

Dante Certification Program

Level 2 Part B, Online Skills Test

Description

You need to put together a small Dante system for a public event space that may employ volunteers help to run audio. This system needs to be configured for the following:

- A lectern mic for the main presenter to be heard.
- 8 stage mics, feeding a stage box, to hear stage performers.
- A mixer to blend and adjust these sources into a stereo mix for the main speakers
- A headphone monitor to check the quality of individual devices separately.
- An analog feed from a stage box output to a small private monitor at the lectern.
- Background music provided by a computer media player.
- A DSP acting as a loudspeaker processor.
- A power amp to drive the main speakers.
- A complete multichannel recording of events made using the computer.
- A working Dante system with useful labels.

You have the following Dante-enabled equipment already connected to a network switch and appearing in **Dante Controller**:

- A mixer
- A lectern mic
- A stage box
- A headphone amp
- A DSP configured for loudspeaker conditioning
- A power amp connected to speakers
- A laptop running Dante Virtual Soundcard configured for 16x16 channels, with a DAW and a Media Player running
 - Note: Laptop is pre-configured to have Media Player appear on outputs 1 & 2
 - Note: Laptop is pre-configured to have DAW connected to inputs 1 thru 16

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Step 1: Review the signal flow

We will now build a system as shown in the **signal flow** diagram below. Please note that this is not a network diagram; no switches are shown. All network connections are **logical** and made using Dante Controller only.

Initial assumptions

1. **8 analog microphones** are connected to the analog inputs of the **StageBox** on channels 1-8.
2. The **LecternMonitor** is connected via an analog cable to the channel 1 analog output of the **StageBox**.
3. The **Main speakers** are connected via analog cables to the **PowerAmp**.
4. The **HeadphoneAmp** has a set of headphones plugged in to its analog output.

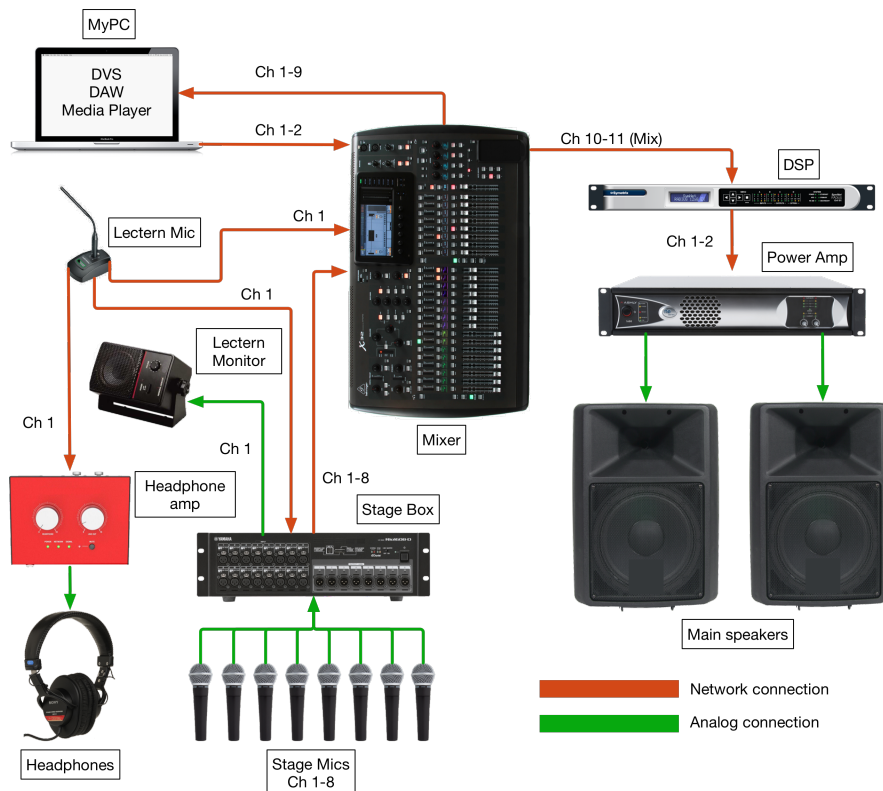


Figure 1: Signal flow diagram of completed system

Read CAREFULLY – ONLY MAKE CHANGES REQUESTED

Click Start Over button on simulator to initialize before you begin the test.

Step 2: Label your devices

When we first open Dante Controller, we see that several items on the network use cryptic names. These should be changed to be more understandable, especially for any volunteers who might need to use the system.

