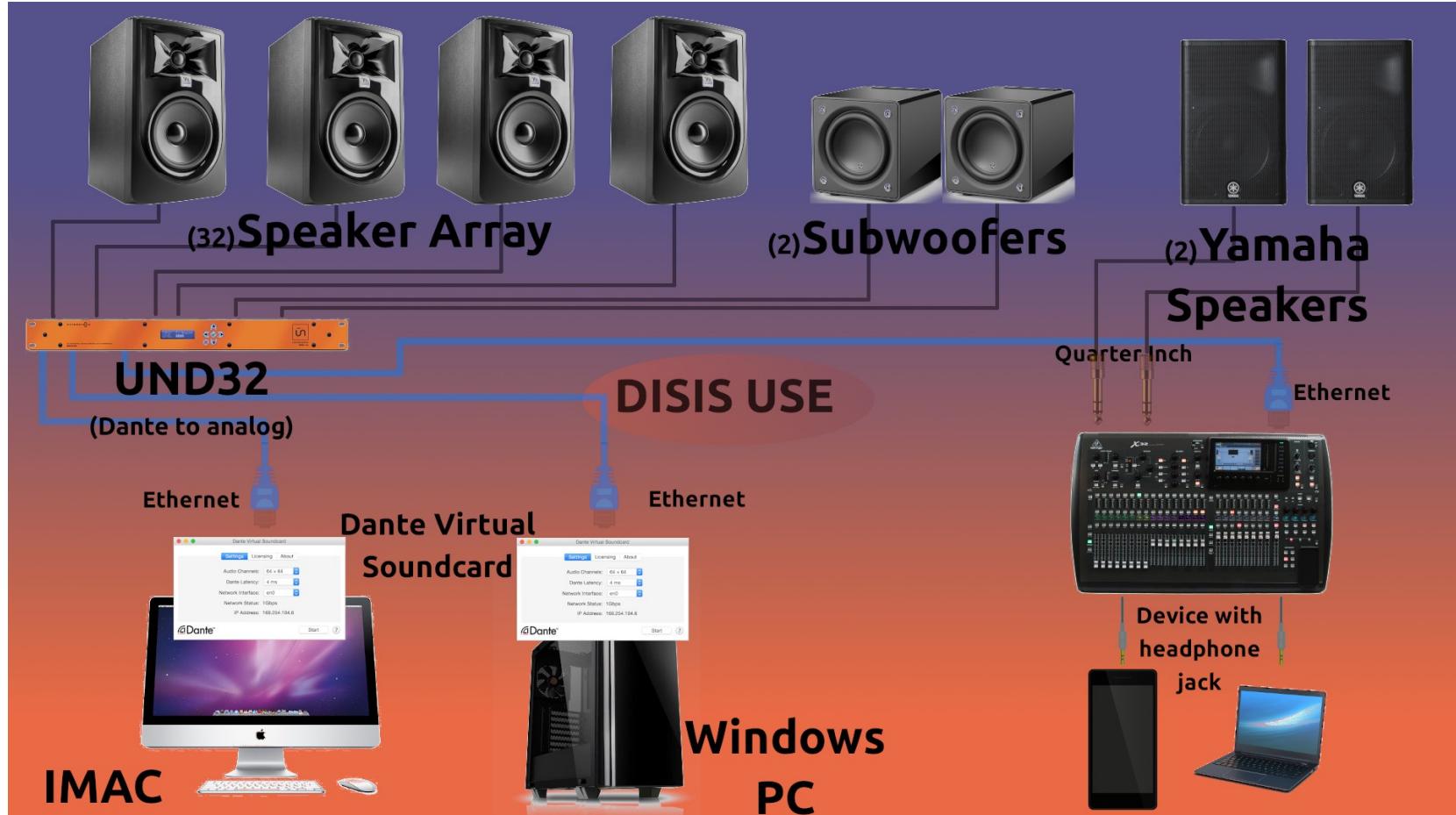


Working in DISIS Use Guide

Contents:

- 1. Overview**
- 2. Load DISIS-NORMAL Behringer X32 Mixer Configuration**
(Needed for any basic use of the space, refer to diagram on next slide)
- 3. DISIS MAC 1 Stereo Playback Guide over Dante**
(Stereo/Classroom Listening)
- 4. Playback over Stereo Floor Speakers (no Dante Routing Needed)**
(Classroom Discussion)
- 5. Multichannel Playback DISIS Computer (Windows or Mac) to all or some of
DISIS Speakers**
(Multichannel Piece/Music)
- 6. Device with Headphone Jack to Main Stereo Speakers**
(iPad, Phone, Computer)

Overview:



NOTE: This guide assumes that the Behringer X32 mixer is loaded with preset DISIS-NORMAL.

Load DISIS-NORMAL Behringer X32 Mixer Configuration:

1. Press ROUTING button on mixer
2. Press UTILITY button
3. Using the first knob from the left under the mixer's screen, select all of the check boxes by moving the knob and clicking all options under recall patching scope until all is lit with orange
4. Using second knob from the left under the mixer's screen, scroll to preset 7 DISIS-NORMAL
5. Click in the knob
6. Click Yes under page select (it is a button that looks like a right arrow key)

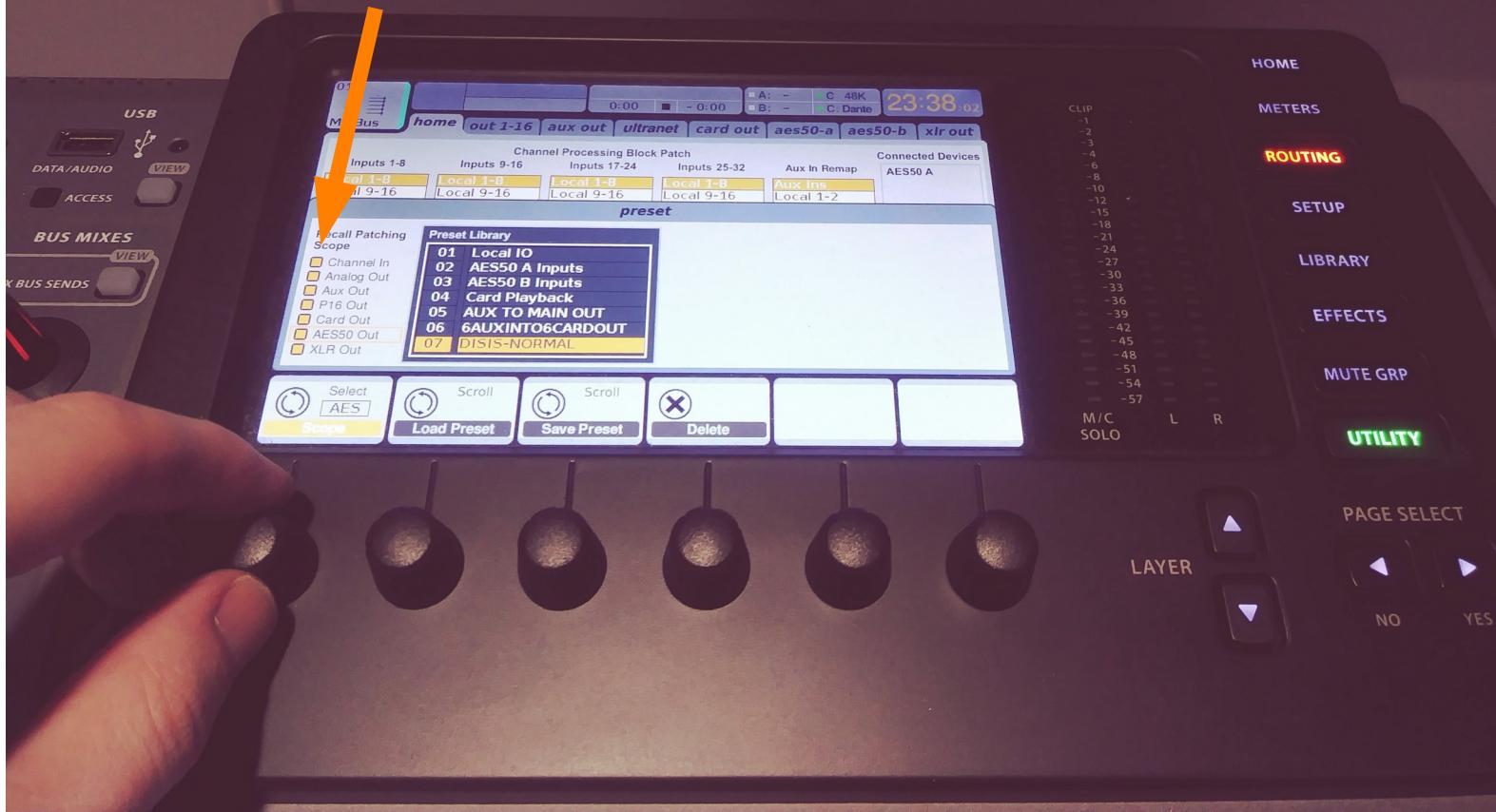
1. Press ROUTING button on mixer



2. Press UTILITY button



3. Using the first knob from the left under the mixer's screen, select all of the check boxes by moving the knob and clicking all options under recall patching scope until all is lit with orange

