OWNER'S MANUAL



PORTABLE THUNDERBOLT™ / USB AUDIO INTERFACE





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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. 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!
- 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 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.
- 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.
- The device is designed to operate in a temperate environment, with a correct Operating Temperature of 0-50° C, 32-122° F.
- During Firmware updates all peripherals must be turned off or disconnected from the unit. Only a direct USB /Thunderbolt™ connection to your computer and the power supply should remain active. Ensure you have a stable Internet connection and the USB /Thunderbolt™ cable you are using is maximum 3 meters long.

2. Introduction

Thank you for purchasing Zen Tour from Antelope Audio.

Producing your own music has become the contemporary equivalent of writing poetry. Current technologies have made sound recording as easy as grabbing a pen and pouring your feelings on paper. However, unlike the solitude writing requires, music creation is usually a shared experience. A simple two or four-channel audio interface is no longer enough. A cool, creative jam with friends will require at least eight channels, packed in a portable interface that could easily fit in a backpack.

With Zen Tour we are pushing the envelope once again. Antelope is offering not just a portable Thunderbolt™ & USB audio interface, but a pro piece, easily covering the needs of a small band. Zen Tour comes with 4 switchable Mic/Line inputs and 4 more Hi-Z/Line ins. Two reamp outs and a Talkback button on the front panel put it in the spotlight of portable tabletop interfaces.

Zen Tour borrows the powerful Field-Programmable Gate Array (FPGA) from Antelope Audio's top-selling pro studio devices. This game-changing technology provides the interface with massive parallel processing capabilities and the lowest latency levels on the market. In Zen Tour portability meets studio power like in no other device. No longer will portable interface stand for a starting point for your career, Antelope turned Zen Tour in a powerful tool for growing huge in the crazy music business!

The custom FPGA is a rock-solid platform for creating multiple, zero latency mixes and applying an exciting stack of effects. Forget about buying expensive plug-ins – Zen Tour offers something better. Get creative with Antelope's brand new hardware-based guitar amp & cab simulations, recreations of legendary studio gear, the extremely versatile AuraVerb reverb and our own EQ and compressor. The FPGA effects offer unbeatable authenticity and audio realism, comparable only to the sound and behavior of legendary hardware gear.

Zen Tour control is now literally at your fingertips via the intuitive touchscreen. The OS X and Windows compatible software control panel follows Antelope's innovative concept for networking. You can now manage all Zen Tour features from multiple computers in the same network. Did we mention iOS and Android mobile apps will allow you to access all Zen Tour features from your smartphone or tablet?

While other portable interfaces have to choose between giving you a decent amount of I/O channels or high-end DSP effects Zen Tour is better at both! With the 4 switchable Mic/Line and 4 Hi-Z/Line ins now come 8 analog outs, digital I/O on ADAT & S/PDIF, two independent headphone amps and two separate pairs of monitor outs. The FPGA powered Thunderbolt™ and custom USB make the device lightning fast and compatible with any DAW on the market

Enjoy working with the new Zen Tour!

All the best.

The Antelope Team

3. Features

- 1x Custom USB 2.0 Type-B Connector
- 1x Thunderbolt™ Gen1
- 4x Mic / Line In on TRS / XLR combo
- 4x Hi-Z / Line In on TRS
- 8x Line Out on DB25 (8 channels)
- 2x ReAmp Outs on TRS
- 2x HP Outs on TRS
- 2x Monitor Line Out on 1/4 TRS stereo jacks (L/R CHs) for pair of stereo monitors
- 1x S/PDIF I/O on 2x RCA
- 2x ADAT I/O on Fiber optic
- 1xTALKBACK Mic
- 1x 3.5" high resolution TFT display (262 000 colors) with capacitive touchscreen panel

4. Installation Guide

Connect the DC power source on the rear panel.

