

PureAudio

Lotus DAC5 SE User's Manual V1.2

August 2022



FCC Notice - Declaration of Conformity Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

WARNING : Only peripherals complying with the FCC class B limits may be attached to this equipment.

Changes or modifications made to this equipment, not expressly approved by us or parties authorized by us could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

EU Declaration of Conformity



Hereby, PureAudio, Inc. declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

The manufacturer of this product is PureAudio, Inc., No. 33, Cukengkou Rd., Ruifang Dist., New Taipei City 224, Taiwan .
The Authorized Representative for EMC and product safety is PureAudio, Inc., No. 33, Cukengkou Rd., Ruifang Dist., New Taipei City 224, Taiwan .

For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

For customers in Europe

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

SAFETY INSTRUCTIONS

There are two categories of Safety Instructions included in this manual :

- Product Warnings, (i.e., what must never be done to assure avoiding those hazards that could cause bodily injury or property damage); and
- User Directions (i.e., what must always be done to assure the safe use of your device).

The Safety Instructions contained in this manual have been categorized in accordance with the seriousness of the potential hazards through the use of Signal Words. Those Signal Words, and their intended meanings, are as follows:

DANGER : Indicates that a failure to observe the Safety Instructions could result in death or catastrophic bodily injury.

WARNING : Indicates that a failure to observe the Safety Instructions could result in serious bodily injury.

CAUTION : Indicates that a failure to observe the Safety Instructions could result in minor bodily injury or property damage.

NOTE : Designates important information that relates to activities and/or conditions that might result in loss of data and/or damage to your device.

Safe Use and Operation of Your Device

This equipment emits stray RF energy and will interfere with the reception of signals by airborne electronic navigational devices or medical devices. Do not operate this equipment near any sensitive medical devices.

WARNING : Use only grounded AC power cords.

Always immediately disconnect the power to the equipment in the event the device emits an unusual odor or sound or generates smoke.

WARNING : Never attempt to disassemble, repair or make any modification to your device. Disassembly, modification or any attempt at repair could cause bodily injury or property damage, as well as damage to the device itself.

WARNING : Your device is not a toy. Never allow children to play with your device. Misuse, rough or improper handling of your device by children could result in serious bodily injury for any of the enumerated safety warnings in this manual. In addition, always keep all accessories and components out of the reach of small children as small parts might present a choking hazard. Seek immediate medical attention if choking occurs or if any small part has been swallowed.

CAUTION : Never raise the sound volume level too high when using your device with earphones. An excessive sound volume level could cause damage to your hearing.

WARNING : To reduce the risk of fire or electric shock, do not expose the unit to moisture or water.

Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.

Read all the instructions before connecting or operating the component.

Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Do not use this unit near water.

You must allow a minimum 10 cm or 4 inches of unobstructed clearance around the unit. Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling. Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel. Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable.

Do not route the power cord where it will be crushed, pinched, bent, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where the cord exits the back of the unit.

The power cord should be unplugged from the wall outlet during a lightning storm or if the unit is to be left unused for a long period of time.

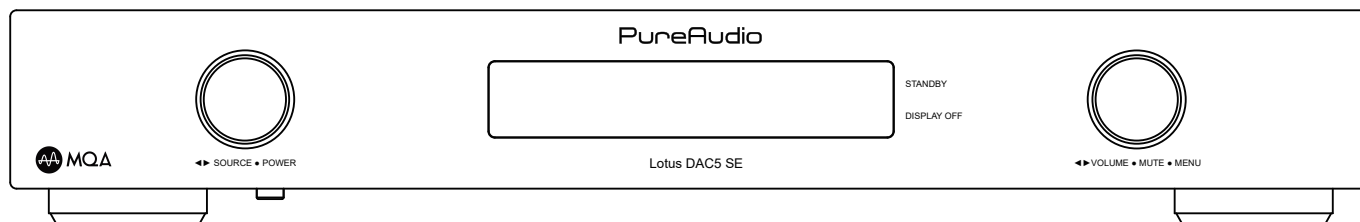
Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:

- The power supply cord or plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit shows signs of improper operation.

