



THUNDERBOLT™ AND USB AD/DA AUDIO INTERFACE

# ORION 32+ GEN 4



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## BEFORE YOU BEGIN



*Congratulations on your purchase! We would like to turn your attention to the following:*

Orion 32+ Gen4 is a multi-channel audio interface and high-end AD/DA converter for professional recording studios and high-profile production facilities. For over a decade now the Orion 32 line of interfaces has been revolutionizing the world of professional audio. The latest revision of this iconic 1RU studio centerpiece steps up the game by taking the best of its predecessors and adjusting it to the ever-growing needs and standards of the industry. Orion 32+ Gen4 incorporates the latest Antelope Audio tech, drastically boosting the unit's potential.

Along with the comprehensive I/O, the Orion 32+ Gen4 features high-resolution conversion and 64-bit AFC™ clocking so your recording system can sound better than ever.

Experience a new level of detail in your recordings and enjoy a wider soundstage for an exceptional stereo image in audio playback.

The 1U box fits perfectly in high-end audio installations that need to transfer audio over long distance or are simply short on rack space but need to track all audio simultaneously. The versatile interface fuses multiple devices into one by combining an AD/DA converter, patch bay, audio interface and a monitor controller.

### **Important!**

The PC/Mac Control Panel application is the ultimate “mediator” between the Orion 32+ Gen4 and your DAW of choice. To take complete advantage of the unit's capabilities, you



are meant to handle tasks like level adjustments, signal routing, signal processing, mixing, and metering from its intuitive, single-window environment. The resulting audio is routed into your DAW for recording in formats of your choice, such as multi-track, stem, and two-channel stereo.

Thus, we encourage you to familiarize yourself with the '[Control Panel Application](#)' [chapter](#) before you begin working with the Orion 32+ Gen4. Should you ever find yourself struggling, do not hesitate to contact our [Customer Support](#) team over phone, live chat, and our ticket system. You can also visit [Antelope Audio on YouTube](#) and explore our video tutorials or join the [Antelope Audio Users](#) Facebook group and ask for advice. The [Knowledge Base](#) is also a valuable source of information.

We hope you will enjoy working with the Orion 32+ Gen4.

Best wishes,  
**Team Antelope**



# System Requirements

## Mac:

- Apple Mac 2012 or newer with Thunderbolt™ port
- Minimum: Mac OS X 10.12 Sierra. Recommended: Mac OS X 11.02 Big Sur
- Available storage space (Minimum 4 GB)
- Memory (RAM): 4 GB minimum (8 GB or more recommended)

## Windows:

- PC computer with certified Thunderbolt™ connectivity
- Windows 10 (64-bit) with latest Microsoft Updates
- Available storage space (Minimum 4 GB)
- Memory (RAM): 4 GB minimum (8 GB or more recommended)
- CPU: Intel Core i3™ or AMD FX (Higher recommended)

## Additional Information:

- Stable Internet connection is required to download and update your Antelope Audio software
- The device does not come with a Thunderbolt cable included



## PRODUCT ACTIVATION

This Orion 32+ Gen4 product activation is a mandatory process required to be completed on the first run of the interface. It is needed to validate your product warranty and to gain access to our special software packages and exclusive product offers.

Please note that the mandatory device activation procedure requires an active Internet connection on your computer. Activating an Antelope Audio device offline is not possible.

1. Connect the provided power supply to the power connector on the Orion 32+ Gen4's rear panel. Connect the power plug to an AC/DC mains outlet.

**Note:** The switching power supply automatically accommodates mains electricity in any country. Always use the provided power supply to prevent accidental damage.

2. Connect the Orion 32+ Gen4 to your Windows or Mac computer using a USB-C cable or a Thunderbolt™ 3 cable (not included).

**Note:** Legacy Thunderbolt™ 2 connections are possible using third-party adapters and corresponding cables.

### Notes:

- The USB or Thunderbolt™ connection is required to have the Orion 32+ Gen4 recognized by the Antelope Launcher and Control Panel applications at all times.

3. Open your internet browser and navigate to <https://antelopeaudio.com/login/>

4. Login to the Antelope Audio user area with your e-mail and password. If you don't have an account, visit <https://antelopeaudio.com/sign-up/> to create one.

5. Click on the 'Activate New Device' button.




## Activation

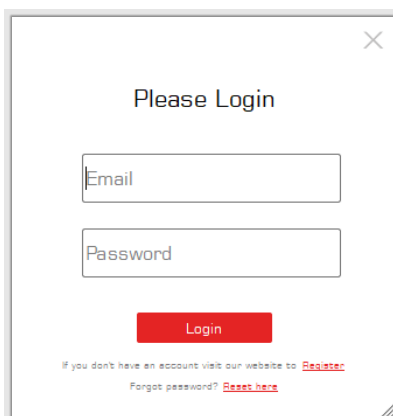
Step by step activation of your new device.

[ACTIVATE NEW DEVICE](#)

6. Click on 'Orion 32+ Gen4' from the device list.

7. Download and install the Antelope Launcher application for Windows or macOS.

8. Open the Antelope Launcher application and click on the 'Login' button.  Enter the e-mail and password you used to login into the Antelope Audio user area and click 'Login'.



Please Login

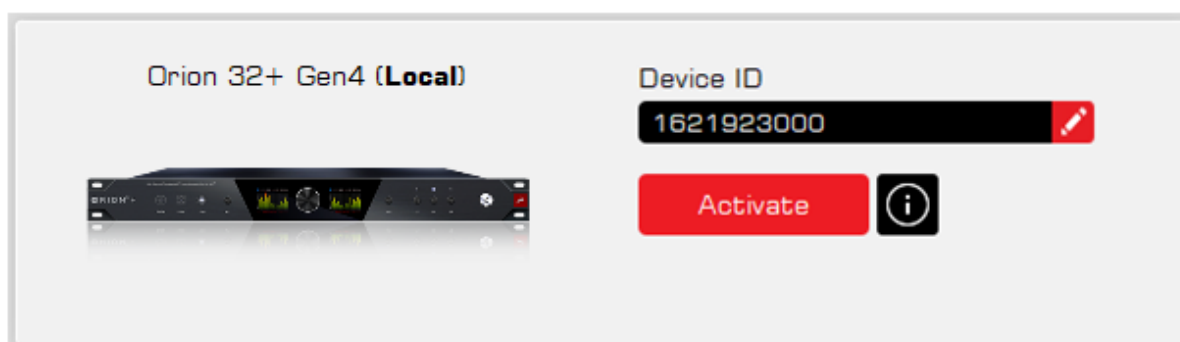
Email

Password

Login

If you don't have an account visit our website to [Register](#)  
Forgot password? [Reset here](#)

9. Click on 'Activate' to open the Device Management Wizard.



**Note:** If the Orion 32+ Gen4 does not appear in the 'Devices' tab, click on 'Not seeing your device?' and follow the on-screen instructions.

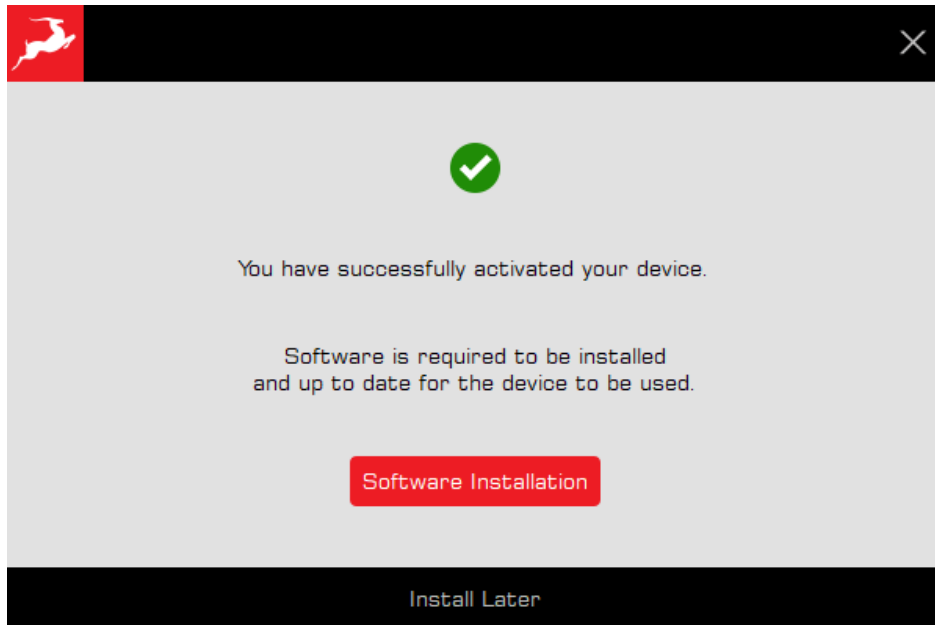
10. In the Device Management Wizard, choose 'Enable additional features' if you prefer to configure functionality add-ons as well (available later) and click 'Continue'.

11. Upon successful activation, the final window will read 'You have successfully activated your device. Software is required to be installed and up to date for the device to be used.'

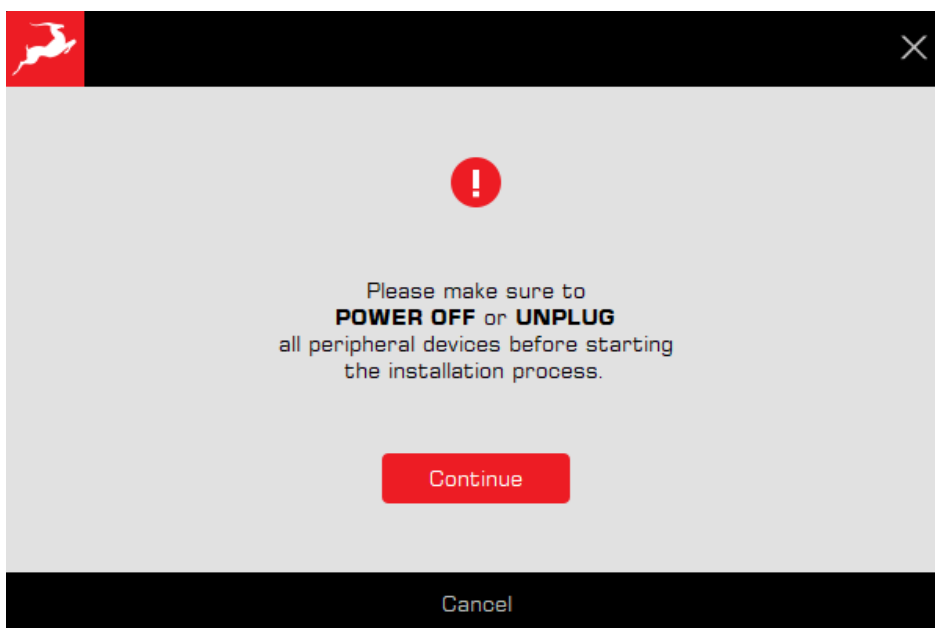




Click 'Software Installation' to go through the rest of the setup process or 'Install Later' if you prefer to postpone this step. It is available later via the launcher's Manage Device menu.



The following warning message advises to power off or unplug any devices connected to the Orion 32+ Gen4 to avoid any potential damage during the firmware installation process. Click 'Continue' when ready and go through the instructions that follow.





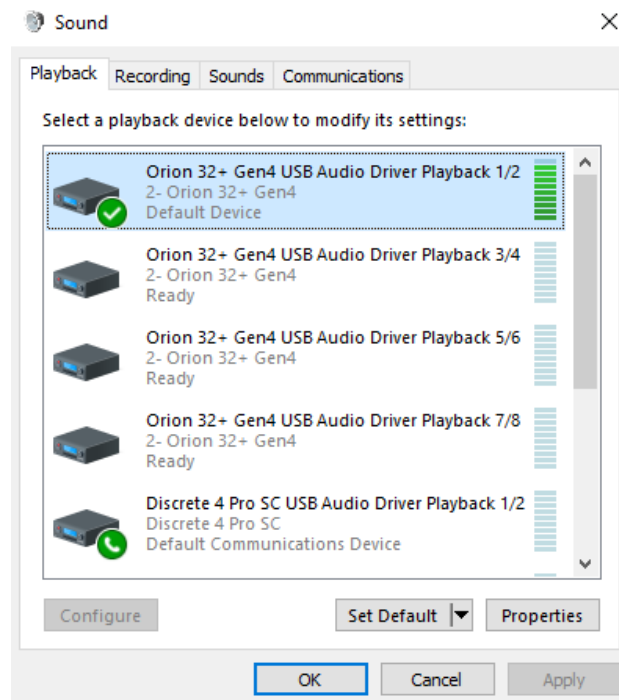
After the installation is complete, you can proceed with the instructions for your operating system and configure the Orion 32+ Gen4 for use with your Windows or macOS computer.