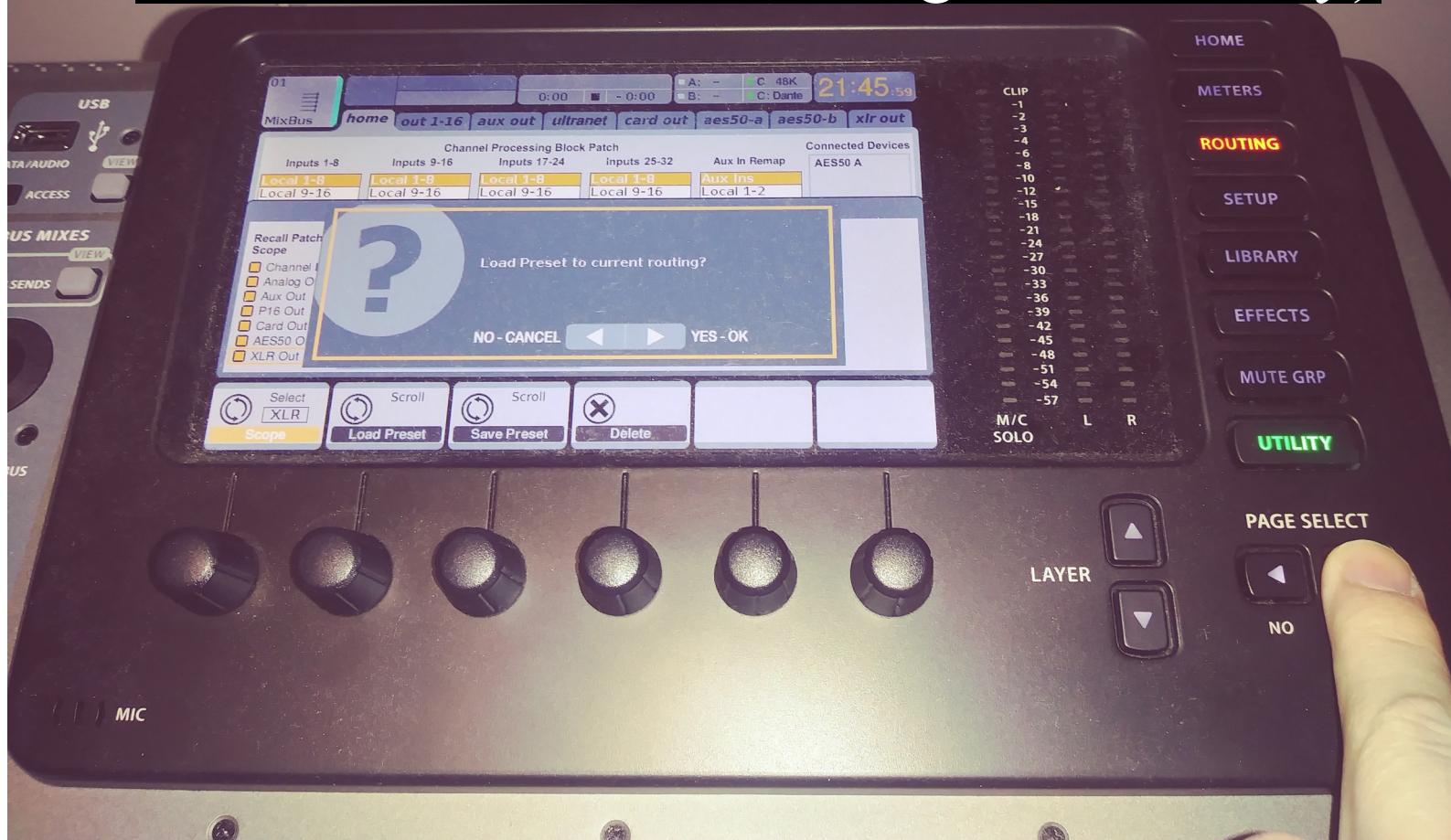


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5. Click in the knob

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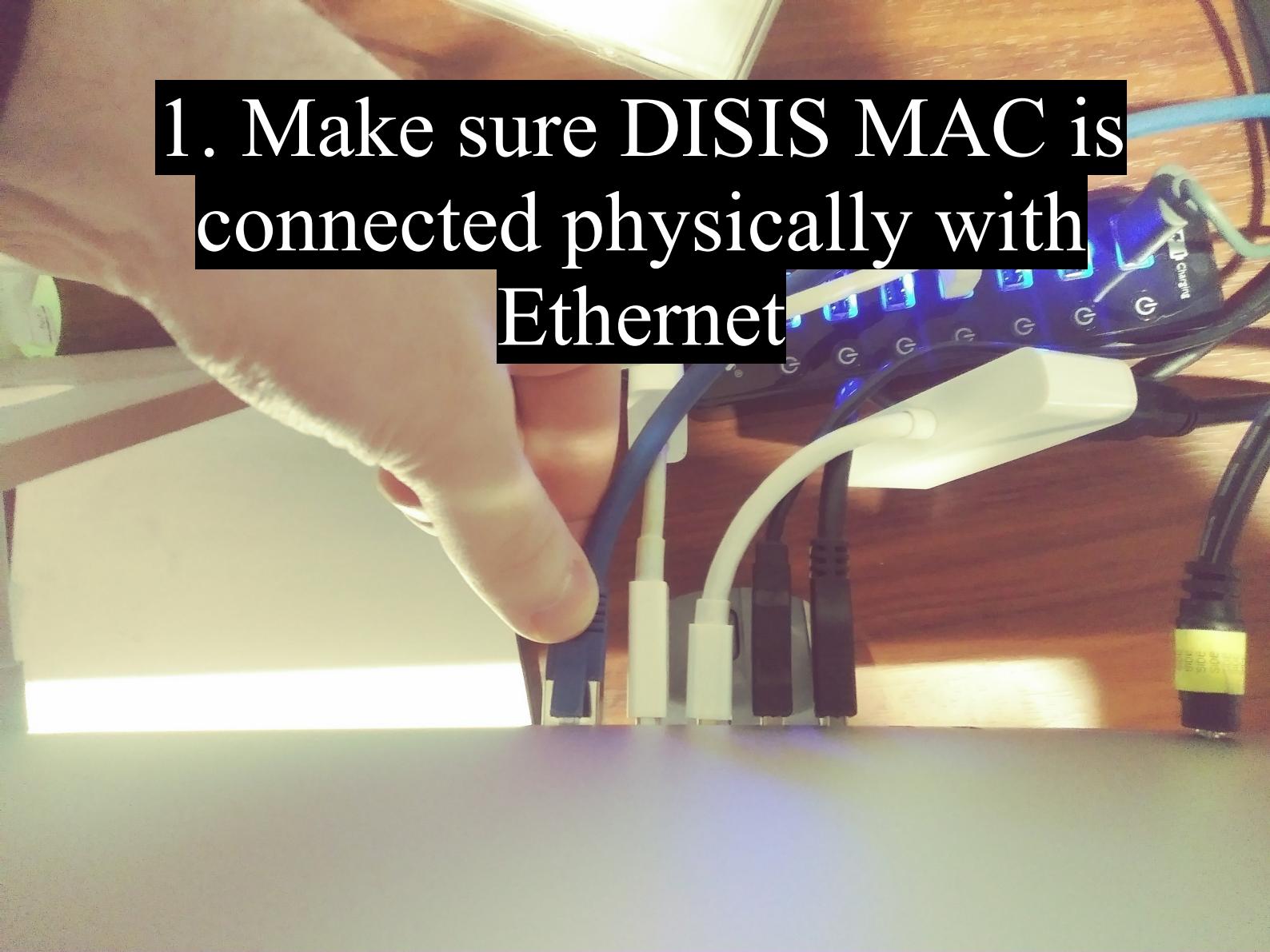


DISIS MAC 1 Stereo Playback Guide over Dante:

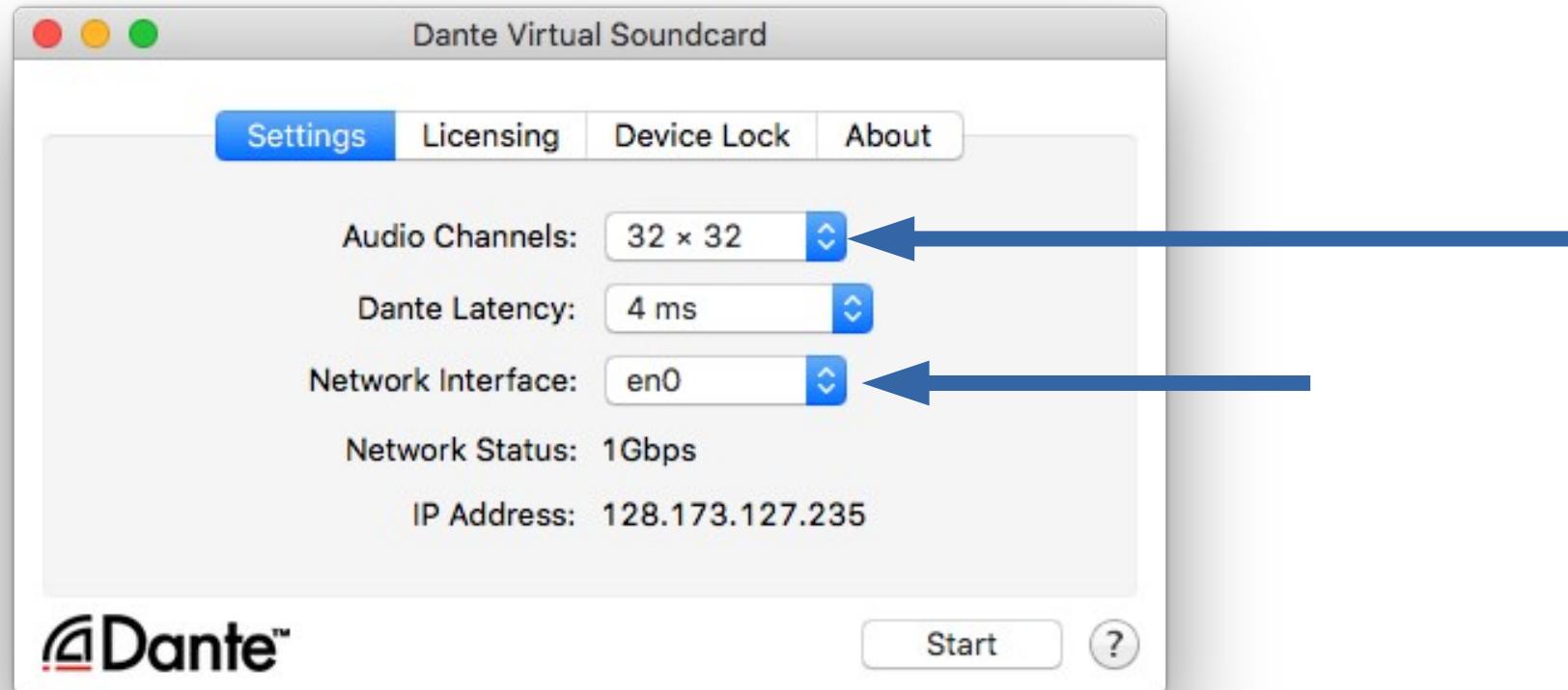
To use the DISIS MAC stations for audio playback over the DISIS main speakers:

1. Make sure DISIS MAC is connected physically with Ethernet
2. Load Dante Virtual Sound Card and click start, making sure to select how many audio channels you would like to use
3. Open up Dante Controller
4. Turn down DISIS MAC's application volume to 0% for safety
5. Load preset with File>Load, then "DISIS 1 to all DISIS" for Stereo playback (and multichannel playback) to the main speakers, click open, select all, and ok
6. Route computer system, or application audio to Dante Virtual Soundcard
 - Keep in mind at this point that audio out without volume control will route full 0dB full scale audio to the main speakers. This will be **extremely loud**. Make sure to always use some kind of volume control when routing out of the speakers
7. Play sound and **slowly** turn up the application's gain

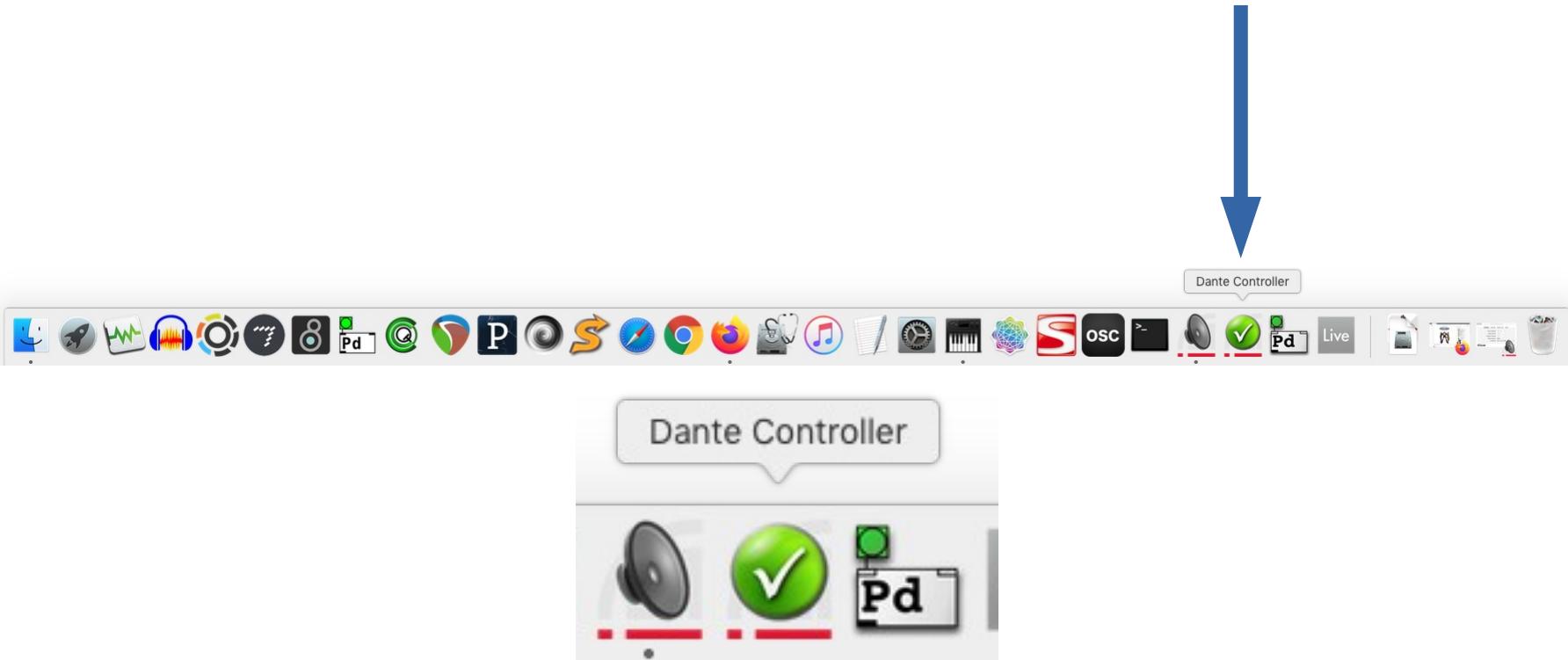
1. Make sure DISIS MAC is
connected physically with
Ethernet