Windows:

- 1. Connect the USB cable to the USB port on your computer.
- 2. Download the Zen Tour launcher from www.antelopeaudio.com/products/zen-tour/.
- 3. Start the application, the launcher will automatically download the Software Control Panel.
- 4. Open your Control Panel by double clicking and follow the device activation procedure.
- 5. Connect your inputs and outputs of choice to Zen Tour.
- 6. Open your preferred DAW and ensure the device is selected as an input and output.

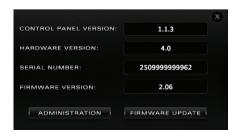
Note Make sure your Zen Tour has the most recent firmware installed. Check this by selecting the Options panel and clicking on the Firmware Update button.

Mac OS:

- Connect the Thunderbolt™ (TB) or the USB cable to the TB or USB port on your computer.
- 2. Download the Zen Tour launcher from www.antelopeaudio.com/products/zen-tour/.
- 3. Start the application, the launcher will automatically download the Software Control Panel.
- 4. Open your Control Panel by double clicking and follow the device activation procedure.
- 5. Connect your inputs and outputs of choice to Zen Tour.
- 6. Open your preferred DAW and ensure the device is selected as an input and output.

Note Make sure your Zen Tour has the most recent firmware installed. Check this by selecting the Options panel and clicking on the Firmware Update button.

See picture:



5. Activation Guide

It is essential to activate Zen Tour before using it. Once the DC power source is plugged and the device is connected to your computer via USB or Thunderbolt™ follow the steps below:

- 1. Navigate to <u>www.antelopeaudio.com/products/zen-tour/.</u>
- 2 Download the Zen Tour Launcher
- 3. Start the application (If you are on a PC install the launcher). The launcher will automatically download the Software Control Panel.
- 4. You will be greeted by an Activation Screen. If you already have an Antelope Audio account click on "Use existing Antelope ID". Enter your information and click Continue.
 - If you don't have an Antelope Audio account please enter a user ID, e-mail and password, then click Done.
 - Check your email for the activation link mail and click on it. If the email does not appear in your Inbox, please check your Spam folder.
- 5. Go back to the launcher and enter the required information. Click Done.
- 6. You're good to go!

6. Front Panel Explained



1. 4 Line / Instruments (Hi-Z) Inputs

Inputs suitable for connecting instruments such as bass or guitar to Zen Tour.

2. 2 Headphone Outputs

Two independently assignable headphone outputs, selectable and controllable via the main volume control knob. Which headphone output is currently controlled will be indicated on the touchscreen display.

3. 2 Reamp Outputs

These outputs are direct outputs that should be used with guitar amplifiers for re-amping.

4. High resolution "capacitive touch" TFT display

Multi function touchscreen that displays various information and control options.

5. Gain Button

Press to adjust the volume level of Zen Tour using the Rotary Control Knob.

6. Headhone Select

Press to switch between the two headphone outputs and adjust their volume levels.

7. Antelope Function Button

Accesses various menus in combination with other buttons

8. Talkback Button

Press the talkback button to activate the talkback microphone. This can be distributed to the selected headphones and/or monitors using the software control panel or the touchscreen.

9. Rotary Cotrol Knob

Big knob for monitor outs, line outs or HP volume control. By pressing it you can Mute the selected output.

10. ADAT Inputs and Outputs

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

7. Rear Panel Explained



11. 4 Mic Preamp / Line Inputs

4 Class-A mic preamps with phantom power over the Combo Inputs on the rear panel of Zen Tour.

12. Monitor Outputs

Assignable balanced stereo output (left channel at the top and right channel below). Only one active at a time.

13. S/PDIF Input and Output

75 Ω S/PDIF inputs and outputs for use with compatible equipment.

14. Line Output D-SUB 25

D-SUB 25 connector with 8 outs (following TASCAM standard).

15. USB 2.0 Type-B Connector

Custom USB interface for Zen Tour control via Antelope Audio Software Control Panel.

16. Thunderbolt™ Port

Enables you to connect your Zen Tour to a Thunderbolt™ port on a Mac computer using a Thunderbolt™ cable (not included).

17. DC Power Connector

For use with Antelope's DC power supply only!