**Note:** The Orion 32+ Gen4 will be listed in the 'My Hardware' page of the Antelope Audio user area with its serial number and activation date.

## Configuring for Windows 10

When using a USB connection under Windows, here is how you can configure operating system playback using Windows Audio.

1. Enter the 'Sound' options window from the Windows Control Panel; or right-click the speaker icon in the system tray and choose 'Open Sound settings'.
2. Under the Playback and Recording tabs, 4 stereo channel pairs are available for playback and recording, corresponding to the first 8 DAW Out and In channels in the interface's signal routing matrix. These can be used for playing and recording audio with applications using Windows Audio as opposed to the ASIO driver.
3. Make sure the Orion 32+ Gen4 Playback channels 1/2 are selected as the default playback device for seamless playback experience. Same is valid for the Recording tab.



### Notes



- Please note that Windows Audio is not yet supported over a Thunderbolt connection, only ASIO. We recommend using the [VB-Audio VoiceMeeter Virtual Audio Mixer](#) as an ASIO to Windows Audio bridge.

## Tips

- If you are experiencing interruptions or failure when using your DAW and trying to playback audio from your OS at the same time, make sure that the device sample rate matches the one of your DAW session.

## Further Reading

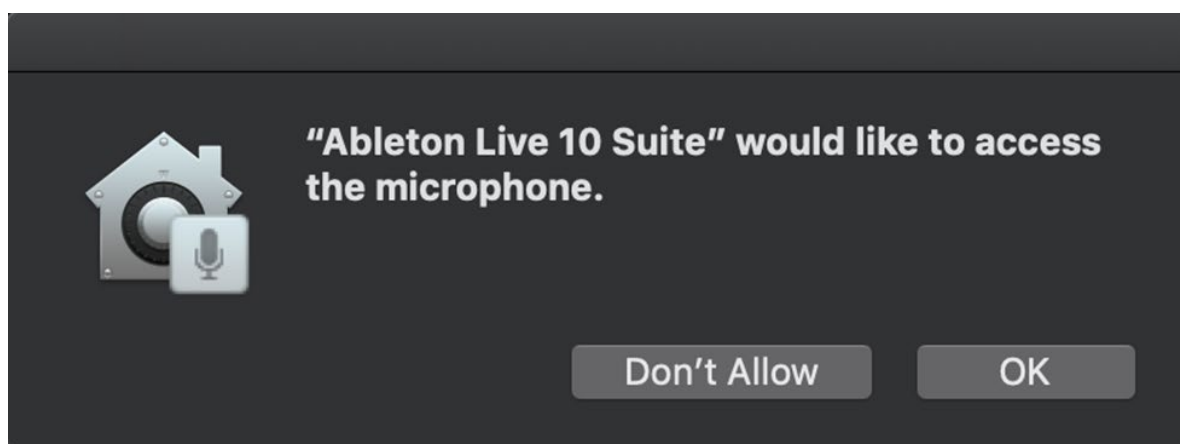
- Antelope Audio Knowledge Base - [Windows 10 Optimization](#)

## Configuring for macOS (10.14 and later)

The security settings in macOS (10.14 and later) may result in no input signal reaching your DAW, despite having everything set up correctly.

These steps apply when you are using the Orion 32+ Gen4 in a DAW for the first time:

1. Launch your DAW and choose Orion 32+ Gen4 as the input device. The following dialog box will appear (if using Ableton Live 10 Suite, for example):

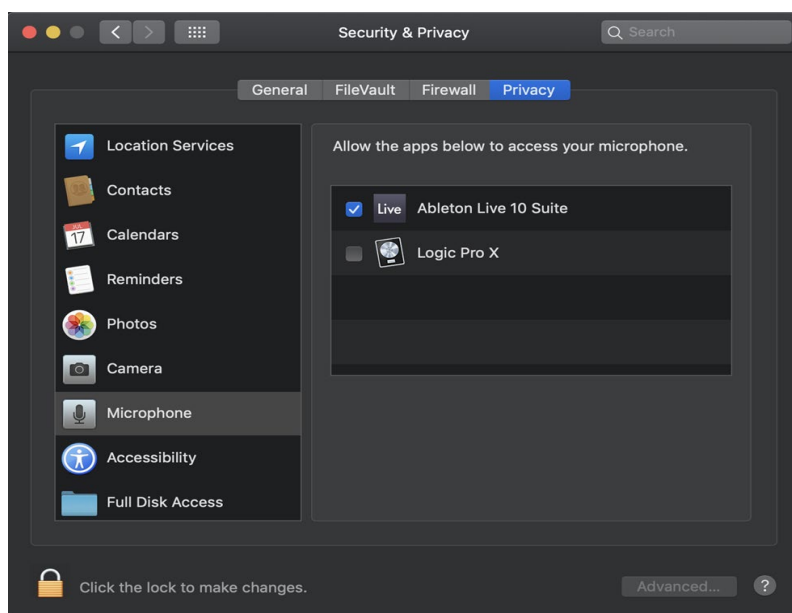


2. Click 'OK' and your DAW should function normally.



However, if the events above did not occur for some reason, or you are using multiple DAWs, you must do a manual tweak for each in **'Security & Privacy'** settings:

1. Click the **'Apple'** symbol and choose **'System Preferences'**. Head to the **'Security & Privacy'** settings menu.
2. Click the **'Privacy'** tab. In the column on the left, choose **'Microphone'**. Make sure there's a checkmark next to any DAW you want to use.



**Note:** You may have to click the padlock symbol in the bottom left corner and enter your password to make changes.

## FRONT PANEL EXPLAINED



The Orion 32+ Gen4 front panel features the following items (left to right):



Internal clock indicator

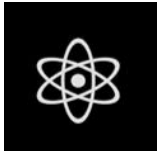


Lights up when the Orion 32+ Gen4 is locked to its internal clock signal generator.



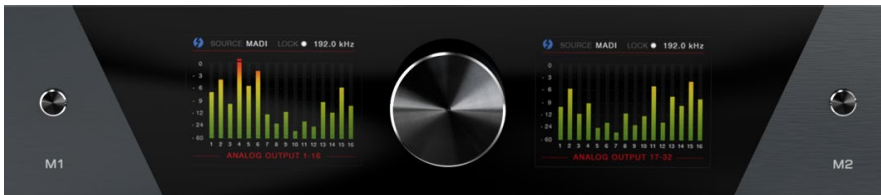
### External clocking lock indicator

Lights up when the Orion 32+ Gen4 is locked to an external clock signal source.



### Atomic clock indicator

Lights up when the Orion 32+ Gen4 is locked to an external Antelope Audio 10M/10MX Atomic Clock.



### Display L (left), display R (right), and controls

The Orion 32+ Gen4's dual color display screens, stepped jog wheel, and function keys provide an alternative to the PC/Mac Control Panel application for many aspects of the interface's functionality.

By default, Display L (left) shows the following information:

- Clock (Sync) source – Internal clock, External clock, S/PDIF, ADAT (2x, 4x), MADI
- Lock indicator – lights up when the Orion 32+ Gen4 is locked.
- Peak meters for up to 32 audio channels from an audio source of your choice.

By default, Display R (right) shows the following information:

- Current device sample rate – 32kHz to 192kHz.
- USB or Thunderbolt indicator – shows what computer connectivity protocol is currently being used, when such is successfully connected.
- Peak meters for up to 32 audio channels from an audio source of your choice.



The jog wheel has the following functionality by default:

- Turn clockwise or counterclockwise to adjust the volume of the physical line or monitor outputs, or the volume of the Surround monitoring tab's main output (in dB). Press and hold down the jog wheel with the Surround output selected, to switch between 1dB and 0.1dB increments.
- Press the jog wheel to mute or un-mute the line or monitor outputs.
- Menu navigation. When inside a menu, turn the jog wheel to choose menu entries. Press the jog wheel to confirm.

The left function key has the following functionality:

- When Display L shows peak meters for an audio source with more than 16 audio channels, press the left function key to switch between peak meters for audio channels 1 – 16, 17 – 32, etc.
- When you are adjusting output volume by turning the jog wheel, press the left function key to switch between the line, monitor and surround outputs.
- Press and hold the left function key to enter Menu 1, shown on Display L. Turn the jog wheel to select an entry. Press the jog wheel to confirm. Press the left function key again to exit the menu.

**Menu 1 has the following key functionalities and settings:**

- Sync Source – choose the current sync (clock) source. The following choices are available: Internal clock, External clock, ADAT (2x, 4x), MADI, S/PDIF.
- Sample Rate – choose the current device sample rate. The following choices are available: 32kHz, 44.1kHz, 48.0kHz, 88.2kHz, 96.0kHz, 176.4kHz, 192kHz. Make sure your choice matches the DAW and operating system sample rates.
- Peak Meter – choose the audio source for the peak meters shown on Display L. Up to 32 peak meters are available for metering source. When Display L shows peak meters for an audio source with more than 16 audio channels, press the left function key to switch between peak meters 1 – 16, 17 – 32, etc. The following choices are available: Line In, DAW Out, MADI1 In, MADI2 In, ADAT In, S/PDIF In, Surround Out, Mix 1 Out, Mix 2 Out, Mix 3 Out, Mix 4 Out, Line Out, Monitor, DAW In, MADI1 Out, MADI2 Out, ADAT Out, S/PDIF Out, Surround In, Mix 1 In, Mix 2 In, Mix 3 In, Mix 4 In.



- S/PDIF Gain – Allows digital gain adjustment of the left and right S/PDIF input channels. Press down the volume knob to enable selection between the left and right channels, press down again to confirm the selection.
- ADAT Gain – Allows digital gain adjustment of the ADAT input channels. Press down the volume knob to enable selection between all available channels, press down again to confirm the selection.
- MADI S-MUX – toggle S-MUX for the MADI digital inputs and outputs.
- USB channels – Switch between 24 and 32 channels of I/O via a USB 2.0 connection.

The right function key has the following functionality:

- Press and hold the right function key to enter Menu 2, shown on Display R. Turn the jog wheel to select an entry. Press the jog wheel to confirm. Press the right function key again to exit the menu.

**Menu 2 has the following key functionalities and settings:**

- Peak Meter – choose the audio source for the peak meters shown on Display R. Up to 32 peak meters are available for metering source. When Display R shows peak meters for an audio source with more than 16 audio channels, press the right function key to switch between peak meters 1 – 16, 17 – 32, etc. The following choices are available: Line In, DAW Out, MADI1 In, MADI2 In, ADAT In, S/PDIF In, Surround Out, Mix 1 Out, Mix 2 Out, Mix 3 Out, Mix 4 Out, Line Out, Monitor, DAW In, MADI1 Out, MADI2 Out, ADAT Out, S/PDIF Out, Surround In, Mix 1 In, Mix 2 In, Mix 3 In, Mix 4 In.
- Routing – Enters the standalone routing matrix menu. Select between signal destinations on the left display by scrolling with the jog wheel. Once you reach the desired destination/output, press down the jog wheel to either select a single or all channels of that destination. Confirm by pressing the jog wheel again. The selection will move to the right display, allowing you to pick a signal source in a similar fashion. You can route either multiple or signal channels at a time. This menu is useful for routing signals without a computer connection and the interface's software control panel.
- Brightness – adjust the illumination of display screens L and R by turning the jog control.



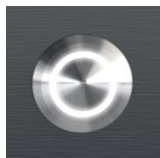
- Presets 4 – 5 – here, you can recall presets 4 – 5 as stored in the Control Panel application. Presets 1, 2 and 3 are recalled from Preset keys 1, 2 and 3 on the Orion 32+ Gen4's front panel.
- Presets Save – Used to save all current device settings to one of the 5 hardware preset slots. Also available in the software control panel.
- Monitor Trim – choose an audio signal trim value for the monitor outputs (12dBu - 24dBu). By default, this option is set to 24dBu. Trim can be used to compensate for the perceived volume differences between two or more sets of speakers so that they produce the same perceived volume level.
- Line Out Trim – choose an audio signal trim value for the line outputs (12dBu - 24dBu). By default, this option is set to 24dBu.
- Line In Trim – choose an audio signal trim value for the line inputs (12dBu - 24dBu). By default, this option is set to 24dBu.
- DC Coupled IN – switch between enabled and disabled DC Coupled line inputs.
- DC Coupled OUT – switch between enabled and disabled DC Coupled line outputs.
- Factory Reset – return the unit to factory settings. Note that Presets 1 – 5 will be lost.
- Scr Save Time – choose how long it takes for the screensaver to appear on display screens L and R. We recommend choosing the shortest duration you are comfortable with to prolong the display screens' life.
- Device Info – display the unit's serial, hardware revision and software revision numbers on Display R.
- Device Diagnosis – display diagnostics information for the unit.



