



▶ RIME

USER MANUAL

V1.5.0

Please read this manual carefully before
using the software.



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1 Quick Start Guide

Install and authorize your new plug-in:

- Double-click the .pkg (Mac) or .exe (Win) file
 - Follow the installation instructions
 - Open the plug-in in your DAW of choice, enter your license code and click on ACTIVATE
- Please note that you need an active internet connection to activate the plug-in

Getting started:

- Set the right bus configuration on the top left (Stereo up to 7.1.4)
- Select the right headphone model on the top right
- You can fine tune the sound by using the two shelving EQs and the Ambiance amount

System requirements and supported platforms

- Supported sample rates: 44.1, 48, 88.2, 96, 176.4 and 192 kHz
- Supported buffer sizes: 64 to 2048

For latest System requirements & Supported Platforms, please check the product page on our website: www.neumann.com



2 Neumann RIME

RIME enables immersive monitoring of multichannel loudspeaker setups using Neumann headphones. It can be used as a plug-in on your DAW's master bus or as a standalone application.

1. SETUP
2. SPEAKER CONTROL SECTION
3. HEADPHONE PROFILE
4. HEAD TRACKING
5. OUTPUT SECTION



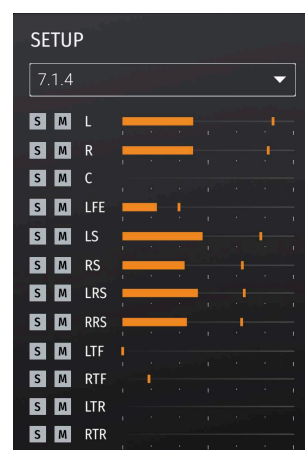
Plug-in Overview

2.1 SETUP

RIME gives you access to a virtual 7.1.4 studio. In the setup section you can choose to use either this setup or any of its sub-sets like e.g. Stereo or 7.0. This can help with performance if you are only working on a stereo or surround production and don't need all the available speakers. Depending on the channel width some setups may also not be available.

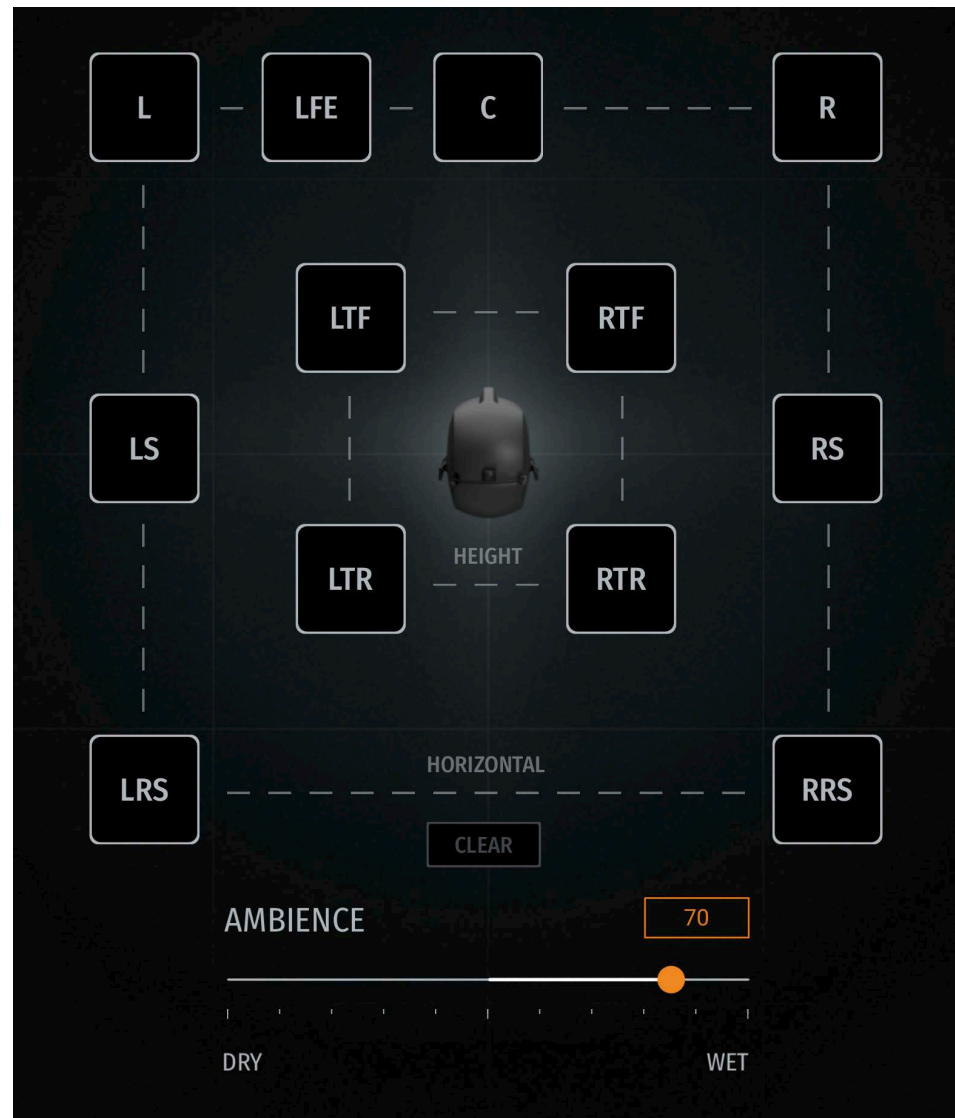
To use multichannel setups your DAW needs to support tracks with the corresponding channel count!

