plug-ins process the physical inputs.

- Apollo's hardware preamp controls remain active even if the Unison plug-in is disabled.

- Changes made to the hardware preamp when a Unison plug-in is bypassed are not retained when the plug-in is reactivated.

- A Unison plug-in's modeled behaviors and parameter ranges are used by the hardware controls whenever possible, even if the attribute is different from Apollo's stock preamps. For example, if the Unison plug-in has a 15 dB pad, then Apollo's front panel PAD button value will use the Unison plug-in's 15 dB value instead of Apollo's stock 20 dB value.

- Default gain levels when a Unison plug-in is inserted can vary from Apollo's default (non-Unison) preamp levels, and also between various Unison plug-in titles. This is a byproduct of accurate preamp modeling. Because hardware preamp designs from each manufacturer vary, they all have different total gain amounts, control ranges, and control response curves, and can vary based on whether the input is Mic, Line, or Hi-Z.

- If a Unison plug-in does not contain settings that are available on Apollo (pad, low cut filter, etc), the Apollo default settings are applied when the Unison plug-in settings are loaded, and the Apollo settings are still available for control via Apollo's front panel and/or the UAD Console channel.

- When a Unison plug-in is removed from the Unison insert, Apollo's mic input impedance reverts to its default value of 5.4K Ohms. When the original hardware preamp being emulated by the Unison plug-in has a Hi-Z (instrument) input and associated Hi-Z input switch, this switch is unavailable in the Unison plug-in window. Instead, the Unison plug-in's Hi-Z input is

automatically selected when a plug is inserted into the Unison channel's front panel Hi-Z input jack.

- If Apollo is disconnected from the host computer (standalone mode), the Unison plug-in can no longer be controlled from Apollo's front panel. However, the signal continues to be processed by the Unison plug-in, using the values that were active when the connection was lost. Note that if Gain Stage Mode is active when the host connection is lost, the gain stage can apparently be switched from the front panel. However, the actual gain stage being controlled does not change.

- When a channel strip preset is saved from a preamp channel, the channel strip preset contains the state of the preamp channel's Unison insert.

- When a preamp channel strip preset is loaded into a preamp channel, the Unison insert state is replaced by the Unison instance state in the preamp channel strip preset. For example, if the preamp channel strip preset's Unison insert is empty, the Unison insert will be empty after loading the preset.

- Hi-Z input impedance interaction is unavailable with first-generation (silver) Apollo rackmount models.

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Website: https://help.uaudio.com/hc/en-us/articles/25350937974676-Sends

## Sends

Each Apollo channel has two Sends (Aux 1 and Aux 2), which are routed to the two stereo auxiliary buses. Aux buses are typically used for shared effect processing (to reduce UAD resource usage) for real time monitoring with time-based effects such as reverb and/or delay. The aux mixes are adjusted via each input's aux send controls.

By default, the aux sends are post-fader and post-mute. The aux sends can be switched to be pre-fader and pre-mute. The Aux Pre / Aux Post function switch for each aux is located in its respective auxiliary bus return strip.

## Accessing Sends

To show or hide sends, click the circle next to Sends in the Mixer Navigation column on the left side of UAD Console. Sends are shown when the circle is illuminated.

## Large and Small Sends

By default, sends are shown in Small view. This view allows you to easily adjust the level for a send or to mute the send, while fitting more mixer sections on your screen.  You can expand sends, to reveal the additional pan control for the send, and to use a long-throw fader for more accurate level control.

- To expand sends, click the Large icon to the left of the send row.
- To expand all sends, click the Large switch in the Mixer Navigation section.

## Sends Overview

The Sends Overview allows you to quickly see the send and cue status of visible channels in UAD Console. Click the Sends Overview switch to toggle the Sends row between the standard appearance and Sends Overview.

You can click on any Sends Overview to open a popover window that allows you to easily control Aux and Cue levels, mutes, and panning for that send (you cannot adjust panning for Sends on stereo linked channels).

## Adjusting Send Levels

To adjust the level of the input sent to the aux bus:

- Rotate the Send knob. The send level is shown while you engage the knob.

- Double-click the Send knob or the Aux or Cue level value in Sends Overview to open the volume popover, and type a dB value (-144 to +12), then click OK.
- When Sends are in Large view or Sends Overview is open, drag the fader to adjust the send level, or click the level at the bottom of the meter to open the Send volume popover and adjust the level. When expanded, you can also adjust the pan control.
- When Sends Overview is active, click on the overview for a channel to open the Sends Overview popover, then adjust the levels and pan controls for Aux and Cue buses by dragging the faders and adjusting the pan controls.
- To adjust any control with the mousewheel, hold Option on the keyboard, then scroll the wheel over the control.
- To mute a send, click the Mute button. This prevents any audio from the channel from being sent to the Aux destination.

## Opening and Closing the Sends Row

You can open and close the Sends row.

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Website: https://help.uaudio.com/hc/en-us/articles/25351037512340-Cues

# Cues

The cue buses are for creating mixes that are different from the main monitor mix. Cues are typically used for performers that want to hear a headphone mix that is different from the main monitor mix, or for routing individual channels or mixes to other equipment.

The cue mixes are adjusted using the cue sends on each input and aux strip. All cue sends are pre-fader and pre-mute so they are not affected by adjustments to the main monitor mix.

**Note:** By default, two cues are displayed in UAD Console (four with Apollo 16). Up to four cues are available with Apollo by increasing the Cue Bus Count in Settings > Hardware.

The complete cue system comprises the cue mix buses, the cue sends, and the cue outputs.

**Cue Mix Buses –** A cue mix bus is the summed stereo mix of individual audio signals. Signals are routed into the cue mix buses via the cue send controls, and returned from the cue mix bus via the cue outputs controls.

**Cue Sends –** The cue sends adjust the individual channel signals going into the cue mix bus. Each input channel and aux return contains individual level, pan,* and mute controls for each active cue mix bus. All cue sends are pre-fader and pre-mute so they are not affected by adjustments to the main monitor mix.

***Note:** If two input channels are stereo-linked, the cue sends on the stereo pair cannot be panned. Sends for stereo channels are hard-panned left and right.

**Cue Outputs –** Cue mix buses are returned via the Cue Outputs window, which is a matrix for routing the cues to Apollo's available hardware outputs.

**Cue Monitoring –** Available cue outputs also can be selected as a source for the main monitor outs via the Monitor Output Options, enabling any cue mix bus to be heard in the main monitor speakers.

## Accessing Cues

To show or hide Cues, click the circle next to Sends in the Mixer Navigation section at the left of UAD Console. Cues and sends are shown when the circle is illuminated.

## Large and Small Cues

By default, cues are shown in Small view. This view allows you to easily adjust the level for a cue or to mute the send, while fitting more mixer sections on your screen. You can expand Cues, to reveal the additional pan control for the cue, and to use a long-throw fader for more accurate level control.

- To expand a cue row, click the Large icon to the left of the row
- To expand all cues, click the Large switch in the Mixer Navigation section.

## Cues in the Sends Overview

The Sends Overview allows you to quickly see the send and cue status of visible channels in UAD Console. Click the Sends Overview switch to toggle the Sends row between the standard appearance and Sends Overview.

You can click on any Sends Overview to open a popover window that allows you to easily control Aux and Cue send levels, mutes, and panning for that channel (you cannot adjust panning for Sends or Cues on stereo linked channels).

## Adjusting Cue Levels

- To adjust the level of the input sent to the cue bus:
- Rotate the Cue knob. The cue level is shown while you engage the knob.
- Double-click the Cue knob to open the Cue volume popover, and type a dB value (-144 to +12), then click OK.
- When Cues are in Large view, drag the fader to adjust the send level, or click the level at the bottom of the meter to open the Send volume popover and adjust the level. If the Cue is Stereo, you can also adjust the pan control.
- When Sends Overview is active, click on the Sends Overview for a channel to open the Sends Overview popover, then adjust the levels and pan controls for Aux and Cue buses by dragging the faders and adjusting the pan controls.

- To adjust any control with the mousewheel, hold Option on the keyboard, then scroll the wheel over the control.

- To mute a cue, click the Mute button. This prevents any audio from the channel from being sent to the cue destination.

## Opening and Closing the Cues Row

You can open and close the Cues row.

## Routing Cue Outputs

Cue Outputs are adjusted within the Cue Outputs window. To open the Cue Outputs window, click on the name of any Cue in the Cues area, or click Cue Outputs in the Monitor Column. The Mix (MIX switch highlighted) or Cue (MIX switch dim) can be assigned independently to each headphone output. Cue outputs can also be heard in mono, by clicking the MONO switch.

To assign a cue to a headphone output, click the rectangle under the desired Cue column that aligns with the headphone output. Selected pairs are highlighted, and unselected pairs are blank (black) The selected cue/headphone pair is highlighted, and available cue/headphone pairs are black.

### Devices

The Devices column lists the active Apollos and their headphone outputs.

### Cue Source Select

Each Cue is displayed in a separate column, with two switches (Mono and Mix) that determine the Cue source and format. The source for each cue output can be either the associated dedicated cue bus or the main monitor mix. The cue sources for each cue are mutually exclusive (both sources cannot be simultaneously active).

**MIX On**

When MIX is lit (the default), the cue source is UAD Console's main monitor mix, summed with all DAW outputs that are routed to the monitor outs (if applicable). UAD Console's main monitor mix faders, mutes and solos are heard in the cue output in this mode.

**MIX Off**

When MIX is unlit, the cue source is the dedicated cue mix, summed with all DAW outputs that are routed to the same cue outputs (if applicable). In this mode, the mix of the cue bus is determined by the cue send controls in the input channel strips and the aux return strips.

UAD Console's main faders, mutes, and solos are not reflected in the cue outputs when cue is the source (UAD Console's cue sends are pre-fader).

**MONO**

This switch sums the left and right channels of the stereo cue mix bus into a monophonic signal. The cue output is stereo when the switch is gray and mono when it is lit.

**Tip:** This switch only controls the cue's outputs. To hear the cue mix in mono when it is routed to the monitor outputs (via the Control Room Source switches), use the Monitor Mono switch instead.

## Selecting the Headphone Output (all models except Apollo Solo, Apollo Twin, Apollo 16)

The colored rectangular switches next to each headphone icon in the Cue Outputs window determine the Apollo headphone output to which each cue mix bus is routed. The headphone outputs are mutually exclusive (each headphone output can have only one source). The blue switches indicate the current output routing. The black spaces are available headphone outputs. Click a black space to switch the Apollo output to that headphone output.

## Cue Examples

**Note:** The color of the rectangles reflect the device colors in the Devices column in Settings > Hardware when multiple Apollos are connected. The "A" unit is the monitor unit, the "B" unit is a second Apollo, and so forth.

The main mix is the cue source for Cue 1 and Cue 2.

The main mix is heard on A and B HP 1 and HP 2.

The main mix is the cue source for Cue 1.

The main mix is heard on A and B HP1.

The Cue mix is the source for Cue 2.

The Cue 2 mix is heard on A and B HP 2.

The main mix is the cue source for Cue 1.

The main mix is heard on A and B HP1.

The Cue 2 mix is the source for Cue 2.

The Cue 2 mix is heard on A and B HP 2.

The Cue 2 mix is mono.

The main mix is the cue source for Cue 1.

The main mix is heard on B HP 1.

The Cue 2 bus is the source for Cue 2.

The Cue 2 mix is heard on A and B HP1, and B HP 2.

The Cue 2 mix is mirrored to Line Outputs 5-6.


## Using HP & LINE 3/4 Cues (Apollo Twin)


With Apollo Twin, you have the option of sending the main mix or a cue mix to the headphone output and Line Outputs 3/4.

Choose the cue source from the Devices column for HP and LINE 3/4.

- Select the MIX switch to route the monitor mix to the output, summed with all DAW outputs that are routed to the output.
- Clear the MIX switch to send a cue mix to the output, summed with all DAW outputs that are routed to the same output.
- Select the MONO switch to send the main mix or cue mix in mono.

## Apollo Twin Cue Notes

- To use Line Outs 3/4 as a Cue bus, you must configure the Alt count as 0 in Settings > Hardware.
- You can either send the monitor mix (MIX selected) or cue mix (MIX deselected) to an output.
- When a cue is enabled, the cue appears with a colored bar in the Sends row in UAD Console. To hear audio sources from the output, signals must be sent to that cue's bus via the cue sends.

## Using HP Cue (Apollo Solo)

On an Apollo Solo, you have the option of sending the main mix or a cue mix to the headphone output.

Choose the cue source from the Devices column for HP.

- Select the MIX switch to route the monitor mix to the output, summed with all DAW outputs that are routed to the output.
- Clear the MIX switch to send an independent cue mix to the output, summed with all DAW outputs that are routed to the same output.
- Select the MONO switch to send the main mix or cue mix in mono.

## Cue Mirror to Menu (Apollo rack models, Apollo x4)

This menu is used to optionally route the cue bus to Apollo's available hardware outputs. To select a hardware output pair for the stereo cue, first click NONE to expose the drop menu, then select an available output pair from the menu.

**Important:** The cue mirror output route overrides the DAW output channels assigned to the same hardware output(s). If an output is in use by a cue output, it is no longer available to be assigned as an output within the DAW.

**Tip:** To route signals to both the cue and the desired stereo output, route to a dedicated cue bus in Settings > I/O Matrix, then assign the cue to the desired stereo output via the Cue Output menu.

Cue output assignments are mutually exclusive. When a cue output route is assigned, that output becomes unavailable for routing from a different cue bus (cue mix buses cannot be merged to the same outputs).

**Note:** If an output does not appear in the menu, the output is already in use by another input channel (Flex Routing), cue output, or ALT output.

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Website: https://help.uaudio.com/hc/en-us/articles/25351234458260-Output-Flex-Routing

## <u>Output Flex Routing</u>

By default, Apollo's input channels are routed to the monitor outputs only. Optionally, Apollo's inputs can be routed to any available Apollo rack mount hardware output. A maximum of 16 channel output route assignments are available for each connected Apollo rack model.

**Important:** If an output is in use by Flex Routing, it is no longer available to be assigned as an output within the DAW. The Flex channel output(s) route overrides the DAW output channels assigned to the same hardware output(s).

Multiple input signals cannot be merged to the same output(s) with Flex Routing because this feature is not a mix bus. However, the cue mix buses can be used for this purpose.

**Notes**

- This feature is available with Apollo rack models only (Flex Routing is unavailable with Apollo desktop models).
- Flex Routing is unavailable at sample rates of 176.4 kHz and 192 kHz.

## Output Route Display

The Output Route display is located above each channel's main input mix controls. The active output assignment is displayed here. Clicking the display opens the Flex Route browser.

## Flex Route Browser

The Flex Route Browser is where the hardware output assignment for the input channel can be changed.

**To change the output route:**

- Click anywhere in the Output display to reveal the Flex Route browser.
- Select an output (or output pair, for stereo linked channels) in the browser.
- Click the X at the top of the browser to close.

**Tip:** If an output does not appear in the window, the output is already in use by another input channel, cue output, or ALT output.

**Routes Available Count**

The number of currently available mono and stereo channel output routes is displayed in yellow text at the bottom of the browser, and depends on the connected Apollo model. The number is decremented with each assignment.

**Apollo X rack models –** Up to 16 outputs can be assigned with Flex Routing for each connected Apollo X rack model.

**Other rack models –** Up to eight outputs can be assigned with Flex Routing for each connected Apollo rack model.

**Mirror to Monitor**

When a channel is routed to an output other than the monitor outputs, the channel is simultaneously routed to the monitor outputs (mirrored) by default. Mirroring to the monitor outputs can be disabled so the channel is routed only to the output selected in the Output Route menu.

To toggle monitor mirroring, click the "Mirror to Monitor" button in the Flex Route browser. Monitor mirroring is active when the text is orange colored. Mirroring is off when the text is white.

**Multi-Unit Routing**

When two or more Apollo rack models are connected in an Apollo Expanded multi-unit configuration, Flex Routing can be used within each unit. Up to eight output routes can be assigned for each connected Apollo rack model.

**Note:** Inputs can only be routed to outputs of the same unit.

Website:

# Monitor Mix Controls

The monitor mix controls within each input channel strip are for adjusting the signals at Apollo's monitor outputs.

## Input Pan

This control adjusts the input's position in the stereo panorama of the monitor mix bus.

## Stereo Input Pan

When the input is stereo linked, two pan knobs appear for the channel enabling independent panning for both the left and right channels. When stereo link is activated, the default position of the dual pan knobs are hard left/right.

## Input Solo

Solo mutes all input signals, except for any inputs in solo mode. Solo is used to hear individual channels in the monitor mix without having to modify other channels.

**Note:** Input solo does not affect the channel's cue sends, which are pre-fader.

Click the switch to toggle the solo state. The channel is in solo mode when its solo switch is highlighted in yellow. Note that activating mute has no effect if the channel is in solo mode.

## Input Mute

Mute prevents the input channel's signal from being routed to the monitor mix bus (and aux buses that are in POST mode), but not the cue mix buses.

Click the button to toggle the mute state. The channel is muted when its mute switch is highlighted in red.

**Tip:** Option-click (macOS) or Alt-click (Windows) the mute button to toggle mute on all input channels.

If you enable pre-fader metering in Settings > Options, the input meter remains active when the channel is muted for a visual reference that there is still a signal coming into the channel, even though it isn't heard in the monitor mix. When post-fader metering is enabled, you do not see meter levels on muted tracks.

**Note:** Input mute does not affect the channel's cue sends, which are pre-fader. All cue sends have their own mute switch.

## Input Fader

This is the channel's main signal level control for the monitor mix. Changes to this control are reflected in the channel's level meter.

The input fader adjusts the channel's level in the monitor mix bus (the monitor outputs) and the aux mix buses (when set to POST mode), but not the cue mix buses.

**Tip:** For finer control resolution, hold the Shift key while adjusting faders.

## Fader Scale

The numerical labels next to the fader represent the amount of gain or attenuation applied by the fader. Up to 12 dB of gain above 0 dB is available. A value of 0 dB represents unity gain (no gain or attenuation).

## Fader Value

The input fader's current setting is displayed beneath the input meter.

**Tip:** Double-click the fader setting to open the volume popover. To specify a fader value, type the value, then click OK.

## Copy Mix

All channel fader and pan values for all inputs (the entire monitor mix) can be copied simultaneously to any send or cue mix bus.

To copy the monitor mix to a send mix bus, right-click (or Ctrl-click) any channel fader to display the copy mix menu, then select a destination bus for the mix.

## Input Meter

Pre/Post metering preference

The input meter displays the signal level of the channel after UAD plug-in processing in the inserts. Depending on the state of the METERING option in the Display panel in Settings > Options (either pre-fader or post-fader), this meter will display the level going into the monitor mix bus (post-fader/post-inserts), or the level at the channel's hardware input (pre-fader/post inserts).

**Tip:** When recording into a DAW, it's typically best to set metering to pre-fader so meters accurately represent the signal level at the DAW inputs.

You can also set pre-fader or post-fader metering by right-clicking/Ctrl-clicking in the meter display, and choosing Pre-Fader or Post-Fader under Metering.

## Input Level Scale

The numerical labels represent digital signal levels. "0" represents 0 dBFS (digital full scale, the maximum level before undesirable A/D clipping). If the level at the Apollo input exceeds 0 dBFS, the meter's clip indicator illuminates.

**Important:** If clipping occurs, reduce the preamp gain, the output level of the device feeding the input, or the output gain(s) of UAD plug-in processing in the inserts to eliminate undesirable A/D clipping distortion.

## Peak Hold

The input meters also have a peak hold feature, which holds signal peak values for a specified period of time. The clip and peak hold times can be adjusted in the Display panel in Settings > Options.

## Rename/Link Popover

The Rename/Link popover is used for customizing input labels and stereo linking adjacent channels. Click the channel name at the bottom of the UAD Console window to open the popover for a channel or linked pair.

## Input Label

The input labels are displayed beneath the channel's fader and meter. Each label can be customized for convenient input identification. By default, the name of the Apollo hardware input.

Input labels showing several customized input names

## Input Label Menu

The Input Label Menu contains the same functions as the Rename/Link window, and also the ability to hide the input from view, Isolate the channel, and load Channel Presets. To display the Input Label Menu, right-click or Control-click any Input Label.

**Tip:** To re-show an input hidden via this menu, use the Show/Hide Inputs function.

**To customize a channel input name:**

- Click an input label or choose "Rename" from the Input Label Menu. The Rename/Link popover window appears.
- Type a custom name for the input.
- Press Return/Enter or click the close button.

**To return to the default name:**

- Click an input label or choose "Rename" from the Input Label Menu. The Rename/Link popover window appears.
- Press the Delete key to remove the customized text from the NAME field.
- Press Return/Enter or click the close button.

**Input label Notes**

- To identify the hardware input when an input name is customized, click the input label. The hardware input name appears at the top of the popover window.
- Input labels are stored in UAD Console session files and the UAD Console Recall plug-in.
- Auxiliary return labels cannot be customized.
- Custom input labels are visible within UAD Console only.
- Input labels are not displayed within a DAW.

**Tip:** Driver I/O labels are displayed in some DAWs and can be customized separately in Settings > I/O Matrix.

## Show/Hide Inputs

UAD Console can hide any input channel strip from view. This feature reduces the need for horizontal scrolling when the UAD Console window is narrow (when all visible channels don't fit) and can reduce visual distractions when there is no need to see a particular input.

**How to Use Show/Hide Inputs**

- Either choose "Show/Hide Channels" from the View Menu, or use the keyboard shortcut (Mac: ⌘+I or Win: Ctrl+I). Modifier icons appear on all Input Labels (see Mixer Navigation Modifiers for related details).
- Click or swipe across the Input Labels. The modifier toggles between green and gray. The input will be shown when its modifier is green, and hidden when gray.
- Click the DONE switch in the Mixer Navigation area, or use the keyboard shortcut (Mac: ⌘+I or Win: Ctrl+I). The inputs with gray modifiers are hidden. To bring hidden inputs back into view, repeat the procedure.

**Show/Hide Input Notes**

- A minimum of one input channel must be shown.
- All input channels remain active even if they are hidden from view.
- Show/Hide status is stored in UAD Console session files and the UAD Console Recall plug-in.
- The Show Aux Returns switch is available to show/hide the aux return strips.

## Stereo Link

Adjacent channels (1+2, 3+4, etc) can be linked to create stereo input pairs. When channels are linked as a stereo pair, any control adjustments will affect both channels of the stereo signal identically.

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

## Stereo Link Activation

Stereo pairs are created by activating LINK within the Rename/Link Popover. For preamp channels (Apollo and Apollo Twin), activating LINK performs the exact same function pressing the LINK button on Apollo's top panel.

**Tip:** Option-click the LINK button to stereo link all channels.

**When Link is activated:**

- The LINK switch is lit instead of gray.
- One set of controls is available for the stereo channel (except pan, as noted below).
- All current control settings of the left channel are copied to the right channel (except pan, as noted below).
- All inserted plug-ins in the left channel are converted to stereo (parameter values are retained).
- The input pan knob changes to dual pan knobs.
- Pan values are forced to hard left and hard right.
- The send pan knobs are hidden (pans are forced to hard left/right with stereo sends).
- The input level meter changes to a stereo meter.
- The custom input names revert to default input names.

## Stereo Link Deactivation

A stereo pair is separated back into individual channels by clicking the LINK switch when it is active (the LINK switch is gray when deactivated). When LINK is deactivated, all current control settings and inserted plug-ins for the stereo channel remain on the first channel (except pan, which is centered) and the second channel reverts to a default state.

**Link Constraints**

- Only odd-numbered channels can be linked to the next even-numbered channel. For example, Analog 1 can be linked to Analog 2, but Analog 2 cannot be linked to Analog 3.
- Only the same type of inputs can be linked (for example, an analog input can only be linked to an analog input).
- For preamp channels, only the same input jacks can be linked (for example, a Mic input cannot be linked to a Line input).
- Hi-Z inputs cannot be linked.

- When unlinked, the second channel's input switches to MIC, and the channel gain is returned to 0.
- When unlinked, channel pans return to the center.
- When unlinked, all stereo inserts on the track are converted to mono, and retained on the first track of the pair. UAD Console inserts are not inserted on the second track of the pair.

