



User Manual

ORION 32+ | Gen 3

64-channel USB & Thunderbolt™

AD/DA converter





CONTENTS

Before You Begin.....	4
Mandatory Online Activation.....	5
Setting Up	6
Configuring For Windows 10.....	7
Configuring For MacOS 10.14 Mojave (Or Later)	10
Antelope Launcher.....	12
'Devices' Tab.....	12
'Plug-Ins' Tab.....	15
'System' Tab.....	16
Front Panel Explained.....	19
System Menu	19
Control Menu.....	22
Rear Panel Explained	24
Control Panel.....	27
Mouse & Keyboard Shortcuts.....	27
Main View	28
Settings Window.....	29
Routing Tab.....	35
Routing Matrix – Terminology.....	36
Mixer Tab.....	40
AuraVerb	41
Effects Tab.....	43
AFX2DAW	45



Customer Support Information.....	51
My Antelope Audio Product Isn't Working.....	52
Limited Warranty Policy.....	54
Safety Notes.....	60
Technical Specifications.....	61



BEFORE YOU BEGIN



Congratulations on your purchase! We'd like to turn your attention to the following:

As with all Antelope Audio interfaces and converters, the software Control Panel is the “mediator” between the Orion 32+ | Gen. 3 and your preferred DAW. To take complete advantage of the unit’s capabilities, you are meant to handle tasks like gain adjustments, signal routing, effects processing, initial mixing and so on from the Control Panel. The resulting audio is routed into your DAW for recording in formats of your choice, such as multi-track, stem, and two-channel stereo.

We encourage you to familiarize yourself with the software Control Panel – particularly the **‘Routing’** and **tab** before you begin working. This way, you can overcome potential stumbling blocks for users new to Antelope Audio products.

Note that the only way to use FGPA FX as inserts (plug-ins) in your DAW, and also automate them, is by purchasing the Antelope Audio AFX2DAW plug-in. Think of it as a hardware-to-software “bridge” that turns our hardware-processed, low-latency effects into typical software plug-ins applied to your audio tracks. AFX2DAW is available for macOS and Windows users over Thunderbolt™.



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.

Best wishes,
Team Antelope

MANDATORY ONLINE ACTIVATION

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



SETTING UP

Once the unit has been connected to an AC power source (95 – 245 V):

1. Connect a USB 2.0 Type-B (included) or Thunderbolt™ 2 cable to the corresponding ports on the Orion 32+ | Gen. 3 and your computer.

Notes:

- The unit will automatically detect the connection type upon the initial startup, but not on subsequent starts. Manually set the connection type from 'Comms. Interface' in the System Menu every time you switch between Thunderbolt™ and USB connections.
 - USB 2 connection supports up to 32 I/O audio channels. Thunderbolt™ 2 connection supports up to 64 I/O audio channels.
 - Thunderbolt™ 3 connections require a third-party TB3 to TB Legacy adapter and corresponding cables.
2. Visit www.antelopeaudio.com and log-in or create a customer account (if you don't have one).
 3. Download and install the latest Antelope Audio Launcher and Driver for your operating system (Windows 10 / macOS 10.14 or later) from the '[Downloads](#)' section of the Orion 32+ | Gen. 3 website.

Note: For Thunderbolt™ connection on Windows, download and install the latest [Antelope Audio Windows Thunderbolt™ driver](#).

4. Open Antelope Launcher and update your Orion 32+ | Gen. 3 to the latest firmware and Control Panel versions. Please read the 'Antelope Launcher' chapter if you are not sure how to do this.



Note: If your device isn't recognized by Antelope Launcher or the operating system, [read this](#).

5. Start the Orion 32+ | Gen. 3 Control Panel from the Antelope Launcher and follow the device activation procedure.

Note: Bypass any security prompts from your operating system, e.g. Windows Defender Firewall and macOS alerts.

6. Register your device with the '**Antelope Audio Registration Wizard**' by following the on-screen instructions.
7. Connect your analog and digital equipment of choice to the Orion 32+ | Gen. 3.
8. Launch your preferred DAW and:
 - Choose the Orion 32+ | Gen. 3 as your main input and output device.
 - Make sure your DAW and operating system sample rates match the device sample rate.

Need any help?

Visit the Antelope Audio [Customer Support](#) page, choose your device and go from there.

Configuring for Windows 10

Windows 10 needs a few tweaks to get everything up and running:

1. Enter the '**Sounds**' options window from the Control Panel or right-click the speaker icon in the system tray and choose 'Open Sound settings'.
2. Make sure the Orion 32+ | Gen. 3 is chosen under 'Output' and 'Input'.
Next, click 'Device Properties' under 'Output'. Then, click 'Additional Device Properties'.




3. Enter the **'Supported Formats'** tab and place checkmarks next to all the available sample rates.

Sample Rates

Which of the following sample rates are supported by your Digital Receiver?

<input checked="" type="checkbox"/> 32.0 kHz	<input checked="" type="checkbox"/> 88.2 kHz	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 44.1 kHz	<input checked="" type="checkbox"/> 96.0 kHz	
<input checked="" type="checkbox"/> 48.0 kHz	<input checked="" type="checkbox"/> 176.4 kHz	

< >


 Test


4. Enter the **'Enhancements'** tab and disable all enhancements.

5. Enter the **'Advanced'** tab and choose any of the available “2 channel, 24-bit” modes from the drop-down menu. Click 'OK' to close the window.

Default Format

Select the sample rate and bit depth to be used when running in shared mode.

2 channel, 24 bit, 44100 Hz (Studio Quality) 

 Test

6. Back in Sound settings, click 'Device Properties' under 'Input'. Then, click 'Additional Device Properties'. Enter the 'Enhancements' tab and disable all enhancements. Click 'OK' to close the window.

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.
- In some cases, disabling the '**Exclusive mode**' functionality from the '**Advanced**' tab in '**Playback**' and '**Recording**' Properties might help when running multiple playback applications at the same time.
- Disabling the 32kHz sample rate isn't mandatory, but it might help in general.

Further Reading

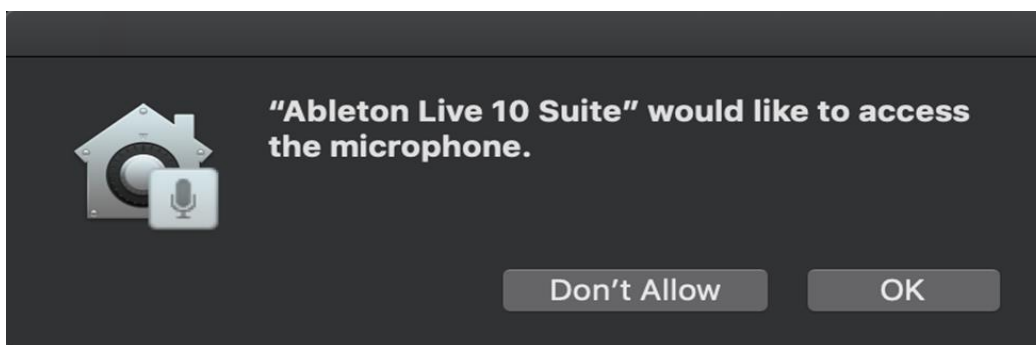
- Antelope Audio Knowledge Base - [Windows 10 Optimization](#)



Configuring for macOS 10.14 Mojave (or later)

The new security settings introduced in macOS Mojave 10.14 and later releases 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+ | Gen. 3 in a DAW for the first time:

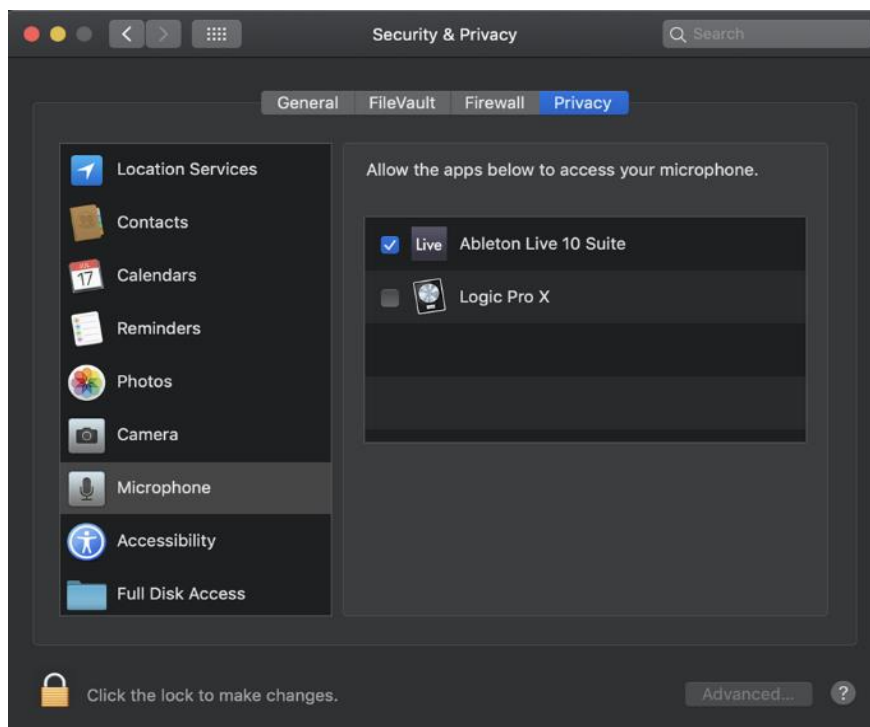
1. Launch your DAW and choose Orion 32+ | Gen. 3 as the input device. The following dialog box will appear (if using Ableton Live 10 Suite, for example):



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.

