Matrix² δelta

Analogue Summing Mixer, Analogue Router & DAW Controller
The ultimate hybrid studio centerpiece

Key Features:

- Automatically reference your console using plugins within your DAW (Vol, FX, Cut and Pan can all be automated)
- 16 recallable input channels supported per summing mode
- Recallable input/DAW monitoring patch source of 16 channels for tracking
- Dual stereo mix busses both summing totals and monitoring
- A classical mini level DAW section
- Ultra-wide solid state analogue summing system up to 16 stereo
- 16 cue/foldback send with stereo per channel & 2 stereo returns
- Artist monitor section with individual EQ and stereo source selection
- Stereo digital I/O (SPDIF and AES/EBU) with SSL grade conversion
- Independent function keys for keyboard key combinations
- Latch talkback mute insert circuit
- Local control and utilities can easily be used for dynamic surface
- Automatic recallable buss assign for 2 computer studios allowing hybrid mix
- Stereo insert per main module – give and copy your whole console outboard gear

Rik Simpson
Engineer, Coldplay

Antelope
Owner's Manual

⊗RION³²+

⚡ THUNDERBOLT.

32-CHANNEL AD/DA INTERFACE WITH AFC™ CLOCKING TECHNOLOGY

WWW.ANTELOPEAUDIO.COM

1. 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.

●● 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.

●● AC 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

2. Introduction

Thank you for purchasing the Orion32+ from Antelope Audio.

Orion32+ is a 32-channel AD/DA converter and audio master clock, supporting ThunderboltTM, MADI and USB interfaces, clocked by Antelope's renowned 64-bit Acoustically Focused Clocking (AFC) technology.

Orion32+ allows up to 192 kHz I/O streaming of up to 32-channels of I/O digital audio through ThunderboltTM or its custom-built USB chip. The converter also provides up to 64 channels through its Fiber Optic MADI I/O connections.

Orion32+ supports ADAT protocol as well, offering up to 16 I/O channels. The multi-channel converter inputs and outputs pass the analog signal through 8 D-SUB 25 I/O connectors.

In addition to being an extremely high quality audio converter, Orion32+ is also an audio master clock. The two word clock outs, together with the 10 MHz input, make Orion32+ ideally suited to be in the center of any project or high-end studio.

With its seamless digital routing options, the Orion32+ offers extended flexibility. The device is managed through a desktop application available for both Windows and OS X. Moreover, it is equipped with multiple monitor mixers with on-board DSP effects such as EQ, compressor and reverb.

Connected with MP32, a 32-channel console-grade microphone preamp, Orion32+ ensures a full transparency of the sound and complete integrity of the signal via the whole chain, from the mic pres through the conversion, recording and playback, all of them characterized by the signature Antelope sound.

For further information, you can also visit our support area online for the FAQ, Help Desk and to register your product at: **www.antelopeaudio.com** (http://www.antelopeaudio.com).

Enjoy working with the new Orion32+!

All the best,

The Antelope Team

3. Features

●● Antelope Audio precise AD/DA conversion technology

●● 64 channels I/O Fiber Optic MADI

●● 32 channels at 192 kHz I/O via ThunderboltTM or custom-built USB chip

●● 32 channels AD/DA

●● 16 channels I/O via Fiber Optic ADAT

●● 2 channels I/O via S/PDIF

- • 1 x Monitor Out on TRS (2 channels)
- • Antelope's renowned 64-bit Acoustically Focused Clocking Technology
- • Antelope's proprietary Oven Controlled Oscillator for supreme clocking stability
- • 2 Word Clock Outputs, 1 Word Clock Input and 1 Atomic Clock Input
- • Five presets for fast and easy recall of favorite setups
- • 1U rack size device consuming only 20 Watts keeping the heat low
- • A user friendly desktop application available for both Windows ans OS X
- • Ergonomic software control panel
- • Extremely flexible routing and mixing capabilities
- • Massive parallel DSP and effects processing

4. Installation Guide

Windows:

1. Connect the USB cable to the USB port on your computer.
2. Download and install the Orion32+ software control panel and drivers from www (http://www).
antelopeaudio.com/en/support/downloads This will enable you to control your device
from your computer and select all necessary settings.
3. Open your control panel by double clicking and follow the device activation procedure.
4. Connect your choice of inputs and outputs to Orion32+.
5. The guest operating system will recognize the new output audio device (Orion32+).
6. If you want to use Orion32+ through USB for playback and recording, open your
preferred DAW and make sure the device is selected as an input and output.
Note: Make sure your device has the most recent firmware installed.