2. Load Dante Virtual Sound Card and click start, making sure to select how many audio channels you would like to use



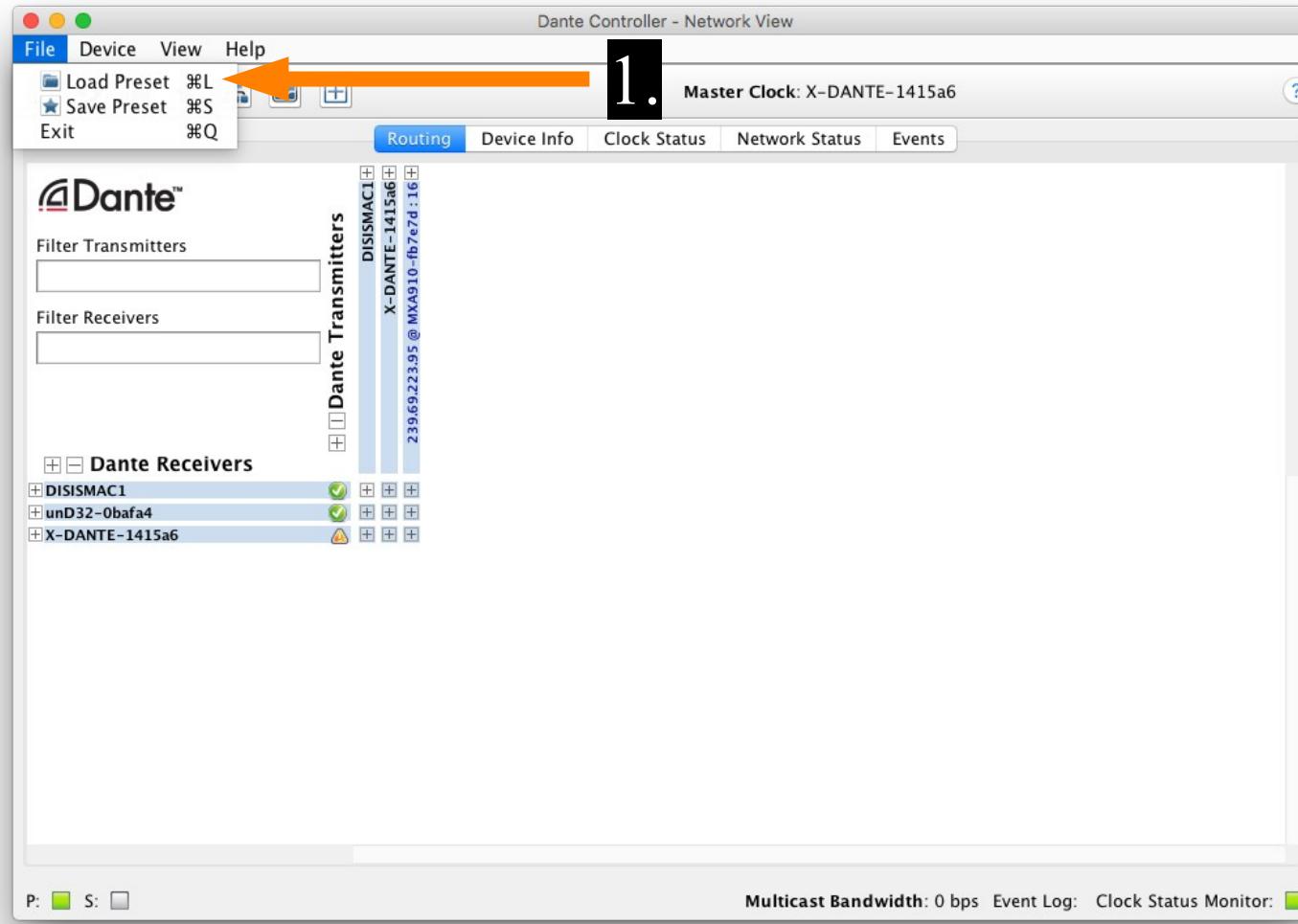
3. Open up Dante Controller



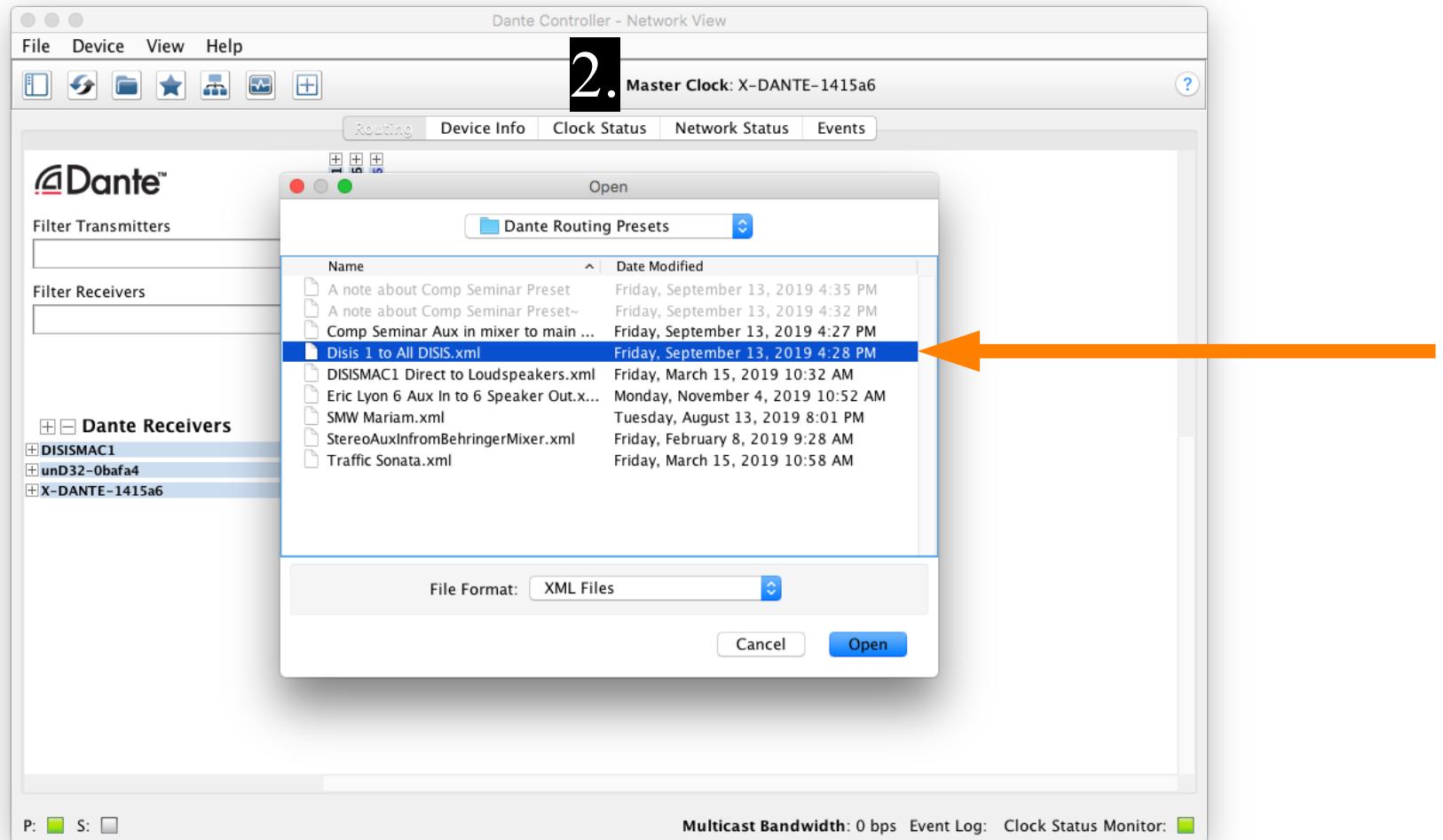
4. Turn down DISIS MAC's application volume to 0% for safety



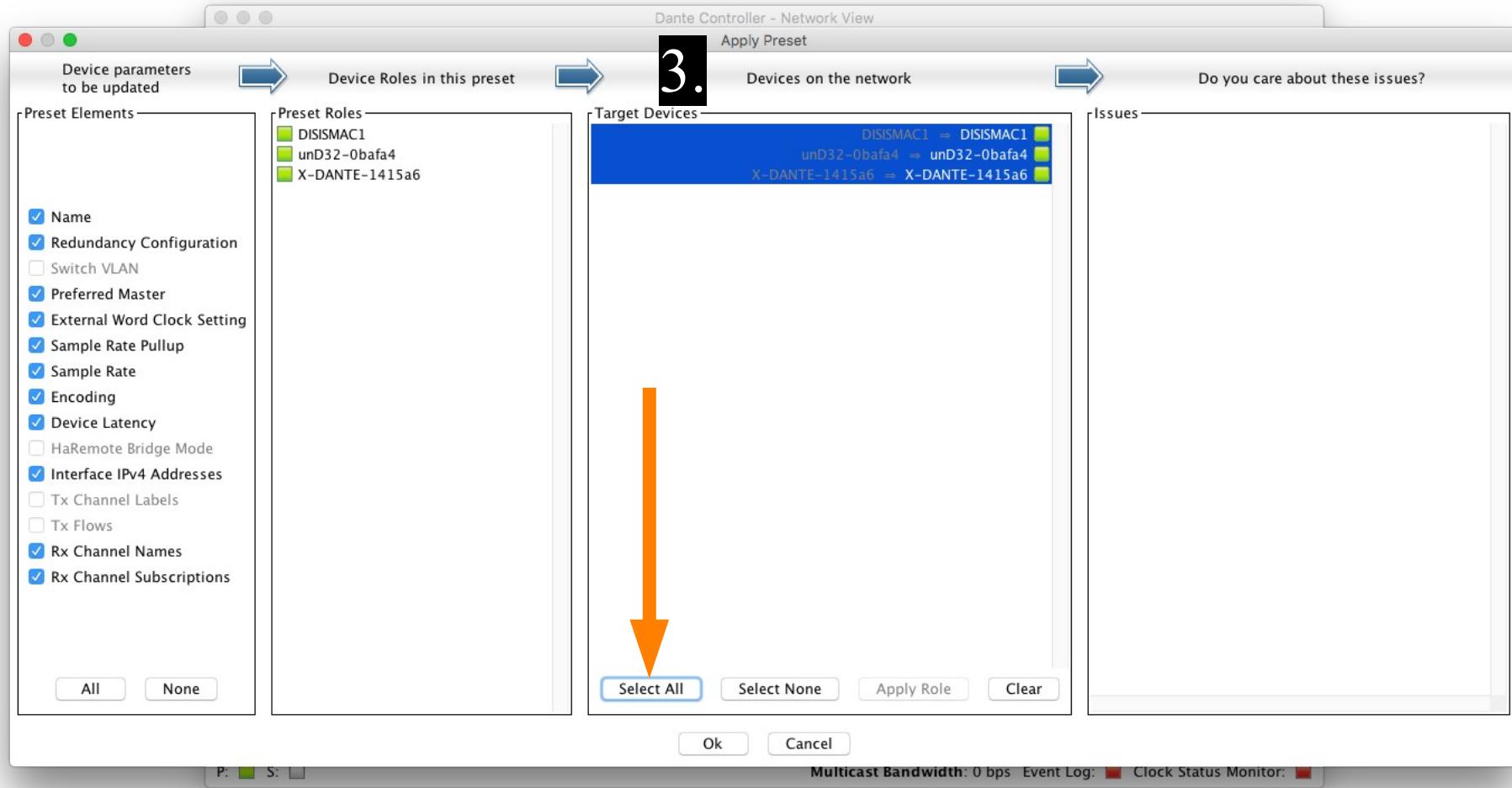
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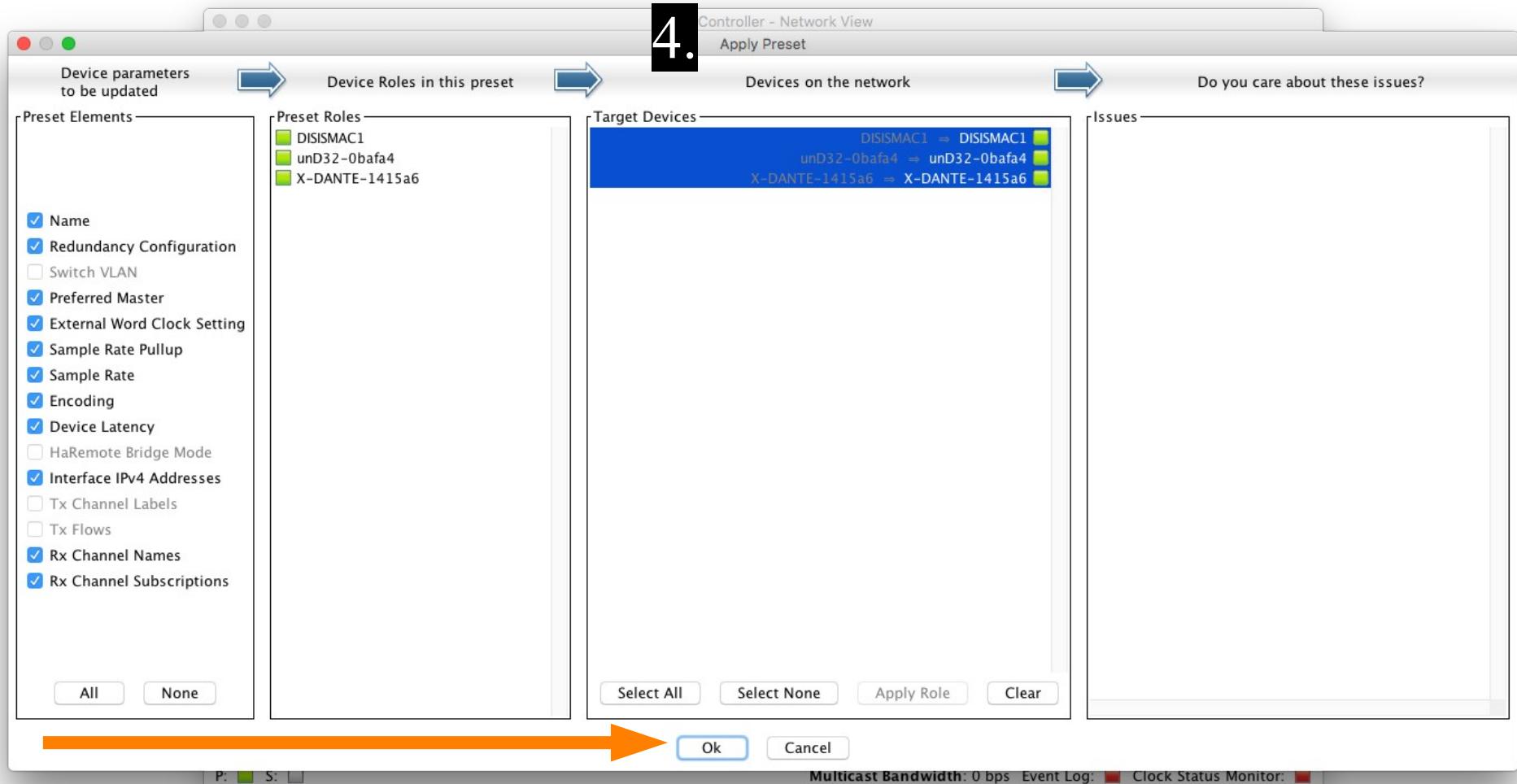
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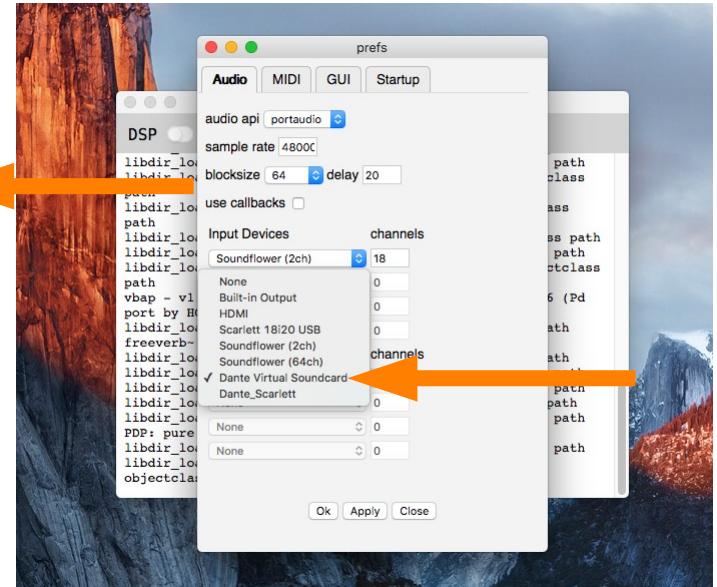
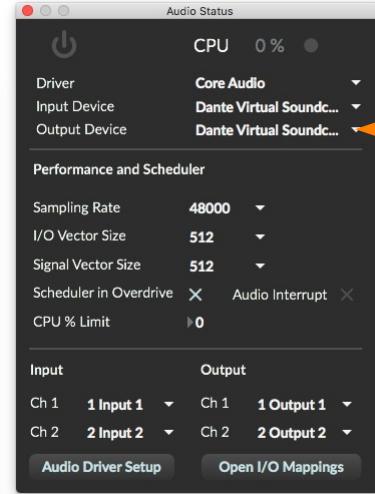
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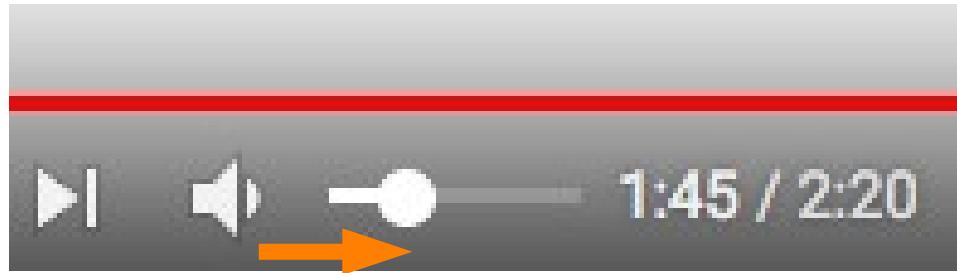


