User's Manual

14x20 Thunderbolt™ 3 | USB 2.0 | Audio Interface

DISCRETE 4 PRO
SYNERGY CORE

Version 1.0–03.05.2022

CONTENTS

Guitar Amps & Cabs

BEFORE YOU BEGIN

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

As with all Antelope Audio interfaces, the software Control Panel is the "mediator" between the Discrete 4 Pro Synergy Core 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, 'rough' mixing and metering 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.

Depending on your experience, you might find this approach different from what you are used to. Perhaps the most familiar workflow for the modern recordist involves treating the audio interface like a box which brings audio in and out of your computer, with the rest of the session taking place in your DAW. To an extent, it is possible to use the Discrete 4 Pro Synergy Core in this manner by relying on the front panel display and controls for monitoring, gain control and setup. The DAW is used for recording, mixing and mastering.

After the initial setup, it is also possible to use Discrete 8 Pro Synergy Core without a computer connection. In this case, the unit functions as a digital mixer operated from the front panel controls. The last known signal routing configuration from the software Control Panel is applied.

Regardless of your preference, we encourage you to familiarize yourself with the Control Panel application. This way, you can overcome potential stumbling blocks for users new to Antelope Audio products. For example, almost any issue concerning recording and playing back audio (on the interface's side) can be resolved with the correct signal routing.

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 good 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 and must be completed on the first run of the interface. Completion of the process is needed to validate your product warranty and gain access to special software packages and exclusive product offers.

INSIDE THE BOX

- Discrete 4 Pro Synergy Core

- USB type B to A cable

- Power supply adapter

- Getting Started leaflet

SETTING UP

Once the unit is connected to an AC power source and your computer is switched on:

1. Connect a USB 2.0 Type-B (included) <u>or</u> Thunderbolt™ 3 cable (not included) to the corresponding ports on the Discrete 4 Pro Synergy Core and your computer.

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 support website.
If you are on a macOS Catalina or higher, you might need to allow the Unified Driver to be installed from the Security and Privacy settings – you can read how to do this in the following article.
If you have a M1 Mac – please go through this article.

Note: For Thunderbolt™ connection on Windows, download and install the latest Antelope Audio Windows Thunderbolt™ driver or install it from the Antelope Launcher/System section

4. In the DEVICES section in the Antelope Launcher you should see your Discrete 8 Pro Synergy Core - click on the ACTIVATE button and follow the steps to complete the procedure. If the Discrete is not seen in the DEVICES section – make sure you have installed the driver from the SYSTEM section first.

5. After the activation is completed, the device will restart. Then, update the Discrete 8 Pro Synergy Core to the latest Bundle version available in the DEVICES section. If you are not sure how to do this, please read the 'Antelope Launcher' chapter.

For more in-depth instructions, please visit the Getting Started page.

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

6. Connect your analog and digital equipment of choice to the Discrete 8 Pro Synergy Core.

---

7. Launch your preferred DAW and:

- Choose the Discrete 4 Pro Synergy Core 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 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 Discrete 8 Pro Synergy Core 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?

☑ 32.0 kHz	☑ 88.2 kHz	☑	▶ Test
☑ 44.1 kHz	☑ 96.0 kHz		
☑ 48.0 kHz	☑ 176.4 kHz		

4. Enter the 'Enhancements' tab and make sure all enhancements are disabled.

5. Enter the 'Advanced' tab and choose any of the available "2 channel, 24-bit" modes.

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.

- You can disable the device and enable it again from the 'Playback' tab to refresh the driver. This will be similar to disconnecting and re-connecting your device, which makes Windows reset the playback configuration of the applications you are using.

- In some cases, disabling the 'Exclusive mode' functionality from the 'Advanced' tab in 'Playback' 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 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 Discrete 4 Synergy Core in a DAW for the first time:

1. Launch your DAW and choose Discrete 4 Pro Synergy Core as the input device. The following dialog box will appear (if using Ableton Live 10 Suite, for example):
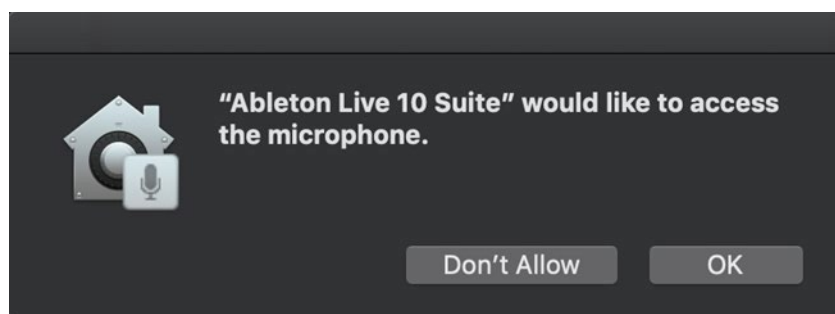
3. Click 'OK' and your DAW should function normally.

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. Open the 'Apple' menu from the top-left of the menu bar 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
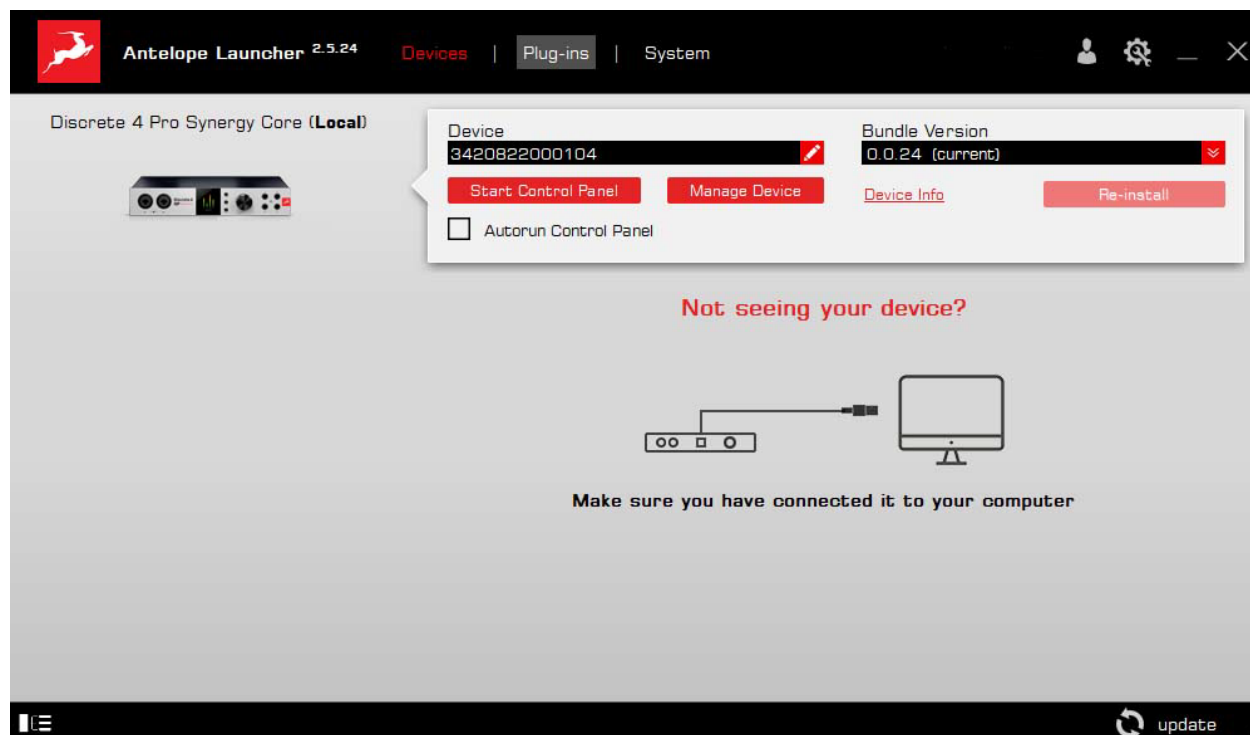
All Antelope Audio devices currently connected to your computer are listed in this section. In this example, we have connected the Discrete 4 Pro Synergy Core. However, the application functionality is identical for each Antelope device.

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 Device

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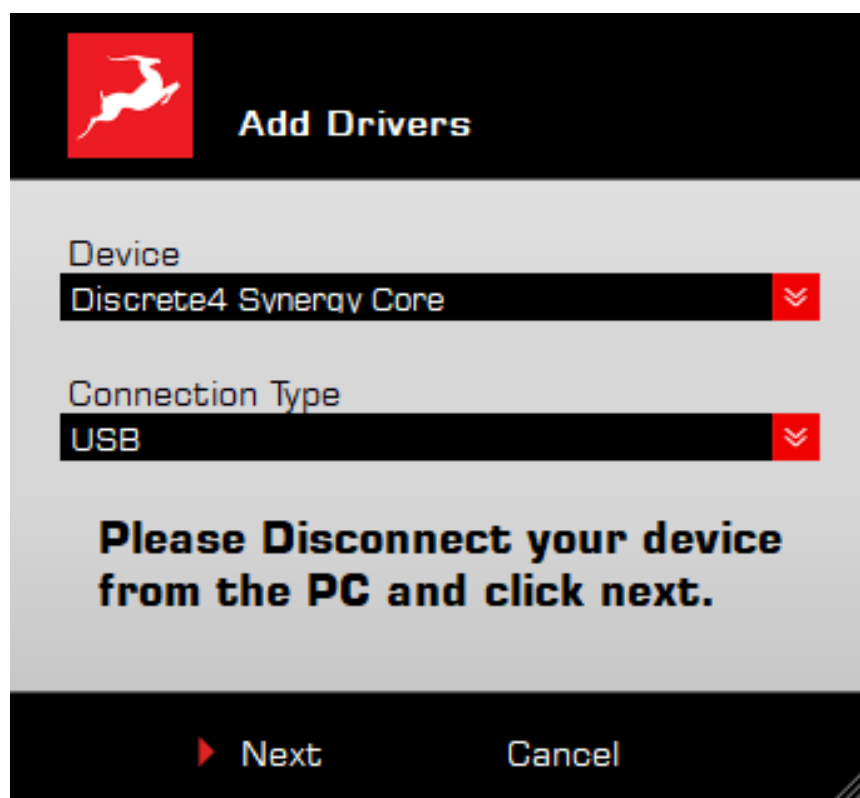
Choose your device and connection type from the drop-down menus, disconnect the device from your computer, and click 'Next' to perform a driver re-install.

