**TASCAM**

**2020**

# System Design Guide

## for Audio Installation

## Support Book for System Plan

## System Design Guide for Installations

Introduction

AV installations have evolved greatly due to the evolution of technology.

The evolution of video, lightning and network technologies has created new experience-based services to appear and trigger the demand for a new approach. Because of this, proper technical knowledge for this new environment is becoming more and more essential, and this knowledge is required not only from system engineers, but also from salespeople in order to guide customers into creating a successful system.

We have produced this design guide to meet such needs, and to visually present project proposals more clearly by illustrating system examples based on application or project type.

TEAC CORPORATION  January 2020

# Table of Contents

# 1-1 AV system for small-mid scale conferences

| Space Saving | DSP Sound Adjustment | Easy Control via Smartphones |

Microphones and other audio equipment inside the conference room can be all managed using the 1U sized MX-8A matrix mixer, which can be mounted in a rack with other equipment creating a compact and space-saving system. Detailed sound field and microphone levels can be configured with the TASCAM MX CONNECT control software for integrators, while using the TASCAM EZ CONNECT control software will allow end-users to easily adjust volume or select sources for the entire room.

The MX-8A has a 2 in / 2 out USB audio interface function, making it possible to directly record to or playback minutes files from a computer. Equipped with balanced audio outputs, the BD-MP1 professional-grade Blu-ray player can be added to this system for video playback.

## System Diagram
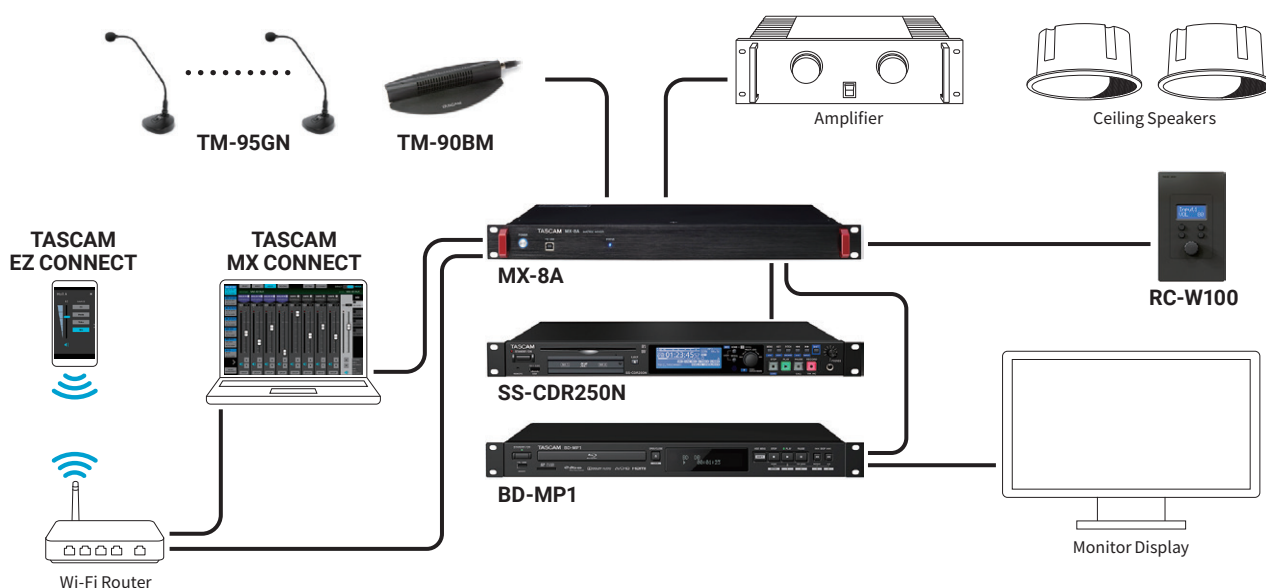


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | **MX-8A** | |
| Wall-mount programmable controller | **RC-W100** | |
| Control software for system integrators / managers | **TASCAM MX CONNECT** | |
| Control software for end-users | **TASCAM EZ CONNECT** | |
| Solid state / CD stereo audio recorder | **SS-CDR250N** | |
| Blu-ray™ player | **BD-MP1** | |
| Gooseneck microphone | **TM-95GN** | |
| Boundary microphone | **TM-90BM** | |

# 1-2 Centralized management and operation of minutes recording data server

**Clear Sound**

**Automatic File Upload**

**Server Management**

This system can be constructed by adding the SS-R250N to a sound system based on the MX-8A. Easy-to-hear audio enhances the ability to transcribe minutes efficiently by incorporating the MX-8A between the microphones and the recorder.

This allows appropriate sound level adjustment using the EQ and compressor sound processing functions creating the optimal audio quality for transcriptions.

In addition to recording to SD cards and USB flash memory, the SS-R250N can also automatically upload recorded data to FTP servers, making it easier to archive or manage recorded files for later transcription.

## System Diagram
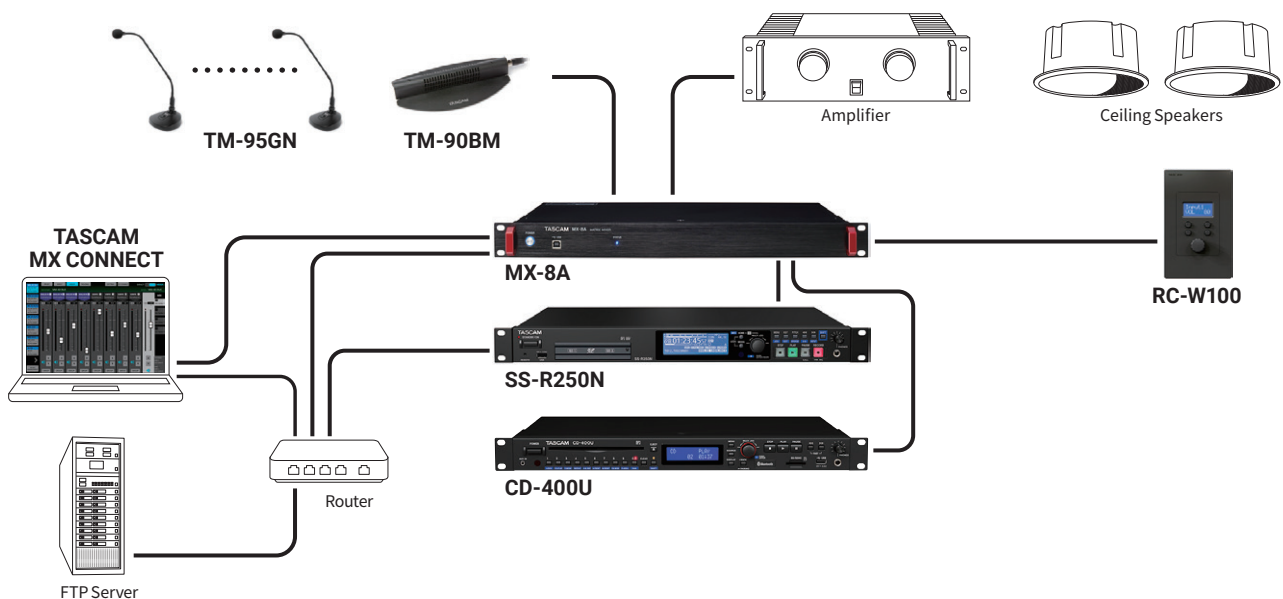
TM-95GN    TM-90BM    Amplifier    Ceiling Speakers

TASCAM MX CONNECT

MX-8A

SS-R250N

CD-400U

Router

FTP Server

RC-W100

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | **MX-8A** | |
| Solid state audio recorder | **SS-R250N** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |
| Gooseneck microphone | **TM-95GN** | |
| Boundary microphone | **TM-90BM** | |
| Control software for system integrators / managers | **TASCAM MX CONNECT** | |
| Wall-mount programmable controller | **RC-W100** | |

# 1-3  Sound system for conference rooms

| Multi-person Mic Control | Individual Speaker Recording | DAW Linked |

For larger conference systems where loudspeakers are installed and each attendee has an individual microphone, a mixer that supports multiple mic input connection like Model 24 is required.

Model 24's 16 mic preamps support up to 16 microphones and has the function to work as a multi-track recorder or as a USB audio interface.

Used as a multi-track recorder, each audio channel is recorded on a separate track, allowing easier track down of each attendee's voice by just linking them to their respective input channel.

## System Diagram
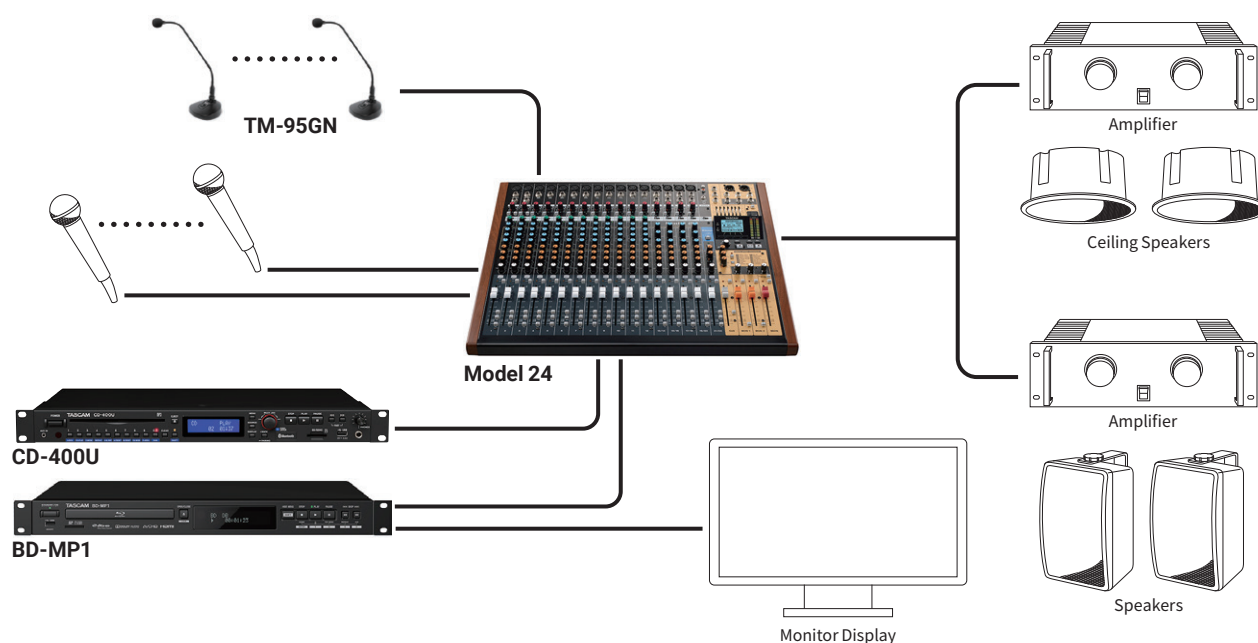
TM-95GN

Amplifier

Ceiling Speakers

Model 24

Amplifier

CD-400U

BD-MP1

Monitor Display

Speakers

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 24 track recording mixer | **Model 24** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |
| Blu-ray™ player | **BD-MP1** | |
| Gooseneck microphone | **TM-95GN** | |

# 1-4 Corporate presentations / live streaming system

**Video Streaming to Remote Locations**

**Multicast Streaming**

**4K Video Support**

**AVoIP**

It is possible to perform and send presentations to other conference rooms or remote offices by building a multicast streaming system using the Full HD VS-R264 or the 4K compatible VS-R265.

This system can be used for a wide variety of purposes such as streaming lectures or training sessions remotely to satellite offices and sites, or sharing performance reports to shareholders, etc.