The unit has been dropped or damaged in any way

Quick Start Guide

1. Front Panel View



SOURCE and POWER :

Briefly press to ON/Standby mode.

Turn the knob to switch between inputs.

In menu mode, turn the knob to switch menu item.

MUTE, MENU and VOLUME :

Brief press to Mute/Unmute.

Long press for more than 3 seconds to enter the Menu/exit the Menu.

Turn the knob to adjust volume.

In menu mode, turn the knob to switch item value.

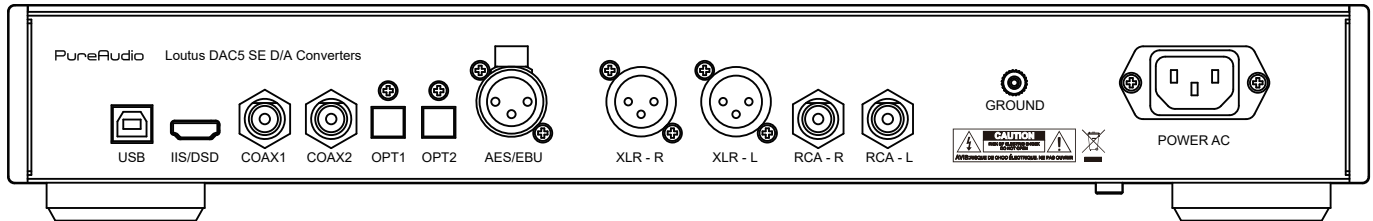
STANDBY LED :

The LED lights up, indicating that the DAC5 SE is in the standby state.

DISPLAY OFF LED :

The LED lights up to indicate that the power to the display is turned off.

2. Rear Panel View



Digital Inputs :

USB : USB slot is for connecting with the B Type to A Type USB 2.0 version cable to PC's USB port which is able to send digital audio up to PCM 768KHz / DSD 512 and MQA.

IIS/DSD : With HDMI cable to transfer IIS and DSD data from source devices, Accept up to PCM 384KHz / DSD256 and MQA. Do not connect to the HDMI output of Set Top Box or BD / DVD player.

Coaxial Inputs: Accept up to PCM 384KHz, DOP up to DSD 128 and MQA.

Optical Inputs: Accept up to PCM 192KHz, DOP DSD 64 and MQA.

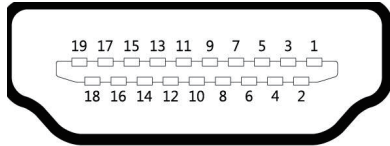
AES/EBU Input: Professional digital input accepts up to PCM 192KHz, DOP DSD 64 and MQA.

Analog Outputs :

1x Balanced Stereo Audio Output (XLR MALE)

1x Stereo Audio Output (RCA)

3. IIS / DSD Pin define



PIN1 : SDATA - / DSD R-

PIN2 : GND

PIN3 : SDATA + / DSD R+

PIN4 : BCK + / DSD CLK +

PIN5 : GND

PIN6 : BCK - / DSD CLK -

PIN7 : LRCK - / DSD L -

PIN8 : GND

PIN9 : LRCK + / DSD L +

PIN10 : NC

PIN11 : GND

PIN12 : NC

PIN13 : NC

PIN14 : NC

PIN15 : NC

PIN16 : NC

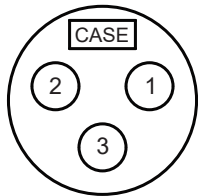
PIN17 : GND

PIN18 : NC

PIN19 : +3.3V OUTPUT (50mA)

Note : Due to various brands and custom specifications, we do not guarantee that all IIS/DSD sources are compatible.