Note: If the issue persists, please contact Antelope Audio Customer Support.

'Plug-ins' tab
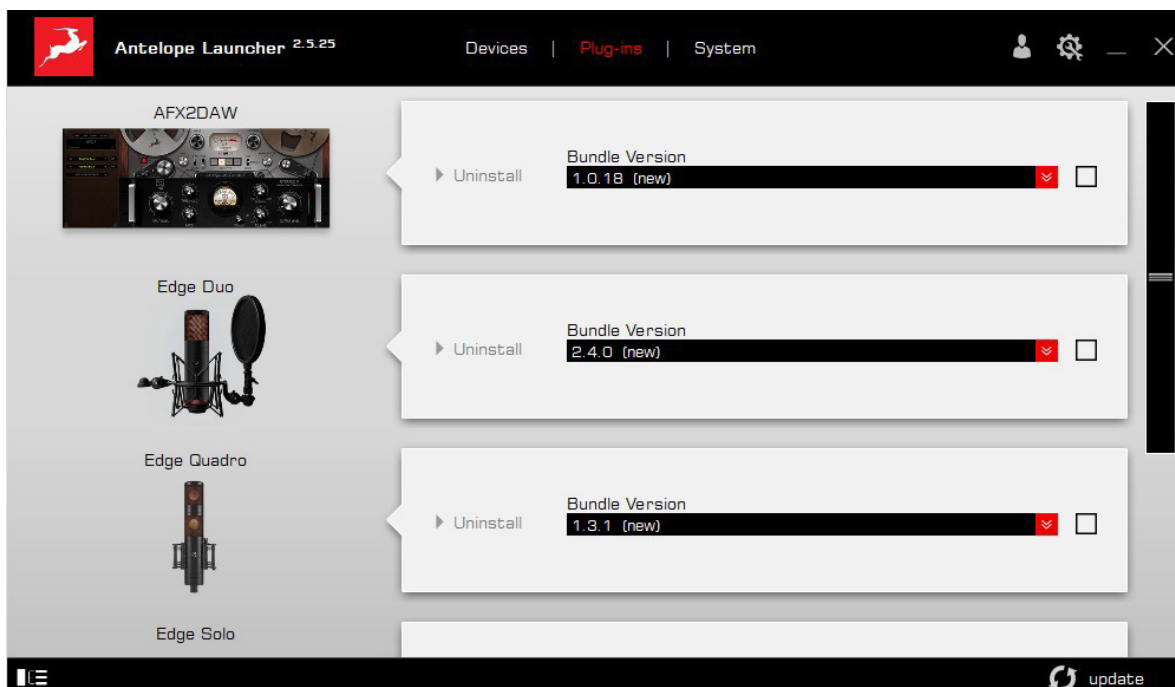
This section lets you install, update, and uninstall Antelope Audio software such as native mic emulations and afx2daw.

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
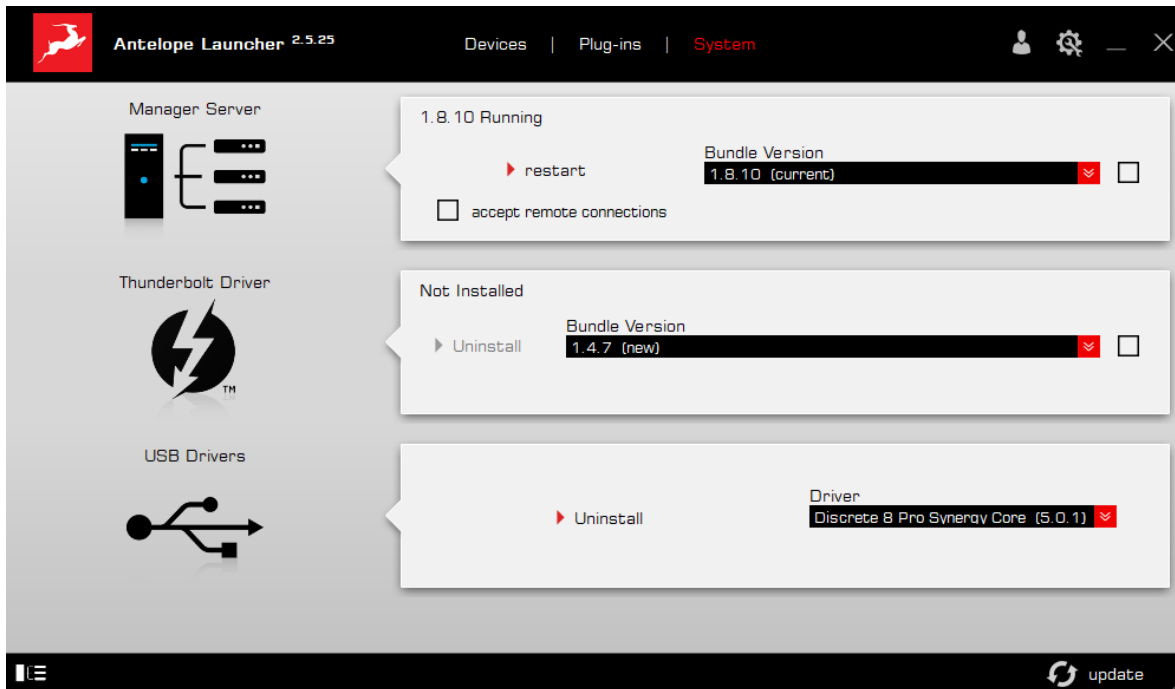
Here, you can do the following:

- 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.
NOTE: It is highly recommended to install the latest available Manager server version to ensure normal behavior.

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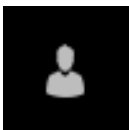
Click and enter your Antelope Audio username and password, then click 'Login'. If you don't have an Antelope Audio account, click 'Register' and follow the on-screen instructions.

Settings button

Click to open the Settings window.
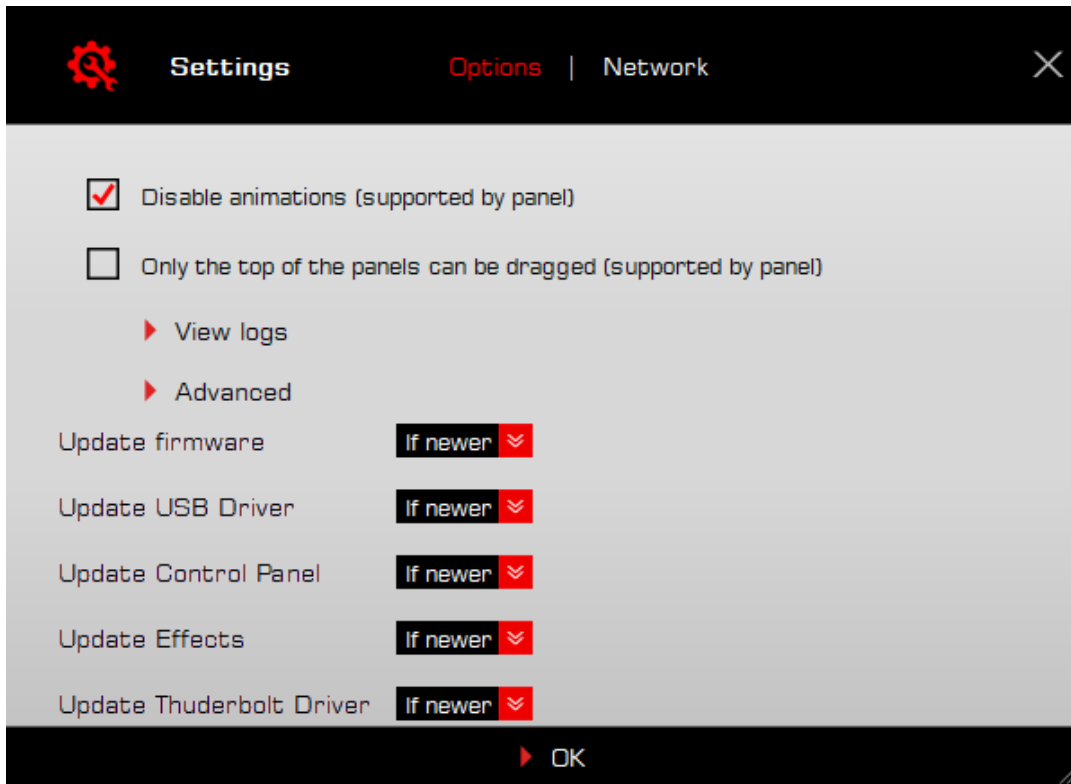
Here, you can do the following:

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

"If newer" will allow you to update the component if there is a newer available version than your currently installed one. It is recommended to keep this option as default.
"Never" will prevent you from updating or reinstalling the component
"Always" allows you to re-install, update or downgrade the component with older, current or newer versions