7. Touchscreen Explained

Zen Tour features a touchscreen on its front panel. From it you can access all functions of the device.

The touchscreen features the following options:

MENU

Here you can adjust different Zen Tour parameters:



Brightness

Adjusts the touchscreen brightness.

Comm Interface

Selects which is the current type of connection between the computer and Zen Tour, USB or Thunderbolt $^{\text{TM}}$.

Screen Saver Style and Time

Changes the amount of time it will take for the screen saver to appear as well as the type of the screen saver for the touchscreen.

SR Conversion

Enables and disables the Sample Rate Converter for the S/PDIF Inputs.

Presets Saving

Enables you to save the current settings on a preset.

Factory Reset

Resets the device to the factory settings, note that all settings and saved presets will be lost.

Lock

Indicates whether Zen Tour is locked to an incoming signal or not.

Power

Powers off the device.

When in standby mode the Zen Tour touchscreen will be switched off. Tap it to see the power icon then tap it again to switch the device on.



ACTIVATE

This screen indicates you have to activate your device.



MAIN DISPLAY

Tap here to get the listed meter sources and scroll by pressing and dragging to find the source you need displayed.



MON

Enter the Monitor menu to adjust the Monitor volume level from the main Volume Knob. Tap speaker icon to mute (or press the Zen Tour knob).



LINE

Enter the Line Out menu to adjust the output volume level. Tap speaker icon to mute (or press the Zen Tour knob).



HEADPHONES

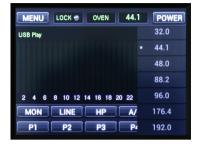
Cycle through the two Headphone outputs and set their volume levels. Tap speaker icon to mute (or press the Zen Tour knob).





SAMPLE RATE

Here you select the Sample Rate for Zen Tour. Tap the SR button to see the available Sample Rates. The current one will be displayed on the top of the touchscreen.



TALKBACK

Press and hold the Talkback button on the Zen Tour Front Panel to adjust Talkback volume level and select / mute Talkback on Headphone Outs 1 & 2 and on Monitors.



GAIN

Tap here to select the input mode or press the Gain button on the Zen Tour Front Panel to adjust the gain levels of the inputs and cycle through the different modes (Line/Mic/Hi-Z).





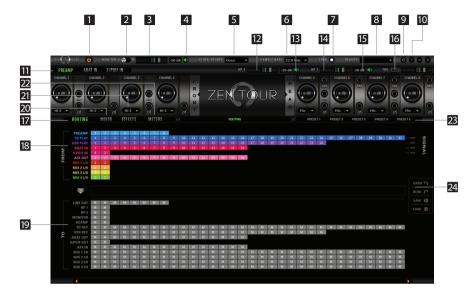
METERS

Select a signal type to be displayed in Meters mode.



Presets 1-5

The Global Presets save all device settings to one of the five available Preset slots. By pressing buttons P1 to P5 you switch between all customizable presets.



8. Software Control Panel

8.1. Main View and Routing Tab

The universal panel view is constantly located on the upper half of the control panel for quick access to the most important features.

Main view:

- 1. Power/Standby button
- 2. Monitor A/B select button
- 3. Monitor volume slider
- 4. Monitor mute
- 5. Clock Source select

This dropdown menu allows you to select how the Zen Tour is to be clocked.

- 6. Sample Rate Select
- 7. Lock light
- 8. Devices

This dropdown menu allows you to switch between Antelope Audio devices connected to your computer or on the same network.