6. Route computer system, or application audio to Dante Virtual Soundcard



-Keep in mind at this point that audio out without volume control will route full 0dB full scale audio to the main speakers. This will be **extremely loud**. Make sure to always use some kind of volume control when routing out to the speakers

7. Play sound and slowly turn up the application's gain



Playback over Stereo Floor Speakers (no Dante Routing Needed):

1. Make sure mixer channels AUX IN 1 and 2 are muted or down all of the way
2. Find headphone plug going to Behringer X32 mixer
3. Connect plug into device
4. Play Audio
5. Unmute and move Mixer AUX IN 1 and 2 up to preferred volume
6. Move Mixer Channels Bus 1 and 2 up for bass send. If you don't see the channels on the mixer, make sure to select the button Bus 1-8.
 - Note, this bass send is affected by the gain set on channels 1 and 2. For example, if you send audio and only move up the bass gain with no gain on AUX IN 1 and 2 set, there will be no bass. Giving AUX IN 1 and 2 30% gain and BUS 1 and 2 40% bass would give about 12% bass in total volume.
 - Note, this will send to Dante if the Behringer is routed to Dante. If this is the case, load up Dante preset "DISIS 1 to All DISIS" to remove the Behringer's audio sends to the main speakers
7. Make sure the Yamaha Floor speakers are both on and the volume is turned greater than 0%
 - If you have followed all instructions and are not getting sound at all from the floor speakers, they are probably off or unplugged from power. Make sure they are plugged into power, connected with quarter-inch, and are switched to on.

1. Make sure mixer channels AUX IN 1 and 2 are muted and down all of the way



2. Find headphone plug going to Behringer X32 mixer

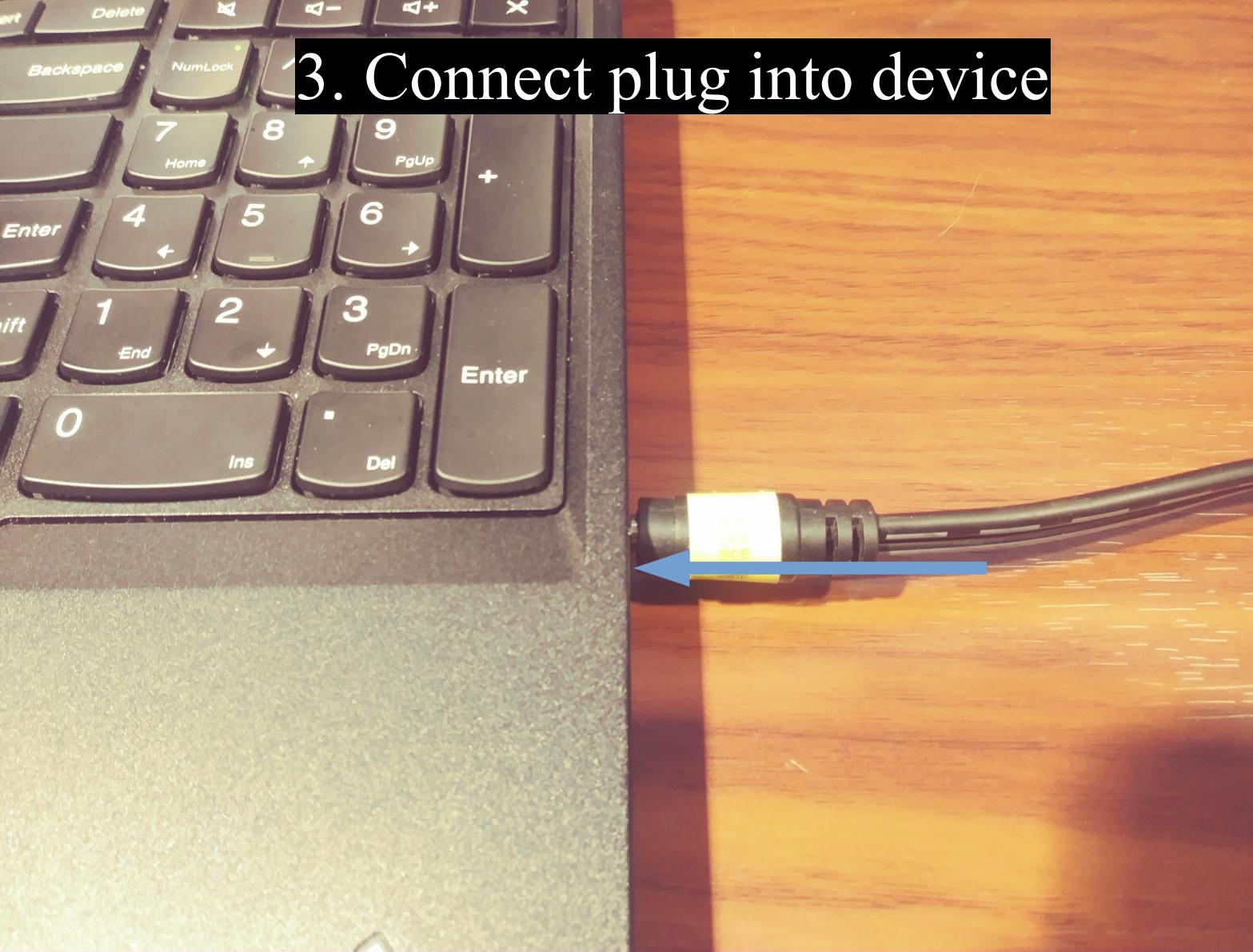
1.



2.



3. Connect plug into device



4. Play Audio

5. Unmute and move Mixer AUX IN 1 and 2 up to preferred volume



6. Move Mixer Channels Bus 1 and 2 up for bass send. If you don't see the channels on the mixer, make sure to select the button Bus 1-8.



-Note, this bass send is affected by the gain set on channels 1 and 2. For example, if you send audio and only move up the bass gain with no gain on AUX IN 1 and 2 set, there will be no bass. Giving AUX IN 1 and 2 30% gain and BUS 1 and 2 40% bass would give about 12% bass in total volume.

-Note, this will send to Dante if the Behringer is routed to Dante. If this is the case, load up Dante preset "DISIS 1 to All DISIS" to remove the Behringer's audio sends to the main speakers

7. Make sure the Yamaha Floor speakers are both on and the volume is turned greater than 0%



-If you have followed all instructions and are not getting sound at all from the floor speakers, they are probably off or unplugged from power. Make sure they are plugged into power, connected with quarter-inch, and are switched to on.

Multichannel Playback DISIS Computer (Windows or Mac) to all or some of DISIS Speakers:

1. Open Dante Virtual Soundcard and click start if not already running
2. Open Dante Controller
3. Find your computer name on the front of the computer
4. Look for your computer name on the top of the routing matrix.

-Note, the matrix routes top to left. (If your computer is not here, make sure Dante Virtual Soundcard is running and the computer is connected to the network over ethernet.)

5. Find UND32 device on the left of the matrix
6. Open up all of the channels on the UND32 device with the plus box
7. Make sure your computer's application's gain is set to 0%
8. Control+left-click (yes, not command if on MacOS) on the + or - box to route all your computer's channels to all of the speakers sequentially

-Note, only one device can be sending channels out to UND32 device's inputs, meaning individual speakers in DISIS.

-Adjust your channels if you want different outputs going to different speakers by adjusting the matrix sends manually (click on the channel boxes that you would like to send to)

-Dante in DISIS only runs at a sampling rate of 48000hz. Make sure your application is set to 48000hz (48khz) in its audio settings

Multichannel Playback DISIS Computer (Windows or Mac) to all or some of DISIS Speakers:

9. Route your computer's application's audio to Dante Virtual Soundcard

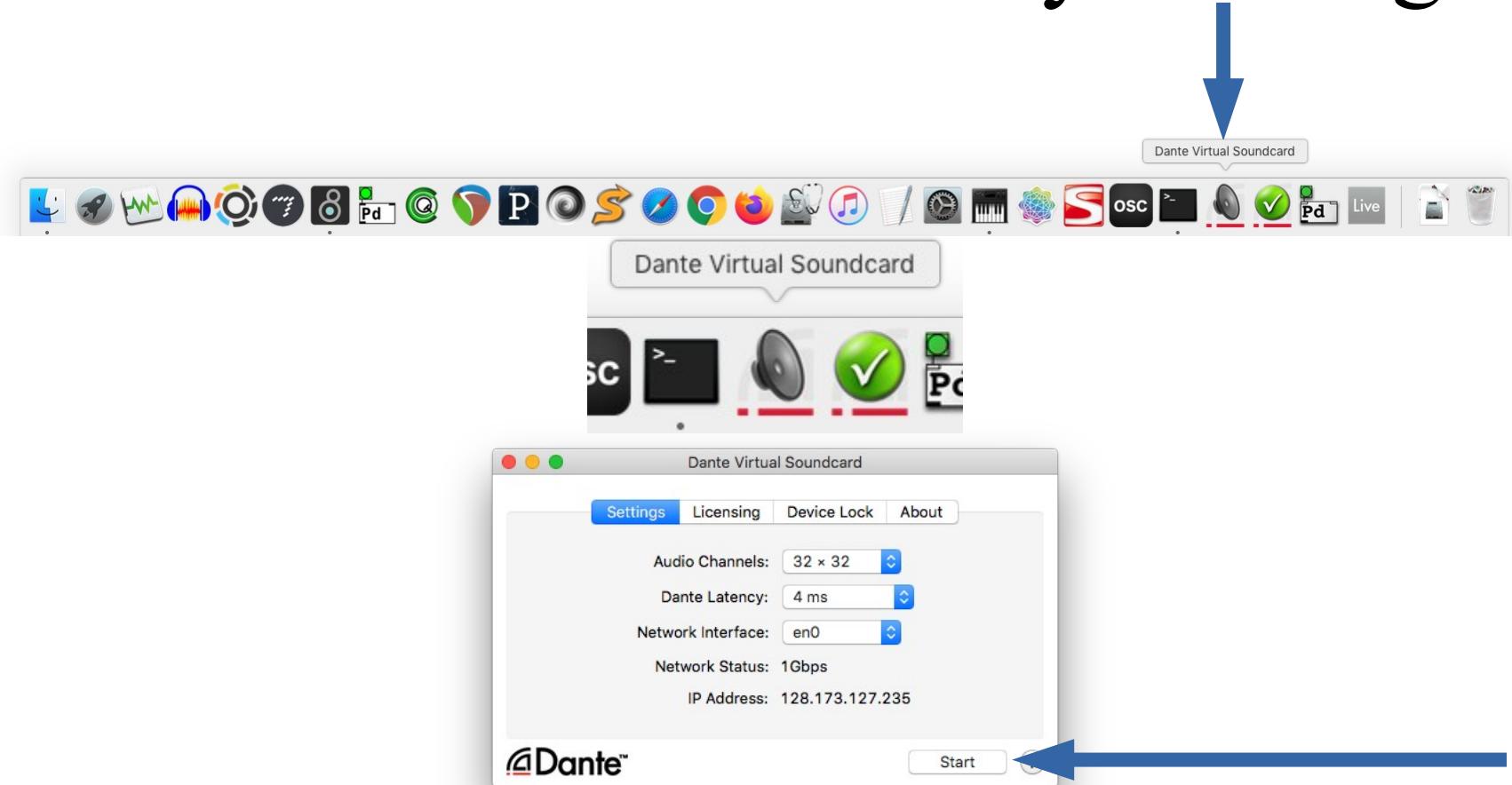
-Note, Dante does not control any volume. Make sure before playing audio to gain stage or control your gain to the speakers, or it could play very loudly and damage your hearing/scare you.