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

Click 'Network' to view network status and logs.
You can find information about currently connected devices on your local computer or detected devices on other computers in the same network
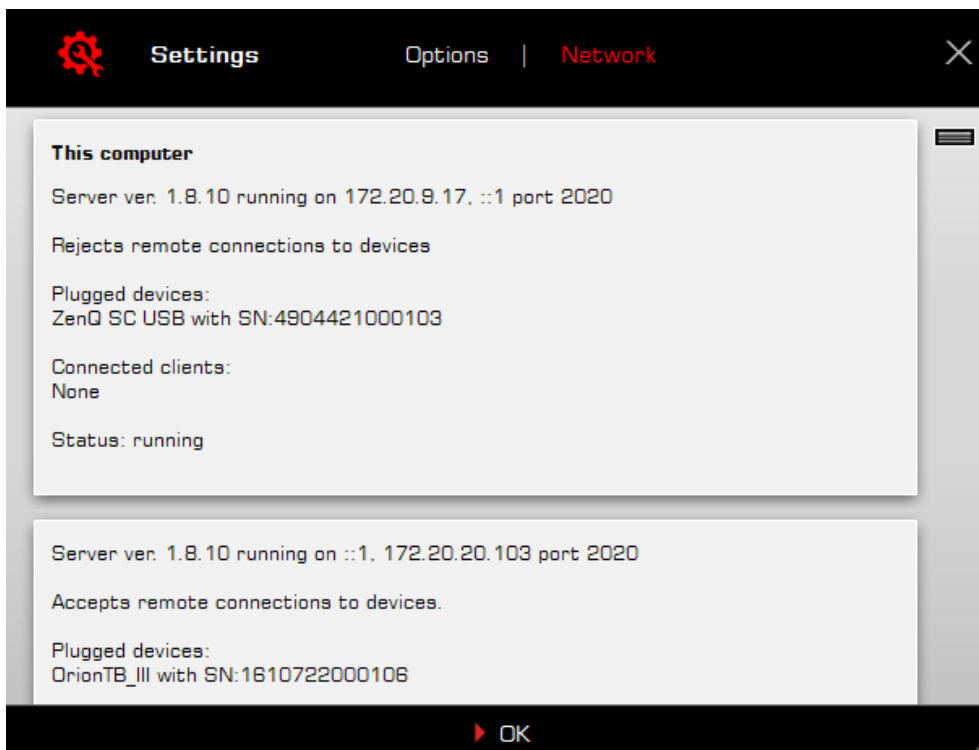
FRONT PANEL EXPLAINED

Left to right, top to bottom:
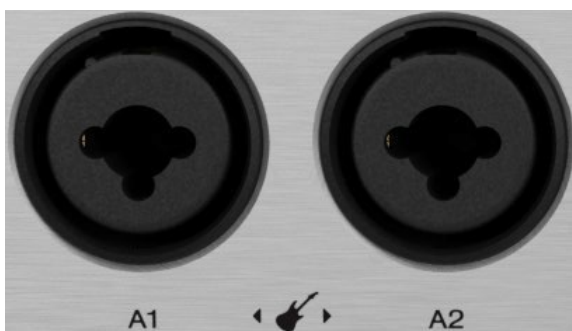
Mic/combo Inputs A1 - A2

2 mic preamp/line/Hi-Z inputs on combo XLR connectors. Labeled A1 and A2.

Note: Record line-level sources using TS/TRS cables, period.
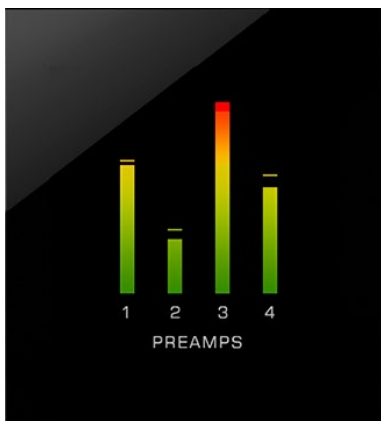
Display

Shows peak metering, menu content, firmware update progress and other information.

Function Buttons

The three function buttons have the following functionality:

Top Button

- Toggle between Inputs 1-4 gain control
- Press-and-hold to enter the Control Menu:

Control Menu

The control menu contains the following sub-menus. Turn the main rotary control to select entries and adjust values. Press the main rotary control to enter and/or confirm. Press any button to exit.

Power OFF

Press the main rotary control to power off the unit.

Clock Source

Choose a clock source from the following options:

- Internal (when the device is connected via Thunderbolt – clock source should be Internal)
- ADAT (2x, 4x)
- S/PDIF
- USB. In USB mode, the Discrete 4 Pro Synergy Core still uses its internal clock.

Sample Rate

Choose the device sample rate. Please make sure your choice matches the operating system and DAW sample rates.

Peak Meter

Choose the audio source for the peak meters on the display. Up to 32 audio channels are shown.

Brightness

Dim or illuminate the display.

Monitor Trim

Adjust monitor output signal trim (in dBu).

Line Out Trim

Adjust line output signal trim (in dBu).

Back to the function buttons...

Middle Button

- Press once to view information such as sync source and device sample rate.
- Press once while in any menu to exit.
- Hold down to enter Standby mode. Press any function button to exit Standby.

Bottom Button

- Press to toggle between HP1, HP2, HP3, HP4, Line out and Monitor out to adjust their volume.
- Press-and-hold to enter the System Menu.

System Menu

The System menu contains the following sub-menus. Turn the main rotary control to scroll and select entries. Press the main rotary control to enter and/or confirm. Press any function button to exit.

Device Info

Shows the device serial number, hardware and firmware revisions. Useful for troubleshooting with customer support.

Comm Interface

Chose the communication interface of the device between USB and Thunderbolt which is connected to the computer. There are 4 different options:

- **Fixed USB** – the device is using only the USB port.

- **Fixed TB** – the device is using only the Thunderbolt 3 port.

- **Preferred USB** – the device will detect the type of connection you are using automatically. If you have both USB and TB ports connected – it will prefer and use the USB port.

- **Preferred TB** – the device will detect the type of connection you are using automatically. If you have both USB and TB ports connected – it will prefer and use the Thunderbolt port.

Scr Save Time

Choose how long it takes for the screensaver to appear. We recommend the shortest setting you are comfortable with.

Scr Save Style

Choose the type of screensaver. We recommend 'Black' if the interface is operating for longer durations regularly. This helps prevent burn-in.

Factory Reset

Performs a factory reset. Note that all presets and settings will be lost.

Back to the front panel...

Main Rotary Control

Large, stepped attenuator for precise gain and value adjustments, also used for menu navigation. Pressing down confirms selections.

- Turn to adjust volume for the currently selected output. While the volume adjustment menu is active, pressing down the top function button switches between 'MONITOR 1' and 'MONITOR 2' and pressing down the bottom function button switches between the selected monitor output and 'LINE OUT'.
- Press to mute or un-mute the selected output.
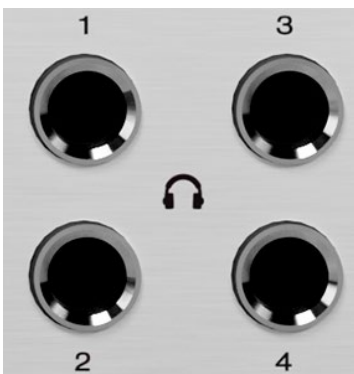
Headphone outputs H1 – H4

Four stereo headphone outputs on 1/4-inch TRS jacks.

REAR PANEL EXPLAINED

From left to right, top to bottom:

18V/20W Power Input

For use with the provided Antelope Audio power supply only!

S/PDIF I/O

Carries incoming and outgoing 2-channel S/PDIF digital audio over coaxial RCA cables.
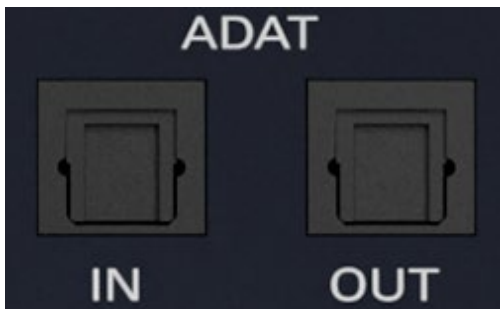
ADAT I/O

1 input and 1 output each carrying up to 8 I/O audio channels over Toslink fiber optic cables. Note that ADAT runs on S/MUX. Standard ADAT audio limits apply:

- Up to 8 I/O channels of 24-bit, 44.1kHz or 48kHz audio.

- Up to 4 I/O channels of 24-bit, 96kHz audio (over S/MUX).

- Up to 2 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.

Thunderbolt™ 3 port

Thunderbolt™ 3 port for computer connection. Note that Thunderbolt™ 2 connections require a third-party TB3 to TB2 adapter and corresponding cables. It is recommended to use Apple certified cables and adapters.

USB Port

USB 2.0 Type-B port for computer connection.

Word Clock I/O
Two Word Clock outputs on BNC connectors, 75 Ohm

Monitor Outputs L/R

Left and Right monitor speaker outputs on signal-balanced 1/4-inch jacks.
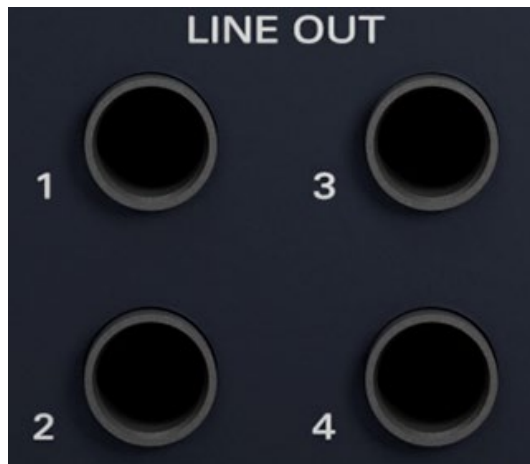
Line Outputs

Four analog Line outputs on signal-balanced 1/4-inch jacks.

Mic/Line Inputs

Two mic/line inputs on combo XLR connectors. Labeled A3 and A4. Hi-Z is not available on these inputs.

Important! Record line-level sources using TS/TRS connectors. Record mic-level sources using XLR connectors.

CONTROL PANEL

Welcome to the software Control Panel!

More than just an alternative to the front panel controls, the Control Panel provides straightforward and comprehensive access to each aspect of the interface's functionality. This includes settings, inputs, signal routing, audio mixing, effects stacking, monitoring, metering, and presets. The Discrete 4 Pro allows connection between any signal source and any destination for turning any session scenario into reality. All this flexibility is accessible via the full virtual patch-bay or the simplified routing view of the original Discrete interfaces – the choice is yours.

Feel free to get going immediately with the 'Quick Start' section as your guide or skip it for now and read the entire chapter before you touch any virtual knobs and faders.

Quick Start

Let's begin with some quick examples of essential tasks being accomplished in the Control Panel.

Note: These examples do not convey the "correct" or "only" way of accomplishing the following tasks. They merely illustrate some fundamental logic and offer solutions to the initial stumbling blocks most often encountered by novice users.