### **Preset keys 1, 2 and 3**

Press one of the three preset keys to recall the corresponding hardware preset. Presets 4 and 5 are recalled from Menu 2 or the Control Panel application.





### On/standby button

When the unit is on, press the button to enter standby mode. Press again to resume.

## REAR PANEL EXPLAINED

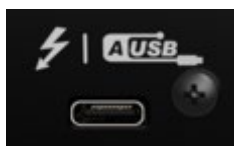


### Power Connector



For use with the provided power supply only.

### Thunderbolt™ 3 / USB 2.0 Computer Connection



Thunderbolt™ 3 / USB 2.0 Type-C port providing PC/Mac connection. Legacy Thunderbolt™ 2 also supported via a Thunderbolt™ 3 to 2 adapter.

### Thunderbolt™ Specs:

Interface Connection:	Thunderbolt™ 3 (Type-C) Port, I/O
I/O Channel Count	128 Channels
Daisy-chain	Supported



Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM
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#### USB Specs:

Interface Connection:	USB 2.0 (Type-C) Port, I/O
I/O Channel Count	32 Channels (24ch mode available)
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM

#### External Clock Inputs



1x Word Clock input and 1x Atomic Clock input on BNC connectors for synchronizing to external clock sources.

#### Word Clock Inputs

Word Clock Input	1 x Input @ 75 Ohms 3Vpp on BNC
10M Atomic Reference Input	1 x Input @ 75 Ohms 1Vpp on BNC
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM

#### Word Clock Outputs



2x Word Clock outputs on BNC connectors for synchronizing external equipment to the Orion 32+ Gen4.

### Word Clock Output Specs

Word Clock Output	2x Output @ 75 Ohms 3Vpp on BNC
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### S/PDIF Connections



S/PDIF I/O on RCA connectors.

### S/PDIF Specs:

Interface Connection:	2 x RCA Connectors
SPDIF SRC	Not supported
I/O Channel Count	2 Channels
Supported sample rates	44.1 kHz–192 kHz, 24-bit PCM

### MADI Connections



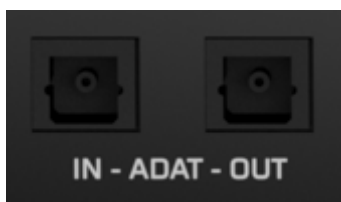
MADI I/O carrying digital audio over fiber optic cables with SC-Plugs on both ends.

Standard MADI audio limits apply per connector:

#### MADI Specs:

Interface Connection:	4 x Optical SC Connectors
MADI Mode	Dual Wire, Optical
SMUX	Supported
MADI Protocol	AES10-2003
I/O Channel Count	128 Channels @44.1/48.0 kHz 64 Channels @88.2/96.0 kHz 32 Channels @176.0/192.0 kHz
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM

#### ADAT Connections



ADAT input and output carrying up to 8 I/O audio channels over optic cables.

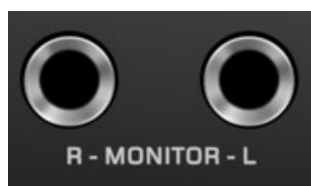
#### ADAT Specs:

Interface Connection:	2 x Optical Connectors
SMUX	Supported
I/O Channel Count	8 Channels @44.1/48 kHz



	4 Channels @88.2/96 kHz 2 Channels @176.4/192.0 kHz
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM

## Monitor Speaker Outputs



L/R studio speaker outputs on 1/4-inch TRS connectors.

## Monitor Output Specs:

Output connection:	2 x 1/4" 6.35 mm Jack (3 pin)
Channel count	2 Mono Channels
Output level	-inf to 24dBu // 1 dB step
Dynamic range	130 dB
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM
THD+N (A)	-115 dB

## Line Outputs



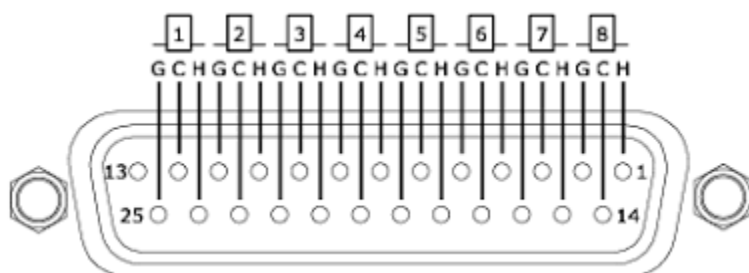
32 line audio outputs on 4x DC-coupled DB25 connectors (TASCAM pin-compatible).

## Line Output Specs:



Output connection:	4 x D-sub 25-pin (Tascam Standard)
I/O Channel count	32 Channels
Output level	-inf to 24dBu // 1 dB step
Dynamic range	128 dB
Supported sample rates	44.1 kHz–192 kHz, 24-bit PCM
THD+N (A)	-115 dB

TASCAM's DB-25 Pinout Standard:



## Line Inputs



32 line audio inputs on 4x DC-coupled DB25 connectors (TASCAM pin-compatible).

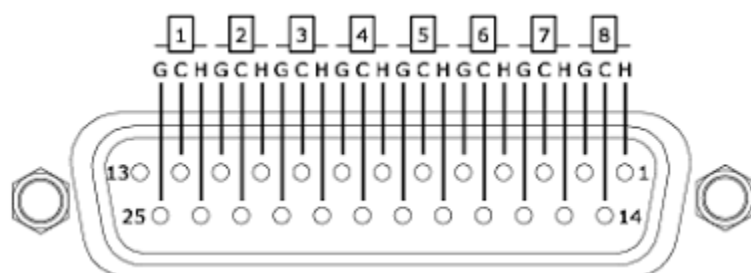
## Line Input Specs:

Input Connection:	4 x D-sub 25-pin (Tascam Standard)
I/O Channel Count	32 Mono Channels
Input level trim	12 dBu to 24 dBu in steps of 1 dB
Dynamic Range	122 dB



Supported sample rates	44.1 kHz–192 kHz, 24-bit PCM
THD+N (A)	-116 dB
Impedance Load	12 kilohms

TASCAM's DB-25 Pinout Standard:





# CONTROL PANEL APPLICATION

The screenshot displays the Orion 32+ Gen4 Control Panel application. At the top, there are tabs for S/PDIF, ADAT, METERS, MONITORS, SESSION, and INFO. Below these are two large knobs for CH 1 and CH 2, both set to 0 dB. The main area is divided into several sections: ROUTING, MIXER, SURROUND, TRIMS, MATRIX, UNDO, REDO, SAVE, and LOAD. The ROUTING section shows a grid of connections between various input and output channels. The INPUT section includes LINE\_IN 1-32, DAW OUT 1-32, DAW OUT 33-64, DAW OUT 65-96, DAW OUT 97-128, MADI1 IN 1-32, MADI1 IN 33-64, MADI2 IN 1-32, MADI2 IN 33-64, ADAT IN 1-8, SPDIF IN, and SURROUND OUT. The OUTPUT section includes LINE OUT 1-32, MONITOR, DAW IN 1-32, DAW IN 33-64, DAW IN 65-96, DAW IN 97-128, MADI OUT 1-32, MADI OUT 33-64, MADI2 OUT 1-32, MADI2 OUT 33-64, ADAT OUT 1-8, and SPDIF OUT. The routing matrix is color-coded, with green indicating active connections and other colors for different channel types.

## Introduction

Welcome to the Orion 32+ Gen4 Control Panel application! It provides intuitive and comprehensive access to each aspect of the unit's functionality. This includes settings, signal routing, audio mixing, monitoring, metering, and presets.

We encourage you to get comfortable with the software and make the most of your new audio interface. For example, you may find that getting an initial mix happening in the 'Mixer' tab and routing it to your DAW for detailed post-production is quite convenient. Moreover, you will never be stuck figuring out audio inputs and outputs with everything clearly labeled and color-coded in the Routing Matrix.





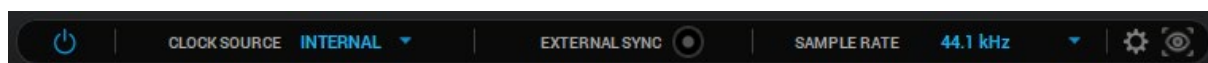
## Mouse & Keyboard Shortcuts

The following features are accessible via mouse & keyboard shortcuts in the Control Panel:

- Return to default value (all knobs and faders):  
double-click the knob or fader.
- Change text labels and manually enter gain values:  
double-click the text label / gain value.
- Adjust parameter values in smaller increments (all knobs and faders):  
Hold Ctrl (Windows) / Command (macOS) and drag.
- Detach, move and resize Control Panel tabs:  
Right-click (Windows) / Command-click (macOS) and drag the tab.
- Click any peak meter to clear it.
- Click and drag the corners of the Control Panel application window to freely resize the interface. Note that black bands will be automatically added to the window to preserve the screen ratio. This is by design and it's not a 'bug'.

## Main View 1

Main View 1 is always visible in the Control Panel's top section. It features the following areas:



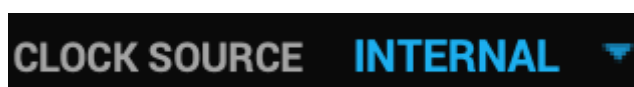
### Function Strip

From left to right, the Function Strip features the following items:



#### On/Standby button

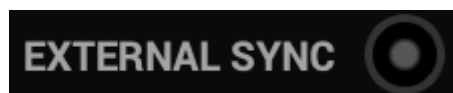
Click to power on the Orion 32+ Gen4 or enter standby.



#### Clock Source



Click the drop-down menu to choose a clock source. The following choices are available: Internal clock, External clock, S/PDIF, ADAT (2x, 4x), MADI.



### External Sync Indicator

Lights up when the Orion 32+ Gen4 is locked to an external clock source.



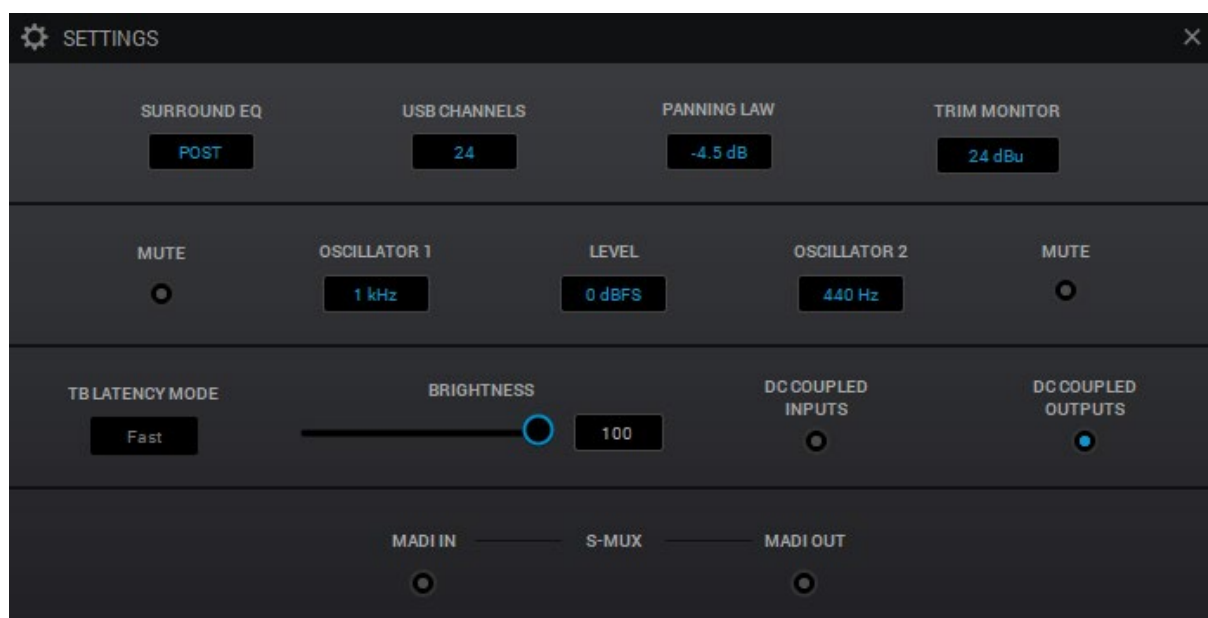
### Sample Rate

Drop-down menu to choose the device sample rate. The following choices are available: 32kHz, 44.1kHz, 48.0kHz, 88.2kHz, 96.0kHz, 176.4kHz, 192kHz. Make sure your choice matches the DAW and operating system sample rates.