- 9. Settings
- 10. Info
- 11. PREAMP / ADAT IN / S/PDIF IN Section
- 12. Headphone (HP 1) volume slider
- 13. Headphone (HP 1) 'Mute' button
- 14. Headphone (HP 2) volume slider
- 15. Headphone (HP 2) 'Mute' button
- 16. Talkback button / indicator light & Talkback volume fader
- 17. Routing Section
- 18. 'From' Section (from Routing tab)

- 19. 'To' Section (from Routing tab)
- 20. Mixer Section
- 21. Effects Section
- 22. Meters Section
- 23. Presets
- 24. Undo/Redo Routing; Save/Load (from Routing tab)
- 25. Hi-Z and Line (Front inputs on TRS) modes selectable via dropdown menu (please ensure your selection from the dropdown menu matches the type of signal being inputted)



26. Mic and Line (Rear inputs on TRS / XLR combo) modes selectable via dropdown menu (please ensure your selection from the dropdown menu matches the type of signal being inputted)



- 27. Channel Gain (value adjustable in 1 dB steps), Ctrl+Left-Click (Win) / Cmd+Left-Click (Mac) mutes the channel
- 28. 48V Phantom Power Switch (independently assignable)
- 29. Peak Meter
- 30. Phase Inverse button
- 31. Stereo Link



8.2. Mixer Tab

- 1. Fader (double-click to reset to zero)
- 2. Fader Level indication
- 3. Solo
- 4. Mute
- 5. Stereo Link
- 6. Pan (double-click to reset to zero)
- 7. Send (double-click to reset to zero)
- 8. Master Mix Fader (double-click to reset to zero)
- 9. Master Mix Level indication
- 10. Master Mix Mute
- 11. Mixer 1-4 Show/Hide

Zen Tour offers four software low latency mixers which provide near zero latency mix and monitoring that can be distributed to any output from the control panel.

For example, you can drag all of the 24 USB PLAY channels to MIXER 1 channels and then drag and drop MIX 1 L/R to LINE OUT 1&2 providing a stereo bus mix to LINE OUT channels 1 and 2.

The low latency mixers provide all basic functions of a real mixer such as: Solo, Mute, Pan, Stereo Link, Volume Level fader control and a Master Fader, so you can easily make a stereo mix plus an Auxiliary send in order to use AuraVerb.

AuraVerb is a powerful and flexible algorithmic reverb effect powered by ZenTour's Custom FPGA-based DSP. It provides near zero-latency effect monitoring without taxing your CPU. AuraVerb can also be used as a hardware effect from your DAW. That way you can take advantage of its rich and unique sound while mixing or mastering.

By default the effect is switched off.





Quick Start

AuraVerb appears as a pre-fader send effect on the Zen Tour's Mixer 1. To send a signal to the reverb, turn up the send control on a mixer channel and use the reverb output level to adjust the return to the mixer's master channel. To hear the reverb, route the mixer output to your monitors by clicking and dragging MIX 1 [1] [2] to MONITOR [1] [2] on the routing matrix. Fine tune the reverb mix by balancing between the dry signal on the mixer channel's fader and the reverb Output Level knob.

AuraVerb Parameters

Color

AuraVerb's Color control allows you to adjust the overall tone of the reverb. On "0" the space created is darker, like a lushly carpeted area. On "100" the reverb sounds the brightest, which can add some sizzle to a lead vocal, for example.

PreDelay

PreDelay is a common function on most reverb effects and allows you to create a bit of space between the source and the onset of reverb by controlling the amount of delay time that precedes the initial reverberated sound. 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 these late bursts of reflections, either to create dedicated echoes or to support the spatial impression of the simulated acoustic space.

AuraVerb allows you to fine tune several other parameters for even deeper control of the acoustic environment you are designing.

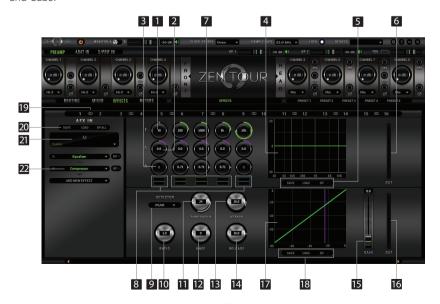
- Richness
- Reverb Time
- Room Size
- Reverb Level

AuraVerb offers 24 presets suitable for a variety of genres and instruments.

The S & L icons stand for saving and loading your own AuraVerb presets.