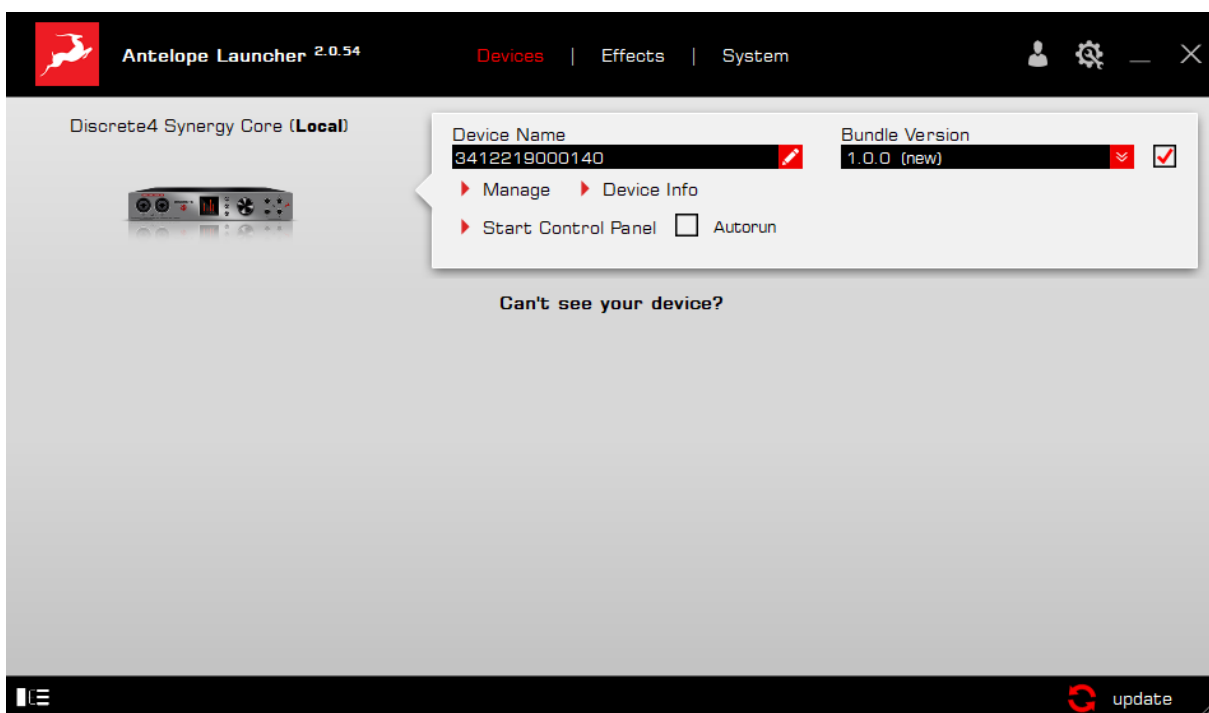




ANTELOPE LAUNCHER

The Antelope Launcher is a streamlined hub for managing and troubleshooting your Antelope Audio products. The application is organized into the following tabs:

‘Devices’ tab



All Antelope Audio devices currently connected to your computer are listed in this section. In this example, we have connected the Discrete 4 Synergy Core. However, the application functionality is identical for each Antelope device.

The following functionality is available in the 'Devices' tab:

Device Name

Click the black box to enter a name for your device. The device serial number is used by default. Erasing the name and clicking outside the box reverts to the serial number.

Bundle Version



By default, this drop-down menu shows the most recent software bundle available for your device. Clicking it shows the currently installed software bundle version and lets you roll-back to an older build.

To update or change the installed software version, choose your desired Bundle Version, click the check mark next to the drop-down menu, and click the 'Update' button.

Manage

Click to launch the Antelope Registration Wizard. Use it to register or de-register devices and features (such as AFX2DAW, Synergy Core FX, HDX Activation and so on).

Device Info

Click to display the following information (useful for troubleshooting):

- Serial number
- Hardware version
- Firmware version
- Control Panel version
- USB/Thunderbolt™ driver version
- Software Bundle version

Click the information window to close it.

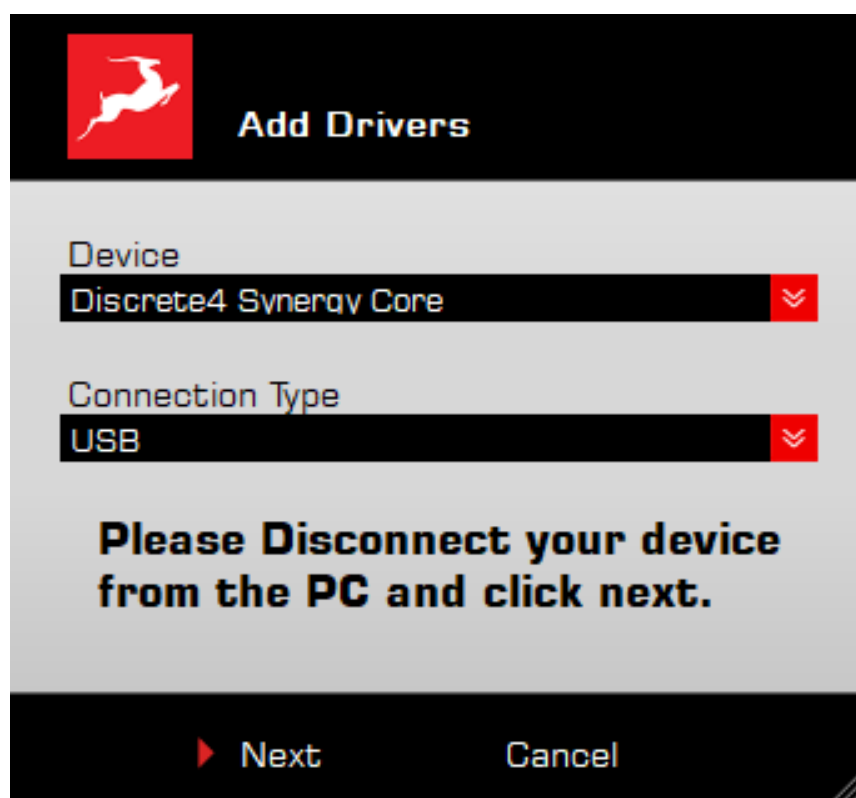
Start Control Panel

Click to start the device's Control Panel application. You can also click the device's picture. Place a check mark next to 'Autorun' to have the Control Panel for a specific device launch automatically when you start Antelope Launcher.

Can't see your device?



If a device is missing from the list, the most common reason is driver conflict. The Antelope Launcher makes it easy to re-install drivers and troubleshoot. Click "Can't see your device?" to launch the 'Add Drivers' wizard.

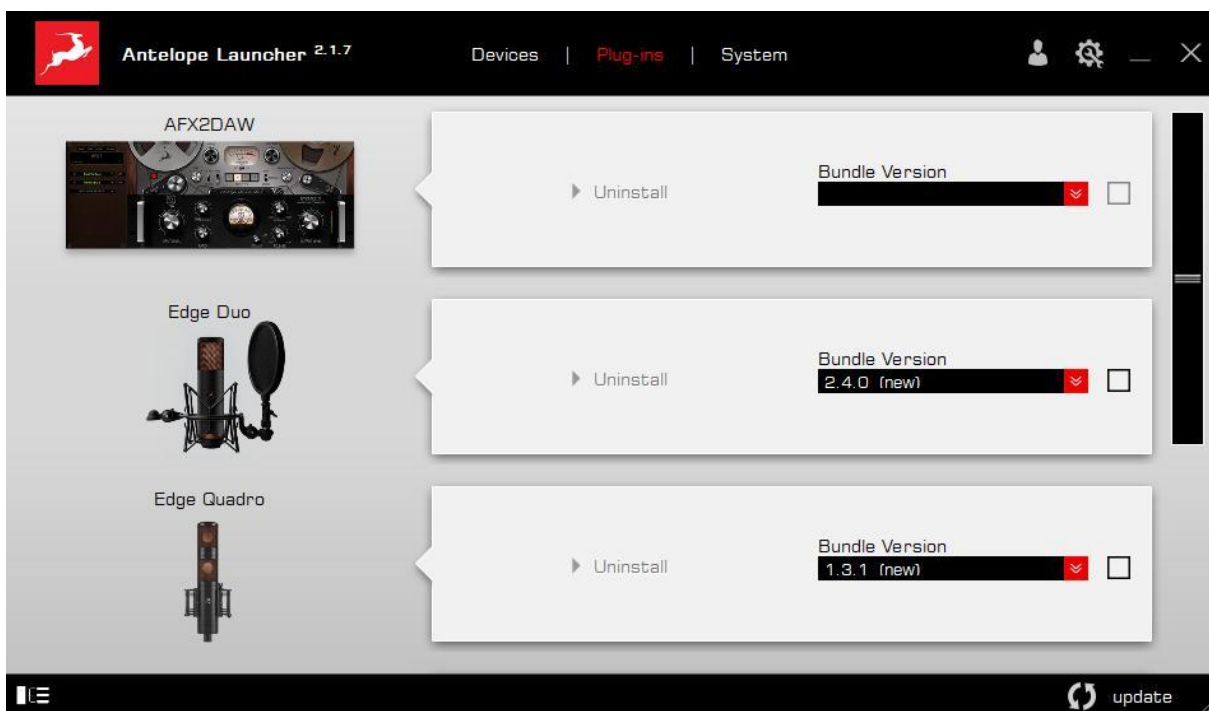


Choose your device and connection type from the drop-down menus, disconnect the device from your computer, and click 'Next' to perform a driver re-install.

