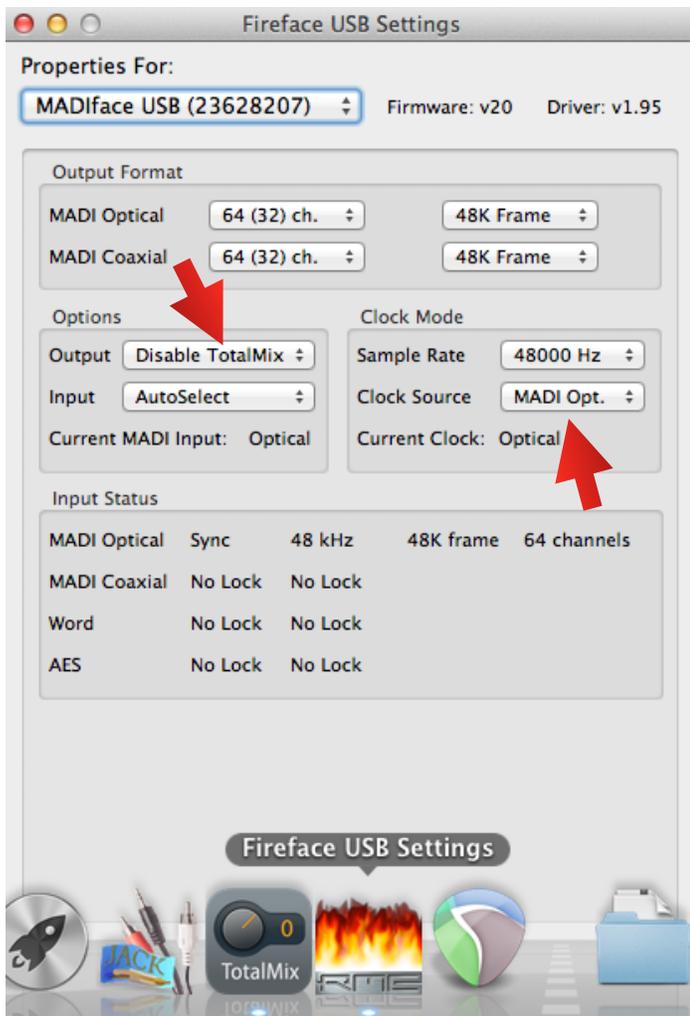


Sound Lab Instructions - Audio



• On either the Sound Lab iMac or your own laptop, connect to the RME **MADiface USB** via USB.

• In the **Fireface USB Settings** applet, make sure

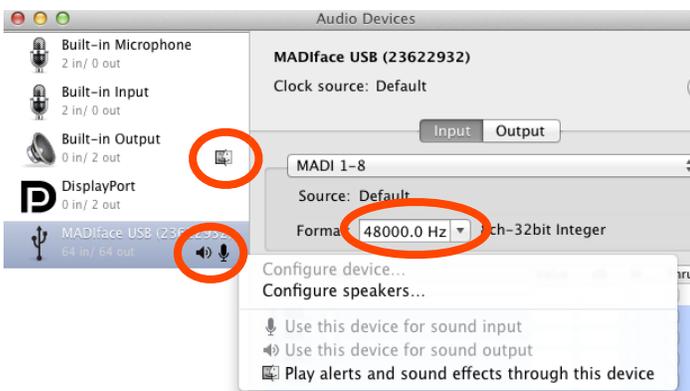
1. Options > Output > "Disable TotalMix"

2. Clock Mode > Clock Source > "MADI Opt." (Note this is "BNC In" for Room 205)

• In **Audio MIDI Setup**

(Applications>Utilities), confirm that the MADiface's sample rate matches that of the hardware in the rack.

To change the sample rate, use the web interface. See the next page for details. Make sure your system defaults to the MADiface USB so applications, including SuperCollider use it as the interface. Right Click MADiface USB to change this setting. NOTE: you may want to set your "system sounds" to still play back to your Built-In Output.