Playback audio from the computer

The audio signal coming from your computer when using the Discrete 8 Pro Synergy Core as a playback device is represented by the COMPUTER PLAY channels. In most cases in your DAW or your computer sounds will play on Outputs 1-2 which corresponds to COMPUTER PLAY 1 and COMPUTER PLAY 2. You can route COMPUTER PLAY 1 and 2 in any of the MIXERS (1-4) and make sure the panning is set to hard left and hard right to have a proper stereo image. Then just route the MIXER OUT channels to your Headphones/Monitor outs. Another option would be to directly route COMPUTER PLAY 1 and 2 into the Headphone/Monitor Left and Right

Monitor incoming audio via headphones

Say you want to monitor incoming audio from mic/combo input A1 via Headphone output 1 (HP1), both on the front panel. Connect your equipment and open the Control Panel. Do the following:

1. In the 'PREAMPS' section, head to the leftmost preamp and click the middle symbol to the right of the volume indicator until you get:

- A microphone symbol if you plugged in a mic. If it's a condenser, activate 48V phantom power from the button below the gain knob.

- A guitar symbol if you plugged in a guitar or bass.

- A jack symbol if you have plugged in a line level source (synths, samplers, players and so on).

2. Go to the 'MIXER' tab and make sure that 'PREAMP 1' is selected as a channel source on any of the four available mixers. For this example, we'll use 'MIXER 1' and select the source on the first mixer channel.

To hear the input on one of the headphone outputs, open either the 'HEADPHONE 1' or 'HEADPHONE 2' tab on the bottom of the software panel and choose the two 'MIXER 1' channels as sources for your headphone outputs.

The source selection is located on the left side of large volume rotary knob, and it's marked with 'L' – 'R' corresponding to the left and right mono outputs.

Click on 'L' and select 'MIXER 1 OUT - 1' for the left channel. Click on the 'R' select 'MIXER 1 OUT - 2' for the right channel. This will feed your headphones with the stereo output of the first mixer.

You should be hearing audio from the input in your headphones. Adjust input gain from the gain knob in the 'PREAMPS' section and output volume from the mixer channel fader or the 'HEADPHONE 1' knob.

You can also use the front panel controls.

Apply Synergy Core FX to incoming audio

Go to the 'AFX' tab to access the Synergy Core processing functionality. Choose your audio input(s) from the input selectors for the available 16 channels. Click the area below the input selector to open the corresponding Synergy Core FX rack window. Click the 'ADD NEW EFFECT' button to start building your effects chain and adjusting effects settings. Close the window when you are done. An in-depth overview of the FX Rack can be found later in the manual.

Play guitar through the virtual amps and cabinets, listening from studio monitors

1. Connect your guitar to A1 and your studio monitors to the Monitor L/R outputs of the Discrete 8 Pro Synergy Core.

2. Open the Control Panel and head to the leftmost area in the 'PREAMPS' row. Click the middle symbol to the right of the volume indicator until you get an electric guitar symbol.

3. Go to the 'AFX' tab and select 'PREAMP 1' on any available channel, we'll use the first effects rack for this example.

4. Click the area below the input selector to launch the Synergy Core FX Rack. Click 'ADD NEW EFFECT' and make your guitar amp and cabinet choices from the menu. If you don't know where to start, the 'Modern (US)' amp and 'Modern 4 x 12' cabinet combination make for a great modern rock/metal rig.

An in-depth overview of the cabinet simulator is available later in the manual. You can learn more about the individual amp models here and about the cabinets here.

5. Select 'AFX OUT 1' as a source on an available mixer channel. We'll use the first channel of 'MIXER 1' for this example. Afterwards open the 'MONITOR 1' tab on the bottom of the control panel and select the two outputs of 'MIXER 1' for the left and right speakers. Adjust panning and volume to taste from the mixer settings and the monitor output volume from the volume knob in the 'MONITOR 1' tab.

Sing with microphone emulations and monitor live with headphones

Connect your headphones to HP1 on the front panel. Connect your Antelope Audio Edge or Verge modeling microphone to the preamp/combo inputs. In our example, we are using the Edge Duo, which is connected to inputs A1 and A2.

1. Open the Control Panel and head to the leftmost preamp from the PREAMPS row. Click the middle symbol to the right of the volume indicator until you reach the 'mic' symbol. Then, click the 'cog wheel' symbol. This will launch the mic emulations window. Choose Edge Duo with the dial.

2. Adjust microphone gain with the gain knobs. Note that preamps A1 and A2 are now linked and have identical settings between them.

3. Go to any available mixer, 'MIXER 1' in this example, and select 'EMU MIC 1' and 'EMU MIC 2' as sources for the first two, or any other mixer channels.

4. Open the 'HEADPHONES 1' tab on the bottom of the control panel and make sure the outputs of the first mixer are selected from the left and right channel dropdown menus, 'MIXER 1 OUT 1' and 'MIXER 1 OUT 2' respectively.

You should be hearing mic audio in your headphones at this point. Use the 'HEADPHONES 1' volume knob or the mix faders for Channels 1 and 2 to adjust output volume.

Record in your DAW

Recording with the Discrete 8 Pro Synergy Core is very simple. First, make sure the interface is chosen as your main input and output device in your DAW. Next, open the Control Panel and click 'DAW'. Note the following:

Inputs 1 – 32 in your DAW correspond to the 32 channels labeled 'Record 1 – 32 in the 'TO DAW' row. Use the input selectors to choose your audio sources. Then create new tracks in your DAW and assign the inputs with the matching numbers to them, e.g. 'Record 1' = 'Input 1'.

Likewise, Outputs 1 – 32 in your DAW correspond to the channels labeled 'PLAY 1 – 32' in the 'FROM DAW' row. These channels can be chosen as audio sources from the input selectors in any of the following tabs - 'MIXERS', 'DIGITAL OUTS', 'LINE OUTS', 'AFX'. This can also be done from the "virtual patch bay" routing matrix view, available from the 'ROUTING' tab. The possibilities are extensive.

NOTE: The Discrete 8 Pro Synergy Core provides 32 Play and Record channels over Thunderbolt and 24 Play and Record channels over USB.

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 and press Enter to confirm (Text label renaming is only possible through the routing tab).

- Adjust parameter values in smaller increments (all knobs and faders)
  - hold Ctrl (Windows) / Command (macOS) and drag.

- Click any peak meter to clear it.

Main View

From left to right, the Control Panel is organized as follows:

Function Strip 1

On/Off Button

Click to power on/off the hardware unit.
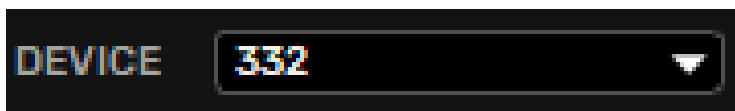
Device Menu

Click the drop-down menu to switch between multiple connected Discrete 8 Pro Synergy Core devices. You can do that or launch a separate Control Panel instance for each device from the Antelope Launcher.
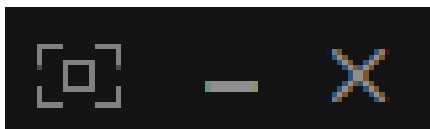
Default panel size, Minimize & Close Buttons

Click to revert the control panel size back to default, minimize or close the Control Panel application.

Function Strip 2
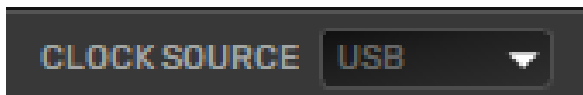
CLOCK SOURCE | USB ▼

Clock Source Menu

Click the drop-down menu to choose a clock source. The following options are available:

- Internal
- W.C.
- ADAT (2x, 4x)
- S/PDIF
- USB. In USB mode, the Discrete 8 Pro Synergy Core still uses its internal clock, but locks to the sample rate set for the computer audio.

SAMPLE RATE | 44.1 kHz ▼

Sample Rate Menu

Click the drop-down menu to choose the device sample rate. Please make sure your choice matches the operating system and DAW sample rates. When locked to a rate from an external source, this selection is not available.

LOCK ●

Lock Indicator

Lights up when the Discrete 8 Pro Synergy Core is locked to an external device (e.g. ADAT).

SESSION: | SAVE LOAD

Session Menu

Discrete 4 Pro Synergy Core User Manual
Page 38
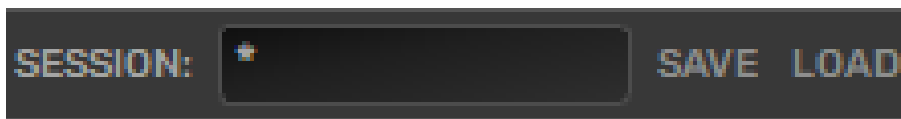
Click the drop-down menu to load a Session. Use the adjacent Save and Load buttons to store and load Session files (*.as).

'Sessions' are complete "snapshots" of entire Control Panel configurations. When Saving a Session, you can choose the exact components you want stored and export Session files for storage and sharing from the 'Save As' button. When loading a Session, you can browse your computer for session files (*.as) and choose which components to load.
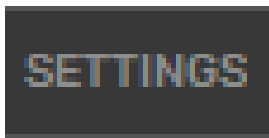
SETTINGS

Settings Button

Click to enter the Settings Window with the following options (left to right, top to bottom):
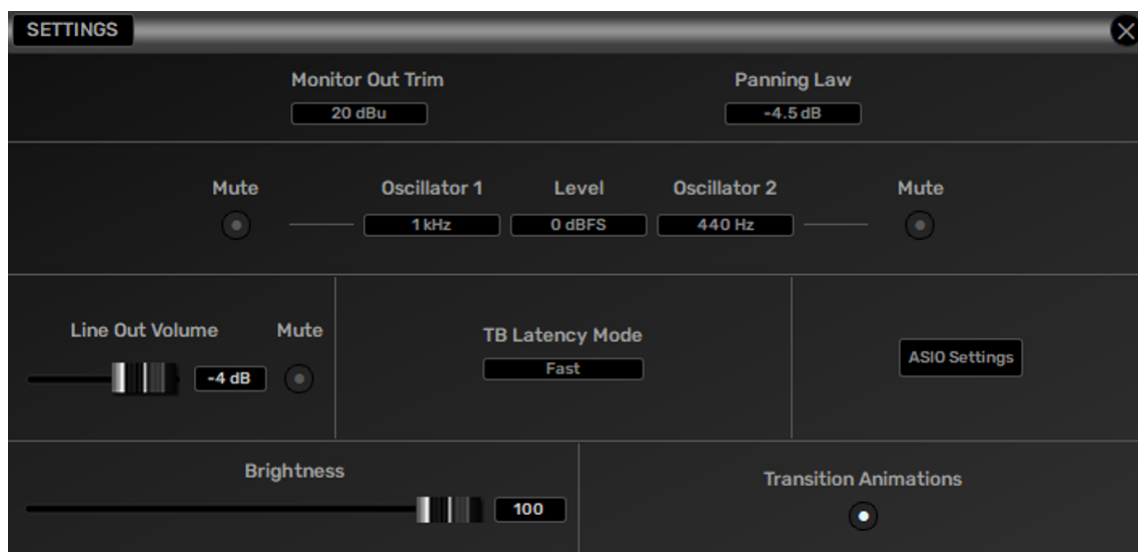
Note: ASIO Settings button is available only on Windows.

