



Emergency Voice Evacuation and Mass Notification Systems



COOKBOOK

The world renowned quality of TOA

TOA has been at the forefront of technology since 1934. Founded in the Japanese city of Kobe, TOA has dedicated over 80 years in researching, developing and selling a range of products within the field of public address systems. Our products guarantee quality and are certified to the latest standards including ISO9001 (International Organization for Standardization).

Furthermore, we don't think of ourselves as merely sellers of audio equipment, we pride ourselves on producing the perfect sound for you. Our corporate philosophy states "One is not buying to receive a device, but in order to receive sound", and as a result, TOA's core belief is to continually strive towards new ways of satisfying our customer.

TOA's history with the development of emergency alert systems stretches back to 1969. Using our long standing experiences with Japan's exceptionally rigorous fire prevention laws as a basis, we were the forerunners in complying with the EN54 fire detection and fire alarm systems' standards that were enacted by the EU in April 2011. We often receive inquiries about the various international standards to which our emergency public address systems must comply, and we can proudly respond that we are in total compliance with agencies such as the UL product safety standards of the Underwriters Laboratories Inc. (UL) in the U.S., The BS standards published by the British Standards Institute (BSI) in the U.K, as well as the Taiwanese Fire Prevention Law, known as the "Mandatory Standard for Emergency Public Address Equipment" put forth by the Chinese Fire Protection Safety Centre.

Since 1934, TOA has been manufacturing reliable Public Address and Voice Evacuation Systems.

1934



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VM-3000 series



VM-3000 series EN54 Certified All-in-one and Compact System

VM-3000 - Description

The VM-3000 Series is digitally audio processed and controlled, with fully digital audio mixing and a built-in high-quality electronic voice message feature. The system may be set up directly using the controls and LCD display on the front panel, which also enables easy operation of the system. Operational versatility is further enhanced by a dedicated PC software configuration capability for uploading and downloading settings via LAN.

The incorporation of wide-ranging functional capabilities, superb reliability and versatility make the VM-3000 a highly cost-effective emergency broadcast system.

System Features

- Max. 4 MIC/LINE inputs
- 2 BGM inputs
- Up to 4 Remote Microphones connectable (max. 2 Fireman's Microphones)
- Max. 60 assignable speaker zone outputs (6 zones per amplifier)
- Volume setting possible for each zone
- Digital audio processed & controlled
- Full digital audio mixing (DSP)
- Built-in high quality electronic voice message
- Intuitive configuration
- Zone setting, priority setting, failure detection setting by dedicated PC software
- LCD display of current status and configuration setting of system units.

Emergency Functions

- Continuous speaker line monitoring without interruption of BGM distribution or paging announcements
- Complete fault detection and indication
- Both built-in and remote Fireman's Microphones
- Built-in voice alarm message
- 2-Phase voice alarm message (Alert and Evacuation) broadcasting

Paging Functions

- 2 Remote Microphone interface lines
- Paging (All zones/Group/Individual) 2-channel broadcast with external amplifier (Paging/BGM)



Maximum System Capacity

Output Power	2,400W (2,000W for UL2572)
Speaker Zones	60 zones
Remote Mic connection	4 units



Certificate No : 1438-CPD-0180
UL2572 Pending
ULC-S576 Pending

VM-3000 series System Management Amplifier



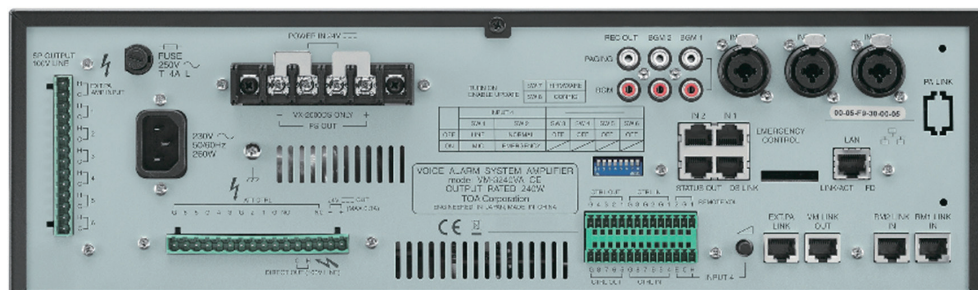
Features

- Central units in the VM-3000 system
- Power outputs 240 W (200W for UL2572)
- 1 unit per system
- Front panel-mounted LCD display for Setting and operation status Automatic message function
- Play back of up to 6 recorded general announcements and 2 recorded emergency announcements
- Up to 2 RM-300MF Emergency Remote Fireman's Microphones can be connected
- Up to a total of 4 RM-200M General Broadcast Remote Microphones and RM-300MF Fireman's Microphones can be connected