Below the dropdown for the input channel configuration, you can solo and mute all channels and visualize the input signal via the input metering. With this you can quickly see how the signals of your production are distributed. Depending on the used input channel configuration, some channels may be inactive.



Input Section

2.2 SPEAKER CONTROL SECTION



Speaker Control Section

The speaker control section of the RIME interface provides a comprehensive overview of your setup, allowing you to manage your virtual loudspeakers with ease. This section is designed to offer functionality similar to the MT48 audio interface, ensuring a familiar and intuitive user experience.

You can either solo (left click) or mute (right click) individual virtual loudspeakers by clicking directly on the speaker buttons or groups (all horizontal or all height speakers) by clicking on the areas between the speakers, enabling you to focus on specific elements of your mix. These controls provide the ability to isolate channels as needed for a better understanding of the audio production. To quickly reset everything to default you can use the CLEAR button.

Additionally, the Ambience parameter is located here, allowing you to control the level of the room response. By adjusting this parameter, you can fine-tune the room's characteristics to match your preferences and needs, ensuring an optimal monitoring environment. This also influences the perceived externalization of the binaural presentation.



2.3 HEADPHONE PROFILE

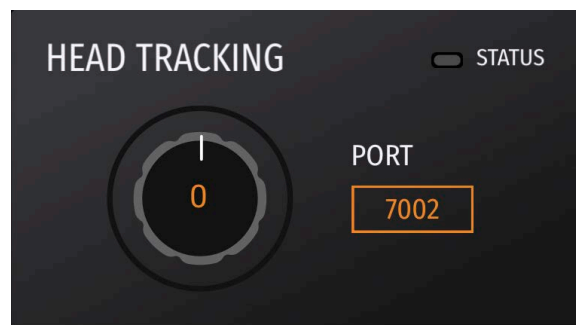


Headphone Section

The headphone profile section of RIME allows users to select their specific Neumann headphone to ensure the best possible audio monitoring experience. By choosing the correct headphone model, RIME can optimize its settings to match the unique characteristics of your headphone, providing accurate and reliable sound reproduction. Alternatively, you can disable the headphone adaptation by choosing the Generic profile. This allows you to use RIME with different headphones by other manufacturers, without any adaptation though.

In addition to selecting the headphone model, users can further customize the sound of RIME using two adjustable filters: a high shelf and a low shelf. These filters enable you to fine-tune the frequency response of RIME to match your preferred sound profile.

2.4 HEAD TRACKING



Headtracking Section

RIME supports head tracking in 3DoF via OSC (Open Sound Control). This gives you a more natural listening experience that feels closer to a real loudspeaker system.