## System Diagram
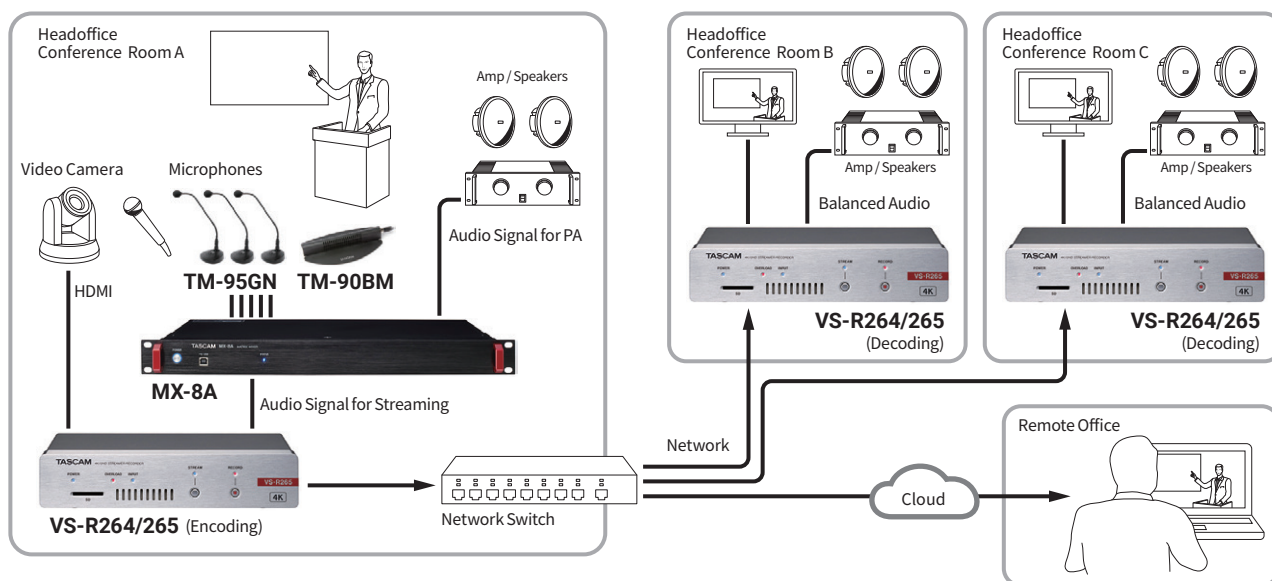


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| Full HD AV over IP encoder / decoder | **VS-R264** | |
| 4K AV over IP encoder / decoder | **VS-R265** | |
| 8 in / 8 out matrix mixer with built-in DSP | **MX-8A** | |
| Gooseneck microphone | **TM-95GN** | |
| Boundary microphone | **TM-90BM** | |

## 1-5 Live streaming system for lectures and seminars

| Expand Viewing Locations | Live Streaming | Video Archiving |

**AVoIP**

Use the VS-R264 or VS-R265 to encode the lectures or seminars' live footage, decode and stream them to another room or via video streaming services allowing participants to virtually enroll in the lectures.

Lectures and seminars can be archived without the need to prepare other special equipment by using the recording function in the VS-R264 and VS-R265. Both models can automatically upload recorded files to a server, making it easier to manage data for later editing.

## System Diagram
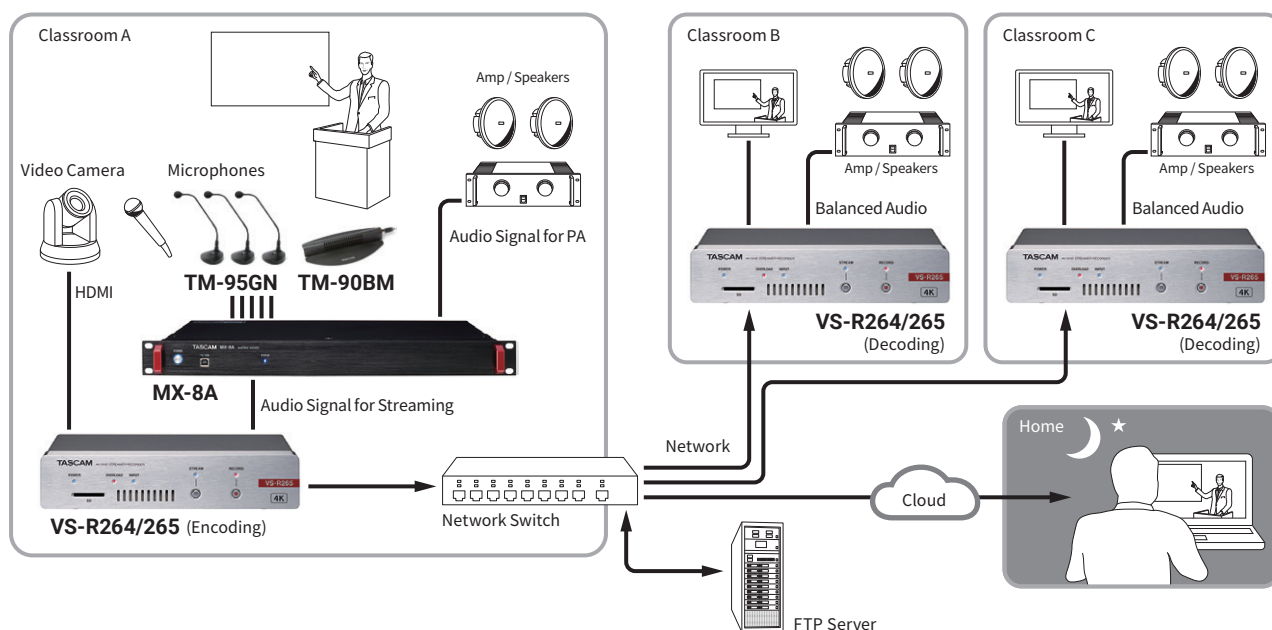


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
| --- | --- | --- |
| Full HD AV over IP encoder / decoder | VS-R264 | |
| 4K AV over IP encoder / decoder | VS-R265 | |
| 8 in / 8 out matrix mixer with built-in DSP | MX-8A | |
| Gooseneck microphone | TM-95GN | |
| Boundary microphone | TM-90BM | |

# 1-6 Internet live broadcast system for parliaments and committees

**Live Streaming**   **On-demand Streaming**   **Video Archiving**

**AVoIP**

The VS-R264 or the VS-R265 can be used to encode and stream live footage of parliaments / committee conferences via video streaming services.

Streamed footage can be simultaneously recorded and uploaded to a server for archiving, allowing the option to access to footage of past conferences.

## System Diagram
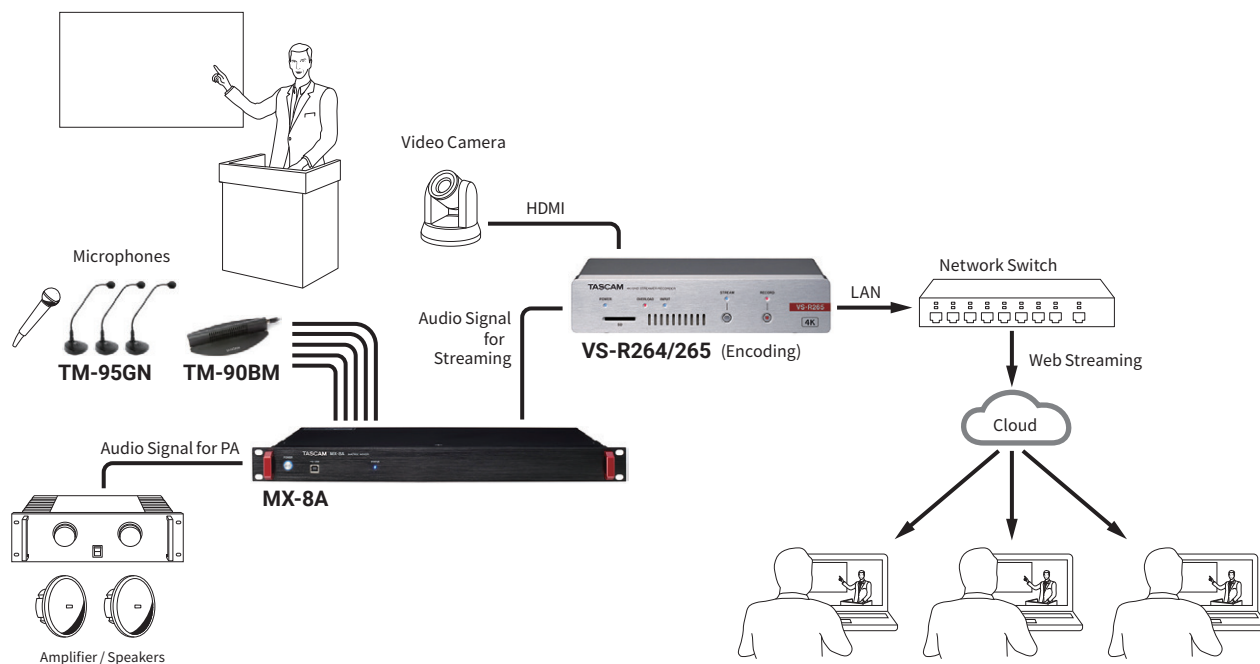
Video Camera
HDMI
Microphones
TM-95GN   TM-90BM
Audio Signal for Streaming
VS-R264/265 (Encoding)
LAN
Network Switch
Web Streaming
Cloud
Audio Signal for PA
MX-8A
Amplifier / Speakers

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
| --- | --- | --- |
| Full HD AV over IP encoder / decoder | VS-R264 | |
| 4K AV over IP encoder / decoder | VS-R265 | |
| 8 in / 8 out matrix mixer with built-in DSP | MX-8A | |
| Gooseneck microphone | TM-95GN | |
| Boundary microphone | TM-90BM | |

# 1-7　Simple video conference system

**Small Web Conference System**　　**Clear Audio**　　**PoE Supported**

Using the 2 mic in / 2 line out MM-2D converter will enable the construction of simple and easy video conference systems with optimal sound adjustment thanks to the integrated DSP mixer with compressor and EQ features.

In addition, the MM-2D's PoE support will eliminate the need for AC power supplies when used with a switching hub.

## System Diagram

Microphone

**TM-90BM**　　**MM-2D**　　Powered Speakers

**TASCAM EZ CONNECT**

Network Switch
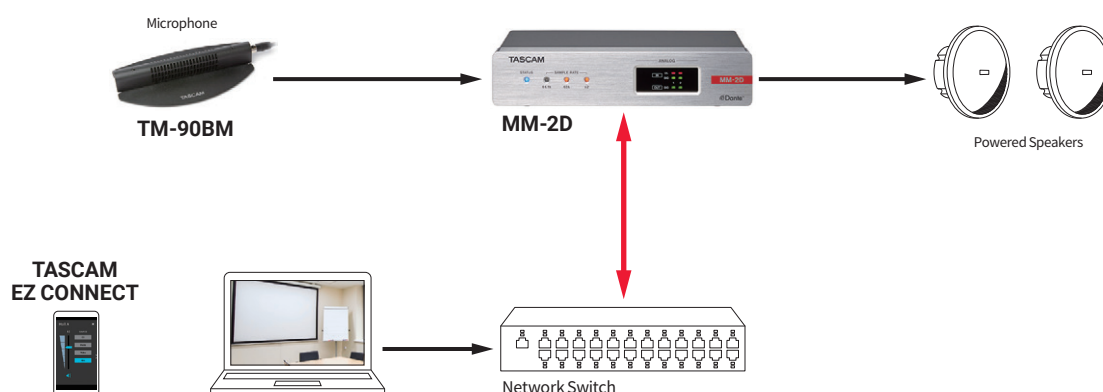
## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
| --- | --- | --- |
| 2 mic in / 2 line out Dante converter with built-in DSP mixer | MM-2D-X | |
| DCP control software for system integrators / managers | TASCAM DCP CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| DCP series dedicated AC adapter | PS-P1220E | Not required if using a PoE switching hub |
| Boundary microphone | TM-90BM | |

# 1-8 Multi-channel recording system for parliament conferences

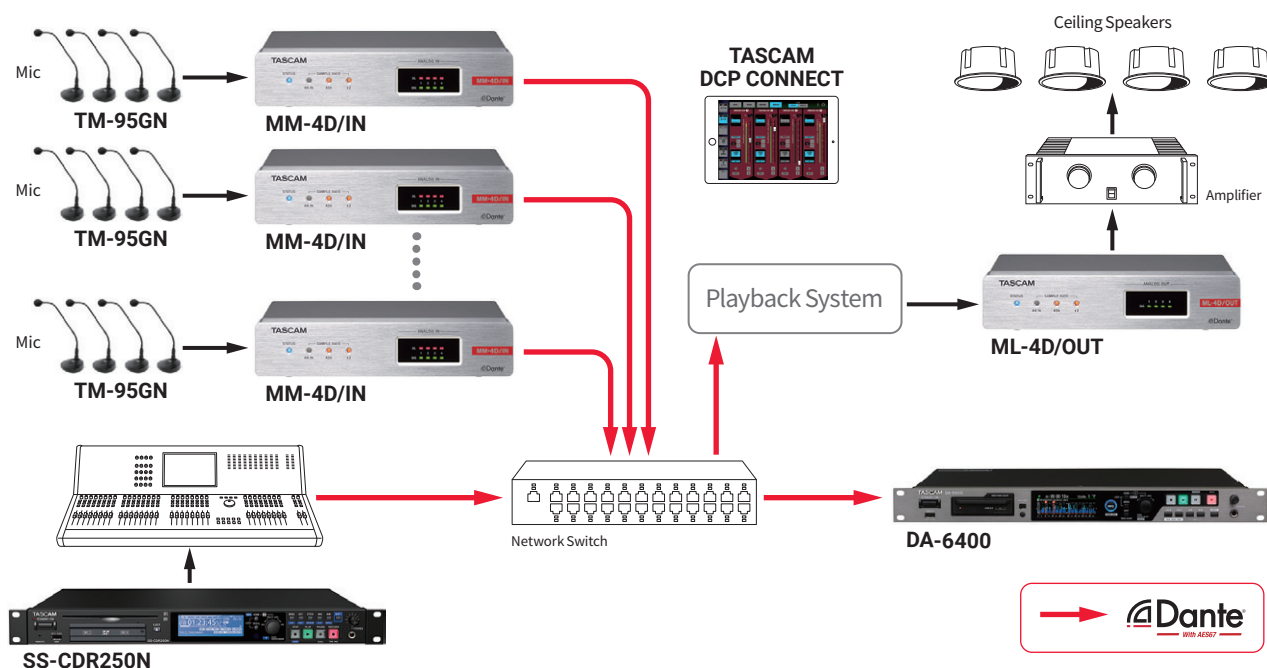| Less Wiring and Installation Procedures | Long Distance Audio Transmission | Individual Recording |
|---|---|---|

This conference recording system is optimal for large-scale conferences in which each participant requires individual microphones. The MM-4D/IN Dante converter allows the connection of up to 4 microphones per unit; after audio is converted to Dante signals, these can be transmitted long distances, requiring less wiring and installation procedures.