Options

- VM-3240E: 240 W (200W for UL2572) Extension Amplifier
- RM-300MF: Emergency Microphone
- RM-200M: Remote Microphone
- IT-450: Input Transformer

VM-3000 series System Management Amplifier



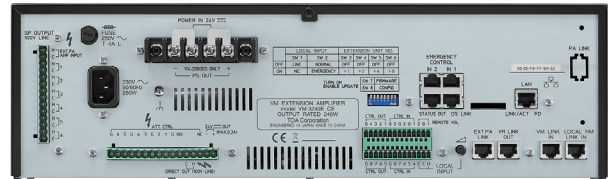
Specifications

	VM-3240VA
Power Requirement	230 V AC, 50/60 Hz
Power Consumption (AC mains)	600 W (with rated output signal), 260 W (according to EN60065)
Rated Output	240W (200W for UL2572)
Frequency Response	50 - 20 kHz, ± 3 dB (at 1/3 rated output)
Distortion	0.7% or less (at rated output, 1kHz)
Signal-to-Noise Ratio	85dB or more
Inputs	Input 1 - 3: -50 dBV (MIC)/ -10dBV (LINE) (changeable) 600 Ohm, electronically balanced combined XLR connector (female)/phone jack Input 4: -50 dBV (MIC) / -10 dBV (LINE) (changeable) 600 Ohm, electronically balanced, removable terminal block (14 pins) BGM 1 - 2: -10 dBV, 10 kOhm unbalanced, RCA pin jack External amplifier Input: 100 V Line removable terminal block (14 pins)
Outputs	Speaker output 1 - 6: Total within rated output, removable terminal block (14 pins), Direct output from internal or external amplifier, removable terminal block (16 pins) Recording output BGM / Paging 0 dBV, 10 kOhm, unbalanced, RCA pin jack
RM Link	Input 1 - 2: Connecting the RM-300MF/RM-200M Remote Microphone. RJ45 female connector Maximum distance: Total 800 m (874.89 yd) between this unit and remote microphones Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
Network I/F	10BASE-T / 100BASE-TX (selectable by automatic negotiation), RJ45 female connector Maximum distance: 100 m (109.36 yd) between this unit and a switching hub Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
VM Link	Output: Connecting the VM-3240E or VM-3360E, RJ45 female connector Maximum distance: 800 m (874.89 yd) Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
EXT PA Link	Connecting the VP-2241 or VP-2421, RJ45 female connector Maximum distance: 5 m (16.4 ft) Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
Control	Input 1 - 8: No-Voltage make contact input, open voltage: 24V DC, short-circuit current: under 2mA, removable terminal block (14 pins) Output 1 - 8: Isolated open collector output, with stand voltage: 30V DC, operating current: under 10mA, removable terminal block (14 pins)
Emergency Control	Input 1 - 5: No-Voltage make contact input, open voltage : 24V DC, short-circuit current: under 2mA, RJ45 female connector Input 6: Isolated voltage input: Inactive; -24V $\pm 20\%$ /Active; +24V $\pm 20\%$, RJ45 female connector Status out: Relay contact output, withstand voltage: 40V DC, operating current: 2 - 300mA, RJ45 female connector
DC 24V Output	24 V DC, maximum feeding current 0.3 A
Dimensions (W x H x D)	482 x 132.6 x 431.2 mm
Weight	16.5 kg

VM-3000 series Extension Amplifier



VM-3240E/VM-3360E



Features

- System can be expanded by connecting up to 9 VM-3240E Extension Amplifiers
- The 240 W VM-3240E is equipped with 6 speaker line outputs, and also features 8 contact inputs and 8 contact outputs for general broadcasts, plus and 6 in puts and 3 outputs for emergency broadcasts. They are connected to the VM-3240VA via the VM Link connector.
- EN54-16 Certificate No. 1438/CPD/0180