4. AES / EBU (XLR FEMALE) Pin define

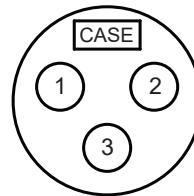


Pin 1 : Ground

Pin 2 : Positive (+)

Pin 3 : Negative (-)

5. Analog XLR (MALE) Pin define :



Output Phase : Postive

Pin 1 : Ground

Pin 2 : Positive (+)

Pin 3 : Negative (-)

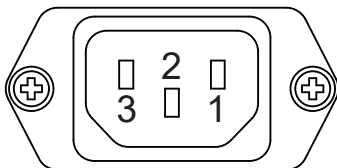
Output Phase : Negative

Pin 1 : Ground

Pin 2 : Negative (-)

Pin 3 : Positive (+)

6. AC Inlet : Connect the supplied mains lead to the AC IN (115V or 230 V) terminal on the rear panel.



Pin 1 : Live Conductor : L

Pin 2 : Ground Conductor : PE

Pin 3 : Neutral Conductor : N

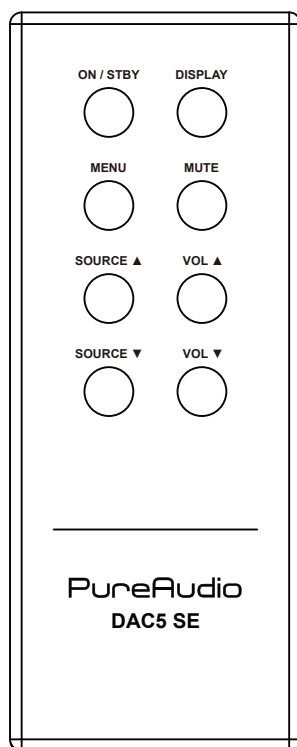
AC Voltage Selector : Make sure that the AC voltage selector switch at the bottom of the unit is switched to the appropriate voltage for your country. All Lotus DAC5 SE are shipped with the switch set to 230V AC in order to prevent accidental damage.



7. Ground terminal : Chassis ground.



8. Remote Control



ON / STBY : Press to put the unit into standby mode or turn it on.

DISPLAY : Turn off / on display.

MENU : Press to enter setting mode or return to the previous screen.

MUTE : Mute / Unmute audio.

SOURCE ▲▼ : Select the playback source, or navigate menu items in menu mode.

VOL ▲▼ : Increase / Decrease volume, or navigate item value in menu mode.

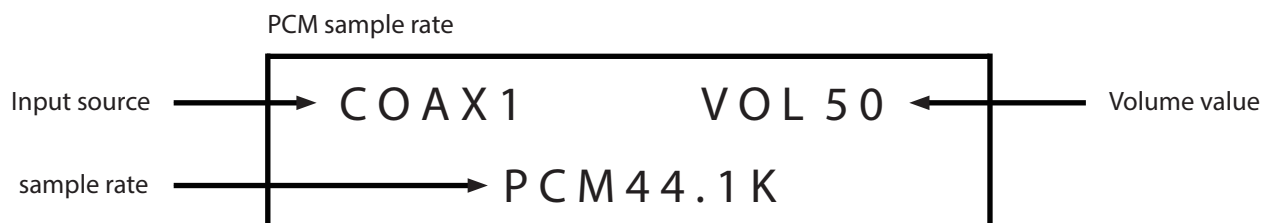
Battery Replacement:

To change the battery, please remove the 4 screws and the bottom cover to reveal the battery casing.

9. Start Up

Turn on the DAC5 SE display will first show PureAudio and Lotus DAC5 SE.

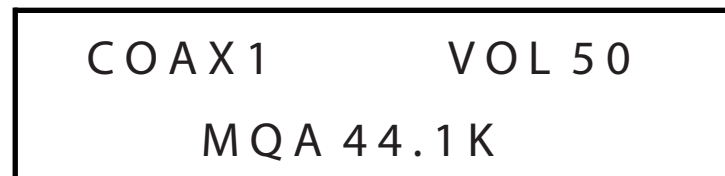
Next, the usage status when the power was last turned off will be displayed. For example, the input is COAX 1, the volume is 50, and the sampling rate is PCM 44.1KHz or other formats as shown below.