For manual adjustments you can use the head rotation knob, this allows only the adjustment of the horizontal rotation (yaw). For the connection with an external OSC capable headtracker you can specify a network port, while the STATUS LED gives you information about the connection status.

In section 4 of the manual, you can find a step by step instruction to set up RIME with the recommended Supperware headtracker.



2.5 OUTPUT



Output Section

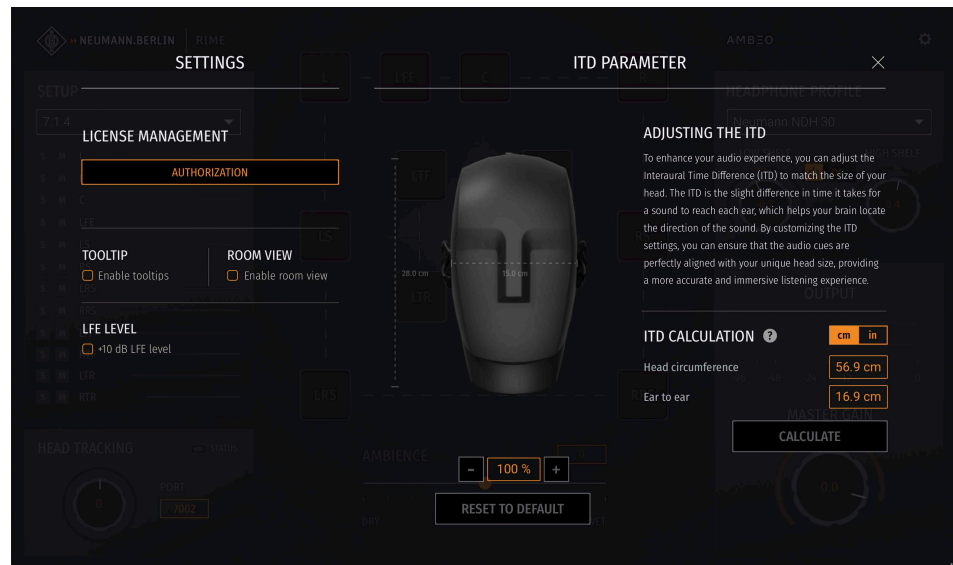
Here, you have access to a large Output metering, which includes both peak and RMS metering. This allows you to monitor your audio levels accurately, ensuring that your mix maintains the desired dynamic range and avoids clipping. When reaching 0 dBFS the indicator turns red.

The Bypass button allows you to quickly check how your mix sounds without the binaural rendering. When using more than 2 input channels, RIME will automatically apply an ITU-like downmix when using the Bypass. We recommend to use this Bypass instead of the Bypass from your DAW since it will keep the same loudness.

Additionally, the output section features the master volume control, giving you the ability to adjust the overall output level of RIME.



3 Settings Window



Settings Window

You can access the settings window by clicking on the cog button in the top right corner of the main UI.

3.1 License Management

By clicking the **AUTHORIZATION** button, you can access the authorization overlay. Here you can activate and deactivate your license, activate a trial or buy a new license via the Neumann shop. You can activate one license on two different machines. If you want to transfer a license from one machine to another, you first need to deactivate it on one of the currently used machines.

Please note that you need access to the internet to activate or deactivate RIME.

If you are offline for more than 365 days, RIME will ask you to input your license key again. This will not use an additional activation of your license though.

3.2 Tooltips

Check the tooltips checkbox to enable or disable the tooltips.

3.3 Room View

Enable the room view in the main UI with this checkbox. This can help you to get a better spatial impression of the setup and the room you hear within RIME.

3.4 LFE Level

By activating this checkbox, you will add 10 dB to the output of the LFE channel. This may be required within certain production workflows to ensure the right gain staging in your production.



3.5 ITD Parameter

On the right side of the settings page, you find the ITD parameter. The Interaural Time Difference (ITD) describes the difference in arrival time of a sound between the left and right ear. With this parameter you can increase or decrease the time difference of the KU 100 dummy head to match the size of your head.

Please note that the parameter is in % and in relation to the size of the KU 100.