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Website:https://help.uaudio.com/hc/en-us/articles/25351771431060-Aux-Returns

## Aux returns

UAD Console has two stereo aux (auxiliary) mix buses. Signals are sent to the aux buses via the aux sends in UAD Console's channel input strips. UAD Console's aux returns are used to control and process the signals that are received from those sends.

The controls in UAD Console's aux return strips are similar to the channel input strips, but instead of controlling a channel input, they control the output of the aux mix bus. Both stereo aux returns have four plug-in inserts for Realtime UAD Processing.

The aux sends can be post-fader and post-mute (channel faders must be raised and un-muted to be routed to the aux bus, and the send levels will reflect channel fader changes), or pre-fader and pre-mute (channel faders and mutes do not affect the aux bus).

The aux buses in UAD Console are designed primarily for send/return processing using UAD plug-ins. Using aux buses for effects is a great way to conserve UAD resources. For example, by using an aux for reverb processing, only one reverb

plug-in is needed on the aux return instead of putting a reverb plug-in on each individual channel.

## Aux Notes

- Aux 2 is unavailable at sample rates of 176.4 kHz and 192 kHz.
- The outputs of the aux buses have 72 samples of additional latency compared to the monitor outputs. This is necessary to maintain the lowest possible latency for the channel input signals.
- You can only show Auxes if the Monitor column is shown. Show the Monitor column with View > Section > Monitor before you attempt to show Auxes.

## Show Aux Returns

By default, the aux returns are not visible. To show the aux returns, enable the AUX switch in the SHOW section of the monitor column, or select View > Section > Auxes from the UAD Console menus.

## Aux Return Strips

Both of UAD Console's aux return strips are identical. Most of the controls have identical functionality as their equivalent control in the channel input strips.

## Channel Presets

Click the plus symbol (+) to open the Channel Presets browser. From the Channel Presets browser, you can load complete preconfigured plug-in chains created for specific recording and monitoring purposes.

## Aux Inserts

The aux inserts are operated using the same methods as the insert controls in the channel input strips. See UAD Plug-In Inserts for complete descriptions of the aux insert controls.

**Aux Inserts Context Menu**

The Aux Inserts context menu allows you to adjust inserts for the aux returns.

- To toggle large or small aux inserts view, right-click or control-click on the Inserts label, and select or deselect View Large Icon. Note that this also changes the view for the Talkback channel strip.
- To disable all plug-ins on an aux return, select Disable All.
- To enable all plug-ins on an aux return, select Enable All.
- To remove all plug-ins from an aux return, select Remove All.

**Important:** UAD plug-in processing in the aux inserts is always routed to the DAW (if the aux buses are routed as DAW inputs), regardless of the Insert Effects setting (aux insert processing is always recorded).

## Aux Cue Sends

The aux returns can be routed to any available cue mix buses using the cue sends on the aux returns. There is no cue pan control on the aux returns, because the aux returns are stereo.

## Aux Cue Sends Context Menu

The Aux Cue sends context menu allows you to adjust sends and cue views for the aux returns.

- To toggle Sends Overview, right-click or control-click on the Sends label, and select or deselect Overview. Note that this changes the view for all channels.
- To view a large or small icon for any cues, select or deselect Send # - View Large Icon. Note that this changes the view of that cue for the talkback channel and the aux returns.

The aux cue sends are operated using the same methods as the send controls in the channel input strips. See Cues for complete descriptions of the aux send controls.

**Tip:** When a Cue Source is set to cue, aux returns must be sent to the cue mix bus via these controls for the aux to be heard in the cue mix.

## Aux Pre

When the PRE switch is engaged (lit), the aux mix bus is pre-fader and pre-mute. In PRE mode, the channel faders and mutes do not affect the aux bus.

**Tip:** Pre-fader mode is useful for configuring a mix bus that is independent of the monitor mix controls (for example, when creating a cue mix).

## Aux Post

Post-fader is the default setting for Aux 1 and Aux 2. When the POST switch is engaged (lit), the aux mix bus is post-fader and post-mute. In POST mode, the channel faders must be up and un-muted to be routed to the aux bus, and the aux send levels will reflect channel fader changes.

**Tip:** Post-fader mode is typically used when configuring an effect send mix so the effect send levels will interact with the input channel fader.

## Aux Mono

This switch sums the left and right channels of the stereo aux mix bus output into a monophonic signal. The aux return output is stereo when the button is gray and mono when the button is lit.

## Aux Mute

The aux mute switch stops the aux return's signal from being routed to the monitor mix. The aux return output is active when the button is gray and muted when the button is lit.

**Note:** Aux mute does not mute the aux cue sends.

## Aux Fader

This is the master signal level control for the aux bus return to the main monitor mix. It does not affect the aux bus return's cue sends. Up to 12 dB of gain above 0 dB is available.

## Aux Meter

The aux meter displays the signal level of the aux return after UAD plug-in processing in the aux inserts. Depending on the state of the METERING option in Settings > Options, (either pre-fader or post-fader), this meter will display the aux bus output level routed into the monitor mix bus (post-fader/post-inserts), or the level of the aux mix bus itself (pre-fader/post inserts).

### Input Level Scale

The numerical labels represent digital signal levels. "0" represents 0 dBFS (digital full scale, the maximum level before undesirable A/D clipping). If the level of the aux bus exceeds 0 dBFS, the meter's clip indicator illuminates. If clipping occurs, reduce the aux sends from the input channels and/or the output gain(s) of UAD plug-in processing in the aux inserts.

### Peak Hold

The aux meters also have a peak hold feature, which holds signal peak values for a specified period of time. The clip and peak hold times can be adjusted in Settings > Options.

**Tip:** When recording into a DAW, it's typically best to keep the metering set to pre-fader so meters accurately represent the signal level at the DAW inputs.

Website:

# Monitor Column

The Monitor Column is visible at the right side of the UAD Console window, when View > Section > Monitor is selected from the UAD Console menus. The Monitor Column contains elements related to monitor outputs, cue outputs, and insert effect printing.

**Important:** The Monitor column must be shown to view Auxes and/or the Control Room strip.

**Note:** Settings in the Monitor Column are global functions. They are not saved with individual UAD Console session files.

## Monitor Meters

The Monitor Meters display the levels of Apollo's monitor mix bus. Levels displayed here mirror the state of the Monitor 1 – 2 LED meters on Apollo.

These meters are before the monitor output level control (pre-fader) and reflect the level of the D/A converters at the monitor outputs.

**Important:** If clipping occurs, reduce levels feeding the monitor bus by lowering the channel faders and/or output gain(s) of UAD plug-ins within UAD Console to eliminate undesirable D/A clipping distortion.

## Separate UAD Console Output Meters Window

To open a separate larger, resizable UAD Console Output Meters window, click on the meters or the UA logo. To close the output meters window, click the X in its upper left corner.

**Tip:** Drag from the bottom right corner to change the height of the separate output meters window.

## Meter Source

When the monitor output signals are changed with the Monitor Output Options, the levels displayed by the monitor meters reflect the changed monitor outputs source signal.

### Monitor Level Scale

The numerical labels represent digital signal levels. "0" represents 0 dBFS (digital full scale, the maximum level before undesirable A/D clipping). If the level of the monitor bus exceeds 0 dBFS, the meter's clip indicator(s) illuminates.

### Peak Hold

The monitor meters also have a peak hold feature, which holds signal peak values for a specified period of time. The clip and peak hold times can be adjusted in Settings > Options.

## Show/Hide Strips

These switches show and hide the visibility of the auxiliary return strips and/or the control room options strip. By default, these strips are not visible. The strips are visible when a SHOW switch is lit.

## Cue Outputs

The Cue Outputs window is where the cue bus returns are configured. To open the Cue Outputs window, click the CUE OUTPUTS button in the Monitor Column. See Cues for more information.

## Monitor Controller

The Monitor Controller switch opens the Monitor Controller floating window, where you can configure Bass Management and access Speaker Utilities for Apollo X surround sound modes.

## Monitor Output Options

Various monitor options are controlled with the switches in the OUTPUT section.

**ALT 1, ALT 2**

When ALT monitoring is enabled in Settings > Hardware, ALT switches appear here to control which hardware outputs the monitor mix is routed to.

Apollo features ALT (alternate) monitoring capabilities. ALT monitoring can be used to control alternate pair(s) of monitor speakers, which is convenient for quickly comparing how a mix sounds through a different set of speakers. Up to two pairs of ALT monitors can be used (one pair with Apollo Twin).

ALT monitoring is enabled in Settings > Hardware by increasing the ALT Count setting to a non-zero value.

**Note:** ALT monitoring is not available on Apollo Solo, which only features one pair of outputs.

**ALT Monitor Connections**

**Note:** The ALT channel output assignments cannot be modified.

**Apollo rack models and Apollo x4 –** The ALT 1 monitor signal is routed to line outputs 1-2, and the ALT 2 monitor signal is routed to line outputs 3-4.

**Apollo Twin –** The ALT monitor signal is routed to line outputs 3-4.

## ALT Monitor Select

ALT selector

The ALT monitors are selected in the OUTPUT section of the Monitor Column. The number of ALT output switches that appear here depends on the ALT Count setting.

## ALT Monitor Volume & Mute

The monitor level knob adjusts the output volume and muting of both the ALT monitors and the main monitors.

## ALT Monitor Knob Color

The colored ring around the Monitor Level knob indicates the active ALT selection, as shown at right.

**Green –** Main monitor outputs are active.

**Orange –** ALT 1 outputs are active.

**Yellow –** ALT 2 outputs are active.

## ALT Monitor Trims

Each pair of ALT outputs has its own trim (gain) setting, which is used to offset any volume level differences with the volume level of the main monitor speakers.

As the monitor level is adjusted, these offsets are maintained so speakers can be accurately compared at any volume. The ALT trims are located in the Control Room Column.

**ALT Level –** Adjusts the output level of the main monitor mix when it is routed to a different pair of Apollo line outputs via the ALT monitoring function. The default value is 0 dB with an available range of ±30 dB.

**ALT Value –** The current ALT level value in dB is displayed.

## Monitor Mono

This switch sums the left and right channels of the stereo monitor mix into a monophonic signal. The monitor output is stereo when the button is gray and mono when the button is lit.

## Monitor Mute

This switch mutes Apollo's monitor outputs and stops monitor meters activity. The monitor outputs are muted when the switch is lit. This switch performs the same function as pressing the MONITOR knob on Apollo. The Monitor Level Indicator (the ring around the level knob) is red when the monitor outputs are muted.

## Monitor Level

This is the master level control for Apollo's monitor outputs. It performs the same function as the MONITOR hardware knob on Apollo.

## Monitor Level Value

The specific monitor output attenuation value in dB is displayed beneath the Monitor Level control. The relative monitor output level is indicated by the colored ring around the Level control (as with the MONITOR knob's LED ring on Apollo).

## Monitor Output Gain Bypass (Apollo 8, Apollo 8p, Apollo 16 MkII)

When Monitor Output Gain in the Settings > Hardware is set to BYPASS, the Monitor Level Value field displays BYP, the monitor level cannot be adjusted, and ALT monitoring and assignable FCN switch features are disabled.

## Monitor Level Indicator

In addition to indicating the relative signal level of the monitor outputs, the state of several other functions is indicated by the color of the ring around the monitor level control:

**Green –** The main monitor outputs are active with variable level control (normal).

**Green (fixed at maximum) –** Monitoring is bypassed in UAD Console Settings.

**Red –** The main monitor outputs (and ALT monitor outputs, if configured) are muted.

**Orange –** The ALT 1 monitor outputs are active.

**Yellow –** The ALT 2 monitor outputs are active.

**Flashing –** The monitor DIM, MONO, and/or TALKBACK functions are active.

## Apollo Twin Dot (Apollo Twin only)

When the Monitor Level function is active on Apollo Twin's hardware (when its white MONITOR indicator is lit), a green dot is visible in UAD Console adjacent to the MONITOR text label, as circled in red.

The dot provides a visual indication that the MONITOR level adjust function is active on the Apollo Twin hardware. When the dot is not visible, adjusting Apollo Twin's hardware level knob will not adjust the monitor level, but instead adjusts preamp gain.

## Monitor Level

This is the master level control for Apollo's monitor outputs. It performs the same function as the MONITOR knob on Apollo. When the ring around the knob is RED, the monitor outputs are muted.

## Control Room Column

The control room column is where various options for the monitor outputs are configured and selected.

## Show Column

By default, the control room column is not visible. To show the column, enable the CTRL ROOM switch in the SHOW section of the monitor column, or choose View > Section > Control Room from the UAD Console menus.

**Tip:** When Apollo X Series and/or Apollo Twin MkII is connected and CTRL ROOM is enabled, the Talkback Input Strip is also visible. For complete Talkback details, see Talkback.

## DIM Controls

DIM is used to quickly reduce the listening volume in the control room by a set amount and quickly return to the prior volume.

**DIM Amount –** This control adjusts the amount of attenuation level that is applied to the main monitor mix when the DIM switch is engaged. The available values are -9, -17 (default), -26, -34, -43, -51, and -60 dB.

**DIM Enable –** When engaged (lit), the monitor outputs (and ALT outputs, when active) are attenuated by the DIM Amount.

**Tip:** Press DIM quickly to latch the function. Press and hold DIM for 0.5 seconds to momentarily engage the function and deactivate DIM when the button is released.

Monitor Source Select

These switches select the mix bus that is sent to Apollo's monitor outputs. The source is selected when its switch is lit.

## MIX

When MIX is selected, the main monitor mix, summed with any DAW outputs assigned monitor outputs (if applicable), is routed to the monitor outputs.

## Cue 1, 2, 3, 4 (Apollo rack models, Apollo x4)

When a CUE is selected, that cue mix (the mix created from cue sends in UAD Console), summed with any DAW outputs assigned to the cue (if applicable), is routed to the monitor outputs.

## HP, LINE 3/4 (Apollo Twin)

When HP or LINE 3/4 is selected, the respective cue mix, summed with any DAW outputs assigned to the respective HP or LINE 3/4 outputs (if applicable), is routed to the monitor outputs.

## HP (Apollo Solo)

When HP is selected, its cue mix, summed with any DAW outputs assigned to the respective HP outputs (if applicable), is routed to the monitor outputs.

## CUE INACTIVE Dialog

CUE, HP, or LINE 3/4 can be selected as a monitor source only if its respective source in the Cue Outputs window is not set to MIX.

Allowing those settings would be the same as simply selecting MIX as the source with the monitor source switch, except that you wouldn't be able to determine the current cue routing without opening the cue outputs window.

If the CUE INACTIVE dialog appears when attempting to enable a cue as the monitor source:

- Close the CUE INACTIVE dialog window by clicking OK.
- Open the CUE OUTPUTS window by clicking its button in the Monitor Column.
- Switch the cue source from MIX to an available CUE output.

Website: https://help.uaudio.com/hc/en-us/articles/26489966354836-Talkback

# Talkback

Apollo X Series and Apollo Twin MkII models include a built-in talkback microphone and integrated talkback software functions in UAD Console. This chapter explains the configuration and operation of all talkback features and functionality for Apollo models with a talkback mic.

**Note:** Talkback features are available only when an Apollo X Series or Apollo Twin MkII is connected to the system.

## Talkback Functions

Talkback is typically used by an operator in a studio's control room to verbally communicate with a performer in the studio's recording/live room. The talkback mic can also be routed into the DAW for recording.

Communication – The talkback mic can be routed to any aux mix bus, cue mix bus, the main monitor mix (and optionally to the main monitor outputs), or any combination of these mix buses simultaneously. Talkback send levels are independently adjustable for each mix bus.

Recording – The talkback mic can be selected as a source for audio inputs in the DAW, providing a convenient way to record slate cues or acoustic performances in audio tracks without a separate external mic.

## Configuration

All talkback functions, such as mix bus destinations and send levels, are configured in a dedicated Talkback Input Strip in the Control Room module within UAD Console.

Talkback is fully integrated into Apollo mixed multi-unit workflows for flexible signal routing when additional Apollos are connected to the system.

The aux and cue buses in the Talkback Input Strip are the same as the aux and cue buses in the standard UAD Console inputs. See Cues for related information.

## Operation

Talkback can be activated using the dedicated hardware TALK button on the top panel of Apollo desktop models, the dedicated FCN button on Apollo X rack models, or the TALK button within UAD Console's talkback input strip — talkback control is mirrored in hardware and software. The TALK button can latch for continuous talkback, or press-hold-release for momentary talkback.

**Note:** See Using Talkback for quick operating instructions.

## Talkback Microphone

**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.

Optimized for Talkback

The built-in mic and supporting analog circuitry are optimized for talkback. The gain and frequency response characteristics are carefully tuned to support typical voice talkback scenarios.

## Automatic DIM

When talkback is active, Console's DIM function is automatically engaged to lower volume levels at the monitor outputs, allowing the talkback mic to better capture the voice input instead of program material from the monitor speakers. See DIM Controls for related information.

## Realtime UAD Processing

As with all Apollo inputs, the talkback mic input strip has two aux sends and four dedicated UAD plug-in inserts for Realtime UAD Processing for manipulating talkback mic sonics. For example, the mic's high frequencies can be softened by filtering the top end with the included UAD Precision Channel Strip plug-in.

If hotter mic levels are desired, any UAD plug-in that features level controls (such as UAD Precision Channel Strip) can be used in the talkback input strip's plug-in inserts to increase software gain of the talkback mic.

## Audio Driver Channels

The talkback mic signal is output to Core Audio (Mac) and ASIO (Windows) by Apollo's audio drivers.

The talkback microphone can be selected as a source for audio inputs in the DAW, providing a convenient means to record slate cues (or complete acoustic performances) in audio tracks without a separate external mic.

The audio drivers carry two mic signal streams labeled TALKBACK 1 and TALKBACK 2. The talkback signal is monophonic and is duplicated on each of the TALKBACK 1 and 2 channels.

**Tip:** With Apollo Thunderbolt models, the talkback driver channels can be optionally configured in the I/O Matrix Panel within Console Settings.

## Mic Location

Apollo Desktop Models – The mic hole is located below the main top panel knob.

Apollo X Rack Models – The mic hole is located above the illuminated UA logo on the front panel.

## Talkback Input Strip

The talkback input channel strip is available in the Control Room module within Console whenever an Apollo model featuring talkback is connected.

To toggle visibility of the talkback strip, click the CTRL ROOM button under SHOW in the Monitor Column. Refer to the illustration above for element descriptions in this section.

**Talkback Channel Inserts**

The talkback strip has four UAD plug-in inserts for Realtime UAD Processing. All talkback plug-in inserts operate the same way as other UAD Console inputs, including the ability to save/recall channel strip presets and switchable routing of channel insert effects into the DAW.

**Talkback Inserts Context Menu**

The Talkback Inserts context menu allows you to adjust inserts for the Talkback channel.

- To toggle large or small talkback inserts view, right-click or control-click on the Inserts label, and select or deselect View Large Icon. Note that this also changes the view for the Aux Returns.
- To disable all plug-ins on the talkback channel, select Disable All.
- To enable all plug-ins on the talkback channel, select Enable All.
- To remove all plug-ins from the talkback channel, select Remove All.

For complete details on all insert functionality and operations, see UAD Plug-In Inserts.

## Talkback Sends Display

The SENDS below the channel inserts display talkback levels being sent to each available cue mix bus.

**Talkback Sends Context Menu**

The Talkback sends context menu allows you to adjust sends and cue views for the talkback channel.

- To toggle Sends Overview, right-click or control-click on the Sends label, and select or deselect Overview. Note that this changes the view for all channels.
- To view a large or small icon for any sends, select or deselect Send # - View Large Icon. Note that this changes the view of that send for the talkback channel and the aux returns.

**Note:** See Sends for related information.

## Flex Routing (Apollo X rack models)

On Apollo X rack models, the Flex Routing display is visible in the talkback input strip.

Click the Flex Routing display to open the Flex Routing popover, for routing the talkback signal to any available line output. For complete details about this feature, see Flex Routing.

**Note:** To prevent acoustic feedback, talkback Flex Routing cannot be assigned to the Monitor outputs.

## TALK Button

This button activates the talkback mic and the DIM function. Talkback is active when the button is lit and Apollo's monitor output level indicator flashes.

- Press and release the button quickly to latch talkback ON.
- To momentarily activate the function and deactivate when the button is released, press for longer than 0.5 seconds.
- TALK button behavior is mirrored in software and hardware. The hardware and software buttons are illuminated when talkback is engaged, and unlit when talkback is off.

## Talkback To Monitor

When this button is lit, the talkback mic is routed to the main monitor outputs. Click the button to toggle the Talkback to Monitor state.

If the monitor speaker system is on when this button is engaged, acoustic feedback from the speakers to the talkback mic can occur.

**Caution:** To reduce the risk of acoustic feedback, lower the volume of the monitor output speakers and/or increase the DIM value before engaging Talkback To Monitor.

In typical studio control room plus recording room setups, this function is generally not used because the monitor output speakers are in the same room as the talkback mic. However, the option is provided for maximum signal routing flexibility.

## Talkback Fader

This fader adjusts the talkback level sent to all cue mix buses that have MIX assigned as the cue's SOURCE in the CUE OUTPUTS window.

**Tip:** If a cue's SOURCE is *not* set to MIX in the CUE OUTPUTS window (e.g., when the cue source is HP/CUE 1 or LINE 3-4/CUE 2), this fader does not adjust on the talkback level for that cue mix. In this case, use the Talkback input strip's Cue sends to adjust talkback levels to the Cue mixes.

## Talkback Meter

This meter displays the input level for the talkback mic when the TALK button is engaged.

By default, pre-fader levels are displayed. Post-fader levels can be displayed by changing the METERING setting in the Options panel within UAD Console Settings.

## Talkback Sends & Cues

With the Talkback Sends and Cues, talkback levels can be individually adjusted and/or disabled for each available mix bus. The level control for each talkback mix bus controls the amount of talkback mic signal sent into the cue bus.

### Available Talkback Mix Buses

All available talkback mix buses are displayed in the channel strip. The displayed talkback mix buses are the MIX bus (the main input fader), both AUX buses, and all available CUE buses.

**MIX Bus –** The main monitor mix bus controlled by the main fader. Note that this will not play talkback audio through the speakers connected to the Monitor outputs unless the Talkback to Monitor switch is engaged.

**AUX Buses –** The same two AUX buses that are available on standard UAD Console inputs.

**CUE Buses –** The same CUE buses as those available on all UAD Console inputs. See Cues for related information.

**Tip:** To increase the number of available CUE buses when multiple Apollos are connected in a multi-unit configuration, increase the CUE BUS COUNT value in the Hardware panel within the Console Settings window.

### Cue Sends

These knobs adjust the talkback signal level sent to cue buses. When a cue bus is assigned to a cue output in the CUE OUTPUTS window, the knob adjusts the level of that cue bus to the output. When a cue is assigned to the MIX in the CUE OUTPUTS window, this knob adjusts the level of the main mix to that cue output.

**Tip:** When a Cue bus has MIX assigned as the cue's SOURCE in the CUE OUTPUTS window, the cue color is gray. In this case, adjust the talkback level with the talkback strip's main fader.

### AUX Sends

These faders adjust the talkback signal level sent to each AUX bus.

**Send Meters**

These meters either around the knobs, or standard meters in Large view, display the talkback signal level being sent to each cue bus when the TALK button is engaged.

**MIX Bus Meter –** By default, pre-fader levels are displayed. Post-fader levels can be displayed by switching the METERING setting in the Options panel within the Console Settings window.

**AUX Bus Meters –** Post-fader levels are always displayed.

**CUE Bus Meters –** Post-fader levels are always displayed.

**Bus Name & Color**

The talkback bus mix name and color are displayed at the top of each section. These names cannot be modified.

**Tip:** If a CUE color is gray, that cue's SOURCE is set to MIX in the CUE OUTPUTS window.


## Activating Talkback

To activate the talkback mic, press any dedicated TALK button. The hardware or software buttons can be used to activate talkback. Talkback is active when UAD Console's Talkback button is lit and Apollo's monitor output level indicator flashes.

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

**Apollo desktop hardware –** Press the top panel TALK button when the interface is in monitor mode (press the hardware MONITOR button to enter monitor mode). The green TALK indicator in the unit's Options Display is illuminated when talkback is active.

**Apollo X rack hardware –** Press the front panel FCN button when the button function is set to TALKBACK in the Hardware panel within UAD Console Settings. The FCN button's yellow LED is illuminated when talkback is active.