### Settings button

Click to open the Settings Window. The following options are available:



### SURROUND EQ

Switch between pre- or post-crossover filter equalization for the speaker channel parametric EQs in the Surround tab.



## **USB CHANNELS**

Switch between 32 and 24 channels of computer I/O when using a USB connection. This is useful for systems having difficulties with USB bandwidth.

## **PANNING LAW**

Specify panning law compensation between 0dB (none) to -4.5dB.

**TRIM MONITOR** - Click the drop-down menu to choose an audio signal trim value for the monitor outputs (12dBu - 24dBu). By default, this option is set to 24dBu. Trim can be used to compensate for the perceived volume differences between two or more sets of speakers so that they produce the same perceived volume level.

## **OSCILLATOR 1 - MUTE**

Mute the output of test oscillator 1.

## **OSCILLATOR 1**

Choose the frequency of test oscillator 1.

## **OSCILLATOR 2**

Choose the frequency of test oscillator 2.

## **OSCILLATOR 2 - MUTE**

Mute the output of test oscillator 2.

## **TB LATENCY MODE**

Choose the Thunderbolt™ latency mode. Experiment with the different modes if you experience audio interruptions and glitching.

## **BRIGHTNESS SLIDER**

Click and drag to adjust the brightness of the Orion 32+ Gen4's dual display screens.

## **DC COUPLED INPUTS**

Click to enable DC-coupling for the Orion 32+ Gen4 line inputs.



## S-MUX

Toggle S-MUX for the MADI digital inputs and outputs.

*Back to Function strip 1...*



### Blink button

Click to make the LEDs on the Orion 32+ Gen4 front panel blink. This way, you can easily identify the unit that's currently connected to your computer. This is useful in situations where several units are racked.



### Control Panel Window Controls

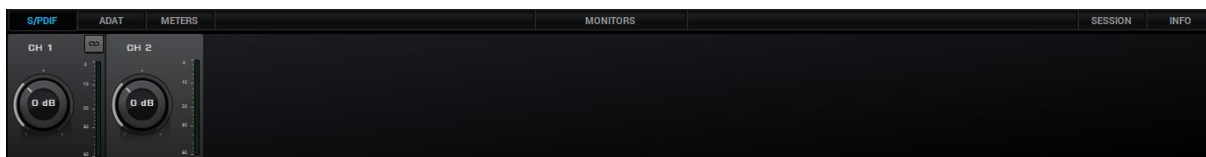
From left to right: Minimize, Maximize, Return to default size, Close window

## View Selector



Switch the Main View between S/PDIF | ADAT | METERS | MONITORS | SESSION | INFO views.

## 'S/PDIF' View



This view contains controls for the S/PDIF digital audio channels. The controls are identical and feature the following functionality (top to bottom):





- **Link button** - Links adjacent S/PDIF or AES/EBU channels. Adjustments made to one channel will be reflected by its neighboring channel.
- **Gain knob** - click and drag to adjust signal gain.
- **Peak meter** - provides gain metering.

## 'ADAT' View

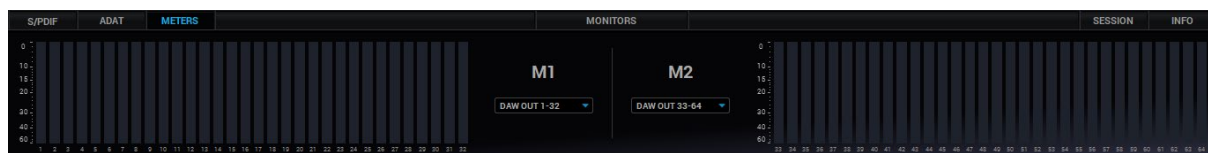


This view contains controls for the ADAT digital audio channels. The controls are identical and feature the following functionality (top to bottom):



- **Link button** - Links adjacent ADAT channels. Adjustments made to one channel will be reflected by its neighboring channel.
- **Gain knob** - click and drag to adjust signal gain.
- **Peak meter** - provides gain metering.

## 'METERS' View



This view provides peak meters for up to 64 channels, 32 per side. The tab is detachable by right-clicking the Meters tab button. Selecting channel groups from the two dropdown menus is independent of the interface's front panel displays metering.

The following channel groups are available on each side: Line In, DAW Out 1-32, DAW Out 33-64, DAW Out 65-96, DAW Out 97-128, MADI1 In 1-32, MADI1 In 33-64, MADI2 In 1-32, MADI2 In 33-64, ADAT In 1-8, S/PDIF In, Surround Out, Mix1 Out, Mix2 Out, Mix3 Out, Mix4 Out, Line Out 1-32, Monitor, DAW In 1-32, DAW In 33-64, DAW In 65-96, DAW In 97-128, MADI1 Out 1-32, MADI1 Out 33-64, MADI2 Out 1-32, MADI2 Out 33-64, ADAT Out 1-8, S/PDIF Out, Surround In, Mix 1 In, Mix 2 In, Mix 3 In, Mix 4 In.



## 'MONITORS' View



This view provides several controls for the Orion 32+ Gen4's Monitor outputs, as well as Surround/Immersive audio monitoring meters and global controls, explained in the 'SURROUND' view section of this document:



**Monitor output controls – applicable to the physical, mastering-grade stereo monitor output on the back panel of the interface.**

- 'DIM' - 'Ducks' audio level when toggled.
- 'MUTE' - Mutes audio output when toggled.
- 'MONO' - Sums output to mono when toggled.
- **Volume knob** - Click and drag to adjust output volume.

## 'SESSION' View



This view lets you save and load Project Session files, which you can assign to 5 quick recall Software Preset slots. 5 Hardware Presets are also available, as complete device snapshots stored on the interface's memory.

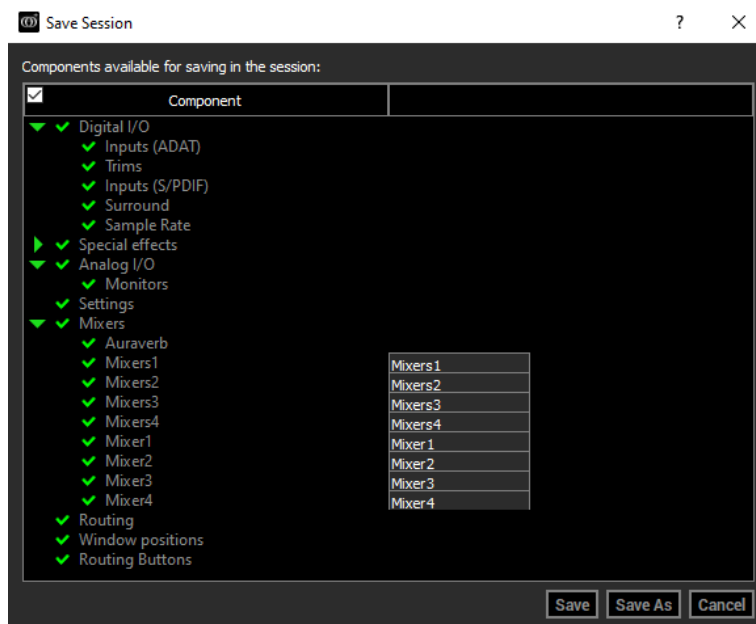
### Project Sessions

Project Sessions are found on the left side. Use them to store snapshots of Control Panel configurations. This way, you can easily recall specific gain and routing adjustments, device settings, and so on. Sessions are stored on your computer in \*.as file format. You can easily backup and share these files with other Orion 32+ Gen4 users, fully updated software and firmware is recommended.

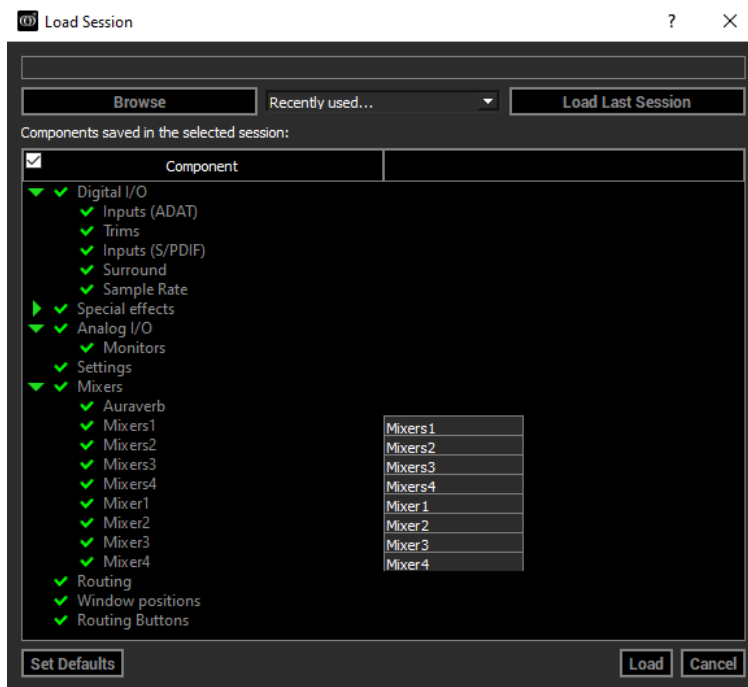
The field to the left of the 'Save' and 'Load' buttons shows the currently loaded Session file. Click the 'Save' and 'Load' buttons to save and load Antelope Session files (\*.as).



In the Save Session window, you can choose the exact components you want stored and export Session files (\*.as) from the 'Save As' button. When your Session is already saved in \*.as file format, click the 'Save' button to save any changes you have made to it.

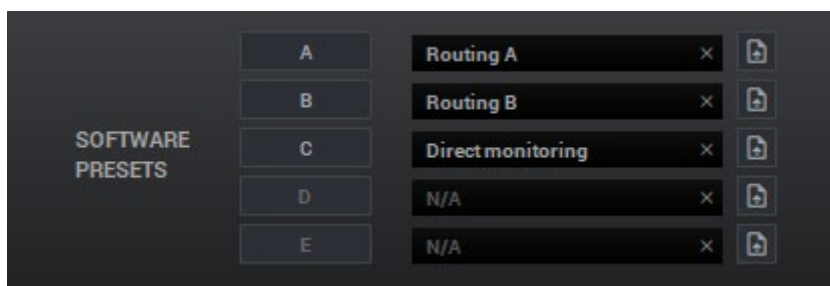


In the Load Session window, you can browse your computer for Antelope Session files (\*.as) and choose which components to load. You can also choose from a drop-down list of recently loaded Sessions or load the last used Session. Clicking the 'Set Defaults' button restores the component selection to its default setting. Clicking the 'Set Defaults' button followed by the 'Load' button will return the Control Panel application to its default state.



## Software Presets

Project Session files can be loaded into the 5 quick recall Software Preset slots. Storing only certain settings in a file allows loading them exclusively, while keeping all other settings unaffected. The 5 buttons are also available in the monitoring pop-out widget, allowing easy access.



## Hardware Presets

Hardware Presets are found on the right side and are stored onto the device memory, making them suitable for standalone use via the interface's front panel. The difference between Hardware Presets and Project Sessions is that the latter are fully configurable and stored in \*.as file format on your computer. Hardware Presets store the current device configuration as-is in 5 slots which can be recalled from both the software application and the hardware unit (using Preset buttons 1, 2, 3 on the front panel and Menu 2 shown on Display R).





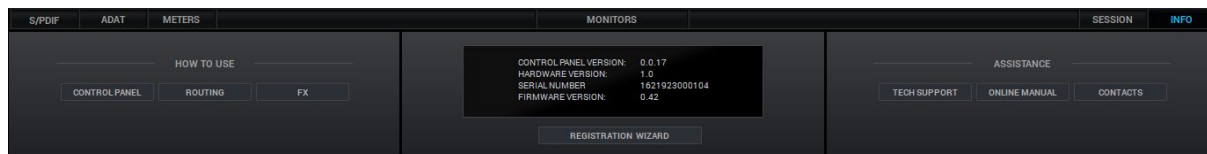
To save the current Control Panel configuration as a preset:

1. Click on preset slot 1 - 5.
2. Enter a name for the preset in the text field.
3. Click on the Save button to save the preset in the chosen slot.