DSD sample rate



MQA original sample rate



MQA Studio original sample rate

COAX1	VOL 50
MQA STUDIO	44.1K

10. Setup menu

Pressing the MENU button will display the set value when you left the menu last time, For example entering the menu will first display as follows.

Menu item	→	SAMPLE RATE ADJUST
Item value	→	OFF

Menu item : Turn the left knob on the front panel or SOURCE ▲▼ on the remote control to switch the menu setting items.

Item Value : Turn the right knob on the front panel or VOL ▲▼ on the remote control to switch item value.

11. Menu structure

The menu items appear in the order shown on the right.

SAMPLE RATE ADJUST



DIGITAL FILTER



LINE OUT LEVEL



LINE OUT PHASE



LINE OUT SETTING



RCA OUTPUT



XLR OUTPUT



JITTER TOLERANCE



DIMMER



11- 1. SAMPLE RATE ADJUST

Converts received PCM or DSD signals to other PCM or DSD formats.

OFF (default)

The original input signal is sent directly to the D/A converter without conversion, Please set to OFF before playing MQA music to avoid noise.

PCM 384K or DSD 11.2M

This means that the input source is converted to PCM or DSD and then sent to the D/A converter.

11- 2. DIGITAL FILTER

The Digital Filter function primarily changes characteristics outside the audible frequency, They cannot affect changes within the audible frequency, You can choose the following digital filter.

LINEAR PHASE FAST (Linear phase fast roll-off filter) (default)

LINEAR PHASE SLOW (Linear phase slow roll-off filter)

APODIZING FAST (Apodizing fast roll-off filter)

HYBRID FAST (hybrid, fast roll-off, minimum phase filter)

BRICK WALL (Brick wall filter)

MINIMUM PHASE FAST (Minimum phase fast roll-off filter)

MINIMUM PHASE SLOW (Minimum phase slow roll-off filter)

11- 3. LINE OUT LEVEL

The volume can be set to variable or fixed output.

VARIABLE (default)

FIXED 0dB

FIXED -6dB

11- 4. LINE OUT PHASE

Adjust the sound output phase, the output phase of RCA and XLR will change at the same time, please adjust according to the power amplifier you use.

POSTIVE (default)

NEGATIVE

11- 5. LINE OUT SETTING

You can choose to have the left and right channel outputs swapped or work in single channel mode.

OUTPUT : L - R (default)

OUTPUT : R - L

OUTPUT : L - L

OUTPUT : R - R

11- 6. RCA OUTPUT

Used to enable or disable RCA connector output analog audio.

ENABLED (default)

DISABLED

11- 7. XLR OUTPUT

Used to enable or disable XLR connector output analog audio.

ENABLED (default)

DISABLED

11- 8. JITTER TOLERANCE

For the tolerance setting of input signal jitter, this adjustment is only valid for COAX 、 OPTICAL and AES/EBU.

LOW (default)

MEDIUM

HIGH

Note : Setting to HIGH may affect the reception of signals above 192KHz.

11- 9. DIMMER

Two-level display brightness adjustment.

BRIGHT (default)

DARK

12. Windows Driver install

12 - 1. System requirements

Win 7 / 8 / 8.1 / 10 (32/64-bit)

12 - 2. Windows Installation Process

Please connect the DAC5 SE to the computer before installing the Windows driver.

12 - 3. Driver install

- 1). Please visit <https://www.pureaudiolab.com> and download the latest driver.
- 2). Open the driver folder and click setup.exe the driver will installer, connect the unit along with the source device.
- 3). Follow the onscreen directions, Please allow 3 ~ 5 minutes for the installer to complete. On older computers, it may take longer.