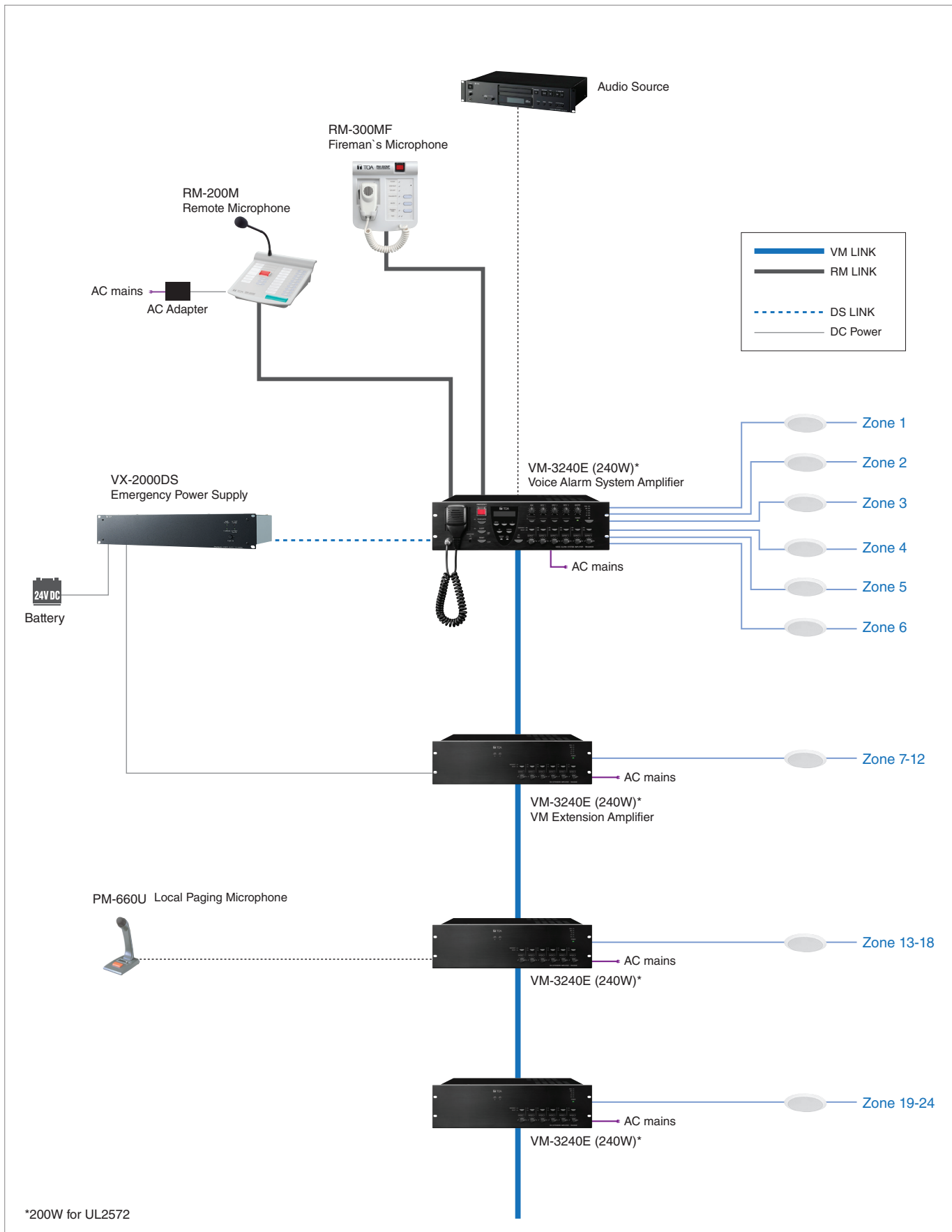
Options

- VM-3240VA: 240 W System Amplifier (200W for UL2572)
- IT-450: Input Transformer

Specifications

	VM-3240E
Power Requirement	230 V AC, 50/60 Hz
Power Consumption (AC mains)	600 W (with rated output signal), 260 W (according to EN60065)
Rated Output	240W (200W for UL2572)
Frequency Response	50 - 20 kHz, ± 3 dB (at 1/3 rated output)
Distortion	0.7% or less (at rated output, 1kHz)
Signal-to-Noise Ratio	85dB or more
Inputs	Local Input: -50dB (MIC)/ -10dB(LINE) (changeable) , electronically balanced, removable terminal block (14 pins) External amplifier Input: 100 V Line removable terminal block(14 pins)
Outputs	Speaker output 1 - 6: Total within rated output, removable terminal block (14 pins) Direct output from internal or external amplifier, removable terminal block (16 pins)
VM Link	Input: Connecting the VM-3240VA or VM-3360VA, RJ45 female connector Output: Connecting the VM-3240E or VM-3360E, RJ45 female connector Maximum distance: 800 m (874.89 yd) Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
EXT PA Link	Connecting the VP-2241, RJ45 female connector Maximum distance: 5 m (16.4 ft) Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
Control	Input 1 - 8: No-Voltage make contact input, open voltage: 24V DC, short-circuit current: under 2mA, removable terminal block (14 pins)
Output	1 - 8: Isolated open collector output, withstand voltage: 30V DC, operating current: under 10mA, removable terminal block (14 pins)
Emergency Control RJ45	Input 1 - 5: No-Voltage make contact input, open voltage : 24V DC, short-circuit current: under 2mA, female connector Input 6: Isolated voltage input: Inactive; -24V $\pm 20\%$ /Active; +24V $\pm 20\%$, RJ45 female connector Status out: Relay contact output, withstand voltage: 40V DC, operating current: 2 - 300mA, RJ45 female connector
DC 24V Output	24V DC. maximum feeding current 0.3A
Dimensions (W x H x D)	482 x 132.6 x 407 mm
Weight	16.5 kg