The built-in DSP functions in the MM-4D/IN, such as high pass filter and limiter, will enable fine adjustment for a more articulate audio quality.

In addition, routing signals via Dante will give users the option to do multi-channel recordings.

## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | MM-4D/IN-X | |
| 4 line out Dante converter with built-in DSP mixer | ML-4D/OUT-X | |
| DCP control software for system integrators / managers | TASCAM DCP CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| DCP series dedicated AC adapter | PS-P1220E | |
| DCP series dedicated rackmount shelf | AK-RS1 | |
| Solid state / CD stereo audio recorder | SS-CDR250N | |
| SS-R250N dedicated Dante interface card | IF-DA2 | |
| 64-channel digital multitrack recorder | DA-6400 | |
| Dante Interface Card for DA-6400 | IF-DA64 | |
| Gooseneck microphone | TM-95GN | |

# 2-1 AV system for audiovisual classrooms

| Blu-ray™ | Multi-media Playback | Cassette Tape Playback |

Introducing TASCAM's line-up of media players will enable flexible playback of educational materials brought to class in various formats. For video playback there is the BD-MP1.

For audio playback, CD-400U enables playback from CD, SD and USB sources, as well as audio from smartphones or tablets via Bluetooth.

In addition, the 202MKVII double cassette deck can be use in case cassette tapes are brought to class.

## System Diagram
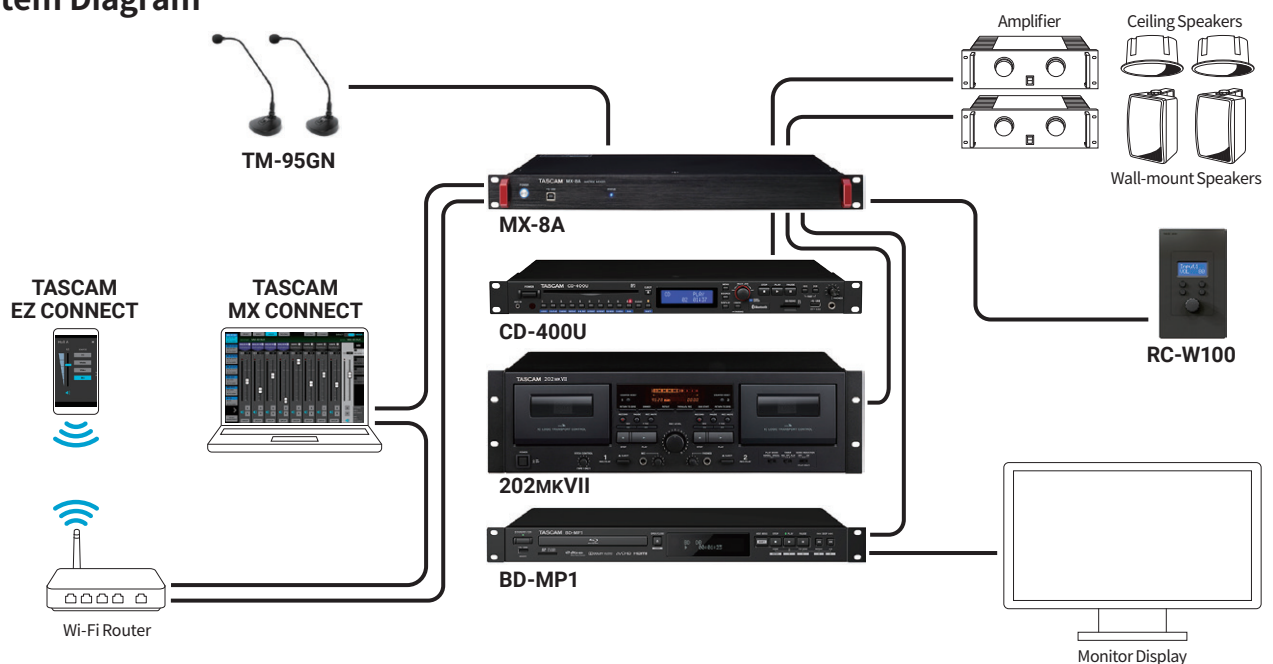


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | MX-8A | |
| Control software for system integrators / managers | TASCAM MX CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| Wall-mount programmable controller | RC-W100 | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | CD-400U | |
| Double cassette deck | 202MK VII | |
| Blu-ray™ player | BD-MP1 | |
| Gooseneck microphone | TM-95GN | |

# 2-2 Uploading system for audiovisual classrooms

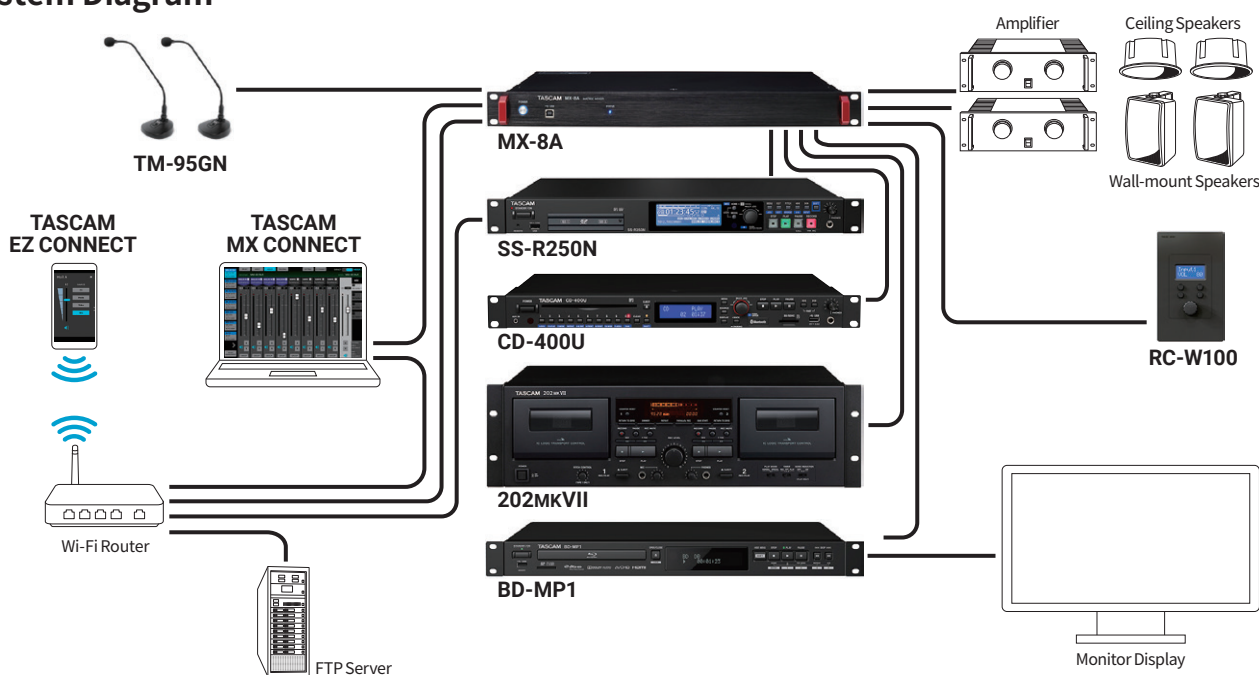| Server Management | Timer Recording | Automatic Archiving |

Use the SS-R250N solid state recorder to record and archive audio files of lectures in combination with the presenter's proper mic audio level processed by the MX-8A.

In addition to recording files to SD cards and USB flash memory, the timer function of the SS-R250N will record scheduled lectures and automatically upload files to a designated server without the need of extra controls, allowing easy data archiving and management.

## System Diagram

TM-95GN

TASCAM EZ CONNECT

TASCAM MX CONNECT

MX-8A

SS-R250N

CD-400U

202MKVII

BD-MP1

Wi-Fi Router

FTP Server

Amplifier

Ceiling Speakers

Wall-mount Speakers

RC-W100

Monitor Display

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | **MX-8A** | |
| Wall-mount programmable controller | **RC-W100** | |
| Control software for system integrators / managers | **TASCAM MX CONNECT** | |
| Control software for end-users | **TASCAM EZ CONNECT** | |
| Solid state audio recorder | **SS-R250N** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |
| Double cassette deck | **202MKVII** | |
| Blu-ray™ player | **BD-MP1** | |
| Gooseneck microphone | **TM-95GN** | |

# 2-3 Sound system for auditoriums / gymnasiums

**Flexible Connectivity**

**Speech and Recital Recording**

**Bluetooth Playback**

The Model 24 multi-functional hybrid mixer is the optimal choice for acoustic systems in auditoriums, in where assemblies, lectures and recitals are often held. Audio sources from microphones and playback devices can be flexibly routed to the 22-channel analog inputs that consist of 20 balanced inputs (12 mono, 4 stereo) and 1 unbalanced stereo input.

Model 24 will provide full and flexible connectivity for events like recitals and concerts in which multiple microphones are required, as well as wireless background music playback through the Bluetooth receiver included on the unit. In addition, Model 24's recording function also allows the recording of important speeches and recitals.

## System Diagram
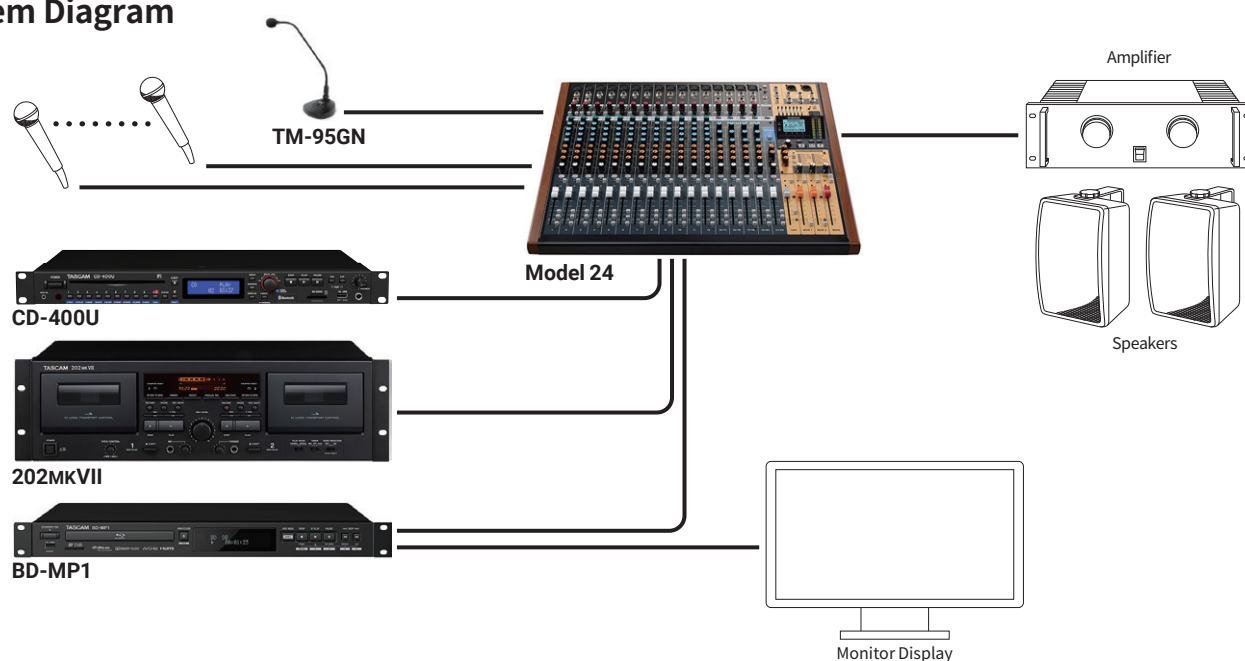
TM-95GN

CD-400U

Model 24

202мкVII

BD-MP1

Amplifier

Speakers

Monitor Display

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 24 track recording mixer | **Model 24** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |
| Double cassette deck | **202мкVII** | |
| Blu-ray ™ player | **BD-MP1** | |
| Gooseneck microphone | **TM-95GN** | |

# 2-4 Live streaming / recording system for lectures and seminars

| Live Streaming | On-demand Streaming | High Resolution Recording |
|---|---|---|

**AVoIP**

Projection systems are used more frequently for lectures and seminars at educational facilities; real-time streaming to remote locations improves convenience, and boosts people's engagement and commitment towards the content they are viewing.