**UAD Console software** – Press UAD Console's TALK button in the Talkback Input Strip. The button is illuminated when talkback is active.

## Multiple Talkback Mics

- When more than one Apollo with a talkback mic are combined in a multi-unit system, the following behaviors apply:
- Only one unit can be used for talkback.
- The Apollo desktop model is the talkback unit (if connected).
- If more than one Apollo X rack model is connected, the designated Apollo X rack monitor unit is the talkback unit.
- If an Apollo X rack is combined with a previous-generation Apollo rack model (and an Apollo desktop model is not connected), the Apollo X rack must be the designated monitor unit to use its talkback mic.

An orange mic icon appears next to the talkback unit in the Devices Column within Console Settings > Hardware. In these multi-unit examples, both units have talkback mics, so the mic icon distinguishes which unit is configured for talkback.

## Adjusting Talkback Levels

Adjust the talkback levels with the main fader, or with the knobs for each Aux Send or Cue.

## Recording the Talkback Mic

To record the talkback mic signal on an audio track in a DAW:

- Select TALKBACK as the I/O input source for the track(s):

    Mono tracks – Select TALKBACK 1 or TALKBACK 2 as the track input.

    Stereo tracks – Choose TALKBACK 1-2 as the track input.

- Press the hardware or software TALK button to route the talkback mic signal to the track. See Activating Talkback for related information.

- Record the mic as you would any other audio signal using the DAW's operating procedures.

**Talkback Recording Notes:**

- The talkback mic is monophonic. Apollo's TALKBACK 1 and TALKBACK 2 audio driver channels carry identical signals to facilitate DAWs that expect even pairs of inputs.
- TALK must be active for the DAW track input to receive the talkback mic signal.
- Talkback can be activated and/or deactivated before, during, or after recording (talkback and DAW operations are independent).

Website: https://help.uaudio.com/hc/en-us/articles/25357506048020-Console-Sessions

# Console Session

The Sessions controls provide methods for managing complete UAD Console configurations as session preset files. When a UAD Console session file is saved, the current UAD Console configuration is written to disk.

When a session file is subsequently reloaded, UAD Console is returned to the exact same configuration state, regardless of any changes to UAD Console that were made in the interim.

**Note:** Monitor settings and hardware settings are global parameters that are not saved in UAD Console session files.

## Content of Session Files

UAD Console session files contain most, but not all, UAD Console settings. The specific parameters saved and not saved are listed below:

Parameters Saved in the UAD Console Session File:

- All knob, slider, and menu values.
- All inserted UAD plug-ins and their settings.
- Input labels.
- Channel show/hide status.
- Settings in the UAD Console Settings window (excluding those listed as not saved).

Parameters Not Saved in the UAD Console Session File:

- Monitor Gain.
- Line Input Gain.
- Line Output Reference Levels.
- Clock Source.
- Sample Rate.
- Monitor Outputs Digital Mirror.
- Cue Outputs.
- I/O Matrix settings.

*(Note: Parameters not saved are global settings and not specific to sessions. Most of these are managed in the UAD Console Settings window.)*

**Tip:** Core Audio / ASIO settings can be saved separately in the I/O Matrix.


## Session Files Location

By default, session files are saved to, and loaded from, the user's home folder at:

- Mac: Users/UserName/Documents/Universal Audio/Sessions/
- Windows:C:\Users\[UserName]\AppData\Roaming\Universal Audio\Sessions

Although session files can be saved to (and loaded from) any location on disk, using the default location is the most convenient, because UAD Console always uses this location for the Session Browser and any Open/Save dialogs presented by the OS.

**Note:** Session files must reside in the default location to appear in session lists within UAD Console.

## Session Sub-Folders

The Sessions folder can contain one level of sub-folders for additional session organization capability. The contents of sub-folders (if any) are displayed in dark gray text, with a disclosure triangle that you can click to expand or close each sub-folder.

## Session Files Suffix

UAD Console's session files have the ".uadmix" suffix. The suffix is added to session files automatically when saving to disk; however, the suffix is not displayed in the file save dialog (the suffix should not be manually typed when saving a session file).

**Note:** Without the .uadmix suffix, the session files will not be visible in the "Open" file dialogs or the Session Browser, and they won't be opened when they are double-clicked in the OS file system.

## Session Files Access

Session files can be saved and loaded via several methods: the Session Browser, the Modified Session Dialog, the Sessions menu, and the File menu.

## Session Name

Session names are displayed in the Meter Bridge at the top of the main UAD Console window ("session-16" in the screenshot above), below the word SESSIONS above the Mixer Navigation panel, and at the top of the Session Browser. Session

names are created when the file is saved; they can also be renamed via the OS file system.

## Modified Session Name

When any UAD Console setting is changed after the session was saved, an asterisk (*) appears after the session name, as shown at right. This is a convenient visual reminder that the session is modified and may need to be saved for future use. To clear the asterisk, save the session or create a new session.

## SYNC Session Name

When a DAW project containing the UAD Console Recall plug-in is opened that has the SYNC function in the plug-in enabled, the session name changes to "- Sync Session -" indicating that the DAW has sent session settings to UAD Console

## Modified Session Dialog

If the current UAD Console session has been modified and a new UAD Console session is loaded, a dialog displaying the current session name in quotes appears with option switches (the session name in quotes does not appear if the session has never been saved). The behavior of the option switches in this dialog are detailed below.

**Important:** This dialog does not appear when a UAD Console session is loaded via the UAD Console Recall plug-in's SYNC function. For complete Sync details, see SYNC.

**Don't Save –** All modifications to the current UAD Console session are discarded and the session is loaded (or created, if new session).

**Cancel –** The current UAD Console session remains active and the attempt to load the UAD Console session file is canceled.

**Save –** The current session is saved to disk and the session is loaded. If the session has never been saved to disk, this switch displays "Save As..." which opens the file save dialog.

## Session Browser

The Session Browser opens to the left of the UAD Console screen. The Browser provides methods for managing UAD Console configurations as session preset files. When a UAD Console session file is saved, the current UAD Console configuration is written to disk.

When a session file is subsequently reloaded, UAD Console is returned to the same configuration state, regardless of any changes to UAD Console that were made in the interim.

## Session Browser Access

To access the Sessions Browser, single-click the area at the top of the Mixer Navigation section.

**Note:** Mixer Navigation (View > Section > Mixer Navigation) must be shown to access the Session Browser.

## Session List

All items within the default Sessions file folder are displayed in the Session list. If more sessions or folders reside in the column than are currently within view, a scroll bar appears.

Double-click any session to load it, or click the disclosure triangle to the left of a sub-folder (if any) to display sessions within the sub-folder.

**Note:** Sub-folders are indicated in the Session List with small disclosure triangles near the left side of the Session List.

## Sub-Folders

If the Session Browser contains one or more folders, expanding a folder by clicking the disclosure triangle displays its contents in the list.

Session Browser Function Switches

The Session Browser contains switches that perform file management tasks. Click a switch to perform the operation on the currently selected preset or sub-folder.

## New

Creates a new UAD Console session with default settings (default settings cannot be changed). If the current session has been modified, a dialog appears allowing you to save it first.

## Open...

Opens the operating system's standard "Open File" dialog for loading existing session files from disk.

**Tip:** Session files can also be opened by double-clicking .uadmix files from within the operating system's file system.

## Save

Opens the Save Session dialog, in which you can save the file, or the current modified preset file in place. If the preset was not previously saved (if the file doesn't exist), or if you type a new name for the file, the Save button changes to Save As.

## Save As

This option appears when you type a new name for the session, after clicking Save.

**Important:** Session settings will not be properly saved if the "/" (forward slash) or "?" (question mark) characters are in the filename. Avoid these and other special characters when saving session files.

## Sessions Menu

The Sessions Menu provides quick access to Session management functions without opening the Sessions Browser. Click any item in the menu to perform the function.

Items in the menu are divided into three sections. File management options are in the top section, existing session files and folders that reside on disk are listed in the center section, and cached (overwritten) sessions are listed in the bottom section.

## Open Sessions Menu

To access the Sessions menu, right-click or Control-click the Sessions area located at the top of the Mixer Navigation area. When the menu is displayed, clicking an item in the menu chooses that item.

## Sessions Menu File Functions

The New, Open, Save, and Save As functions in the Sessions menu have the same functionality as the Session Browser function switches.

## Sessions List

Existing session files that reside in the Default Session Files Location are displayed in the center section of the Sessions menu. (Session names in the diagram are examples only.)

Select a session from the list to load the session file. If the current session has been modified, the Modified Session Dialog appears.

**Note:** Session files must reside in the default session files location and have the .uadmix suffix to be visible in the Sessions menu.

## Sub-Folders

Sub-folder names in the Sessions menu are displayed in blue. Session files within the sub-folder are displayed beneath the blue sub-folder name (session files not within sub-folders appear at the top of the sessions list).

## Cached Sessions

Cached sessions appear in the bottom section of the Sessions menu. Cached sessions are session files that aren't saved on disk. Instead, these sessions are automatically created and stored in a temporary cache.

## Why Cached Sessions Exist

When a DAW project containing the UAD Console Recall plug-in is opened and the plug-in's SYNC function is enabled, the UAD Console settings contained in the DAW project overwrite the current UAD Console settings. The cached sessions are used to recover the overwritten data if desired. For complete Sync details, see SYNC.

## When Cached Sessions Appear

A cached session is automatically created every time a DAW project containing the UAD Console Recall plug-in is opened and the plug-in's SYNC function is enabled. In this scenario, the SYNC function loads the UAD Console session contained in the DAW project, and the previously-active UAD Console settings are moved into the cached sessions menu.

The previously-saved UAD Console session's filename is retained in the cached session, and a timestamp is prefixed so it can be easily distinguished from other sessions. The five most-recently cached sessions appear in the list

# Console Recall Plug-In

## Console Recall Overview

Console Recall is a DAW plug-in supplied in VST, AAX 64, and Audio Units formats. It is inserted and used within host DAWs as with any other plug-in.

**Note:** The Console Recall plug-in is not required to use the Apollo interface hardware, the UAD Console application, or a DAW.

The primary function of the Console Recall plug-in is to store the current UAD Console configuration within the DAW via the SYNC (synchronize) switch in the plug-in. It can also be used to view and adjust Apollo's monitor output level, mono, and mute states without having to leave the DAW.

## SYNC

The SYNC switch is not available in UAD Console. When a DAW project containing the Console Recall plug-in is saved and the SYNC switch is enabled in the plug-in, the current state of the UAD Console application is stored within the Console Recall plug-in.

When the DAW project file is subsequently reloaded, UAD Console is automatically restored to the previous settings state, regardless of any changes to UAD Console or Apollo that were made in the interim.

Since plug-in settings are saved within DAW project files, using SYNC enables UAD Console's current state to be stored within the DAW project file without saving or loading UAD Console sessions presets via the UAD Console Sessions functions.

This feature ensures the DAW project will sound exactly the same when reloaded at a later date, even if UAD Console contains customized settings that might affect the audio, such as send mixes, signal routings, and/or Realtime UAD Processing.

## Console Recall Controls

Most Console Recall plug-in controls are duplicates of those found in UAD Console. The exceptions are the SYNC switch, and the CONSOLE switch, which opens the UAD Console application.

## Monitor Controls

The same control descriptions in UAD Console apply to the Console Recall plug-in controls. Refer to the Monitor Column article for descriptions of the duplicated controls:

- Monitor Meters
- Monitor Level
- Monitor Output Options

## Console Switch

UAD Console can be opened by clicking the CONSOLE switch. Note that UAD Console does not need to be open when using the DAW with the Console Recall plug-in; UAD Console settings are always captured by the Console Recall plug-in as long as the SYNC switch is engaged.

## How To Use Console Recall

To use Console Recall, simply place one instance of the Console Recall plug-in into any insert slot in the DAW project. The plug-in is installed in the same location as all other UAD-2 plug-ins, but the name of the plug-in is "Console Recall" (without the UAD prefix).

**Important:** To avoid unpredictable results, do not insert more than one occurrence of the Console Recall plug-in within any single DAW project.

Because the plug-in does not process audio in any way, the insert location isn't critical. Although it can be placed on any audio track, virtual instrument track, aux bus, output, etc, placing it on the master output is recommended for consistency since projects usually contain an output channel.

Upon instantiation of the plug-in, the Monitor Level, Mono, and Mute controls mirror the equivalent controls in UAD Console. Enabling SYNC causes the current UAD Console settings to be stored within the DAW project.

## Enabling SYNC

When Console Recall is first loaded, the SYNC switch is disabled (gray). To activate SYNC, click the switch so it is engaged (lit).

Enabling SYNC does not change the UAD Console settings; SYNC doesn't do anything until the DAW project file is saved and subsequently reloaded.

**Important:** SYNC saves the UAD Console settings within the DAW file, not the UAD Console application. Therefore the DAW project file must be saved to disk to retain the UAD Console settings in the project.

## Effect on Session Name in UAD Console

When a DAW project is loaded that contains the Console Recall plug-in with SYNC enabled, the Session Name in UAD Console displays "- Sync Session -" and the display is dimmed.

## Loading Synchronized DAW Projects

If SYNC was active when a DAW project file containing Console Recall was saved, then loading that DAW project will load the UAD Console settings saved in the plug-in, and the settings that were active before the DAW project was loaded are overwritten.

**Important:** The UAD Console settings that were active before the DAW project was loaded can be easily recovered if desired using the Cached Sessions feature in the Sessions Menu within UAD Console.

If SYNC was inactive when a DAW project file containing Console Recall was saved, then loading that project will not change the UAD Console settings that were active before the DAW project was loaded.

## Session State Parameter

The Console Recall plug-in has a parameter called "Session State" that is exposed for DAW automation but is not in the plug-in interface. Session State ensures all changes to UAD Console settings and the DAW session are captured by the Console Recall plug-in. If something related to Session State appears in the DAW, it's best to just ignore it.

**Important:** To ensure proper functionality when SYNC is enabled in Console Recall, do not create or edit DAW automation with the Session State parameter.

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Website: https://help.uaudio.com/hc/en-us/articles/31655084572820-Apollo-Monitor-Correction-by-Sonarworks

## Apollo Monitor Correction by Sonarworks

Apollo Monitor Correction by Sonarworks® brings seamless realtime SoundID Reference integration to Apollo X Gen 1 and Gen 2 interfaces. Harness Apollo Monitor Correction to apply custom profiles to your reference headphones or studio monitors to correct your room's acoustics. Your calibration profiles run in

realtime on Apollo's DSP using studio-grade precision filters and alignment delays for stereo or multi-channel speaker systems. Learn more at sonarworks.com.

## What is Apollo Monitor Correction?

Apollo Monitor Correction works in conjunction with Sonarworks' SoundID Reference software to measure and correct inaccuracies in your monitoring systems. After creating calibration profiles of your listening environment with the SoundID Reference software and applying them to Apollo X, Apollo's onboard DSP delivers consistent and accurate studio reference sound to your speakers and headphones in realtime.

After your profiles are applied (transferred) to Apollo, DSP correction is controlled by UAD Console. Correction is always available at the monitor and headphone outputs of your Apollo X monitor unit, so the SoundID Reference app and plug-in are no longer needed.

- **Monitor correction –** Achieved by measuring your speakers and room response (using the SoundID Reference Measure app) with a measurement microphone to create a calibration profile, and applying that profile to your Apollo so it runs on DSP in realtime.
- **Headphone correction –** Achieved by applying headphone calibration profiles to your Apollo headphone output(s). Headphone profiles are predefined by Sonarworks, for correcting the inherent response curves of more than 500 popular headphone models.
- **Target mode –** SoundID Reference calibrates the output of your speakers and headphones to specific reference targets. You can choose from predefined targets (such as Flat Target, Dolby Atmos Music, or car audio) or create your own before applying the profile to Apollo.

**Critical:** Apollo Monitor Correction is controlled by UAD Console and runs on Apollo DSP. To prevent double-processing when Apollo Monitor Correction is active, do not use the SoundID Reference DAW plug-in or enable calibration in the SoundID Reference app.

# Apollo Monitor Correction system requirements

## Sonarworks requirements

- macOS 11 Big Sur or newer
- Sonarworks SoundID Reference software version 5.12.1 or newer (download)
- Sonarworks SoundID Reference software license (buy)
- Sonarworks Apollo Monitor Correction Add-on license (buy)
- Supported measurement microphones for speaker calibration
- Supported headphone models for headphones calibration
- Internet connection for licensing (on startup, or every 24 hours) and to apply calibration profiles in Stereo mode with Bass Management enabled

## Apollo Requirements

**Software**: UAD Software v11.5.1 and UAD Console v1.2.1 or newer (available via UA Connect).

**Hardware**: Apollo X Series (Desktop or Rack) — Gen 2 only.

Supported Models (Gen 2):

### Desktop Models

Apollo x4

Twin X Duo/Quad

Twin X USB Duo

### Rack Models

Apollo x6

Apollo x8

Apollo x8p

Apollo x16

Apollo x16D

## Important Operation Notes

- To use Apollo Monitor Correction, select the **Speakers**, **Headphones 1**, or **Headphones 2** (if available) output under the name of your Apollo monitor unit adjacent to the link icon (⇄) in SoundID Reference. Then choose a calibration profile and target mode for the output, and click the Apply profile to Apollo X button.

- After a calibration profile is applied to Apollo X in the SoundID Reference app, Apollo Monitor Correction always remains active unless it is bypassed or disabled in UAD Console. Apollo Monitor Correction cannot be disabled from within the SoundID Reference app.

- Because Apollo Monitor Correction only calibrates your monitor and headphone outputs, it can remain active when you export or bounce audio in your DAW (set and forget).

- Apollo Monitor Correction is enabled, disabled, and bypassed with UAD Console, and runs on Apollo DSP.

- SoundID Reference standalone cannot detect that Apollo Monitor Correction is active. To prevent double processing when Apollo Monitor Correction is active, do not use the SoundID Reference DAW plug-in, or enable calibration in the SoundID Reference app when Universal Audio Thunderbolt is selected as the standalone output device. If you do choose to use SoundID Reference for standalone processing with the Universal Audio Thunderbolt output, be sure to disable Apollo Monitor Correction in UAD Console. See SoundID Reference processing for more information.

- When Apollo Monitor Correction is active, UAD Console's output meters reflect the calibrated monitor output levels, so they won't match the signal levels in your DAW.

- Apollo Monitor Correction is not applied to Apollo ALT monitor outputs, digital mirror outputs, cues, or cue mirrors.

- SoundID Reference software must be installed to use Apollo Monitor Correction. Do not uninstall SoundID Reference software. However, Apollo Monitor Correction does not require any of the following SoundID Reference software to be active to process audio:

    SoundID Reference standalone app and driver

SoundID Reference DAW plug-ins

SoundID Reference Measure app

## About Sonarworks SoundID Reference Software

SoundID Reference is an independent software product that is developed and sold by Sonarworks. Universal Audio has partnered with Sonarworks to bring SoundID Reference integration to Apollo X.

This manual describes how to use the Apollo Monitor Correction feature with Apollo X and UAD Console. SoundID Reference has its own system and licensing requirements (in addition to Apollo X requirements). Sonarworks provides complete documentation and support for their SoundID Reference software products.

## What is SoundID Reference integration?

Apollo Monitor Correction is a SoundID Reference add-on integration license that runs calibration profiles directly on Apollo's internal DSP, instead of being processed by the SoundID Reference app or plug-in.

## SoundID Reference license types

Sonarworks provides various licensing options for SoundID Reference to meet your monitoring correction needs. Licenses are available for headphones, stereo, and multichannel systems.

**Note:** The stereo license includes subwoofer support. For true 2.1 channel systems, a multichannel license is required.

Although you can use SoundID Reference on its own with any Apollo (or other audio interface), for the best experience you'll need the Apollo Monitor Correction add-on license for hardware DSP integration with Apollo X.

## SoundID Reference functions

**Note:** Adjust these settings before you apply your calibration profile to Apollo X.

- **Calibration target modes –** When you apply a correction profile, you can adjust the output of your speakers or headphones to match a target mode. The default target mode for SoundID Reference is the Flat target, which provides an extremely flat and accurate mix target. However, many other target modes (such as Dolby) are available, which allow you to listen and mix to specific environments, EQ curves, or speakers. See Calibration target modes in the Sonarworks documentation for details.

- **Listening spot –** Adjusts the level of your speakers to compensate for the differences you hear at your listening position, as determined by the calibration measurements. When the Listening spot feature is disabled, the default stereo image is restored. See What is the Listening Spot feature? in the Sonarworks documentation for details.

- **Limit controls –** Used to set a range on which calibration is applied, and the maximum levels of adjustment. With this feature, you can choose the ceiling for the maximum boost applied by calibration, along with some settings for the bass and treble ranges. See Limit Controls in the Sonarworks documentation for details.

- **Dry/Wet mix –** You can configure the Dry/Wet mix of your calibration target. The Dry/Wet mix gives you the option to hear the audio target in a "less corrected" state, effectively reducing the amount of correction applied to your speakers or headphones to match the target mode.

- **Apply Profile to Apollo X –** When you have adjusted settings for your calibration profile, this button sends the profile to your Apollo X, where it is loaded into the DSP on the selected outputs, and processes your audio.

## Already using SoundID Reference standalone?

**Tip:** See Important Operation Notes.

**If you already have speaker calibration profiles**

If you've already used SoundID Reference without Apollo Monitor Correction and have existing speaker calibration profiles created in SoundID Reference 4 or newer, you can apply them to your Apollo X monitor unit for realtime DSP processing without remeasuring your speakers and room.

**If you don't have a speaker calibration profile, or are now using Apollo X Bass Management**

If you don't already have a speaker calibration profile, or you previously measured a profile without Apollo X Bass Management, you should remeasure your speakers and room with the SoundID Reference Measure app.

## Apollo Monitor Correction and SoundID Reference Apps

**Feature Configuration Table:**

**Create calibration profiles for your speakers and room:**

Sonarworks SoundID Reference Measure app: ✓

**Select calibration profiles for speakers and headphones:**

Sonarworks SoundID Reference app: ✓

**Select target modes for different reference listening scenarios:**

Sonarworks SoundID Reference app: ✓

**Enable/disable Listening Spot control:**

Sonarworks SoundID Reference app: ✓

**Adjust Limit Controls:**

Sonarworks SoundID Reference app: ✓

**Adjust dry/wet mix of a calibration profile:**

Sonarworks SoundID Reference app: ✓

**Apply calibration profiles to the Apollo X monitor unit:**

Sonarworks SoundID Reference app: ✓

**Enable/disable monitor correction and headphone correction (unloads DSP):**

Apollo X & UAD Console: ✓

**Enable and disable Safe Headroom:**

Apollo X & UAD Console: ✓

**Soft bypass of Monitor / Headphone corrections:**

Apollo X & UAD Console: ✓

**UAD Console monitor meter displays results of real-time DSP monitor correction:**

Apollo X & UAD Console: ✓

## Apollo and SoundID Reference app presets

Sonarworks refers to processing outputs in SoundID Reference as *Presets*. Presets are displayed in the left panel of SoundID Reference. Presets contain the calibration profiles and target modes for each device output.

## Apollo DSP integration processing

Settings listed under your Apollo monitor unit are Apollo Monitor Correction presets. The SoundID Reference app transfers those settings directly to the hardware when you press the "Apply profile to Apollo X" button, after which the calibration profile runs on Apollo realtime DSP. Sonarworks refers to Apollo DSP processing as *Integration Mode*.

Your Apollo X monitor unit, along with its available outputs, automatically appears in the Presets panel when all system requirements are met.

**Tip:** The link icon (⇔) displayed next to the Apollo monitor unit name indicates that this Apollo is the integrated DSP hardware output device.

## SoundID Reference processing

Other audio device outputs in the left panel of SoundID Reference, which are displayed beneath your Apollo monitor unit and its outputs, are native SoundID Reference presets. These presets are processed by the SoundID Reference software using your computer's CPU. Sonarworks refers to this native processing as *SoundID Reference standalone*.

**Note:** When you enable SoundID Reference standalone processing, your system's sample rate may change.

SoundID Reference standalone processing does not have the same realtime advantages as the Apollo hardware DSP integration offered by Apollo Monitor Correction.