Note: If the issue persists, please contact [Antelope Audio Customer Support](#).



'Plug-ins' tab



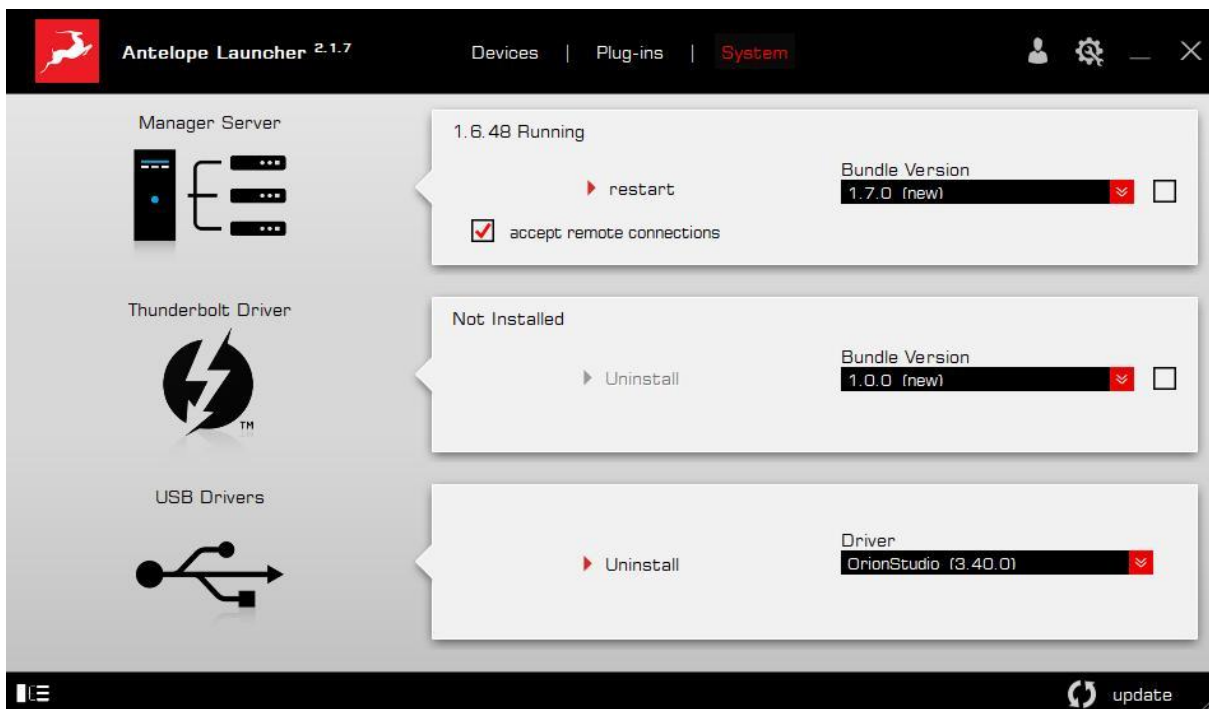
This section lets you install, update, and uninstall Antelope Audio software such as native mic emulations and AFX2DAW.

By default, the Bundle Version drop-down menus show the most recent software bundle available for each product. Clicking the menu shows the currently installed software bundle version and lets you roll-back to an older build.

To update or change the installed software version, choose your desired Bundle Version, click the check mark next to the drop-down menu, then click the 'Update' button.



'System' tab

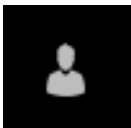


Here, you can do the following:

- Update or roll-back the Manager Server, USB and Thunderbolt™ Driver versions. Choose your desired Bundle Version from the drop-down menu, click the check mark, then click the 'Update' button.
- Restart the Manager Server and enable/disable remote connections from other computers on your network.
- Install the Antelope Audio Thunderbolt™ driver. Choose a Bundle Version from the drop-down menu, click the check mark, then click the 'Update' button.
- Uninstall the Antelope Audio Thunderbolt™ and/or USB driver(s) present on your system.



Login button

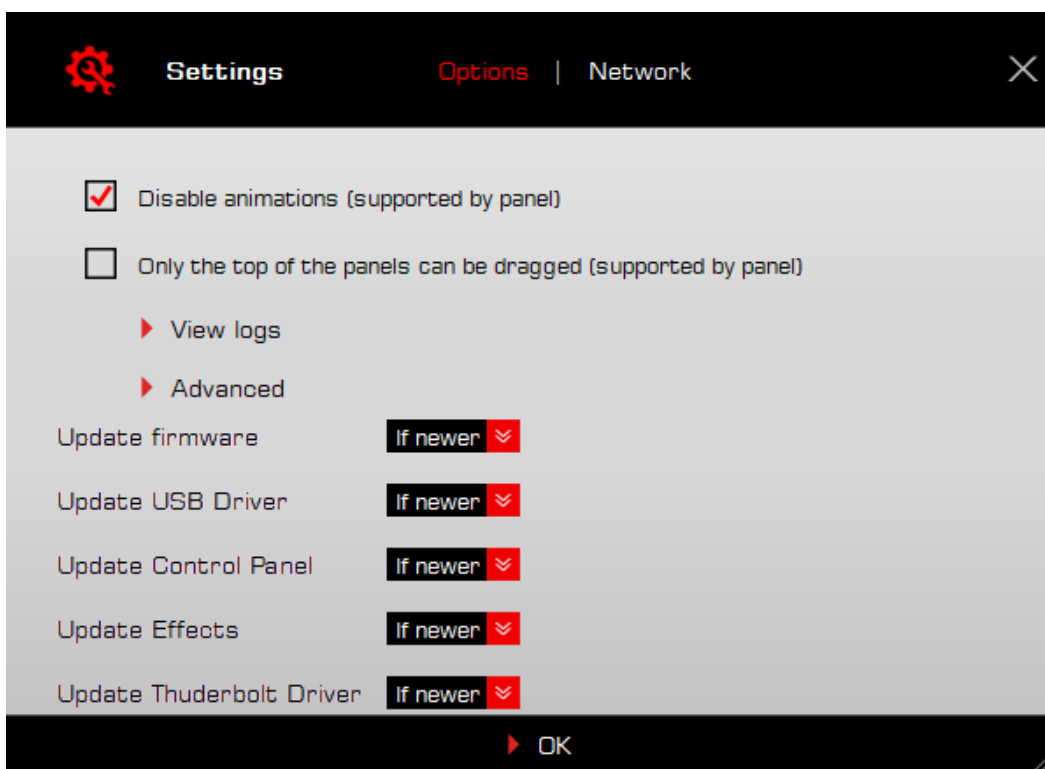


Click and enter your Antelope Audio username and password, then click 'Login'. If you don't have an Antelope Audio account, click 'Register' and follow the on-screen instructions.

Settings button



Click to open the Settings window.



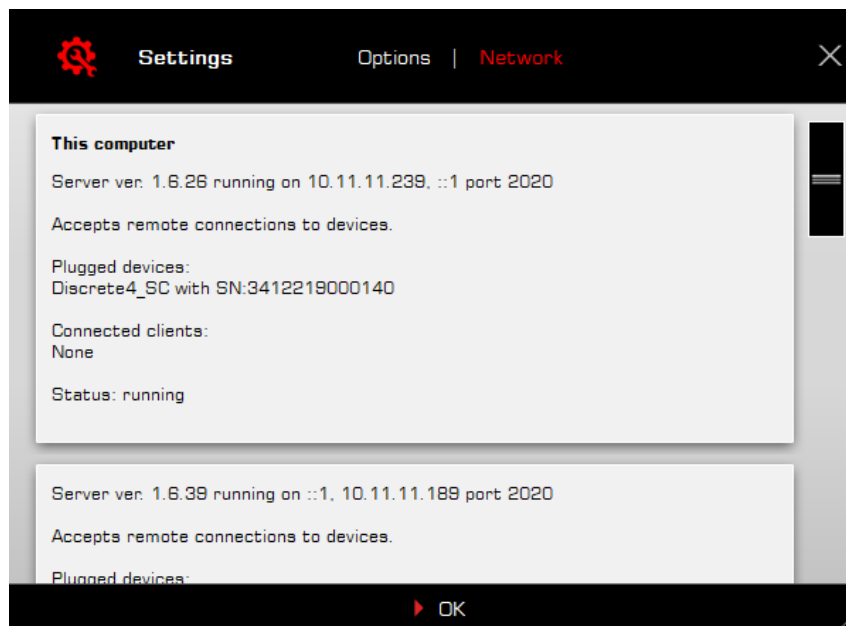


Here, you can do the following:

- Click 'View Logs' to view, save, and send activity logs to Antelope Audio Customer Support.
- Click 'Advanced' to enable or disable automatic updates for each of the following:
 - Device firmware
 - USB Driver
 - Control Panel
 - Effects
 - Thunderbolt™ driver

Make your selection(s) in the drop-down menu(s) and click 'OK'.

- Click 'Network' to view network status and logs.





FRONT PANEL EXPLAINED



From left to right:

PWR button

The following functionality is available:

- Press once to switch on the unit. Press again to enter Standby.



Note: Orion 32+ | Gen. 3 will remain in Standby mode as long as it's connected to an AC outlet. Unplug the power adapter to completely shut down the unit.

- Press-and-hold to enter the System Menu.

System Menu

Pressing-and-holding the PWR button enters the System Menu with the following sub-menus. Use the Frequency Up/Down buttons to navigate. Press and hold the Frequency Down button to enter a menu. To confirm a chosen setting, press and hold the Frequency Down button. Press the PWR button to exit.