3.6 ITD calculation

By measuring specific features of your head, RIME can calculate the best overall ITD scaling value for you. For this calculation to work you will need the head circumference and the ear to ear distance, also called intertragus distance. You can input these values in either cm or inch, please use the cm/in toggle button to switch between units. After inputting these values, you can calculate the best matching ITD scaling value for you by clicking the CALCULATE button. For further information about the measuring process, please click the “?” button to open a step by step guide on how to do these measurements. This will open a pdf with the description of this chapter of the RIME manual.

Measuring the head circumference and ear to ear / intertragus distance:

3.6.1 Measuring the head circumference

You will need:

- A flexible measuring tape (such as a tailor's tape)

Steps:

1. Stand in front of a mirror or have someone assist you.
2. Place the tape measure:
 - Start above your eyebrows, roughly at the center of your forehead.
 - Extend the tape around the sides of your head, passing just above your ears.
 - Ensure the tape lies flat and follows the curve of your skull, passing over the most prominent part at the back of your head.
3. Hold the tape snug but not tight. Avoid compressing your skin.
4. Note the measurement where the tape meets the starting point. Record this value in centimeters (cm) or inches (in).

3.6.2 Measuring Ear to Ear / Intertragus Distance

The Ear to Ear or intertragus distance is the distance between the tragus of your ears (the small cartilage projection at the front of each ear canal).

You will need:

- A ruler or measuring tape
- Glasses or sunglasses (optional but helpful)

Steps:

1. Sit or stand upright with your head level. Use a mirror to see both ears if working alone or have someone assist you.
2. Locate the tragus on each ear.
3. If available, put on a pair of glasses or sunglasses:
 - Align the glasses comfortably on your face.
 - Try to keep the glasses steady while taking them off.
 - Measure the distance between the temples, this should align very close to the ear to ear / intertragus distance.
 - If you do not have glasses at hand, hold the ruler or measuring tape horizontally in front of your head and try to project the distance between the tragus to the ruler or tape.
 - Record the distance in centimeters (cm) or inches (in).



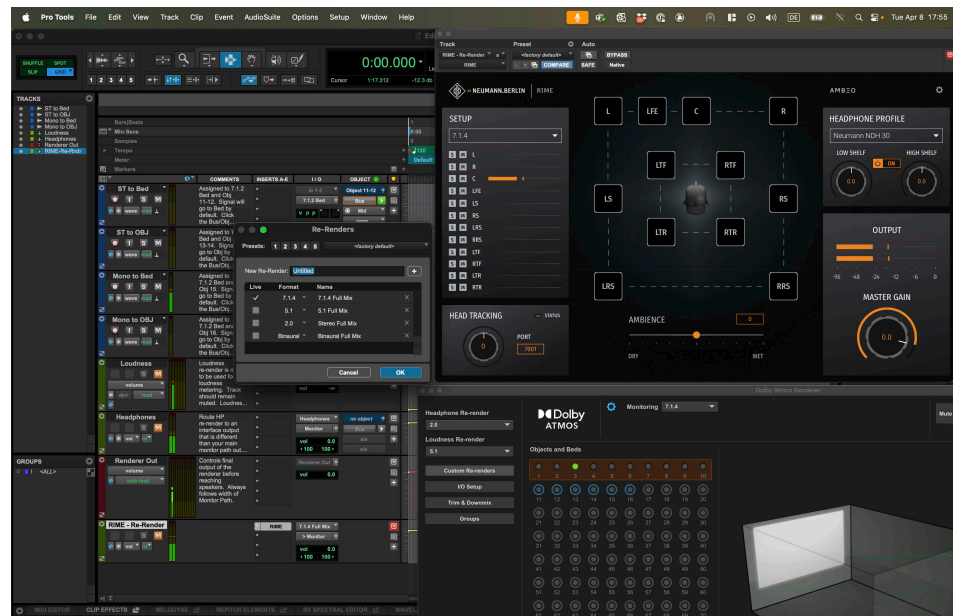
4 DAW integration including the Dolby Atmos Renderer

4.1 Pro Tools

For Pro Tools you have 2 options:

Option 1: You can put Rime directly on your master (7.1.4) output.