Mac OS:

Important Note

A Mac is compatible with Orion32+ only if it has the ThunderboltTM logo.

Mini DisplayPort

Thunderbolt Port

1. Connect the ThunderboltTM cable to the ThunderboltTM port on your computer.
2. Download and install the Orion32+ software control panel and ThunderboltTM driver
from **www.antelopeaudio.com/en/support/downloads** (http://www.antelopeaudio.com/en/support/downloads) This will
enable you to control your
device from your computer and select all necessary settings.
3. Open your control panel by double clicking and follow the device activation procedure.
4. Connect your choice of inputs and outputs to Orion32+.
5. The guest operating system will recognize the new output audio device (Orion32+).
6. If you want to use Orion32+ through ThunderboltTM for playback and recording, open
your preferred DAW and make sure the device is selected as an input and output.
Note: Make sure your device has the most recent firmware installed. Check this by
selecting the Options panel and clicking on the Firmware Update button. See picture:

CONTROL PANEL VERSION:

HARDWARE VERSION:

SERIAL NUMBER:

FIRMWARE VERSION:

| FIRMWARE UPDATE |
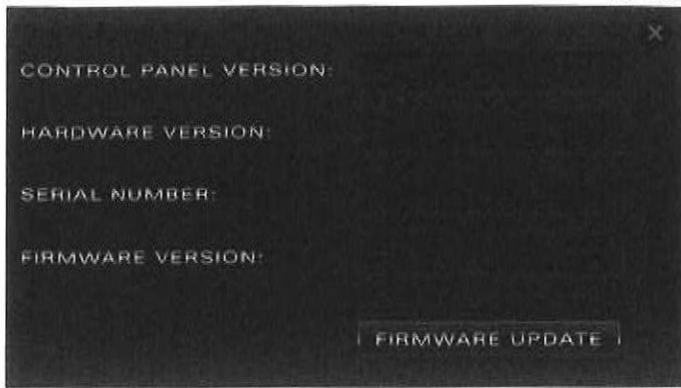
5. Front Panel Explained
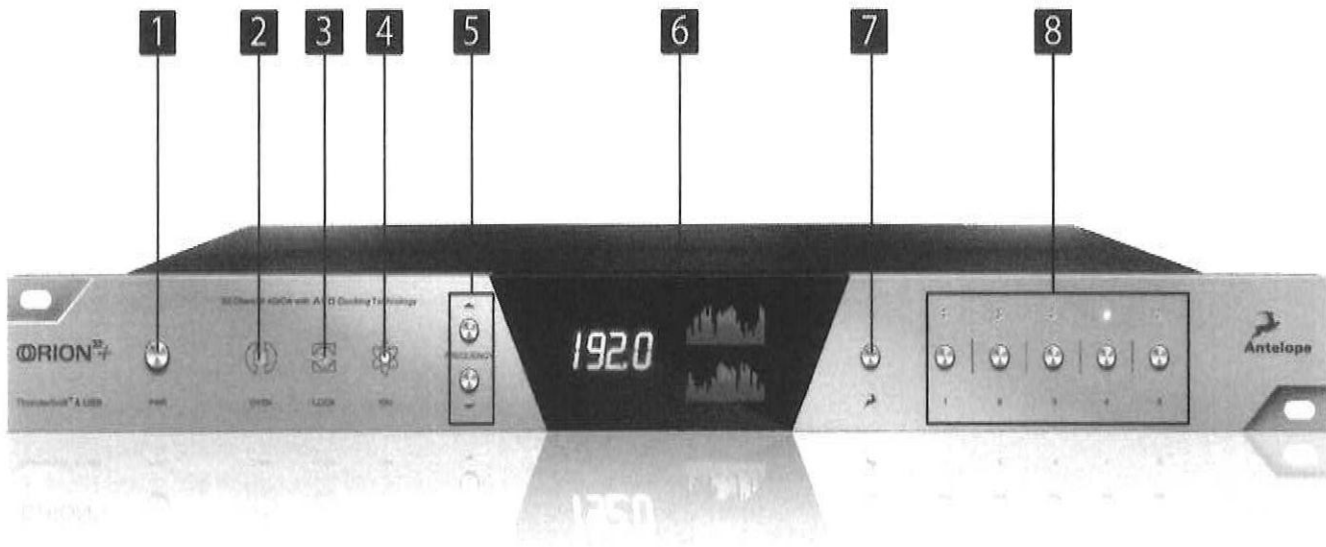
1. Power button

