High-End Speaker Sound Reinforcement System for Banquet Halls

Solution Overview

Banquet Hall Description

- A variety of different types of activities will be held in the banquet hall, such as wedding events, company dinners, large gatherings, speeches, reports, press releases, product demonstrations, small and medium-sized cultural performances, and dances. In order to ensure that the participants can clearly hear the speakers' voices and musical performances, the sound reinforcement system plays an important role in the banquet hall.

- The sound reinforcement solution enables the participants in the banquet hall to hear the speakers' voices and musical performances clearly, enhancing the effects of the event and the experience of the participants. At the same time, the sound reinforcement solution also needs to take into account the ease of installation and maintenance to ensure the reliability and stability of the system.

- A banquet hall usually holds a relatively large space, and it is essential to ensure that the sound is distributed uniformly to all corners so as to eliminate areas of inaudible sound. This can be accomplished through proper loudspeaker layout and mixing console control.

Project Requirements

- Banquet hall is a more high-end entertainment place, and the sound system equipment of the banquet hall is generally designed to ensure a relaxing and comfortable atmosphere for customers, and enable a wonderful performance for programs or evenings.

- The sound reinforcement system for the banquet hall requires a user-friendly operation interface and control mode, allowing for easy tuning and control by staff.

- Consideration also needs to be given to ease of installation and maintenance, as well as uniform sound distribution, ensuring the reliability and stability of the system.

Design Objective

- When designing a sound reinforcement solution, it is necessary to take into account the acoustic characteristics and use requirements of the banquet hall. As the speech signals are mostly concentrated in the medium frequency band, it is important to ensure that the sound in the medium frequency band is transmitted uniformly and clearly. Meanwhile, music performances require good sound quality and sound effects, so the sound reinforcement effect of low frequency and high frequency also needs to be considered.

200㎡ Banquet Hall Solution Design

System Configuration

- Sound Source Part: In view of the simplicity of the auditorium activities, the mobile wireless handheld microphone is equipped to prevent the inconvenience caused by the speaker's movement, and the handheld microphone can effectively enhance the main sound source and suppress the background noise for a clear speech. Additionally, it is easy to manage and can be used after power-on and automatic frequency pairing with the host, not requiring additional operations.

- Regulation and Control Part: The digital mixing console, digital audio processor and feedback suppressor are selected to regulate and control the whole system. The digital mixing console features user-friendly interfaces and powerful functions, and holds a variety of audio signal input and output interfaces to output multiple channels of audio signals and connect various audio inputs and outputs. The digital audio processor and feedback suppressor are built with abundant peripheral modules to carry out a range of processing operations on the entire system while ensuring the signal-to-noise ratio and lowering the failure rate. With stable performance, diversified modes, and hot-swapping, they enhance the stability of the entire system as other channels will not be unavailable due to the failure of one channel.

- Sound Retrieval System: The wall-mounted speaker is powered by 1x8 woofer and 1x1 tweeter, with excellent low and medium frequency response, suitable for music and vocals, with clear and sweet sound quality.

- Central Control System: The central control host is applied to centrally control the power on/off, volume level, screen switching, lighting, etc., with a wireless tablet, enhancing the operability of the banquet hall and promoting an intelligent banquet hall with a high level of technology.

- System Protection: The power sequence controller is equipped to ensure the safety and reliability of the system equipment in use, and protect the equipment from damage, especially in the event of an accident.

Banquet Hall Layout

System Advantages

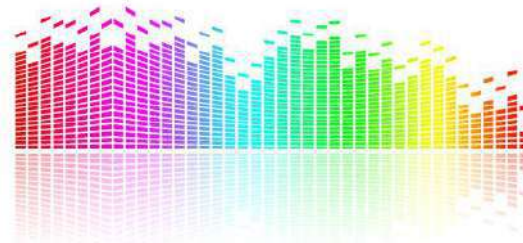## Exclusive OBE Technology

- Designed with an optimal bass enhancement radiator, stylish in outlook.

- With powerful superb bass, the speaker cover vibrates with the sound of music to enhance the bass quality and effect.

Dynamic Frequency Balance

- The bass is compact, clear, well pitched, not loud, muffled or ambiguous; as the main part of the music, the midrange is more important, vocals and instrumental sounds should be natural with details, neither too loud nor muffled, neither too loud nor too low; and the treble should be open, empty and extended, no screaming or fading.

Immersive Experience

- Designed with an ultra avant-garde exterior, it has streamlined edges and rounded curved surfaces, providing a sense of modernity and fashion. It can match the decoration style of the banquet hall, and the speaker color is available in black and white for applications of different styles.

Optimal BASS
Enhancement Radiator

Exclusive OBE Technology
The speaker cover vibrates with the sound of the music

System Advantages

Remote Control

- A computer is connected to the LAN of the switch via a network cable, so as to access the control interface of the digital mixing console with a browser for control.