-Note, on Windows, there exist multiple different sound layers. If Dante Virtual Soundcard is set to ASIO, then you will not find Dante Virtual Soundcard under the operating system's sound settings, but under an application's settings, like Purr-data or Max msp.

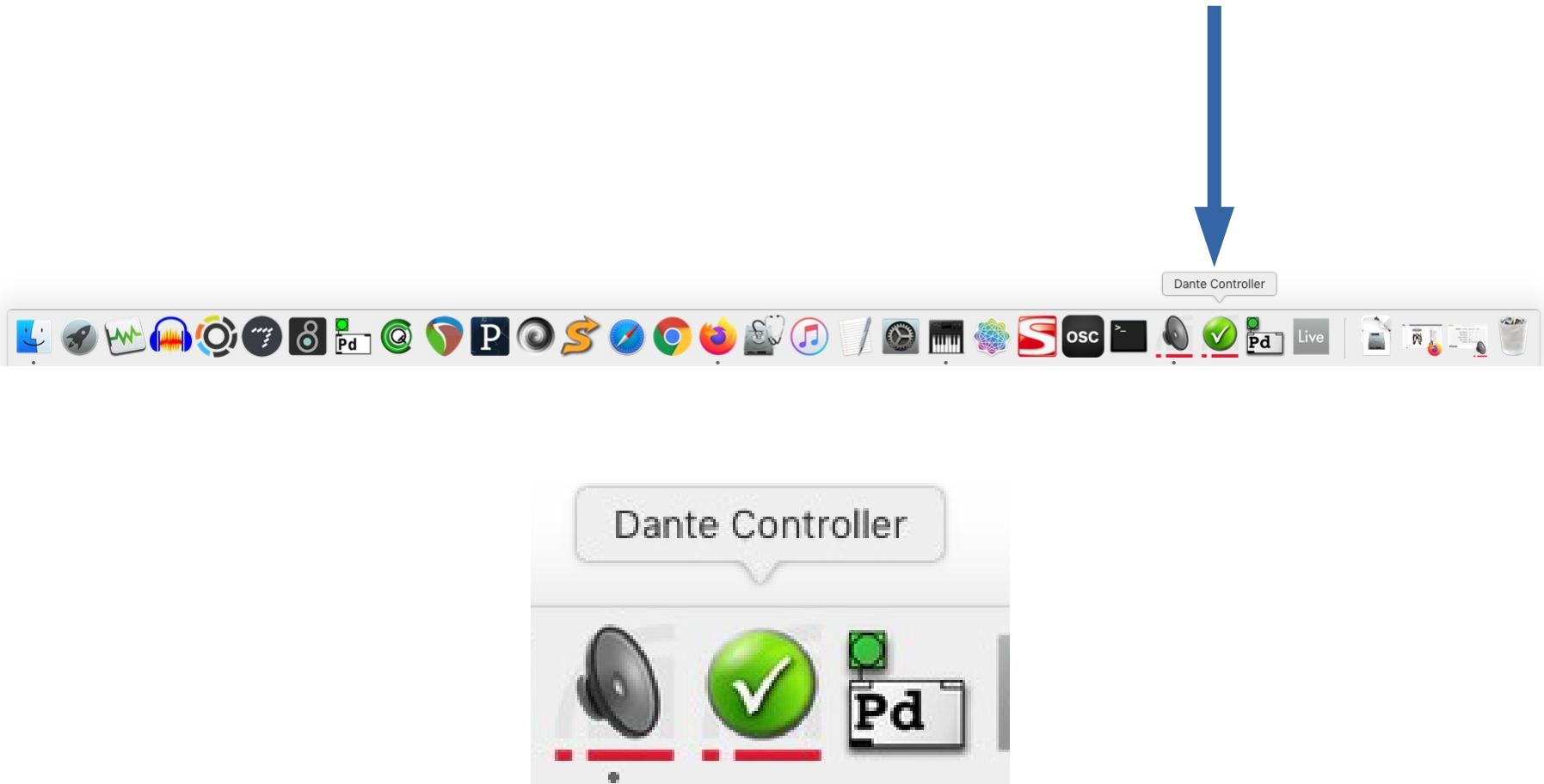
10. Turn up computer's application's gain slowly while playing audio to confirm

-Note, unless an application is designed for multichannel output, applications will only send out of channel 1 and 2. You will need to route channels 1 and 2 to different speakers if the application you are running does not give options to route to other outputs.

1. Open Dante Virtual Soundcard and click start if not already running



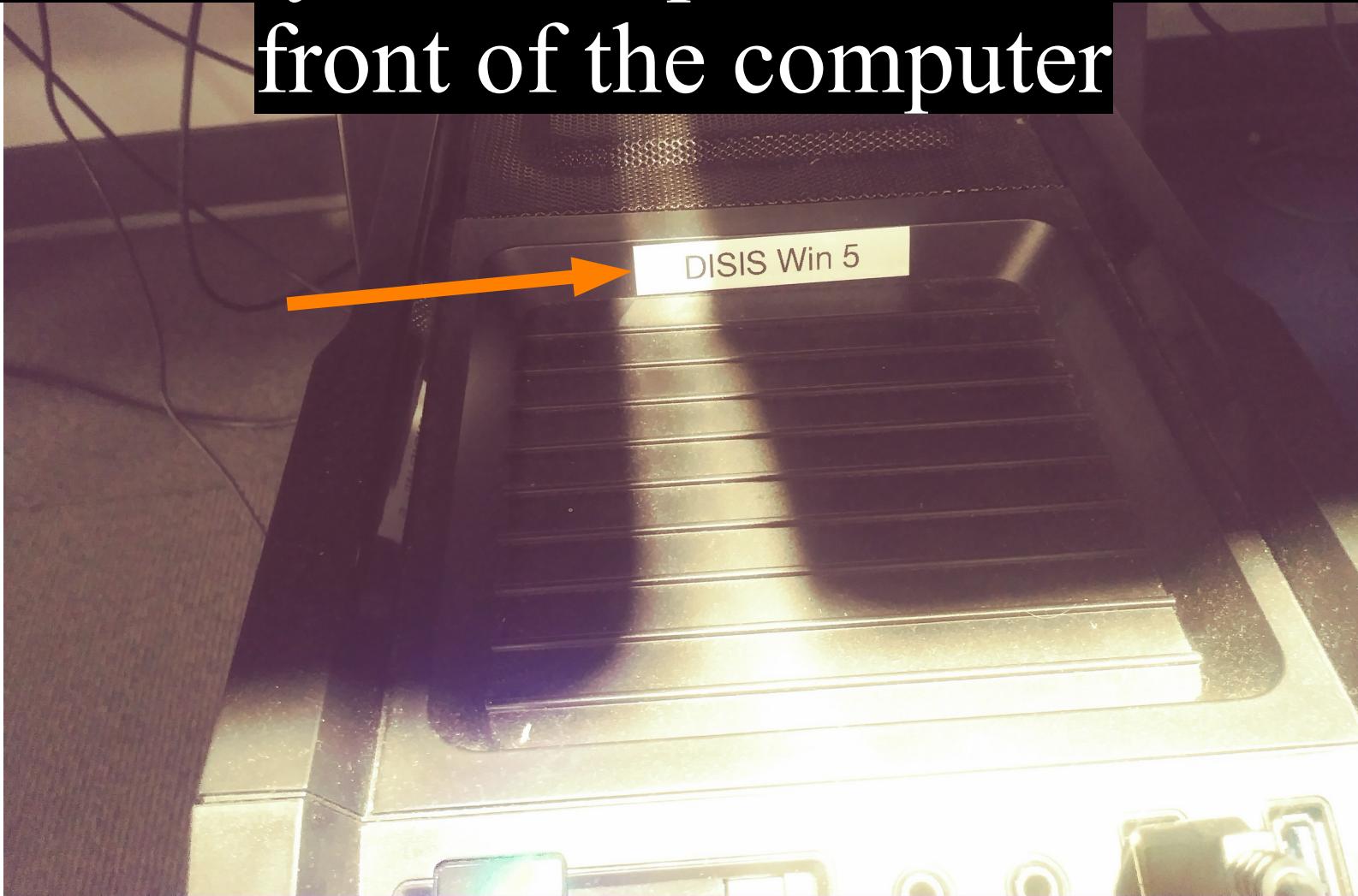
2. Open Dante Controller



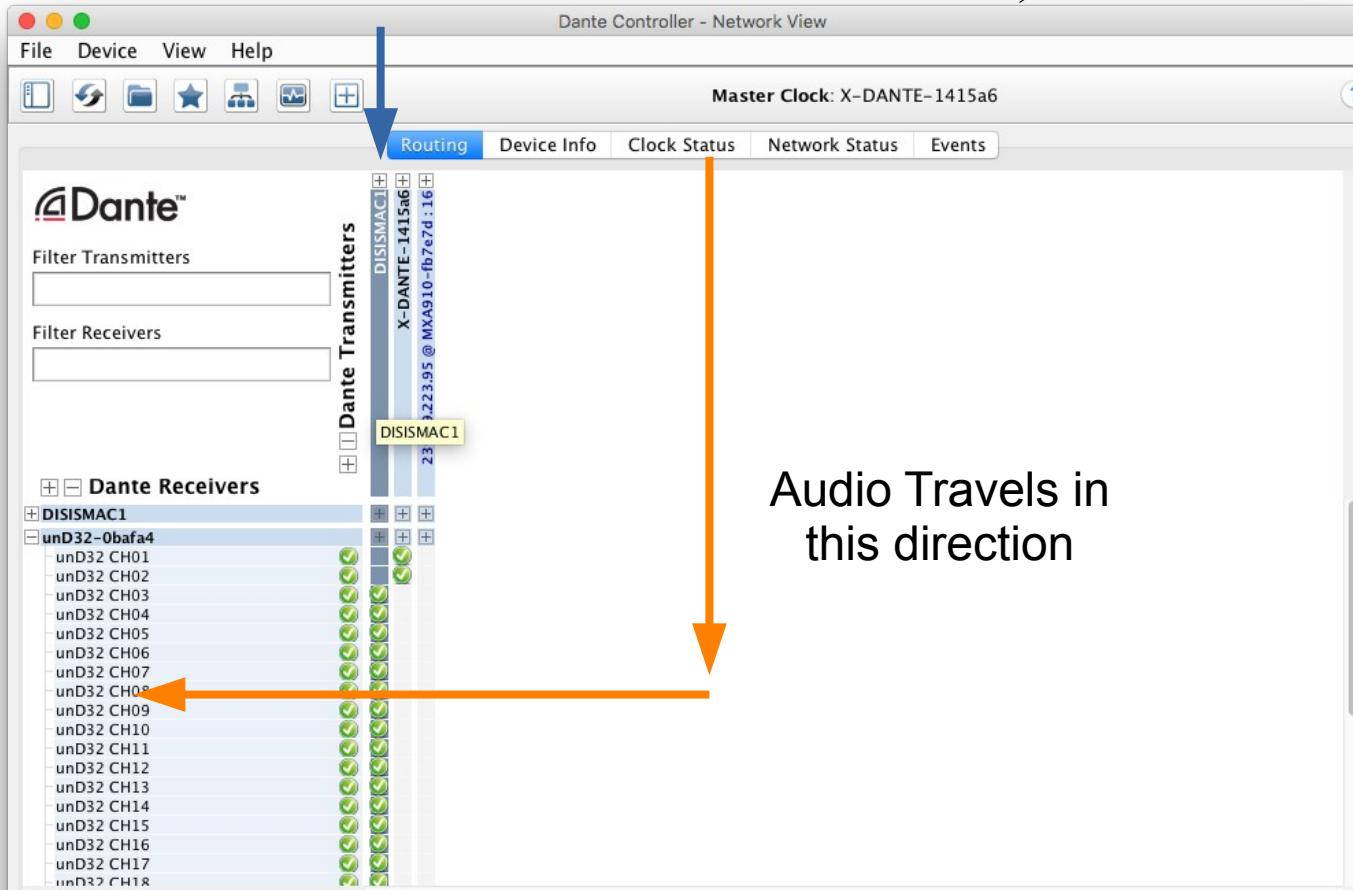
3. Find your computer name on the front of the computer