Toggles standby/operation state

Hold down the Power button to access the System Menu of the device, which allows you to access the following sub-menus:

1. Comm. Interface (allows you to choose between, ThunderboltTM, USB connectivity)
2. Device Info
3. Brightness
4. Scr Save Time
5. Scr Save Style
6. Factory Reset
7. 10M Calibration

To scroll up and down, use the Frequency up/down buttons.

To enter each one of the sub-menus, press the Frequency down button.

To confirm a chosen setting, press and hold the Frequency down button.

2. Oven Clock light

When lit, this indicates Orion32+ is clocked by its own internal clock.

3. Lock light

When lit, this indicates Orion32+ is locked to the signal that enters through the digital inputs on the rear panel (except ThunderboltTM and USB).

4. Atomic Clock Lock light

When lit, this indicates Orion32+ is locked to an atomic signal that enters through the

10M input on the rear panel. This overrides the Oven Clock lock light as soon as it is plugged in and the Oven Clock lock light will automatically go off.

5. Frequency buttons

These two arrow buttons allow you to increase and decrease the sample rate, selecting from:

32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz. The current frequency is indicated on the display (6) when adjusting.

6. Display

Multi-function display that shows Sample Rate on the left and volume levels for each individual input levels on top meter, and output levels on lower meter. It displays 64 channels at a time that are software adjustable from the software control panel.

Note: Be aware that there might be a protective film over the display, which dims the illumination – feel free to remove it.

7. Antelope button

Hold down the Antelope button to access the Control Menu of the device, which allows you to adjust:

1. Clock Source
2. Peak Meter
3. Monitor Trim
4. Line Out Trim
5. Line In Trim
6. SR Conversion
7. S-MUX In
8. S-MUX Out

To scroll up and down, use the Frequency up/down buttons.

To enter each one of the sub-menus, press the Frequency down button.

To confirm a chosen setting, press and hold the Frequency down button.

Note: To Restore Factory Defaults:

1. Unplug the power cable,
2. Hold down the Frequency Up and Down buttons, and plug the power cable back in.

8. Preset buttons (1-5)

Five Preset buttons store and recall your 'favorite' set-ups. For more information see page 14, section 8 (Reference to Software Control Panel).

