





USER MANUAL

v1.7.0

Please read this manual carefully before using the software.

Using headphones requires responsible listening!

Last updated: October 2020

Copyright © 2020 by Dear Reality GmbH

All Rights Reserved



Quick Start Guide

Install and authorize your new plugin:

If you do not have an account, register for free on the [Plugin Alliance website](#).

Double-click the .mpkg (Mac) or .exe (Win) file

Follow the installation instructions.

Open the plugin in your DAW of choice and click on the interface to activate.

If your computer is connected to the Internet, click the "I'm Online" button and enter your Plugin Alliance credentials on the following page.

Alternatively:

For offline activation instructions and additional information, please refer to the Activation Manual included in the installation folder of this plugin.

You may also follow this link to the online version of the manual.

For more information, please visit: www.plugin-alliance.com

System requirements and supported platforms

Supported sample rates:

44.1, 48, 88.2, 96, 176.4 and 192 kHz.

For latest System requirements & Supported Platforms, please check the product list page on the Plugin Alliance website to see particular details for your product.



Table of contents

1	Introduction	5
2	Virtual Mix Room.....	6
3	dearVR MONITOR.....	8
3.1	Input	9
3.2	Control Room.....	9
3.3	Output module	12
3.4	Performance	12
4	DAW integration	13
4.1	Pro Tools.....	13
4.2	Nuendo 10.....	14
4.3	Logic Pro X.....	16
4.4	Reaper	16
5	Speaker setups	17
6	Contact	29



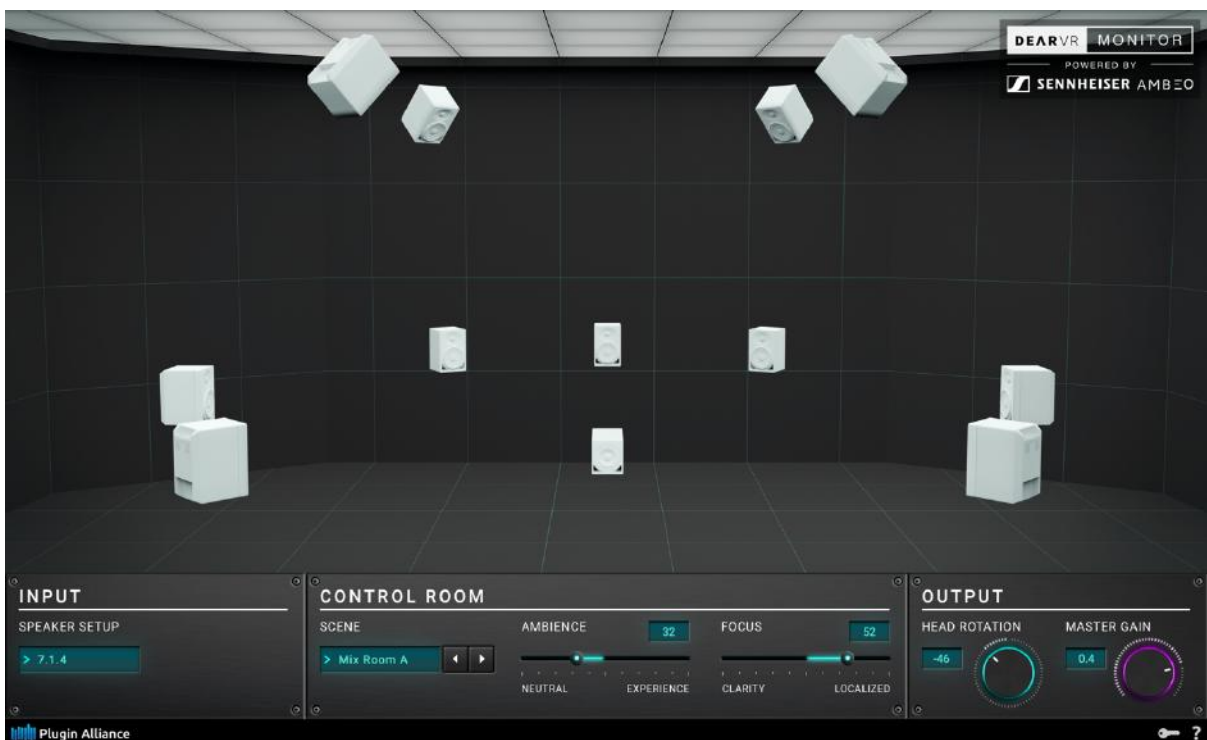
1 Introduction

Thank you for purchasing our dearVR MONITOR plugin, and welcome to your personal reference-grade mix room.

Relying on Reality's outstanding binaural headphone technology, dearVR MONITOR combines the analytic advantages of headphone listening, such as high detail resolution, and good spatial representation, with the perception of mixing in a perfectly matched control room.

