Audio Armor Manual

As of 1st of March 2026

Product Information

Input Power: 5V DC 1A   **Operating Current:** 200ma Average

Device Dimensions: 30x60x60mm   **Materials:** TPU, PLA

Operating Temperature: 0 - 60°C

Safety Instructions

Please Read Before Use

- Never disassemble or attempt to modify the product in anyway.
- Do not expose to excess water, humidity or sunlight.
- Always use the protective covers when wearing the device.
- Do not place near sources of heat such as radiators.
- If using the Minirig speaker at max volume for long periods of time, it is highly recommended that the user wears ear protection to avoid damage to hearing.
- For servicing and repair, please contact the manufacturer.
- Do not exceed your own physical limits when operating this device.

EU(CE)

Dreadnoise declares that the product Audio Armor is in full compliance with all required EMC, Radio and Safety directives.

FCC

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.

NOTE: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

UK Manufacturing Address:

Dreadnoise, 17 Moss Side Crescent, Biggar, South Lanarkshire, ML126GE

Contact:

Liam@dreadnoise.com

Required Components

Anker Nano Power Bank (22.5W, Built-In USB-C Connector) USA

Anker Nano Power Bank (22.5W, Built-In USB-C Connector) UK

Minirig 4 Portable Speaker

Operating instructions

Quick Start Guide

- Begin by installing the Minirig speaker and power bank into their holders
- Attach the 3.5mm AUX cable between the Audio Armor Device and the speaker.
- Attach the USB-C cable between the power bank and the Audio Armor Device. This will switch on the Audio Armor Device. Always switch on the Device before the minirig speaker to avoid pops in the speaker.
- Put the harness on by lifting above your head and clipping in the hooks. Adjust the fit using the straps until the harness is secure and comfortable.
- Switch on the Minirig speaker by single clicking the middle button between the "+" and "-" buttons. Use the buttons to adjust volume as necessary.
- You should now hear sound as you move your body around, including movement textures, footsteps, and vocals. You can trigger the Front and Back sounds by either tilting your body forward or backward.
- Check out the tutorial for further information: https://www.dreadnoise.com/audio-armor

Settings

- You can enter settings by pressing the middle touch button at the bottom of the screen.
- To scroll to different settings pages, use the bottom left and right touch buttons.
- You can switch the screen off by pressing the middle touch button again.
- The screen will switch off after 10 seconds of no activity.

Body Texture

- Body Texture sounds are controlled by angular movements and impacts sensed by the Audio Armor device
- This motion data is used to control the volume and playback speed of the sound.
- Hi Vol adjust the high point of the volume
- Lo Vol adjusts the minimum volume of the body texture. This can be used if you wish to have continuous sound even when not moving. 0 means no audio while idle, and 1-5 increasing in percentages towards the high-volume point.
- T Sns is "Turn Sensitivity", which changes the scale of the angular velocity data. A sensitivity of 1 will set the scale to be very large, meaning larger movements are required to reach max volume. A sensitivity of 5 will set the scale to be very small, meaning small movements will max out the volume. Setting this to 0 will switch off the angular input.
- I Sns is "Impact Sensitivity", which changes the scale of the impact detection data.
- Attack and Release is the amount of smoothing applied to the data as it travels up and down. A value of 1 will see the data move very fast, allowing for sharp movement sounds. A value of 5 will see the data move very slow, allowing for a long smooth movement sound.
- Warp controls the playback speed of the body texture. The increased number drops the starting playback speed down to a maximum of 1/3 speed. The warp control is linked to the same data as the volume control, so as you move faster, the speed will increase back to its original speed.

Step

- This sound is triggered by the device detecting your foot hitting the ground.
- Vol will adjust the volume.
- Sense will adjust the threshold that is considered a step. With 1 setting the threshold high so only large steps will trigger, and 5 setting the threshold low, so even small impacts will trigger it. Large jolts in torso movement can also cause a step trigger, so the sensitivity will need adjusted with your movement type.

Idle/Walk

- Idle Sounds are what plays when no other trigger is currently active. The other triggers being Walking, Front and Back.
- Idle is the bottom level of the 4 triggers, so by triggering walking, front or back, idle will fade out, and only fade back in once the other triggers have stopped.
- Walking is either a set of sounds, or a single looping sound that is triggered by sensing a step. The sound will continue to play as long you keep walking at a certain interval, determined by "W Int" or "Walk Interval". Walk Interval goes between 750ms at 1, to 3 seconds and 5. Once there has been no stepped sensed for the intervals amount of time, it will return to the idle sound.
- "X-Fade" refers to the crossfade time when changing from idle to walking, or walking to idle, with 1 being an immediate change, and 5 being a slow gradual change.

Front/Back

- These sounds are triggered by tilting your body forward or backward at a particular speed.
- **WARNING: you do not need to jolt your back harshly to trigger these. There is no neck movement required to trigger these. They are triggered by simple movements like moving from a standing position to crouching over or crouching over to standing up straight.**
- You can adjust the individual sensitivity of these triggers to find a point that doesn't false trigger.

Calibration

- All devices are calibrated during manufacturing, however if you notice the Body Texture sound feeling offset in certain movements, you can re-calibrate the device by holding down the middle button during the startup screen. Keep the device still on a flat surface while the calibration counts down.

SD Card

- All sounds and settings for the Hub are stored on the Micro SD card included with the product.
- To change the sounds, first power down the Device, and remove the SD by pushing it into the device, and it should pop out.
- Load it onto your computer.
- You will see a presets folder, and an update folder
- Each preset has its own folder, containing a samples folder, a config file, and a convertor program.
- To make your own preset, copy one of the existing presets, and rename it however your like.
- To change samples, simply drag and drop Wave files into the corresponding folders. You can have up to 30 different files in each folder, apart from the body texture folder which can only have 1.
- You can keep the same config settings file as the previous preset, or if you want to refresh it back to default, delete the file, and a new one will be generated on startup of the Audio Armor device.
- **The accepted file type for sound files is: 44.1khz, 16-bit mono Wave file with no metadata. Any other file type will result in failure to play**.
- If you are a Windows user, you can use the convertor program to set the current files in the sample folder to this format. If you are a Mac user, you will need to edit your sounds manually in any audio editing software.
- WARNING: Please only use the type of SD card included with the product, which is the *Sandisk Ultra 32Gb Micro SD*. Using other cards can result in faulty behaviour.

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- The update folder is where you would place any firmware updates that the device may have. You can find the latest firmware available at: https://www.dreadnoise.com/audio-armor

Recommendations for Sound editing

Body Texture

- Be at least 10 seconds long to avoid obvious repetition.
- Equal volume throughout. Dense audio removes the chance of "quiet peaks" where the user would go to make a loud movement sound at the same time the sample goes through a quiet section.
- Exported at maximum volume (compression/limiting recommended)
- rendered as a loop to make the loop point as hidden as possible.

Triggers and steps

- remove all blank space from the beginning of the audio file to make them appear as low latency as possible with the triggering.
- Exported at maximum volume (compression/limiting recommended)

Charging

- Please see the charging instructions for the power bank and Minirig in their manuals.

Instructions on Disposing

- All packaging is recyclable. Please dispose of this in accordance with your local recycling regulations.
- The device should not be treated as household waste. Please dispose of them in accordance with your local recycling regulations or return them to the manufacturer.

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