Comm. Interface

Allows you to choose between Thunderbolt™ and USB connectivity. Make sure your choice matches your computer connection.

Device Info



Displays the device's serial number, hardware revision and firmware version. Useful for troubleshooting with Technical Support.

Brightness

Adjust the display brightness.

Scr Save Time

Choose how long it takes for the screensaver to appear.

Scr Save Style

Choose the screensaver style.

Note: Overlooking the screensaver options may result in screen burn-in if the unit operates for longer durations. We recommend setting up '**Scr Save Time**' to the shortest time period you are comfortable with, and '**Scr Save Style**' to '**Black**'. This effectively makes the display turn itself off after a short period of inactivity, which helps prevent burn-in. Press any button to exit the screensaver.

Factory Reset

Perform a factory reset of the unit.

Notes:

- All presets, mixer and FX settings will be lost after factory reset.
- A second factory reset method is available:
 1. Unplug the power cable.
 2. Press and hold the Frequency Up and Down buttons simultaneously.
 3. Plug the power cable back in.



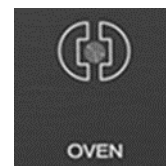
10M Calibration

Calibrate an Antelope Audio 10M/10MX Atomic Master Clock.

Back to the front panel...

Oven Clock Light

When lit, it indicates the Orion 32+ | Gen. 3 is clocked internally by its oven-controlled crystal oscillator.



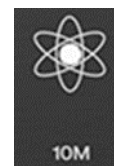
Lock Light

When lit, it indicates Orion 32+ | Gen. 3 is locked to another audio device.



Atomic Clock Lock Light

When lit, it indicates the Orion 32+ | Gen. 3 is clocked externally by an Antelope Audio 10M/10MX Atomic Master Clock. Note that the Oven Clock lock light will automatically dim.



Frequency Up/Down Buttons

Use these buttons to adjust the device sample rate (32kHz - 192kHz) and navigate menus.





Numerical and Function Displays

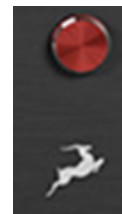
The numerical display (left) shows the device sample rate. The function display (right) shows Peak Metering (by default), menu content, firmware update progress and so on.

Note: There might be a protective film over the display, which may dim the illumination. Feel free to remove it.

Antelope Button

The following functionality is available:

- Press to view information about clocking and audio channels activity.
Press again to return to peak metering.
- Press-and hold the Antelope button to access the Control Menu.



Control Menu

Pressing-and-holding the Antelope button enters the Control Menu with the following sub-menus. Use the Frequency Up/Down buttons to navigate. Press and hold the Frequency Down button to enter a menu. To confirm a chosen setting, press and hold the Frequency Down button. Press the Antelope button to exit.



Clock Source

Set the clock source. The following options are available:

- **'OVEN'** - Oven-controlled crystal oscillator (internal)
- **'WC'** - Word Clock input (external)
- ADAT (2x, 4x) input (external)
- MADI (2x, 4x) input (external)
- **'S/PDIF'** - digital audio input (external)
- USB. In **'USB'** mode the unit still uses its internal clock.

Peak Meter

Adjust peak metering. To avoid information repeating, the choices here are explained in the 'Routing tab – Terminology' chapter.

Monitor Trim

Adjust monitor output signal trim.

Line Out Trim

Adjust line output signal trim.

Line In Trim

Adjust line input signal trim.

SR Conversion

Enable/disable S/PDIF sample rate conversion. For example, if your S/PDIF source is outputting 44.1kHz audio and the Orion 32+ | Gen. 3 is set to 96kHz, the S/PDIF audio will be sample rate-converted to 96kHz.

S-MUX In

Enable/disable S/MUX In.



S-MUX Out

Enable/disable S/MUX Out.

REAR PANEL EXPLAINED



Left to right, top to bottom:

Mains Power Connection

The IEC connector supports a range from ~ 95-245 V. The device automatically accommodates mains voltage in every country.



Word Clock Input (Top)

BNC connector to accept Word Clock reference signal from another device using a standard BNC cable.



10M Input (Bottom)

This BNC connector lets the Orion 32+ | Gen. 3 receive timing reference from an Antelope Audio Atomic Master Clock, such as the 10M and 10MX, thereby increasing oscillator accuracy, musical detail, and clock stability. [Click here to learn more.](#)



Word Clock Outputs

BNC connectors to output Word Clock reference signal using standard BNC cables.



S/PDIF I/O

75ohm S/PDIF connectors for use with compatible equipment over coaxial RCA cables.



L/R Monitor Outs

1/4-inch signal-balanced TRS monitor outs boasting the highest dynamic range in the system.



ADAT I/O

2 inputs and 2 outputs carrying up to 16 I/O audio channels over Toslink fiber optic cables. Standard ADAT audio limits apply:



- Up to 16 I/O channels of 24-bit, 48kHz audio.
- Up to 8 I/O channels of 24-bit, 96kHz audio (over S/MUX).
- Up to 4 I/O channels of 24-bit, 192kHz audio (over S/MUX).
- All ADAT audio is transmitted in 24-bit resolution.

Note: Devices do not need to be powered off for connecting or disconnecting ADAT. However, you should mute the receiving equipment because a large signal spike will occur upon connecting.



MADI I/O

MADI I/O connectors carrying up to 64 audio channels over fiber optic cables with SC-Plug connectors on both ends. Standard MADI audio limits apply:



- Up to 64 I/O channels of 24-bit 48kHz audio
- Up to 32 I/O channels of 24-bit 96kHz audio
- Up to 16 I/O channels of 24-bit 192kHz audio

USB 2 Type-B Port

USB 2 computer connection. Supports up to 32 I/O audio channels at sample rates up to 192kHz.



Thunderbolt™ 2 Port

Thunderbolt™ 2 port. Supports up to 64 I/O audio channels.



D-SUB 25-pin Line Outputs

Four DB-25 breakout cable connectors carrying 8 audio channels each (32 channels in total). Compatible with TASCAM Standard Pin Layout.



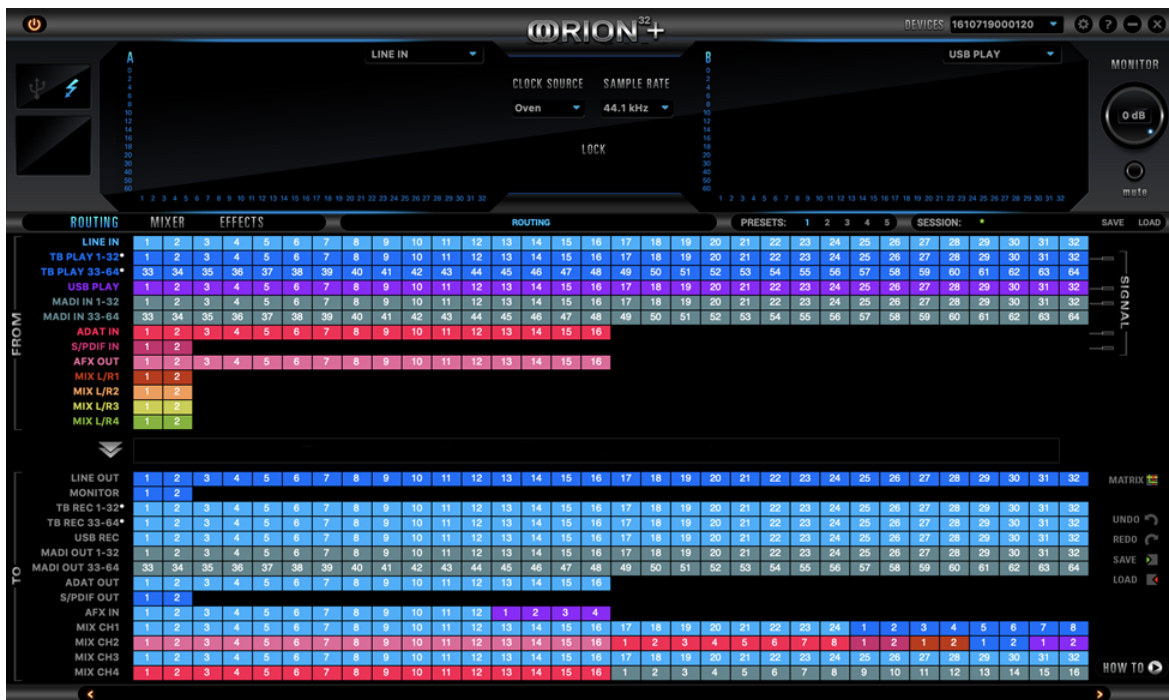
D-SUB 25-pin Line Inputs

Four DB-25 breakout cable connectors carrying 8 audio channels each (32 channels in total). Compatible with TASCAM Standard Pin Layout.





CONTROL PANEL



Welcome to the Orion 32+ | Gen. 3 Core software Control Panel! More than just an alternative to the physical front panel controls, it provides intuitive and comprehensive access to each aspect of the converter's functionality. This includes settings, signal routing, audio mixing, effects, presets and more.

Mouse & Keyboard Shortcuts

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

- Return to unity gain/zero (all knobs and faders): double-click the knob or fader.
- Click any peak meter to 'clear' it.
- Change text labels and manually enter values: double-click the text label / value.
- Adjust parameters in 1-step increments (all knobs and faders): Ctrl-click (Windows) / Command-click (macOS) and drag.



- Detach, move and resize Control Panel tabs: Right-click (Windows) / Command-click (macOS) and drag the relevant tab.
- Save Preset 1 – 5: Ctrl-click (Windows) / Command-click (macOS) on Presets 1 – 5.