Don't limit yourself anymore by poor room acoustics or missing speaker setups. Mix with greater confidence and accuracy anytime, anywhere, and in any common speaker setup from Stereo up to 9.1.6. This manual will help you understand the plugin and how to use it in your projects.

Have fun!





2 Virtual Mix Room

It's not secret, creating a great mix is so much easier within a perfect control room. We've probably all experienced when a final mix has not translated as expected to other systems. With dearVR MONITOR you now access your own virtual mix room over headphones.

Developing dearVR MONITOR the aim was to create a reference-grade "virtual mix room" for all sorts of audio productions, genres, and loudspeaker formats. For a long time, the audio industry has been defining the characteristics of control rooms, even though „the perfect“ mix room de-facto does not exist. Everyone defines it slightly differently, and that's fine.

However, there are definitely certain characteristics that define a reference mix room:

- a certain reverb time
- a defined spatial geometry
- no reflections that color the sound
- a very diffuse reverb tail

When modeling a virtual mix room, we could have measured the parameters of "legendary" mix rooms and transferred them afterward to a software plugin. But what real benefit would you have working in this captured studio control room? You've probably never worked in there in reality and probably never will... and even if you did... maybe you don't like the mix room's acoustic characteristics?

That's why we took a different approach for dearVR MONITOR. If THE perfect mix room doesn't exist, but we know the characteristics of a good reference room, why don't we leave it up to you to customize YOUR perfect mix room?

We believe that a good sounding control room is a very subjective thing and should therefore be flexible within certain limits. It becomes a perfect control room for you when



you feel comfortable with the room's characteristics and perception and feel "at home" or in other words, when the room seems plausible to you.

The adjustable parameters include the main effects that influence the sound image in a real room, and which are neglected in conventional stereo headphone playback:

- the size of the room
- the distance between the loudspeaker and the listener
- the characteristics of the control room

We deliberately programmed all parameters into just two sliders - Ambience and Focus, which are easy to understand and can be adjusted within a range of 0 to 100 for AMBIENCE and a range of -100 to 100 for FOCUS.

With dearVR MONITOR you benefit from steady listening conditions, even outside your studio, and whether for recording or monitoring sessions. This allows you to take advantage of all benefits of a real reference listening room, where a sound engineer can easily assess the quality of an existing recording. The more often you work in this particular room, the easier it is for you to judge how the recording would sound in a different environment.

dearVR MONITOR also puts you just a few clicks away from listening to your recording in a different environment, so you can be sure that your "living room" mix will sound great in a small car!

Our aim is to ensure that you do what you do best when setting up your personal control room: Listen to your ears!

Simply experiment with the room parameters of your virtual control room. As soon as you feel that your setup sounds realistic and pleasant, you've done it! You have created your own personal reference control room that you can now take with you wherever you go.



3 dearVR MONITOR

Being inserted in the master bus of your DAW, dearVR MONITOR enables you to monitor a variety of loudspeaker configurations on any regular headphones. The plugin is divided into two main areas. On top, you find a comprehensive visualization of your virtual mix room and the selected speaker setup. The control panel below contains three sections providing you with direct access to all important parameters:

1. Input
2. Control room
3. Output

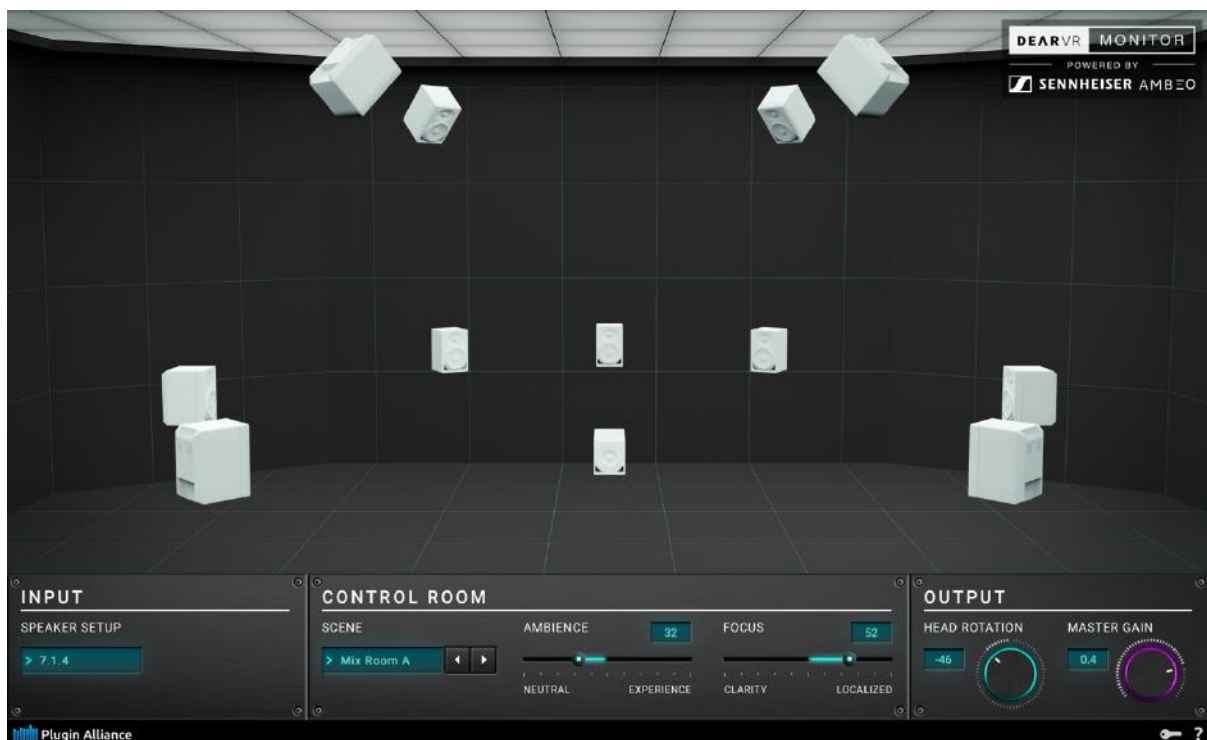


Illustration 3.1 - Plugin Overview



3.1 Input

dearVR MONITOR lets you choose between 32 common speaker setups, starting from Stereo up to 7.1.4 and 9.1.6. Simply select in the input module the speaker setup that fits your recording. You find a complete list of all setups and their speaker configuration at the end of the manual.



Illustration 3.2 - Input Section

3.2 Control Room

Using Dear Reality's outstanding virtual acoustics headphone technology, dearVR MONITOR combines the analytic advantages of headphone listening with the perception of mixing in a perfectly matched mix room. dearVR MONITOR comes with five mix room characteristics which can be selected in the SCENE menu.



Type	Description
Mix Room A	A truly perfect tuned mix room. Very short, linear reverberation time with almost no colorations.
Mix Room B	Another variant of Mix Room A with slightly broader room dimensions and livelier sound characteristics.
Mix Room Large	Larger Mix Room with increased speaker distance – perfectly suitable for immersive speaker setups with a height layer.
Analytic Dry	No reflections and no room response at all. Imagine a perfect anechoic room. Just the pure sound coming from the virtual loudspeakers.
Analytic Position	Few early reflections added for improved location and externalization of audio sources. Optimal mix room to position objects in immersive speaker setups.



Illustration 3.3 - Control section

dearVR MONITOR lets you easily adapt the virtual mix rooms to your taste using the AMBIENCE and the FOCUS sliders. Use the AMBIENCE slider to set the amount of diffusion, and therefore the vividness of the virtual mix room. With FOCUS you select the right stop between overall coloration and localization, based on the patented Clarity algorithm by Sennheiser AMBEO.



Illustration 3.4 - AMBIENCE and FOCUS Parameter



Moreover, dearVR MONITOR provides you with 11 common listening environments. Does your mix pass the car test? Stop spending hours double-checking how your mix translates into common listening scenarios. Simply select the desired scenario in the SCENES menu.

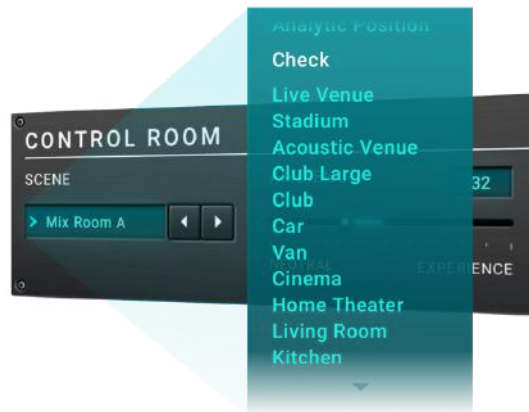


Illustration 3.5 - Overview Check Scenes

dearVR MONITOR puts you just a few clicks away from monitoring your production in the following acoustic environments:

Type	Description
Live Venue	Mid-sized venue with notable slap back reflections from hard surfaces. Medium reverberation and low-end smear.
Stadium	Long reverberation time and strong slap back delay with distinct high frequencies and much overlay.
Acoustic Venue	Well-treaded venue for acoustic performances with bright reflections and a well-balanced, medium-long, reverberation time.
Club Large	A large club with heavy reflections, and low-end smear. Large speaker distance.
Club	Smaller and acoustically well treated club with a pleasant and direct sound.
Car	Middle-class car with a small volume leading to a boomy sound and phase reflections.
Van	Larger van with a more HiFi matched sound impression.
Cinema	Standard medium sized and acoustically treated cinema.
Home Theater	Small but well acoustically treated living room with a rather boomy low end.
Living Room	Small and reflection room with a tonal low-mid range reverberation.
Kitchen	Smaller but reflective room with hard surfaces and audible low mid reverberation.