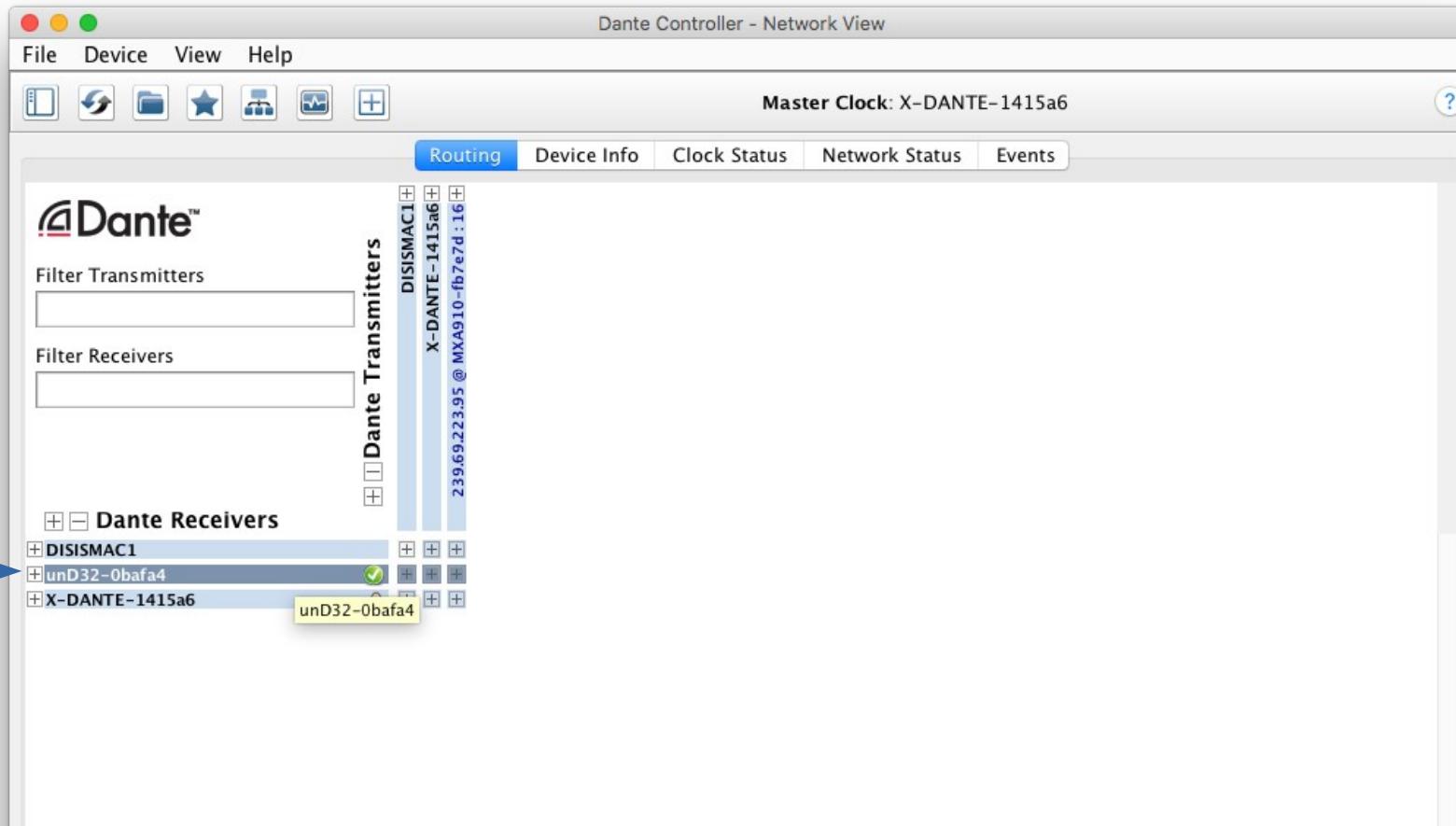
3. Find your computer name on the front of the computer



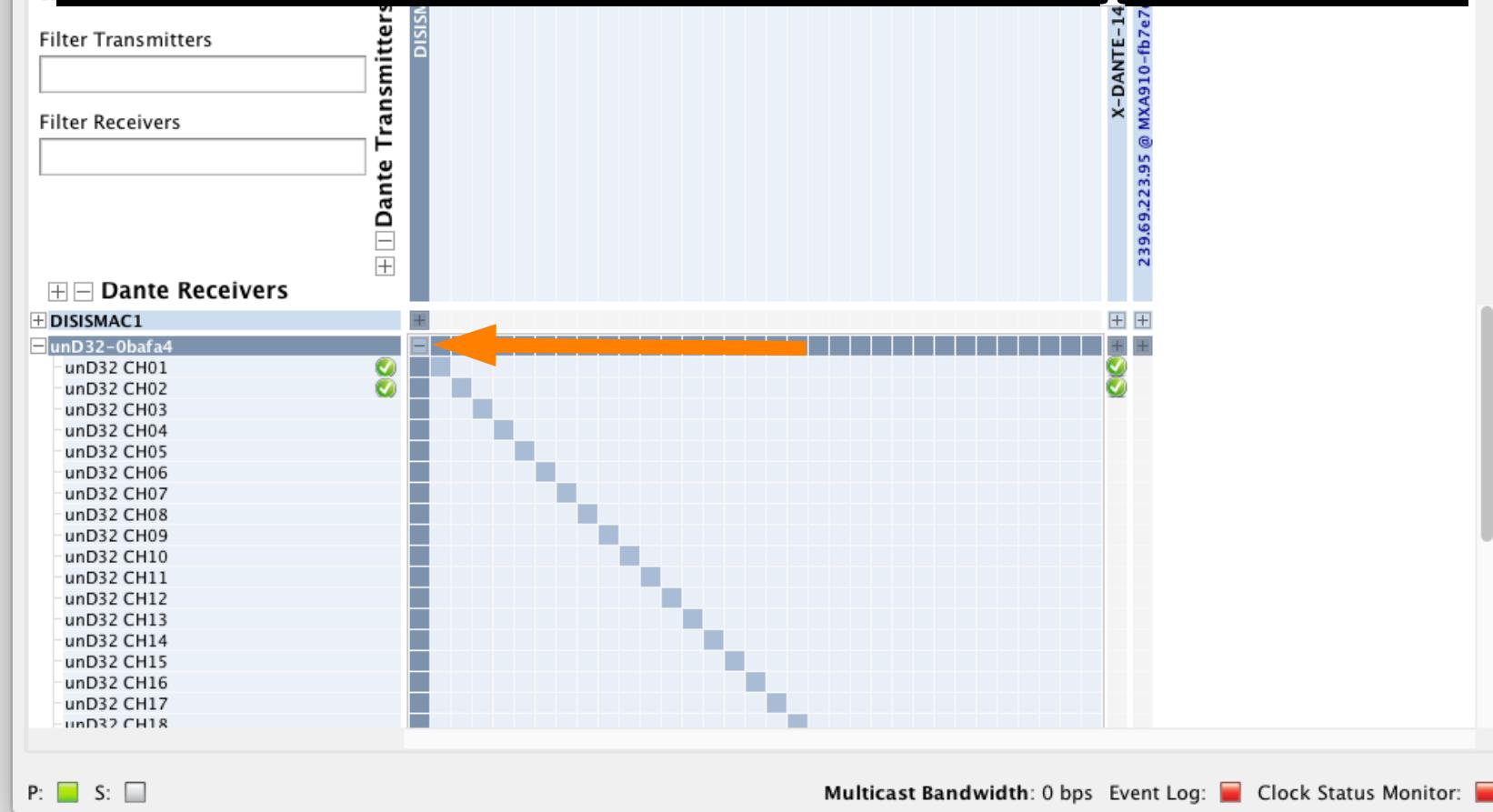
4. Look for your computer name on the top of the routing matrix. Note, the matrix routes audio top to left. (If your computer is not here, make sure Dante Virtual Soundcard is running and the computer is connected to the network over ethernet.)



5. Find UND32 device on the left of the matrix



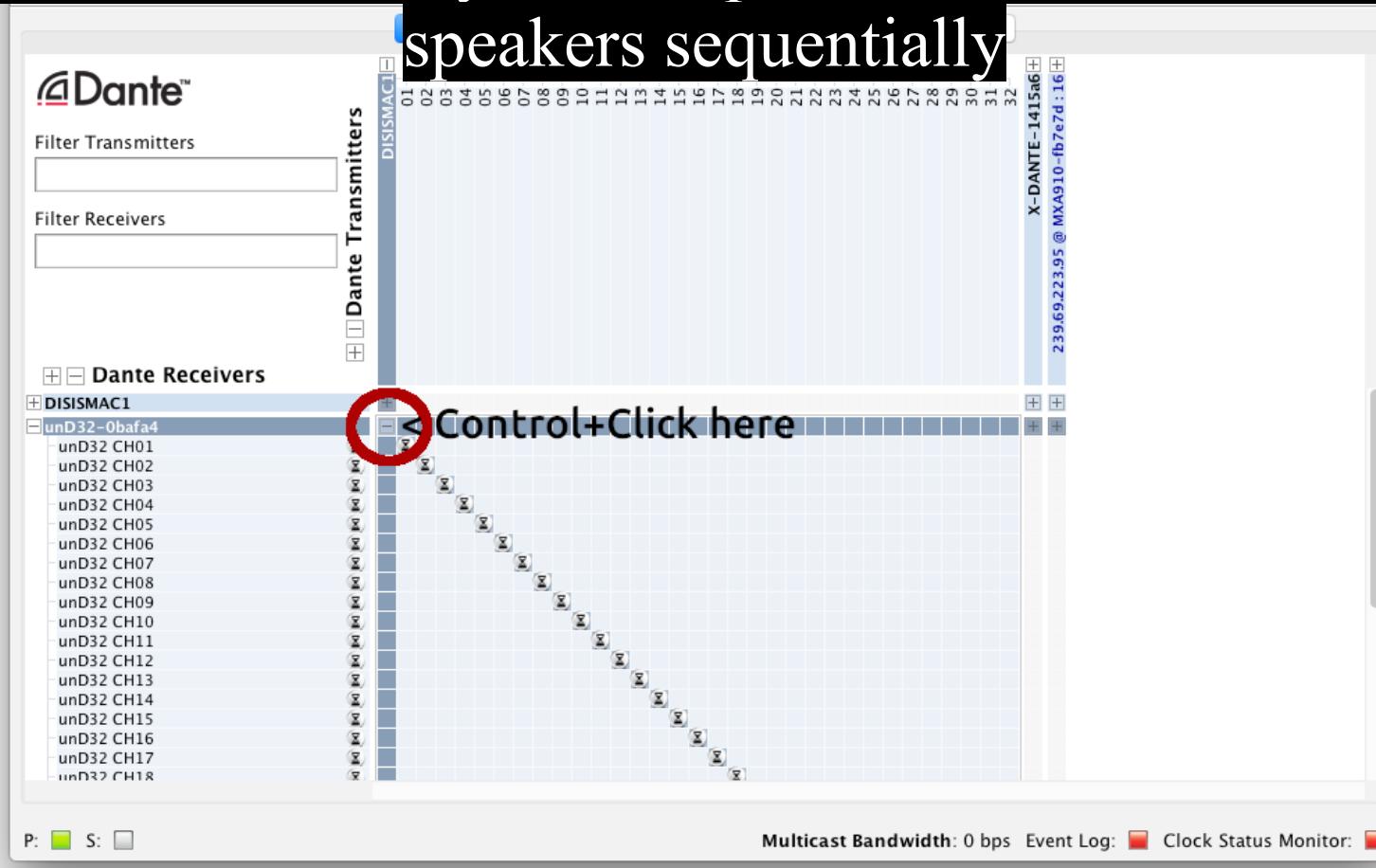
6. Open up all of the channels on the UND32 device with the plus box