**Important:** Standalone device outputs should be deleted from SoundID Reference when using Apollo Monitor Correction, because SoundID Reference standalone does not recognize when Apollo Monitor Correction is active. To prevent double processing, don't manually add any device, including the "Universal Audio Thunderbolt" device, as a standalone output when using the Apollo Monitor Correction add-on.

**Tip:** Standalone device outputs don't have the integrated hardware link icon 🔗.


## Don't enable SoundID Reference standalone

When a SoundID Reference standalone preset is enabled, you see the green "Calibration Enabled" button in the lower right corner of the SoundID Reference window. Don't enable this button when Apollo Monitor Correction is enabled in UAD Console! If a non-integrated preset is selected, you can disable it by deactivating this button, or by selecting one of the Apollo presets under your Apollo monitor unit

**Tip:** All standalone output devices can be removed from SoundID Reference without impacting Apollo Monitor Correction.

If you enable a native SoundID Reference audio output, a warning dialog appears that explains how to prevent double processing. If you see this dialog, either disable calibration in SoundID Reference, or disable Apollo Monitor Correction in UAD Console.

## Differences Between Apollo Monitor Correction and SoundID Reference Software

**Lowest possible latency:**

Apollo Monitor Correction (DSP): ✓

Sonarworks SoundID Reference standalone (CPU):

Sonarworks SoundID Reference plug-in (CPU):

**Processed by Apollo DSP:**

Apollo Monitor Correction (DSP): ✓

Sonarworks SoundID Reference standalone (CPU):

Sonarworks SoundID Reference plug-in (CPU):

**Runs natively on your computer's CPU:**

Apollo Monitor Correction (DSP):

Sonarworks SoundID Reference standalone (CPU): ✓

Sonarworks SoundID Reference plug-in (CPU): ✓

**Record while hearing corrected audio in real-time:**

Apollo Monitor Correction (DSP): ✓

Sonarworks SoundID Reference standalone (CPU):

Sonarworks SoundID Reference plug-in (CPU):

**Calibrated audio for speakers and headphones at the same time:**

Apollo Monitor Correction (DSP): ✓

Sonarworks SoundID Reference standalone (CPU):

Sonarworks SoundID Reference plug-in (CPU):

**Multichannel calibrated playback:**

Apollo Monitor Correction (DSP): ✓

Sonarworks SoundID Reference standalone (CPU):

Sonarworks SoundID Reference plug-in (CPU): ✓

**Virtual Monitoring Add-on (simulate spatial speakers on headphones):**

Apollo Monitor Correction (DSP):

Sonarworks SoundID Reference standalone (CPU): ✓

Sonarworks SoundID Reference plug-in (CPU): ✓

**Requires use of SoundID Reference audio driver:**

Apollo Monitor Correction (DSP):

Sonarworks SoundID Reference standalone (CPU): ✓

Sonarworks SoundID Reference plug-in (CPU):


## Licensing Apollo Monitor Correction

Apollo Monitor Correction requires both a Sonarworks SoundID Reference license and the Apollo Monitor Correction Add-on license. When you open Monitor Correction windows in UAD Console, you are reminded to start a trial or obtain licenses if you do not have them.


### Purchasing licenses

Purchase the SoundID Reference license here. Note that you can purchase several different versions of SoundID Reference, including headphones only, stereo for speakers and headphones (includes subwoofer), and multichannel (includes 2.1), with or without included measurement microphones.

Purchase the Apollo Monitor Correction Add-on license here. The Apollo Monitor Correction Add-on supports headphones, stereo, and multi-channel profiles, depending on your SoundID Reference license.

There are two scenarios for Apollo Monitor Correction licensing.

- **You have not licensed Sonarworks SoundID Reference software.** Add a Sonarworks SoundID Reference license, and the Apollo Monitor Correction Add-on license.
- **You have licensed Sonarworks SoundID Reference software.** Add the Apollo Monitor Correction Add-on license.

## Activating Sonarworks licenses

- Log in to your Sonarworks account. If you don't have an account, you can create one there.
- Hover over My Account, then click Licenses & Devices.
- Click Register a new license.
- Type or paste the license for the SoundID Reference or Apollo Monitor Correction Add-on license, and click Register.
- When the license appears on your license page, click Activate on this device.

You will perform this procedure for each license (SoundID Reference and the Apollo Monitor Correction Add-on). Each license can be activated on up to three computers.

## Calibrating Outputs with Apollo Monitor Correction

**Tip:** See Important Operation Notes.

Apollo Monitor Correction controls appear in the Monitor Column in UAD Console, and in the Monitor Controller window (for Main Monitor correction). To show or hide Apollo Monitor Correction controls, choose View > Section > Monitor Correction from the menus in UAD Console.

Apollo Monitor Correction allows you to correct audio from your headphones, speakers, or both, depending on your license and the Apollo model used.

**Important:** After a calibration profile is applied to Apollo X in the SoundID Reference app, Apollo Monitor Correction always remains active unless it is bypassed or disabled in UAD Console. It cannot be disabled from within the SoundID Reference app.

**Jump to:**

- Apply a speaker calibration profile to your Apollo
- Apply a headphone calibration profile to your Apollo
- Metering with Apollo Monitor Correction

## Apply a speaker calibration profile to your Apollo

- In UAD Console, in the Monitor Column, click Main Mon under Monitor Correction.
  The Monitor controller window opens.
- Click OPEN SoundID. The SoundID Reference app opens.
- Under the name of your Apollo X monitor unit on the left side of the SoundID Reference window, Speakers should be selected.
- Click Select your calibration profile to select a profile from the drop menu. Any calibration profiles you have created appear in this list.
- Select a calibration profile. (If you haven't defined a speaker calibration profile yet, see Create a speaker calibration profile.)
- Configure your calibration target mode and settings. See Calibration target modes for information.
- Click Apply profile to Apollo X.

The calibration profile is applied and enabled on the corrected outputs of your Apollo X monitor unit.

Default profile file locations

By default, calibration profiles are saved to and loaded from the following locations:

macOS: ~/Library/Application Support/Sonarworks/SoundID Reference/Sonarworks Projects

Windows: [system drive]:\Users\your username\AppData\Local\Sonarworks\SoundID Reference\Sonarworks Projects

**Note:** The *User/Library* and *user\AppData* folders on macOS and Windows are hidden by default. To access them, you will need to allow showing hidden files.

## Apply a headphone calibration profile to your Apollo

Headphone calibration is applied only to headphone outputs on the Apollo X monitor unit. On a rack Apollo, you can apply two different headphone calibration profiles. On a desktop Apollo, you can apply a headphone correction profile only to HP1.

- In UAD Console, in the Monitor Column, click Headphones under Monitor Correction. The Headphone Correction window opens.
- Under Calibration Profile, click Open SoundID.
- Under the name of your Apollo monitor unit on the left side of the SoundID Reference window, **Headphones 1** should be selected.
- Click Select your calibration profile to select a profile.
- Select a calibration profile. (If you haven't defined a headphone calibration profile yet, see Adding a new headphone profile.)
- Configure your calibration target mode and settings. See Calibration target modes for information.
- Click Apply profile to Apollo X.

The calibration profile is applied and enabled to the headphones on your Apollo X monitor unit.

**Adding a new headphone profile**

- In SoundID Reference, click Select your calibration profile, or the current calibration profile.
- Click Add a new headphone profile.
- Select from the list of brands and models, or type to search for a brand or model.
- Select the model, and when prompted, confirm the headphones.
- Configure your calibration target mode and settings. See Calibration target modes for information.
- Click Apply profile to Apollo X.

## Metering with Apollo Monitor Correction

Output metering in UAD Console is adjusted to reflect the actual output after any speaker correction, Bass Management, and Safe Headroom. For this reason, UAD Console's output meters may not match your DAW level meters. Refer to your DAW's level meters when mixing.

Note that the left and right meters may not appear to be balanced when the Listening Spot feature is enabled. This is due to the measured level differences at your listening position.

UAD Console's input channel meter levels are unchanged.

**Note:** Headphone corrections are not reflected in UAD Console meters.

## Create a speaker calibration profile

On your computer, open the SoundID Reference Measure app and click Get Started. To Open SoundID Reference Measure from within the SoundID Reference app, click Select your calibration profile (or the current calibration profile name) at the top of the window, and choose Create a new speaker profile. The app guides you through the process of measuring the frequency response of your room and speakers to create a monitor calibration profile.

For complete information, refer to Sonarworks' Speaker measurements documentation.

**Important:** When creating speaker calibration profile measurements, disable all plug-in processing on the microphone input, including any Unison plug-in, and don't add or remove plug-ins on other channels if Input Delay Compensation is enabled (or simply create a new UAD Console session).

## Apollo output settings

Set your output settings (in UAD Console Settings > Hardware) before you create and apply the calibration profile, then do not change them after the profile is created. Changing these settings after the calibration profile is measured will affect the accuracy of speaker corrections.

These settings are:

- Monitor levels (-10 dBv or +4 dBu for rack models, and 20 dBu or 14 dBu for desktop models)
- Output reference levels (-10 dBv or +4 dBu)
- Headroom (+20 dBu or +24 dBu)

**Note:** These settings are read-only while the speaker measurement process is occurring.

## Speaker trim settings

When creating a multichannel speaker calibration profile, you may be prompted by the SoundID Reference Measure app to adjust speaker trims for individual speakers in your room. The Speaker Utilities panel in the Monitor Controller window remains active while you are creating your speaker calibration profile for this purpose.

After a speaker calibration profile is applied to Apollo in SoundID Reference, individual speaker trims in the Speaker Utilities panel of UAD Console's Monitor Controller window cannot be adjusted.

**Speaker trim notes**

- The Sub trim level in Stereo mode is not adjustable in Speaker Utilities.
- **Apollo rack models:** To adjust the balance between your subwoofer and speakers in Stereo mode, adjust the satellite speaker trims in the Speaker Utilities panel, and the subwoofer level with the physical controls on the subwoofer.
- **Apollo desktop models:** To adjust the balance between your subwoofer and speakers in Stereo mode, adjust the speaker and subwoofer levels with the physical controls on the speakers. L/R speaker trims are not available with Apollo desktop models.

## Apollo X Bass Management notes

- If you are using Apollo X Bass Management, make sure Bass Management is enabled when you measure your calibration profile. All Bass Management settings are retained when you apply the profile, and automatically managed by Apollo Monitor Correction. You cannot adjust Bass Management settings when Apollo Monitor Correction is enabled.
- If you currently use Apollo X Bass Management, but your monitor calibration profile was measured without Bass Management enabled, Bass Management is not used in the profile. Remeasure your profile to incorporate Bass Management.
- In Stereo mode with a subwoofer, Apollo Monitor Correction does not apply level adjustments or time alignment to the subwoofer in relation to the main L/R speaker levels. If the profile you measure with Bass Management enabled requires ±6 dB or more of correction in the bass frequencies covered by the subwoofer, we recommend that you adjust your speaker and subwoofer levels to compensate, then remeasure the profile. See this Sonarworks article for more information.

## Monitor and Headphone Correction Controls

The Monitor Correction and Headphone Correction buttons are located in the UAD Console Monitor column. Click the MAIN MON button to open the Monitor Correction floating window, and the HEADPHONES button to open the Headphone Correction floating window.

**Tip:** You can show and hide these buttons with the UAD Console menu commands View > Section > Monitor Correction.

## Monitor Correction buttons (Monitor Column)

You can open Apollo Monitor Correction windows with the buttons in the Monitor Column for HEADPHONES and MAIN MON.

You can toggle bypass of the Main Monitor corrections by hovering your mouse over the Main Mon button and clicking the IN button. When bypassed, the Main Mon button is dimmed and its label is italicized.

## Monitor Correction windows

Both Apollo Monitor Correction windows (Main Monitor and Headphone Correction) include the same SoundID correction controls, as described below.

The Monitor Correction window also includes Apollo X Bass Management features and Speaker Utilities.

The Headphone Correction window includes two tabs for HP1 and HP2 if the monitor unit is an Apollo X rack model, and HP1 only if the monitor unit is an Apollo Twin X or Apollo x4 desktop model.

**Note:** You cannot adjust Bass Management settings or use Speaker Utilities when a calibration profile is enabled. All monitor correction is controlled by the calibration profile, including any bass management and speaker trims that were active when the calibration profile was measured.

## Main Monitor Controller panel

The Main Monitor Calibration profile area shows the calibration profile name and an image of the corrections that are applied by the profile.

## Headphone Correction panel

The Headphone Calibration profile area shows the calibration profile name and an image of the corrections that are applied by the profile. Click the HP1 or HP2 tabs to show the calibration profiles for the two headphone outputs. On an Apollo desktop model, only HP1 appears.

## Calibration Profile / Open SoundID

Click the calibration profile name to open the SoundID app, where you can select another calibration profile, make target mode changes, and apply profiles to the Apollo.

## Main Monitor / Headphone Correction Enable

Click to toggle the main monitor or headphone corrections. There is a slight pause in audio output when the correction is applied or removed. Disabling processing is a hard bypass that unloads Apollo's DSP, so audible artifacts are more pronounced than the Bypass control.

**Tip:** Use Bypass to quickly toggle between corrected and uncorrected audio.

## Safe Headroom

Click to enable Safe Headroom. The feature is enabled when the switch is lit. Safe Headroom prevents digital clipping in the frequencies that are boosted by the SoundID Reference profile. The Safe Headroom value is calculated from the maximum peak EQ level applied by a profile, and reduces the output level by this amount (indicated on the Safe Headroom button) when enabled.

Enabling Safe Headroom can cause very large reductions in output level if calibration files have large peaks.

## Bypass

Click this switch to toggle speaker or headphone correction without disabling the features. This is a soft bypass that has minimal audio artifacts (DSP remains active), so you can quickly alternate between corrected and uncorrected audio.

You can also toggle the bypass for speaker corrections by hovering your mouse over the Main Mon button in UAD Console's monitor column, and clicking the IN button.

## Additional Controls in Monitor Controller window

When Apollo Monitor Correction is enabled, all features in the Bass Management panel of the Monitor Controller floating window are disabled. Bass Management controls are accounted for when you create your calibration profile, and managed by the profile. To configure Apollo X Bass Management (before you create a calibration profile) see this article.

## Apollo Monitor Correction latency

The following additional latency is incurred at the Apollo outputs when Apollo Monitor Correction is enabled on speakers or headphones.

- 1.5 ms at 44.1 and 48 kHz
- 0.75 ms at 88.2 and 96 kHz
- 0.7 ms at 176.4 and 192 kHz

## Apollo Monitor Correction DSP & filters

Apollo Monitor Correction uses 24 minimum phase biquad filters per channel for all satellite speakers, and 5 filters for the LFE/Sub channel.

**UAD-2 DSP Loads**

- On a 9.1.6 surround system, the processing load is less than one DSP core.
- On an Apollo Twin X DUO when Bass Management, Monitor correction, and Headphone correction are active, the processing load is approximately 13% of one DSP core.

## More Information

**SoundID Reference system menu**

You can access the SoundID Reference system menu from the macOS menu bar or the Windows system tray when SoundID Reference is running. The SoundID Reference system menu provides links to work with some SoundID Reference features, including updates, support, and preferences.

If you can't adjust target mode calibration controls in the SoundID Reference app, enable calibration from this menu. (Calibration controls are enabled when the menu says "Disable calibration').

When using Apollo Monitor Correction, don't enable SoundID Reference standalone processing. You can see if a SoundID Reference standalone output is enabled in this menu.

Website: https://help.uaudio.com/hc/en-us/articles/30920209088404-Apollo-X-Bass-Management

# Apollo X Bass Management

## Bass Management Overview

With Bass Management and your Apollo X Series interface, you can configure low frequency content filtering for your monitor speakers and LFE channel. You can configure bass management for all satellite channels at once, or for individual channel pairs, and the LFE channel in a surround monitoring system.

Bass Management allows for smaller studio monitors and satellite speakers in stereo and surround arrays to operate more accurately in their correct frequency ranges, while low frequency information below the crossover point is reproduced by a dedicated subwoofer.

In stereo monitor mode, you can add a subwoofer to your speaker system, define its low frequency content, and adjust all speaker levels simultaneously with UAD Console's level and mute controls.

Bass management is applied before UAD Console's level meters, so you can see the results of the filters in the meter output. Satellite crossover filters and the LFE low pass filter are variable 12 or 24 dB per octave Linkwitz-Riley filters.

**Note:** Bass management is not applied to ALT monitors, and is unavailable in LCR, LCRS, and QUAD Surround modes.

## Configuring Bass Management

Bass management is configured in UAD Console's Monitor Controller floating window. To open the Monitor Controller floating window:

- If the Monitor column isn't visible, select  Section > Monitor from the View menu.
- Click the Monitor Controller button in the Monitor Column.

**Note:** The Monitor Controller button only appears with Apollo X Series interfaces.

## Bass routing for Apollo X models

Bass management routes low frequency content to an Apollo X hardware output. Connect this hardware output to your low frequency monitor (for example, a subwoofer).

**Note:** If you switch Apollo Monitor Modes between Stereo and Surround modes, the subwoofer output channel will change, and you will have to make the correct hardware connections.

### Stereo monitor mode

In Stereo monitor mode, bass content is routed to a specific output on each Apollo X model. Note that because one hardware output is used for bass content, features that require that output pair are limited.

### Surround monitor modes

In a surround system, the LFE channel is routed to a specific hardware output already.

Bass Channel Routing Table (Stereo Monitor Mode) - Gen 2 Model

**Apollo Twin X Gen 2:**

Sub Output Channel: 4

Bass Management Notes: ALT monitoring unavailable

## Managing bass with the Bass Management panel

### Enabling bass management

- In the Monitor Controller floating window, click the Bass Management tab.
- Toggle bass management on/off with the ENABLE button. When bass management is enabled, the button is lit.

### Adjusting crossover filter slopes

Filter crossover slopes can be set for the satellite speakers and for the LFE channel in a surround mode. Crossover filter slopes are configured for bass management system-wide, and not per-channel.

- From the Satellite Filter menu, select the crossover slope (12 dB or 24 dB per octave).
- (Surround modes only) From the LFE Filter menu, select the filter slope (12 dB or 24 dB per octave).

## Adjusting the crossover frequency for satellite speakers

Satellite speaker crossover frequencies can be set for each speaker pair, or for all speakers at once in a surround monitor mode.

**Tip:** If you set the Satellite Crossover to OFF, no bass content is sent to the subwoofer channel.

- In the Bass Management panel, select a satellite speaker or satellite speaker pair by clicking a speaker icon in the speaker display, or by selecting from the Channel menu. In Stereo mode the L/R speaker pair is selected, and is the only available pair.
- From the Satellite Crossover menu, select the filter crossover frequency, The available satellite crossover values are OFF, 80 Hz, 100 Hz, or 120 Hz.
- Repeat steps 1–2 for all channels.

**Tip:** To adjust the Satellite Filter crossover for all satellite speakers, click SELECT ALL in the speaker display, or select ALL from the Channel menu.

## Adjust bass management features for the LFE channel (surround modes)

The LFE low pass filter (LPF) frequency can be set independently when any surround monitoring mode with an LFE channel is selected (surround modes without an LFE channel do not support bass management). The LFE Filter is applied to the signal from your audio source (DAW) to your LFE channel, and does not affect the signal to your satellite speakers.

The Bass Management panel also allows you to add 10 dB of gain to the LFE channel, for the film mixing standard.

- In the Bass Management panel, select the LFE channel by clicking the LFE icon in the speaker display, or by selecting it from the Channel menu
- From the LFE LPF menu, select the low pass filter frequency. The available LFE LPF values are OFF, 80, 100 Hz, 120 HZ, and 150 Hz.
- Enable the LFE +10 dB button if you are mixing to the standard that allows 10 dB of extra headroom for the LFE channel.

## Additional Monitor Controller features for bass management

The Monitor Controller floating window includes other controls that can be used with bass management features.

**Monitor mode**

The Monitor Controller window provides easy access to the Monitor mode switch, so you can switch between stereo monitoring and supported surround modes for your Apollo X. Select a monitor mode from the drop menu to the left of the monitor level knob. Your Apollo X output routing is updated, and the speaker layout image is adjusted accordingly. For more information on surround modes, see Apollo X Rack Surround Sound,

**Note:** Surround functionality is available with Apollo X rack models only.

**Monitor Level**

This is the level control for Apollo's monitor outputs. It performs the same function as the MONITOR hardware knob on Apollo X.

**SRND switch**

Switches to the current surround monitoring mode.

**Note:** This switch appears only when a surround monitoring mode is selected.

**STR switch**

Switches to stereo fold down. Click SRND to return to surround monitoring mode.

When stereo fold down is active, the bass management crossover follows the Stereo L/R speaker settings. When stereo fold down is active, center channels (including LFE/SUB) are attenuated by -3 dB and surround side channels by -1.5 dB. The main Left and Right channels are not attenuated.

**Note:** This switch appears only when a surround monitoring mode is selected.

**MONO switch**

Switches to mono fold down. When mono fold down is active, the bass management crossover follows the Center channel crossover frequency, or the Stereo L/R speaker settings in 2.1 mode. When mono fold down is active, center channels (including LFE/SUB) are attenuated by -3 dB, surround side channels are attenuated by -7.5 dB, and the main Left and Right channels are attenuated by -6 dB.

**MUTE switch**

Mutes all audio output.


## Apollo DSP and Bass Management

Bass Management uses a small amount of DSP for filtering.

The system incurs the following additional latency when Bass Management is enabled:

- 1.5 ms at 44.1 kHz and 48 kHz
- 0.75 ms at 88.2 kHz and 96 kHz
- 0.7 ms at 176.4 kHz and 192 kHz

Website: https://help.uaudio.com/hc/en-us/articles/26817449653012-Apollo-X-Surround-Sound

# Apollo X Surround Sound

## Create Professional Immersive Audio Mixes

Surround sound is multi-channel audio output that expands on the basic two-channel stereo format. Surround sound with Apollo X is a hardware and software operating mode that is configured within Console. When enabled, Apollo X and Console output features are optimized for the surround environment.

Use Apollo x16 as your all-in-one monitoring hub for mixing formats up to 9.1.6, and easily create 16-channel immersive audio mixes for Dolby Atmos, Auro-3D, Sony 360 Reality Audio, and others.

**Note:** Surround functionality is available with Apollo X rack models only.

## Surround Features

- Eleven available surround modes, up to 9.1.6 channels (up to 5.1 with Apollo x6, up to 7.1 with Apollo x8/x8p, up to 9.1.6 with Apollo x16)
- Control all surround output channel levels simultaneously with Monitor knob
- Monitor knob can be calibrated to absolute dB SPL values
- Surround output channel metering in Console and front panel hardware LEDs
- SMPTE channel ordering eliminates re-patching when changing surround modes
- Individual surround channel offset trim controls for speaker calibration
- Individual surround channel solo and mute controls
- Automatic Core Audio/ASIO surround channel naming and reordering

## Operational Changes

When any surround mode is active, the following Apollo X and Console behaviors are changed from the standard (stereo mode) behavior. These behaviors are explained in greater detail later in this chapter.

**Monitor Mode Menu –** When an Apollo X is recognized, the menu for selecting surround formats appears in the Hardware panel within the Console Settings window.

**Monitor Control –** All surround output channels are simultaneously controlled with Apollo's front panel hardware Monitor knob and/or the Monitor controls within Console.

**Monitor Controller Window –** Individual surround channel output offset trims, bass management features, and the overall SPL (sound pressure level) are calibrated within this window. This window also provides access to individual surround channel solo and mute controls.

**Calibrated SPL Monitor Level –** Console's monitor output level is optionally displayed as a calibrated dB SPL (instead of -dBFS value below full output).

**Surround Channel Metering –** The output level of each surround channel is displayed in Console's Monitor column, in the Console Output Meters window, and optionally on the front panel of Apollo X.

**Fold Down –** Stereo and Mono fold down options in Console's Monitor Column enable quick switching between full surround and collapsed monitoring.

**I/O Matrix –** Surround output channel and name assignments in Console Settings are automatically updated when a surround mode is activated.


## Hardware Settings

### SMPTE Channel Ordering

Apollo X surround sound uses standard SMPTE output channel ordering. With SMPTE output channel ordering, output channel assignments to each surround speaker remain the same in the various monitor modes.

This feature facilitates the ability to switch between surround formats without having to re-patch physical outputs to the surround speakers. For example, the subwoofer is always assigned to the Line 2 output, regardless of the selected surround mode.