3.3 Output module

Head rotation is a crucial factor when it comes to localizing sounds in the three-dimensional space. Therefore, dearVR MONITOR provides you with the possibility to simulate rotating your head in the virtual mix room to judge your mix precisely and accurately. Control the overall output volume of the dearVR MONITOR using the master gain. Because of the plugin structure, the different speaker setups use different gain compensation values within their categories to ensure distortion free summation.

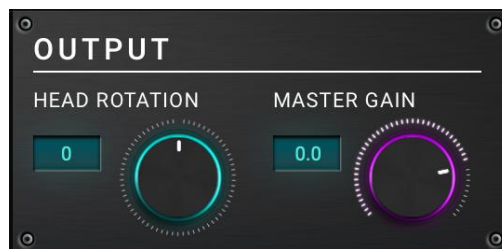


Illustration 3.6 - Output Module

Pro Tip – Level compensation for A/B listening

Of course, your mix should also work on headphones! You can use the Master gain to compensate for gain differences between the plugin output, according to the chosen parameter, and the bypassed plugin. Note, that you should pay attention to your levels, so no clipping is introduced in your plugin chain!

3.4 Performance

DearVR MONITOR drains a lot of performance, especially when using configurations with a multichannel speaker setup. Therefore, if you encounter any performance issues, we recommend to try a lower sample rate setting. If you are still experiencing performance issues, try to use a smaller space with less reverb.



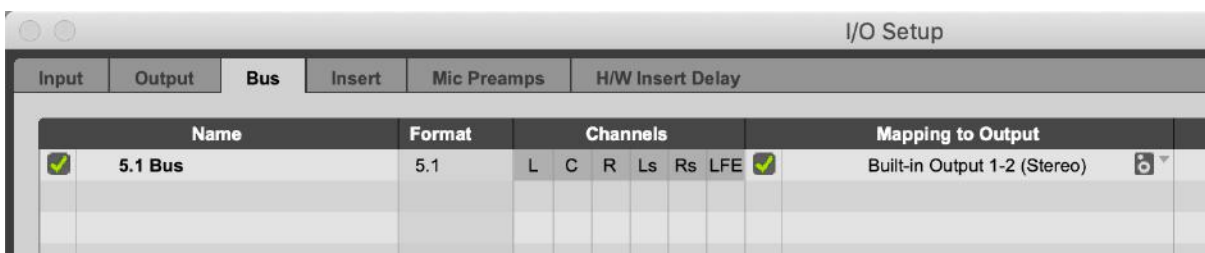
4 DAW integration

4.1 Pro Tools

- Create an output bus for the format you want to monitor.
- Route all your sources to this bus.
- Create a master bus for the bus and put dearVR MONITOR on it.



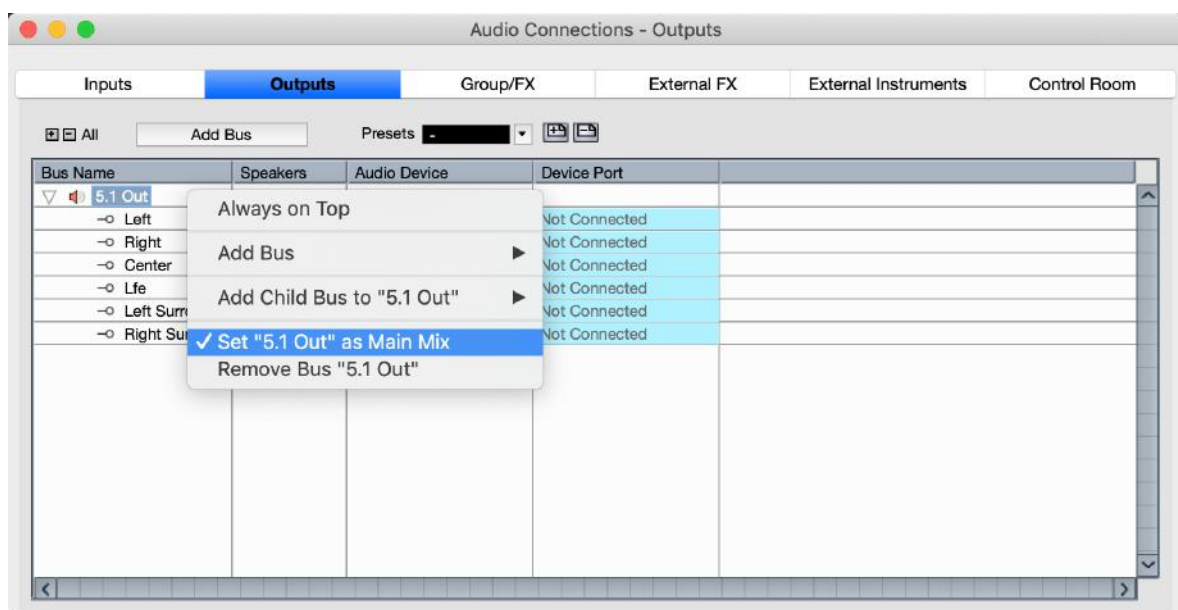
- Configure dearVR MONITOR as you need it.
- To connect the bus to your headphones output you need to go to Setup -> I/O and search for Bus. There you can connect your bus to the output.