Monitor Out Trim	Click to choose the signal trim amount (in dBu) for the Monitor Outputs from the drop-down menu.
Panning Law	Click to specify Panning Law compensation between 0dB (none) to -4.5dB from the drop-down menu.
Mute	Mutes Oscillator 1 output.
Oscillator 1	Choose a frequency for the Oscillator 1test signal from the drop-down menu.
Level	Choose the output level (in dBFS) for theoscillator 1 & 2 test signals.
Oscillator 2	Choose a frequency for the Oscillator 2test signal from the drop-down menu.
Mute	Mute Oscillator 2 output.
Line Out Volume	Use the fader to adjust line outputs volume (in dB). Click the adjacent 'Mute'button to mute and unmute the line outputs.
Brightness	Use the fader to adjust the hardware unit's display brightness.
TB Latency Mode	Choose the Thunderbolt Latency mode from the drop-down menu. Experiment with the different modes if you experience audio glitches, CPU overload,etc.
ASIO Settings	For Windows users - click to launch the Discrete 4 Pro Synergy Core USB ASIO Control Panel. The 'Buffer Settings' tablets you choose your preferred ASIO Buffer Size for an optimal balance between latency and performance.

PREAMPS Strip

Labeled 'PREAMPS' on the far left. Contains controls for the eight mic/combo inputs labeled A1 – A4 on the Discrete 4 Pro Synergy Core. There are the following controls for each input:

Gain Knob

Click and drag the knob or double-click the text label in the center and use your keyboard to adjust input gain. The gain ranges are as follows:

- Mic: -12dB - 65dB
- Line: -6dB - 20dB
- Hi-Z (inputs A1 and A2): 0dB - 40dB

48V Button (in mic mode)

Click to activate or deactivate 48V phantom power for condenser microphones.

Peak Meter

Visualizes input gain.

Link Button ('stereo' symbol)

Click to link adjacent inputs in pairs of two. Any change made to one channel applies the same exact change to its neighboring channel.

Input Type Button ('mic' symbol)

Click to switch inputs between mic, line, or Hi-Z (inputs A1 - A2).

Mic Emulations Button ('cog' symbol, when in mic mode)

Click to open the 'Mic Emulations' window. More information is available in the Edge & Verge Mic Emulations chapter.

| COMPUTER PLAY 1 ▼ | COMPUTER PLAY 2 ▼ | PREAMP 1 ▼ | PREAMP 2 ▼ | AFX OUT 1 ▼ | AFX OUT 2 ▼ | ADAT IN 1 ▼ | ADAT IN 2 ▼ |

Input Selectors

Input Selectors are found above each analog and digital output channel. Click an input selector to choose the audio input assigned to its related output channel. The following choices are available:

PREAMP 1 - 4	These are the four mic/combo inputs.
EMU MIC 1 - 4	These are the four mic/combo inputs with Edge & Verge Mic Emulations applied. This way, you can record 'dry' and 'mic emulation' audio on different channels.
COMPUTER PLAY 1 - 32	These inputs represent DAW Outputs 1 - 32. <u>This is where you receive audio from your DAW.</u> Assign an audio track to Output 1 – 32 in your DAW and choose the COMPUTER PLAY input with the same number. This way, you can

	route DAW audio to the internal mixers, analog and digital outputs and apply Synergy Core FX to it.
ADAT IN 1 - 8	ADAT audio inputs 1 - 8.
S/PDIF IN 1 - 2	Two channels of incoming S/PDIF stereo digital audio.
AFX OUT 1 – 16	The processed output signal from the AFX channels. Whichever source you put in the AFX channels, you receive a processed signal with added effects.
MIXER 1 - 4 OUT	The summed output signal from each 32-channel mixer. Each output is stereo left and right (for example MIXER 1 OUT 1 and MIXER 1 OUT 2)
MUTE M	Choose to mute this channel
OSCILLATOR 1 - 2	Test signal from oscillator 1 or 2.

Main tabs

The main tabs in the Control panel give you access to the essentials:

- Mixers – gives you access to navigate between the 4 individual MIXERS which will show up on the right side of the same row

- Digital outs – allows you to route signals to the ADAT and S/PDIF outputs.
- Line outs – allows you to route signals to the 4 line outputs and adjust their volume.
- DAW – allows you to route signals for recording into your DAW.
- AFX – add effects for each channel strip and select the source you want to process.
- Routing – gives you access to the routing matrix.
- Auraverb – gives you access to the settings of the Auraverb reverb effect.
- Monitoring control – gives you access to routing and adjusting volume on the Monitor and Headphone outputs.

For an in-depth explanation on each tab, please continue reading.

MIXERS

This tab allows you to access the four 32-channel virtual mixers.

Use the Input Selectors to assign an audio input to each channel.

Each mixer is completely independent. You can have different inputs for each mixer. Each channel strip has the following components:

- Panning knob with values between –30 (hard left) and 30 (hard right),
- Volume fader which allows you to adjust the volume of the signal
- Peak meter which shows you the real time signal in dB in a range from –60 to 0dB.
- Solo button which allows you to mute the rest of the channels in the mixer and listen to only the Soloed one.
- Mute button which allows you to Mute the selected channel.
- Link button (1 available per pair) allows you to link all the controls with the neighbor channel strip and adjust the settings on both channels together. This is mostly used when you have a stereo signal using two channels for left and right.

Default and Compact view – 8/32 channels

On the top right side of the mixer, you can find a switch between 8 and 32 channels which changes the view of the mixer. In the 8-channel mode, the mixer fits 8 enlarged channel strips. In the 32-channel mode all 32 channels are visible simultaneously.

Scroll bar

Just below the channel strips you can find a scroll bar which allows you to scroll between all 32 available channels in the mixer without using the extended view. This scroll is available in the 8-channel mode view only.

DIGITAL OUTS

This tab lets you route all available audio sources to the ADAT and S/PDIF digital outputs. Each ADAT and S/PDIF output channel has a dedicated Input Selector and Peak Meter.

LINE OUTS

This tab allows you to route all available audio sources and send them out of the four line outputs.
Each channel strip contains the following:

- Input selector which allows you to choose the audio source you want to send.
- Trim knob with adjustment between 14 and 20dBu.
- Peak meter showing the source signal level in real time.
- Link button which allows you to link all outputs and adjust their trim together.

Discrete 4 Pro Synergy Core User Manual
Page 45
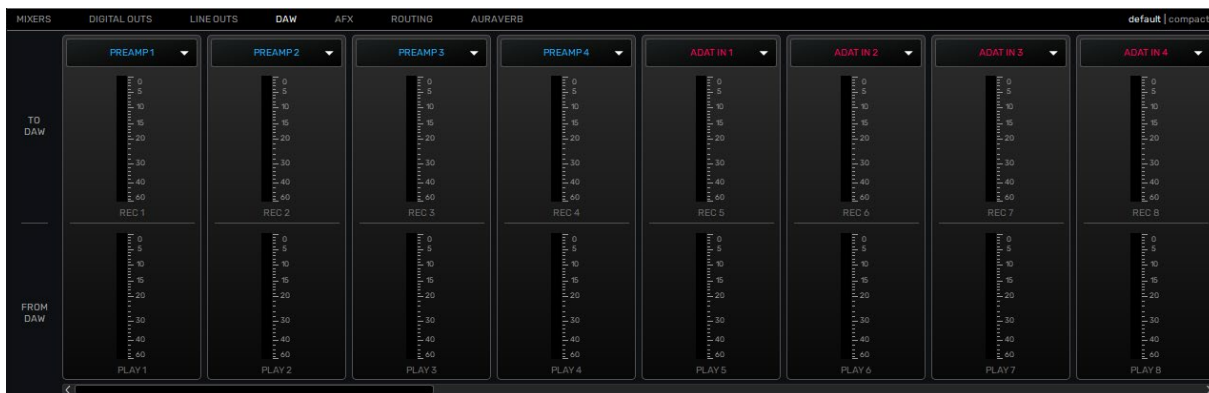
DAW

This tab provides an overview of audio going in and out of your DAW. The most important aspect of this section is selecting which Signal source to send for recording inside your DAW. TO DAW section manages this feature.

TO DAW
This section contains a total of 32 channel strips which represent the INPUT channels inside your DAW. Above each channel strip there is an Input selector which allows you to choose the signal source you want to send for recording inside your DAW. For example, if you want to record the signal coming into Preamp 1 of the Discrete, on INPUT 1 inside your DAW, all you need to do is select PREAMP 1 from the Input selector on the first channel strip (Record 1). Record 1 = Input 1 inside your DAW.
The Peak Meters on each Record channel are showing in real-time the signal going into your DAW for recording.

FROM DAW
This section has a total of 32 PLAY channels which represent the Output channels inside your DAW. The peak meters will visualize the signal going OUT of your DAW.
Those peak meters also represent the signal from COMPUTER PLAY 1-32, as COMPUTER PLAY 1-32 corresponds to the audio from Outputs 1-32 inside your DAW.