**SMPTE Channels**

The SMPTE channel ordering output assignments are shown in the table below. Connect each surround speaker to the physical Apollo X output shown in the table.

**Note:** Analog Line Out 15-16 (Apollo x16) are assigned as Alt L (15) and Alt R (16) outs in Dolby Atmos (5.14, 7.1.4, 9.1.6) modes.

Apollo Outputs and SMPTE Channel Assignments

**MON L:** L

**MON R:** R

**LINE 1:** C

**LINE 2:** LFE

**LINE 3:** Ls, S, Lrs, Lss

**LINE 4:** Rs, Rrs, Rss

**LINE 5:** Cs, Lss, Lrs

**LINE 6:** Rss, Rrs

**LINE 7:** Ltf

**LINE 8:** Rtf

**LINE 9:** Ltr

**LINE 10:** Rtr

**LINE 11:** Lw

**LINE 12:** Rw

**LINE 13:** Ltm

**LINE 14:** Rtm

**LINE 15:** ALT L

**LINE 16:** ALT R

## Monitor Modes & Channel Assignments

All available surround modes and their speaker channel assignments are shown in the tables below. Note that due to standard SMPTE channel ordering, the speaker assignment for each physical output channel is essentially the same within a single column.

## Apollo x6 Surround Modes and Channel Assignments

**Stereo Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (ALT L), 2 (ALT R), 3 (ALT 2 L), 4 (ALT 2 R), SUB

**2.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (LFE), 2 (ALT L), 3 (ALT R)

**LCR Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (ALT L), 3 (ALT R)

**LCRS Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (S), 3 (ALT L), 4 (ALT R)

**QUAD Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (Ls), 2 (Rs), 3 (ALT L), 4 (ALT R)

**5.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (LFE), 3 (Ls), 4 (Rs), 5 (ALT L), 6 (ALT R)

Apollo x8/x8p Surround Modes and Channel Assignments

**Stereo Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (ALT L), 2 (ALT R), 3 (ALT 2 L), 4 (ALT 2 R), SUB

**2.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (LFE), 2 (ALT L), 3 (ALT R)

**LCR Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (ALT L), 3 (ALT R)

**LCRS Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (S), 3 (ALT L), 4 (ALT R)

**QUAD Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (Ls), 2 (Rs), 3 (ALT L), 4 (ALT R)

**5.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (LFE), 3 (Ls), 4 (Rs), 5 (ALT L), 6 (ALT R)

**6.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (LFE), 3 (Ls), 4 (Rs), 5 (Cs), 6 (ALT L), 7 (ALT R)

**7.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Analog Line Outputs:** 1 (C), 2 (LFE), 3 (Lrs), 4 (Rrs), 5 (Lss), 6 (Rss), 7 (ALT L), 8 (ALT R)

## Apollo x16 Surround Modes and Channel Assignments

Monitor Mode: Analog Mon Outputs and Output Channel Assignments (Mon-Line 8)

**Stereo Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 1: ALT L

LINE 2: ALT R

LINE 3: ALT 2 L

LINE 4: ALT 2 R

LINE 8: SUB

**2.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 2: LFE

**LCR Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 3: C

**LCRS Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 3: C

LINE 4: S

**QUAD Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 5: Ls

LINE 6: Rs

**5.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 3: C

LINE 4: LFE

LINE 5: Ls

LINE 6: Rs

**6.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 3: C

LINE 4: LFE

LINE 5: Ls

LINE 6: Rs

LINE 7: Cs

**7.1 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 3: C

LINE 4: LFE

LINE 5: Lrs

LINE 6: Rrs

LINE 7: Lss

LINE 8: Rss

**5.1.4 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 7: Ltf

LINE 8: Rtf

**7.1.4 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 7: Ltf

LINE 8: Rtf

**9.1.6 Mode:**

**Analog Mon Outputs:** MON L, MON R

**Output Channel Assignments:**

LINE 7: Ltf

LINE 8: Rtf

Output Channel Assignments (9-16)

**Stereo Mode:**

No additional assignments

**2.1 Mode:**

LINE 9-16: ALT L, ALT R

**LCR Mode:**

LINE 9-16: ALT L, ALT R

**LCRS Mode:**

LINE 9-16: ALT L, ALT R

**QUAD Mode:**

LINE 9-16: ALT L, ALT R

**5.1 Mode:**

LINE 9-16: ALT L, ALT R

**6.1 Mode:**

LINE 9-16: ALT L, ALT R

**7.1 Mode:**

LINE 9-16: ALT L, ALT R

**5.1.4 Mode:**

LINE 9: Ltr

LINE 10: Rtr

**7.1.4 Mode:**

LINE 9: Ltr

LINE 10: Rtr

**9.1.6 Mode:**

LINE 9: Ltr

LINE 10: Rtr

LINE 11: Lw

LINE 12: Rw

LINE 13: Ltm

LINE 14: Rtm


# Apollo x16D Surround Modes and Channel Assignments

Monitor Mode: Analog Mon Outputs and Dante Outputs (1-8)

**Stereo Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: ALT L

LINE 2: ALT R

LINE 3: ALT 2 L

LINE 4: ALT 2 R

LINE 8: SUB

**2.1 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: LFE

**LCR Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

**LCRS Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: S

**QUAD Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 5: Ls

LINE 6: Rs

**5.1 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Ls

LINE 6: Rs

**6.1 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Ls

LINE 6: Rs

LINE 7: Cs

**7.1 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Lrs

LINE 6: Rrs

LINE 7: Lss

LINE 8: Rss

**5.1.4 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Ls

LINE 6: Rs

**7.1.4 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Lss

LINE 6: Rss

LINE 7: Lrs

LINE 8: Rrs

**9.1.6 Mode:**

**Analog Mon Outputs:** ALT L/R

**Dante Outputs:**

LINE 1: L

LINE 2: R

LINE 3: C

LINE 4: LFE

LINE 5: Lss

LINE 6: Rss

LINE 7: Lrs

LINE 8: Rrs

Dante Outputs 9-16

**5.1.4 Mode:**

LINE 9: Ltf

LINE 10: Rtf

LINE 11: Ltr

LINE 12: Rtr

**7.1.4 Mode:**

LINE 9: Ltf

LINE 10: Rtf

LINE 11: Ltr

LINE 12: Rtr

**9.1.6 Mode:**

LINE 9: Ltf

LINE 10: Rtf

LINE 11: Ltr

LINE 12: Rtr

LINE 13: Lw

LINE 14: Rw

LINE 15: Ltm

LINE 16: Rtm

## Hardware Surround Metering

Surround levels are displayed on the LEDs on the front panel of the Apollo X rack hardware when the meters are set to OUT via the METER button on the front panel.

On the hardware, the output LED meters always reflect signal levels at their associated physical outputs, and the physical outputs always use the SMPTE channel ordering, regardless of the active surround mode. Therefore the hardware MONITOR meters always display L and R levels, the Line 1 meter always displays the Center level, Line 2 always displays the LFE/SUB level, and so forth, according to the SMPTE channel ordering.

Surround Channel Alignment

Because of standard SMPTE channel ordering, the 2.1, LCRS, QUAD, and 5.1.4 surround modes have non-surround channels between the surround channels. These non-surround channels are indicated by dashes (–) in the Monitor Modes & Channel Assignments table.

When 2.1, LCRS, QUAD, or 5.1.4 surround modes are active, the non-surround channel(s) between the surround channels is automatically placed after the surround channels at the driver level. This feature allows all of the surround channels to exist in consecutive order within the DAW without having to re-patch physical outputs.

The output channel assignments for the 2.1, LCRS, QUAD, and 5.1.4 surround modes are shown in the tables below. The channels where Line 1 and Line 2 would

normally appear are modified as needed (shown with red highlight) so the surround mode channels are adjacent in the DAW.

**Note:** These assignments are identical to those in the Monitor Modes & Channel Assignments table. The tables below simply illustrate how those assignments appear within the DAW for these surround modes.

**2.1 Output Channel Ordering:**

**MON L:** L

**MON R:** R

**LINE 2:** SUB

**LCRS Output Channel Ordering:**

**MON L:** L

**MON R:** R

**LINE 1:** C

**LINE 2:** S

**QUAD Output Channel Ordering:**

**MON L:** L

**MON R:** R

**LINE 3:** Ls

**LINE 4:** Rs

**5.1.4 Output Channel Ordering:**

**MON L:** Ltf

**MON R:** Rtf

**LINE 3:** Ltr

**LINE 4:** Rtr

## Software Settings

### Monitor Mode Menu

Surround is activated by choosing any surround mode (other than STEREO) from the Monitor Mode menu in the Hardware Settings Panel within the Console Settings window, as shown at right.

**Caution:** Lower speaker volumes before reducing the surround mode to a mode with fewer output channels. When the surround mode is switched to a mode with fewer channels, the channels that are released from monitor control switch to full volume.

### Monitor Mode Notes

- The Monitor Mode menu is available only when one or more Apollo X is recognized.
- In a multi-unit configuration, the Monitor Mode menu is available only when Apollo X has the Monitor Unit Designation. One unit must be designated as the monitor unit. Monitor speakers are attached to the monitor unit only. All other units are expander units.
- Headphone and cue outputs can be assigned to any leader or follower unit. However, mirrored cues can be routed to the monitor unit only.

## Monitor Controller Window

The Speaker Utilities tab on the Monitor Controller window is where Apollo X surround components are calibrated. The Monitor knob can be calibrated for absolute dB SPL (volume) values and the surround output channel level offsets can be individually trimmed.

To open the Monitor Calibration popover, click the the Monitor Controller button in the Monitor Column, or the button next to the MONITOR MODE menu in Console Settings > Hardware.

Offset trim controls for each output channel in the active surround format are dynamically displayed in the popover, on the Speaker Utilities tab.

See Calibrating Monitors for detailed instructions on how to calibrate the surround system using the functions in this popover.

**Tip:** In addition to surround modes, Monitor Calibration is also available in Stereo mode.

## Monitor Level Display

These options determine the type of dB units displayed beneath the Monitor knob within Console. Absolute SPL (Sound Pressure Level, displayed as dB SPL) or relative dBFS (digital full scale, displayed as dB) labels can be shown.

**Note:** When the dB SPL option is selected, displayed SPL values are accurate only if the surround speaker system is properly calibrated.

## Set dB SPL

The SET dB SPL button is used to enter the calibrated dB SPL value (volume level) of the Monitor knob after the speaker offset trims are adjusted during calibration.

**Note:** The SET db SPL button applies to the dB SPL function only. When the SET function is used, the Show mode is automatically set to dB SPL.

## Channel Offset Trims

Each channel output level can be offset by ±10 dB in continuous increments of 0.1 dB. Click the TRIM button to set offsets. Offset trims for each hardware device and surround mode are saved within user preferences on the computer system.

**Note:** The L and R offset trims adjust the main monitor L/R outputs only and do not affect ALT monitor outputs. Stereo ALT offsets can be adjusted with the ALT TRIM control in the Monitor Column.

## Surround I/O Matrix

When any surround mode is activated with the Monitor Mode menu:

- Output channel assignments and names are changed to match the mode.
- Physical output assignments and channel names can be customized. However, only the SMPTE Channels are available for assignment.

# Console Surround Monitoring

When a surround mode is active, the Monitor Meters and Monitor output options in Console's Monitor Column appear as shown.

## Monitor Meters

Surround channel levels are displayed at the top of Console's Monitor Column. To open a separate large, re-sizable Console Output Meters window, click on the meters or the UA logo. To close the separate output meters window, click the X in its upper left corner.

**Tip:** Drag from the bottom right corner to change the height of the separate output meters window.

### Channel Ordering

In Console, the Monitor Meters use FILM output channel ordering. Unlike SMPTE channel ordering for physical outputs, the software meters change according to the active surround mode.

Console Surround Monitor Meter Channel Ordering for Each Surround Mode

**Stereo Mode:**

**Console Output Meters:** L - R

**2.1 Mode:**

**Console Output Meters:** L - R - LFE

**LCR Mode:**

**Console Output Meters:** L - C - R

**LCRS Mode:**

**Console Output Meters:** L - C - R - S

**QUAD Mode:**

**Console Output Meters:** L - R - Ls - Rs

**5.1 Mode:**

**Console Output Meters:** L - C - R - Ls - Rs - LFE

**6.1 Mode (Apollo x8, x8p, x16):**

**Console Output Meters:** L - C - R - Ls - Cs - Rs - LFE

**7.1 Mode (Apollo x8, x8p, x16):**

**Console Output Meters:** L - C - R - Lrs - Rrs - Lss - Rss - LFE

**5.1.4 Mode (Apollo x16 only):**

**Console Output Meters:** L - C - R - Ls - Rs - Ltf - Rtf - Ltr - Rtr - LFE

**7.1.4 Mode (Apollo x16 only):**

**Console Output Meters:** L - C - R - Lss - Rss - Lrs - Rrs - Ltf - Rtf - Ltr - Rtr - LFE

**9.1.6 Mode (Apollo x16 only):**

**Console Output Meters:** L - C - R - Lw - Rw - Lss - Rss - Lrs - Rrs - Ltf - Rtf - Ltm - Rtm - Ltr - Rtr - LFE

**Note:**

*Apollo x8, x8p, x16* models support 6.1 and 7.1 modes.

†Apollo x16 only supports 5.1.4, 7.1.4, and 9.1.6 modes.

Console's monitor meters change with each surround mode.


## Speaker Utilities


The Speaker Utilities tab on the Monitor Controller window is used to mute, solo, and trim levels for individual surround output channels. The overall monitor output level can also be adjusted here.

To open Speaker Utilities, click the Monitor Controller button on the Monitor Column, then choose the SPeaker utilities tabMwhen a surround mode is active.

**Speaker Utilities Notes**

The Speaker Utilities tab  is available only when a surround mode is active.

The MONITOR button in the Monitor Column blinks when any surround channel is soloed or muted.

Solo and mute states are reset when the surround format is changed with the Monitor Mode menu or if unit ordering is changed in the DEVICES column in Console Settings > Hardware.

## Mode

Mode switches between SOLO, MUTE, and TRIM modes. The mode can also be switched by clicking its associated LED in the popover.

A blinking Mode LED indicates that a surround channel is in mute or solo mode when the other mode is active. For example, if an output is muted, the red LED will blink when SOLO mode is active.

**Solo**

To solo any surround channel, click its speaker icon in the Monitor popover when the yellow SOLO LED is illuminated. A surround output channel is soloed when its speaker icon is yellow.

**Tip:** Option-click (Mac) or alt-click (Win) to simultaneously change the solo state of all surround channels.

**Mute**

To mute any surround channel, click its speaker icon in the Monitor popover when the red MUTE LED is illuminated. A surround output channel is muted when its speaker icon is red.

**Tip:** Option-click (Mac) or Alt-click (Win) to simultaneously change the mute state of all surround channels.

**Trim**

To trim the level for any output channel, click the speaker icon and drag up or down, or double-click and enter a value.

**Tip:** Option-click (Mac) or Alt-click (Win) on any channel to set the offset trim to 0.

## Surround Fold Down

When a surround mode is active, all surround channels can be folded to a stereo or mono monitor mix. Although not a substitute for true LtRt encoding (which requires specialized hardware), this feature is convenient when all surround speakers are unavailable or when working with headphones.

## Level Compensation

When a surround mode is active and the mix is folded to stereo or mono, combined surround channel signals are attenuated as appropriate to maintain channel balance.

**Note:** Fold down level compensation occurs only when MONITOR MODE is set to a surround mode (levels are not compensated in stereo mode).

## Stereo Fold

Stereo fold down is active when the STER button in the OUTPUT section of the Monitor Column is illuminated. Click SRND to return to surround monitoring mode.

When stereo fold down is active, center channels (including LFE/SUB) are attenuated by -3 dB and surround side channels by -1.5 dB. The main Left and Right channels are not attenuated.

## Mono Fold

Mono fold down is active when the MONO button in the OUTPUT section of the Monitor Column is illuminated. Click MONO to return to surround monitoring mode.

When mono fold down is active, center channels (including LFE/SUB) are attenuated by -3 dB, surround side channels are attenuated by -7.5 dB, and the main Left and Right channels are attenuated by -6 dB.

**Note:** When mono fold down is active, inputs are routed to the Center output channel, except in 2.1 and QUAD surround modes. In 2.1 and QUAD surround

modes (which do not feature a center channel), input signals are heard as summed mono in the Left and Right output channels.

## Calibrating Monitors

This procedure details how to calibrate Apollo X surround outputs to a monitor level of 85 dB SPL with a subwoofer boost of +10 dB. You'll need the following tools:

- SPL Meter and Surround-capable DAW
- Digital audio source files (available at here):
  - 500-2500 Hz pink noise @ -20 dBFS
  - 40-80 Hz pink noise @ -20 dBFS

## Calibration Procedure

- In the Hardware panel within the Console Settings window, choose the desired surround format from the Monitor Mode menu, then configure the DAW to use the same surround format.
- In the DAW, play the 500-2500 Hz pink noise @ -20 dBFS audio file from a track that is routed to the front left (L) speaker output channel.
- Click the Monitor Controller button on the Monitor Column, then click the Speaker Management tab, then click the Set in dB SPL button.
- Click the Trim button to set speaker trim offsets.
- From the mix position, point the SPL meter directly at the L channel speaker, then tilt the meter upwards towards the ceiling at an angle approximately 45 degrees from horizontal.
- In the Speaker Utilities tab, rotate the monitor knob until the SPL meter reads 85 dBC (or other desired SPL value).
- In the DAW, move the same audio file to the center (C) speaker output channel track. From the mix position, point the SPL meter directly at the C channel speaker, then tilt the meter upwards towards the ceiling at an angle approximately 45 degrees from horizontal.
- In the Speaker Utilities tab, drag up or down on the C channel, adjusting its offset level until the SPL meter reads 85 dBC.
- Repeat steps 7 – 8 for the other full range speaker output channels.

- In the DAW, mute all of the full range speaker output channels.
- In the DAW, play the 40-80 Hz pink noise @ -20 dBFS audio file from a track that is routed to the subwoofer (LFE) speaker output channel.
- In the Speaker Utilities tab, drag up or down on the LFE channel, increasing its offset level until the SPL meter reads 95 dBC. Note that in standard practice, the LFE channel is typically boosted by +10 dB in film mixing and +4 dB in TV post production. However, LFE boost levels are not standardized.
- In the Speaker Utilities window, press the SET dB SPL button. A popover opens
- Enter a value of 85 (or the desired SPL value from step 6, if different) into the calibration text field, then press SET db SPL again.

The calibration procedure is complete.

## Calibration Notes

- After calibration, the Monitor knob is labeled as dB SPL units and the value displayed below the knob is the calibrated sound pressure level.
- Different standards are used for different applications. The most common standard is 0 dBFS being equal to -20 dB or 85 dB SPL (C-weighted).
- Hearing protection is recommended during the calibration procedure to prevent unnecessary exposure to high volume levels.

## Surround Operation Notes

The following operation notes apply when any Apollo X surround mode is active.

### Input Routing

- Digital Mirror routes always use stereo fold down and include any input signals.
- Apollo input signals are always routed to the Left & Right output channels, including when stereo fold down is active.
- To route an input signal(s) directly to one or more surround output channels, use the DAW.

**Cue & Headphone Mix Buses**

- Surround fold down does not affect the cue or headphone mix buses.
- Stereo is always active in the cue and headphone mix buses.
- To monitor the cue and headphone mix buses in mono, use the MONO function in the Cue Outputs popover.

**Operating System Surround Sound**

- Surround sound playback from non-DAW applications (DVD players, etc) is routed and folded down to stereo by the operating system (Core Audio or WDM).
- (macOS) Core Audio surround channels can be routed to Apollo X surround channels by choosing the surround mode from the Configuration menu within the Audio MIDI Setup application's Audio Devices > Output > Configure Speakers popover.
- (Windows) WDM stereo fold down is routed to Apollo X Left & Right Monitor outputs only.

**Flex Routes**

- Output channels that are used in surround monitor modes are unavailable for Flex Route assignments.
- If a Flex Route is assigned to a surround channel before entering a surround mode that uses the channel, the Flex Route is reassigned to Monitor, and the assignment remains on Monitor after returning to a mode that does not use the output.

**Console Recall**

- Console Recall cannot be inserted on surround tracks. To use Console Recall in a DAW surround session, insert Console Recall on a mono or stereo track.
- Console Recall plug-in operation within the DAW is identical in stereo and surround sessions.

Website: https://www.presonus.com/pages/studio-one-pro

# Multi-Unit Cascading

## Apollo Expanded Overview

Up to four Apollo Thunderbolt units of any model type (Apollo rack and desktop models) can be connected and used together as a single consolidated multi-unit system via Thunderbolt. When multiple Apollo units are connected via Thunderbolt, all units are controlled within a single Console window, and the I/O complement of all devices is available within the DAW. Operating a multi-unit system is nearly identical to that of a single-unit system for seamless expansion when more I/O is needed.

**Note:** A total of six UAD-2 devices can be used together in a single system.

## Console Integration

When multi-unit cascading, the number of Console inputs is increased to match the increased hardware inputs. All Apollo units share the same monitor, auxiliary, and cue mix buses for integrated mixing convenience.

## Monitor and Expander Units

To facilitate the mix bus integration within Console, one unit must be designated as the monitor (leader) unit. Monitor speakers are attached to the monitor unit only. All other units are expander (follower) units. For details, see Monitor Unit Designation.

**Note:** Headphone and cue outputs can be assigned to any leader or follower unit. However, mirrored cues can be routed to the monitor unit only.

## Hardware Setup

In multi-unit systems, all Apollo devices are interconnected via a single Thunderbolt cable per unit, with a single Thunderbolt connection to the host computer. The host computer port, as well as any Thunderbolt devices on the bus (including Apollo), can be Thunderbolt 1, Thunderbolt 2, or Thunderbolt 3 (Windows systems require built-in Thunderbolt 3 for the host computer connection).

## Constraints

Depending on the specific configuration, certain features and/or I/O streams are reduced when multi-unit cascading. See Multi-Unit Constraints for details.

## Driver I/O

Apollo I/O availability and numbering changes when multi-unit cascading. I/O routes can be virtually remapped via Apollo's I/O Matrix Panel. For a list of default I/O states, see the Driver I/O Tables.

## Multi-Unit Wiring

**Note:** Visit help.uaudio.com for complete compatibility information and the latest technical updates.

## Apollo Expanded Wiring Notes

Follow the guidelines below when combining multiple Apollo Thunderbolt units.

### All Multi-Unit Systems

- Up to four Apollo units and six UAD devices total can be combined within the same system.

- A maximum of one desktop interface model (Arrow, Apollo SOLO, Apollo Twin, Apollo Twin MkII, Apollo Twin X, Apollo x4) can be combined within the same system.
- When connecting multiple Thunderbolt Apollo/Arrow/Satellite devices, they must all be daisy-chained to the same Thunderbolt port on the computer.
- Apollo X Series Thunderbolt 3 models can be mixed with prior Apollo Thunderbolt models via compatible Thunderbolt 3 to Thunderbolt 2 adapters.
- A single Thunderbolt cable is required for all Apollo unit interconnections. Connect one cable to the host computer and one cable between each Apollo unit.
- The Thunderbolt protocol is bidirectional. Do not connect more than one Thunderbolt cable between the same two devices.
- All Apollo clocking is automatically managed via Thunderbolt. Do not interconnect any Word Clock, FireWire, ADAT, or MADI ports between any Apollo units.
- Apollo/UAD device ordering and Thunderbolt ports used (such as which port on Apollo racks and Satellites, placements within daisy chain, etc) is not important.
- Monitor speakers (including ALT speakers) and any cue outputs must be connected to the designated monitor unit only.
- All Apollo units must be connected via Thunderbolt. Apollo Thunderbolt models cannot be combined with Apollo models that use FireWire or USB connections.

**Windows Multi-Unit Systems**

- A Windows 10 or 11 PC with a Thunderbolt 3 port is required.
- A compatible Thunderbolt 3 to Thunderbolt 2 adapter is required when connecting to older Apollo Thunderbolt models without Thunderbolt 3.
- Connections to Thunderbolt 1 and Thunderbolt 2 computer ports are not supported.