Please note that you need a 7.1.4 capable output for this and that you cannot use RIME on a different output channel.

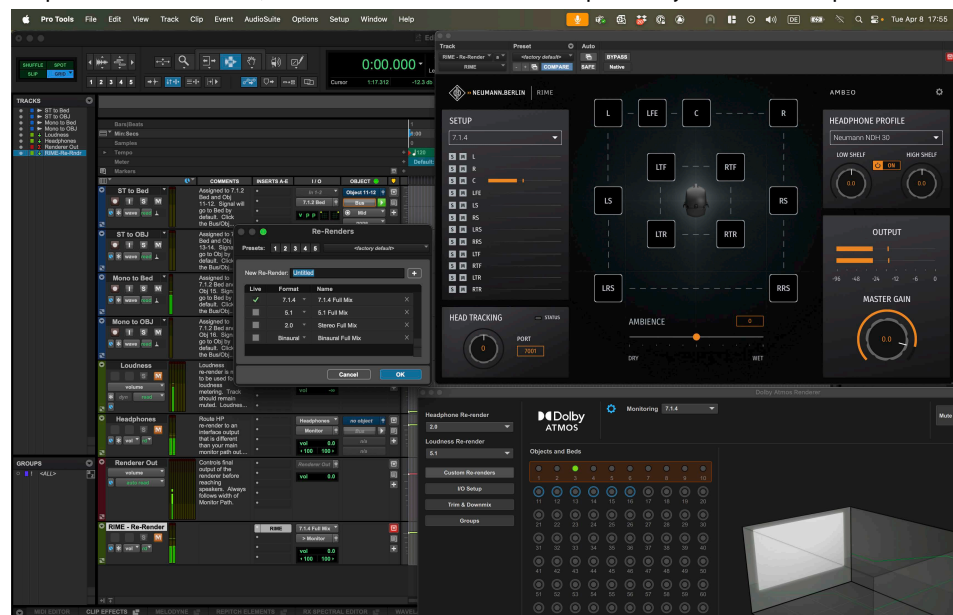


Option 2: Putting RIME on a custom re-render

For this you need to create a 7.1.4 re-renderer within the Dolby Atmos renderer.

This re-renderer can be used as an input for a new track.

The benefit of this option is that you can have your normal master output parallel to the RIME monitoring plug-in. Furthermore, this option can also be used when you only have a stereo output device connected, since the re-render does not depend on your master output.





4.2 Cubase/Nuendo

For Cubase/Nuendo you have 2 options:

Option 1: You can put Rime directly on your master (7.1.4) output.

Please note that you cannot use RIME on a different output channel then.



Option 2: Putting RIME in the control room section.

If you put RIME within the control room section, you can use it as one of many possible monitoring paths. On top of that it will be bypassed when you render your session.

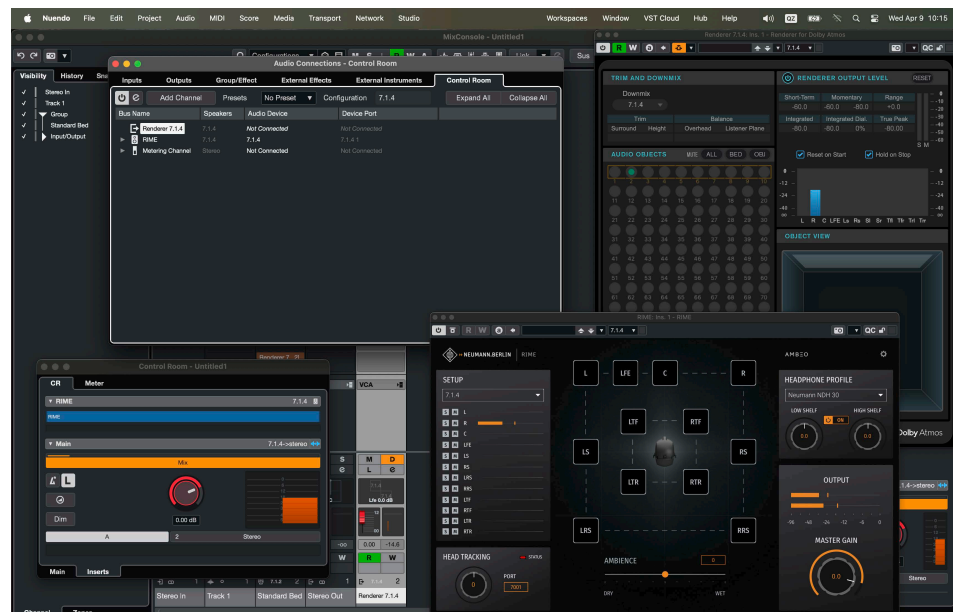
To put RIME in the control room section, you first need to create a 7.1.4 output device under Studio/Audio Connections. For Dolby Atmos this would be your Renderer output, which can be created directly in the ADM Authoring window (Project/Adm Authoring...).