To load a preset:

1. Click on preset slot 1 - 5.
2. Click on the Load button to load the preset from the chosen slot.

## 'INFO' View



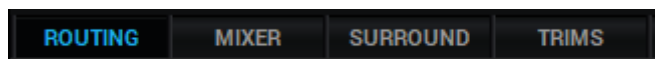
The Info view contains:

- Shortcuts to YouTube videos covering the Control Panel, routing, and various other functionality.
- Firmware, hardware and software information.
- The 'Registration Wizard' button which opens the Antelope Registration Wizard, used for registering devices and assigning purchased add-ons.
- Shortcuts to Antelope Audio Tech Support, the Orion 32+ Gen4 user manual, and contact information.

## Main View 2

Main View 2 is always visible below Main View 1. It features the following areas:

### View Selector



Switch Main View 2 between ROUTING | MIXER | SURROUND | TRIMS views.



## 'ROUTING' view

This view contains the Routing Matrix for analog and digital audio routing. The Routing Matrix is row-based. Each row has its own unique color and represents a specific audio input or output with its maximum number of channels.

The Routing Matrix is split in two main sections: **Input** (Source) and **Output** (Destination). Route audio between them by dragging and dropping the colored number blocks. The following functionality is also available:

- Click on a number block to highlight the destinations it's currently routed to.
- Double-click a number block to change its text label.
- Right-click the row labels on the left side to change the row's color.
- Click the colored names of rows (which appear in the horizontal Input and Output bars) to show and hide the inputs and outputs of your choice in the routing matrix.

- 
- Use Ctrl (Windows)/Command (Mac) + Click or Shift + Click operating system shortcuts to select multiple blocks.
  - An alternative grid-based view is available ('MATRIX').
  - Undo/Redo buttons are available.
  - Save/Load buttons let you save and load routing setups (as opposed to entire Sessions).
  - Right-click (Windows) or Command + Click (Mac) on the 'Routing' button in the View Selector and drag to have the Routing Matrix in its own floating window.

## Routing Matrix - Terminology

Here are the individual rows inside the Routing Matrix explained:

### 'INPUT' SECTION



## **LINE IN 1-32**

These rows represent the 32 line inputs.

## **DAW OUT 1-32, 33-64, 65-96, 97-128**

These rows represent DAW 'Outputs 1 - 128'.

This is where you receive audio from your DAW.

Create a new track in your DAW and assign the output with matching number - e.g. DAW 'Output 1' = 'DAW OUT' 1.

These rows also represent all computer audio, such as media playback, YouTube, etc. By default, computer audio is routed to outputs 1 and 2.

## **MADI1 IN 1-32, 33-64 / MADI2 IN 1-32, 33-64**

These rows represent 128 channels of incoming MADI digital audio. Channel count is reduced at higher sample rates.

## **ADAT IN 1-8**

This row represents up to 8 channels of incoming ADAT digital audio. Channel count is reduced at higher sample rates.

## **S/PDIF IN**

This row represents 2 channels of incoming S/PDIF digital audio.

## **SURROUND OUT 1-16**

This row represents the outputs of the Surround tab's processing.

## **MIX 1-4 OUT**

These rows represent main outputs 1 and 2 of virtual mixers 1 to 4. The 4 virtual mixers are found in the 'MIXER' view.

## **'OUTPUT' SECTION**

### **LINE OUT 1-32**

These rows represent the 32 line outputs.

### **MONITOR**

This row represents 2-channel monitor output audio.



## DAW IN 1-32, 33-64, 65-96, 97-128

This row represents DAW Inputs 1 – 128. This is where you send audio to be inputted and recorded into your DAW via the Thunderbolt/USB connection. To record from a 'DAW IN' device output, route audio to it from the 'Routing' tab. Create a new track in your DAW and assign the input with the matching number - e.g. 'DAW IN' 1 = DAW 'Input 1'.

## MADI1 OUT 1-32, 33-64 / MADI2 OUT 1-32, 33-64

These rows represent 128 channels of outgoing MADI digital audio.

## ADAT OUT 1-8

This row represents up to 8 channels of outgoing ADAT digital audio. Channel count is reduced at higher sample rates.

## S/PDIF OUT

This row represents 2 channels of outgoing S/PDIF digital audio.

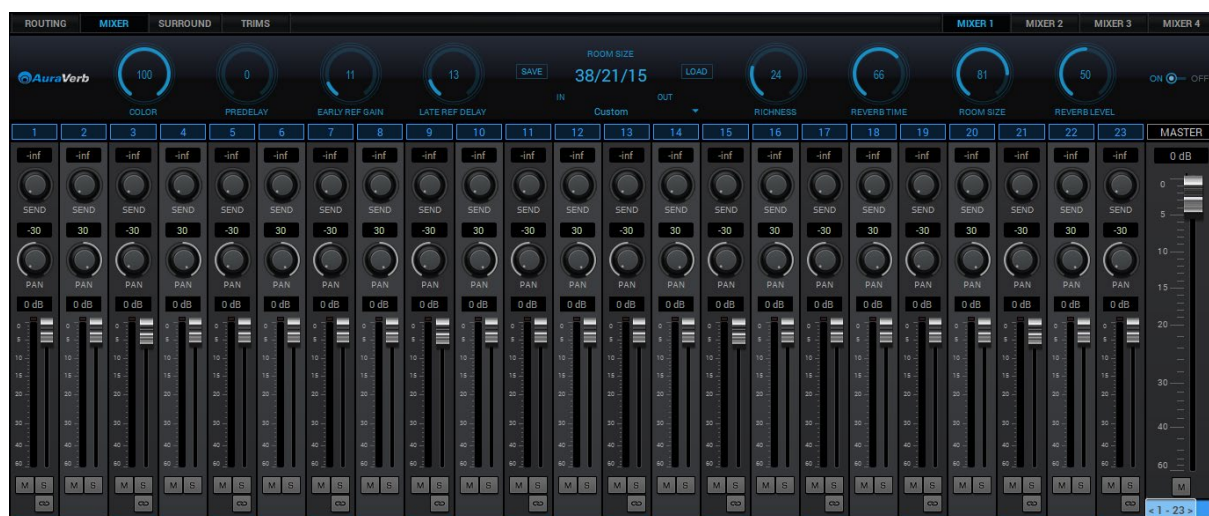
## SURROUND IN 1-16

This row represents the inputs of the Surround tab's processing.

## MIX 1-4 IN

These rows represent the inputs of virtual mixers 1 to 4. The 4 virtual mixers are found in the 'MIXER' view.

## 'MIXER' view



The Mixer tab is home to four 32-channel virtual mixers. Each channel is equipped with Pan, Volume, Solo, and Link controls (on odd-numbered channels), as well as metering. The Master channel has Volume and Mute controls.



Note the colored slider immediately below the Master fader. Click and drag left and right to scroll the entirety of the mixer horizontally.



## Limitations

- There is no grouping/bus/sub-mixing functionality, but the four full-fledged mixers give plenty of space to set up sub-mixes alongside your main mix.
- Due to technical reasons, we cannot offer volume automation inside the mixers at this time.
- MIDI control is not supported.

Mixer 1 is home to the AuraVerb send effect, explained below.

## AuraVerb

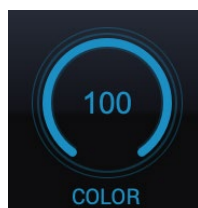
AuraVerb provides richness and color using a special new approach and a unique algorithm. The reverb features eight different controls, including a 'Color' parameter to create everything between darkened textures to bright, sizzling presence. In addition, there are 24 presets done by award-winning audio engineer and producer Brian Vibberts.



AuraVerb is a Send effect designed for live performance and monitoring. Turn the 'Send' knob on a mixer channel to hear the reverb applied to it.

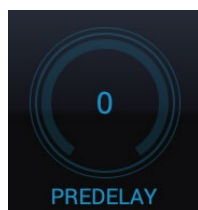
## Parameters

The following parameters are available in AuraVerb:



### Color

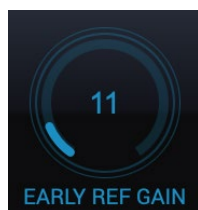
The Color control lets you adjust the overall tone of the reverb. At 0, the space created is darker, like a lushly carpeted area. At 100, the reverb is at its brightest, which can add some 'sizzle' to a lead vocal, for example.



### **PreDelay**

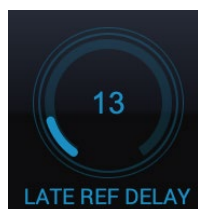
Common for most reverbs, the pre-delay lets you create a bit of space between the source and the onset of reverb. This happens by controlling the amount of delay time that precedes the initial sound from the reverb. This parameter is used to place the reverberated signal later in time with respect to the unprocessed signal.

Natural settings for this are based on the size of the environment and range from 0 to 32 milliseconds. Fine adjustment of this parameter with respect to the tempo of the song or dramatic timing of the piece can help set the feel of the reverb within the mix.



### **Early Reflection Gain**

This is the linear gain value for all early reflections. These reflections are perceptually grouped with the direct sound when set at lower levels and can nicely thicken a track when increased.



### **Late Reflection Delay**

Among other things, AuraVerb calculates reflected energy from the side walls and ceiling of the virtual space. Late Reflection Delay controls the delay of these bursts of reflections,

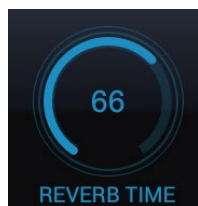


either creating echoes or supporting the spatial impression of the simulated acoustic space.



### Richness

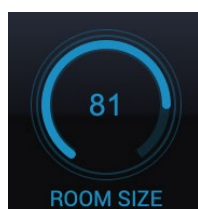
Richness controls the complexity of the reverb envelopment and dampening nuances. At 0, there is less dampening and a brighter decay. This sound is light or airy, but by increasing the Richness, you can add a sense of spaciousness to the sound and smoothly increase reverb time for lower frequencies.



### Reverb Time

Reverb Time controls the length of decay, while Room Size increases the virtual space dimensions. The perceived decay time will also be affected by Richness and Color on sources with a lot of high frequency content. Generally, as the size of the space increases, the Reverb Time will also increase.

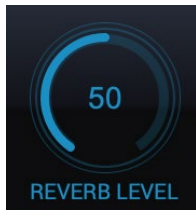
Setting Reverb Time to 50% gives a natural sounding tail for all room sizes. Interesting big spaces or subtle ambience reverbs can be created by setting Reverb Time unusually high or low with respect to the Room Size parameter.



### Room Size

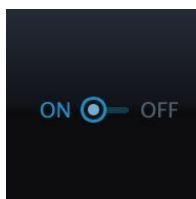


Room Size increases the virtual space dimensions



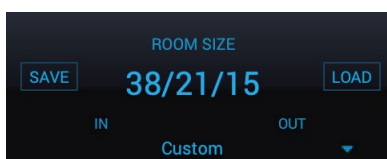
### Reverb Level

This is the output level control of the reverb. Since inputs for AuraVerb are assigned to Send knobs on Mixer 1's channels, we recommend balancing the channel volume levels from the Send controls and using Reverb Level to adjust the amount of reverb in the Master bus.



### REVERB FX ON/OFF Switch

Use it to enable and disable AuraVerb.



### Preset Manager

The Preset Manager lets you save and load presets. Use the drop-down menu to choose a preset. Use the 'Save' and 'Load' buttons to save and load reverb presets.





## 'SURROUND' view



This tab of the control panel provides monitoring control functionality and speaker calibration processing for up to 16 channels of surround or immersive audio. Formats from stereo up to 9.1.6 Dolby Atmos are supported, while maintaining customizability within the 16-channel limit for any unorthodox setup requirements.

### Important Note!

The functionality in this tab is available only as an *optional upgrade* for the Orion 32+ Gen4. To unlock it the following options are available:

- Purchase a license code from the Antelope Audio website Software Store. A single license can be used to unlock the functionality on one Orion 32+ Gen4. The feature is called Multichannel Monitoring System in the store and is available once the Orion 32+ Gen4 is selected at the top. After purchasing, the license needs to be assigned to the interface via the Antelope Launcher's Device Manager menu.
- All Antelope Audio MRC hardware remote purchases come with a complimentary license code, which can be used to unlock the optional multichannel monitoring feature on one Orion 32+ Gen4. Once an MRC is activated on a user's account, it will provide one license code which then needs to be assigned to the interface via the Antelope Launcher's Device Manager menu.

### Preliminary setup

To access the speaker calibration processing, up to 16 channels can be routed into the speaker management processing (Surround In) via the routing tab. These can be any signals inputted into the interface - analog, digital or computer playback channels.