Moreover, recording high resolution content allows for later editing or redistribution, and is a great advantage and source for new teaching materials/products.

## System Diagram
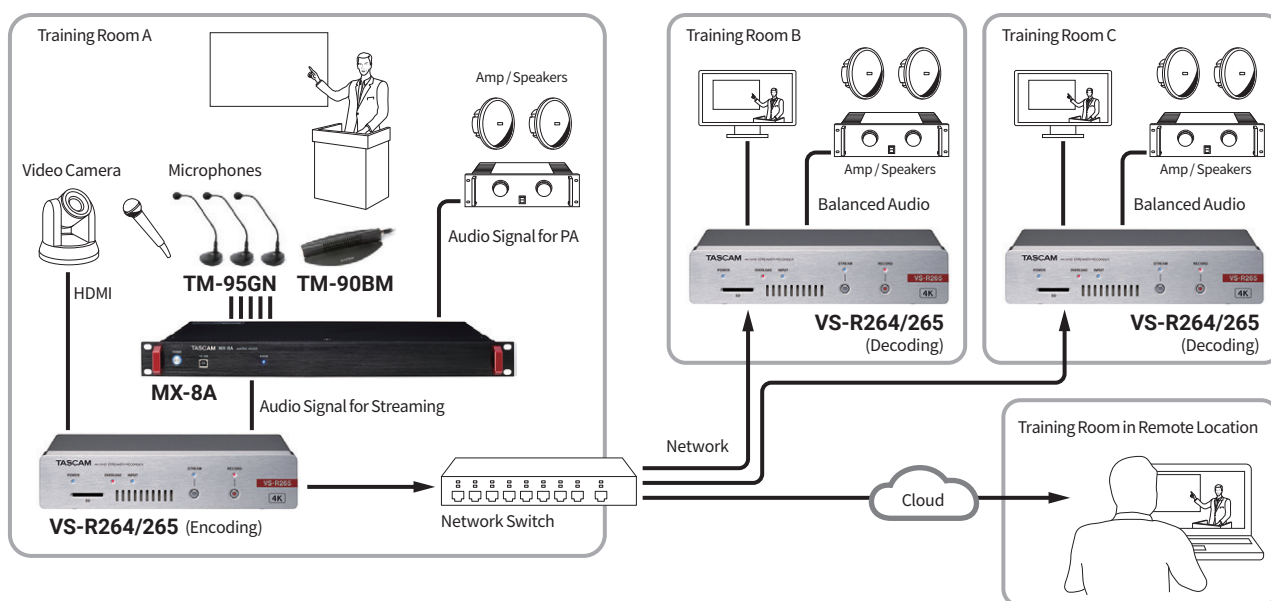


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| Full HD AV over IP encoder / decoder | **VS-R264** | |
| 4K AV over IP encoder / decoder | **VS-R265** | |
| 8 in / 8 out matrix mixer with built-in DSP | **MX-8A** | |
| Gooseneck microphone | **TM-95GM** | |
| Boundary microphone | **TM-90BM** | |

# 3-1 Multi-sound playback system

**Multi-Channel Playback**    **Cable Reduction**    **External Control**

Dante
with AES67

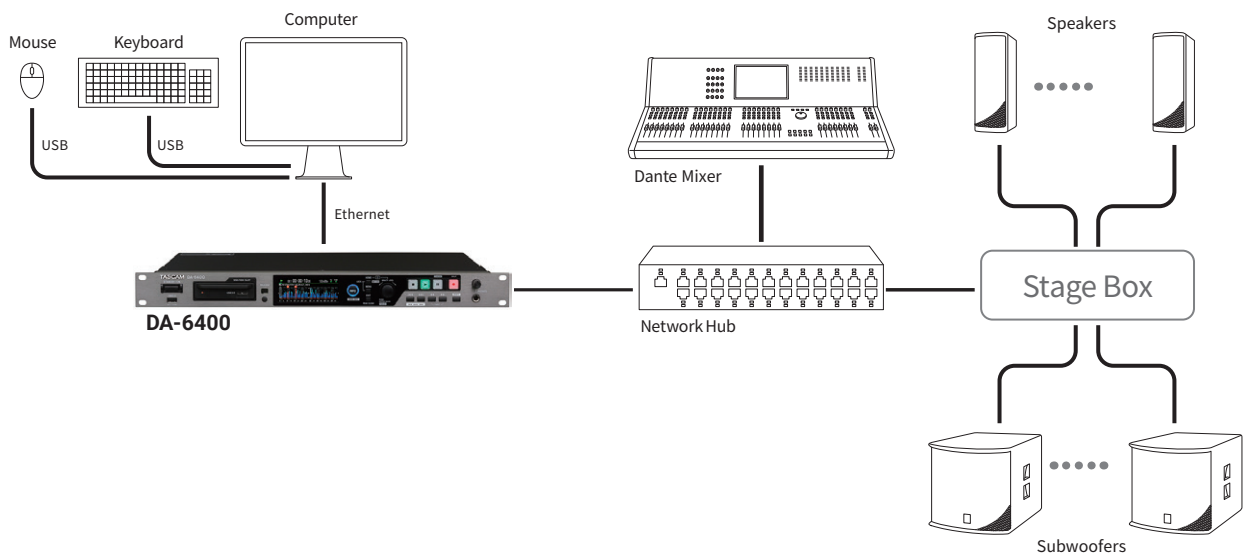The DA-6400 multi-track recorder allows source playback of up to 64 channels.

With the optional Dante converter card IF-DA64, 64 channels can be transmitted with just one LAN cable.



## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 64ch digital multi-track recorder/player | **DA-6400** | |
| Dante interface card for DA-6400 | **IF-DA64** | |

# 3-2 Live streaming system

| Live Streaming | 4K, Full HD Support | Video Archiving |

**AVoIP**

The VS-R264 / VS-R265 can be used for live performance streaming solutions as a streaming device. Installing these as decoders at different locations within a venue, or at separate venues will easily enable the construction of public viewing / monitoring systems.

The implemented balanced inputs and outputs on VS-R264 / VS-R265 also facilitates the connection to sound systems at the main venue (encoder) and public viewing (decoder) sites.

In addition, with the recording function and the uploading function to FTP servers, both streaming and file archiving can be done at the same time, allowing easy management of content files for later use included for sale.

## System Diagram
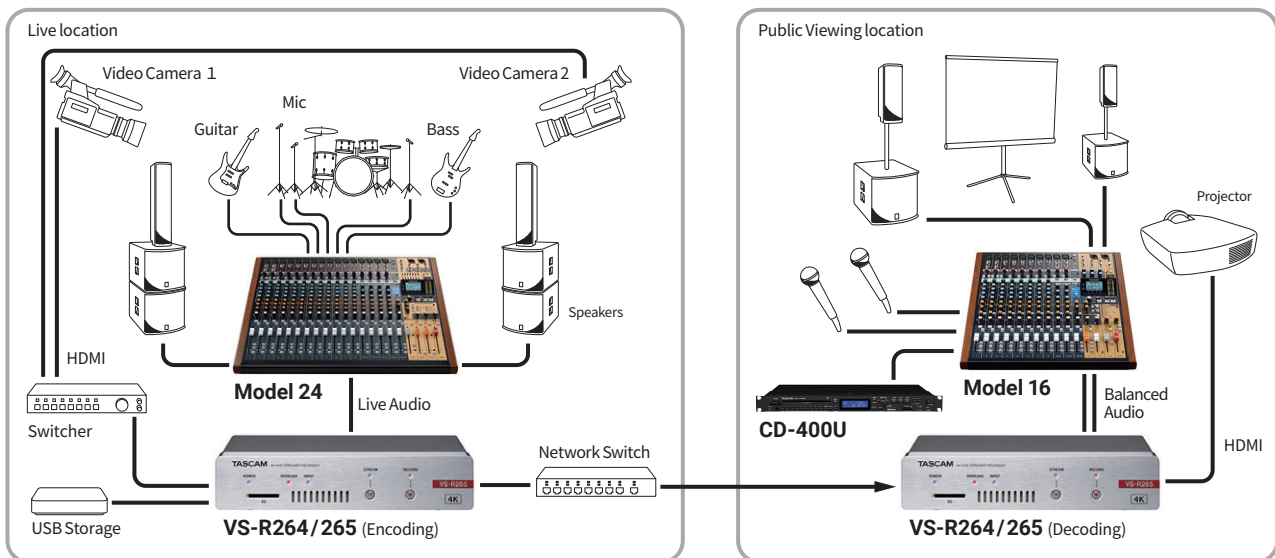


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| Full HD AV over IP encoder / decoder | **VS-R264** | |
| 4K AV over IP encoder / decoder | **VS-R265** | |
| 24 track recording mixer | **Model 24** | |
| 16 track recording mixer | **Model 16** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |

# 3-3 PA wireless mic system for theaters using Dante

| Cable Reduction | Compact System | Long Distance Transmission |

For theater stages and environments where multiple wireless microphones are needed for the performers, connecting all wireless microphones' audio signals into the ML-32D or the ML-16D will enable a simplified and compact system.

The output audio signals coming from the wireless microphone's receivers are converted from analog to Dante with the ML-32D / ML-16D. After assigning signals on a Dante-compatible console, long-distance transmission from stage to FOH can be done with the minimum amount of cables.

Additionally, signal input to ML-32D /ML16-D's analog D-sub input terminal can be done by introducing the XLR to D-sub conversion break-out box BO-16DX/IN.