Intelligent Central Control

- Combined with the intelligent central control system, it controls equipment on/off with one key, lighting, air-conditioning, cabinet power and other operations, allowing you to experience the convenience brought by the intelligent banquet hall.
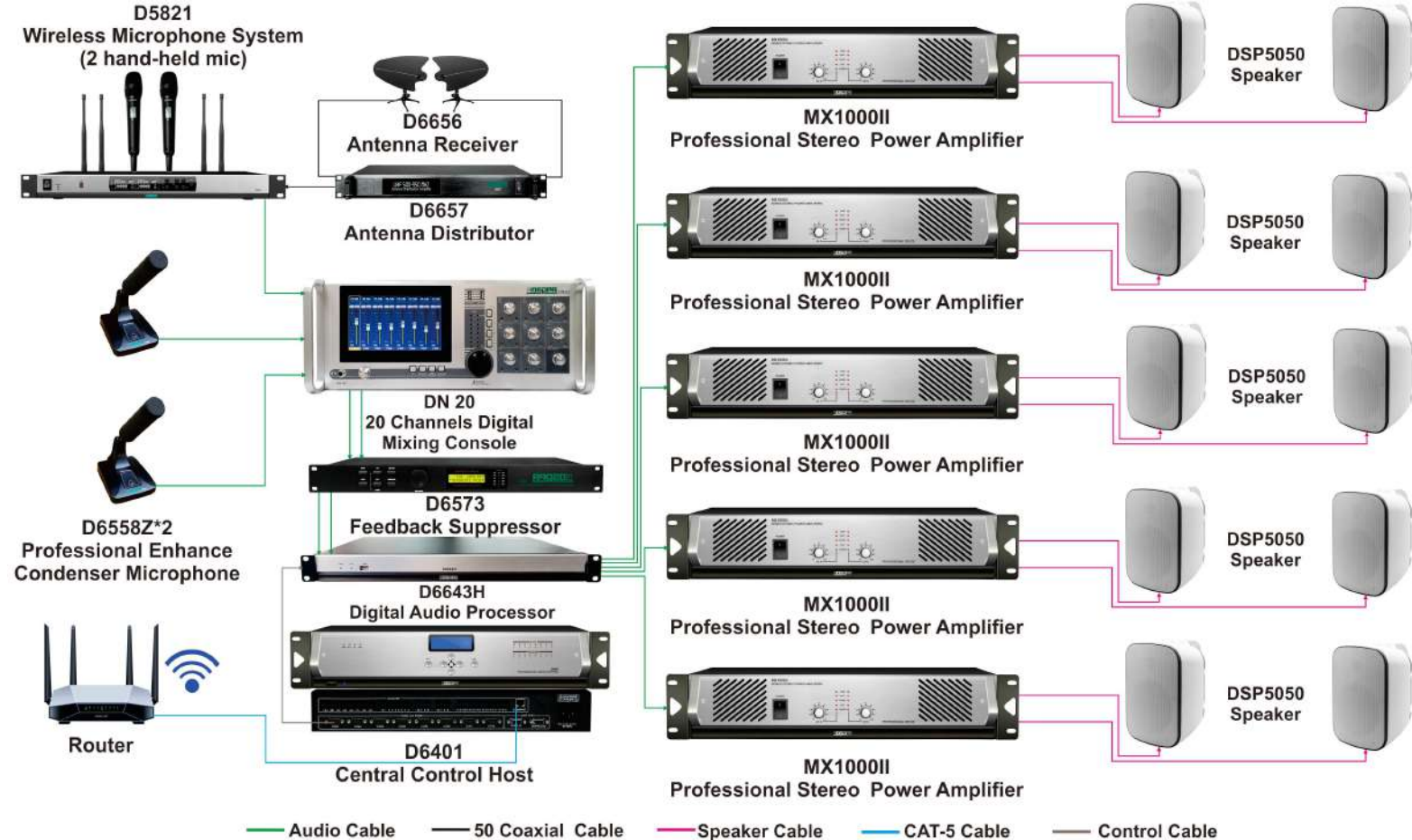

Strong Anti-interference Capability

- The sound reinforcement system of the banquet hall provides a certain anti-interference ability, which can effectively minimize the interference from other sound sources or noise, and ensure undistorted sound.

Conference System Connection Diagram

No.	Model	Product Name	Quantity
Sound Source Part			
1	D5821	Wireless Handheld MIC System	1 SET
2	D6656	Antenna Receiver	1 SET
3	D6657	Antenna Distributor	1 PC
4	D6558Z	Wired Microphone	2 PCS
Regulation and Control Part			
1	DN20	Digital Mixing Console	1 PC
2	D6643H	Audio Processor	1 PC
3	D6573	Feedback Suppressor	1 PC
Sound Retrieval System			
1	MX1000II	Professional Amplifier	5 PCS
2	DSP5050	Wall Mount Speaker	10 PCS
Central Control System			
1	D6401	Central Control Host	1 PC
2	Self-Purchased	Router	1 PC
Supporting Materials			
1	D6572II	Power Sequence Controller	1 PC

D5821
Wireless Microphone System
(2 hand-held mic)

D6656
Antenna Receiver

D6657
Antenna Distributor

D6558Z*2
Professional Enhance
Condenser Microphone

DN 20
20 Channels Digital
Mixing Console

D6573
Feedback Suppressor

D6643H
Digital Audio Processor

Router

D6401
Central Control Host

MX1000II
Professional Stereo Power Amplifier

DSP5050
Speaker

— Audio Cable   — 50 Coaxial Cable   — Speaker Cable   — CAT-5 Cable   — Control Cable

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