8.3. Effects Tab

Click on the Effects Tab to reveal the 16 AFX Channel strips. The Zen Tour Effects tab allows you to stack up to 8 effects (viewable in pairs) on each channel strip. You can choose between EQ (including classic hardware EQ emulations), Compressor, Vintage Guitar Amps and Cabs.



EΩ

- 1. Frequency Adjust Dials (double-click to return to default)
- 2. Gain Adjust Dials (double-click to return to default)
- 3. Q Factor Adjust Dials (double-click to return to default)
- 4. Frequency Band Analysis Screen
- 5. Save / Load / Bypass
- 6. EQ Output Metering
- 7. Selectable High Pass or High Shelf Filter (in green)
- 8. Bandpass / Notch Filter (in blue / red)

Compressor

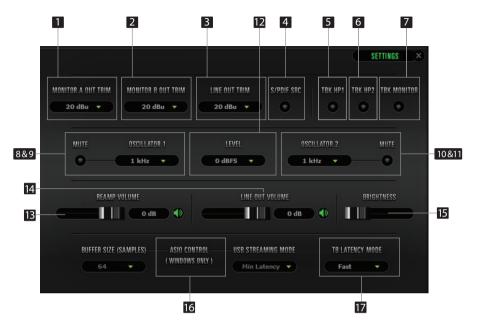
- Detector
- 10. Ratio
- 11. Threshold
- 12. Knee
- 13. Attack
- 14 Release
- 15. Gain
- 16. Compression Meter
- 17. Compression Curve
- 18. Save / Load / Bypass
- 19. Stereo Link
- 20. Save / Load / Bypass All
- 21. Select Preset
- 22. Add Effect to Channnel Strip & Bypass

8.4. Meters Tab

The Meters tab allows you to measure the volume levels of all audio signals coming from and to the Zen Tour. A dropdown menu allows you to easily switch between the routing



matrix sections, whose signal levels you want to visualize. The peak meters shown in the Meters Tab will appear on the Zen Tour display as well.



8.5. Settings Tab

Click on the gear icon to open the "Settings" window.

- 1. Monitor A Out Trim
- 2. Monitor B Out Trim
- Line Out Trim
- S/PDIF SRC
- 5. Talkback HP1
- 6. Talkback HP2
- Talkback Monitor
- 8&9. Oscillator 1 Frequency and Mute 10&11. Oscillator 2 Frequency and Mute
- 12. Oscillator Level
- 13. Reamp Volume
- 14. Line Out Volume
- 15. Brightness Adjusts the front panel display brightness
- 16. Windows only: ASIO Control Buffer Size & USB Streaming Mode
- 17. Thunderbolt™ Latency Mode

9. In the Box

- Zen Tour Portable Thunderbolt™ and USB AD/DA Interface
- Wall Wart Power Supply Unit
- Cleaning Cloth
- 1 USB cable
- Owner's Manual
- Warranty Card

10. Troubleshooting

Start up and Sound

Are you running the latest control panel and firmware?

If not, please update your control panel and firmware.

Note: Before performing a firmware update disconnect or switch of all peripherals and ensure only the Power Supply and USB/ThunderboltTM connections are still active.

• Are you correctly routing the audio signal via the routing panel?

For Thunderbolt™ or USB playback, route the Thunderbolt™ or USB-play channels to the Line Out channels by dragging and dropping from the top section to the bottom.

 Have you set the correct sample rates matching your DAW with your computer's sound and the Zen Tour?

On Mac, first check that the sample rate is correct in the audio midi setup, then proceed to check in the DAW before finally checking the Zen Tour sample rate.

For Windows, first check in play back devices, right click on the Zen Tour then click properties before then moving to the advanced tab. Then repeat the above by checking the DAW's sample rate, the Zen Tour's or your ASIO drivers.

Connectivity

If you believe there is no sound being received to an input or delivered from an output:

- Check your source. Is there a signal being transmitted form the source?
- Is your source in the correct sample rate for the Zen Tour to receive?