## System Diagram
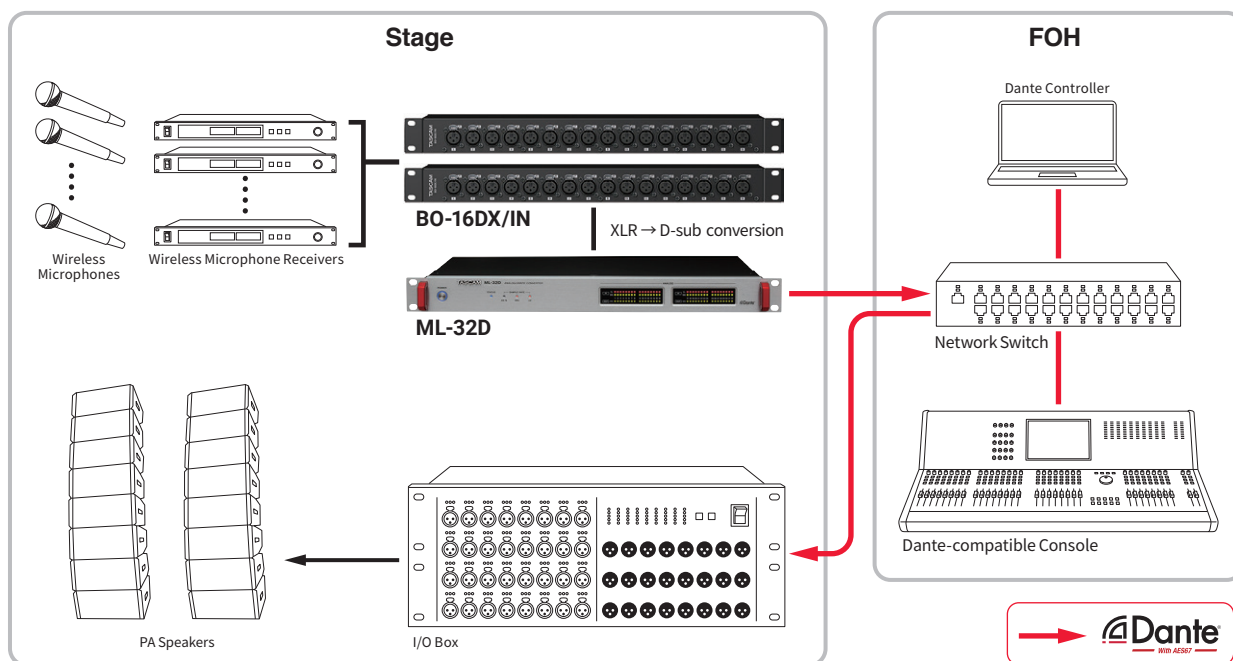


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 32 analog line I/O Dante converter | ML-32D | |
| 16 analog line I/O Dante converter | ML-16D | |
| 16 channel D-sub 25-pin XLR input breakout box | BO-16DX/IN | |

# 4-1 Sound system for small banquet halls, lectures and conferences

**Intuitive Controls**

**Speech & Sideshow Recording**

**Space Saving**

The intuitive controls on the Model 16 analog mixer provide easy sound adjustment and operation for small banquet halls. Microphones and instruments as well as playback equipment can be all easily connected to the 14-channel analog inputs.

Smartphone or tablet sources can be wirelessly streamed with the integrated Bluetooth receiver. In addition, users can record speeches or live music performances with Model 16's multi-track recording function.

## System Diagram



Smartphone
Bluetooth
TM-95GN
Speakers
Model 16
202MKVII
CD-200BT
BD-MP1
Monitor Display
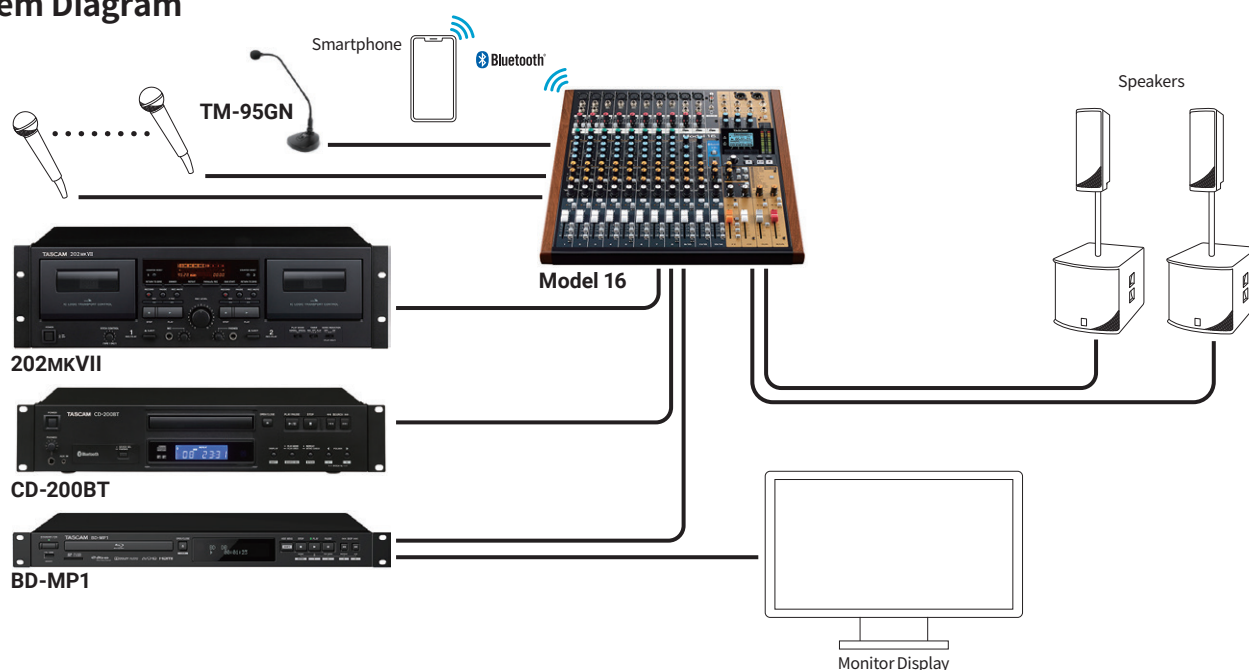
## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
| --- | --- | --- |
| 16 track recording mixer | **Model 16** | |
| Double cassette deck | **202MKVII** | |
| CD player | **CD-200BT** | |
| Blu-ray™ player | **BD-MP1** | |
| Gooseneck microphone | **TM-95GM** | |

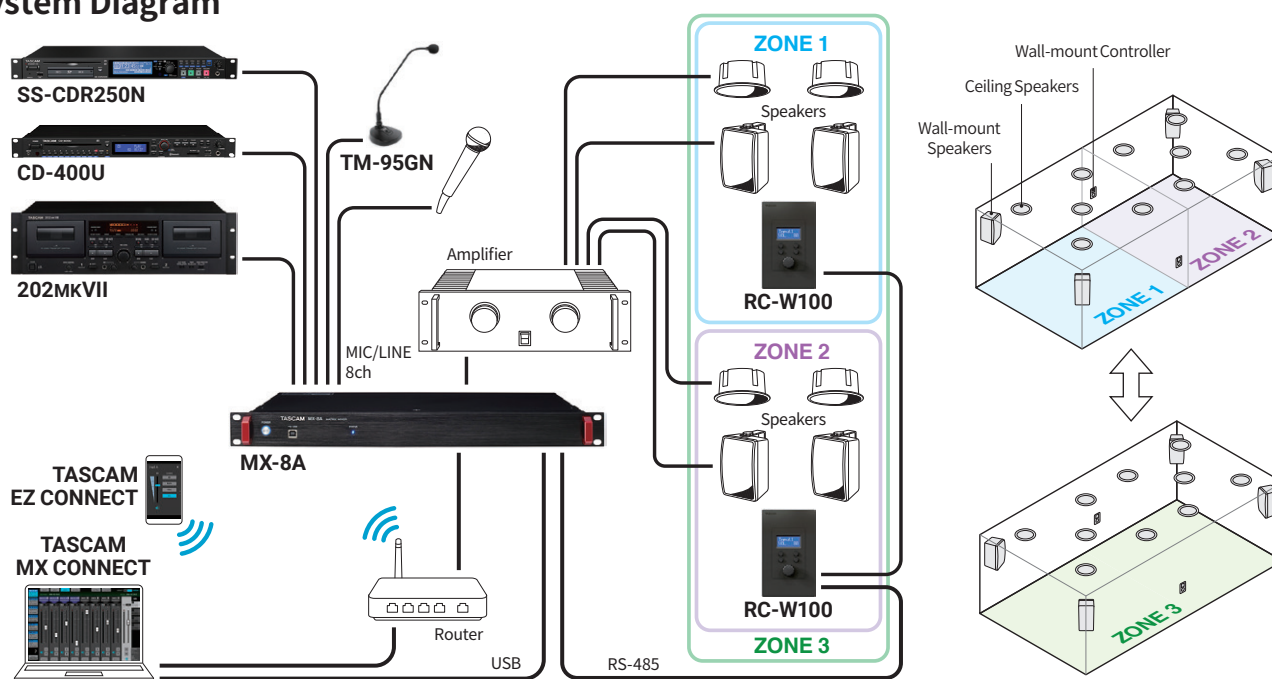# 4-2 System for multi-purpose banquet halls

| Space Saving | Sound Adjustment per Area | Scene Preset |
|---|---|---|

Multi-use banquet halls are commonly used for wedding receptions, banquets, conferences and more. Depending on the usage or the way these halls are divided, there is a variety of sound system requirements.

With the MX-8A, different sources and routing destinations can be registered to meet such configurations, allowing quick switching of sound system presets for quick adaptation to the environment and situation.

## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | MX-8A | |
| Wall-mount programmable controller | RC-W100 | |
| Control software for system integrators / managers | TASCAM MX CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| Solid state / CD stereo audio recorder | SS-CDR250N | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | CD-400U | |
| Double cassette deck | 202MKVII | |
| Gooseneck microphone | TM-95GM | |

# 4-3 Playback system for banquet rooms and event spaces

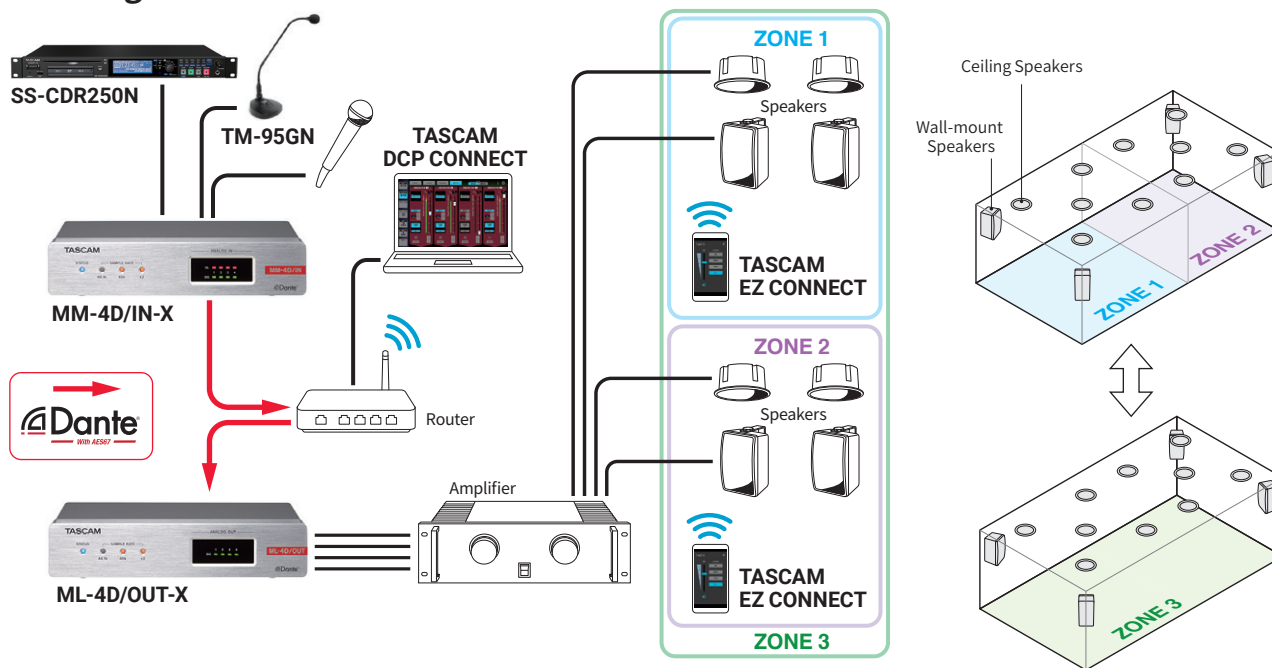| System Management | Sound Adjustment per Area | Scene Preset |
|---|---|---|

Dante with AES67

In cases where particular rooms need to be divided, or need to be changed several times a day, users can build up optimal systems depending on factors such as time and usage.

The ML-4D/OUT enables line output to 4 different areas, and with the included compressor, EQ, and other DSP functions, optimal sound adjustment can be done for each individual area. Adjustments can be registered as presets, making it easier to recall the optimal sound setting for each area.

Moreover, adding extra MM-4D/IN and ML-4D/OUT units will allow for the expansion of input and output channels, even if there are many rooms to control. All units can be managed through a network connection using the TASCAM DCP CONNECT software.