VM-3000 series Application Example



VM-3000 series Emergency Remote Microphone

EN 54
16



RM-300MF



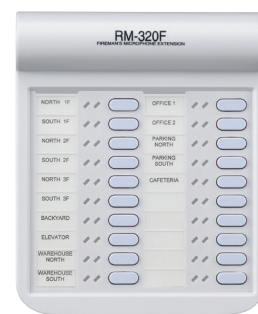
Alarm Switch



Microphone



Function keys



RM-320F

Features

- Exclusively for broadcasts made by firemen in emergency situations
- For activation of emergency mode, start and stop automatic broadcasts of emergency announcements, reset emergency signals, and live microphone announcements
- CPU OFF switch allows all-zone calls (simultaneous attenuator-free global calls).
- No general broadcasts can be made.
- The RM-320F Emergency Microphone Extension enables zone selection or failure indication/failure acknowledgment function.
- Up to 3 RM-320Fs can be connected to the Emergency Microphone, expanding the available keys up to 20 per unit.
- 20 function buttons per unit.
- Zone selection (1 - 20) and failure indication/acknowledgment functions can be assigned to each function key using the dedicated software.

Specifications

	RM-300MF	RM-320F
Power Requirement	24 V DC (Operating range: 15 - 40 V DC)	-
Current Consumption	120 mA (up to 600 mA with 3x RM-320F)	180 mA max. (in terms of DC power inputs of RM-300MF)
Distortion	Under 1%	-
Frequency Response	200 - 15 kHz	-
Signal-to-Noise Ratio	Over 55 dB	-
Audio Output	0 dBV, 600 Ohm, balanced	-
Microphone	Unidirectional dynamic microphone	-
Volume Control	Microphone, buzzer	-
Operation key	Emergency button, Evacuate button, Alert button, Emergency reset key, CPU switch, Reset switch	
Key Extension	20 keys extension per RM-320F, extension connector	20
Connection Cable	Shielded CPEF cable or Category 5 STP cable, by M3 screw terminal	Connection to RM-300MF by way of dedicated cable
Finish	ABS resin, bluish gray (PANTONE 538 or its equivalent)	
Dimensions (W x H x D)	200 x 215 x 82.5 mm	110 x 76.5 x 215 mm
Weight	1.1 kg	350 g

VM-3000 series Remote Microphone



RM-200M



RM-210



Features

- Elegant design
- Zone, group and all-call paging, and starting pre-recorded messages
- Indication of system failure, line failure, busy zone etc.
- Extraordinary clarity and freedom from distortion by built-in compression circuit
- Up to 4 remote microphones can be connected to the VM-3000 system amplifier
- Up to 800 m total cable length
- RM-210: Allows announcements in Up to 60 zones
- Color: Bluish gray

Options

- WH-4000A: Headset
- WB-RM200: Wall-mounting bracket



WB-RM200

Specifications

	RM-200M	RM-210
Power Requirement	24 V DC (Operating range: 14 - 28 V DC)	From RM-200M
Current Consumption	100 mA maximum	20 mA max. (in terms of DC power inputs of RM-200X and RM-200XF)
Distortion	Under 1%	-
Frequency Response	100 - 20 kHz	-
Signal-to-Noise Ratio	Over 60 dB	-
Audio Output	0 dBV, 600 Ohm, balanced	-
Microphone	Unidirectional electret condenser microphone	-
Speaker Control	Controllable by PC software	-
Voice Message Control	Activation of 5 messages	-
Key Extension	10 keys extension per RM-210, extension connector	10
Connection Cable and Connector	Category 5 STP cable, RJ45 connector	Connection to RM-200M, RM-200X or RM-200XF by way of dedicated cable
Finish	ABS resin, bluish gray	ABS resin, bluish gray (PANTONE 538 or its equivalent)
Dimensions (W x H x D)	190 x 76.5 x 215 mm (Gooseneck microphone excluded)	110 x 76.5 x 215 mm
Weight	750 g	350 g