Note : During the setup the hardware device must be connect to your PC source device and when the message appear to ask for disconnect and reconnect, follow the instruction and when finish doing so click on "OK". The source device should recognize the PureAudio USB device and a message will show on the bottom.

13. Uninstall Windows Driver

- 1). Open the control panel from START and double click on the control panel then select add or remove pograms.
- 2). Select PureAudio USB USBAudio Driver and click remove.
- 3). Click Yes to confirm the removal.

14. Mac Installation Process

There is no installation require for Mac system however, a simple setting is require in order to allow the PureAudio USB Audio to be active.

15. MQA - Master Quality Authenticated

The DAC5 SE includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording. The front panel display indicates if the MQA stream is detected. 'MQA' or 'MQA Studio' indicates that the product is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. "MQA Studio" indicates it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner. For more about MQA please visit: <http://www.mqa.co.uk/>

'MQA and the Sound Wave Device are registered trade marks of MQA Limited. © 2016'

Note: During MQA playback, the Sample rate conversion function will be disabled and force to off mode also digital filter function will be disabled and force to MQA custom filter mode.

16. Technical Specifications

16 - 1 Inputs : Rear panel

- USB : Type B 2.0 Hi-Speed, Windows / Supports PCM 44.1KHz ~ 768KHz / DSD 512 and MQA.
Type B 2.0 Hi-Speed, Mac / Supports PCM 44.1KHz ~ 768KHz/24Bit and DOP 256.
- IIS/DSD : Supports PCM 44.1KHz ~ 384KHz and DSD 256 data streams.
- COAXIAL : Supports PCM 44.1KHz ~ 384KHz / DOP 64, 128 and MQA.
- OPTICAL : Supports PCM 44.1KHz ~ 192KHz / DOP 64 and MQA.
- AES/EBU : Supports PCM 44.1KHz ~ 192KHz / DOP 64 and MQA.

NOTE : DOP (DSD over PCM).

16 - 2. Outputs : Rear panel

- RCA unbalanced outputs : 4 Vrms.
- XLR balanced outputs : 8 Vrms.
- Output Impedance: < 50 Ohm.
- Frequency response: 20 Hz - 20 KHz / ± 0.3 dB.
- SNR: > 110 dB.
- THD+N: < 0.0005%.

17. GENERAL

- Power Supply: AC voltage selector switch at the bottom of the unit, 115V or 230V.
- Dimensions [W x H x D]: 430 mm x 55 mm x 315 mm (Including foot pad height 69 mm).
- Weight: 5.6 Kg
- Power consumption: Standby under 0.9W

18. Package content

- The Lotus DAC5 SE DAC (Silver or Black).
- Aluminum remote (Silver).
- Power cord.

Note

- Design and specifications are subject to change without notice.
- Illustrations in this manual might differ slightly from production models.

PureAudio Limited Warranty and Limitation of Liabilities

ADDITIONAL RIGHTS

For consumers, who are covered by consumer protection laws or regulations in their country of purchase or, If different, Their country of residence, The benefits conferred by this warranty are in addition to all rights and remedies conveyed by such consumer protection laws and regulations. This warranty does not exclude, Limit or suspend any rights of consumers arising out of nonconformity with a sales contract. Some countries, States and provinces do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on how long an implied warranty or condition may last, So the limitations or exclusions described below may not apply to you. This warranty gives you specific legal rights, And you may also have other rights that vary by country, State or province. This limited warranty is governed by and construed under the laws of the country in which the product purchase took place.

LIMITED WARRANTY

For a period of ONE (1) Year from the date of retail purchase by the original end-user purchaser ("Warranty Period"), PureAudio warrants (in) this product against defects in materials and workmanship, and (ii) that each product, unmodified and under normal use and conditions, will substantially comply with PureAudio ' applicable written technical documentation for the product. PureAudio reserves the right to make substitutions and modifications from time to time in the specifications of products sold by PureAudio, provided that such substitutions or modifications do not materially affect overall product performance.