## System Diagram

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | **MM-4D/IN-X** | |
| 4 line out Dante converter with built-in DSP mixer | **ML-4D/OUT-X** | |
| DCP control software for system integrators / managers | **TASCAM DCP CONNECT** | |
| Control software for end-users | **TASCAM EZ CONNECT** | |
| DCP series dedicated AC adapter | **PS-P1220E** | |
| DCP series dedicated rackmount shelf | **AK-RS1** | |
| Solid state / CD stereo audio recorder | **SS-CDR250N** | |
| Gooseneck microphone | **TM-95GM** | |

# 5-1 Sound system for retail stores

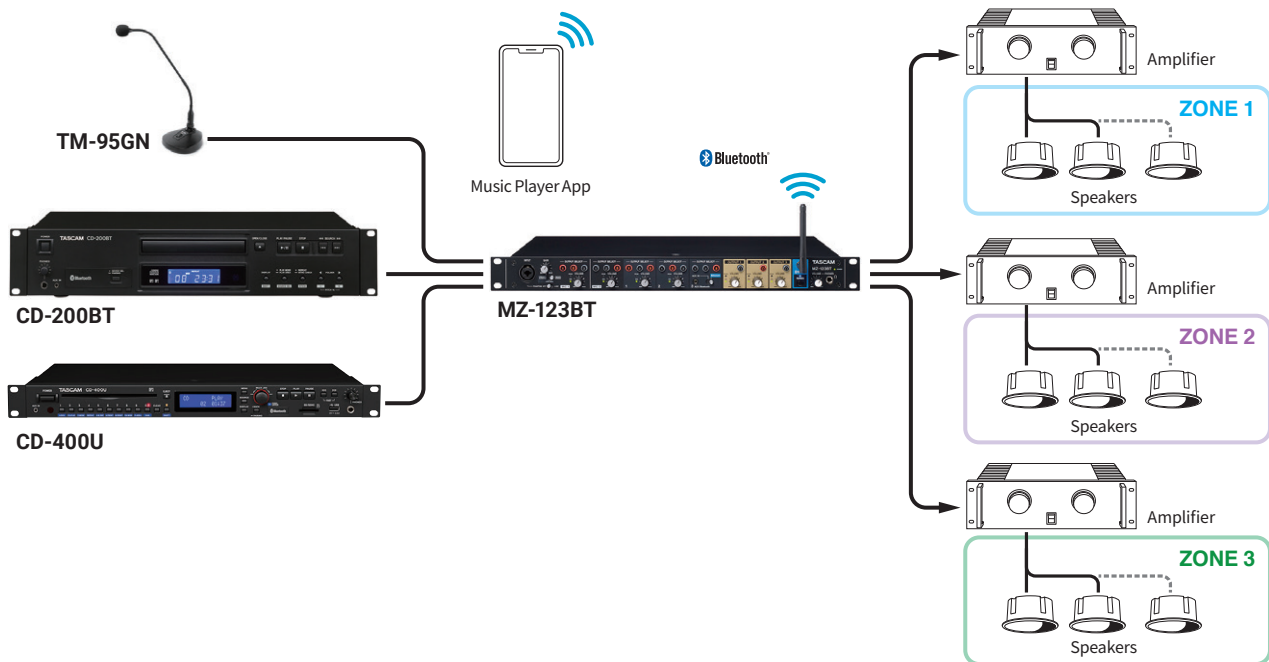| Individual Zone Playback | Bluetooth Playback | Clear Audio Announcements |

Background music sources can be assigned individually to each of the 3 independent zone outputs of the MZ-123BT, allowing different background music to play in separate areas of a retail store.

Music sources can be played by connecting other TASCAM playback equipment, or via smartphones / tablets using the integrated Bluetooth receiver in the MZ-123BT.

This model also provides 2 microphone inputs and a convenient talkover function, which will automatically detect mic signal input and attenuate background music levels, enabling clear audio in-store announcements.

## System Diagram



TM-95GN

Music Player App

CD-200BT

CD-400U

Bluetooth®

MZ-123BT

Amplifier

**ZONE 1**

Speakers

Amplifier

**ZONE 2**

Speakers

Amplifier

**ZONE 3**

Speakers

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
| --- | --- | --- |
| 3 zone audio mixer with Bluetooth® receiver | **MZ-123BT** | |
| CD player | **CD-200BT** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | **CD-400U** | |
| Gooseneck microphone | **TM-95GN** | |

# 5-2 PA system for waiting rooms
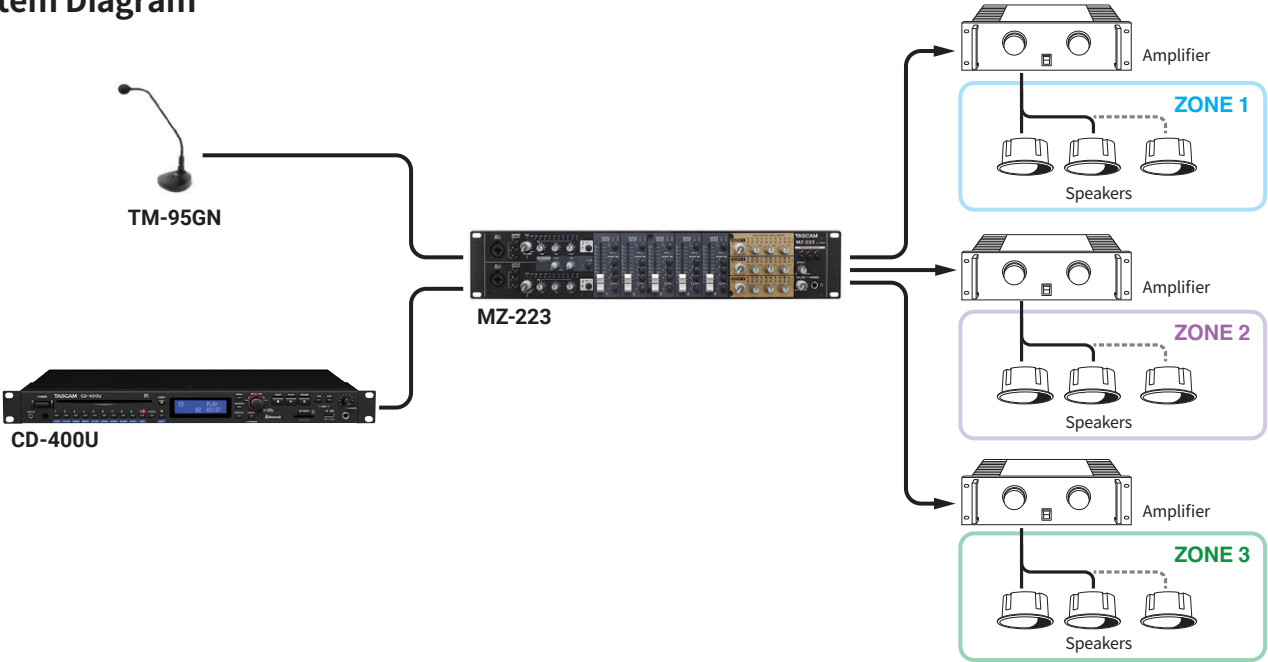
**Clear Announcements**

**Individual Zone Playback**

**Fader Operation**

MZ-223's talkover function makes it a suitable choice for waiting rooms in facilities where customer paging is required. The talkover function will automatically detect mic signal input and attenuate background music levels, enabling easy-to-hear announcements and paging.

Also, the 3 independent outputs in MZ-223 allows for background music and announcements to be separately played in areas other than the waiting room.

## System Diagram

TM-95GN

CD-400U

MZ-223

Amplifier

**ZONE 1**

Speakers

Amplifier

**ZONE 2**

Speakers

Amplifier

**ZONE 3**

Speakers

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 3 zone mixer | **MZ-223** | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tune | **CD-400U** | |
| Gooseneck microphone | **TM-95GN** | |

Retail / commercial facilities

# 5-3 BGM / announcement playback system for area division in shopping malls, etc.

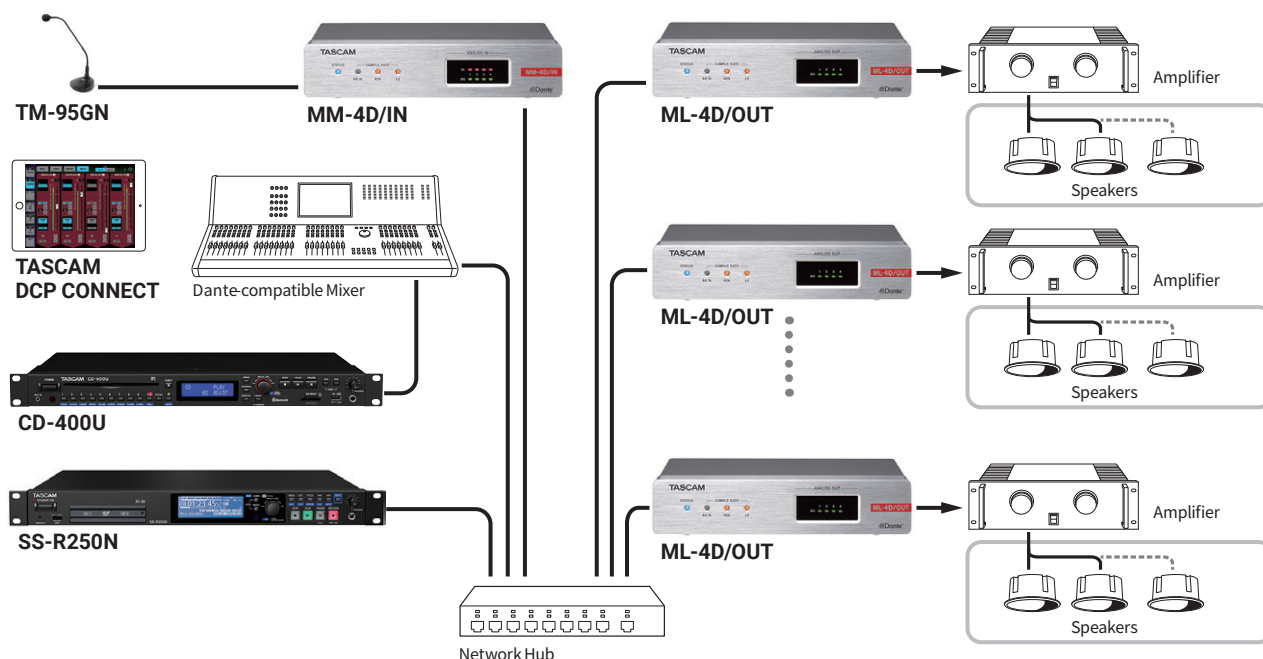| Individual Zone Playback | System Management | Easy Expansion |

Using the MM-4D/IN and the ML-4D/OUT will enable each floor or area to have different background music and announcement playback, as well as optimal sound adjustment thanks to the ducking and ANC* functions installed in both units.

Meanwhile, Dante conversion and connectivity will allow for long-distance signal transmission, easy input/output expansion, and the reduction of wiring / installation procedures.

*ANC (ambient noise compensator) function: will automatically adjust the main volume according to the surrounding noise levels for clearer background music and announcement playback.

## System Diagram

TM-95GN    MM-4D/IN    ML-4D/OUT    Amplifier
Speakers

TASCAM DCP CONNECT    Dante-compatible Mixer    ML-4D/OUT    Amplifier
Speakers

CD-400U

SS-R250N    ML-4D/OUT    Amplifier
Speakers

Network Hub

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | MM-4D/IN | |
| 4 line out Dante converter with built-in DSP mixer | ML-4D/OUT | |
| DCP control software for system integrators / managers | TASCAM DCP CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| DCP series dedicated AC adapter | PS-P1220E | |
| DCP series dedicated rackmount shelf | AK-RS1 | |
| Solid state audio recorder | SS-R250N | |
| SS-R250N dedicated Dante interface card | IF-DA2 | |
| Gooseneck microphone | TM-95GN | |

# 5-4 BGM system for restaurants

| Individual Zone Playback | DSP Sound Adjustment | Clear Announcements |
|:---:|:---:|:---:|

The MX-8A enables the construction of a variety of sound systems depending on the application or environment. In this case, using the MX-8A will allow users to assign different background music to the main floor and lounging area, or use the same source but at different volume levels depending on the area.

The ANC* function installed in MX-8A will automatically turn up the microphone volume according to the surrounding noises, providing clear announcements even in noisy environments.