### Mac Multi-Unit Systems

- Thunderbolt 1, Thunderbolt 2, or Thunderbolt 3 ports may be mixed and used for any/all connections.
- Apollo X Series can be connected to Thunderbolt 1 and Thunderbolt 2 Macs via the Apple Thunderbolt 3 to Thunderbolt 2 adapter.

## Multi-Unit Wiring Example

Two typical examples of mixed multi-unit Apollo/UAD systems are illustrated below. See the wiring notes on the previous page for additional details.

## Multi-Unit Operation

### Power On Sequence

Thunderbolt devices may be connected and/or disconnected when the computer and/or devices are powered on (hot plugging). The order in which the Apollo units are connected and/or powered on is not important. Apollo units are automatically detected a few moments after connection.

### Multi-Unit Monitoring

To facilitate the mix bus integration within Console, one unit must be designated as the monitor (leader) unit. All other units are expander (follower) units.

### Monitor Unit Designation

The Apollo unit at the top of the Devices column in the Hardware panel within the Console Settings window is the designated monitor unit. The monitor unit is indicated by a small orange speaker icon and the letter "A" to the left of the unit's icon.

A different unit is designated as the monitor unit by dragging the unit to the top of the Devices Column, as shown in the screenshots below. The monitor/expander designations can be changed at any time.

**Note:** Designating Apollo Twin as the monitor unit is not a recommended configuration. Instead, designating an Apollo rack model or Apollo x4 as the monitor unit is recommended in order to take advantage of their additional outputs for CUE routing and ALT monitoring.

**Important:** Lower all speaker and headphone volumes before changing the monitor unit designation. Changing the monitor unit designation changes the driver I/O configuration. Quit all audio applications before performing this action. Additionally, wait for this operation to complete before making further adjustments.

## Multi-Unit Monitor Outputs

When multi-unit cascading, all units share the same monitor mix bus. The monitor speaker system (including ALT monitors, if configured) must be connected to the monitor outputs of the monitor unit only.

Note: After changing the monitor unit designation, the monitor speakers must be physically connected to the new monitor unit to hear the monitor outputs.

### Monitor Outputs on Expander Units

When multi-unit cascading, the monitor outputs of all expander units are available as additional line outputs via the I/O Matrix panel within the Console Settings window. In this configuration, the monitor outputs of the expander units are not affected by the Monitor Level knob.

## Multi-Unit Headphone Outputs

All headphone outputs for all connected Apollo units (monitor and expander) are available to output the monitor or cue mix buses via the Cue Outputs Popover.

## Multi-Unit Cue Outputs

Cue mix buses can be routed to physical outputs (line, ADAT, etc) on the monitor unit only. However, cues mix buses can be sent to any available headphone output via the Cue Outputs window.

## Multi-Unit Monitor Control

### Monitor Knobs

The monitor knob on the front panel of expander units (except Apollo desktop models, as below), and its surrounding green LED indicator ring, are disabled. To adjust the monitor output level, the front panel monitor knob on the monitor unit, the desktop remote unit, or the monitor level controls in Console or the Console Recall plug-in must be used.

### Apollo Desktop Remote

When an Apollo desktop model is connected in a multi-unit system, its monitor knob mirrors that of the monitor unit for volume and mute control. This feature offers convenient desktop control of the monitor and ALT speakers.

### Apollo Desktop Talkback

When an Apollo desktop model with a Talkback mic is connected in a system with an Apollo X rack model, the Apollo desktop model is the talkback unit. For additional details, see the Talkback article.

## Multi-Unit Unison Gain Stage Mode

To control a Unison plug-in with Gain Stage Mode, the hardware controls on the unit containing the preamp channel must be used.

For example, to control a Unison plug-in in an Apollo x8p preamp channel, the Apollo x8p hardware must be used. To control a Unison plug-in in an Apollo Twin preamp channel, the Apollo Twin hardware must be used, and so forth.

## Multi-Unit Clocking

All multi-unit clocking is carried via Thunderbolt. All connected Apollo units always clock (follow) from the monitor (leader) unit, whether set to internal or external clock.

**Important:** Do not interconnect any FireWire, ADAT, Word Clock, or MADI ports between any Apollo units connected via Thunderbolt.

**Internal**

When multiple units are connected via Thunderbolt, all system clocking and clock settings are automatically configured by Apollo's device drivers. The clock setting in Console's Info Bar (and its mirrored setting in the Hardware panel within the Console Settings window) must remain on INTERNAL unless specifically clocking to an external (non-Apollo) device.

**Note:** When Apollo's clock source is set to INTERNAL, "EXT" will illuminate on the front panel hardware of the expander units.

**External**

When using an external (non-Apollo) clock, connect the external clock to the monitor unit only. All connected Apollo units are automatically configured to use the external clock when Apollo's Clock is set to EXTERNAL.

**Important:** When synchronizing to an external clock, connect the external clock source to the monitor unit only. The expander units always synchronize to the monitor unit.

## Multi-Unit Flex Routing

When two or more Apollo rack models are connected, Flex Routing can be used within each unit. Up to 16 output routes can be assigned for each connected Apollo rack model.

**Note:** Inputs can only be routed to the outputs of the same unit. It's not possible to cross-route from one unit to another.

## Distinguishing Multiple Units

### Device Color

Each unit in the Devices list is color coded for enhanced identification. These colors are used in the Meter Bridge and the I/O Matrix Panel when multi-unit cascading to differentiate between devices. The device colors cannot be modified.

### Device Name

When using multiple devices of the same type, it may be helpful to give each device a unique Device Name instead of the default names. The Show Device Names setting is particularly useful with multiple devices.

### Device Letter

Each unit in the Devices list is designated with a sequential letter. These letters are used in the I/O Matrix Panel when multi-unit cascading to differentiate between Apollo devices. The device letters cannot be modified.

### Talkback

When multiple units with talkback mics are connected, the active talkback unit has an orange mic icon in the Devices Column within Console Settings > Hardware, as shown in these two examples.

## Console Session Management

### Console 1 to Console 2 / UAD Console Session

If a Console session was created and saved with Console 1 (UAD v8.0.0 and earlier) and the session is subsequently opened with a multi-unit Thunderbolt setup in Console 2 (UAD v8.0.1 or later Thunderbolt software) or UAD Console, the previous Console 1 configuration is retained, with the exceptions noted below.

**Note:** Cue and headphone management settings are now handled differently than Console 1 sessions. These settings are not retained when updating a Console 1 session.

**Single-to-Multi Session**

If a Console session was created and saved with a single-unit setup and the session is subsequently opened with a multi-unit setup, the expander unit(s) is automatically added to the session and the number of Console inputs expands accordingly. All settings from the single-unit session are maintained.

**Multi-to-Single Session**

If a Console session was created and saved with a multi-unit setup and the session is subsequently opened with a single-unit setup, the expander unit(s) settings are retained in the session for offline configuration. If desired, expander unit(s) can be removed from the session via the Device Options in the Hardware panel within the Console Settings window.

## Multi-Unit Constraints

Certain Apollo features are reduced when multi-unit cascading to maintain integrated mix buses with Realtime UAD Processing capabilities. These constraints are listed below.

- Cue buses can be routed to the line and/or digital outputs of the monitor unit only. This constraint does not apply when routing cues to headphone outputs.
- Flex Routing destinations can only be assigned to outputs on the same unit as the input. It's not possible to cross-route from one unit to another.
- Apollo uses Thunderbolt for inter-unit clocking when multiple Apollo devices are connected. Because the host computer is the lead Thunderbolt controller, inter-unit clocking, and therefore standalone use, is not possible with Apollo multi-unit cascading.
- When Apollo Twin is connected in a multi-unit system, the Line 3/4 and Headphone outputs on the Twin are not available for signal routing within the DAW. However, Apollo Twin's Line 3/4 and Headphone outputs can be routed within Console by assigning the output(s) as a destination in the Cue Outputs window.

- Only one desktop interface model (Arrow, Apollo SOLO, Apollo Twin, Apollo Twin MkII, Apollo x4) can be combined in single system.
- Apollo Thunderbolt models cannot be combined with Apollo models that use FireWire or USB connections.

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Website:     https://help.uaudio.com/hc/en-us/articles/28349656196500-Apollo-x16D-Networked-Audio

## Apollo x16D Networked Audio

Apollo x16D brings all the power of Realtime UAD Processing into your Dante® network, allowing you to process audio with UAD-2 plug-ins in real time across up to four networked x16Ds. An Apollo x16D has the following features:

- 16x16 channels of Dante/AES67 digital audio
- 2x2 AES/EBU digital I/O
- 2 analog monitor outputs
- UAD HEXA DSP processing
- Surround monitoring capability for formats up to 9.1.6
- Up to 4 stereo cue buses
- Built-in Talkback mic

### Networked Audio System Requirements

- Apollo x16D Thunderbolt Audio Interface with Dante
- Dante Controller software (download the latest version)
- Dante-compatible hardware

## Download Dante Controller

To use Dante digital audio features, you must download and install Dante Controller software from Audinate.

**Note:** Dante Domain Manager is not supported with Apollo x16D.


## Dante Firmware Updates

Dante firmware in your Apollo x16D may be updated through the Apollo firmware update process, when you install a newer version of UAD software. Follow the on-screen instructions if you are prompted to update the firmware.

**Firmware Update Notes**

- A network connection is required to update firmware. You may be prompted to select a network interface if your network connection to the x16D is not your default network connection.
- Dante firmware updates are not managed through the Dante updater. All Apollo firmware updates are exclusively performed through the UAD Meter firmware update process.
- Any firmware update will cause an interruption in audio processing.


## Apollo x16D Connections

Apollo x16D requires two connections to your computer:

- **A Thunderbolt connection.** Your Apollo x16D(s) must be connected via Thunderbolt to your computer. Apollo devices, including Apollo x16Ds, can be daisy-chained to the host computer in any order. **Note:** The Apollo daisy chain must be connected to only one Thunderbolt port on the host computer.
- **An Ethernet network connection.** Your Apollo x16D must be connected from one of the network ports via an Ethernet cable to your computer, either directly, or through a Dante-capable Ethernet switch. You might need an Ethernet adapter for the host computer connection.

See Apollo x16D Use Cases for more information on these network connections.

Apollo x16D can be operated in Switched mode or Redundant mode. This operating mode is set in the Dante Controller software. Use of these modes changes the operation of the Ethernet ports. Consider Redundant Mode when you require real-time failover capabilities.

## Setting up x16D with UAD Console and Dante Controller software

### Configure your Apollo x16D in UAD Console

- Launch UAD Console.
- If an Apollo x16D is your Monitor system, set the x16D Clock Source to DANTE.
- If the Apollo is not your Monitor system, set the clock source according to your requirements. See Clocking Use Case Tables for more details.

## Configure your system in Dante Controller software

As a brief overview, a Dante system comprises transmitters and receivers. Transmitters transmit audio to the Dante network, and Receivers receive audio from the Dante network. A transmitted audio stream can be received by multiple device channels. When a transmitter and receiver are paired, that pairing is called a *subscription*. Multiple receivers can subscribe to a transmitted audio stream.

For more information, see Audinate's Routing Media documentation.

- Launch Dante Controller software.
- If you are prompted to select a network interface, select the primary network interface (and secondary interface, if applicable) with which your computer communicates with the Dante network.
- The Dante Controller device view opens. If it is not visible, click the Routing tab.
- Expand Receivers and Transmitters to see the devices from which the x16D(s) can receive audio (transmitters) and to which the x16D(s) can send audio (receivers).

- To configure audio subscriptions between receivers and transmitters, click in the boxes in the rows (receivers) and columns (transmitters) in Routing view. A green checkbox appears when a subscription is successful.
- To remove an audio subscription, click a checkmarked subscription.

**Note:** You may need to adjust the sample rate for other devices on your network. The Apollo x16D sample rate is set in UAD Console, but sample rates for other devices may require manual intervention. You can adjust a device's sample rate in the Device View screen on the Device Config tab.

## Set Dante network latency

You can set Dante network latency, which defines the allowable network latency.

In Device View, choose the latency setting in the Device Latency section. For most networks the default setting of 1.0 msec is adequate.

**Note:** Changing device latency will cause audio to be interrupted.

## Apollo x16D Clocking

The x16D provides a flexible clocking mechanism that allows for clocking to the internal device clock, the network-distributed Dante clock, or external clock sources such as Word Clock or AES/EBU. It is important to understand the requirements of the various clock sources and how they interact with your Apollo system to avoid audio issues and ensure system stability.

## Apollo x16D Clock Settings

The Apollo x16D defaults to:

- Clock source = DANTE
- Sample rate = 48 kHz

In general, having the clock source set to DANTE on an x16D monitor unit is the most flexible option, as the device can adapt to become a clock leader or clock follower without audio issues.

The UA Mixer Engine, which runs in the background and is controlled by UAD Console, automatically manages the sample rate of multiple connected Apollos so they always match each other, and manages other settings such as "Preferred Leader" and "Enable Sync to External", to guarantee proper clock synchronization.

**Important:** When an Apollo x16D is locked with Dante Device Lock, it will not respond to automatic sample rate management or configuration changes. If you intend to use Dante Device Lock, it is recommended to first connect your system as desired and configure the system sample rate and clock settings, then apply Dante Device lock.

## Apollo x16D Use Cases

The following examples present use cases that leverage the Apollo x16D for existing Dante systems.

## Adding Apollo x16D to your live sound rig or live console

You can add an Apollo x16D to your live sound mixing console for effects processing.

In this scenario it is expected that the Dante Clock Leader of the system is the Dante-enabled FOH (front of house) console. In this scenario, the FOH Console is using a built-in clock not furnished by external Word Clock or AES/EBU.

## Connection Diagram

- If only one Apollo x16D and one Dante-equipped mixing console are connected, you can connect the Apollo x16D directly to the mixing console using the available primary network port, or optionally connect both the

x16D's primary network port and mixing console to a Dante-capable Ethernet switch.

- If multiple Dante devices are connected, connect all Dante devices including the Apollos and the mixing console to a Dante-capable Ethernet switch. Note that you can connect each Apollo to another device in Switched mode, via the network ports.
- In either scenario above, the host computer running UAD Console requires a network connection to the primary network of the x16D.

Use the following settings.

**In UAD Console**

- Set the Apollo x16D(s) clock source to DANTE.

**In Dante Controller**

- For the FOH mixing console, enable the "Preferred Leader" setting.
- For the connected Apollo x16D monitor unit, disable the "Preferred Leader" setting.
- Observe that the connected Apollo x16D(s) are assigned as Dante clock followers.

## Using Apollo x16Ds in a recording studio

In a scenario where one or more Apollo x16D devices are connected to multiple devices and/or in multiple rooms, connect all Dante devices including the Apollos to a Dante-capable Ethernet switch.

**Recommended settings**

Use the following settings:

- Set the x16D(s) clock source to INTERNAL, DANTE, or AES/EBU
- Enable "Preferred Leader" on the monitor unit x16D (this is automatically deployed when the clock source is Internal, but optional when the clock source is DANTE or AES/EBU).
- Disable "Preferred Leader" on all other devices on the Dante network.

## Apollo x16D Network Settings

The Apollo x16D includes network settings in the UAD Console Settings window, on the Network tab.

For the most part, these settings are informational.

### Network Interface

This displays the network interface which your computer uses to connect to the Dante network.

### Dante Network Settings

The Dante Network Settings row shows information about the network settings for all connected Apollo x16D devices. These network settings are also displayed in Dante Controller. All fields in this display are read-only, except Reset.

### Reset

If you need to reset your network settings for an Apollo x16D, click Reset. When you tap the Reset button, a warning appears that audio will be interrupted. All network settings are reset after you click OK.

**Tip:** For example, if the IP address of your x16D has been set to a static IP address that you don't know, you can reset the network settings.

### Dante-Capable Ethernet Switches

- Dante devices can work over a wide variety of commonly available Ethernet switches. Gigabit switches are recommended.
- Your switch must meet the following requirements:
- Gigabit ports for inter-switch connections
- Quality of Service (QoS) with 4 queues

- Diffserv (DSCP) QoS, with strict priority
- A managed switch is also recommended, to provide detailed information about the operation of each network link: port speed, error counters, bandwidth used, etc.

## Switched Mode and Redundant Mode with Apollo x16D

Apollo x16D can be operated in Switched mode or Redundant mode. Use of these modes changes the operation of the Ethernet ports. Consider Redundant Mode when you require real-time failover capabilities. Redundant or Switched mode is set in Dante Controller software's Device View > Network Config, in the Dante Redundancy section.

## x16D Switched Mode

In (default) Switched mode, the secondary Ethernet port will behave as a standard switch port, allowing daisy-chaining through the device. In this network topology, the x16D only requires a connection from the network device to one of the x16D Ethernet ports. You can connect a network port to your computer and the other port to a Dante device, or connect your computer and the x16D to an Ethernet switch. If the second network port is connected, it must be connected to another IP-addressable device and not the same network switch as the first Ethernet port. Do not connect both x16D network ports to the same network switch or device.

## x16D Redundant Mode

In Redundant Mode, the device duplicates Dante media traffic to both Ethernet ports, allowing the implementation of a redundant network via the secondary port. In this mode, Apollo x16D's Ethernet ports function as connections to separate, isolated networks. In a redundant configuration, the primary Ethernet port is connected to the primary Dante network, and the secondary Ethernet port is connected to the secondary (redundant) Dante network. This scenario provides automated failover protection. The Dante configuration is mirrored on both

Ethernet ports so that if one fails, the other will immediately resume audio transmission tasks.

**Redundancy notes**

- Dante redundancy requires that both the primary and secondary interfaces on any redundant device are connected using the same link speed. For example, if the primary interface is connected to a 1 Gbps switch port, the secondary interface must also be connected to a 1 Gbps switch port.
- Dante devices that do not support redundancy must be connected to the primary network only. See the example above.

## Using multiple Apollo x16Ds on the same network with different UAD Consoles and computers

In a scenario where multiple Apollo x16D devices are configured on the same network, but used with different computers and UAD Console connections (for example, a computer lab), the UAD Console clock source should be set to DANTE. This setting will prevent clocking issues between the separate devices. In this configuration, any one of the x16Ds on the network, or another Dante device, can be the clock leader.

### Clocking Use Case Tables

The following tables describe settings for the x16D(s) in your system in several scenarios.

**Important:** As a general rule, if you set an Apollo x16D as the Preferred Leader, we recommend that you do not enable the Preferred Leader option for any other device in the Dante configuration, so that the network leadership assignment is predictable. This is especially important when the clock source for the x16D is set to Internal.

# Apollo x16D Monitor Unit Clock Source and Dante Leadership Requirements

**Clock Source = Dante:**

**Monitor Unit Dante Clock Leadership Requirements:**

The x16D monitor unit or another Dante device on the network can be the Dante clock leader.

**Automatic Dante Controller Settings:**

"Enable Sync to External" is forced OFF.

"Preferred Leader" is forced ON.

**Clock Source = Internal:**

**Monitor Unit Dante Clock Leadership Requirements:**

The x16D monitor unit must be the Dante clock leader; otherwise, audio issues will occur.

**Automatic Dante Controller Settings:**

"Enable Sync to External" is forced ON.

**Clock Source = Word Clock or AES/EBU:**

**Monitor Unit Dante Clock Leadership Requirements:**

Either the external clock device or the x16D monitor unit must be the Dante clock leader; otherwise, audio issues will occur.

**Automatic Dante Controller Settings:**

"Enable Sync to External" is forced ON.

Expander Unit(s) Dante Clock Leadership Requirements

**Dante Clock Leadership Requirements:**

An expander unit x16D cannot be the Dante clock leader.

**Automatic Dante Controller Settings:**

"Preferred Leader" is forced OFF.

"Enable Sync to External" is forced ON.


## **Apollo x16D is NOT the Monitor Unit**

**Clock Source = Dante:**

**Monitor Unit Dante Clock Leadership Requirements:**

N/A

**Automatic Dante Controller Settings:**

N/A

**Clock Source = Internal:**

**Expander Unit(s) Dante Clock Leadership Requirements:**

One of the expander unit x16Ds must be the Dante clock leader; otherwise, audio issues will occur.

**Automatic Dante Controller Settings:**

"Preferred Leader" is forced ON.

"Enable Sync to External" is forced ON.

**Clock Source = Word Clock, AES/EBU, ADAT, or SPDIF:**

**Expander Unit(s) Dante Clock Leadership Requirements:**

Either the external clock device or an expander unit x16D must be the Dante clock leader; otherwise, audio issues will occur.

**Automatic Dante Controller Settings:**

"Enable Sync to External" is forced ON.

**Note:** When Apollo x16D is not the monitor unit, you cannot select **DANTE** as the clock source in UAD Console. Clock settings are managed by the Dante network in this scenario.

## Dante Device Lock

Device Lock is a Dante feature that allows you to lock a supported Dante device so it cannot be reconfigured without first explicitly unlocking. When a device is locked, audio continues to flow according to its existing configuration, but the configuration cannot be changed, and Dante Controller settings for the device are read-only.

**Note:** If you lose your device PIN, you can reset it to unlock your device. See "Unlocking a Device When You Have Forgotten the PIN" in the Device Lock chapter of the Dante Controller User Guide.

## Device Lock behavior within UAD Console

When Device Lock is enabled on any Apollo through the Dante Controller software, the following changes appear in UAD Console.

**Sample Rate –** The "Sample Rate" setting is grayed out and unavailable. You cannot make changes to the sample rate when a device is locked, as doing so would cause audio issues.

**Clock Source –** The Clock Source menu is grayed out and unavailable. Changes to the Clock Source setting could require other changes to devices in Dante Controller, to which any locked devices may not be able to adapt.

**Network Reset –** The Network Reset switches grayed out and unavailable. Network settings cannot be changed when one or more devices are locked.

**Monitor Unit Assignment –** You cannot change the monitor unit or device ordering when a device is locked.

## Monitor Modes & Channel Assignments for Apollo x16D

**Analog Monitor Outputs & Dante Outputs:**

**MON L/R**

**Dante Outputs 1-8:**

**Stereo:** MON L/R = L/R, Dante = ALT L, ALT R, ALT 2 L, ALT 2 R

**2.1:** MON L/R = ALT L/R, Dante = L, R, LFE

**LCR:** MON L/R = ALT L/R, Dante = L, R, C

**LCRS:** MON L/R = ALT L/R, Dante = L, R, C, S

**QUAD:** MON L/R = ALT L/R, Dante = L, R, Ls, Rs

**5.1:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Ls, Rs

**6.1:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Ls, Rs, Cs

**7.1:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Lrs, Rrs, Lss, Rss

**5.1.4:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Ls, Rs

**7.1.4:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Lss, Rss, Lrs, Rrs

**9.1.6:** MON L/R = ALT L/R, Dante = L, R, C, LFE, Lss, Rss, Lrs, Rrs

**Dante Outputs (Continued):**

**Outputs 9-16:**

**5.1.4:** Dante = Ltf, Rtf, Ltr, Rtr

**7.1.4:** Dante = Ltf, Rtf, Ltr, Rtr

**9.1.6:** Dante = Ltf, Rtf, Ltr, Rtr, Lw, Rw, Ltm, Rtm


## Apollo x16D Driver Channels

This table lists the I/O numbers and names for all Core Audio / ASIO streams available at the default I/O Matrix Panel settings.

**Notes**

- In multi-unit systems, channels marked with (m) are available on the monitor unit only.

- At 176.4 kHz and 192 kHz sample rates, channels marked with † are unavailable.

