

WAVES CA SOLUTION GUIDE: House of Worship Installation

This solution guide describes a practical implementation of the Waves CA DSP Engine in a house of worship to improve audio quality and clarity for in-person and online services.

SOLUTION BENEFITS INCLUDE



Improve speech intelligibility without loss of tonality



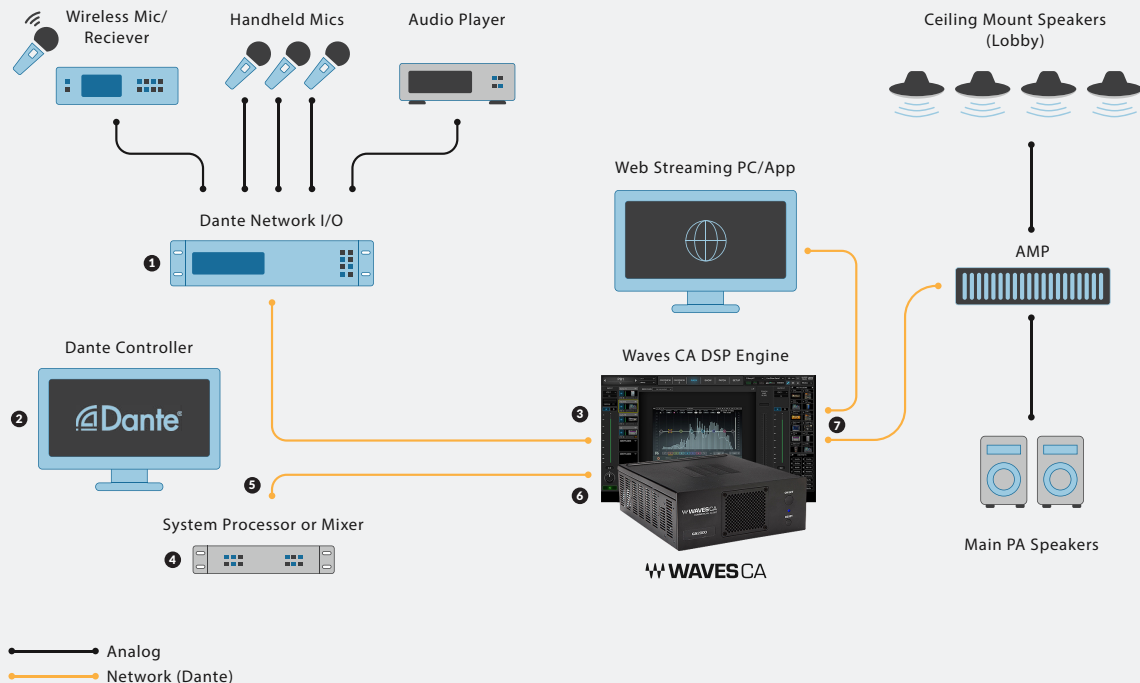
Automatically suppress mic feedback



Provide optimized audio feeds for online program streaming

SYSTEM REQUIREMENTS

- 3 handheld (wired) + wireless headset mic + music player used in main room
- 2 zones (main room, lobby area) with adjustable volume controls
- Audio recording for basic online streaming or recording of services



SOLUTION OVERVIEW

Note – numbers below correspond to the numbers on the system diagram.

- 1 Mic and line inputs use a standard I/O-to-Dante interface box for connecting wired and wireless microphones.
- 2 Each input is routed using the Dante Controller to an individual Rack assignment on the Waves CA DSP engine.
- 3 Waves CA DSP engine is configured with presets for hand-held and head-worn microphone, and playback groups for stereo music player.
- 4 The processed audio from the Waves CA DSP engine is routed to a Dante-enabled audio mixer. The mixer is set for appropriate source levels for the 2 zones and audio streaming output.
- 5 Outputs from the mixer are routed using the Dante Controller to the Waves CA engine for final processing.
- 6 Waves CA DSP engine is configured with presets for the main room, lobby, and audio streaming.
- 7 The final processed audio from the Waves CA DSP engine is routed to the Dante-enabled PA system and a computer used for the service recording/streaming.

THE WAVES CA DIFFERENCE

The Waves CA DSP Engine integrates directly in the Dante network to dramatically improve speech clarity and audio playback quality for the small church installation. The Waves CA presets are used to process the audio streams based on the input type: Handheld Mic, Headworn Omni and Playback Group.

The presets used on the microphone channels are preconfigured to support common mic types and usage in a variety of church environments. The presets treat and suppress typical challenges with mics including feedback, pops & thumps, hissing and background noise.

Each microphone channel input is processed independently in order to provide the best results. This also gives the system integrator complete control and flexibility to optimize the settings for different mics that may be used in the facility.

In addition to the microphone processing, the Playback Group preset is used to provide consistent volume level and sound for the music player, which could be a CD playback unit, MP3 player, or audio output from the church video system. The preset provides automatic levelling of the source audio without over-compressing, such that the resulting audio stream does not exceed the desired loudness while remaining consistent across different source media.

The Waves CA DSP Engine also includes presets to fine-tune the audio outputs that are sent to the room PA and system(s) used for service recording or online streaming. These presets provide a baseline configuration for integrators to customize the presets for the exact needs of the installation.

All Waves CA presets can be used “out-of-the-box” to get superior results, however they can also be easily adjusted and stored for optimal performance in a specific installation.