*ANC (ambient noise compensator) function: will automatically adjust the main volume according to the surrounding noise levels for clearer background music or announcement playback.
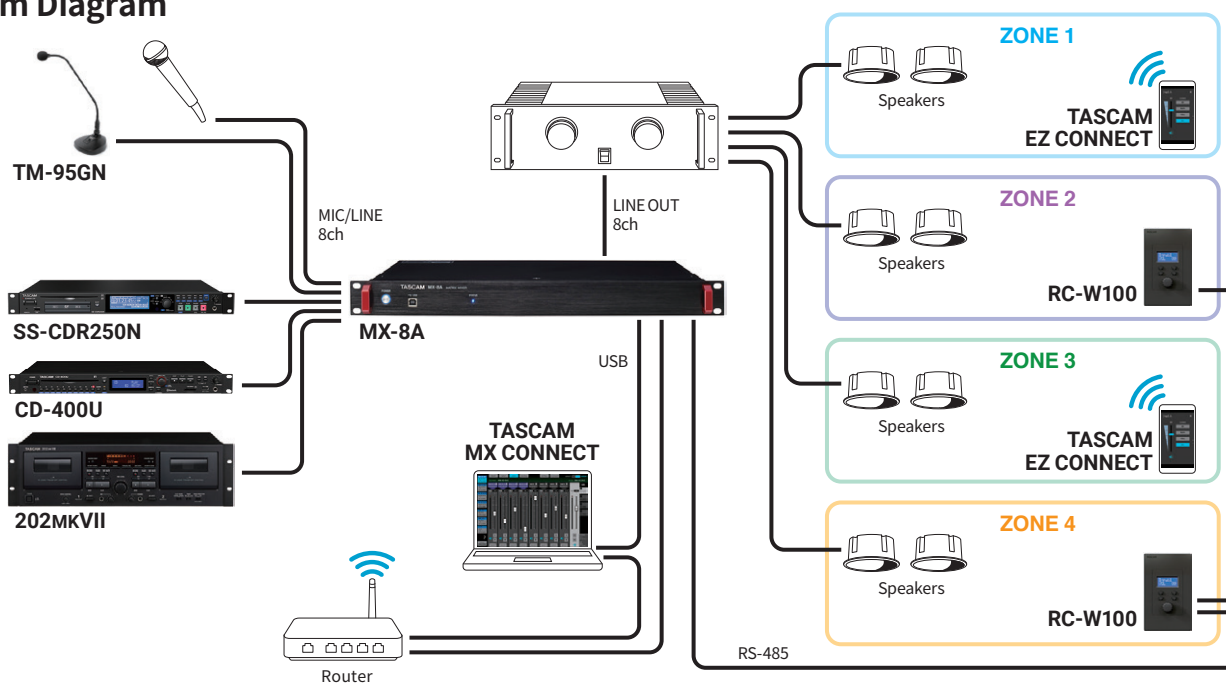
## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 8 in / 8 out matrix mixer with built-in DSP | MX-8A | |
| Wall-mount programmable controller | RC-W100 | |
| Control software for system integrators / manager | TASCAM MX CONNECT | |
| Control software for end-users | TASCAM EZ CONNECT | |
| Solid state / CD stereo audio recorder | SS-CDR250N | |
| CD/SD/USB player with Bluetooth® receiver and FM/AM tuner | CD-400U | |
| Double cassette deck | 202MKVII | |
| Gooseneck microphone | TN-95GN | |

Retail / commercial facilities

# 5-5 Digital signage system with IP connection

**Long Distance Transmission**

**Multi-Monitor Display**
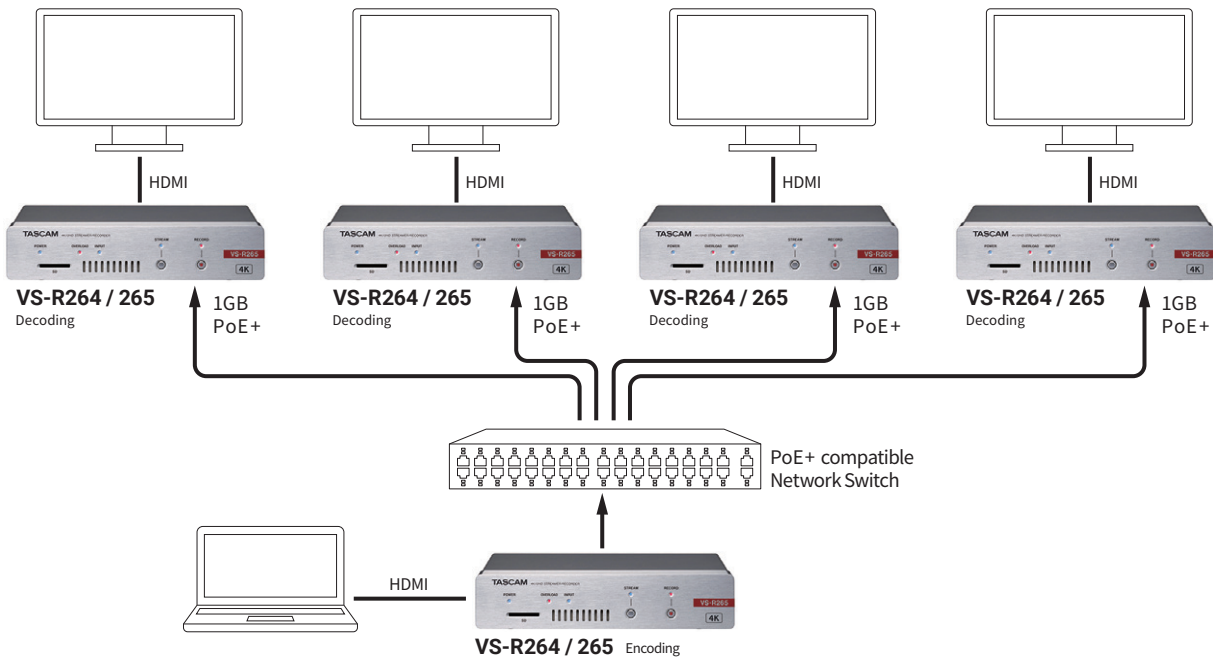
**System Management**

AVoIP

Using VS-R264 / VS-R265's encoding and decoding functions, video images on a computer can be shown on multiple displays allowing the construction of digital signage systems for office buildings, stations, hotel lobbies, etc.

Also, adding a PoE+ network switch will eliminate the need for using AC power supplies, making it possible to reduce space and construction procedure costs.

## System Diagram



HDMI | HDMI | HDMI | HDMI

**VS-R264 / 265** Decoding — 1GB PoE+

**VS-R264 / 265** Decoding — 1GB PoE+

**VS-R264 / 265** Decoding — 1GB PoE+

**VS-R264 / 265** Decoding — 1GB PoE+

PoE+ compatible Network Switch

HDMI

**VS-R264 / 265** Encoding

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| Full HD AV over IP encoder / decoder | **VS-R264** | |
| 4K AV over IP encoder / decoder | **VS-R265** | |
| DCP series dedicated rackmount shelf | **AK-RS1** | |

# 6-1 Communication system for recording studios

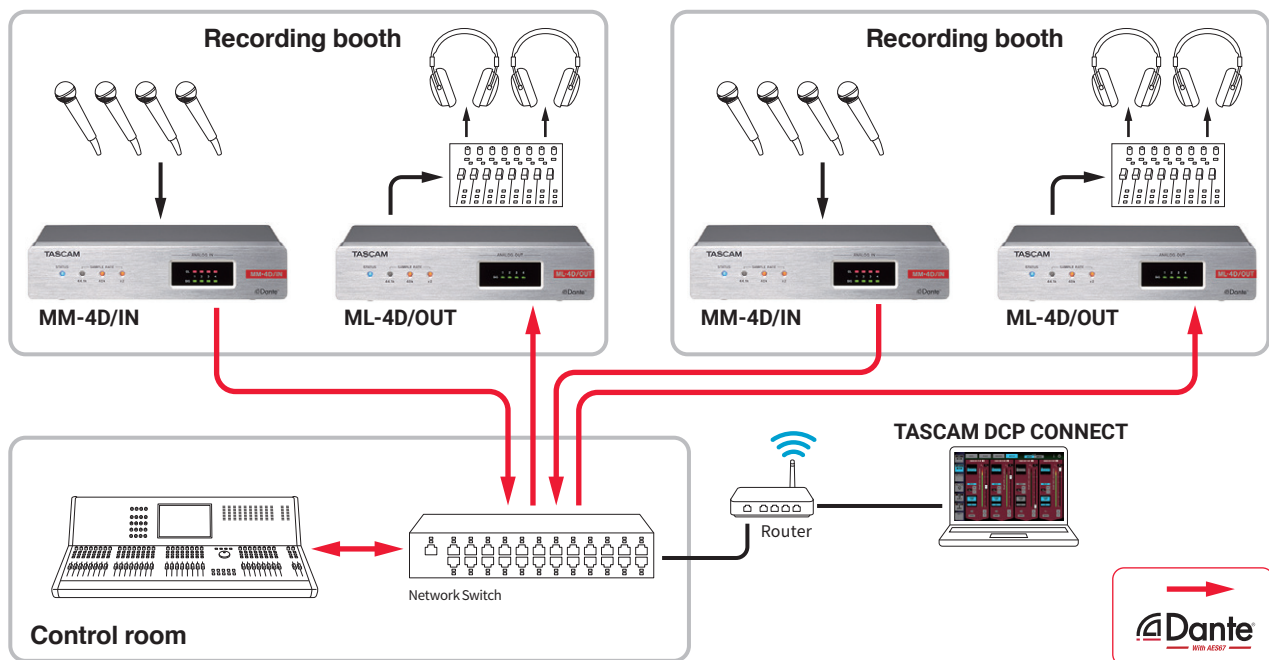| Flexible Routing | Easy Expansion | Remote Gain Control |
|---|---|---|

Create easy communication systems between multiple recording booths and the main control room using Dante network audio. Flexible connection and routing can be done via Dante Controller without the need to send signals through the recording console and other lines.

Moreover, adding the MM-2D (2 mic / line in / out), MM-4D/IN (4 mic in), and ML-4D (4 line out) Dante converters will allow for a flexible expansion of input and output channels.

Each unit is equipped with a DSP mixer, allowing gain control and other functions be adjusted via TASCAM DCP CONNECT control software.

## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | MM-4D/IN-X | |
| 4 line out Dante converter with built-in DSP mixer | ML-4D/OUT-X | |
| DCP control software for system integrators / manager | TASCAM DCP CONNECT | |
| DCP series dedicated AC adapter | PS-P1220E | |
| DCP series dedicated rackmount shelf | AK-RS1 | |

# Main studio – live remote communication system

**Long Distance Transmission**

**System Management**

**Less Wiring**



Transmit Dante signals by connecting both the live remote site (OB vans) and the main studio using a LAN network.

Once program material is sent back to the studio via Dante, it can be mixed with other audio sources and then be broadcasted.

Using the MM-2D (2 mic in / 2 line out) will also facilitate voice communication between studios and remote sites.

## System Diagram
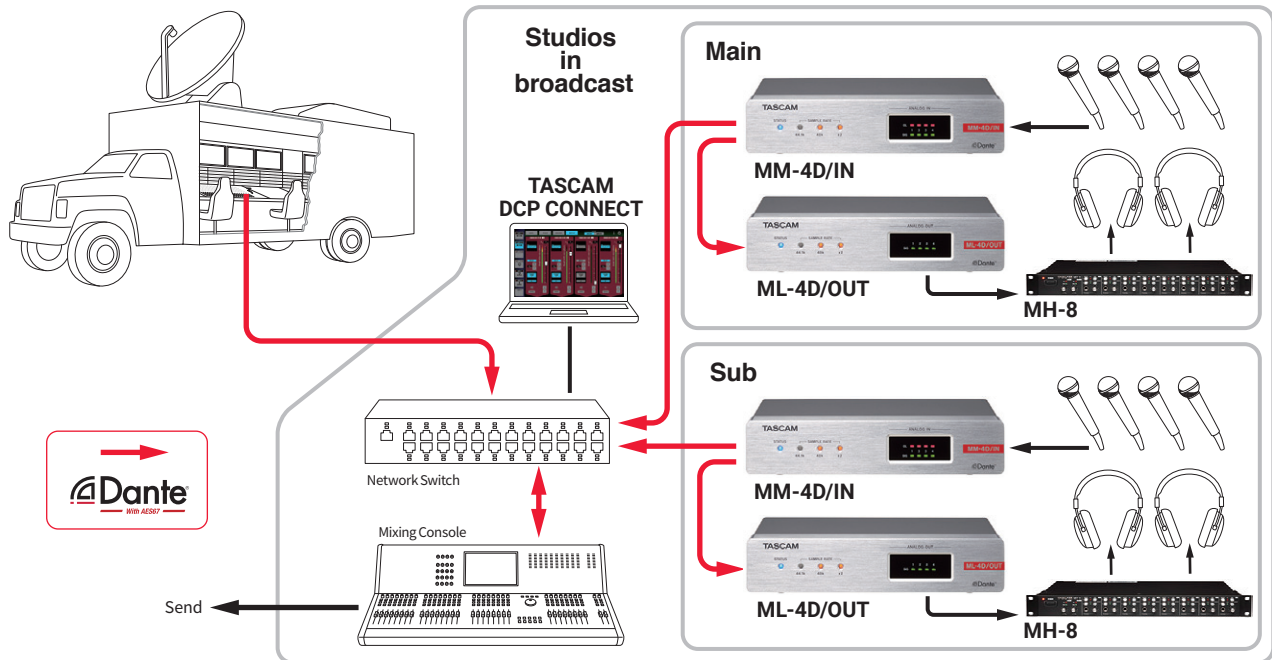


## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | **MM-4D/IN-X** | |
| 4 line out Dante converter with built-in DSP mixer | **ML-4D/OUT** | |
| DCP control software for system integrators / manager | **TASCAM DCP CONNECT** | |
| 8-ch headphone amplifier | **MH-8** | |
| Monitor stereo headphones | **TH-02** | |
| DCP series dedicated AC adapter | **PS-P1220E** | |
| DCP series dedicated rackmount shelf | **AK-RS1** | |

# 6-3 PA/SR system using Dante

| Cable Reduction | Flexible Recording and Playback | Remote Operation |

Significantly reduce physical wiring connections between the stage and PA mixer by applying Dante multi-channel audio transmission. This allows the transmission of audio data, but also control signals for each Dante device settings.