7. Make sure your computer's application's gain is set to 0%

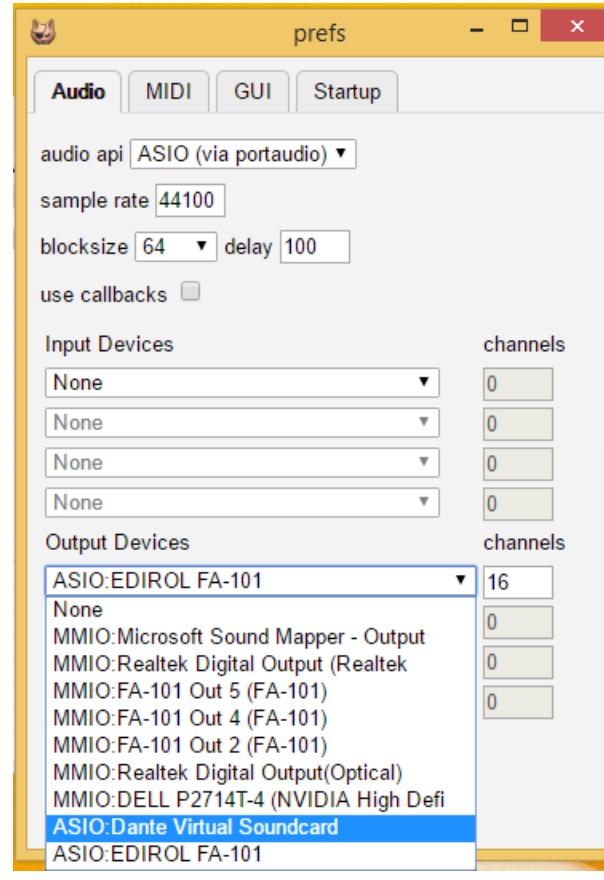
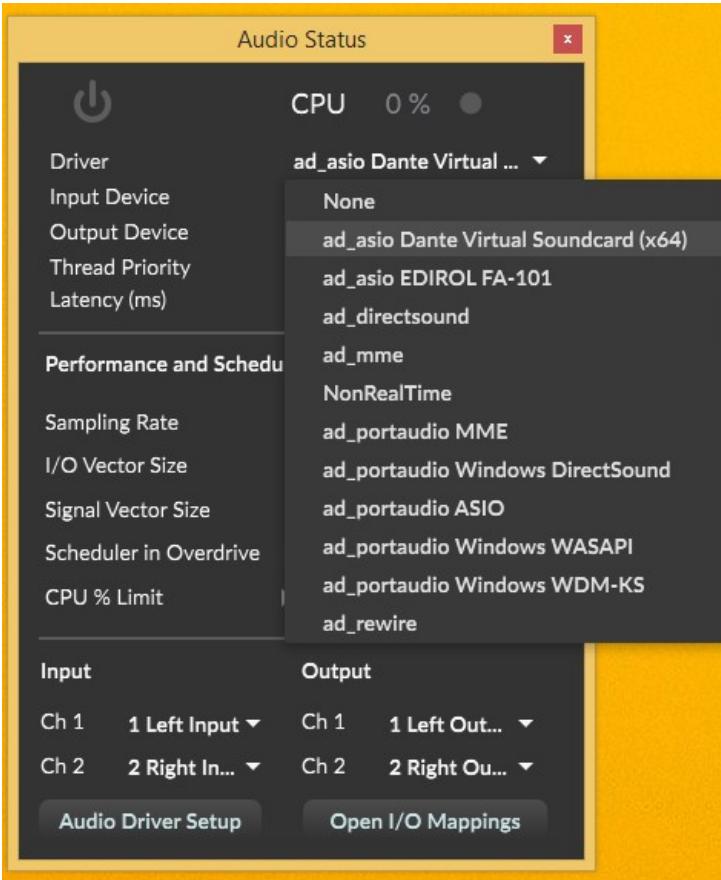


8. Control+left-click (yes, not command if on MacOS) on the + or - box to route all your computer's channels to all of the speakers sequentially



- Note, only one device can be sending channels out to UND32 device's inputs, meaning individual speakers in DISIS.
 - Adjust your channels if you want different outputs going to different speakers by adjusting the matrix sends manually (click on the channel boxes that you would like to send to)
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9. Route your computer's application's audio to Dante Virtual Soundcard

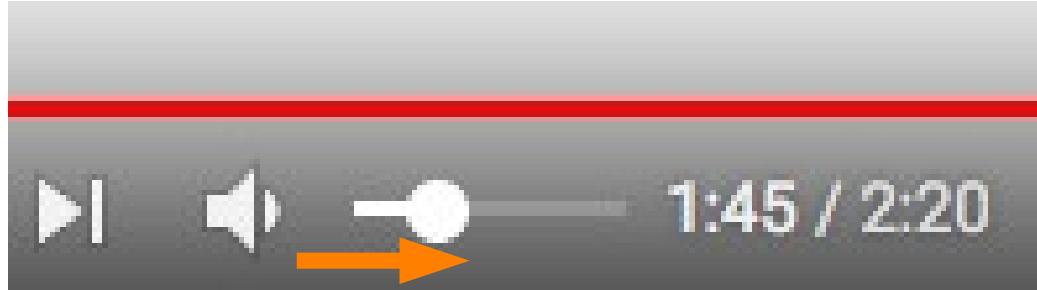


9. Route your computer's application's audio to Dante Virtual Soundcard

-Note, Dante does not control any volume. Make sure before playing audio to gain stage or control your gain to the speakers, or it could play very loudly and damage your hearing/scare you.

-Note, on Windows, there exist multiple different sound layers. If Dante Virtual Soundcard is set to ASIO, then you will not find Dante Virtual Soundcard under the operating system's sound settings, but under an application's settings, like Purr-data or Max msp.

10. Turn up computer's application's gain **slowly** while playing audio to confirm



-Note, unless an application is designed for multichannel output, applications will only send out of channel 1 and 2. You will need to route channels 1 and 2 to different speakers if the application you are running does not give options to route to other outputs.

-Note, currently there is no Linux driver for Dante, meaning any Linux computers on the network will not be able to route audio to the DISIS speakers. If you need this, you will have to use jacktrip from the Linux computer to a Dante-capable Windows or MacOS machine, or use an analog connection into Dante with the Behringer X32.

Device with Headphone Jack to Main Stereo Speakers:

1. Make sure mixer channels AUX IN 1 and 2 on Behringer X32 are all the way down and muted
2. Find headphone plug going to Behringer X32
3. Connect plug into device
4. Load, under Dante Controller, File>Load Preset, preset “StereoAuxInfromBehringerMixer” by clicking open, select all, and ok.
5. Unmute and slowly turn up mixer AUX IN 1 and 2 up to preferred volume
6. Move Mixer Channels Bus 1 and 2 up for bass send. If you don't see the channels on the mixer, make sure to select one of the buttons that says Bus 1-8.
-Note, this bass send is affected by the gain set on channels 1 and 2. For example, if you send audio and only move up the bass gain with no gain on AUX IN 1 and 2 set, there will be no bass. Giving AUX IN 1 and 2 30% gain and BUS 1 and 2 40% gain would give about 12% bass in total volume.
7. When you are done, make sure to turn the mixer channels AUX IN 1 and 2 to 0% and THEN unplug device.

1. Make sure mixer channels AUX IN 1 and 2 on Behringer X32 are all the way down and muted



2. Find headphone plug going to Behringer X32 mixer

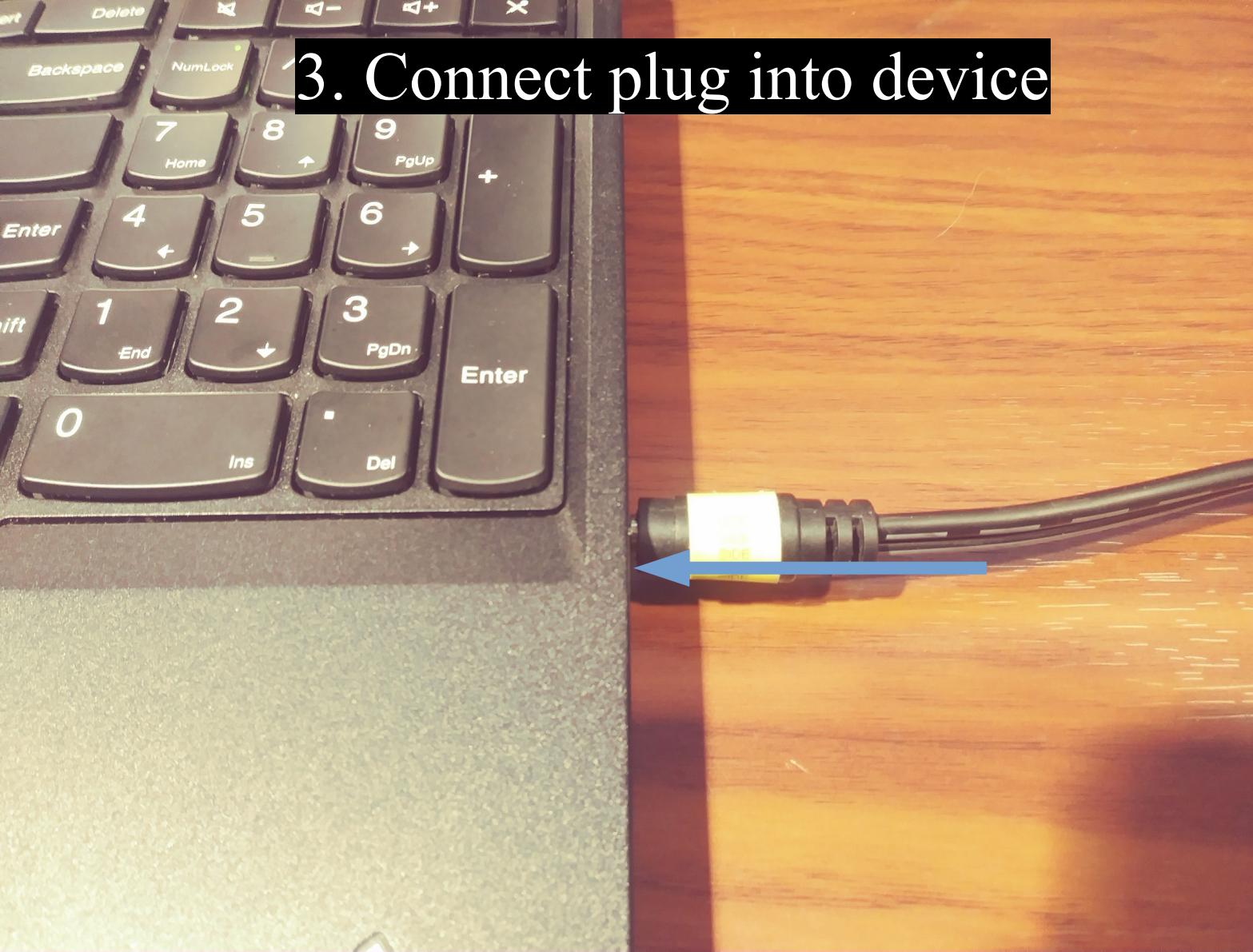
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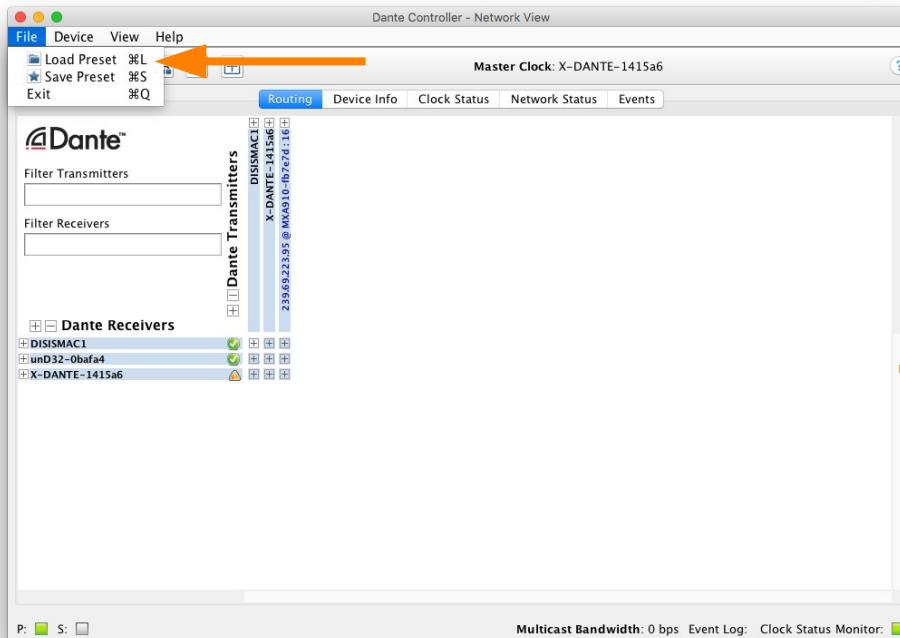


3. Connect plug into device

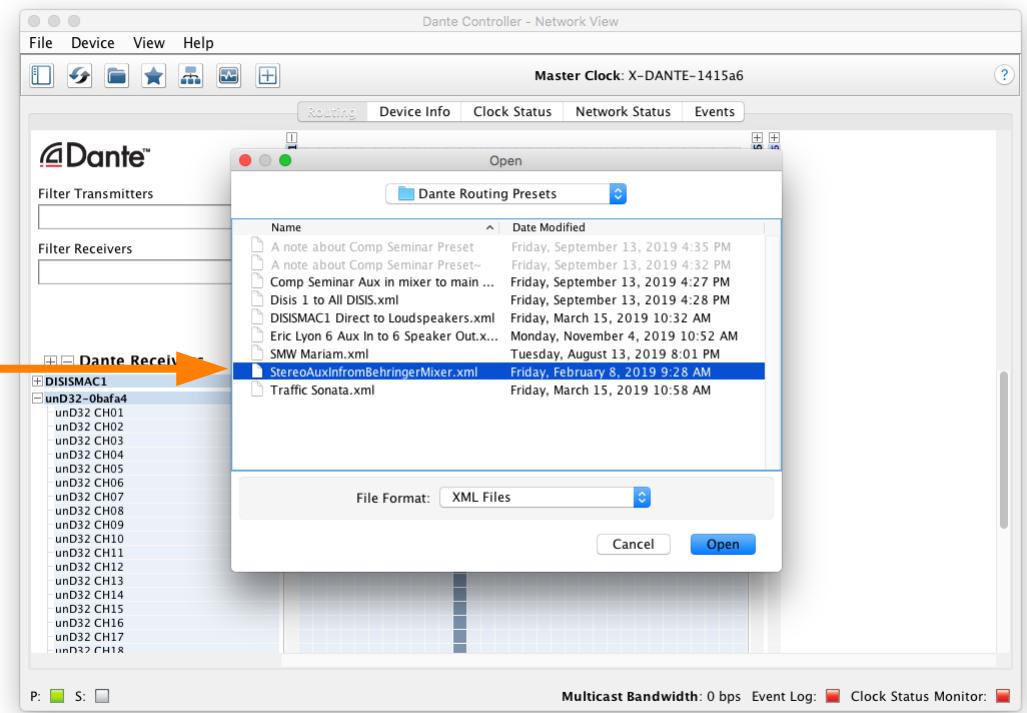


4. Load, under Dante Controller, File>Load Preset, preset “StereoAuxInfromBehringerMixer” by clicking open, select all, and ok.