There is a readout of the sample rate in the gear rack.



All sound goes through the **volume knob**, which is an active attenuator and has a MUTE switch.

Audio sent from your machine will be routed/decoded in the room based on the router and decoder settings. (See the next page...)

Routing and Decoder Settings

From a web browser, go to dx117decoder.local:8080.

To change settings, select the settings you want on the left half of the page and click “Update”.

You’ll see a readout of what’s happening in the Post window, then once updated the new settings will display in the top right frame labeled “Current Settings”.

Stereo Sound: If “Stereo First” is enabled on the web interface, the first two channels will be sent to stereo to the left and right speakers. Subsequent channels will be sent into the selected routing and decoding scheme.

Ambisonic Decoding: Depending on the room you’re in, various first order ambisonic decoders are available in horizontal (2-D), dome or spherical (3-D) layouts.

Note: If “Stereo First” is enabled, decoder input channels are offset by 2 channels.

Routing to Individual Speakers:

When choosing a setting, on the left side of the page look to the title denoting “discrete routing” options. This allows you to play directly to speakers without a decoder. All allows access to each speaker, while other settings will route to a subset of speakers. For example, a “Hex” setting will route to a hexagon within the speaker array, so if you send consecutive outputs 0-5, the system will map to that layout for you.

Note: If “Stereo First” is enabled, direct speaker routing is offset by 2 channels.

Direct Patching to Speakers: Use the bottom row of the patch bay to connect directly to speakers. Channel order follows the Discrete routing order. Stereo Left and Right patch points are labeled.

Amplitude controls in the web interface

This is digital amplitude control, so an amplitude above 0dB may cause clipping in the hardware output stage.

Attenuate suspends fader control and attenuates your audio -25dB.

Mute suspends fader control and mutes your audio.

Troubleshooting

Problem: No sound!

Solution:

- 1) Confirm that your sample rate is matched to the rack gear (no flashing lights in the rack).
- 2) Double check the fader volume and Mute/Attenuation buttons in the web interface.
- 3) Check the physical volume knob and mute switch on the desk.
- 4) You may need to switch the room correction setting to “basic_balance”, then back to your desired correction settings. Sometimes the correction process fails and needs to be reset.

Problem: The sound image of my ambisonic material sounds odd, skewed or otherwise not correct.

Solution:

- 1) RME total mix may be sending audio to channels you don't expect. In the **Fireface USB Settings** applet, make sure Options > Output > "Disable TotalMix". While there, also confirm that the Output Format is set to a 96K Frame (which works for all sample rates).
- 2) Double check the **Stereo** setting is what you expect. Remember when Stereo is active, the first 2 channels you send the routing system are routed to the stereo speakers, and following channels are sent to the decoding/routing scheme you've selected. When Stereo is off, your output is sent straight to the decoder/router.

Problem: There are intermittent crackles/distortion in my sound.

Solution:

- 1) Check that your sample rates match across all devices: Check that the web interface sample rate matches your **Audio MIDI Setup** as well as the **Fireface USB Settings** applet and with the readout on the Big Ben in the decoder rack. In **Fireface USB Settings** applet, check Clock Mode > Clock Source > "MADI Opt." (Note this is "BNC In" for Room 205). Here also confirm your Output Format is set to 96K Frame (which works for all sample rates).
- 2) Check the web interface to make sure you're not boosting the signal digitally in the amplitude slider more than expected. This may clip your sound at the hardware output before the volume knob.
- 3) Make sure you have the latest interface drivers for the Fireface USB. The driver version shows in the **Fireface USB Settings** applet. You can download the latest from the RME downloads site. Google RME Downloads... go to the section for the USB series and find the driver for your computer.

Problem: Sound is quiet with the Volume knob cranked up.

Solution:

Confirm your source application is turned up to the right level. If your source is quiet, you can turn up the router/decoder on the web interface by 12 dB. Remember to set it back to 0dB when you're done.