ROUTING	MIXER	SURROUND	TRIMS	MATRIX																UNDO	REDO	SAVE	LOAD															
INPUT	<1-12>	LINE_IN 1-32	DAW OUT 1-32	DAW OUT 33-64	DAW OUT 65-96	DAW OUT 97-128	MADI 1 IN 1-32	MADI 1 IN 33-64	MADI 2 IN 1-32	MADI 2 IN 33-64	ADAT IN 1-8	SPDIF IN	SURROUND OUT																									
LINE_IN 1-32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32						
DAW OUT 1-32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24														
MADI 1 IN 1-32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32						
MADI 1 IN 33-64	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64						
SURROUND OUT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																						

DAW OUT 1-32: 1

OUTPUT	<1-12>	LINE OUT 1-32	MONITOR	DAW IN 1-32	DAW IN 33-64	DAW IN 65-96	DAW IN 97-128	MADI OUT 1-32	MADI OUT 33-64	MADI 2 OUT 1-32	MADI 2 OUT 33-64	ADAT OUT 1-8	SPDIF OUT																									
LINE OUT 1-32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M						
MONITOR	1	2																																				
DAW IN 1-32	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4														
MADI OUT 1-32	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M					
MADI OUT 33-64	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M					
SURROUND IN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	M																						

The processed signals are outputted via the (Surround Out) channels, which can be routed to any analog or digital output, or even a combination of such. These routing capabilities allow for full flexibility when integrating the processing into any setup.

- 2.0
- 2.1
- 3.0
- 3.1
- 4.0
- 4.1
- 5.0
- 5.1
- 5.1.2
- 5.1.4
- 7.0
- 7.0.2
- 7.1
- 7.1.2
- 7.1.4
- 7.1.6
- 9.1.2
- 9.1.4
- 9.1.6

### Format selector

Select your preferred format from the list of readily available ones or configure custom signal routing via the tab's inputs in the routing matrix. Formats here are grouped together based on channel count, so in some cases one option can contain multiple formats (e.g., 4.0 contains QUAD and LRCS). They are available via the path order selector, explained below.

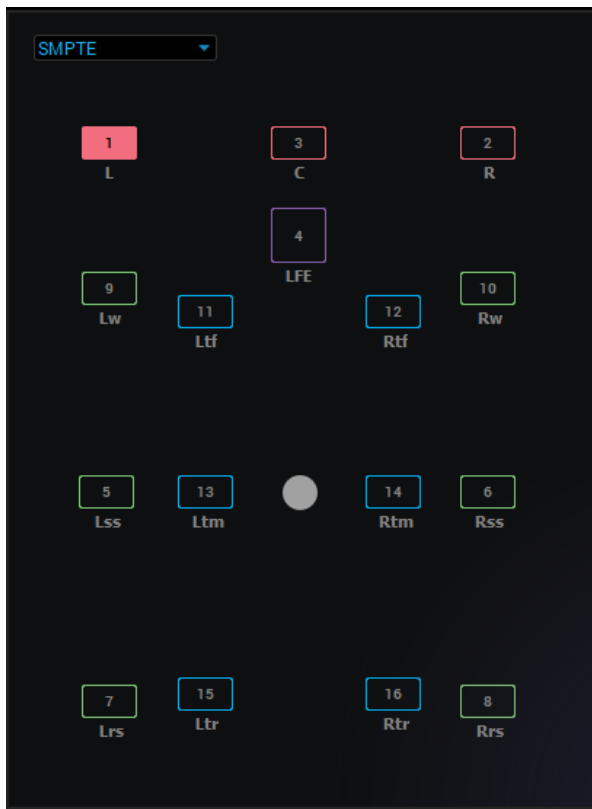




## Path order selector

After selecting a format, different channel orders are available for the relevant speaker layout, also known as path orders. Complete list of readily available ones below, and to note again, any channel order within the 16-channel limit can be achieved via the routing matrix tab.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>2.0</b>	Stereo	L	R														
<b>2.1.</b>	Stereo + LFE	L	R	LFE													
<b>3.0</b>	LRC SMPTE	L	R	C													
	LRC Film	L	C	R													
	LRS	L	C	R													
<b>3.1.</b>	LRC+LFE SMPTE	L	R	C	LFE												
	LRC+LFE Film	L	C	R	LFE												
	LRS+LFE	L	R	S	LFE												
<b>4.0</b>	Quad	L	R	Ls	Rs												
	LRCS SMPTE	L	R	C	S												
	LRCS Film	L	C	R	S												
<b>4.1.</b>	Quad+LFE	L	R	Ls	Rs	LFE											
	LRCS+LFE SMPTE	L	R	C	LFE	S											
	LRCS+LFE Film	L	C	R	S	LFE											
<b>5.0.</b>	SMPTE	L	R	C	Ls	Rs											
	Film	L	C	R	Ls	Rs											
	DTS	L	R	Ls	Rs	C											
<b>5.1.</b>	SMPTE	L	R	C	LFE	Ls	Rs										
	Film	L	C	R	Ls	Rs	LFE										
	DTS	L	R	Ls	Rs	C	LFE										
<b>5.1.2.</b>	SMPTE	L	R	C	LFE	Ls	Rs	Lts	Rts								
	Film	L	C	R	Ls	Rs	LFE	Lts	Rts								
<b>5.1.4.</b>	SMPTE	L	R	C	LFE	Ls	Rs	Ltf	Rtf	Ltr	Rtr						
	Film	L	C	R	Ls	Rs	LFE	Ltf	Rtf	Ltr	Rtr						
<b>7.0</b>	SMPTE	L	R	C	Lss	Rss	Lsr	Rsr									
	Film	L	C	R	Lss	Rss	Lsr	Rsr									
<b>7.1.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lsr	Rsr								
	Film	L	C	R	Lss	Rss	Lsr	Rsr	LFE								
<b>7.0.2.</b>	SMPTE	L	R	C	Lss	Rss	Lsr	Rsr	Lts	Rts							
	Film	L	C	R	Lss	Rss	Lsr	Rsr	Lts	Rts							
<b>7.1.2.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lsr	Rsr	Lts	Rts						
	Film	L	C	R	Lss	Rss	Lsr	Rsr	LFE	Lts	Rts						
<b>7.1.4.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lsr	Rsr	Ltf	Rtf	Ltr	Rtr				
	Film	L	C	R	Lss	Rss	Lsr	Rsr	LFE	Ltf	Rtf	Ltr	Rtr				
<b>7.1.6.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lrs	Rrs	Lft	Rft	Ltm	Rtm	Ltr	Rtr		
<b>9.1.2.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lrs	Rrs	Lw	Rw	Lts	Rts				
<b>9.1.4.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lrs	Rrs	Lw	Rw	Lft	Rft	Ltm	Rtm	Ltr	Rtr
<b>9.1.6.</b>	SMPTE	L	R	C	LFE	Lss	Rss	Lrs	Rrs	Lw	Rw	Lft	Rft	Ltm	Rtm	Ltr	Rtr

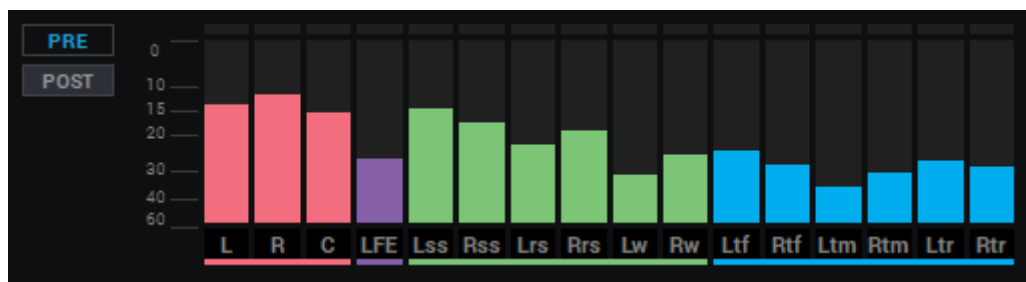


## Speaker layout and selector

Selected format and channel order is visualized here, allowing control over each speaker's settings by left clicking it. Each channel routed via the routing tab is allocated a speaker and labeled according to the selected path order. Customized path orders are possible when routing the processed output channels. The following functionality is available for monitoring controls:

- Alt + left click mutes target speaker
- Cmnd (Ctrl on PC) + left click solos target speaker
- Cmnd (Ctrl on PC) + Shift + left click adds a speaker to the soloed group
- Cmnd or Alt + left click on the blank background removes all mutes

## Metering

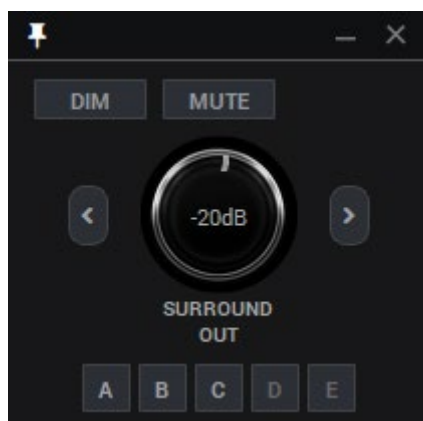


Peak meters for each channel of the selected format, with color-coding and labeling, along with pre- and post-processing switch. The Monitors tab can be viewed independently of the Surround tab, which helps keeping an eye on the meters while using other functionality.



### Surround level

Main surround output level affecting all channels, along with dim and mute monitoring functions.



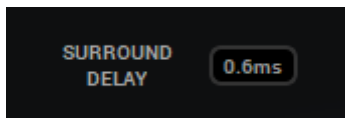
Large pop-out button shows/hides a pop-up controller widget (shown above), providing quick access to key monitoring functionality. Available are Surround Out, Line Out and Monitor Out level controls, along with dim, mute and mono buttons wherever applicable. A-E session recall buttons are configured in the Session tab. Click the widget's top left pin icon to enable/disable its always-on-top function, allowing easy access while sharing the screen with your DAW session.



### Monitor out level

Applicable to the physical, mastering-grade stereo monitor output on the back panel of the interface (explained in the Monitoring view section above).

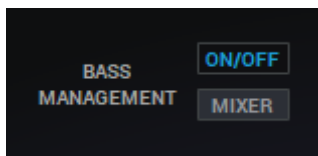
### Surround global (lip-sync) delay



Offsets all the processed channels by up to 100ms, useful for syncing the audio to picture (lip sync delay).

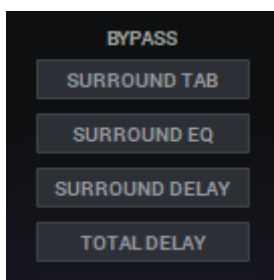
\*The inherent system latency of 0.6ms is displayed as the minimum global delay value.

### Bass Management



- On/Off – Enables/disables all crossover filters.
- Mixer – Opens the bass management mixer window (explained below).

### Bypass controls



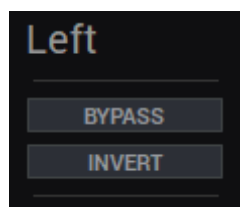
- Surround Tab – Bypasses all the Surround tab's processing.
- Surround EQ – Bypasses all equalization processing for the surround channels.
- Surround Delay – Bypasses the global Surround delay offset. The minimum value is 0.6ms, which is the inherent latency of the processing.
- Total Delay – Bypasses both the global and per-channel delays.



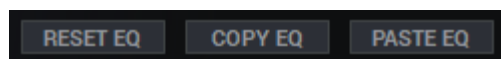
## Speaker settings



Provides access to the selected speaker channel's settings.



- Full name of the selected channel/speaker.
- Bypass button for all of the channel's processing, excluding the level setting.
- Phase invert button.

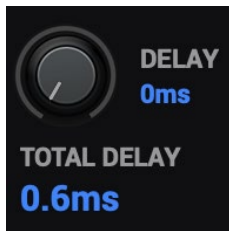


Channel EQ reset, copy and paste settings buttons.



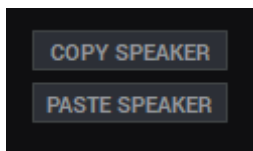


- Level setting in dB - hold down Cmnd (Ctrl on Windows) for fine 0.1 dB steps.
- Total gain - sum read-out of the channel's level setting and the main output level.



- Delay - time offset of the channel in milliseconds, up to 100ms. Holding down Cmnd (Ctrl on Windows) enables offsetting by 0.1ms steps.
- Total delay - sum read-out of the channel's delay value and the global delay.

\*The inherent system latency of 0.6ms is displayed as the minimum total delay value readout.



- Copy Speaker - copies all channel settings of the currently selected speaker.
- Paste Speaker - pastes the previously copied channel settings to the currently selected speaker.