If a hardware defect exists and a valid claim is received within the Warranty Period, at its option and to the extent permitted by law, PureAudio will (1) repair the hardware defect at no charge, using new or refurbished replacement parts, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or (3) refund the purchase price of the product. PureAudio may request that you replace defective parts with user-installable new or refurbished parts that PureAudio provides in fulfillment of its warranty obligation. A replacement product/part assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes PureAudio's property. When a refund is given, your product becomes PureAudio's property.

OBTAINING WARRANTY SERVICE

If you purchased the product in the U.S., deliver the product, at your expense, to any PureAudio Service Center located in the U.S. If you purchased the product outside of the U.S., deliver the product to any PureAudio Authorized Importer in the country where you purchased the product. Be aware, however, that not all countries have PureAudio Authorized Service Providers ('NASP') and not all Authorized Service Providers outside the country of purchase have all parts or replacement units for the product. If the product cannot be repaired or replaced in the country it is in, it may need to be sent to a different country or returned to the country of purchase at your expense for repair or replacement. If you seek service in a country that is not the country of original purchase, you will comply with all applicable import and export laws and regulations and be responsible for all custom duties, V.A.T. and other associated taxes and charges. Where international service is available, PureAudio may repair or exchange defective products and parts with comparable products and parts that comply with local standards. You can always deliver the product to PureAudio U.S. main service center for obtaining warranty service, however, you may have to pay for return shipping cost.

PureAudio may send you user-installable new or refurbished replacement product or parts to enable you to service or exchange your own product ("DIY Service"). Upon receipt of the replacement product or part, the original product or part becomes the property of PureAudio and you agree to follow instructions, including, if required, arranging the return of original product or part to PureAudio in a timely manner.

When providing DIY Service requiring the return of the original product or part, PureAudio may require a credit card authorization as security for the retail price of the replacement product or part and applicable shipping costs. If you follow instructions, PureAudio will cancel the credit card authorization, so you will not be charged for the product or part and shipping costs. If you fail to return the replaced product or part as instructed or the replaced product or part is not eligible for warranty service, PureAudio will charge the credit card for the authorized amount.

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to hardware products manufactured by or for PureAudio that can be identified by the "PureAudio" trademark, trade name, or logo affixed to them. The Limited Warranty does not apply to any non-PureAudio hardware products or any accessories, even if packaged or sold with PureAudio hardware. Non-PureAudio manufacturers,

suppliers, may provide their own warranties. Other accessories distributed by PureAudio under the PureAudio brand name are not covered under this Limited Warranty. This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, liquid contact, fire, earthquake, non-PureAudio products, or other external causes; (b) to damage caused by service performed by anyone who is not a NASP; (c) to a product or a part that has been modified without the written permission of PureAudio; (d) to consumable parts, such as batteries, or protective coatings designed to diminish over time unless failure has occurred due to a defect in materials or workmanship; (e) to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports; (f) to defects caused by normal wear and tear or otherwise due to the normal aging of the product; or (g) if any PureAudio serial number has been removed or defaced.

Important: Do not open the hardware product. Opening the hardware product may cause damage that is not covered by this warranty. Only PureAudio or a NASP should perform service on this hardware product.

This warranty and remedies set forth above are exclusive and lieu of all other warranties, remedies and conditions, Whether oral or written, Express or implied. PureAudio specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If PureAudio cannot lawfully disclaim implied warranties under this limited warranty, All such warranties, Including warranties of merchantability and fitness for a particular purpose are limited in duration to the duration of this warranty. No PureAudio reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

PureAudio is not responsible for direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory, Including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and property, Any costs of recovering, reprogramming, or reproducing any program or data stored in or used with PureAudio products, and any failure to maintain the confidentiality of data stored on the product. PureAudio specifically does not represent that it will be able to repair any product under this warranty or make a product exchange without risk to or loss of programs or data.

PureAudio shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration to the duration of this warranty.

PureAudio

<https://www.pureaudiolab.com>