Main View



The Main View is always visible (except in Mixer 1, where it's replaced by AuraVerb) and features the following functionality:

On/Standby Button

On/Standby button for the hardware unit.



Devices

Drop-down menu listing connected Antelope Audio devices by their serial number.



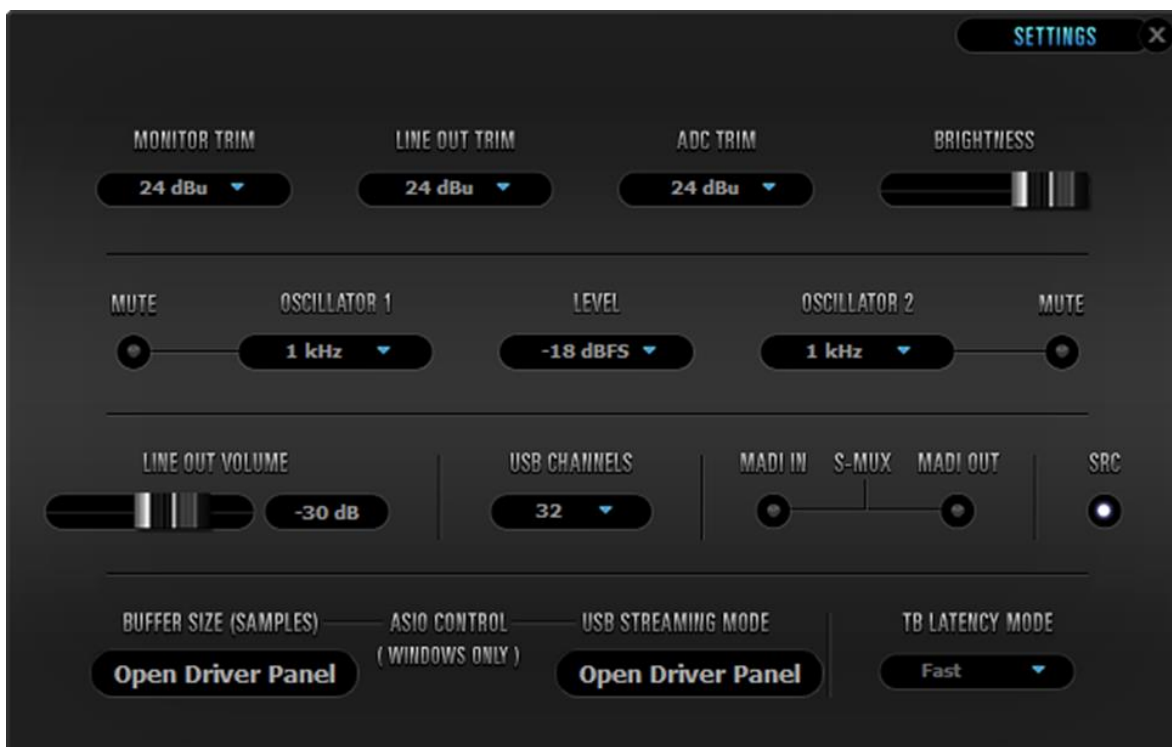
Note: You are expected to run a separate Control Panel instance for each connected device you want to use in your session. Each Control Panel has its own settings (routing, etc.). While it's possible to switch devices from the drop-down menu on the fly, you may find this workflow less convenient.



Settings Window



Opens the Settings Window with the following options (left to right, top to bottom):



MONITOR TRIM

Adjust monitor output signal trim (in dBu).

LINE OUT TRIM

Adjust line output signal trim (in dBu).

ADC TRIM

Adjust line input signal trim (in dBu).



BRIGHTNESS

Dim or illuminate the displays.

MUTE

Click to mute Oscillator 1 output.

OSCILLATOR 1

Choose a frequency for the Oscillator 1 test signal from the drop-down menu.

LEVEL

Choose the output level (in dBFS) for the oscillator 1 & 2 test signals.

OSCILLATOR 2

Choose a frequency for the Oscillator 2 test signal from the drop-down menu.

MUTE

Click to mute Oscillator 2 output.

LINE OUT VOLUME

Adjust line output volume (in dB).

USB CHANNELS

(When connected over USB) Choose the number of available I/O audio channels from the drop-down menu. May be set to '24' by default. Choose '32' to access all 32 audio channels.

MADI IN/OUT & S-MUX

Enable or disable MADI I/O. S/MUX is enabled and disabled automatically.



SRC

Click to enable or disable S/PDIF sample rate conversion. For example, if your S/PDIF source is outputting 44.1kHz audio and the Orion 32+ | Gen. 3 is set to 96kHz, the S/PDIF audio will be sample rate-converted to 96kHz.

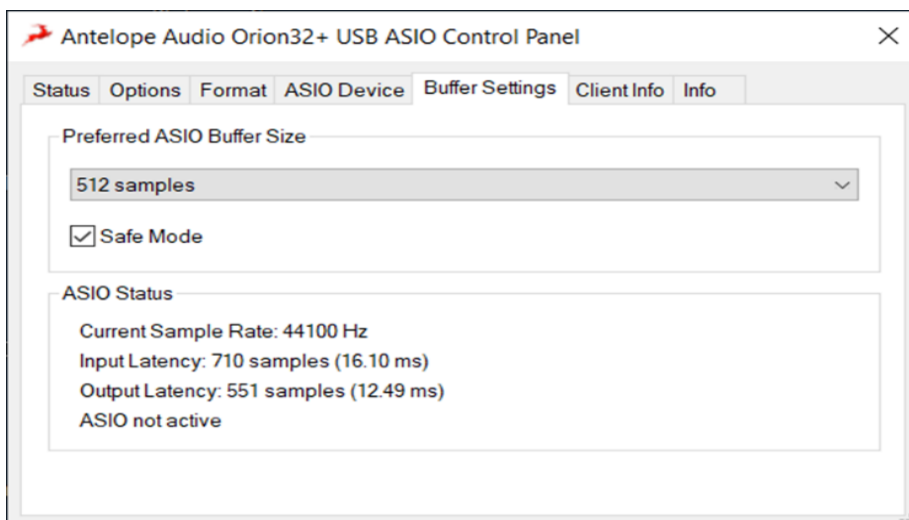
ASIO Controls (Windows only):

BUFFER SIZE (SAMPLES)

Click 'Open Driver Panel' to open the Orion 32+ | Gen. 3 ASIO Driver Control Panel. Head to the 'Buffer Settings' tab and choose your Preferred ASIO Buffer Size from the drop-down menu.

USB STREAMING MODE

Click 'Open Driver Panel' to open the Orion 32+ | Gen. 3 ASIO Driver Control Panel. Head to the 'Options' tab and choose from two streaming modes 'On when needed' and 'Always on'. Experiment with the two if you experience glitches, dropouts and other audio streaming errors.



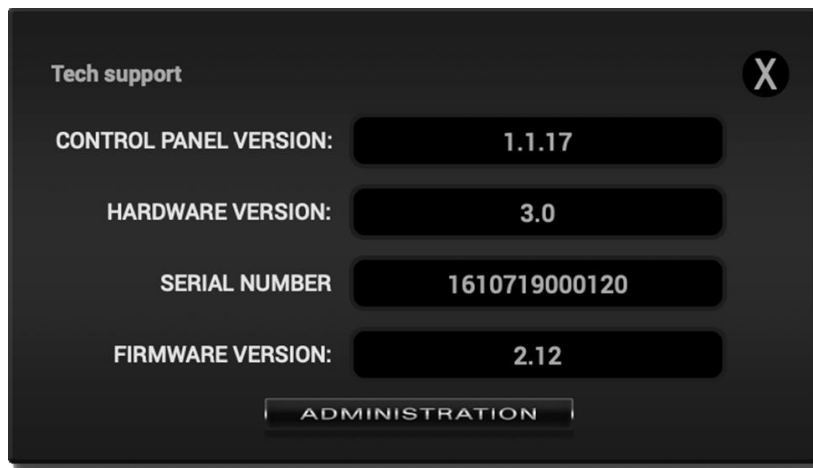
TB LATENCY MODE

(When connected over Thunderbolt™) Set to 'Fast' by default. Experiment with the different options if you experience glitches, dropouts and other audio streaming errors.



Help button

Displays software and hardware information. Useful when troubleshooting and contacting Customer Support. Click the '**ADMINISTRATION**' button to launch the '**Antelope Audio Registration Wizard**' with device registration and feature assignment options.



Minimize Button

Minimizes the Control Panel.



Close Button

Closes the Control Panel.



Connection Type Indicator

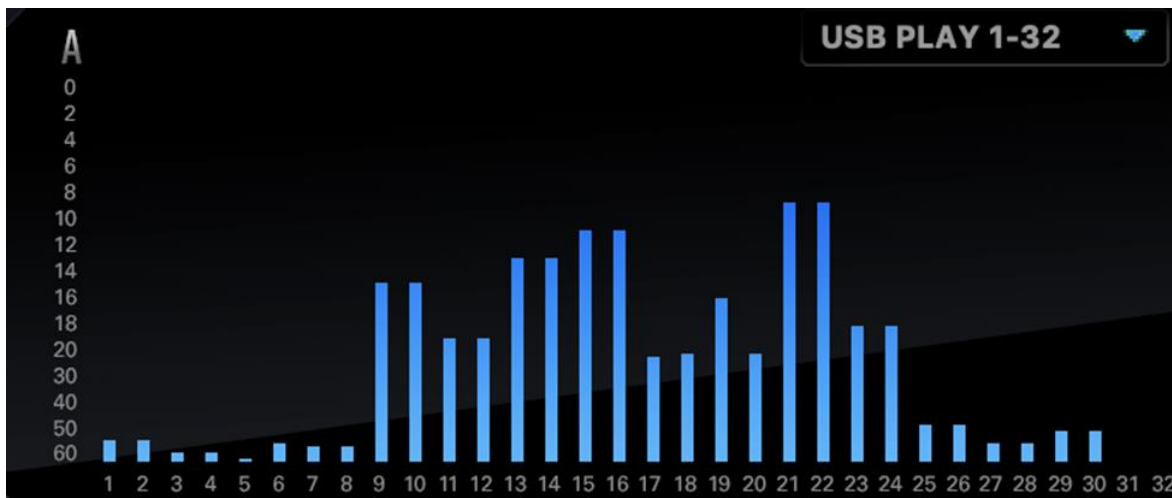
Shows the active computer connection type – USB (left) or Thunderbolt™ (right).