### Channel EQ graph and settings

8-band parametric EQ with cut and shelf filters available for the low and high bands, and bell filters available for the remaining bands. Adjustable graph amplitude range, when hovering over the minimum and maximum values to the left of the graph. Color coded graph visualization of the selected channel's frequency calibration. Four separate graphs are available as follows:

- channel output (coral orange - L, C, R; green - surround speakers; blue – overhead speakers) - represents the signal being sent to the output.
- channel EQ settings graph (teal) - represents the currently dialed EQ settings.
- LFE split signal (purple) - represents the signal split and sent to the LFE channel via the bass management crossover mixer. The graph shows the low-pass filter applied to the channel.
- crossover high-pass filter graph (yellow) - represents the high-pass filter settings applied to the channel, also available via the Bass Management Mixer window.



## 'BASS MANAGEMENT' mixer



The above mixer is available via the Bass Management Mixer button in the Monitoring tab. It provides all bass management settings allowing monitoring low frequency content of the surround/overhead channels via the LFE channel. Each channel is labeled, and color coded according to the selected format and path order.



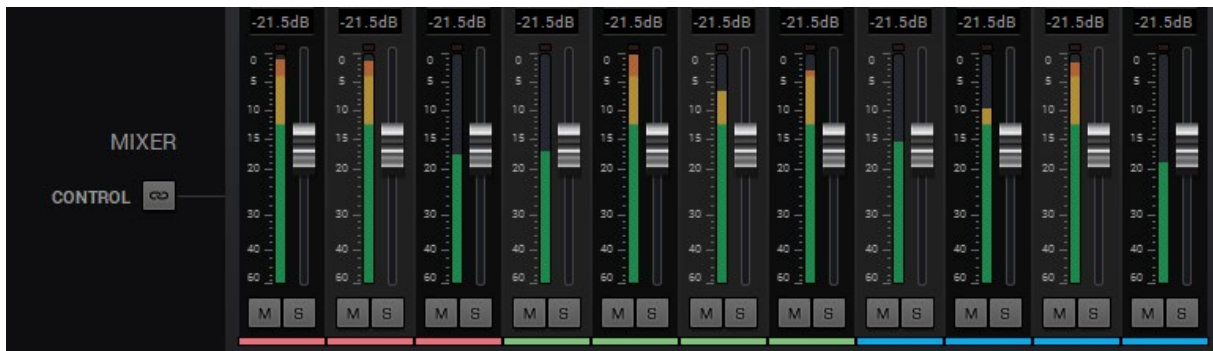
### High pass filters' settings

- Cutoff frequency for each channel, with setting linking available.
- Filter type switch for each channel, choice between Linkwitz-Riley and Butterworth filters, with linking.
- Filter order settings available providing second, fourth and eighth order filters (12dB, 24dB, 48dB per octave respectively), with linking.
- Filter bypass for each channel, with linking.



### Low pass filters' settings

- Cutoff frequency for each channel, with setting linking available.
- Filter type switch for each channel, choice between Linkwitz-Riley and Butterworth filters, with linking.
- Filter order settings available providing second, fourth and eighth order filters (12dB, 24dB, 48dB per octave respectively), with linking.
- Filter bypass for each channel, with linking.



### Mixer settings

- Low-passed signal level to-LFE, via faders for each channel, with linking (+6 to -60dB range).
- Mute and solo functionality available for each channel.
- Meters per channel, displaying peak value of the low-passed signals.



## LFE channel settings

Control over the following settings of the LFE's low pass filter:

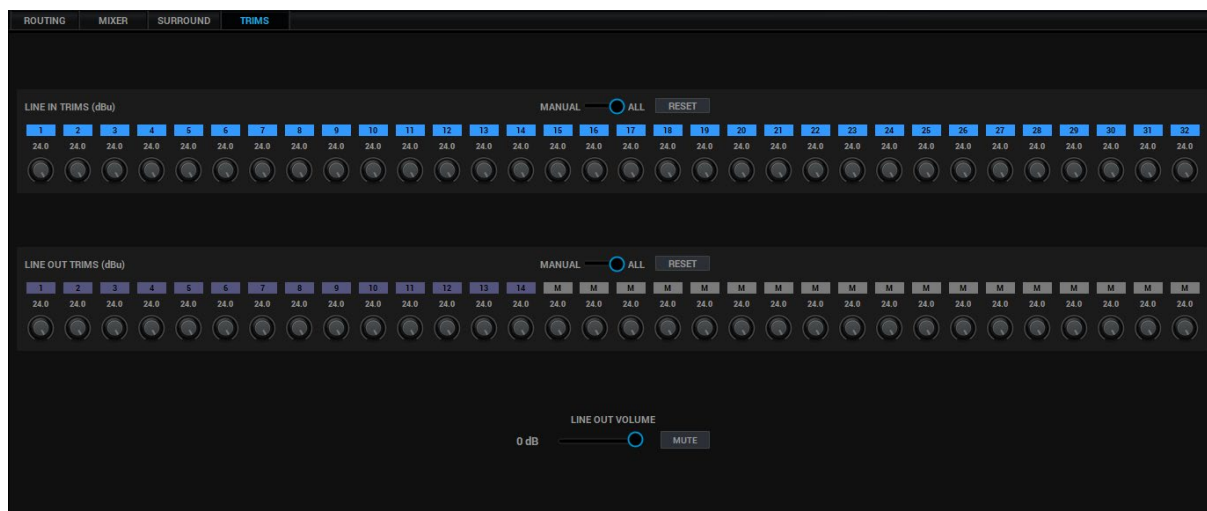
- Cutoff frequency.
- Filter type switch, choice between Linkwitz-Riley and Butterworth filters.
- Filter order (2nd, 4th, 8th).
- Filter bypass for each channel, with linking.
- Separate volume control fader for the LFE channel's output signal.
- Level meter for the LFE output signal.
- Mute and solo functionality.

## Additional notes

- For setups that include more than one subwoofer (e.g., 9.3.6), sending the LFE output channel to multiple outputs in parallel is easily achieved via the routing matrix.
- Chaining channels for additional delay time is possible, if the allocated 100ms per channel are not enough. Of course, this would mean sacrificing one of the 16 available channels.



## 'TRIMS' view



This tab lets you adjust signal trim for the line inputs and outputs. By default, signal trim is set to 24dbu.

- Use the Manual/All switches to adjust signal trim for individual audio channels or globally.
- Click the 'Reset' buttons to return all trim values to default.
- Click and drag the slider to adjust the line output volume.

## THUNDERBOLT™ 3 FUNCTIONALITY

The Orion 32+ Gen4's Thunderbolt™ 3 connection enables the following functionality:

### Daisy Chaining

Thunderbolt™ 3 can “daisy chain” devices”. Daisy chaining means that one device can plug into the end of a chain of devices, one after the other. A basic example would be connecting the Orion 32+ Gen4 to an external hard drive with two Thunderbolt™ 3 ports. One port is occupied by the unit while the other connects to a computer or another Thunderbolt™ 3 device in the chain.

The following rules are in place:

1. The Thunderbolt™ 3 specification places a limit of up to 6 devices per chain. However, the 6-device limit does not apply to the following Apple computers:

- 2018 MacBook Pro or later



- 2018 Mac mini or later
- 2017 iMac Pro or later

These machines have dual Thunderbolt™ 3 busses and support up to 12 devices per chain.

2. Each device must be powered on for subsequent devices to operate.

3. If a USB or DisplayPort device is plugged directly into the Type-C connector downstream from any device, the Thunderbolt™ daisy chain is terminated at that point.

4. As Thunderbolt™ bandwidth is shared between daisy chained devices, the available bandwidth for each device inevitably decreases. Therefore, Antelope Audio cannot guarantee optimal performance in each and every daisy chain configuration possible.

## Device Charging

Orion 32+ Gen4 is able to power any device with USB and/or Thunderbolt™ Type-C connectors from its Thunderbolt™ 3 port. For example, you can power a laptop (e.g. 2016 MacBook Pro or later).

## Backwards Compatibility

Thunderbolt™ 3 is backwards-compatible with legacy Thunderbolt™ 2 connections using third-party adapters and corresponding cables. Given all the technical variables involved, we cannot provide singular instructions for legacy compatibility in this manual. Please get in touch with Customer Support if you need help setting up.



# CUSTOMER SUPPORT INFORMATION

Antelope Audio Customer Support can be reached by the following means:

## Online

Visit [support.antelopeaudio.com](https://support.antelopeaudio.com)

## Phone

We are there for you around the clock, 21 hours/day, Monday to Friday.

North America +1-916-238-1643 01:00 a.m. – 10:00 p.m. (EST)

International +44 19 2593 3423 06:00 a.m. – 03:00 a.m. (GMT)

Pour le Support francophone: +44 20 3389 8108 09:00 a.m. – 17:30 p.m. (GMT+1)

## Live Chat

Live Chat is available during the following hours Monday to Friday

International 06:00 a.m. – 06:00 p.m. (GMT)

**Note:** If you're trying to reach us outside working hours, we advise you to file a ticket in our customer support system or leave a voice message.

## Additional Resources

- The [Antelope Audio YouTube channel](#) is home to various tutorial videos and endorser content which you may find helpful and inspiring.
- The [Antelope Audio Users Facebook group](#) lets you interact with fellow users and some of our employees. Note, however, that it is not meant to be a support group. Please contact our customer support team for such inquiries.



- The [Knowledge Base](#) in our Customer Support section is an often-overlooked source of troubleshooting information, answers to commonly asked questions and Antelope know-how.





# MY ANTELOPE AUDIO PRODUCT ISN'T WORKING.

## WHAT SHOULD I DO?

If you cannot find a solution on your own, please get in touch with us so we check if you are having a hardware-related issue. If this is the case, we will guide you through the repair process. If the product should be returned, an RMA number will be issued so we can begin the procedure.

### What's an RMA number?

Issuing a RMA (Return Merchandise Authorization) number is required for any factory service or repair procedure. Please, don't attempt to send us your device without receiving a RMA number first, as the device will be returned and not serviced.

### How do I get an RMA number?

The Antelope Audio Customer Support team is in charge of issuing RMA numbers. Visit [support.antelopeaudio.com](https://support.antelopeaudio.com) and get in touch.

After your RMA has been issued, you will receive an email with instructions on how to proceed.

### RMA shipping information

Alongside the product you are returning please, include a letter containing your full name, shipping address, RMA number issued by our technical support team and a note with a short information about the technical issue.

Please use the original box if possible, because a worn out one will surely not protect your product sufficiently on its way to the Antelope Audio HQ. Additional cushioning materials in multiple layers between the unit and the box walls to prevent from shock, vibration and various tears and scratches.



Please remove any labels or old shipment markings it may have and ensure you add your shipping address inside the box in case the original shipment label becomes illegible during transportation.

The shipping costs are covered by the owner of the product. Antelope Audio will not cover any local customs charges.

We recommend using a courier service of your choice (e.g. DHL, UPS, FedEx). The package should be insured for its real value, marked as fragile and a tracking number should be provided. We do not recommend using standard mail delivery services.

Please, don't forget to add the RMA number, issued by the Antelope Audio technical support, on all shipping paperwork.

Antelope Audio cannot be held responsible for undelivered packages – lost or damaged on the way to the Antelope Audio HQ. For damage claims, please contact your shipping service provider of choice.

Antelope Audio cannot cover any repair costs for product damages due to poor packaging.



## LIMITED WARRANTY POLICY

This is a non-transferable voluntary Limited Product Warranty provided to end-customers who have purchased Antelope Audio-branded hardware product (hereinafter referred to as “Product”) from an authorized Antelope Audio re-seller.

For customers covered by consumer protection laws or regulations in their country of purchase or, if different, their country of residence, the benefits conferred by Antelope Audio's Limited Warranty are in addition to, and not instead of, rights and remedies conveyed by such consumer protection laws and regulations and it does not exclude, limit or suspend buyer's rights arising from consumer law. Consumers have the right to choose whether to claim service under the Antelope Audio Limited Warranty or under their consumer law rights.

All claims made under the Antelope Audio Limited Warranty will be governed by the terms set out in this warranty document.

### Warranty Coverage

Antelope Audio warrants that the Product will be free from defects in material and workmanship for the period of 1 (one) year commencing on the date of purchase of Product by end-customer from authorized Antelope Audio's re-seller.

Except where explicitly prohibited by applicable local law, this warranty is limited to the original purchaser and is non-transferable. This warranty provides you with specific legal rights, and you may have additional rights that vary under local laws.