Adding an SS-CDR250N 2-channel audio recorder/player to the system will enable background music playback and program recording. In addition, the DA-6400 64-channel recorder/player can be adapted to any application in which multi-track recording / playback is required. For ambient sound recordings, the MM-4D/IN-X will easily add and connect mic signals onto the Dante system. When on the same network, remote configuration of mic gain and dynamics can be done using the TASCAM DCP CONNECT control software.
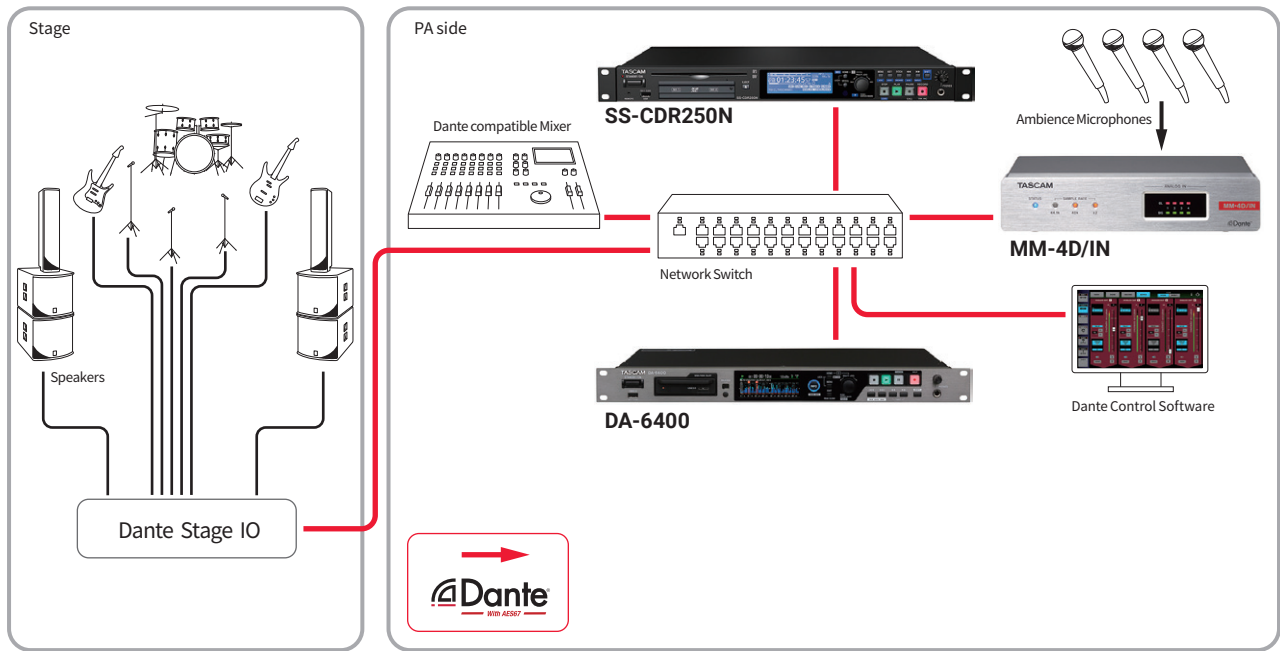
## System Diagram

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | MM-4D/IN-X | |
| Solid state / CD stereo audio recorder | SS-CDR250N | |
| SS-R250N dedicated Dante interface card | IF-DA2 | |
| 64ch digital multi-track recorder/player | DA-6400 | |
| Dante interface card for DA-6400 | IF-DA64 | |
| DCP control software for system integrators / manager | TASCAM DCP CONNECT | |

# 6-4 PA system expansion using Dante

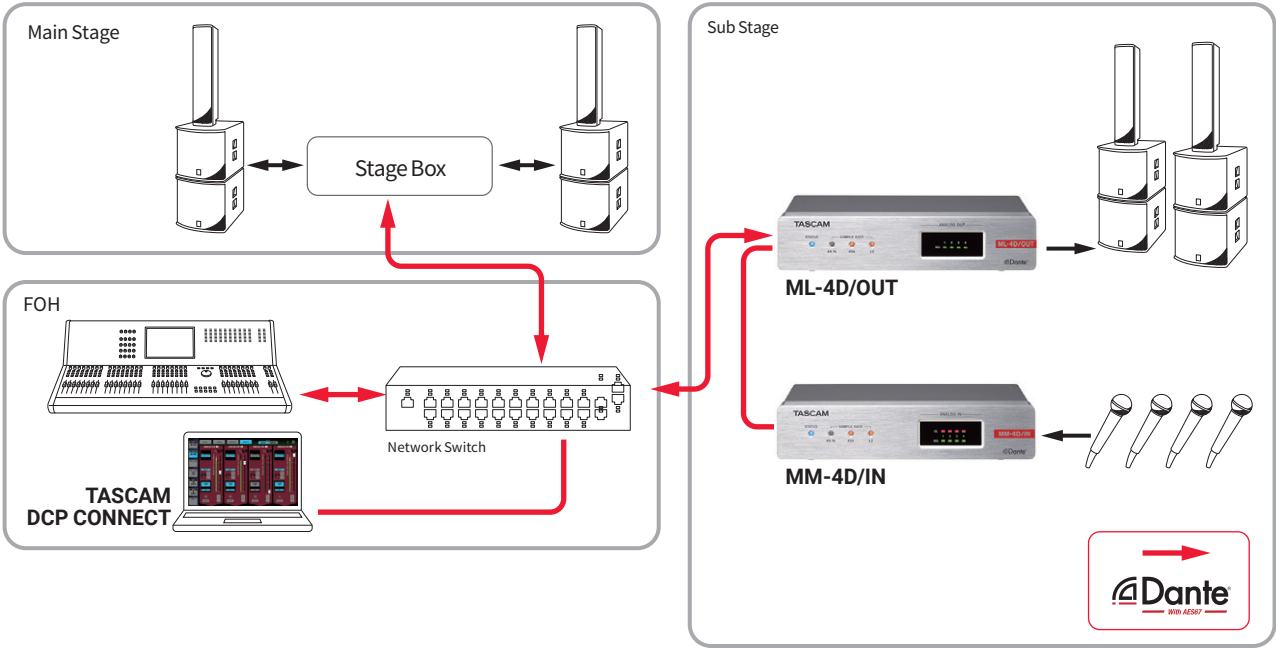**Cable Reduction**  **Easy Expansion**  **Long Distance Transcription**

By applying Dante long distance multi-channel audio transmission, PA systems can easily be expanded with the minimum quantity of cables to areas other than the main stage including sub-stages or the entrance halls.

Combining MM-4D/IN (4 mic / line in) and ML-4D/OUT (4 line out) to the system will flexibly handle the required number of inputs and outputs.

In addition, the installed DSP mixer on all Dante Compact Processor models will allow for the optimal sound adjustment for each different location and environment.

## System Diagram



## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 4 mic in / 4 line in Dante converter with built-in DSP mixer | **MM-4D/IN-X** | |
| 4 line out Dante converter with built-in DSP mixer | **ML-4D/OUT-X** | |
| DCP control software for system integrators / manager | **TASCAM DCP CONNECT** | |
| DCP series dedicated AC adapter | **PS-P1220E** | |
| DCP series dedicated rackmount shelf | **AK-RS1** | |

# 6-5 Dante I/O channel expansion in Pro Tools

## Easy Expansion    Cable Reduction    Space Saving

**Dante** With AES67
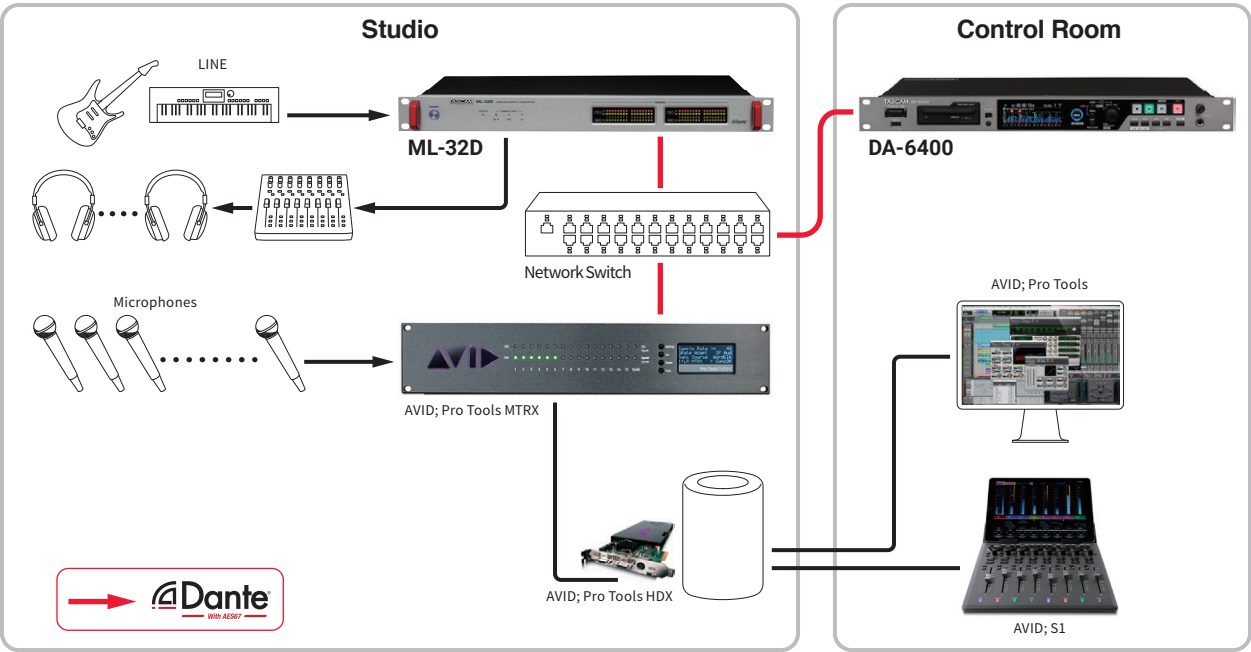
Combining Dante's remarkable ability to transmit multiple channels at once via a single Cat5e cable with the 1U-sized 32 line in/out ML-32D (or 16 line in/out ML-16D) converter will enable an easy and compact channel-expansion solution for your Pro Tools system.

## System Diagram

Studio

LINE

**ML-32D**

Microphones

AVID; Pro Tools MTRX

**Dante** With AES67

Network Switch

AVID; Pro Tools HDX

Control Room

**DA-6400**

AVID; Pro Tools

AVID; S1

## TASCAM Equipment Installed

| Product Name | Model Number | Remarks |
|---|---|---|
| 32 analog line I/O Dante converter | **ML-32D** | |
| 16 analog line I/O Dante converter | **ML-16D** | |
| 64ch digital multi-track recorder/player | **DA-6400** | |
| Dante interface card for DA-6400 | **IF-DA64** | |

* For more information on AVID products, please contact:
  https://www.avid.com/learn-and-support/contact-support

**Broadcasting stations and studios**

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