NOTE: When renaming devices, make sure you label them EXACTLY as indicated. DO NOT INCLUDE original channel numbers as part of the new label.

Using the Device View in Dante Controller, make the following changes:

1. Change the name of the device **YSS-Q16** to **Mixer**
2. Change the name of the device **AR3-H** to **HeadphoneAmp**
3. Change the name of the device **Microphone** to **LecternMic**
4. In addition to device names, we wish to ensure that some channels are *sensibly labeled* as well.
5. On device **MyPC**, label TRANSMIT channel 1 as **MusicL** (*NOT 01 MusicL*).
6. On device **MyPC**, label TRANSMIT channel 2 as **MusicR**.
7. On device **Mixer**, label TRANSMIT channels 10 and 11 as **MixOutL** and **MixOutR**, respectively. (Please note that these are channels 10 and 11.)
8. On device **DSP**, label TRANSMIT channels 1 and 2 as **SpeakerL** and **SpeakerR**, respectively.
9. On device **StageBox**, label RECEIVE channel 1 as **LecternMonitor**. (Please note that this is on the RECEIVE side – the others are TRANSMIT.)

Step 3: Create audio routes in Dante Controller

Now that devices are labelled and we know what the system should do according to the signal flow diagram, Dante Controller is used to create the audio signal paths.

You may want to use the Filter Receivers field to isolate the section of the routing screen you need to create subscriptions. Aligning the proper Transmitter and Receiver channels to create the subscription at the proper intersection can be a little challenging in this simulated version of Dante Controller.

1. Connect transmitter channel of **LecternMic** to receiver channel 1 of **Mixer**.
 - This makes the **LecternMic** available to the **Mixer**.
2. Connect transmitter channels 1-8 of **StageBox** to receiver channels 2-9 of **Mixer**.
 - This makes the stage microphones available to the **Mixer**. (Please note the specific channel ranges.)

3. Connect transmitter channels MusicL and MusicR of **MyPC** to receiver channels 10 & 11 of **Mixer**.
 - This makes the background music from the Media Player available to the **Mixer**.
4. Connect transmitter channels MixOutL and MixOutR of **Mixer** to receiver channels 1 & 2 of **DSP**.
 - This connects the mixed output of the **Mixer** to the **DSP**.
5. Connect transmitter channels SpeakerL and SpeakerR of **DSP** to receiver channels 1 & 2 of **PowerAmp**.
 - This connects the processed mixed output to the **PowerAmp** and **Main speakers**.
6. Connect transmitter channels 1-9 of **Mixer** to receiver channels 1-9 of **MyPC**.
 - This makes the individual channels of the mix available to the recording software on **MyPC**, omitting background music.
 - This will require making settings inside the **Mixer**, separate from Dante.
7. Connect the transmitter channel of **LecternMic** to receiver channel LecternMonitor of **StageBox**.
 - This allows the speaker at the lectern to adjust their own monitor level.
 - This maps the output of the **LecternMic** to the channel 1 output of the **StageBox**.
8. Connect the transmitter channel of **LecternMic** to receiver channel 1 of **HeadphoneAmp**.
9. Observe the error message.
10. Make adjustments to solve problem indicated in the error message.
11. Verify that subscription is working.
12. Double click the **Mixer** and open Device View
13. Select the **Latency** tab, and observe the latency monitor for the device **StageBox**.
14. Make adjustments in device settings to solve the issue.
15. Select the **Latency** tab on **Mixer** again, verify that it is behaving as expected.
16. Done

To complete the skills exam:

1. Review these instructions and make sure all tasks have been completed, the subscriptions were made to the proper channels, and that **NO OTHER SETTINGS WERE CHANGED**. (Expanding and contracting channel views of devices do not affect the Answer Code.)
2. If additional changes were made that were not requested:
 - a. Manually change those settings back, OR
 - b. Click the Start Over button on the Routing screen and redo the tasks, OR
 - c. Submit the Answer Code as directed below and retake the Skills test if you don't pass.

3. Enter the Answer Code that is displayed at the top of the Routing screen into the empty answer box on the online test page and submit the answer.

Remember – each time the test is attempted there may be a different simulator version generated and each version requires a different answer code.

Good luck!

Note: This test is part of the overall Dante Certification Program for Dante audio networking technology by Audinate. More info on Dante and the certification program can be found at www.audinate.com/cert-info