So, if you want to send an audio track from your DAW to the analog and digital outputs, or into the Synergy Core FX (AFX tab) - assign this track to Output 1 - 32, go back to the Discrete Control Panel and assign the 'COMPUTER PLAY' source with the same number anywhere you want. Play 1 = Output 1 inside your DAW.

Default and Compact view – 8/32 channels

On the top right side of the DAW section, you can find a switch between 8 and 32 channels which changes the view mode. In the 8-channel mode, the DAW section fits 8 enlarged channel strips.
In the 32-channel mode all 32 channels are visible in the DAW section.

Scroll bar
Just below the channel strips you can find a scroll bar which allows you to scroll between

all 32 available channels in the DAW section without using the extended view. This scroll is available in the 8-channel mode view only.

NOTE: 32 channels are available via Thunderbolt only. If you are using USB – there are 24 inputs and outputs available.
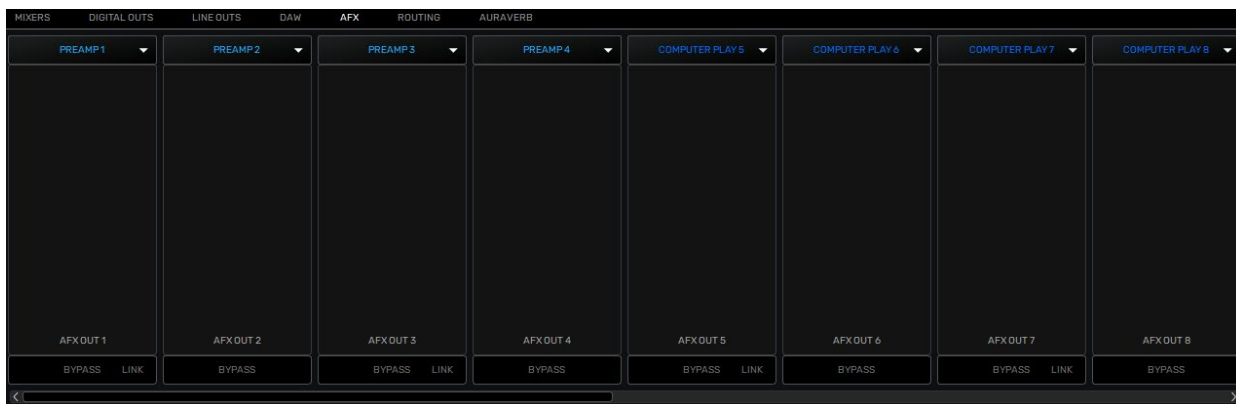
AFX

On top of each channel strip, you have the option to select the signal source which you want to add effects to. By clicking on the source, you open a dropdown menu where you can select which signal you want to process (for example PREAMP 1).
There is a scroll bar bellow allowing you to scroll between all 16 AFX channel strips easily.

Click inside the AFX area below each source to open the FX Rack and apply Synergy Core FX. Click the 'BP' button to bypass all FX applied to the channel. Click the 'Link' button to link adjacent channels, duplicating any effects and creating a stereo effects rack.

The FX Rack looks like this:

The following functionality is available:

- Use the 'SAVE' and 'LOAD' buttons to store and recall FX Chains.

- Click the 'BP ALL' button to bypass all FX in the rack. Click again to re-activate.

- Click the 'DEL ALL' button to clear the FX Rack - Left click + hold Ctrl (Windows) / Command (Mac).

- Click the drop-down menu below the input label to load factory presets.

- Click the 'ADD NEW EFFECT' button to choose and load Synergy Core FX. Their controls appear in the right section.

- The left section lets you click and drag to re-order FX. A 'BP' button is available next to each effect to bypass it.

- Hold Ctrl (Windows) or Command (Mac) and drag to adjust controls in smaller steps.

- The 'How To' button points your Internet Browser to a video tutorial playlist in the Antelope Audio YouTube channel.

Note: User manuals for some equalizers and compressors are available here.
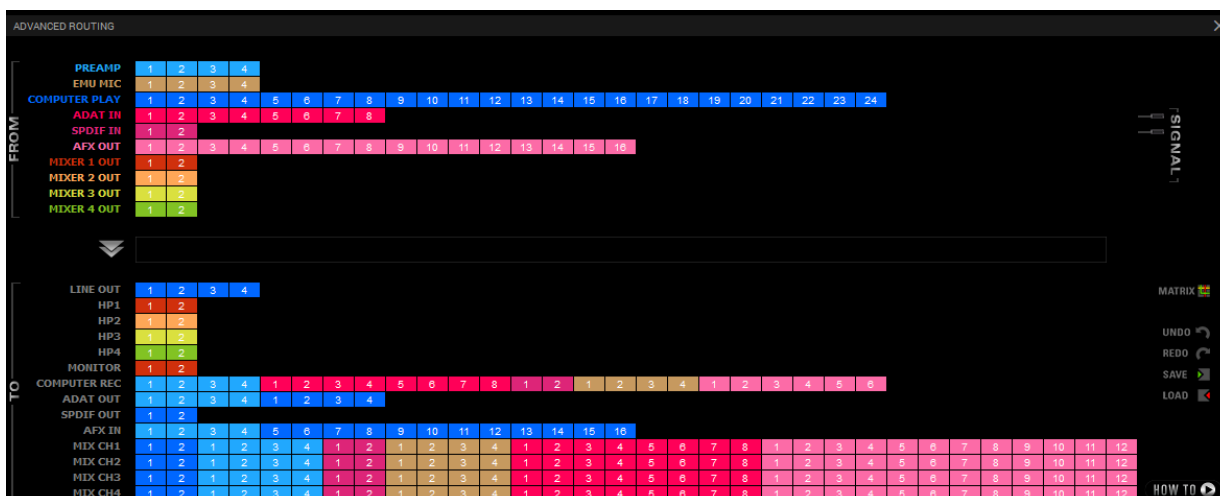
ROUTING

This tab contains the Routing Matrix for analog and digital audio routing. It is important to know that all changes in the routing matrix affect the settings in the other tabs and sections in the control panel. The opposite is also valid – making routing changes with the Input Selectors in the Mixers, Digital outs, Line outs and HP/Monitor outs affect the routing matrix.

The Routing Matrix is row-based. Each row has its own unique color and represents a specific audio in or out with its maximum number of channels.

The Routing Matrix is split into two main sections: FROM (Source) and TO (Destination). Route audio between them by dragging and dropping the colored number blocks. The following functionalities are also available:

- Drag and drop with left mouse click to route channels FROM into TO section. For example: Drag and drop PREAMP 1 into COMPUTER REC 1.
- Click on a number block to highlight the destinations it's currently routed to.
- Double-click a number block to change its text label. The changed text will also appear in the other Control panel sections where this channel is selected in the Input selector.
- Click on a source channel to highlight it and use Shift + Left-Click on a channel to the right on the same row to select multiple sources.
- Select multiple source channels by using Ctrl/Command + Left-Click.

Routing matrix terminology

FROM:

PREAMP - This row represents each of the 8 preamp/combo inputs.

EMU MIC - This row represents mic preamp inputs 1 - 8 with mic emulations applied to incoming microphone audio. This offers some interesting possibilities, such as:

● Simultaneous monitoring and recording of dry microphone audio from the 'PREAMP' row and mic emulation audio from the 'EMU MIC' row on separate audio tracks in your DAW – with and without Synergy Core FX added on top.

 ● Setting up multiple monitoring mixes, e.g. 'dry' mix for the recording engineer and 'mic emulation' mix for the performing artist, with different FX chains on all mix channels.

COMP PLAY - This row represents DAW 'Outputs 1 - 32' (Thunderbolt™) or DAW 'Outputs 1 - 24' (USB). 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' = 'COMP PLAY' 1. This row also represents all computer audio, such as OS media playback (iTunes, Spotify, YouTube, Zoom, etc.), DAW outputs, etc.

ADAT IN - This row represents up to 8 ADAT optical audio channels. Note that ADAT runs on S/MUX.

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 the output from 16 mono audio channels with Synergy Core FX applied.

MIXER 1-4 OUT - These rows represent the four 2-channel stereo outputs from the four virtual 32 channel mixers in the 'Mixer' tab. Channel 1 is left and Channel 2 is right.

TO:

LINE OUT - This row represents 4 line outputs over one signal-balanced TRS jacks.

HP1 - This row represents Headphone output 1 as two mono (L/R) channels.

HP2 - This row represents Headphone output 2 as two mono (L/R) channels.

HP3 - This row represents Headphone output 3 as two mono (L/R) channels.

HP4 - This row represents Headphone output 4 as two mono (L/R) channels.

MONITOR - This row represents Monitor output as two mono (L/R) channels.

row works only when the output is set to REAMP mode that can be switched from the MONITOR 2 section in the main control panel.

COMP REC - This row represents DAW Inputs 1 – 32 (Thunderbolt™) or DAW Inputs 1 – 24 (USB). This is where you send audio to your DAW for recording. To record using a 'COMP REC' channel, route audio to it from the 'Routing' tab. Create a new track in your DAW and assign the input with the matching number:

- example 'COMP REC' 1 = DAW 'Input 1'.

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

S/PDIF OUT - This row lets you route 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 audio into the Synergy Core FX. You can route up to 16 mono channels and stack up to 8 effects on each, independent of sample rate. Synergy Core FX are found in the 'AFX' tab.

MIX 1-4 IN – The 'Mixer' tab is home to four low-latency Direct Monitoring mixers with 32 inputs each. This row lets you route audio to them.

AuraVerb

This is Antelope's proprietary reverb effect which can be applied as a send on each channel in MIXER 1. You can use the Auraverb on your Headphones and Monitor mixes by routing MIXER 1 OUT 1 and 2 to Monitor/HP left and right. If you want to record the Auraverb in your DAW you would have to route MIXER 1 OUT 1 and 2 into the DAW section.
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.