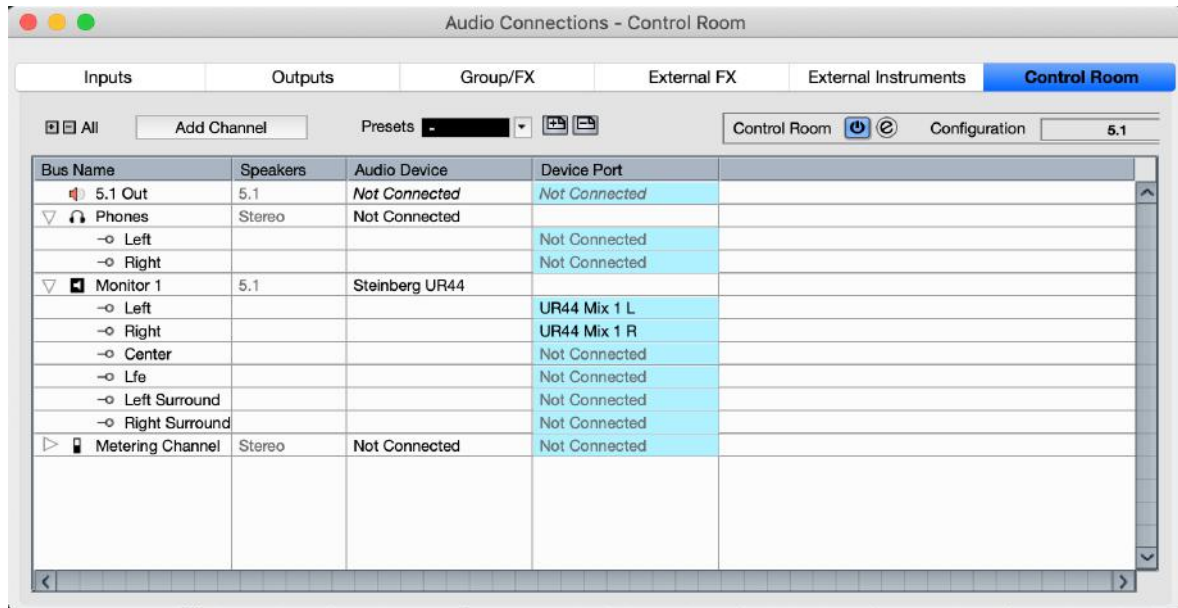


4.2 Nuendo 10

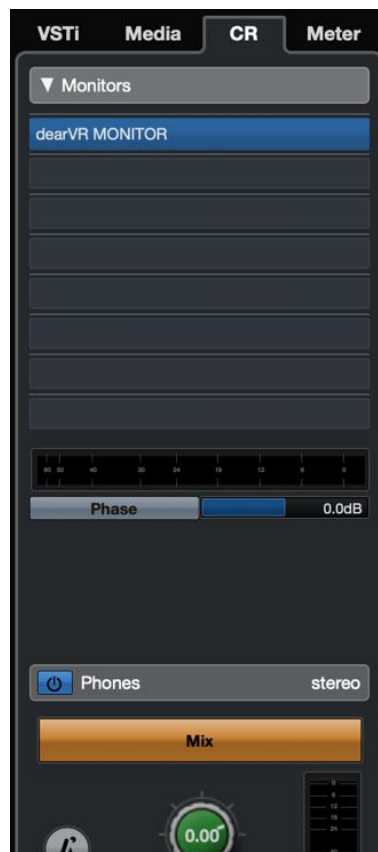
- Go to Studio -> Audio Connections
- Create an Output for the output format you want to work with. Right-click on it and select it as your main mix. This ensures you can bounce your session in the correct format properly.



- Move there to the Control Room tab.
- You will have a Main mix in your multichannel format. Create a Monitor by right clicking on the window and select "Add Monitor" with the same configuration as your main mix and assign your headphones output.



- Go to Studio -> Control Room and move there to the tab "Inserts"
- Place dearVR MONITOR on the Monitor you just created.





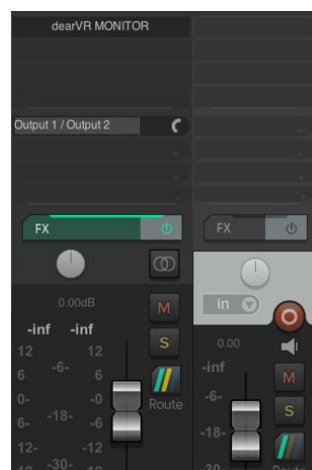
4.3 Logic Pro X

In Logic Pro X you can simply put dearVR MONITOR on the master channel to monitor your mix. Since Logic Pro X uses a different channel configuration for surround formats internally, please use the designated input configurations for Logic. If you are using dearVR MONITOR with dearVR PRO, you can use the regular configuration.