Next, switch in the Audio Connections window to the Control Room tab. Here you can create a new Monitor path (Add Channel/Add Monitor). For easier identification, call this Monitor path RIME.

Connect the left and right output of this Monitor to your headphone output.

To insert RIME in this monitor path, go to Studio/Control Room and move to the Inserts tab.

Place RIME in the insert chain and set it to 7.1.4. Now you can use it as a Monitor path within Nuendo and Cubase.





4.3 Logic

In Logic you need to put RIME directly after the Dolby Atmos renderer within your master track.

Please make sure to set the Dolby Atmos renderer and RIME to 7.1.4.



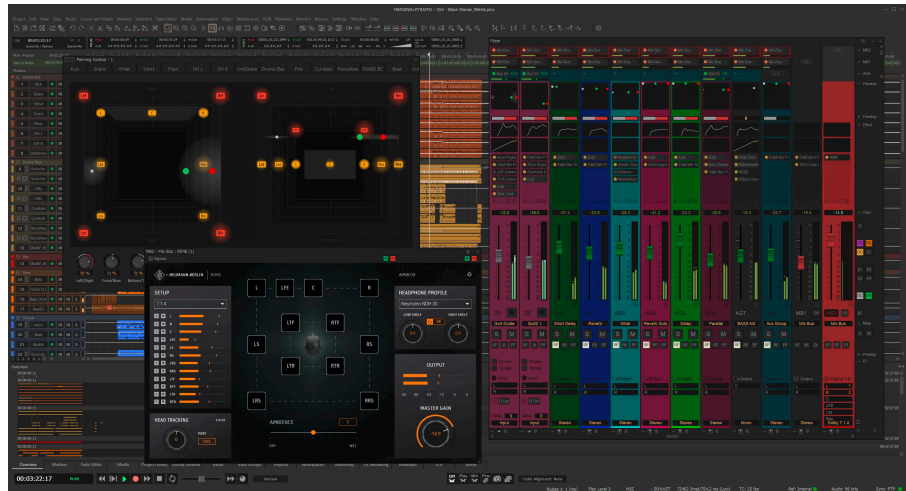
4.4 Pyramix

1. Create a new project or open an existing project that include a Bus supported by the RIME plugin
 - Stereo
 - 7.0
 - 7.1
 - 7.1.4
2. Add the RIME Plugin to your Bus, by selecting the strip channel plugins listing dialog.
3. Select in the RIME setup dialog the layout matching your Bus
4. In your Pyramix DAW Mixer patch the Bus channels outputs to your monitoring L R outputs (e.g. To Headphones channels 1-2)





5. You can now fully perform your Mix using the NDH 20 or NDH 30 headphones and use the Pyramix immersive panner built in each channel strip.



5 Stand-alone application

RIME can be used as a stand-alone application. This opens various new use cases like listening to music, watching movies or even gaming without the need of a DAW. In this chapter we will explain how to setup RIME to monitor 7.1.4 setups from any application.

The stand-alone allows you to listen to any input of your audio devices and route the output to your headphones.

For Mac we included the RIME Virtual Audio Device, which allows you to route audio from one application to another, effectively enabling to route all your system audio into RIME (e.g. your music or video player of choice).