**Apollo x16D Driver Default I/O Table**

▯ Inputs | Outputs

1 | DANTE 1 | 1 | MON L

2 | DANTE 2 | 2 | MON R

3 | DANTE 3 | 3 | DANTE 1

4 | DANTE 4 | 4 | DANTE 2

5 | DANTE 5 | 5 | DANTE 3

6 | DANTE 6 | 6 | DANTE 4

7 | DANTE 7 | 7 | DANTE 5

8 | DANTE 8 | 8 | DANTE 6

9 | DANTE 9 | 9 | DANTE 7

10 | DANTE 10 | 10 | DANTE 8

11 | DANTE 11 | 11 | DANTE 9

12 | DANTE 12 | 12 | DANTE 10

13 | DANTE 13 | 13 | DANTE 11

14 | DANTE 14 | 14 | DANTE 12

15 | DANTE 15 | 15 | DANTE 13

16 | DANTE 16 | 16 | DANTE 14

17 | AES/EBU L | 17 | DANTE 15

18 | AES/EBU R | 18 | DANTE 16

19† | VIRTUAL 1* | 19 | AES/EBU L

20† | VIRTUAL 2* | 20 | AES/EBU R

21† | VIRTUAL 3* | 21 | VIRTUAL 1*

22† | VIRTUAL 4* | 22 | VIRTUAL 2*

23† | VIRTUAL 5* | 23 | VIRTUAL 3*

24† | VIRTUAL 6* | 24 | VIRTUAL 4*

25† | VIRTUAL 7* | 25 | VIRTUAL 5*

26† | VIRTUAL 8* | 26 | VIRTUAL 6*

27† | MON L* (m) | 27† | VIRTUAL 7*

28† | MON R* (m) | 28† | VIRTUAL 8*

29† | AUX1 L* (m) | 29 | CUE1 L

30† | AUX1 R* (m) | 30 | CUE1 R

31† | AUX2 L* (m) | 31 | CUE2 L

32† | AUX2 R* (m) | 32 | CUE2 R

33 | TALKBACK 1 | 33† | CUE3 L

34 | TALKBACK 2 | 34† | CUE3 R

35† | CUE4 L | 35† | CUE4 R

Note:

- Software Outputs (for DAW inputs)
- Software Inputs (for UAD Console inputs)

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Website:       https://help.uaudio.com/hc/en-us/articles/25403524417812-UAD-Console-Settings

## UAD Console Settings

Global parameters for Apollo and UAD Console are configured in the UAD Console Settings window

## Accessing UAD Console Settings

- The UAD Console Settings window can be opened using any of these methods:
- Choose View > Preferences from the Application Menus
- Click the SETTINGS switch at the bottom of the Mixer Navigation area
- Use the Command + comma (Mac) or Ctrl + comma (Win) keyboard shortcuts
- (Mac) Choose UAD Console Settings from the UA icon drop menu in the macOS Menu Bar
- (Windows) Right-click the blue UA diamond logo in the Windows System Tray (in taskbar at lower right of screen), then select UAD Console Settings from the contextual menu

## UAD Console Settings Panels

Controls within the UAD Console Settings window are arranged according to related functionality. Each set of related settings are contained within a single panel. Four panels are available in the UAD Console Settings window:

**Hardware –** Settings related to Apollo hardware device setup

**I/O Matrix –** Settings related to custom driver I/O mapping

**Options –** Settings related to how items are displayed in UAD Console, and editing controls

**MIDI –** Settings for setting up MIDI control of Tap Tempo within UAD Console

## Accessing Settings Panels

Each of the four UAD Console Settings panels is accessed by clicking the panel's name at the top of the UAD Console Settings window. The panel is selected and displayed when its name is illuminated.

## Changing Settings

Unless otherwise noted, all values within the UAD Console Settings window are changed by either choosing a different value from a drop menu, or entering a new values directly.

**Drop Menus –** Values with drop menus are indicated by a disclosure triangle at the lower right of the value field. To change these settings, click the item and choose a different value from its drop menu.

**Direct Entry –** Values with direct text or numerical entry have a lighter gray background and do not have a disclosure triangle at the lower right of the value field. To change these settings, click the field and type a new value with the keyboard, then press the Return/Enter key.

## Available Settings

The parameters that are displayed in the UAD Console Settings window can vary depending on the particular Apollo hardware model(s) that are currently connected to the system.

Only settings that apply to the currently connected hardware are displayed. Any settings that are unique to a particular hardware model are noted in the descriptions.

Website:

# Hardware Settings Panel

The Hardware panel is where Apollo's system-level audio interface I/O settings such as sample rate, clock source, and output reference levels are configured. These settings are used by DAW applications when they are configured to use Apollo as the audio interface. Even when UAD Console is not open, these settings are stored by the Apollo drivers for use by other host applications.

## Sample Rate & Clock Settings

Behavior and control of these two settings depend on the operating environment:

**Without a DAW –** Sample Rate and Clock Source settings define the active sample rate and clock source for Apollo when a DAW is not used (when UAD Console is the only host application).

**With a DAW –** These settings are usually changed within the DAW application's audio preferences.

**Tip:** These settings can also be viewed and changed via UAD Console's Info Bar.

## Sample Rate

This setting defines the sample rate that is used for Apollo A/D and D/A conversion and UAD Plug-Ins processing. When using UAD Plug-Ins, higher sample rates require more UAD DSP resources.

**Important:** When the Clock Source parameter is set to use any external clock source, the sample rate must be manually set to match the sample rate of the external clock.

**Note (Apollo Twin, x4, 8p, x8p):** If the current digital input setting is S/PDIF and the sample rate is changed to a rate higher than 96 kHz, the clock source is changed to Internal and the S/PDIF inputs are no longer available.

## Hardware Clicks

When the sample rate is changed, hardware relays that mute the outputs are temporarily engaged to prevent audio artifacts. This action causes an acoustic clicking sound that can be heard within the hardware. These clicks are by design and can be safely ignored.

**Note:** Hardware clicks when changing samples rates are not heard with first-generation (silver) Apollo models, which do not feature hardware relay muting.

## Clock Source

This setting determines the master clock source for A/D and D/A conversion. The available values are:

**Apollo Solo –** Internal only

**Apollo desktop models –** Internal clock or external clock from S/PDIF or ADAT

**Apollo rack models with preamps –** Internal clock or external clock from S/PDIF, ADAT, or Word Clock

**Apollo 16 –** Internal clock or external clock from AES/EBU or Word Clock

If the Clock Source setting is not set to Internal and the external clock signal is not detected, then the text in the Clock Source display is RED (if this occurs, verify connections and external clock device settings).

**Note:** Only one device in a system can be the master clock. This setting must match the host DAW setting or audio glitches and/or distortion could occur.

## Digital Mirror

This setting configures the S/PDIF outputs (Apollo, x4, 8/x8, 8p/x8p) or AES/EBU outputs (Apollo 16) to mirror the Monitor 1 & 2 outputs. This feature is typically used when connecting to the stereo inputs of other devices with digital inputs such as a speaker system, stereo recorder, or external D/A converter.

When Digital Mirror is ON, the Monitor Level knob controls both the digital output level and the analog monitor output level (these digital outputs are post-fader when mirrored).

This setting is unavailable with Apollo Twin, which does not feature digital outputs.

### Digital Mirror Notes

- When Digital Mirror is ON, any DAW outputs and/or UAD Console aux outputs that are routed to these digital ports will not be heard, because these digital ports are switched to output the signals at the monitor outputs instead.
- When ALT monitoring is active, the ALT outputs are not routed to these digital ports (the monitor outputs are mirrored, not the monitor bus).


## Buffer Size (Windows)

**Note:** This setting is available on Windows systems only. On Mac systems, the hardware I/O buffer size is set within the DAW application.

This setting determines the hardware I/O buffer size used by a DAW. As values are decreased, DAW throughput latency decreases, but the computer's CPU load increases. Conversely, as values are increased, DAW throughput latency increases, and the computer's CPU load is reduced. For related information, see Latency Basics.

Available buffer size values are dependent on the current Sample Rate value. If values in the Buffer Size menu are gray and cannot be selected, change the Sample Rate value.

**Note:** If audio artifacts occur during DAW playback (clicks, pops, stuttering, etc), the buffer size may need to be increased.

**Important:** Buffer Size applies to use with a DAW only. It has no effect on UAD Console's hardware monitoring features or Realtime UAD Processing within UAD Console.

## Input Delay Compensation:

**Off**: Adds 0 extra delay (samples).

**Short**: Adds 100 extra delay (samples).

**Medium**: Adds 200 extra delay (samples).

**Medium-Long**: Adds 300 extra delay (samples).

**Long**: Adds 1000 extra delay (samples).

Input Delay Compensation maintains phase alignment across UAD Console's analog and digital inputs when certain UAD plug-ins are used.

When enabling Input Delay Compensation, it's usually best to start with the Short value (100 samples) to minimize latency. The default value is Medium.

**Note:** Changes to this setting do not take effect until the DAW is quit.

## Input Delay Compensation Exceeded Dialog

A dialog will appear in UAD Console if the compensation amount is exceeded on a channel. If this occurs, either increase the IDC value or reduce upsampled plug-ins usage on the channel to maintain phase alignment.

## Cue Bus Count

The number of active cue mix buses is changed with this setting. Increasing the Cue Bus Count increases the number of cue mix buses (and associated cue sends and returns) available within UAD Console and the DAW.

Between two and four cue buses can be set. The default value is two with Apollo and four with Apollo 16. This setting is unavailable with Apollo Twin, which always features two cue mix buses (HP and Line 3/4).

**Note:** Cue buses 3 and 4 are unavailable at sample rates of 176.4 kHz and 192 kHz.

## ALT Count

This setting determines the number of ALT (alternate) monitor outputs that are available within UAD Console. Between zero and two ALT outputs can be set (one maximum with Apollo Twin). The default value is zero.

**Important:** Increasing the ALT count overrides any other assignments using Line outputs 1, 2 (ALT count of 1) and Line outputs 1, 2, 3, 4 (ALT count of 2).

## FCN Switch Assign (Apollo X rack models, Apollo 8/8p)

Apollo X rack models and Apollo 8/8p feature an assignable function (FCN) switch on the hardware front panel that can be configured to control one of three monitoring functions. The FCN switch LED illuminates when the function is active.

The function of the switch is configured with this menu. The available functions are:

**ALT 2 –** Selects the Alternate 2 monitor speakers. The monitor signals are routed to outputs 3 & 4 instead of the main monitor outputs, and the monitor level indicator ring is yellow instead of green when ALT 2 is active.

**Note:** ALT COUNT must be set to 2 to use the FCN switch for ALT 2 switching.

**MONO –** Sums the left and right channels of the stereo monitor mix into a monophonic signal. The monitor level indicator ring flashes when MONO is active.

**DIM –** Attenuates the signal level at the monitor outputs by the dB amount set in UAD Console's Control Room strip. The monitor level indicator ring flashes when DIM is active.

**TALKBACK –** Activates the talkback mic and the DIM function. Talkback is active when the button is lit. Press and release the button quickly to latch talkback ON. To

momentarily activate the function and deactivate when the button is released, press for longer than 0.5 seconds. The Monitor Level Indicator ring flashes when talkback is active.

**NONE –** The FCN switch is unassigned.

**Note:** When more than one Apollo interface is connected in a multi-unit configuration, the FCN switch is operable on the designated monitor unit only.

## Headroom (Apollo X rack models)

Headroom sets the maximum analog signal level for the line inputs, line outputs, and monitor outputs of connected Apollo X rack models. The available values are +20 dBu (the default value) or +24 dBu.

+24 dBu operation is typically used when interfacing with professional audio equipment such as large format consoles, analog tape machines, and similar devices that require higher analog I/O signal levels.

When set to +24 dBu, the line inputs require 4 dB more input signal to achieve 0 dBFS A/D conversion. Similarly, the line and monitor outputs are 4 dBu hotter when Headroom is set to +24 dBu.

### +24 dBu Compatibility with +20 dBu Sessions

When a DAW session is created and/or saved with +20 dBu headroom and that DAW session is subsequently played back when Apollo X is set to +24 dBu headroom, any previously-recorded tracks, and UAD plug-ins applied to those tracks, will sound identical as when set to +20 dBu headroom; the signal output levels will simply be 4 dBu hotter.

However, when recording new tracks with +24 dBu headroom using Realtime UAD Processing through UAD Console into a DAW session that was previously saved with +20 dBu headroom, the UAD plug-ins in UAD Console (but not the DAW) may need to be adjusted to achieve the same sound. For example, the UAD plug-ins in UAD Console may need an input level that is 4 dBu hotter for the same "pushed" sound.

## Headroom Notes

- The Headroom menu is visible only when one or more Apollo X rack units are connected to the system.
- The Headroom setting does not change Mic, Hi-Z, or digital signal levels.
- The operating headroom for all Apollo models except Apollo X rack models is always +20 dBu. The operating headroom for Apollo X rack models can be switched between +20 dBu and +24 dBu.

## Monitor Mode (Apollo X rack models)

This menu enables Apollo X surround sound and specifies the surround mode. For details, see Apollo X Surround Sound.

## Devices Column

This column lists all Apollo devices in the system. It has five functions:

- Selects current unit to see device-specific options
- Designates the monitor unit in multi-unit setups
- Indicates which unit(s) are currently online
- Indicates the Talkback unit (if available)
- Adds devices for offline configuration

## Select Device

Clicking a unit in the column reveals its device-specific settings in the Options Column.

## Device Letter

Each unit in the Devices list is designated with a sequential letter. These letters are used in the I/O Matrix Panel when multi-unit cascading to differentiate between Apollo devices. The device letters cannot be modified.

## Device Color

Each unit in the Devices list is color coded for enhanced identification. These colors are used in the Meter Bridge and the I/O Matrix Panel when multi-unit cascading to differentiate between devices. The device colors cannot be modified.

## Designated Monitor Unit

In multi-unit configurations, the device at the top of the column is the designated monitor (master) unit. The monitor unit is indicated by a speaker icon between the device letter and the device name. To change the monitor unit, drag a unit to the top of the device column.

For related details, see Multi-Unit Cascading.

**Note:** This operation reconfigures the system. There may be a delay before the operation is completed.

## Add Device

If there are less than four devices in the column, unit(s) can be manually added for offline configuration by clicking the "+" button (below the devices in the column) to present the Add Device popover. Click a device in the menu to add it to the Device Column.

**Tip:** When a device is properly connected and powered, it is automatically detected and added to the device list.

**Note:** Add Device does not appear if you have four or more Apollo devices in the Devices column.

## Options Column

Selecting a unit in the Devices column reveals its device-specific settings in the Options column. A device is currently selected when its text is not dim.

**Note:** Settings in the Options Column apply only to the specific unit currently selected in the Devices Column.

## Device Name

Apollo's default device name can be changed. The device name is displayed in the "Connecting to Apollo" window that appears briefly during system connection, in the I/O Matrix panel settings, and optionally in the Meter Bridge.

**Note:** Text in this field cannot be modified when the device is offline.

## Identify

Clicking the Identify switch will cause the currently selected unit's front panel LEDs to flash in a pattern. This feature is typically used with multi-unit systems to distinguish units when making I/O connections.

**Note:** If the device is offline, this switch displays REMOVE instead.

## Remove

When a device is offline, it can be removed from the devices list. To remove an offline device, select the unit in the DEVICES column, then click the REMOVE switch in the OPTIONS column.

**Note:** If an expander unit is powered down or disconnected from the system, the expander unit must be removed before the sample rate can be changed to 176.4 kHz or 192 kHz.

## Monitor Level

This menu switches the operating level of the monitor outputs. Available values depend on which model is the designated monitor unit.

**Note:** This setting is unavailable with the original (silver) Apollo, which does not feature an adjustable monitor operating level.

**Apollo X rack models –** Available selections are +4 dBu and -10 dBV.

**Apollo models except Apollo X rack –** Available selections are 20 dBu and 14 dBu.

**Apollo x16D -** Available selection of +4 dBu and -10 dBV applies only to analog I/O and is always applied to Mon L-R analog I/O, regardless of the monitor mode.

## Output Reference Levels

These menus set the reference level for the line outputs. The number of menus displayed depends on the currently connected Apollo hardware (for example, Apollo 16, which features more outputs, will display more output menus).

The line output reference levels can be set to –10 dBV or +4 dBu in adjacent pairs. The value is usually set to match the nominal input level of devices connected to these outputs (a setting of +4 dBu outputs a higher signal level than –10 dBV).

**Tip:** Input reference levels for the analog line inputs are set in UAD Console's channel input strips.

## Digital Input (Apollo Twin, x4, 8p, x8p)

This menu selects the digital input type (ADAT or S/PDIF) to be used by the TOSLINK optical connector and UAD Console's digital input channels.

Optical S/PDIF digital input is supported at sample rates up to 96 kHz. If the current setting is ADAT and the sample rate is higher than 96 kHz, when S/PDIF input is selected, the clock source is changed to Internal and the S/PDIF inputs are no longer available.

## Digital Output (Apollo x4, 8p, x8p)

This menu selects the digital output type (ADAT or S/PDIF) to be used by the TOSLINK optical connector and UAD Console's digital outputs channels.

Optical S/PDIF digital output is supported at sample rates up to 96 kHz. If the current setting is ADAT and the sample rate is higher than 96 kHz, when S/PDIF input is selected, the clock source is changed to Internal and the S/PDIF outputs are no longer available.

## Monitor Output Gain (Apollo 8, 8p, 16 MkII)

**Note:** In multi-unit configurations, this setting is available for the designated monitor unit only.

By default, monitor output levels are continuously variable. However, the monitor outputs can be set to completely bypass the monitor level circuitry and operate at a fixed reference level.

This feature routes the signal directly from the D/A converters to the monitor outputs when level control is not needed (for example, when connecting the monitor outputs to an external monitor controller). Two settings are available:

**On –** The monitor controls operate normally

**Bypass –** The monitor controls and associated circuitry are bypassed, and:

- The Monitor Level cannot be adjusted
- The Monitor Level Indicator ring is solid green
- The Monitor Level Value display changes to "BYP"
- ALT monitoring and assignable FCN switch features are unavailable
- Signals at the Monitor Outputs are output at line level (without attenuation)

## Line Input Gain (Apollo 8, 8p, x6, x8, x8p)

By default, line inputs on preamp channels are routed through the channel's preamp so the line input level can be adjusted with the Gain knob. However, preamp channel line inputs can be individually set to completely bypass the channel's preamp circuitry and instead operate at a fixed reference level.

This feature routes the preamp channel's line input signal directly into the D/A converter for the purest path when additional gain is not needed (for example,

when connecting external mic preamps to preamp channel line inputs). Two settings are available:

**On –** The line input is routed through the channel's preamp

**Bypass –** The preamp and associated circuitry are bypassed, and:

- The Preamp Gain Indicator ring for the channel is solid green
- If a Unison plug-in is in the channel's dedicated Unison insert, the Unison plug-in is bypassed

## Channel DSP Pairing

Channel DSP Pairing allows multiple UAD plug-ins that are inserted in a single UAD Console input channel strip to span across two paired DSP cores. This feature effectively doubles the amount of Realtime UAD Processing DSP loading that is available on a single Apollo input.

**Note:** Channel DSP Pairing changes the way available DSP resources are allocated. The feature does not increase the total amount of available DSP.

When enabled (the default setting), Channel DSP Pairing is automatic. Simply insert UAD plug-ins in UAD Console inputs as usual, and input DSP resources are automatically distributed across DSP pairs as efficiently as possible.

**Note:** Individual UAD plug-ins must fit within a single DSP core, even when Channel DSP Pairing is available. A single UAD plug-in cannot span across paired DSPs.

A maximum of two DSP cores can be paired with a single Apollo input. More than one DSP pair can be allocated, so multiple Apollo inputs can take advantage of the feature. The Channel DSP Pairing concept is illustrated below.

Conceptual Channel DSP Pairing illustration. Note that the signal from an input is output from its paired DSP.

**Channel DSP Pairing Example**

If an additional UAD plug-in inserted on a UAD Console input channel strip that doesn't fit on the first DSP core (if the combined DSP load exceeds 100%), the plug-in(s) will load on a paired DSP core, as illustrated below.

In this specific example, the Fender '55 Tweed Deluxe plug-in DSP core load is 70% (at 44.1 kHz). The Korg SDD-3000 is also loaded on the same input, but since its load is 35% (and the combined load exceeds 100%), Channel DSP Pairing automatically loads the second plug-in on the paired DSP.

With Channel DSP Pairing, more than one DSP-intensive UAD plug-in can be loaded on the same UAD Console input

## Complex Channel DSP Pairing

Building on the previous example, the diagram below illustrates how more than one DSP pair can be used to create simultaneous plug-in chains that would not be possible without Channel DSP Pairing.

In this example, Input 1 has an electric guitar plug-in chain (Fender + Korg) using one DSP pair, while Input 2 has a vocal mic plug-in chain (Neve + Teletronix) using a second DSP pair. A third DSP pair uses the remaining DSP on core two before pairing to the third DSP core.

### Control Elements

Channel DSP Pairing is controlled by a row of buttons beneath the control name. To change DSP allocation values, click a button in the row. The feature is active when DSP PAIRS displays a value greater than 0.

As the DSP PAIRS value is increased, the VIRTUAL CHANNELS value is decreased. This reciprocal action sets how Apollo's internal DSP resources are allocated.

### Available DSP Pairs

The number of available DSP pairs is adjustable. Apollo rackmount models can be set to a maximum of four available DSP pairs (default value of 2), while Apollo Twin models have a maximum of two available pairs (default value of one).

**Notes**

- On all models, decreasing Virtual channels conserves DSP.
- On Apollo SOLO models, Channel DSP Pairing is not available because they contain only one DSP.

**Relationship to Virtual Channels**

When Channel DSP Pairing is enabled (when DSP PAIRS displays a value greater than 0), the number of available Virtual I/O channels is reduced.

Virtual channels that are disabled by the DSP allocation are removed from UAD Console's main window. Disabled Virtual channels appear in gray italic text in the I/O Matrix, indicating that they are inactive.

**Tip:** Reducing the number of active Virtual I/O channels also conserves DSP used by Apollo's internal digital mixer, which can be useful when you need just a bit more DSP.

**Channel DSP Pairing Latency**

When Channel DSP Pairing is active, input latency is slightly increased across all Apollo inputs. The amount of latency increase depends on the Apollo model:

- All Apollo rack and desktop models (except X Series HEXA models): 69 samples
- All Apollo X Series HEXA models: 74 samples
- If a HEXA DSP core interface model (e.g., Apollo x8) is connected in multi-unit configurations, input latency is increased by 74 samples across all connected models.

**Note:** Input latency is only increased when DSP is actually paired, even if DSP PAIRS is set to a non-zero value.

**Channel DSP Pairing Notes**

- Channel DSP Pairing values are saved within individual UAD Console sessions files. Unlike other UAD Console hardware settings, it's not a global setting.
- Channel DSP pairing is unrelated to UAD plug-ins inserted in the DAW, where UAD plug-ins automatically load on any available DSP.

- In multi-unit configurations, each Apollo unit has its own Channel DSP Pairing setting, and DSP can only be paired within an individual unit.
- Channel DSP Pairing applies to internal DSP with Apollo models only. It does not apply to UAD-2 DSP Accelerator models or Apollo Solo.
- Channel DSP pairing is unavailable on Auxiliary and Talkback channels, nor at sample rates of 176.4 and 192 kHz.

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Website: https://help.uaudio.com/hc/en-us/articles/25403673923220-I-O-Matrix-Settings-Panel

# I/O Matrix Settings Panel

The I/O Matrix panel is where customized I/O routings for Core Audio (Mac) or ASIO (Windows) are managed at the driver level.

**Note:** The I/O Matrix and its associated features are only available with Thunderbolt-connected Apollo models.

## I/O Matrix Columns

In addition to the switches at the top of the panel, two columns are displayed. The INPUTS column on the left displays all available Apollo inputs. The OUTPUTS column on the right displays all available Apollo outputs.

## I/O Matrix Rows

Each row in the panel represents a single Apollo audio channel. The currently assigned input and output route for each channel is displayed within a single row. By clicking any assign switch, a different route can be mapped to the channel.

**Tip:** To view more channels simultaneously, increase the vertical size of the UAD Console Settings window.

## I/O Matrix Panel Elements

Note: Channels in gray italic text in the output column can be reassigned by disabling the feature that is currently using the route. These features are:

- Flex Routes
- DSP Pairs
- Cue Outputs
- Cue Output Mirrors
- Digital (S/PDIF) Mirror
- ALT monitoring
- Surround Sound

## Mode Menu

This menu provides a quick method to return to Apollo's default Core Audio / ASIO driver settings. When any settings within the I/O Matrix panel are not the default value, this menu displays "Custom."

To return to the factory default settings, choose "Default" from the MODE drop menu.

Important: Any customized settings within the I/O Matrix panel will be lost when the mode is changed to Default unless the custom settings are saved first via the I/O Preset controls.

If the mode is switched from Default to Custom, the I/O Preset Display shows "(Untitled)" indicating the current settings have not yet been saved.

## I/O Presets Overview

The I/O presets controls provide methods for managing complete I/O Matrix panel configurations as I/O preset files. When an I/O preset file is saved, the current I/O Matrix panel configuration is written to disk.