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.
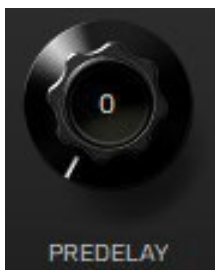
PreDelay

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.
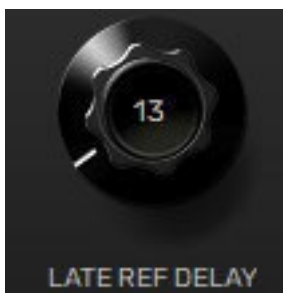
Late Reflection Delay

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.
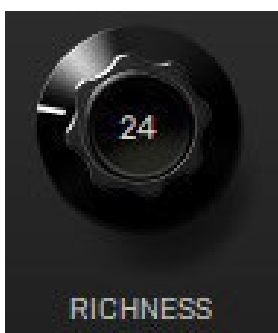
Richness

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.
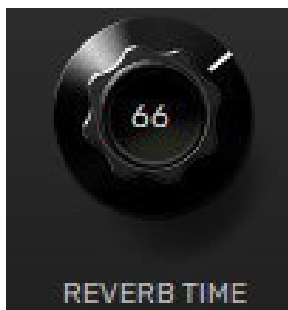
Reverb Time

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.
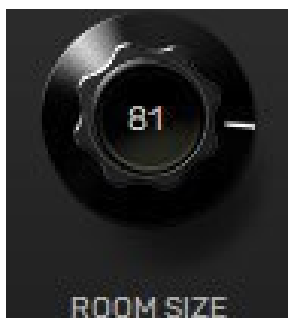
Room Size

Room Size increases the virtual space dimensions.
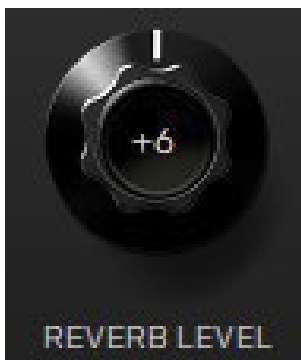
Reverb Level

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.
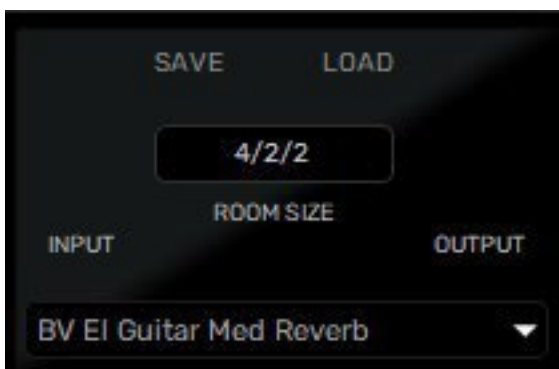
Preset Manager

The Preset Manager lets you load pre-defined presets. Use the drop-down menu to choose a preset.
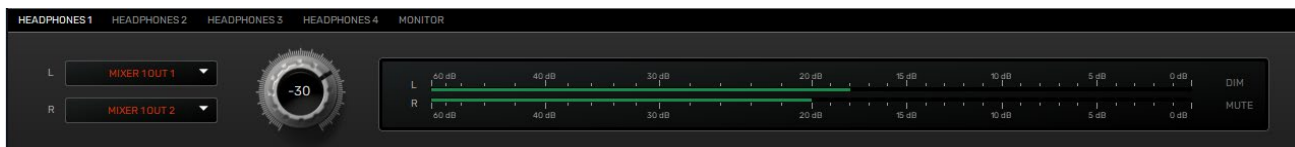
MONITORING CONTROL

This section allows you to route different signals directly to the Monitor and Headphone outputs and adjust their volume.
On the top left corner, you can switch between, HP1, HP2, HP3, HP4 and MONITOR.
Each tab has the following:

- 2 Input selectors for the left and right channels – you select the audio source you want to send to the outputs.
- Volume knob – adjust the volume of the outputs.
- Peak meter – real time visualization of the audio signal going out of the outputs.
- Dim button - attenuates the volume of the output with –20dB.
- Mute button - mutes the output.

A suite of 11 guitar amps and matching cabinets lets you hear and record the roar of your electric guitar in real-time. These also include a bass rig as well. If you don't play guitar, but like the sound of cooked-up tubes and speaker cabinets pushing air, you can route any audio into these precise emulations!

Getting Started

Guitar amps and cabs are used like almost any other Synergy Core effect. Here are the basics:

1. Connect your guitar to A1 and your studio monitors to the Monitor L/R outputs of the Discrete 4 Pro Synergy Core.

2. Open the Control Panel and head to the leftmost area in the 'PREAMPS' row. Click the middle symbol to the right of the volume indicator until you get an electric guitar symbol.

3. Click a channel's input selector in the 'AFX' area and choose PREAMPS > PREAMP 1 from the menu.

4. Click the 'AFX' area below the input selector to launch the Synergy Core FX Rack. Click 'ADD NEW EFFECT' and make your guitar amp and cabinet choices from the menu. If you don't know where to start, the 'Modern (US)' amp and 'Modern 4 x 12' cabinet combination make for a great modern rock/metal rig.

Here are some additional tips regarding the cabinet modules:

- Change the cabinet model anytime from the 'Cabinet' drop-down menu.
- Change your cabinet's mics from the 'Mic A' and 'Mic B' drop-down menus. Click the adjacent 'Phase' button if your choice of microphones results in phasing issues.
- Click and drag the virtual microphones to adjust their vertical and horizontal positioning.
- Click and turn the 'Mic A' and 'Mic B' knobs to dial-in the amount of signal you want from each microphone.
- Click and turn the 'Rear Mic' knob to mix-in signal from an additional mic behind the cabinet.
- Click and turn the '45-degree Mic' knob to mix-in signal from an additional mic positioned at a 45-degree angle from a speaker cone.
- Click the 'ReSPiRe' button to hear some cab sim mojo courtesy of our friends from Overloud. In their own words, the ReSPiRe technology lets you switch between the 'real' response of the cabinet and a processed version optimized to fit into a mix and avoid frequency overlap with the other instruments.
- Click the 'HPF' button to engage a preset high-pass filter (tames excessive low end).
- Click the 'LPF' button to engage a preset low-pass filter (tames harsh or shrill-sounding highs).
- Click the 'BP' button to bypass the cab sim.

Finally, route the AFX OUT channels to COMP REC or in the DAW section to the Record channel strips so you can record.

Software Re-amping

In addition to hardware re-amping through the REAMP outputs, you can re-amp DI guitar tracks through the Synergy Core amps & cabs:

1. Open your DAW. Place your DI on a track and assign it to one of Outputs 1 – 32. Remember: DAW Outputs = 'COMPUTER PLAY' channels.

2. Open the Control Panel and click the AFX tab. Click an Input Selector and choose the 'COMPUTER PLAY' channel with the same number as your DAW output.

3. Stack your amps, cabs and FX from the FX Rack.

4. Go to the DAW section and route AFX OUT channels corresponding to the number of channels you are using (for example AFX OUT 1-4)

5. Create a new track in your DAW and enable live monitoring. Assign the correct DAW input channel (same number as the output channel) and hit 'Play' in the transport controls. You should be hearing your re-amped track and be able to record it.

EDGE & VERGE MIC EMULATIONS

Edge & Verge mic emulations are intended for use with the Antelope Audio Edge & Verge modeling microphones only. We cannot guarantee optimal (or even usable) results with other microphones.

Getting Started

Connect your headphones to HP1 on the front panel. Connect your Antelope Audio Edge or Verge modeling microphone to the preamp/combo inputs. In our example, we are using the Edge Duo, which is connected to inputs A1 and A2.

---

1. Open the Control Panel and head to the leftmost preamp from the PREAMPS row. Click the middle symbol to the right of the volume indicator until you reach the 'mic' symbol. Then, click the 'cog wheel' symbol. This will launch the mic emulations window. Choose Edge Duo with the dial.

2. Adjust microphone gain with the gain knobs. Note that preamps A1 and A2 are now linked and have identical settings between them.

3. Go to any available mixer, 'MIXER 1' in this example, and select 'EMU MIC 1' and 'EMU MIC 2' as sources for the first two, or any other mixer channels.

4. Open the 'HEADPHONES 1' tab on the bottom of the control panel and make sure the outputs of the first mixer are selected from the left and right channel dropdown menus, 'MIXER 1 OUT 1' and 'MIXER 1 OUT 2' respectively.

You should be hearing mic audio in your headphones at this point. Use the 'HEADPHONES 1' volume knob or the mix faders for Channels 1 and 2 to adjust output volume.

Gain Calibration

Gain adjustment for the Edge Solo and Verge is straightforward, but the Edge Duo and Edge Quadro are multi-membrane microphones. There may be differences in the input signal strength from each membrane, which is to be expected due to the opposite directions of the capsules.

Note that engaging mic emulations for Edge Duo and Edge Quadro automatically 'links' their input channels, thus individual gain adjustments per input are not possible while using their mic emulations.

Using Mic Emulations

In the 'Mic Emulations' window, click and rotate the dial to access the emulations available for your modeling microphone:

Following is a guide to using the mic emulations for each Antelope Audio modeling microphone.

Edge Solo

Edge Solo Mic Emulations Window

The following functionality is available:

- Choose mic emulations from the drop-down menu on the right.

- Click and turn the 'Phase Invert' dial to flip the microphone's polarity.
- Click and drag the '48'V switch to activate or turn off phantom power.

Recording and Monitoring Edge Solo

Edge Solo is a single-membrane condenser microphone. This means the microphone will occupy one physical mic preamp input and one virtual 'EMU MIC' channel.

Edge Solo mic emulations work on a single input audio channel. Recording and monitoring both 'dry' and 'mic emulation' audio means dealing with two mono tracks.

- Route the 'PREAMP' input for Edge Solo to your desired outputs to monitor 'dry' audio.
- Route the 'EMU MIC' output for Edge Solo (same number as the 'PREAMP' input) to your desired analog and digital outputs to monitor/record 'mic emulation' audio.
- Route 'PREAMP' and 'EMU MIC' channels to different outputs and record or monitor from them to get both 'dry' and 'mic emulation' audio.

For more information about Edge Solo, visit its product page.

Edge Duo

Note to owners of the legacy 'Edge' modeling microphone: 'Edge' and 'Edge Duo' have nearly identical hardware, so feel free to use the 'Edge Duo' emulations with your legacy 'Edge' mic.