1. Save Preset
- 1. From Control Panel
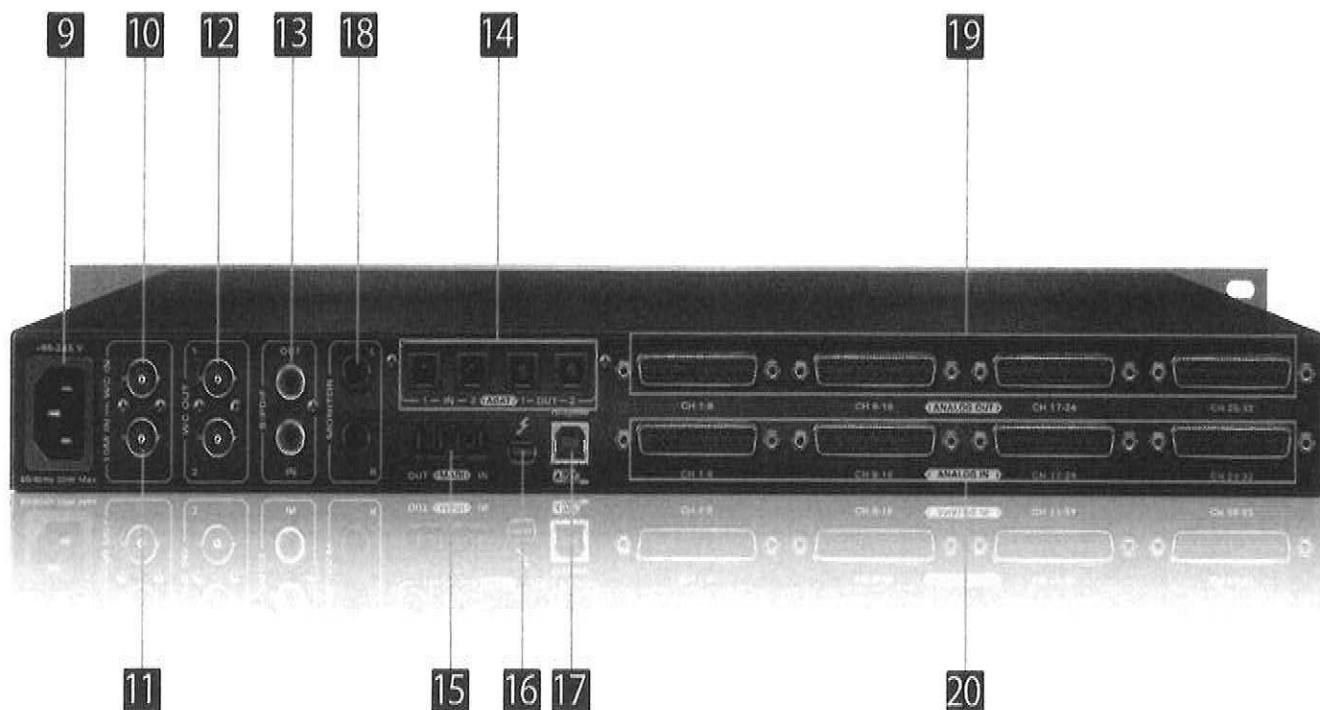- 1. Ctrl(Win) / Cmd(Mac) + Click on Preset Button
2. Ctrl + Number 1 to 5 from Keyboard
- 2. Recall Preset
1. Simply click on your choice of preset.

6. Rear Panel Explained

9. Mains Power Connection

The IEC connector supports a range from ~95-245 V. This enables the device to automatically accommodate mains voltage in every country.

10. Word Clock Input

BNC connector used to accept Word Clock reference.

11. 10M Input

This BNC Input Connector allows the Orion32+ to receive timing reference from an Atomic Clock such as the Antelope 10M and 10MX, to increase the Oscillator accuracy. If the device is in Oven mode, plugging in the atomic clock causes the "Atomic LED" light to illuminate on the device front panel and the atomic device becomes the primary timing reference, thus providing better sample accuracy, more detailed sound and greater stability.

12. Word Clock Outputs

Two Word Clock Outputs with BNC connector.

13. S/PDIF Input/Output

75 Ω S/PDIF connectors for use with compatible equipment.

14. ADAT Connectors

2 Inputs & 2 Outputs (up to 8 channels per line).

15. MADI Input/Output

1 x MADI I/O Connector providing 64 tracks input and 64 tracks output.

16. ThunderboltTM port

Enables you to connect your Orion32+ to a ThunderboltTM port on a Mac computer using a ThunderboltTM cable (not included).

17. USB High-Speed

Orion32+ uses USB connector Type B and operates up to 192kHz sample rate with

7. Software Control Panel

7.1. Routing Tab and Main View options

The universal panel view sits constantly on the upper half of the control panel, allowing for quick access to the most important features.

Main view:

1. Power/Standby button

2. Connectivity display (indicates how your Orion32+ is connected to your computer -