4.4 Reaper

In Reaper you can simply put dearVR MONITOR on your master bus and select the correct input configuration to monitor your mix.



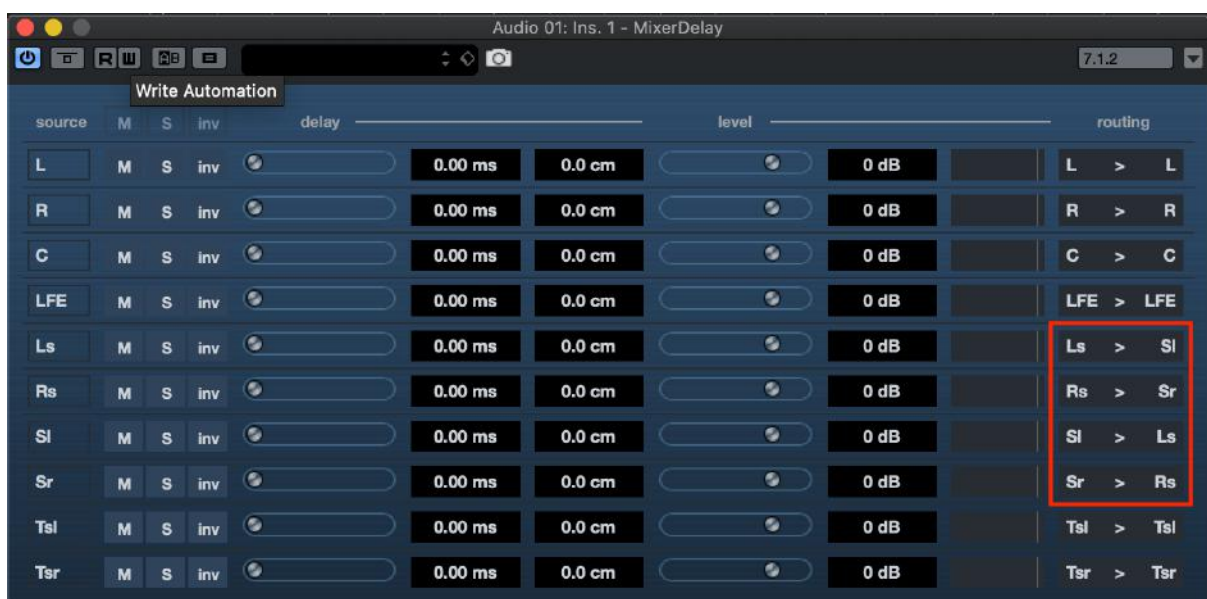


5 Speaker setups

dearVR MONITOR supports 32 different speaker setups. We strive to provide you with all relevant speaker setups for audio productions and will regularly update our database to adapt dearVR MONITOR to the latest DAW setup changes. With dearVR MONITOR we currently support all track formats which are available in Pro Tools. For higher channel counts, which are not available in Pro Tools, we focus on the Nuendo layout. We marked the setups which are only supported by specific DAWs in the following section. Even if a setup is not supported with the native panner of your DAW, you can reroute the flipped channels to make MONITOR work again with your native panner.

Pro Tip – Adjusting channel order in NUENDO

If you run into any problems with mixed up channels in Nuendo you can use the MixerDelay plugin to switch channels in your signal flow. You can also use it to configure formats that are not compatible natively with dearVR MONITOR. In the following screenshot, you can see an example for switched side surround and surround channels in a 7.1.2 setup.





Type	Description
L	Left
R	Right
C	Center
BC	Back center
LC	Left center
RC	Right center
LFE	Low frequency effects
SL	Surround left
SR	Surround right
SB	Surround back
SSL	Side surround left
SSR	Side surround right
SBL	Surround back left
SBR	Surround back right
HFL	High front left
HFR	High front right
HFC	High front center
HBL	High back left
HBR	High back right
T	Top
TL	Top left
TR	Top right



Mono Input	
Channel Number	1
Channel Description	C
Azimuth	0°
Elevation	0°

Mono Summed		
Channel Number	1	2
Channel Description	L	R
Azimuth	0°	0°
Elevation	0°	0°

Stereo		
Channel Number	1	2
Channel Description	L	R
Azimuth	-30°	30°
Elevation	0°	0°

Stereo Wide		
Channel Number	1	2
Channel Description	L	R
Azimuth	-45°	45°
Elevation	0°	0°



LCRS				
Channel Number	1	2	3	4
Channel Description	L	R	C	SB
Azimuth	-30°	30°	0°	180°
Elevation	0°	0°	0°	0°

