

Participant Audio Integration Requirements

For contestants connecting a laptop-based AI calling agent to the event Dante audio system

Purpose. This document explains how to prepare your laptop and AI agent so the room can hear both sides of every call through the house audio system, and so the operator can stop the call immediately at any time.

Minimum success condition: when your bot is live, the event team must hear both the AI agent and the called party through the house system, and you must be able to terminate the call immediately.

1. What we provide

- At your station, we will provide one house audio connection into our Dante system.
- Depending on the station, that connection will be either a USB-C Dante adapter presented to your laptop as a standard USB audio device, or a 3.5 mm analog connection into the house audio chain.
- Treat the house connection as the only approved live-call audio output for the event.
- USB-C is the preferred connection type. 3.5 mm analog is supported only when it passes preflight and produces a clean signal.

2. Your AI agent must meet these requirements

Audio routing

- Route both of the following to the same house device: the AI agent voice or TTS output, and the far-end caller audio.
- Do not depend on mirrored output to laptop speakers, Bluetooth headphones, AirPlay, or a second local output device to make the booth work.
- Do not require the event team to patch or re-route individual app audio during your call.
- If your app runs in a browser, test it in the same browser you plan to use at the event and confirm that all audio paths land on the selected house device.

Device handling

- Your system must start, maintain, and complete a call with the house adapter selected as the output device.
- Bring any required USB-C, USB-A, Thunderbolt, or 3.5 mm dongles for your laptop.
- Do not unplug, re-plug, or change output devices after a live call begins.
- Disable Bluetooth audio, AirPlay, spatial audio, and any automatic device switching during your slot.

Operator control

- A visible on-screen control labeled Hang Up, Stop Bot, End Call, or similar is required.
- A keyboard shortcut for immediate call termination is also required.
- When either control is used, the live call must end immediately and the bot must stop speaking.
- An operator must remain at the laptop for the entire call.

Startup readiness

- Log in to all required services and complete any model loading, token refresh, or browser permissions before your scheduled slot.
- Your booth setup must be able to run without installing new drivers or troubleshooting core dependencies at the lectern.

3. Recommended build standard

- Preferred method: use the organizer-provided USB-C Dante adapter as your only live-call output device.

- Allowed fallback: use the provided 3.5 mm analog output path only if that is the station interface and it passes preflight.
- For browser-based agents, do not assume the browser will route every audio path automatically. Validate speaker or output-device behavior before event day.
- For 3.5 mm analog setups, start at a moderate laptop output level and let event staff set final room gain.

4. Mandatory preflight at check-in

Test	What we verify	Pass condition
Device selection	Your laptop and your application are both using the house device.	The correct house device is selected before the call starts.
Bot voice test	Your local AI speech path reaches the house system.	The room hears a spoken test phrase from your bot through the Dante system.
Test call	Your remote call audio reaches the house system.	The room hears the far-end audio clearly through the Dante system.
Full-duplex check	Both sides of the conversation are present at the same time.	The room hears both the bot and the called party without changing devices mid-test.
Kill switch test	Your emergency stop works from the UI and the keyboard.	You can terminate the call immediately from both controls.

5. Go / no-go conditions

- If we cannot hear both sides of the conversation through the house system, you do not go live.
- If you cannot terminate the call immediately from the laptop, you do not go live.
- If your setup depends on unsupported audio mirroring, Bluetooth routing, ad hoc fixes, or untested browser behavior at show time, you do not go live.

6. Troubleshooting before your slot

- Confirm the house device is selected in both the operating system and your application.
- On Windows, verify that the application is still using the correct output device in Volume Mixer.
- On macOS, verify the correct output device in Sound settings or Audio MIDI Setup.
- If you are using a browser app, connect the house device first, then reload your app and re-check speaker selection before the preflight call.
- Close other apps that may seize or redirect audio devices during the event.

7. Superseding prior competition wording

This document replaces any earlier guidance suggesting that a call becomes fully autonomous once it starts. For this event, immediate human call termination is mandatory.

Reference notes

This standard is based on current product and platform documentation showing that Dante AVIO USB and USB-C adapters are class-compliant audio devices for playout and recording, that Dante analog AVIO adapters are line-level devices, that Windows and macOS may require explicit output-device selection, and that browser-based apps may need explicit speaker routing for Web Audio paths.

- Audinate: Dante AVIO Adapters; Dante AVIO USB driver FAQ; Dante AVIO product guides.
- Microsoft Support: app audio output selection and communications audio handling in Windows.
- Apple Support: Sound output settings and Audio MIDI Setup on Mac.

- Chrome for Developers: output-device routing for Web Audio.