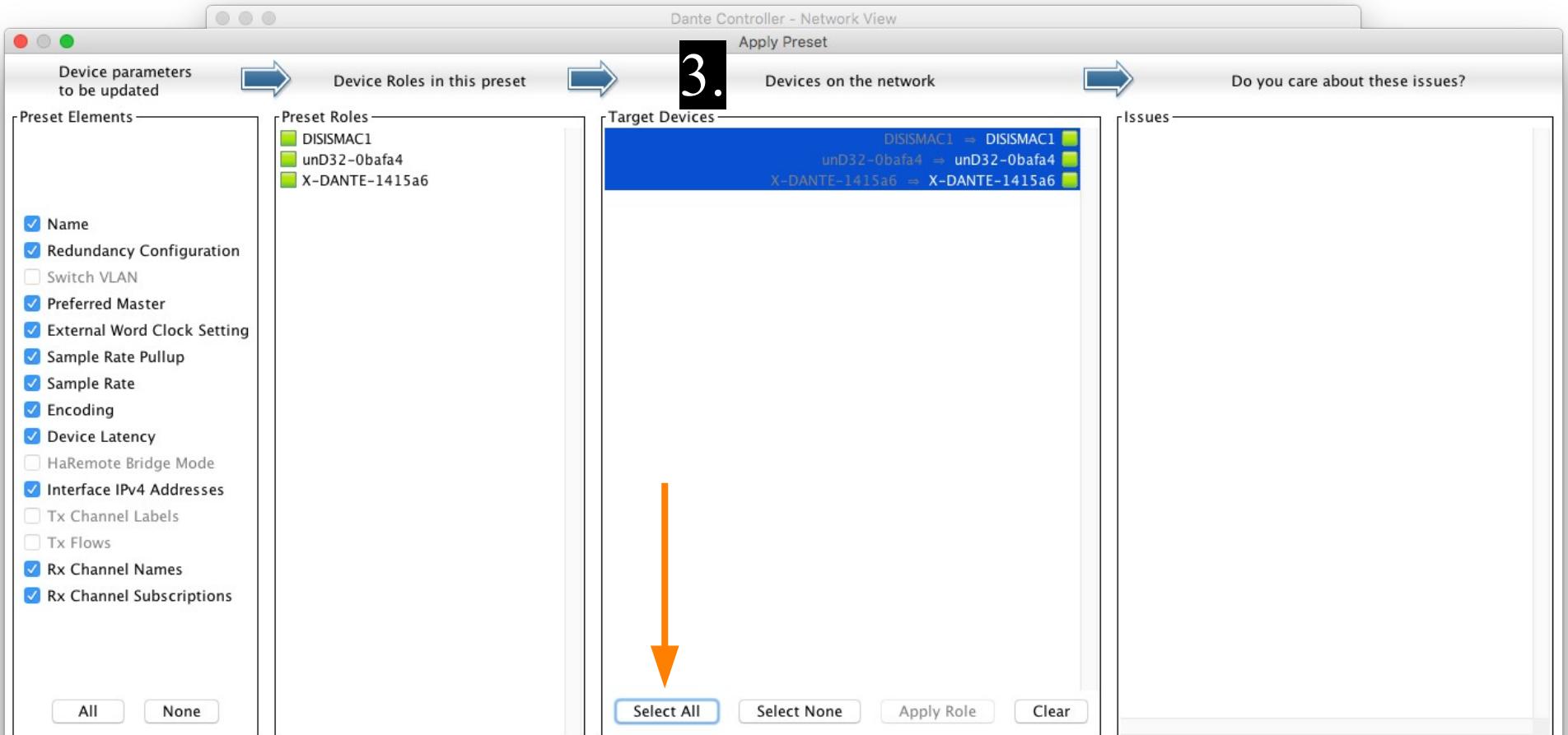
1.



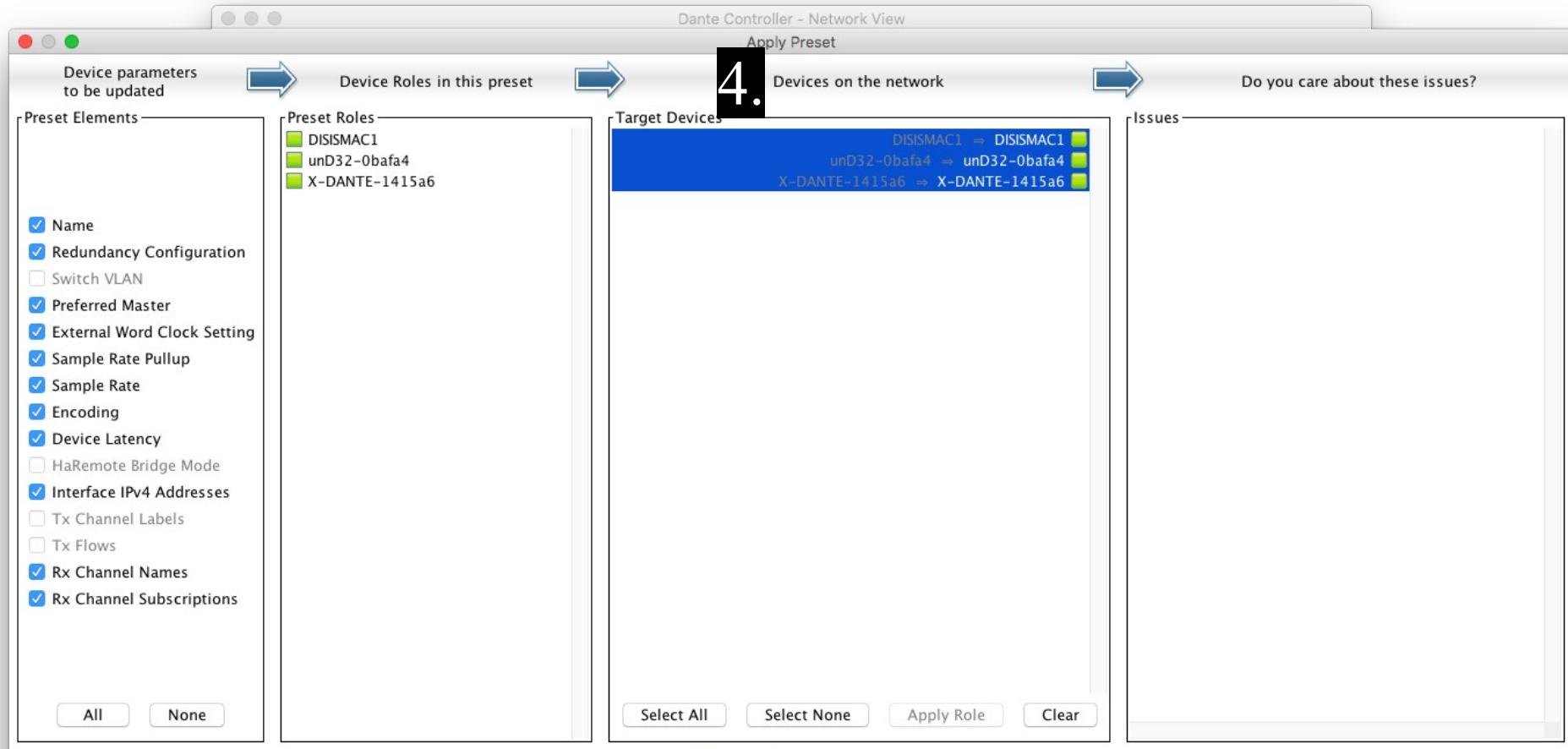
2.



4. Load, under Dante Controller, File>Load Preset, preset “StereoAuxInfromBehringerMixer” by clicking open, select all, and ok.



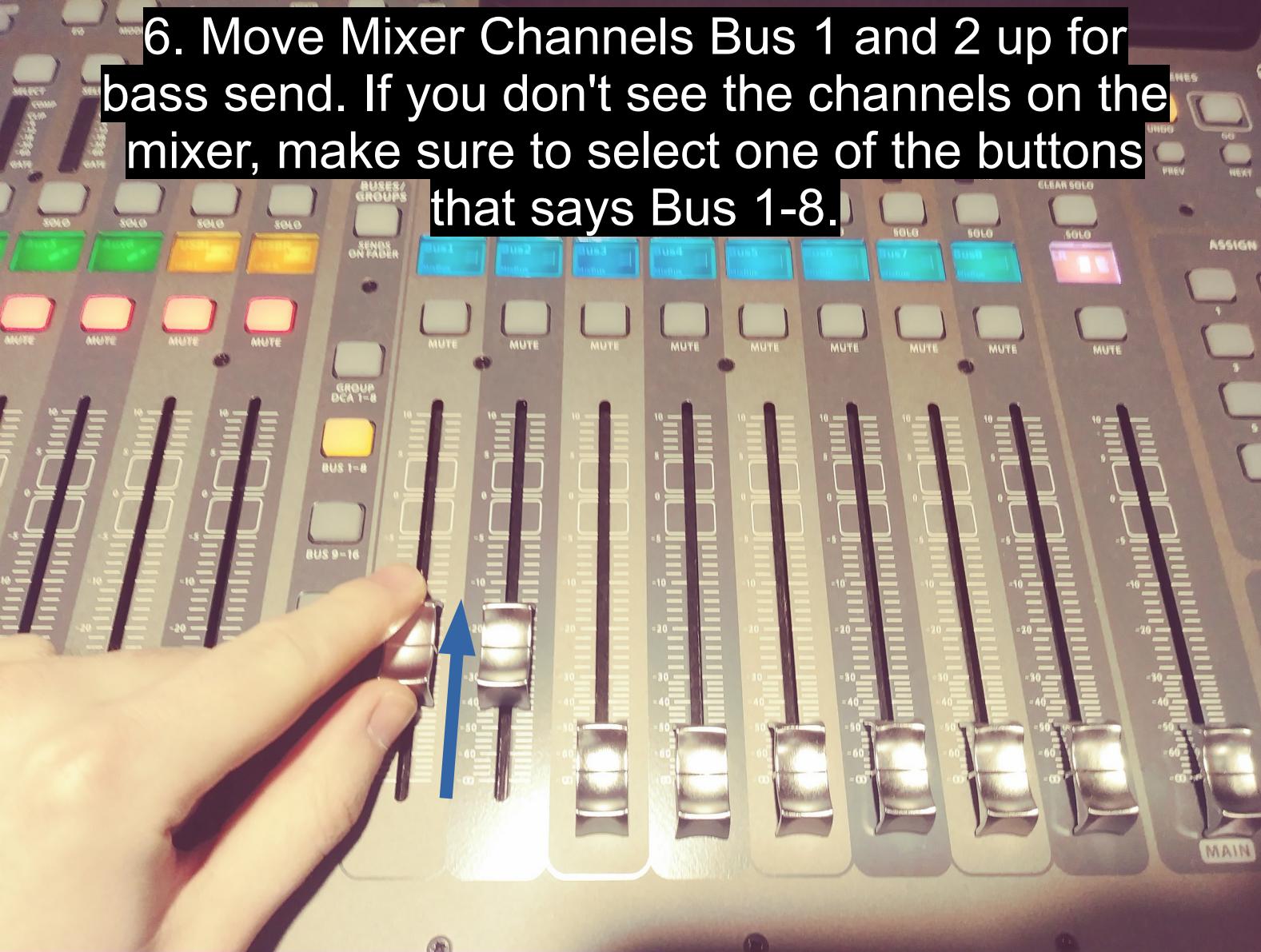
4. Load, under Dante Controller, File>Load Preset, preset “StereoAuxInfromBehringerMixer” by clicking open, select all, and ok.



5. Unmute and slowly turn up mixer AUX IN 1 and 2 up to preferred volume



6. Move Mixer Channels Bus 1 and 2 up for bass send. If you don't see the channels on the mixer, make sure to select one of the buttons that says Bus 1-8.



-Note, this bass send is affected by the gain set on channels 1 and 2. For example, if you send audio and only move up the bass gain with no gain on AUX IN 1 and 2 set, there will be no bass. Giving AUX IN 1 and 2 30% gain and BUS 1 and 2 40% gain would give about 12% bass in total volume.

7. When you are done, make sure to turn the mixer channels AUX IN 1 and 2 to 0% and THEN unplug device.