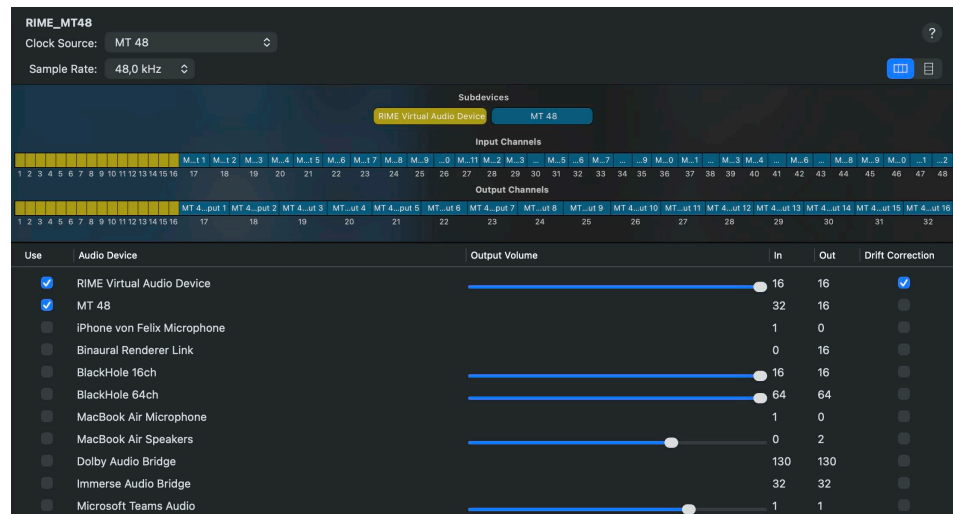
5.1 Setting up the Stand-alone with the RIME Virtual Audio Device

In the stand-alone version of RIME you will see a new Options button in the top left corner. Clicking it opens a dropdown, from where you can choose the Audio Setup.

In the Audio Setup you can choose your input and output device and the channels that you want to use. Furthermore, you can set the sample rate as well as the buffer size. Please note that audio is automatically muted the first time you use RIME to prevent feedback loops. This can also be disabled in the Audio Setup.

Set the input device as the RIME Virtual Audio Device and the output device as your audio interface.

Depending on your configuration it can happen that the in- and output device run out of sync, which leads to clicks and dropouts. If this happens, the best option is to combine both devices into an aggregate device. If this configuration you can enable the drift correction. To set up an aggregate device, open the Audio MIDI Setup on your Mac. On the bottom left click the + button and choose Create Aggregate Device. Now check the devices that you want to use together, in this example the RIME Virtual Audio Device and the Neumann MT 48. Next, set the MT 48 as the Clock Source and enable the drift correction for the RIME Virtual Audio Device. In RIME you now have to choose this new Aggregate Device as your in- and output.



Aggregate Device in macOS Audio MIDI Setup

Make sure to select the right channels for your in- and output since all channels from both devices will now appear in the list. After setting this, you can just use the RIME Virtual Audio Device as your output device in your desired application or as your system output. It will now automatically get routed in RIME with the correct drift correction applied.

6 Step by step guide for the Supperware Headtracker

For RIME we recommend the Supperware headtracker and its companion app “Bridgehead” that you can find here. But you can also use other headtrackers as long as those support OSC.

<https://supperware.co.uk/>

Usage

1. Start Bridgehead, go to “OSC bridge settings” and choose “Neumann” as Profile. Connect your Supperware headtracker via USB.
2. If the Neumann profile is not available yet, please update your bridgehead application or add the following to your Profiles.txt:

```
Neumann
/ypr
yaw.pitch.roll
local 7001
```
3. Start RIME and set the port in the headtracking section to 7001.
4. The headtracking display should now follow the movement of the headtracker and the status LED should turn green.
 - a. If the status LED is red, it means that the port is already taken. Please use another port instead.
 - b. If the status LED is grey, it means that no valid message was received.

7 Known Issues



8 Changelog

Version 1.5

- Stand-alone version for mac including the RIME Virtual Audio Device
- 3dof headtracking via OSC
- Bypass
- Horizontal/Height Solo + Mute
- Clear all Solo + Mute
- Uninstaller for Mac
- new Speaker setups (5.1 and 7.1.2)
- new generic headphone profile