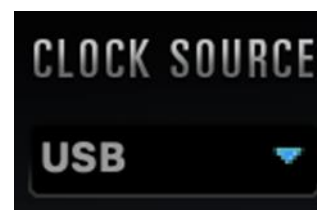
Peak Meter A

Provides peak metering for up to 32 audio channels. Choose the audio source from the drop-down menu.



Clock Source

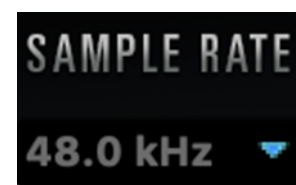
Choose the clock source from the drop-down menu. The following options are available:



- 'Oven' - Oven-controlled crystal oscillator (internal)
- 'W.C.' - Word Clock input (external)
- ADAT (2x, 4x) input (external)
- MADI (2x, 4x) input (external)
- S/PDIF digital audio input (external)
- USB. In 'USB' mode the unit still uses its internal clock.

Sample Rate

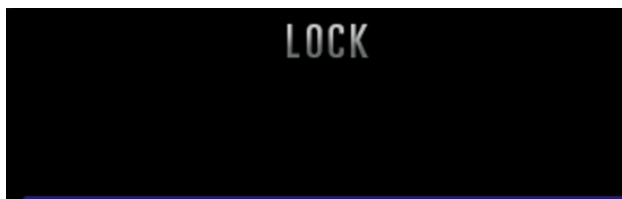
Choose the device sample rate from the drop-down menu. Please make sure the device sample rate matches the sample rate in your DAW and operating system settings.





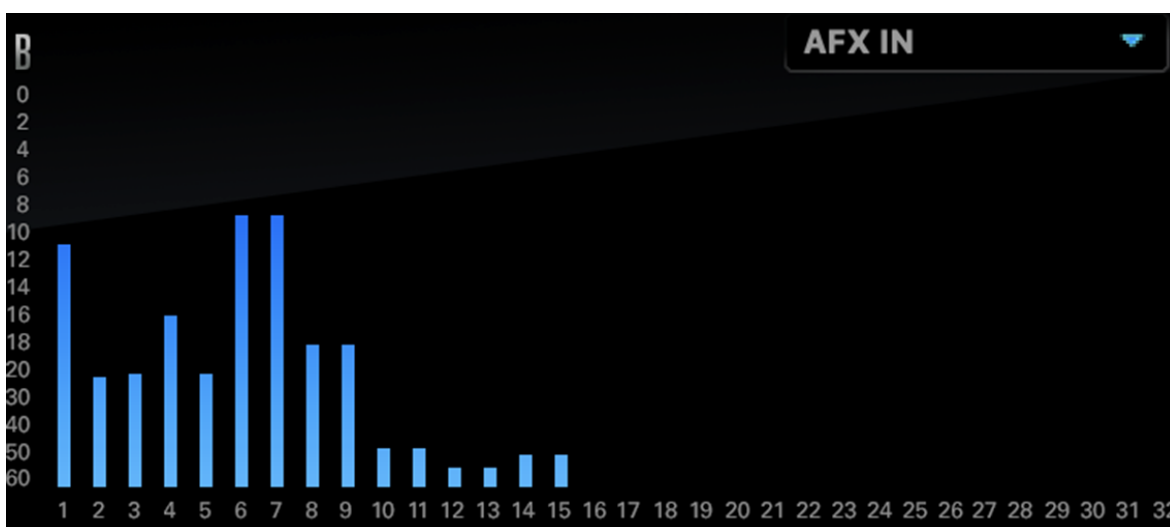
Lock Indicator

When the Orion 32+ | Gen. 3 is locked to another device (i.e. ADAT), the lock indicator will display a “Pad Lock” symbol.



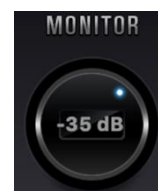
Peak Meter B

Provides peak metering for up to 32 audio channels. Choose the audio source from the drop-down menu.



Monitor Volume Knob

Adjust monitor volume.



Mute Button

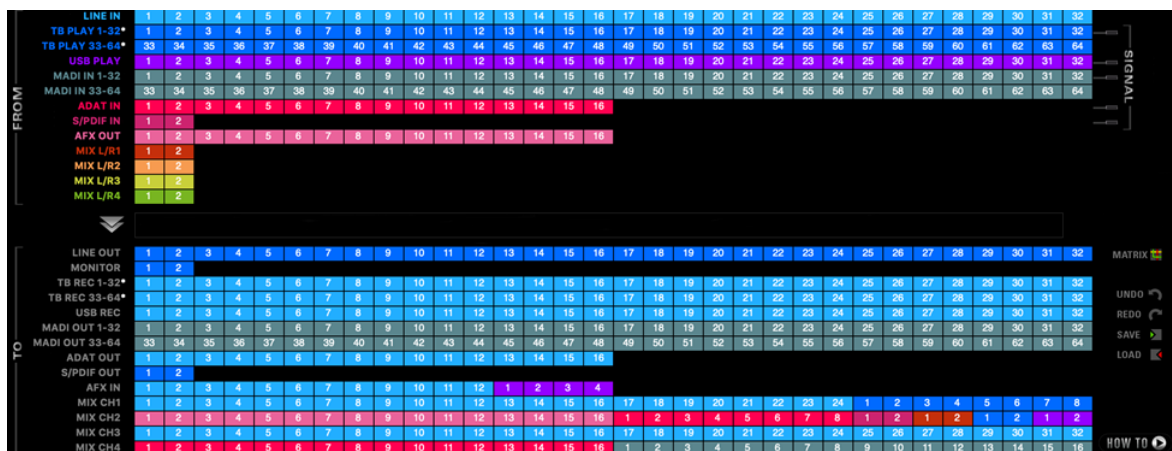
Mute monitor outs.





Drop-down menu with saved Sessions and adjacent SAVE/LOAD buttons.

Routing tab



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

- Orion 32+ | Gen 3 User Manual



- Right-click (or Command-click) a colored block and choose 'Mute' to mute this channel or '**Mute All**' to mute all channels in the row.
- An alternative grid-based view is available ('**MATRIX**'). Please [read the guide](#).
- Undo/Redo buttons are available.
- Save/Load buttons let you save and load routing setups (as opposed to entire Sessions).
- The How-To button points your Internet Browser to a YouTube playlist with tutorial videos.

Routing Matrix – Terminology

From (Source) Section:

LINE IN

This row represents 32 line inputs over four D-Sub 25-pin connectors (TASCAM Standard Pin Layout). Each D-Sub connector provides 8 mono audio channels.

TB PLAY 1 – 32 / 33 – 64

When your converter is connected over Thunderbolt™, the 'TB PLAY' rows represent DAW 'Outputs 1 – 64'. 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' = 'TB PLAY' 1.

Note: These rows also represent all computer audio, such as media playback, YouTube, etc.

USB PLAY

When your converter is connected over USB, the 'USB PLAY' row represents DAW 'Outputs 1 – 32'. 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' = 'USB PLAY' 1.

Notes:

- This row also represents all computer audio, such as media playback, YouTube, etc.
- If you only see 24 channels, click the '**Settings**' button and choose '**32**' from the '**USB CHANNELS**' drop-down menu.

MADI IN 1 – 32 / 33 – 64

These rows represent up to 64 channels of incoming MADI audio.

ADAT IN

This row represents up to 16 ADAT optical audio inputs, found on 2 ports of 8 channels each.

S/PDIF IN

This row represents 2 channels of incoming stereo S/PDIF audio over coaxial RCA cable.

AFX OUT

The AFX OUT row ('AFX' short for '**Antelope FX**') represents up to 16 mono audio channels with FPGA FX applied.

Low Latency Mixer Outputs

The MIX 1 L/R to MIX 4 L/R rows represent the four 2-channel stereo outputs from the four software mixers in the '**Mixer**' tab.

To (**Destination**) section:

LINE OUT



This row represents 32 line outputs over four D-Sub 25-pin connectors (TASCAM Standard Pin Layout). Each D-Sub connector provides 8 mono audio channels.

MONITOR

This row represents Monitor outputs L/R, found on 1/4-inch TS connectors on the Orion 32+ | Gen. 3 back panel.

Note: These signal-balanced, mastering-grade outputs boast the highest dynamic range in the system.

TB REC 1 – 32 / 33 – 64

When your converter is connected over Thunderbolt™, the 'TB REC' rows represent DAW 'Inputs 1 – 64'. This is where you send audio to your DAW. Create a new track in your DAW and assign the input with matching number – e.g. DAW 'Input 1' = 'TB REC' 1.