SX-2000 - Description

The SX-2000 is a scalable system for configuring versatile and highly effective PA systems. The system features new matrixing capabilities, so that a single system can have its components distributed in different locations under centralized control. Ideal for large scale installations ranging from multiple buildings to local systems, the versatile SX-2000 Series is particularly suitable for using in airports and railway stations, factories, shopping malls and large offices. The system's versatility such as dual power source and redundancy for fail-safe operation makes it a reliable solution for any specific installation without long lead times and the expense of custom systems.

SX-2000 System Configuration

The basic system comprises one SX-2100AI Audio Input Unit, one SX-2000AO or SX-2100 Audio Output Unit and the SX-2000SM System Manager. It enables from 2 inputs/8 outputs right up to 64 inputs and 256 outputs, with further expansion to 1,416 control inputs/outputs if needed. The SX-2000 Series makes it simple to control an expanded system by use of networking with commercial switching hub and cables, IP Intercom Network audio adaptor(s) can also be used. It features functions such as feedback suppressor, compressor/ auto-leveler, equalizer/filters, and auto mixing (with feedback ducker) to ensure high sound quality. The SX-2100AI modular construction simplifies system configuration as only plug-in modules have to be used. Therefore it allows flexibility of use with a wide range of input devices such as CD player, FM etc. to suit a particular application.

Fail-Safe Operation

The system is featuring a self-diagnosis to continuously monitor the status as well as speaker lines and connections. It generates alerts and email notifications to the system administrator along with a failure log. Power failure protection is given by two power supply channels plus a battery back-up keeps the system operational without requiring an UPS. An additional analog backup line from the microphone to the amplifier allows simultaneous broadcasting even during a breakdown of the system's digital functions. The SX-2000 system can be password-protected and key locked at external devices.

Features

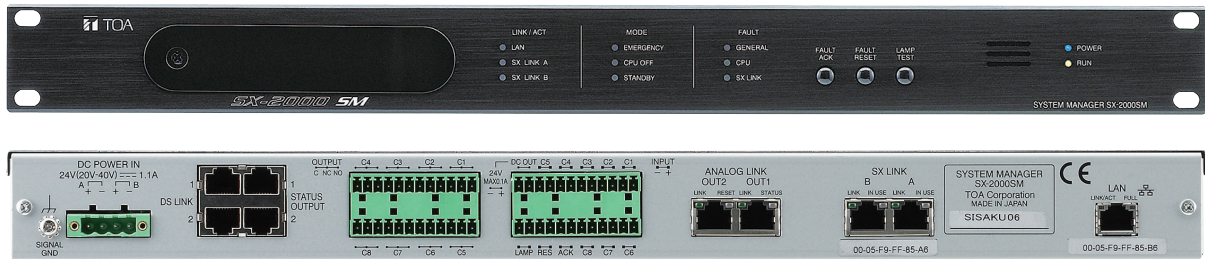
- Network-base sound system
- Max.64 audio inputs and 256 outputs with 16 bus lines
- Max.1416 control inputs and outputs for system integration
- Built-in DSP function, event logger and surveillance of amplifiers and speaker lines
- Max 1536 zones in combination with VM-3000
- Max 2048 zones in combination with TOA's N-8000 series IP Intercom System



Certificate No : 1134-CPD-102

Maximum System Capacity	
Output Power	107,520W
Speaker Zones	256 zones
Remote Mic connection	64 units





Features

- Matrix system in combination with an audio input unit, audio output unit, and remote microphone
- Audio signal routing and priority control
- 8 control inputs, 8 control outputs
- Failure status outputs, failure data inputs/switches
- Access indicators, mode indicators and failure indicators enabling a wide range of controls and status monitoring
- Control can be performed by way of a CF card inserted into the SX-2000SM unit
- Operations can be recorded and their contents stored on a CF card as an operation log
- Two power inputs for creation of a dual-redundant power system
- Automatic voice announcement for emergency purpose available
- System settings via Dual LAN connection

Options

- SX-2000AO Audio Output Unit
- SX-2100AI Audio Input Unit
- SX-2100AO Audio Output Unit