- Try a different cable and another source if available.
- Check the routing on the control panel. Have you routed the signal path correctly?
- If you have routed signals to the routing mixer, check their corresponding fader is up.
- Check the relevant peak meters of the control panel by selecting them in the drop down menu to see if the relevant signal is being received or is being outputted.
- Check if the Output / Input you're having issues with is not muted.

DAW

- What buffer size is your DAW set to?
- If it is significantly low i.e. lower than 128 samples in your buffer size, try increasing it.
 Try increasing the buffer size from the Zen Tour control panel (Windows Only)
- Have you checked the input and output routing is correct in your DAW?
- Is the ZenTour device selected in the relevant sound card section of the DAW's preferences?

If the Zen Tour doesn't show up in you DAW, first try unplugging and plugging back the Thunderbolt™ cable (or the USB cable), then restarting your Computer and finally re-install the firmware, drivers and control panel for the Zen Tour.

11. Technical Specifications

Inputs

Analog	4 x Hi-Z / Line inputs on TRS ¼ jacks on front 4 x Mic / Line inputs on XLR & TRS ¼ combo on rear	
Digital	2 x ADAT (up to 16CH) 1 x S/PDIF	

Outputs

Analog	2 x Main Monitor outs on TRS ¼ jacks 2 x Stereo Headphone outs on TRS 2 x ReAmp outs on TRS 1 x Line out on D-SUB 25, +20dBu, 56 Ohms	
Digital	2 x ADAT (up to 16CH) on optical fibre 1 x S/PDIF on RCA	
USB I/O:	1 x USB 2.0 Hi-Speed; Data stream up to 480 Mbits/192kHz, 24 channels I/O, Type-B	
Thunderbolt™	1 x Thunderbolt™ (32x32 channels I/O)	

D/A Main Monitor Converter

Dynamic Range	129 dB
THD + N	-108 dB

D/A Converter

Dynamic Range	120 dB
THD + N	-107 dB

A/D Converter

Dynamic Range	124 dB
THD + N	-112 dB
MIC Preamp	
Gain	0 – 65 dB
THD + N	-108 dB

Clock Specs

Clocking System	4th Generation Acoustically Focused Clocking 64-bit DDS Oven Controlled Crystal Oscillator
Clocking Stability	<+/-0.02 ppm, oven controlled at 64.5°C/ 148.1°F
Clocking Aging	< 1 ppm per year
Clocking Calibration	<+/-0.001 ppm
Sample rates (kHz)	32, 44.1, 48, 88.2, 96, 176.4, 192
Operating temperature	0-50°C/32-122°F
Power Supply	DC Universal Input 18V
Power Consumption	25 Watts Max

Dimensions & Weight

Width	255 mm / 10"
Height	59 mm / 2.3"
Depth	167 mm / 6.6"
Weight	1600 g

12. Antelope Audio Support Resources

Antelope Audio offers a range of services and support resources for your Antelope hardware, firmware and software control panels.

FAO

Several categories of frequently asked questions are available on the website: http://www.antelopeaudio.com/en/support

Telephone Support

Phone line is for general inquiries and technical support: +1 734 418 8661 Hours of Operation: 7:00 a.m. – 3:00 p.m. (EST)

Help Desk

A ticketing system ensures a 24-hour response time: www.antelopeaudio.com/en/support/help-desk

Live Chat

Connect with a customer support agent directly via the website: http://www.antelopeaudio.com/en/support
Click on Antelope Tab on the right-hand side of the webpage Hours of Operation: 7:00 a.m. – 3:00 p.m. (EST)

Control Panel Newsfeed

The software control panel for Zen Tour incorporates a newsfeed at the bottom, which displaysall new updates and relevant information:

Facebook Page

Get social with Antelope Audio and never miss an update: https://facebook.com/AntelopeAudio/

YouTube Page

Tutorial videos, interviews, user cases and promos for forthcoming products: http://goo.gl/yfOmZf

Web Blog

Regular blog posts will update you on the latest user cases with the Zen Tour: http://antelopeaudio.com/products/zen-tour/

Notes



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contact. This product should not be mixed with other commercial wastes for disposal.

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