In general, this warranty means your Antelope Audio hardware product will operate in accordance with published technical specifications, as specified by its data-sheet, and in the operating environment for which it was intended for the length of the warranty period.

This version of the warranty applies to products purchased on or after January 1, 2018. For prior versions of the Antelope Audio limited warranty, please contact customer service.

### Limited Factory Refurbished (B-stock) Warranty



Antelope Audio warrants products sold as “B-stock, Factory Refurbished or Open Box” to be free from defects in materials (unless otherwise stated in product description) and workmanship. Only products purchased from an authorized dealer or directly from Antelope Audio are covered by this Warranty.

The Limited Factory Refurbished (B-stock) Warranty is valid for the period of 6 (six) months, commencing on the date of purchase of Product, if local regulations do not require otherwise.

All warranty terms contained hereunder apply also to the B-stock Warranty, unless otherwise specified.

## **Remedies**

Antelope Audio’s entire liability and your exclusive remedy for any Antelope Audio Product that is not operating in accordance with its published technical specifications is at Antelope Audio’s discretion:

1) to repair the Product at Antelope Audio’s expense using new or equivalent-to new refurbished parts in good working condition; or

2) to replace the Product at Antelope Audio’s expense with a product with equivalent functionality formed from new and/or equivalent-to new refurbished parts in good working condition, or

3) to refund the price paid. Should Antelope Audio decide to refund the price paid, it may deduct from the paid Product’s price any damages caused to the Product; where, within fourteen (14) days of the expiration of the warranty period, (i) Antelope Audio has received written notice of any nonconformity; (ii) after Antelope Audio’s written authorization, customer has returned the nonconforming product to the designated place; and (iii) Antelope Audio has determined that the Product is nonconforming and that such nonconformity is not the result of any of the exclusions designated below.



These warranty obligations are conditioned upon the hardware being returned to the original place of purchase, or another place as directed by Antelope Audio, with the original sales receipt attached. You will be required to pay shipping and handling charges for returning the product. You may be required to pay any other applicable tariffs, duties, taxes, or other fees with regard to returning the products.

Any repaired or replacement Product will be warranted for the remainder of the original warranty period.

### **Obsolete or Discontinued Products**

An obsolete or discontinued product will be repaired or replaced with the same product if available. If Antelope Audio is unable to replace your obsolete or discontinued product with the same product, Antelope Audio will replace the obsolete or discontinued product, in its sole discretion, with a product having similar function and capacity.

### **Exclusions**

This warranty does not cover problems or damage resulting from, but not limited to, any of the following: (i)Wear and tear associated with normal use; (ii)Any modification, abuse, accident, disassembly, misapplication, misuse, negligence, acts of God, accident; (iii)Unauthorized repair or attempted repair by anyone other than Antelope Audio or someone authorized by Antelope Audio to do warranty work; any unauthorized repairs will void this warranty(iv)Any improper operation, maintenance or installation, including any use not in accordance with any supplied product instructions; (v)Connection to any improper voltage supply; (vi)Use of consumables or spare parts not supplied by Antelope Audio, except where such restriction is prohibited by applicable local law; (vii)Any other cause which does not relate to a Product defect in materials or workmanship.

The warranty does not apply to any Products which have been subject to misuse, neglect, accident or modification or which have been soldered or altered such that they are not capable of being tested under normal test conditions.

This warranty does not cover (i) any counterfeit products, i.e. Products that Antelope Audio, at its sole discretion, determines were not manufactured by Antelope Audio or any



of its authorized manufacturing partners; (ii) Products purchased from a person or entity which is not an authorized dealer or re-seller of Antelope Audio; (iii) Product sold “as is” or “with all faults”, to the extent permitted by local law.

This warranty is not valid in case any manufacturer label(s), serial numbers, date stamp(s) or warranty sticker(s) has been altered or removed from the Product.

### **Limitation of Liability**

ANTELOPE AUDIO SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, REVENUE, OR DATA (WHETHER DIRECT OR INDIRECT) OR COMMERCIAL LOSS FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON YOUR PRODUCT EVEN IF Antelope Audio HAS BEEN ADVISED PREVIOUSLY OF THE POSSIBILITY OF SUCH DAMAGES. Some local laws do not allow the exclusion or limitation of special, indirect, incidental or consequential damages, so this limitation or exclusion may not apply in your jurisdiction.

ANTELOPE AUDIO WILL NOT ASSUME OR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH ITS PRODUCTS.

### **Data Recovery**

In the event of data loss using Antelope Audio storage devices, Antelope Audio is not responsible for backing up or recovering any data that you may have lost.

### **No Other Warranties**

No Antelope Audio employee, dealer, re-seller, or other agent is authorized to make any modification, extension, or addition to this warranty.

### **How to Make a Warranty Claim**

Valid warranty claims should be processed through your point of purchase. Please also verify the return policy directly with the retailer where you purchased your product. Any warranty claims that cannot be reprocessed through your original point of purchase should be



addressed directly to Antelope Audio. Our customer service contact information can be found on the web or in the documentation included with your Product.

## **Returning Your Product**

In the event that you need to return your Antelope Audio products for repair or replacement, Antelope Audio will provide you with a Return Merchandise Authorization Number (RMA#) as well as return instructions. Do not return your product without prior approval from Antelope Audio. Any product returned without a valid unique RMA# will be refused and returned to the sender at the sender's expense. To avoid problems at the time of receipt, clearly write your RMA# on the outside of the package and include a copy of your RMA confirmation-mail within the package.

In certain situations, for in-warranty units, we may (entirely at our opinion) offer you a temporary replacement unit, provided that we have such on stock in your state. To request a temporary replacement unit, a valid credit card must be provided to secure the new replacement unit for shipping prior to Antelope Audio receiving the defective one.

## **Request a Return Material Authorization Number (RMA#)**

Please follow these steps to obtain an RMA number:

(i) For end user customers, submit a claim online at: [support.antelopeaudio.com](https://support.antelopeaudio.com). For business to business (B2B) / Direct customers of Antelope Audio please email us at [techsupport@antelopeaudio.com](mailto:techsupport@antelopeaudio.com)

(ii) A valid proof of purchase is required for RMA processing (i.e. receipt, invoice, etc). Antelope Audio will provide you with the RMA number within 2 working days as of the claim submission date.

## **RMA Return Addresses**

We have multiple RMA receiving locations worldwide. Your RMA confirmation will specify the specific return address you must use when sending your RMA package. Any packages



received at an unauthorized location may be refused and returned to the sender at the sender's expense.

### **Products Lost or Damaged During Transit**

The original packaging material should be used to pack the product for return; if the original packaging is not available, you should use such materials that provide the same or greater protection to the product. All packages that arrive with any external damage or appear inadequately packed will be refused and returned to the sender at the sender's expense. We are not responsible for damage incurred during shipping to our RMA receiving locations or for lost or stolen products.

### **Company information**

**Antelope Audio** is the trade name, under which the company Elektrosfera Ltd., registered under the legislation of the Republic of Bulgaria with UIN: 131052590, is doing business and is worldwide known. Elsewhere in this document where the trade name **Antelope Audio** is used shall refer to Elektrosfera Ltd., with address of management: Tsarigradsko Shose Blvd., 7th km, Building of BIC IZOT, floor 6, Mladost region, Sofia, Bulgaria.

If any term hereunder is held to be illegal or unenforceable, it shall be severed from this warranty and the legality or enforceability of the remaining terms shall not be affected.





## SAFETY NOTES

To reduce the risk of electrical shocks, fire, and related hazards:

- Do not remove screws, cover, or cabinet. There are no user serviceable parts inside. Refer servicing to qualified service personnel.
- Do not expose this device to rain, moisture or spillover of liquid of any kind.
- Should any form of liquid or a foreign object enter the device, do not use it. Switch off the device and then unplug it from the power source. Do not operate the device again until the foreign object is removed or the liquid has completely dried and its residues fully cleaned up. If in doubt, please consult the manufacturer.
- Do not handle the power cables with wet hands!
- Make sure the device is switched off when plugging/unplugging it to/from the power source.
- Avoid placing things on the cabinet or using the device in a narrow and poorly ventilated place which could affect its operation or the operation of other closely located components.
- If anything goes wrong, turn off the device first and then unplug the power. Do not attempt to repair the device yourself. Consult authorized service personnel or your dealer instead.
- Do not install near any heat sources such as radiators, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not use harsh chemicals to clean your unit. Clean only with specialized cleaners for electronics equipment.
- Connect all your devices before powering your unit.
- This unit is connected via its power cord to the mains safety earth.
- Never operate the unit without this earth connection.
- DC power supply cable should be routed so that it is not likely to be walked on or squeezed by items placed upon or against it.
- To completely turn off the device, unplug the power cable first from the outlet and then from the rear panel of the unit.
- Both occasional and continued exposure to high sound pressure levels can cause permanent ear damage via headphones and monitors.
- Your unit should always be un-racked when traveling or in a flight case.



- The device is designed to operate in a temperate environment, with a correct Operating Temperature of 0-50° C, 32-122° F.



# TECHNICAL SPECIFICATIONS

## AD Line Input

Input Connection:	4 x D-sub 25-pin (Tascam Standard)
I/O Channel Count	32 Channels
Input level trim	12 dBu to 24 dBu in steps of 1 dB
Dynamic Range	122 dB
Supported sample rates	44.1 kHz—192 kHz, 24-bit
THD+N (A)	-116 dB
Impedance Load	12 kOhms

## DA Line Output

Output Connection:	4 x DC-coupled D-sub-25-pin (Tascam Standard)
I/O Channel Count	32 Channels
Output level	-inf to 24dBu // 1 dB step
Dynamic Range	128 dB
Supported sample rates	44.1 kHz—192 kHz, 24-bit
THD+N (A)	-115 dB

## DA Monitor Output

Output Connection:	2 x 1/4" 6.35 mm Jack (3 pin)
Channel Count	2 Channels
Output level	-inf to 24dBu // 1 dB step
Dynamic Range	130 dB
Supported sample rates	44.1 kHz—192 kHz, 24-bit
THD+N (A)	-115 dB



## Digital Interface – Thunderbolt™

Interface Connection:	1 x Thunderbolt™ 3 (Type-C) Port, I/O - Doubles as USB port
I/O Channel Count	128 Channels
Supported sample rates	44.1 kHz—192 kHz, 24-bit
Control Panel Support	Supported

## Digital Interface – USB

Interface Connection:	1 x USB 2.0 (Type-C) Port, I/O - Doubles as Thunderbolt port
I/O Channel Count	32 Channels (24ch mode available)
Supported sample rates	44.1 kHz—192 kHz, 24-bit
Control Panel Support	Supported

## Digital Interface – MADI

Interface Connection:	4 x Optical SC Connectors
MADI Mode	Dual Wire, Optical
SMUX	Supported
Madi Protocol	AES10-2003
I/O Channel Count	128 Channels @44.1/48.0 kHz 64 Channels @88.2/96.0 kHz 32 Channels @176.0/192.0 kHz
Supported sample rates	44.1 kHz—192 kHz, 24-bit PCM

## Digital Interface – S/PDIF

Interface Connection:	2 x RCA Connectors
SPDIF SRC	Not Supported
I/O Channel Count	2 Channels
Supported sample rates	44.1 kHz—192 kHz, 24-bit



## Digital Interface - ADAT

Interface Connection:	2 x Optical Connectors
SMUX MODE	Supported
I/O Channel Count	8 Channels @44.1/48 kHz 4 Channels @88.2/96 kHz 2 Channels @176.4/192.0 kHz
Supported sample rates	44.1 kHz—192 kHz, 24-bit

## Clocking System

Clocking Technology	4th Generation Acoustically Focused Clocking 64-Bit Jitter Management DDS
Word Clock/Loop-Sync Input	1 x Input @ 75 Ohms 3Vpp on BNC
Word Clock/Loop-Sync Output	2 x Output @ 75 Ohms 3Vpp on BNC
10M Atomic Reference Input	1 x Input @ 75 Ohms 1Vpp on BNC
Clock Stability Clock Aging Clock Calibration	<+/-0.02 ppm. < 1 ppm per year <+/-0.001 ppm
Supported sample rates	44.1 kHz—192 kHz, 24-bit

## Display Screens

Display Count	2
Display Type	IPS
Resolution	320x240



<b>Dimensions</b>	1.8"
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### Other

<b>Operational Temperature</b>	0-50°C/32-122°F
<b>Electrical Specs</b>	45 Watts
<b>Weight</b>	3.4 kg/ 7.49 lbs
<b>Dimensions</b>	W482.6 D279 H44