

AUSTRIAN AUDIO

PolarDesigner3

Introduction

About PolarDesigner3

PolarDesigner allows you to smoothly control the polar pattern of your Austrian Audio OC818 or any other dual-diaphragm dual-output microphone in up to five frequency bands. PolarDesigner is not only used by engineers to gain access to the microphone's directivity in a versatile and unique way, but also by artists shaping their sounds creatively.

System Requirements

macOS 10.14 or later

Windows 11, 64 bit or later

Supported plugin formats: AAX, AU, VST3

Tested on ProTools, Cubase, Logic, Reaper

Microphone Setup and Routing

Connect the front-diaphragm signal (XLR out) to input 1/L of your audio interface, the rear-diaphragm (accessible via the OCC8 mini XLR cable) to input 2/R and set the polar pattern switch to the position showing the two cardioids. Please note: the front-diaphragm of OC818 is on the side showing the Austrian Audio logo.

Overview



Compare

Set and compare two settings of PolarDesigner. Please note: if you use the AB function of your DAW please do not use the Compare function of PolarDesigner (and vice versa). Either use the AB of your DAW or PolarDesigner.

Compare

A B

Zero latency mode

Use the zero latency mode for real-time applications such as monitoring during recording or in live sound. When activated, PolarDesigner will not cause any additional latency. Activating the zero latency mode deactivates all filtering, i.e. only broadband polar patterns can be set.

Zero latency

Number of bands

Get access to your microphone's polar pattern in one to five frequency bands. You will immediately see the pattern views as well as the directivity panel change.

1 2 3 4 5

Preset

Save and load your favourite PolarDesigner settings. Use the slide out menu to manage your presets. Show colleagues and friends how you use PolarDesigner to realise your own unique sounds by simply sending them a preset file.

Preset

Load >

Save

Pattern View

The pattern view displays the currently selected polar pattern for each active frequency band. The pattern colour makes it easy to determine the corresponding drag-line in the directivity panel and the corresponding sliders in the band slider section.

Frequency bands can be deselected from any pattern control by clicking on the pattern view icon.



Equalization control

Apply free-field or diffuse-field equalization to your OC818. These filters are designed specifically for use with the OC818. Both equalization techniques aim at generating a polar-pattern independent frequency response. Although different polar patterns have different sonic characteristics you might want to change the directionality of the microphone without changing the sound. Equalization control enables you to do that.

As reference we use the sound of the microphone in cardioid mode.

The free-field filter matches the sound of your custom polar pattern to the reference for recordings in free-field conditions, i.e. recordings of frontal sources in non-reverberant environments.

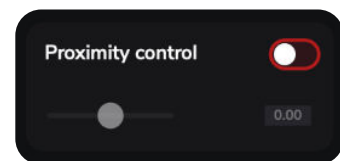
The diffuse-field filter does the same for non-frontal sources or recordings in reverberant environments.

We encourage you to try them out and listen to the results. Please note that these filters add an additional latency of 11ms and are therefore automatically disabled in zero-latency mode.



Proximity Control

The proximity effect creates a low-frequency boost for close sources recorded with pressure-gradient microphones (i.e. all microphones which have non-omnidirectional polar patterns). This bass boost gets stronger with closer sources and more directive polar patterns. When recording close sources, you will notice that the bass boost will be strongest when you choose the figure-of-eight pattern and will not be present in case of the omnidirectional polar pattern. However, you can use the proximity control to either apply a bass boost to the omnidirectional pattern (positive values) or to remove the bass boost from the more directive patterns (negative values). Ideally, the proximity control enables you to obtain constant bass boost (or constantly no bass boost) across all polar patterns. As the underlying filter is an infinite impulse response (IIR) filter, the proximity control does not add additional latency to your signal.



Terminator Control

The terminator control - of course the name hints to our favourite Austrian cyborg - is not about killing Sarah Connor, but about terminating spill (undesired crosstalk) from your recording.

Three different modes help you getting the most out of your signal: Click on „Terminate Spill“ and Terminator control will guide you through the process. After clicking the button, it will ask you to play back the spill. Choose a section of undesired signal (feel free to loop short parts) and let the algorithm analyze the signal for a couple of seconds. As soon as the algorithm is done with analysis it asks you to stop the playback. The algorithm will immediately set the polar pattern which minimizes the energy of the tracked signal.



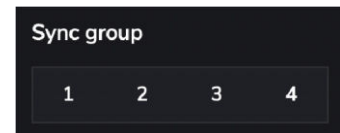
Alternatively, click „Maximize Target“ and play back the desired signal. After a couple of seconds, the algorithm asks you to stop play back and sets the polar pattern which maximizes the energy of the tracked signal.

Best results can be achieved by going one step further: Click on „Max Target-to-spill“ and run through the same process as described above. You will be asked to perform both steps „Terminate Spill“ and „Maximize Target“. Finally, hit the „Apply Max Target-to-spill“ button and the algorithm will set the polar pattern which maximizes the target-to-spill energy ratio.

Termination control detects spill and target through the averaged level. It averages during acquiring the signals. Make sure to play the desired/undesired signal within this timeslot.

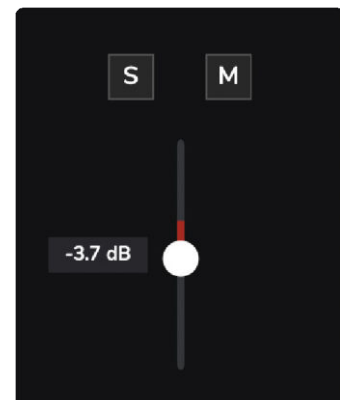
Sync group

The sync-channel section helps you to synchronize PolarDesigner instances across different tracks. Simply choose the same sync-channel on all PolarDesigner instances to be synchronized, and you will see all synced instances reacting to parameter changes applied to a single instance. A little warning: The last selected PolarDesigner instance in the Sync group will define the settings of your Sync group. We recommend to start adjusting the parameters after setting up the Sync groups.



Gain/Solo/Mute

In this section you can set gains and Solo/Mute for each frequency band.



For further questions please contact support@austrianaudio.com

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