USB REC

When your converter is connected over USB, the 'USB REC' row represents DAW 'Inputs 1 – 32'. This is where you send audio to your DAW. Create a new track in your DAW and assign the input with matching number – e.g. DAW 'Input 1' = 'USB REC' 1.

Note: If you only see 24 channels, click the 'Settings' button and choose '32' from the 'USB CHANNELS' drop-down menu.

MADI OUT 1 – 32 / 33 – 64

These rows represent up to 64 channels of MADI audio output.

ADAT OUT

This row lets you route up to 16 mono audio channels to the ADAT outputs (2 ports of 8 mono audio channels each). Note that ADAT runs on S/MUX.



S/PDIF OUT

This row lets you send 2 audio channels to S/PDIF-compliant equipment over coaxial RCA cable.

AFX IN

The AFX IN row ('AFX' short for 'Antelope FX') lets you route up to 16 mono audio channels into the FPGA FX.

Note: You must route at least one signal here before any FX are being applied.

MIX CH1 – CH4

The '**Mixer**' tab is home to four low-latency Direct Monitoring mixers with 32 inputs each. This row lets you route audio to their inputs.

If you ever find yourself struggling with the Routing Matrix for some reason, 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.



Mixer tab



The Mixer tab is home to four 32-channel software 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.

Limitations

- There is no grouping/bus/sub-mixing functionality, but the four full-fledged mixers give plenty of space to set up sub-mixes (e.g. drum bus, artist headphones) 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 has AuraVerb available as a Send effect for monitoring purposes. Turn the 'Send' knob on an audio channel to hear the reverb. The four mixers are otherwise identical.



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 & producer Brian Vibberts. The following parameters are available in AuraVerb:

Color

The Color control lets you adjust the overall tone of the reverb. On “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 predelay allows you to 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 & Room Size

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.

Output Level

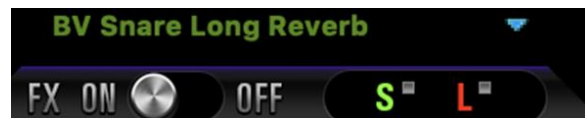
This is the output level control of the reverb. Since inputs for AuraVerb are assigned to Send knobs on Mixer 1’s channels, we recommend balancing the channel volume levels



from the Send controls and using Output 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 'S' button to save a preset. Use the 'L' button to load a preset.

Effects tab



The 'Effects' tab lets you apply up to 8 FPGA FX per mono audio channel for a total of 16 channel strips and 128 FX instances, independent of sample rate. However, different types of FX place different processing loads, resulting in the following instance limitations:



- Feed-Forward Compressors (PowerFFC, X903, VCA160) – 16 instances
- Powergate – 12 instances
- Feedback Compressors (FET-A76, Liverpool, Gyratec X, Tube176, Stay-Levin, ALT-436C, SMT-100A, FET A-78, BA-6A, Tubechild670, Impresser, BAE100CF) – 16 instances
- Equalizers (all) – 40 instances
- Reverb (AuraVerb) – 1 instance

FX Basics

- Route audio to the **'AFX IN'** row inputs in the **'Routing'** tab.
- Click the audio input (or linked pair) you want to work on:



- **'Link'** buttons are available for each pair of inputs. Linking two inputs means the exact same FX processing is applied to both. Names of inputs and linked inputs are shown immediately above the Presets drop-down menu on the left.
- The **'DEL ALL'** button clears all FX racks for all audio channels.
- Click the **'ADD NEW EFFECT'** drop-down menu to choose and add effects. Their instances will appear in the FX Rack to the right. The list on the left lets you drag to re-order.
- Use the **'SAVE'** and **'LOAD'** buttons to store FX chains.
- Use the **'BP ALL'** and **'DEL ALL'** buttons to bypass or delete all FX on the current channel.
- Individual **'BP'** (bypass) buttons are available next to each effect on the left side.
- Hold Ctrl (Windows) or Command (Mac) and drag to adjust FX parameters in smaller increments.

FX List

The Orion 32+ | Gen. 3 ships with a selection of essential FPGA-powered FX, which includes the following products:



1. AuraVerb (Reverb)
2. Master De-Esser (De-essing)
3. PowerEX (Expander)
4. Powergate (Noise Gate)
5. PowerFFC (Feed-Forward Compressor)
6. ClearQ (Equalizer)

Fill out your FPGA FX arsenal with authentic models of vintage compressors and equalizers by purchasing them from our website.

Notes:

- AuraVerb is a Send effect for monitoring from Mixer 1 and is not available as an insert anywhere.
- More information about each effect can be found [here](#).

AFX2DAW

Available as a separate purchase, AFX2DAW is a bridge plug-in which enables the use of hardware-processed FPGA FX as DAW inserts for a simplified and convenient workflow.

Requirements

- Apple Mac computer (2012 or later) with Thunderbolt™ connection

Note: Orion 32+ | Gen. 3 is a Thunderbolt™ 2 device. Thunderbolt™ 3 connections require a third-party TB3 to TB Legacy adapter and corresponding cables.

- macOS 10.14 Mojave or newer
- Antelope Launcher version 1.8.3 or newer
- Antelope Audio Unified Driver version 3.30 or newer
- Orion32+ | Gen. 3 software version 1.1.14 or later (recommended the latest available version)



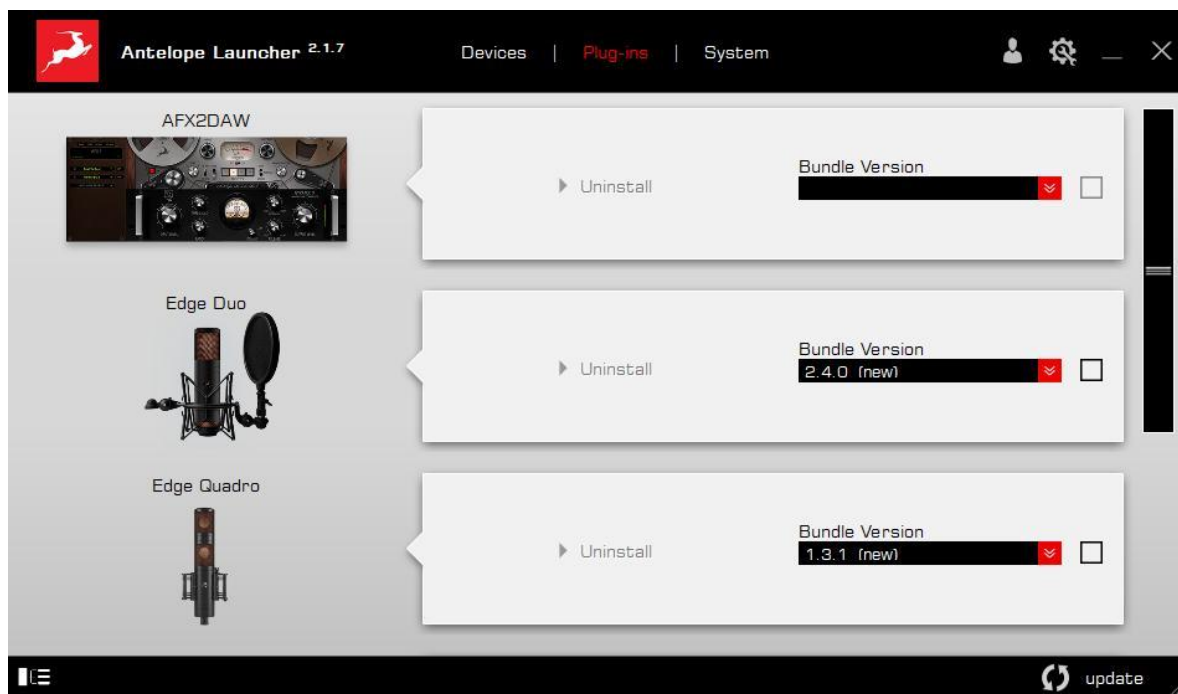
- A working Orion32+ | Gen. 3 installation with the unit still connected to your Mac.
You can download and install all necessary updates from Antelope Launcher.

How to install AFX2DAW

After purchasing AFX2DAW, you will receive a Claim Code at the e-mail address you used to register your Antelope Audio user account.

Note: If the e-mail doesn't seem to arrive in your inbox, please check your 'Spam' and 'Junk' folders.

1. Log-in to antelopeaudio.com and head to the 'Claim Features' page to enter your Claim Code.



2. Open Antelope Launcher and click the 'Plug-ins' tab. Click the checkmark in 'AFX2DAW', then click the 'update' button to download and install the plug-in.
3. Click the 'Devices' button and start the Orion 32+ | Gen. 3 Control Panel.
4. Click the '?' button, then click 'ADMINISTRATION'. Log-in with your Antelope Audio account information and click 'Continue'.



5. Choose 'Register device or assign features' and click 'Continue'.

Antelope Registration Wizard

Please choose

- ☒ Register device or assign features
- ☐ Unregister device or unassign features
- ☐ Logout

6. Follow the on-screen instructions to assign AFX2DAW to your Orion 32+ | Gen. 3.

Note: If you see multiple AFX2DAW bundles in the list, feel free to assign all of them

Antelope Registration Wizard

Please select new bundles to assign

- ☒ AFX2DAW BETA PROGRAM(
- ☒ AFX2DAW(A2DY6R40UIB)

How to launch AFX2DAW

Launch your DAW and load an instance of AFX2DAW on a mono or stereo track. The plug-in behaves almost exactly like the 'Effects' tab in the Orion 32+ | Gen. 3 Control Panel application. However, you no longer have to manually choose the channel you are working on, as AFX2DAW automatically binds to the track it's loaded on.