Specifications

	SX-2000SM
Power Source	24 V DC (2 independent power inputs)
Current Consumption	Under 0.8 A
SX Link Network I/F	2 100BASE-TX circuits
Matrix System Specification	Bus: 16; audio input: Max. 64 ch, audio output: Max. 256 zones. Contact input: Max. 1,416, contact output: Max. 1,416. Priority control: 512 steps. Event log: Max. 1000 pcs
Matrix System Configuration	SX-2000AI/2100AI: 8 in total SX-2000AO/2100AO: 32 in total SX-2000CI: 32 (one per SX-2000AO/2100AO) SX-2000CO: 32 (one per SX-2000AO/2100AO) RM-200SF/200SA: 64 in total (up to 8 in total per SX-2000AI/2100AI)
LAN	Network I/F 1 10 BASE-T/100 BASE-TX circuit. Network Protocol TCP/IP. Connection Cable Shielded Category 5 twisted pair cable for LAN (CAT5-STP)
Analog Link	Input/output connector output: 2. Connection cable shielded category 5 twisted pair cable for LAN (CAT5-STP)
Failure Data	3 inputs (ACK/RESET/LAMP TEST) and 4 outputs (CPU FAULT/GENERAL FAULT/CPU OFF/BUZZER)
Memory Card	Insertion slot: 1 (supplied CF card (128MB))
Control	8 Control outputs, 8 control inputs
Finish	Panel: Aluminum, black, alumite, case: Surface-treated steel plate
Dimensions (W x H x D)	482 x 44 x 333 mm
Weight	3.8 kg

SX-2000 series Audio Input Unit



Features

- Modular audio input
- 2 to 8 inputs per unit
- Multiple units can be decentralized in a whole system
- Audio signals are transmitted digitally to the audio output unit
- Analogy audio output function (1 channel)
Enables simultaneous all-zone calls for use in emergency situations
- Audio input levels (post-fader levels) are indicated on the level meters provided for each input channel
- Volumes can be adjusted for each channel using the volume controls on the front panel or the SX-2000 software
- Volume controls can be locked using the SX-2000 software
- Input channels can be monitored using the internal speaker
- 2 power inputs for redundant power system to support a dual-redundant power supply system

Options

- SX-200RM: Remote Microphone Interface Module
- SX-200IP: IP Interface Module
- RM-200SF: Remote Microphone
- RM-200SA: Remote Microphone
- RM-210: Extension Unit
- D-921E: Mic/Line Input Module
- D-921F: Mic/Line Input Module
- D-922E: Mic/Line Input Module
- D-922F: Mic/Line Input Module
- D-936R: Stereo Select Input Module

Specifications

	SX-2100AI
Power Source	24 V DC (2 independent power inputs)
Current Consumption	Under 1.5 A
Audio Input	8 inputs, for up to 4 modules
Audio Input Characteristics	Sampling frequency: 48 kHz
Analog Link Input / Output Connector Connection Cable / Device	1 input, 1 output, CAT5-STP, max. cable length 800m, 2 x RJ45 connector
SX Link Network I/F Connection Cable / Device	2 x 100 Base TX CAT5-STP, maximum cable length 100m to hub
Control IN / OUT	16 inputs, 16 outputs
Finish	Panel: Aluminum, black, alumite, case: Surface-treated steel plate
Dimensions (W x H x D)	482 x 88.4 x 349 mm
Weight	7.2 kg

SX-2000 series Modules for SX-2100AI



SX-2100AI (rear)



SX-200RM

Remote Microphone Interface Module

The SX-200RM is a dedicated remote microphone module for the SX-2000 Series audio input unit and can be used to connect two remote microphones. Input sensitivity can be adjusted.



Specifications

	SX-200RM
Power Source	Supplied from SX-2000AI
Input	Monaural x 2, -10 dB (0 dB=0.775V), 10 Ohm, RCA pin jack
A/D Converter	24 bits
Frequency Response	20 - 20 000 Hz, ± 1 dB (+4 dB input, 0 dB=0.775V)
Sampling Frequency	48 kHz
Dynamic Range	> 100 dB (IHF-A weighted)
Total Harmonic Distortion	< 0.05 % (+4 dB input, 0 dB=0.775V)
Finish	Panel: Pre-coated steel plate, black, 30% gloss
Dimensions (W x H x D)	35 x 119.5 x 178.4 mm
Weight	180 g
Applicable Model	SX-2100AI