Quad				
Channel Number	1	2	3	4
Channel Description	L	R	SBL	SBR
Azimuth	-30°	30°	-135°	135°
Elevation	0°	0°	0°	0°

4.0				
Channel Number	1	2	3	4
Channel Description	L	R	SL	SR
Azimuth	-30°	30°	-110°	110°
Elevation	0°	0°	0°	0°

5.0 Film					
Channel Number	1	2	3	4	5
Channel Description	L	C	R	SL	SR
Azimuth	-30°	0°	30°	-110°	110°
Elevation	0°	0°	0°	0°	0°



5.0 ITU					
Channel Number	1	2	3	4	5
Channel Description	L	R	C	SL	SR
Azimuth	-30°	30°	0°	-110°	110°
Elevation	0°	0°	0°	0°	0°

5.1 Film						
Channel Number	1	2	3	4	5	6
Channel Description	L	C	R	SL	SR	LFE
Azimuth	-30°	0°	30°	-110°	110°	0°
Elevation	0°	0°	0°	0°	0°	-15°

5.1 ITU						
Channel Number	1	2	3	4	5	6
Channel Description	L	R	C	LFE	SL	SR
Azimuth	-30°	30°	0°	0°	-110°	110°
Elevation	0°	0°	0°	-15°	0°	0°

5.1 ITU Logic (Logic Pro X only)						
Channel Number	1	2	3	4	5	6
Channel Description	L	R	SL	SR	C	LFE
Azimuth	-30°	30°	-110°	110°	0°	0°
Elevation	0°	0°	0°	0°	0°	-15°

6.0

Channel Number	1	2	3	4	5	6
Channel Description	L	R	C	SL	SR	BC
Azimuth	-30°	30°	0°	-110°	110°	180°
Elevation	0°	0°	0°	0°	0°	0°

6.1

Channel Number	1	2	3	4	5	6	7
Channel Description	L	R	C	LFE	SL	SR	BC
Azimuth	-30°	30°	0°	0°	-110°	110°	180°
Elevation	0°	0°	0°	-15°	0°	0°	0°

7.0

Channel Number	1	2	3	4	5	6	7
Channel Description	L	R	C	SSL	SSR	SBL	SBR
Azimuth	-30°	30°	0°	-90°	90°	-135°	135°
Elevation	0°	0°	0°	0°	0°	0°	0°

7.1

Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	C	LFE	SSL	SSR	SBL	SBR
Azimuth	-30°	30°	0°	0°	-90°	90°	-135°	135°
Elevation	0°	0°	0°	-15°	0°	0°	0°	0°



7.1 SDDS (Pro Tools only)								
Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	C	LFE	SL	SR	LC	RC
Azimuth	-40°	40°	0°	0°	-110°	110°	-20°	20°
Elevation	0°	0°	0°	-15°	0°	0°	0°	0°

7.1 SDDS Logic (Logic Pro X only)								
Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	SL	SR	C	LFE	LC	RC
Azimuth	-40°	40°	-110°	110°	0°	0°	-20°	20°
Elevation	0°	0°	0°	0°	0°	-15°	0°	0°

5.0.2							
Channel Number	1	2	3	4	5	6	7
Channel Description	L	R	C	SL	SR	HFL	HFR
Azimuth	-30°	30°	0°	-110°	110°	-80°	80°
Elevation	0°	0°	0°	0°	0°	45°	45°

5.0.4 (Nuendo only)									
Channel Number	1	2	3	4	5	6	7	8	9
Channel Description	L	R	C	SL	SR	HFL	HFR	HBL	HBR
Azimuth	-30°	30°	0°	-110°	110°	-30°	30°	-110°	110°
Elevation	0°	0°	0°	0°	0°	30°	30°	30°	30°



5.1.2								
Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	C	LFE	SL	SR	LC	RC
Azimuth	-30°	30°	0°	0°	-110°	110°	-80°	80°
Elevation	0°	0°	0°	-15°	0°	0°	45°	45°

5.1.4 (Nuendo only)										
Channel Number	1	2	3	4	5	6	7	8	9	10
Channel Description	L	R	C	LFE	SL	SR	HFL	HFR	HBL	HBR
Azimuth	-30°	30°	0°	0°	-110°	110°	-45°	45°	-135°	135°
Elevation	0°	0°	0°	-15°	0°	0°	45°	45°	45°	45°

7.0.2									
Channel Number	1	2	3	4	5	6	7	8	9
Channel Description	L	R	C	SL	SR	SBL	SBR	TL	TR
Azimuth	-30°	30°	0°	-90°	90°	-135°	135°	-80°	80°
Elevation	0°	0°	0°	0°	0°	0°	0°	45°	45°

7.0.4											
Channel Number	1	2	3	4	5	6	7	8	9	10	11
Channel Description	L	R	C	SL	SR	SBL	SBR	HFL	HFR	HBL	HBR
Azimuth	-30°	30°	0°	-90°	90°	-135°	135°	-30°	30°	-135°	135°
Elevation	0°	0°	0°	0°	0°	0°	0°	30°	30°	30°	30°