The following functionality is available in AFX2DAW:

- Click the '**ADD NEW EFFECT**' drop-down menu to choose and add effects. Their instances will appear in the FX Rack to the right. The list on the left lets you click and drag to re-order.
- Use the '**SAVE**' and '**LOAD**' buttons to store FX chains.
- Use the '**BP ALL**' and '**DEL ALL**' buttons to bypass or clear all FX currently in the rack.
- Use the drop-down menu below these buttons to load presets.
- Individual '**BP**' (bypass) buttons are available next to each effect in the list to the left.
- Command-click and drag an FX parameter to adjust it in smaller increments.

How to setup AFX2DAW

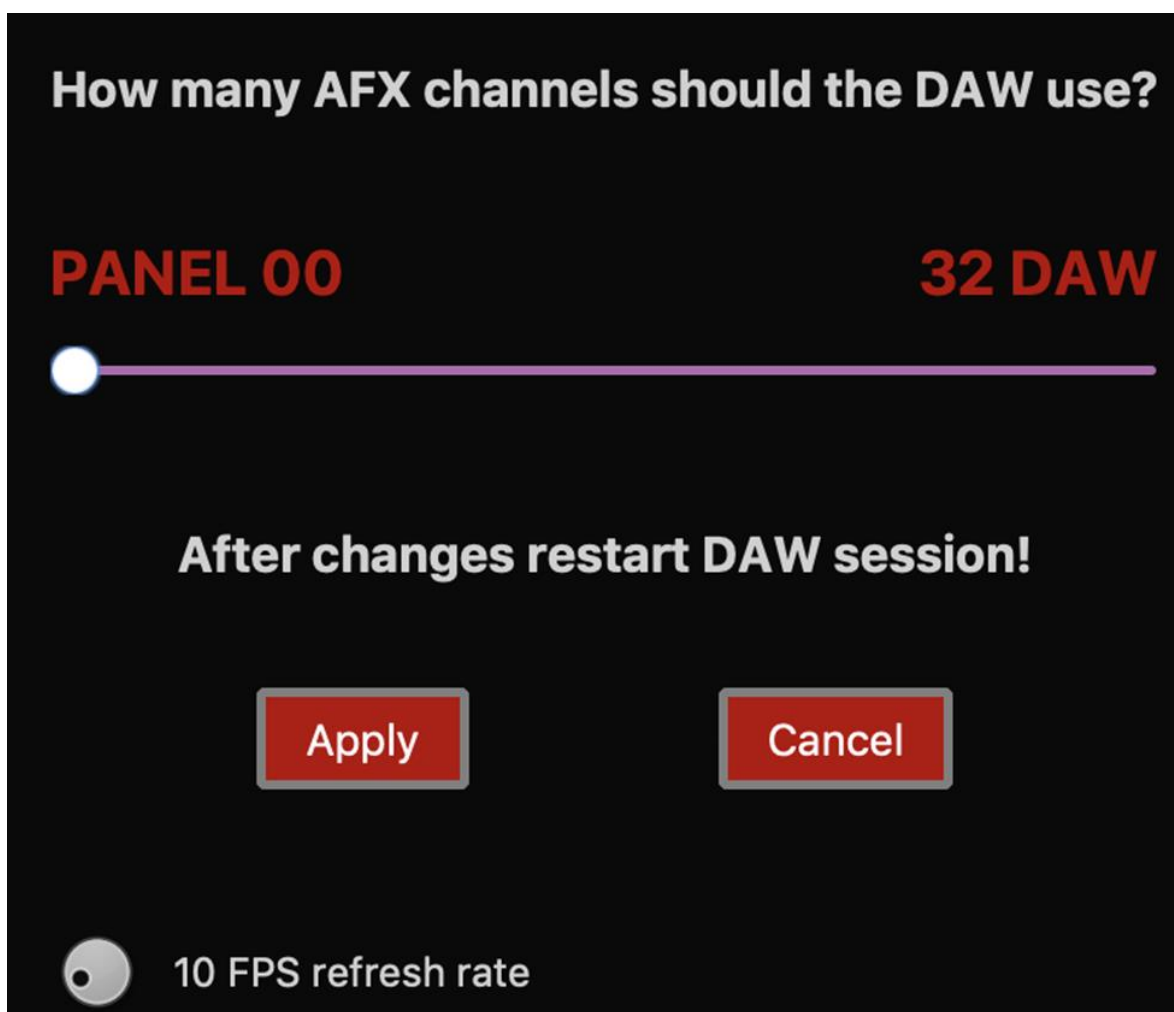
Upon launching AFX2DAW, you will notice that a new instance of the Orion 32+ | Gen. 3 Control Panel is loaded. The '**Routing**' tab now features an '**AFX2DAW**' button immediately above the '**MATRIX**' button.



Click this button and the following window will appear:



The Slider





Click and drag the slider to adjust the number of AFX channels reserved for your DAW. This number cannot be larger than 32, which is half of the maximum 64 I/O audio channels supported by the Orion 32+ | Gen. 3 over Thunderbolt™. Following is a more detailed explanation of this setting.

For AFX2DAW to function, '**DAW**' channels are assigned at the expense of '**PANEL**' channels. The latter are represented by the number of '**TB PLAY 33 – 64**' channels left in the Routing Matrix.

It is impossible to not have at least 32 '**TB PLAY 1 – 32**' channels available in the Routing Matrix at any time, regardless of the slider setting. However, it is possible to leave no channels for AFX2DAW at all. In such case, you will have all '**TB PLAY 1 – 32**' and '**TB PLAY 33 – 64**' channels available in the Routing Matrix, but the AFX2DAW plug-in won't function.

Feel confused? The following examples might provide a better understanding:

- At the maximum setting of 32 '**DAW**' channels, the Control Panel is left with 32 '**TB PLAY 1 – 32**' available channels. All 32 '**TB PLAY 33 – 64**' channels have disappeared from the Routing Matrix as they have been allocated to AFX2DAW.
- At the maximum setting of 32 '**PANEL**' channels, all '**TB PLAY 1 – 32**' channels and all '**TB PLAY 33 – 64**' channels appear intact in the Routing Matrix, but the AFX2DAW plug-in stops functioning.

There is no '**correct**' setting here, so feel free to adjust the slider at any time to meet your session's demands. Click '**Apply**' to store the current setting and close the setup window.

FPS Refresh Rate Knob

Click and drag the FPS refresh rate knob to set the frame rate for peak meter animations of FX loaded in AFX2DAW. Increasing the frame rate results in smoother animations but comes at the cost of CPU power.



Note: Closing all open AFX2DAW windows in your DAW session eliminates the use of CPU power to animate peak meter movement, as such is no longer being rendered on or off-screen.

Further Reading

Antelope Audio – [AFX2DAW FAQ](#)

CUSTOMER SUPPORT INFORMATION

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

Online

Visit support.antelopeaudio.com

Phone

US time: 12AM (midnight) – 8PM (CST), Monday – Friday

US Phone Number: [\(916\) 238-1643](tel:+19162381643)

European time: 6AM – 2AM (GMT), Monday – Friday.

UK Phone Number: [+44 1925933423](tel:+441925933423)

Live Chat

US time: 12AM (midnight) – 2PM (CST), Monday – Friday

European time: 6AM – 8PM (GMT), Monday – Friday.

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 can't 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'll guide you through the repair process. If the product should be returned, a 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 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 convened 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 non conformity 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. For business to business (B2B) / Direct customers of Antelope Audio please email us at 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 enforce ability 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

Analog Inputs	4 x D-SUB 25 (32 channels total), +24 dBu max, 11.2 kOhms
Analog Outputs	4 x D-SUB 25 (32 channels total), +24 dBu, 56 Ohms 2 x Monitor Outs (signal-balanced) on TS/TRS 1/4 Jacks
D/A Monitor Conversion	Dynamic Range: 129 dB THD + N: -108 dB
A/D Conversion	Dynamic Range: 121 dB THD + N: -112 dB
D/A Conversion	Dynamic Range: 120 dB



	THD + N: -107 dB
Digital Inputs	1 x Fiber Optic MADI (up to 64CH) 2 x ADAT (up to 16CH) 1 x S/PDIF
Digital Outputs	1 x Fiber Optic MADI (up to 64CH) 2 x ADAT (up to 16CH) 1 x S/PDIF
USB I/O	USB 2.0 Hi-Speed; Data stream up to 480 Mbits/192kHz, 32 channels I/O, Type B
Thunderbolt™	1 x Thunderbolt™ 2 (64 channels I/O)
Word Clock Input	1 x Input @ 75 Ohms 3Vpp on BNC 32 – 192kHz
Word Clock Outputs	2 x Outputs @ 75 Ohms 3Vpp on BNC 32 – 192kHz
Atomic Clock Input	1 x 10M Input @ 75 Ohms Vpp on BNC
Clocking System	4th Generation Acoustically Focused Clocking & Jitter Management 64-bit DDS Oven Controlled Crystal Oscillator
Clock Stability	<+/-0.02 ppm, oven controlled at 64.5°C/ 148.1°F



Clock Aging	< 1 ppm per year
Clock Calibration	< +/-0.001 ppm Sample Rates (kHz) 32, 44.1, 48, 88.2, 96, 176.4, 192
OTHER	Operating Temperature 0-50°C, 32-122°F
Weight (approx.)	3kg/ 6.6 lbs
Dimensions (approx.)	Width: 483 mm / 19" Height: 44 mm / 1.75" Depth: 220 mm / 8.66"
Electrical Specs	AC Universal input: ~95-245 V Power Consumption: 20 Watts Max