Edge Duo Mic Emulations Window

The following functionality is available:

- Choose mic emulations from the drop-down menu in the middle.
- Click and turn the 'Phase Invert' dial to flip the microphone's polarity.
- Click and drag the '48V' switch to activate or turn off phantom power.
- Click and turn the 'Channel Swap' dial to swap the Edge Duo inputs.
- Click and turn the 'Pattern' knob to adjust the polar pattern. Note that some mic models have fixed or limited polar pattern adjustment.

Recording and Monitoring Edge Duo

Edge Duo is a dual-membrane condenser microphone – it has one capsule with dual membranes and connects with an Y-XLR cable (included), one XLR connector for each

membrane. The Left (white) connector is the front membrane, the Right (red) is for the rear membrane.

The microphone occupies two physical mic preamp inputs and two 'EMU MIC' virtual outputs.

Note: You can use Edge Duo as a single-membrane condenser mic by disconnecting one of the XLR connectors. In this case, the mic emulations will be visible, but they won't function correctly, you cannot swap inputs and you cannot adjust polar pattern.

Recording and monitoring Edge Duo as a single-membrane condenser mic

Route the 'PREAMP' input for Edge Duo to your desired outputs to monitor 'dry' audio and record by routing the signal in the DAW tab.

Recording and monitoring Edge Duo as a dual-membrane condenser mic

In this case, you will record and monitor two concurrent mono inputs, one coming from each membrane. They will sound slightly different in tone and volume, due to the physical distance between the membranes and the performer. You may have to compensate with individual gain adjustments for each membrane.

Route the 'PREAMP' inputs occupied by Edge Duo to your desired outputs to monitor 'dry' audio and record by routing the signal in the DAW tab.

Recording and monitoring Edge Duo as a modeling microphone

Make sure that 'Edge Duo' mic emulations are enabled. Route the 'EMU MIC' inputs corresponding to the 'PREAMP' inputs occupied by Edge Duo to your desired outputs for monitoring and record by routing the signals in the DAW tab.

Recording and monitoring 'dry' and 'mic emulation' audio simultaneously

With the Edge Duo, monitoring and recording 'dry' and 'mic emulation' audio simultaneously means handling four concurrent mono signals – two 'dry' tracks and two 'mic emulation' tracks. 'Dry' audio comes from the 'PREAMP' inputs, and 'Mic Emulation' audio comes from the 'EMU MIC' outputs. Route them anywhere you want and record by routing the signals in the DAW tab.

For more information about Edge Duo, visit its product page.

Edge Quadro

Connecting Edge Quadro

Edge Quadro is a quad-membrane condenser microphone – it has two heads, each with dual membranes. The Top head rotates 360-degrees, enabling stereo recording techniques such as M/S, X/Y, Blumlein, and even 3D sound. Therefore, the microphone is bundled with a pair of Y-XLR cables. Their Left (White) connectors are for the front membranes, and their Right (red) connectors are for the rear membranes.

However, each cable is designated for either the Top or Bottom head and labeled accordingly – T (Top) or B (Bottom). The inputs on the microphone are labeled too, letting you know where each cable needs to be connected.

There's a bevy of options for connecting Edge Quadro to your Discrete 8 Pro Synergy Core:

As a single-membrane (rotatable) condenser mic. Connect just one XLR from the Top (rotatable) or Bottom head using the corresponding cable. The possible configurations are:

1. Top Head – Front Membrane.

2. Top Head – Rear Membrane.

3. Bottom Head – Front Membrane.

4. Bottom Head – Rear Membrane.

As a dual-membrane (rotatable) condenser mic. Connect two XLRs from either (or both) the Top and Bottom heads with the corresponding cables. The possible configurations are:

---

1. Top Head – Front and Rear Membranes.

2. Bottom Head – Front and Rear Membranes.

3. Top Head – Front Membrane. Bottom Head – Front Membrane.

4. Top Head – Front Membrane. Bottom Head – Rear Membrane.

5. Top Head – Rear Membrane. Bottom Head – Front Membrane.

6. Top Head – Rear Membrane. Bottom Head – Rear Membrane.

<u>As a quad-membrane rotatable condenser microphone.</u> Connect all XLRs from both heads with the corresponding cables. This is the only option for using the Edge Quadro mic emulations.

Edge Quadro Mic Emulations Window

Edge Quadro and Edge Duo mic emulations are identical, except for the ability to apply two different mic emulations in unison - one for each head – complete with two different

polar patterns that are also swappable. All in all, the functionality is the same, but with two mic emulation selectors and two polar pattern changers.

Monitoring and recording Edge Quadro

Taking full advantage of the Edge Quadro's 360-degree recording and dual-emulation capabilities means the microphone will occupy four physical mic preamp inputs and four 'EMU MIC' virtual outputs.

Monitoring and recording 'dry' and 'mic emulation' audio simultaneously with the Edge Quadro mean handling eight concurrent mono tracks – two 'dry' tracks from its Top head, two 'dry' tracks from its Bottom head, two 'mic emulation 1' tracks and two 'mic emulation 2' tracks.

With so many signals available, the routing and processing possibilities are extensive. Put the manual down and explore your skills and creativity.

For more information about Edge Quadro, visit its product page.

Verge

Verge is a small-diaphragm condenser microphone that's as simple to use as the Edge Solo. Its dimensions and ability to handle high sound pressure levels make it a better fit for positioning in tight spaces and recording very loud sources, such as drum kits.

Verge Mic Emulations Window

The following functionality is available:

- Choose mic emulations from the drop-down menu on the right.
- Click and turn the 'Phase Invert' dial to flip the microphone's polarity.
- Click and drag the '48'V switch to activate or turn off phantom power.

Recording and Monitoring Verge

Verge is a single-membrane, small-diaphragm condenser microphone. This means the microphone will occupy one physical mic preamp input and one 'EMU MIC' virtual output.

Verge mic emulations work on a single input audio channel. Recording and monitoring both 'dry' and 'mic emulation' audio means dealing with two mono tracks simultaneously.

- Route the 'PREAMP' input for Verge to your desired outputs to monitor 'dry' audio.
- Route the 'EMU MIC' output for Verge (same number as the 'PREAMP' input) to your desired outputs to monitor 'mic emulation' audio.

- Route 'PREAMP' and 'EMU MIC' blocks to your desired outputs to monitor and record both 'dry' and 'mic emulation' audio.

- Record into your DAW by routing in the DAW tab.

For more information about Verge, visit its product page.

AFX2DAW

Available as a separate purchase or included in a bundle, afx2daw is a bridge plug-in for using Synergy Core FX as inserts in your DAW. All Synergy Core FX processing and I/O audio streaming activity is handled by the DSP and FPGA processors in your interface. afx2daw provides a more immediate workflow with the added bonus of Synergy Core FX automation in your DAW, which isn't available otherwise.

afx2daw is supported on Mac and Windows computers via Thunderbolt.

Click here to learn more and purchase afx2daw.

Setting up afx2daw

After purchasing afx2daw, it will be automatically assigned to your account.

In order to install the plug-in files and activate the afx2daw, please follow these steps:

1. Open Antelope Launcher and click the 'Plug-ins' button. Download and install the latest version of 'afx2daw'.

2. Make sure you are logged in to the Antelope Launcher, then click the 'Devices' button and select MANAGE DEVICE next to the Discrete 8 Pro Synergy Core.

3. Choose 'Register device or assign features' and follow the on-screen instructions to assign afx2daw or the bundle including it to your Discrete 8 Pro Synergy Core.

4. Launch your DAW and load an instance of afx2daw on a mono or stereo track. The plug-in behaves almost exactly like the Control Panel 'FX Rack'.

The following functionality is available:

- 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 on the left side.
- Command-click and drag on an FX parameter to adjust it in smaller increments.

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.

ADVANCED USER TIPS

Use the Discrete 4 Pro Synergy Core as a Master clock

We recommend taking advantage of the Discrete 4 Pro Synergy Core's highly stable and musical clocking, provided by proprietary 64-bit Antelope Audio algorithms (Acoustically Focused Clocking & Jitter Management) to generate timing reference for other digital audio devices in your setup.

This is done in a Master - Slave arrangement where the Master device "clocks" the Slave device with its timing reference signal. To set up the Discrete 8 Pro Synergy Core as a Master clock, connect Word Clock Out 1 or 2 to the Slave device's Word Clock In using a standard BNC cable. The Discrete 8 Pro Synergy Core does not require any specific setup, but the receiving device might require modifying its settings to act as a Slave.

Further reading:

- For a primer on digital clocking and jitter, read this article. More in-depth information can be found here.

- This interview with Antelope Audio founder and CEO, Igor Levin, is also very illuminating.

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

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

UK Phone Number: +44 1925933423

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 January1,2018. 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 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.
- 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	2 x Mic / Line Inputs 2 x Mic / Line / Hi-Z inputs
Analog Outputs	1 x Monitor Out on TRS 1/4 Jacks, +20 dBu max 4 x Line Outs on TRS, +20 dBu max, DC-Coupled 2 x Stereo Headphone Outputs
Mic Preamp	EIN: -128 dBu (A-weighted) Dynamic Range: -121 dB (A-weighted) THD: -106 dB Max input: +18 dBu Max Gain: 65dB
D/A Monitor Converter	Dynamic Range: 130 dB THD + N: -115dB
A/D Converter	Dynamic Range: 122 dB THD + N: -112 dB
D/A Converters (Line Out)	Dynamic Range: 118dB THD + N: - 100dB

Digital Inputs	1 x ADAT (up to 8CH)
	1 x S/PDIF
Digital Outputs	1 x ADAT (up to 8CH)
	1 x S/PDIF
USB 2.0 I/O	USB 2.0 Type B connector
Thunderbolt™	Thunderbolt™ 3 connector
Word Clock Outputs	2 x Outputs @ 75 Ohms 3Vpp on BNC 32 – 192kHz
Clocking System	4th Generation Acoustically Focused Clocking & Jitter Management
	64-bit DDS
Sample Rates (kHz)	32, 44.1, 48, 88.2, 96, 176.4, 192
Bit depth	24

What is included inside the box:

- Discrete 4 Pro Synergy Core
- USB2.0 type A to B cable
- Power supply adapter
- Getting Started leaflet