7.1.2 (Nuendo only)										
Channel Number	1	2	3	4	5	6	7	8	9	10
Channel Description	L	R	C	LFE	SSL	SSR	SL	SR	TL	TR
Azimuth	-30°	30°	0°	0°	-90°	90°	-110°	110°	-80°	80°
Elevation	0°	0°	0°	-15°	0°	0°	0°	0°	45°	45°

7.1.4 (Nuendo only)						
Channel Number	1	2	3	4	5	6
Channel Description	L	R	C	LFE	SBL	SBR
Azimuth	-30°	30°	0°		-150°	150°
Elevation	0°	0°	0°	-	0°	0°

Channel Number	7	8	9	10	11	12
Channel Description	SSL	SSR	HFL	HFC	HRL	HBR
Azimuth	-90°	90°	-45°	45°	-135°	135°
Elevation	0°	0°	45°	45°	45°	45°



9.1.2 (Nuendo only)						
Channel Number	1	2	3	4	5	6
Channel Description	L	R	C	LFE	SL	SR
Azimuth	-30°	30°	0°	-	-90°	90°
Elevation	0°	0°	0°	-	0°	0°
Channel Number	7	8	9	10	11	12
Channel Description	SBL	SBR	SSL	SSR	TL	TR
Azimuth	-135°	135°	-60°	60°	-80°	80°
Elevation	0°	0°	0°	0°	45°	45°

9.1.6 (Nuendo only)								
Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	C	LFE	SBL	SBR	SL	SR
Azimuth	-30°	30°	0°	0°	-135°	135°	-90°	90°
Elevation	0°	0°	0°	-15°	0°	0°	0°	0°
Channel Number	9	10	11	12	13	14	15	16
Channel Description	SSL	SSR	HFL	HFR	HRL	HRR	HSL	HSR
Azimuth	-60°	60°	-45°	45°	-135°	135°	-90°	90°
Elevation	0°	0°	45°	45°	45°	45°	45°	45°



8.0								
Channel Number	1	2	3	4	5	6	7	8
Channel Description	L	R	SL	SR	HFL	HFR	HBL	HBR
Azimuth	-30°	30°	-110°	110°	-30°	30°	-110°	110°
Elevation	0°	0°	0°	0°	30°	30°	30°	30°

9.1										
Channel Number	1	2	3	4	5	6	7	8	9	10
Channel Description	L	R	C	LFE	SL	SR	HFL	HFR	HBL	HBR
Azimuth	-30°	30°	0°	0°	-110°	110°	-30°	30°	-110°	110°
Elevation	0°	0°	0°	-15°	0°	0°	30°	30°	30°	30°

11.1 (Nuendo only)						
Channel Number	1	2	3	4	5	6
Channel Description	L	R	C	LFE	SL	SR
Azimuth	-30°	30°	0°		-110°	110°
Elevation	0°	0°	0°	-	0°	0°

Channel Number	7	8	9	10	11	12
Channel Description	T	HFL	HFC	HFR	HBL	HBR
Azimuth	0°	-30°	0°	30°	-110°	110°
Elevation	90°	30°	30°	30°	30°	30°



13.1 (Nuendo only)

Channel Number	1	2	3	4	5	6	7
Channel Description	L	R	C	LFE	SBL	SBR	SL
Azimuth	-30°	30°	0°	-	-150°	150°	-110°
Elevation	0°	0°	0°	-	0°	0°	0°
Channel Number	8	9	10	11	12	13	14
Channel Description	SR	T	HFL	HFC	HRL	HBL	HBR
Azimuth	110°	0°	-30°	0°	30°	-110°	110°
Elevation	0°	90°	30°	30°	30°	30°	30°



6 Contact

Support

Please let us know if there are any questions concerning the dearVR Plugin.

If you need further assistance, please send an email to:

support@dear-reality.com

For the latest news concerning dearVR please visit our website at:

www.dearVR.com



Dear Reality GmbH
Binterimstraße 8
40223 Düsseldorf

Caution

Using headphones requires responsible listening. Damage to hearing occurs when listen to loud sounds with headphones over time.

- Set the volume control of your computer to a minimum when connecting your headphones.
- Set the volume in a quiet environment and select the lowest volume at which you can hear adequately.
- Do not turn the volume control to high, as this can cause permanent hearing damage.
- Be aware that you can adapt to higher volume settings over time, not realizing that the higher volume may be harmful to your hearing.

Dear Reality GmbH will in any event not be liable for any damage to hearing caused by loud sounds.

dearVR Copyright © by Dear Reality GmbH. All rights reserved.

All trademarks or registered trademarks are the property of their respective owners.

No part of this documentation may be reproduced or transmitted in any form by any means, electronic or mechanical, without permission in writing from Dear Reality GmbH.