SX-200IP

IP Interface Module

Module for mounting in the SX-2100AI

RJ45 connectors

Enable paging announcement from the N-8000 IP Intercom System stations (N-8600MS and N-8610RM) to the SX-2000 System

Specifications

	SX-200IP
Network Section	Network I/F: 10BASE-T/100BASE-TX (Automatic-Negotiation) Network Protocol: TCP/IP, UDP, HTTP, RTP, ARP, ICMP, IGMP Voice packet loss recovery: Silence Insertion Audio delay time: 80 ms, 320 ms (controllable on the software)
Indicator	Operation indicator (RUN)



D-921E

Mic/Line Input Module (24 bits monaural type)

The D-921E is a dedicated 2-channel microphone/line input module designed for use with the SX-2100AI and equipped with removable terminal block type connectors.



D-921F

Mic/Line Input Module (24 bits monaural type)

The D-921F is a dedicated 2-channel microphone/line input module designed for use with the SX-2100AI and equipped with XLR connectors.



D-922E

Mic/Line Input Module (20 bits monaural type)

The D-922E is a dedicated 2-channel microphone/line input module designed for use with the SX-2100AI and equipped with removable terminal block type connectors.



D-922F

Mic/Line Input Module (20 bits monaural type)

The D-922F is a dedicated 2-channel microphone/line input module designed for use with the SX-2100AI and equipped with XLR connectors.



D-936R

Stereo Select Input Module

The D-936R is a dedicated 4 stereo input module designed for use with the SX-2000AI and equipped with standard RCA pin jacks.

SX-2000 series Audio Output Unit SX-2000AO



Features

- Audio output unit
- Units can be operated in a decentralized system
- 8 audio outputs and 2 inputs, can be mixed
- 8 control inputs and 8 control outputs
- Receives audio signals from the audio input unit via digital transmission
- Analog audio input function (1 channel) enables simultaneous all-zone calls for use in emergency situations
- Audio output levels (post-fader levels) indicated on the level meters separate for each output channel
- Volumes adjustable for each channel by front volume controls or the SX-2000 software
- The volume controls can be locked by SX-2000 software
- Any output channel can be monitored using the internal speaker
- Emergency audio input and 24V emergency cut-off input
- 2 power inputs for dual-redundant power supply system
- Automatic control of stand-by amplifier

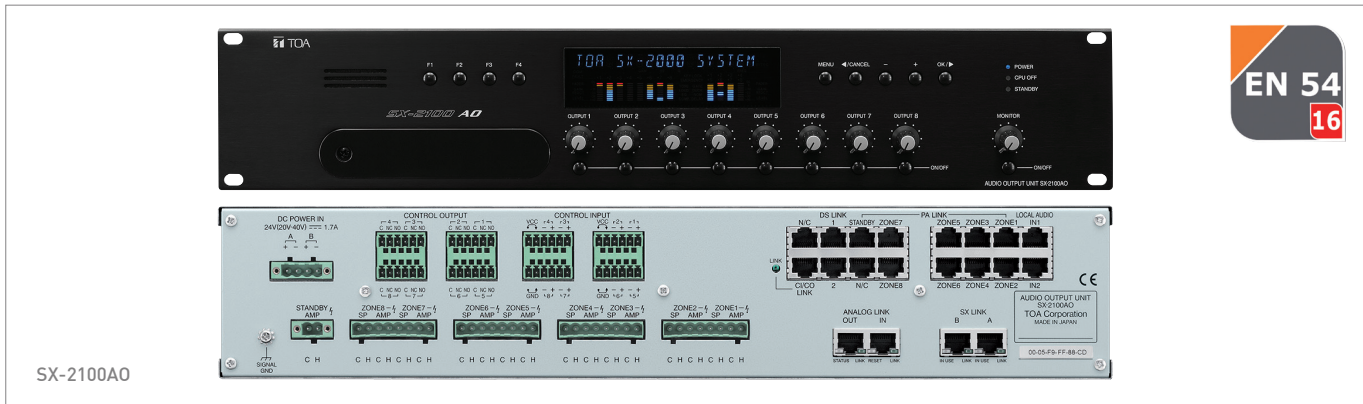
Options

- DA-250DH Digital 2 Channel Amplifier
- DA-250FH Digital 4 Channel Amplifier
- DA-550FH Digital 4 Channel Amplifier
- VX-2000DS: Emergency Power Supply
- Meanwell RCP-100024
- Meanwell RCP-1UI