When an I/O preset file is subsequently reloaded, the I/O Matrix panel is returned to the exact same routing state, regardless of any changes to I/O Matrix settings that were made in the interim.

## I/O Preset Files Location

I/O preset files are saved to, and loaded from, the user's home folder at:

- Mac: Users/[UserName]/Documents/Universal Audio/IOPresets/
- Windows: C:\Users\[UserName]\Documents\Universal Audio\IOPresets\

**Note:** I/O preset files must reside in the default location to appear in the Route Presets popover window within UAD Console.

## I/O Preset Files Suffix

I/O preset files have the ".uadio" suffix. The suffix is added to I/O preset files automatically when saving to disk; however, the suffix is not displayed in the file save dialog (the suffix should not be manually typed when saving a I/O preset file).

**Note:** Without the .uadio suffix, I/O preset files will not be visible in the load preset window.

## Factory I/O Presets

A variety of I/O presets are pre-installed with the software. The factory I/O presets are provided for backwards compatibility with Apollo sessions created with UAD Console v1.

To take advantage of all of the features in the I/O Matrix and UAD Console, the Default mode Custom modes may prove more appropriate in order to take

advantage of the features (such as limiting the driver to 32 I/O channels, arranging the I/O in any desired order, using up to 4 CUE mixes, or using up to 8 Virtual I/O channels).

**Note:** If older DAW sessions were saved using previous versions of Apollo's driver and the I/O Matrix features are used upon reload, the Input/Output configuration tools in the DAW software may need to be modified.

## I/O Presets Menu

The currently loaded I/O preset name is displayed on top of the menu switch, as shown at right. If the I/O preset has not yet been saved, then "(Untitled)" appears in the display.

If a loaded I/O preset has been modified since it was saved, the I/O preset name is displayed in italics, as shown at right.

Clicking the I/O Presets display opens the I/O Presets Popover, where various I/O preset functions can be performed.

## Save Switch

This switch saves the current state of the I/O Matrix panel to disk as an I/O preset file. If the I/O preset already exists, the existing I/O preset file is overwritten with the current settings. If the I/O preset has never been saved, the Save I/O preset window (shown at right) appears so the preset can be named.

**Important:** Settings will not be properly saved if the "/" (forward slash) or "?" (question mark) characters are in the filename. Avoid these and other special characters when saving I/O preset files.

## I/O Presets Popover

The I/O Presets popover window is where various functions can be performed on I/O preset files. To open the I/O Presets popover, click the I/O Presets Menu.

All existing I/O preset files at the I/O Preset Files Location are displayed in a list within the I/O Presets popover. Available functions at the bottom of the popover can be performed on the selected I/O preset (a preset is selected when it is highlighted in gray).

## I/O Presets Functions

The following I/O preset functions are available:

**Open –** Opens the operating system's standard "Open File" dialog for loading existing I/O preset files from disk.

**Save –** Saves the current modified I/O preset file in place. If the preset was not previously saved (if the file doesn't exist), the Save window appears so it can be named.

**Save As –** Opens the Save window so the current settings can be named and saved to disk as a new I/O preset file.

**Load –** Loads the I/O preset that is currently selected (highlighted gray) within the I/O Presets popover.

**Rename –** Allows you to rename the selected I/O preset.

**Delete –** Allows you to delete the I/O preset that is currently selected within the I/O Presets popover (a preset is selected when highlighted in blue).

**Tip:** An I/O preset can also be loaded by double-clicking the preset or typing Return (or Enter) when the preset is selected.

## Channel Count Menus

The Channel Count menus (one each for number of inputs and number of outputs) are used to change the number of Apollo I/O channels used by Core Audio / ASIO.

By default, the total number of available input and output channels, for all detected Apollo devices, are displayed.

The primary reason to change the channel counts is to accommodate the 64 I/O channels available within Pro Tools. When 64 channels are selected for Apollo I/O (PT Mode), any Apollo I/O can still be used by virtually remapping the I/O so the desired channels fit within the available channel count.

**Important:** These menus change the driver I/O complement. Quit all DAW applications before changing the Channel Count settings.

**# Inputs –** The number of active Apollo input channels used by Core Audio / ASIO is displayed here. Click the display to select a different input channel count from the menu.

**# Outputs –** The number of active Apollo output channels used by Core Audio / ASIO is displayed here. Click the display to select a different output channel count from the menu.

**Note:** Each Core Audio / ASIO stream uses host computer CPU resources. To maximize CPU performance, do not set the channel counts higher than the number of channels actually needed.

## Device Name Display

The Device Name of the Apollo device is displayed in the INPUT and OUTPUT columns so each Apollo unit can be readily identified in multi-unit setups. Each device is color-coded for easier identification.

## Cascade Switch

The Cascade switch is used to quickly assign continuous I/O channels if routings have been changed from default values.

**Note:** Cascade doesn't do anything when the Mode Menu displays "Default" because all channels are already continuous in default mode.

When you click Cascade, the Cascade switch and all channel numbers are illuminated. Click+hold any channel number, then swipe down adjacent channel

numbers to quickly assign the channel(s) to the next available channel(s) in the device.

**Tip:** Increase the vertical size of the UAD Console screen to view more channels simultaneously, so more channels can be swiped.

## Assign Switches

Each input and output channel has an assign switch. The assign switches are indicated by disclosure triangles at the lower right of each switch. The currently assigned route is displayed in the switch.

Default input and output routes can be remapped using the assign switches. Clicking an assign switch opens the Route Assign Popover for mapping a different route to the channel.

## Custom Name Field

Each Core Audio / ASIO channel includes a name. This name is displayed wherever Core Audio / ASIO channel names are shown, such as I/O channel assignments within a DAW.

Apollo's Core Audio / ASIO channel names can be customized by simply entering a different name in the Custom Name field. All custom name changes are instantly reflected in the application that displays channel names.

## To restore the default driver name

1. Click a customized name in the CUSTOM NAME column. The custom name text is highlighted.

2. Press the Delete key to remove the customized text from the field.

3. Press Return/Enter.

## Routed Channels (gray italics)

Channels that appear as dimmed gray italics text in the output column are in use by a channel assignment. These channels can be reassigned after disabling the feature that is currently using the route. Features that use gray assignments include Flex Routes, DSP Pairs, Cue Outputs, Cue Output Mirrors, Digital (S/PDIF) Mirror, ALT monitoring, and Surround Sound.

## Route Assign Popover

The Route Assign popover window is where Apollo I/O routes can be virtually re-mapped. To open the Route Assign popover, click any assign switch.

**Important:** Custom driver I/O routing changes the driver I/O complement. Quit all audio applications before changing driver I/O assignments.

## Popover Title Bar Elements

### Previous / Next Channel

Switches the window to display the previous or next Apollo channel.

### Input / Output Channel

Switches the window to display the input or output of the same Apollo channel.

**Tip:** The popover moves from channel to channel with these switches. To prevent the popover from moving when these switches are used, drag the window to any location other than its default position.

### Apollo Hardware Channel

The name of the Apollo hardware channel that is being reassigned is displayed at the top of the window.

### Route Assign Columns

The Device, Inputs, and Outputs columns are displayed in the Route Assign popover.

**Apollo Device**

The DEVICE column on the left displays all detected Apollo devices and the NONE switch. Click a device to select it for channel assignments in the other two columns. Click NONE to remove all I/O assignments from the channel.

**Channel Type**

The TYPE column in the middle displays all available channel types for the selected Apollo device. Click a channel type to select it and display all channels available for assignment in the INPUT/OUTPUT column.

**Available Routes**

The column on the right displays all available routes for the selected channel type. Click an available route to assign the input or output. The assigned route is highlighted in blue.

**Note:** Channels in gray italic text in the output column can be reassigned by disabling the feature that is currently using the route. These features are:

- Flex Routes
- DSP Pairs
- Cue Outputs
- Cue Output Mirrors
- Digital (S/PDIF) Mirror
- ALT monitoring
- Surround Sound

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Website:    https://help.uaudio.com/hc/en-us/articles/25403715826836-Options-Settings-Panel

# Options Settings Panel

Various UAD Console options are set within the Options panel.

## Metering

### Pre-Fader

When set to Pre-Fader, an input's Channel Meter indicates the level at the Apollo input, regardless of the Channel Fader setting. With this setting, changing the fader level will not change the Channel Meter.

**Tip:** When set to Pre-Fader, the Channel Meters mirror the signal level being recorded in the DAW.

### Post-Fader

When set to Post-Fader, changing an input's Channel Fader will change the Channel Meter.

**Note:** The Metering Menu affects the Channel Meters of UAD Console's channel inputs only. It does not affect the Aux Meters or the Monitor Meters.

### Clip/Peak Hold

**Tip:** The Clip and Peak indicators can be cleared at any time with the Clear Clips button.

### Clip Hold Time

This drop menu sets the duration that the red signal clip indicators in the input, send, and monitor meters are displayed before turning off. The available values are None, 1 second, 3 seconds (default), 5 seconds, 10 seconds, or Infinite.

## Peak Hold

This drop menu sets the duration that the signal peak indicators in the input and send meters are displayed before turning off. The available values are None, 1 second, 3 seconds (default), 5 seconds, and 10 seconds.

## Reset Dialogs

This button allows you to reset any dialogs where you have previously clicked "Don't Show Again".

## Modifiers Timeout

This option sets the period, in seconds, used for Option Latch operations.

## Controls Mode

This setting determines how UAD plug-in parameter knobs respond to adjustment. Three control modes are offered: Circular, Relative Circular, and Linear. The behavior of each mode is described below.

**Tip**: This setting is also available in the Configuration panel within the UAD Meter & Control Panel application.

**Linear (slider)** – In Linear mode, the knob is adjusted by dragging horizontally or vertically instead of by rotating. This behavior is similar to moving a physical fader.

**Circular (jump)** – In Circular mode, the software knobs behave similar to physical rotary knobs. Values are changed by clicking on the knob then rotating in a circular direction. When the edge of the knob is clicked, the parameter value jumps to the mouse position.

**Relative Circular (grab)** – Relative Circular mode operates similar to Circular mode, but the knob value does not jump to the mouse position when clicked. Instead, the knob value is modified relative to its original value.

In Relative Circular mode, click anywhere on the knob to make an adjustment originating at the original value (it's not necessary to click on the current knob position).

**Tip:** To increase resolution when adjusting rotary controls in circular and relative circular modes, increase the radius of the mouse relative to the knob while dragging (move the mouse farther away from the knob while dragging in a circular motion).

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Website: https://help.uaudio.com/hc/en-us/articles/25403799874068-MIDI-Settings-Panel

## MIDI Settings Panel

UAD Console supports the ability to use MIDI to remotely set the tempo used for the Tempo Sync feature, and to recall Plug-In Scenes with MIDI messages. The MIDI panel is where the specific MIDI controls are set. MIDI data is received by UAD Console via the operating system.

### Device

Sets the MIDI device to be used as the source for MIDI control. To set the device, click the MIDI DEVICE menu and choose a new device from the drop menu.

**Note:** Only devices configured in the operating system are available for selection in this menu.

## Tap Tempo Channel

Specifies the MIDI channel to be used for Tape Tempo MIDI control. To set the channel, click the field and enter a numerical value between 1 – 16.

## Tap Tempo Event

UAD Console can receive note or controller data for MIDI control of Tap Tempo. These two settings define the MIDI data type and value used for MIDI control. For instructions, see Changing tempo via MIDI.

## MIDI Type Menu

Sets the MIDI data type to be used as the source for MIDI control. To set the data type, first click the drop menu then choose CONTROLLER or NOTE from the menu, or send the value from the MIDI controller.

## MIDI Value Field

Sets the MIDI data value to be used as the source for MIDI control. To set the data value, first click the field then enter a numerical value between 0 – 127, or send the value from the MIDI controller.

## MIDI Note Table

When NOTE is used as the MIDI type, the table below can be used as a reference for MIDI note values.

MIDI Note Numbers by Note and Octave:

**C**:

Octave -1: 0

Octave 0: 12

Octave 1: 24

Octave 2: 36

Octave 3: 48

Octave 4: 60

Octave 5: 72

Octave 6: 84

Octave 7: 96

Octave 8: 108

Octave 9: 120

**C#**:

Octave -1: 1

Octave 0: 13

Octave 1: 25

Octave 2: 37

Octave 3: 49

Octave 4: 61

Octave 5: 73

Octave 6: 85

Octave 7: 97

Octave 8: 109

Octave 9: 121

**D**:

Octave -1: 2

Octave 0: 14

Octave 1: 26

Octave 2: 38

Octave 3: 50

Octave 4: 62

Octave 5: 74

Octave 6: 86

Octave 7: 98

Octave 8: 110

Octave 9: 122

**D#**:

Octave -1: 3

Octave 0: 15

Octave 1: 27

Octave 2: 39

Octave 3: 51

Octave 4: 63

Octave 5: 75

Octave 6: 87

Octave 7: 99

Octave 8: 111

Octave 9: 123

**E**:

Octave -1: 4

Octave 0: 16

Octave 1: 28

Octave 2: 40

Octave 3: 52

Octave 4: 64

Octave 5: 76

Octave 6: 88

Octave 7: 100

Octave 8: 112

Octave 9: 124

**F**:

Octave -1: 5

Octave 0: 17

Octave 1: 29

Octave 2: 41

Octave 3: 53

Octave 4: 65

Octave 5: 77

Octave 6: 89

Octave 7: 101

Octave 8: 113

Octave 9: 125

**F#**:

Octave -1: 6

Octave 0: 18

Octave 1: 30

Octave 2: 42

Octave 3: 54

Octave 4: 66

Octave 5: 78

Octave 6: 90

Octave 7: 102

Octave 8: 114

Octave 9: 126

**G**:

Octave -1: 7

Octave 0: 19

Octave 1: 31

Octave 2: 43

Octave 3: 55

Octave 4: 67

Octave 5: 79

Octave 6: 91

Octave 7: 103

Octave 8: 115

Octave 9: 127

**G#**:

Octave -1: 8

Octave 0: 20

Octave 1: 32

Octave 2: 44

Octave 3: 56

Octave 4: 68

Octave 5: 80

Octave 6: 92

Octave 7: 104

Octave 8: 116

**A**:

Octave -1: 9

Octave 0: 21

Octave 1: 33

Octave 2: 45

Octave 3: 57

Octave 4: 69

Octave 5: 81

Octave 6: 93

Octave 7: 105

Octave 8: 117

**A#**:

Octave -1: 10

Octave 0: 22

Octave 1: 34

Octave 2: 46

Octave 3: 58

Octave 4: 70

Octave 5: 82

Octave 6: 94

Octave 7: 106

Octave 8: 118

**B**:

Octave -1: 11

Octave 0: 23

Octave 1: 35

Octave 2: 47

Octave 3: 59

Octave 4: 71

Octave 5: 83

Octave 6: 95

Octave 7: 107

Octave 8: 119

## Plug-In Scenes Channel

Specifies the MIDI channel to be used for Plug-In Scene control. To set the channel, click the field and enter a numerical value between 1 – 16.

## Plug-In Scenes Event

UAD Console can receive Note or Program Change data for Plug-In Scene changes. These two settings define the MIDI data type and value used for MIDI control.

## MIDI Type Menu

Sets the MIDI data type to be used as the source for MIDI control. To set the data type, first click the drop menu then choose NOTE or PROGRAM CHANGE from the menu, or send the value from the MIDI controller.

- If the controller is sending MIDI Program Change messages, Scenes 1–128 correspond to MIDI program change messages 0–127. Your controller may label these as 0–127 or 1–128, so it is important to check that your scenes are switching correctly.
- If the controller is sending Note data, Scenes 1-128 correspond to MIDI notes C(-1)–G(9).

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Website:    https://help.uaudio.com/hc/en-us/articles/28855272973460-Network-Panel

# Network Panel

## Apollo x16D Network Settings

Network settings for Dante network Apollo devices are included on the Network panel. For the most part, these settings are informational.

## Network Interface

This displays the network interface which your computer uses to connect to the Dante network.

## Dante Network Settings

The Dante Network Settings row shows information about the network settings for all connected Apollo x16D devices. These network settings are also displayed in Dante Controller. All fields in this display are read-only, except Reset.

## Reset

If you need to reset your network settings for an Apollo x16D, click Reset. When you tap the Reset button, a warning appears that audio will be interrupted. All network settings are reset after you click OK.

**Tip:** For example, if the IP address of your x16D has been set to a static IP address that you don't know, you can reset the network settings.

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Website: https://help.uaudio.com/hc/en-us/articles/25357516812564-UAD-Console-Menus

# UAD Console Menus

UAD Console menus appear at the top of the screen (macOS), or at the top left of the UAD Console window (Windows).

## Application Menus

Various UAD Console functions can be accessed from the Application Menus. Selecting an item from the drop menus performs the function.

**Tip:** Many menu functions can also be accessed using the keyboard shortcuts shown next to the item in the menu.

## File Menu

**Session Files Location**

By default, all UAD Console session files are stored at the following location within the OS file system (the same location used by the Session Browser):

- Mac: Users/UserName/Documents/Universal Audio/Sessions/
- Windows: C:\Users\UserName\AppData\Roaming\Universal Audio\Sessions
  **Tip:** UAD Console sessions can be organized via the operating system's file manager. File locations in the OS are reflected within the Sessions Manager.

**New**

Creates a new UAD Console session with default settings (default settings cannot be changed). If the current session has been modified, a dialog appears allowing you to save it first.

**Open...**

Opens the operating system's standard "Open File" dialog for loading existing session files from disk.

Session files can also be opened by double-clicking .uadmix files from within the OS file system.

**Save**

If a session file was previously saved, selecting this option writes the current settings to the file with the same name, overwriting the previously saved file.

If the current session has never been saved, the operating system's standard "Save File" dialog appears so a new session file can be named and saved to disk.

**Save As...**

This option opens the operating system's standard "Save File" dialog so the current session can be named and saved to disk as a new session file.

**Important:** Session settings will not be saved if the "/" (forward slash) or "?" (question mark) characters are in the filename. Avoid these and other special characters when saving session files.

## Edit Menu

### Undo

When a parameter value in the UAD Console window is edited, the change can be reverted with the Undo command. By executing Undo again, edits can be stepped backwards repeatedly.

The number of Undo steps is essentially unlimited. The Undo cache is active until a new or different session is loaded or UAD Console is quit.

### Redo

When the Undo function (above) is executed, the original edit can be restored with the Redo command. By executing Redo again, previous Undo's can be restored repeatedly.

The number of Redo steps is essentially unlimited. The Redo cache is active until a new or different session is loaded.

### Remove All

All plug-ins can be categorically deleted from UAD Console by selecting an item from the sub menu.

### Enable All

All plug-ins can be categorically enabled from UAD Console by selecting an item from the sub menu.

### Disable All

All plug-ins can be categorically enabled from UAD Console by selecting an item from the sub menu.

**Remove/Enable/Disable Sub-Menu**

**Plug-Ins –** The function is performed on all UAD Console plug-ins.

**Insert Plug-Ins –** The function is performed on all channel insert plug-ins. Aux and Unison plug-ins remain inserted.

**Aux Plug-Ins –** The function is performed on all auxiliary plug-ins. Channel and Unison plug-ins remain inserted.

**Unison Plug-Ins –** The function is performed on all Unison plug-ins. Channel and aux plug-ins remain inserted.


## Navigation Menu

### Mixer Scroll Left / Right

Scrolls the Mixer section one channel to the left or right, when all mixer channels are not onscreen. You can also scroll the mixer with the left and right arrow keys.

### Mixer Bank Left / Right

Banks the Mixer section one set of channels to the left or right, when all mixer channels are not onscreen. You can also bank the mixer with the Command+left/right arrow keys (macOS) or Alt+left/right arrow keys (Windows).

### Mixer Far Left / Right

Scrolls the mixer channels all the way to the left (first channel) or right (last channel). You can also scroll the mixer with Option+Command+left/right arrow keys (macOS) or Shift+Alt+left/right arrow keys (Windows).


## View Menu

### Section > Mixer Navigation

Shows the Mixer Navigation section, or hides it when it is visible.

### Section > Plug-In Scenes

Shows the Plug-In Scenes browser, or hides it when it is visible.

**Section > Auxes**

Shows the aux returns when they are hidden, and hides them when they are visible. This item performs the same function as the Show Aux switch in the monitor column.

**Section > Control Room**

Shows the Control Room column (when Monitor is shown), or hides it when it is visible. This item performs the same function as the Show Ctrl room switch in the monitor column.

**Section > Monitor**

Shows the Monitor column, or hides it when it is visible. The Monitor column must be shown to view Auxes and/or the Control Room column.

**Section > Monitor Correction**

Shows the Monitor Correction buttons, or hides them whenthey are visible. Also shows or hides the Monitor Correction panel in the Monitor Controller window.

**Section > Notifications…**

Shows the Notifications panel, where you can see any notifications that have occurred in the current session.

**Compact Monitor Faders**

Shortens the height of the monitor faders, or returns them to full height if they are compacted. Compacted faders allow more room for viewing Inputs, Inserts, Sends, Cues and the Output row.

**Tip:** You can also click at the top of the monitor faders to compact them, or return them to full height.

**Show/Hide Channels**

Allows unused UAD Console inputs to be hidden from view.

### Show All Channels

Shows all channels. This menu item is only available when one or more channels are hidden.

### Show/Hide Floating Windows

When one or more floating windows are open (for example, the Cue Outputs window or plug-in windows), you can Show or Hide these windows with this command, or with the keyboard shortcut Shift+W.

### Preferences

Opens the UAD Console Settings window, where various global parameters are configured. See UAD Console Settings for details about the screen.

## Window Menu

### New Alternate Window

Creates a new UAD Console window.

### Previous/NextWindow

Use the Previous/Next Window menu items or the key commands (Shit+ Cmd+' and Cmd+' on macOS, Shift+Ctrl+' and Ctrl+' on Windows) to cycle through open UAD Console windows.

### Show/Hide Floating Windows

When one or more floating windows are open (for example, the Cue Outputs window), you can Show or Hide these windows with this command, or with the keyboard shortcut Shift+W.

### Full Screen

Expands the UAD Console window to fill your screen. Use the key command Shift+Command+F (macOS) or Shift+Ctrl+F (Windows) to toggle full screen mode.

**Note:** In full screen mode, you cannot see the UAD Console application menus.

Help Menu

**Documentation**

This item opens the UA Knowledge Base section containing the UAD Console Manual. Consult the documentation when you need specific operational information.

**Give Feedback**

This item opens the Feedback window to report a bug, request a feature, or give general feedback.

**Show Keyboard Shortcuts**

This item shows all keyboard shortcuts for UAD Console.

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Website: https://www.uaudio.com/downloads/uad

# Download Apollo & UAD-2 Software

1. Download UA Connect on your desktop computer (macOS or Windows)
2. Launch the app
3. Go to the Apollo & UAD-2 tab
4. Download & run the UAD Software installer
5. Open the UAD Meter & Control Panel to authorize your plug-ins

**Already have UA Connect?**

Open the app then download the UAD Software Installer from the Apollo & UAD-2 tab.

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Website: https://help.uaudio.com/hc/en-us/articles/210208926-Latest-macOS-Windows-Operating-System-Compatibility-Information

# Compatibility Information

## Latest macOS & Windows Operating System Compatibility Information

**General Information:**

- Operating systems not listed are **untested**. Although untested operating systems may work, they are not supported by Universal Audio. Prior UAD software for older operating systems and discontinued UAD products is available in the UAD software archives.
- **Pre-release and beta versions** of operating systems are not supported.
- Some audio software companies advise users not to install specific operating systems due to incompatibilities with their software. Universal Audio recommends checking with the companies that make your software about compatibility before upgrading your OS.

## macOS

- The latest UAD software is compatible with macOS 10.15 Catalina, 11 Big Sur, 12 Monterey, 13 Ventura, and 14 Sonoma.
- For Apple silicon compatibility information, see this article.
- UA FireWire products are incompatible with macOS Big Sur and later.
- IMPORTANT: macOS requires manual configuration steps to fully enable UAD software.

## Windows 11

- The latest UAD software is compatible with Windows 11.

**Windows 10**

- The latest UAD software is compatible with the latest version of Windows 10 64-bit edition.
- Windows 10 Anniversary Update (version 1607 or higher) is required for Thunderbolt connections with Universal Audio devices.