Specifications

	SX-2000AO
Power Source	24 V DC (2 independent power inputs)
Current Consumption	Under 0.79 A
Audio Output	8 outputs, 0 dBV, load: 600 Ohm or more
Audio Output Characteristics	Frequency Response: 20 Hz - 20 kHz , sampling frequency 48 kHz, D/A converter 24 bit
Control Input / Control Output	8 inputs / 8 outputs, removable terminal blocks (6 pins)
Emergency Line Input	Emergency signals switched and sent to input 1 (H,C,E) by relay, removable terminal blocks (3 pins)
Emergency-Cutoff 24 V Input	1 input, input current < 5 mA, removable terminal block (2 pins)
Analog Link	1 input, 1 output, connection cable CAT5-STP, max. cable length 800m, 2 x RJ45 connector
SX Link	2 x 100 Base TX with RJ 45 connector. Connection cable CAT5-STP, maximum cable length of 100m to hub
Operating Temperature	0°C to +40°C
Finish	Panel: Aluminum, black, alumite, case: Surface-treated steel plate
Dimensions (W x H x D)	482 x 88.4 x 349 mm
Weight	6.2 kg

SX-2000 series Audio Output Unit SX-2100AO



Features

- Multiple units can be decentralized in a system
- 8 audio outputs
- 8 control inputs and 8 control outputs
- 1 SX-2000CI Control Input Unit and 1 SX-2000CO Control Output Unit each can be cascaded
- 2 local audio inputs with control inputs are provided for the audio inputs
- Emergency switch over to a standby amplifier
- Analogy transmission path (1 channel) enables all-zone calls for use in emergency situations
- 2 channels of link connection terminals for connecting to two VX-2000DS
- 2 inputs can be mixed and output.
- 2 power inputs for redundant power supply
- Level meters for each output channel allow monitoring of audio output levels
- Output volumes adjustable on the front panel
- Any output channel can be monitored using the internal speaker
- Key lock function

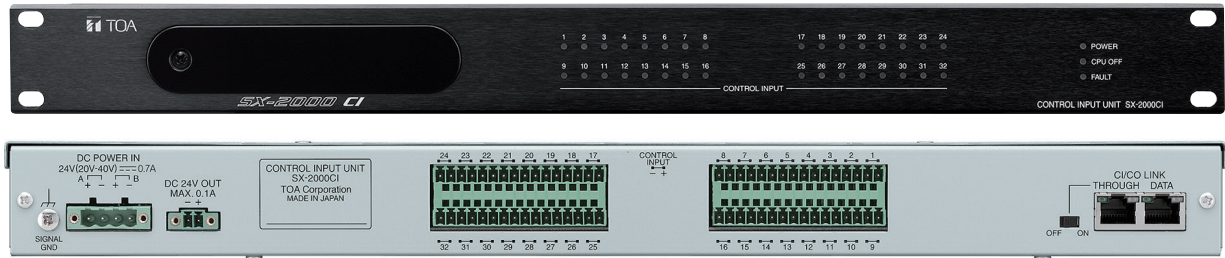
Options

- VX-3000DS: Power Supply Manager
- VP-2064: 60 W by 4 channels amplifier
- VP-2122: 120 W by 2 channels amplifier
- VP-2241: 240 W by 1 channel amplifier
- VP-2421: 420 W by 1 channel amplifier
- VX-2000DS: Emergency Power Supply
- Meanwell RCP-100024
- Meanwell RCP-1UI

Specifications

	SX-2100AO
Power Source	24 V DC (2 independent power inputs)
Current Consumption	Under 1.2 A
Audio Output	8 outputs, 0 dBV, load: 600 Ohm or more
Audio Output Characteristics	Frequency Response: 20 Hz - 20 kHz , sampling frequency 48 kHz, D/A converter 24 bit
CI/CO Link	SX-2000CI / SX-2000CO: 1 interface, connection cable CAT5-STP, RJ45 connector
Local Audio Input	2 audio inputs, 0 dB, 10 kOhm, electronically balanced, RJ45 connector Frequency Response: 20 Hz - 20 kHz , sampling frequency 48 kHz, D/A converter 24 bit 2 Control inputs Connection cable CAT5-STP,
DS Link	VX-2000DS: 2 interfaces, connection cable CAT5-STP, RJ45 connector
Analog Link	1 input, 1 output, connection cable CAT5-STP, RJ45 connector
SX Link	2 x 100 Base TX with RJ 45 connector. Connection cable CAT5-STP
Operating Temperature	0°C to +40°C
Finish	Panel: Aluminum, black, alumite, case: Surface-treated steel plate
Dimensions (W x H x D)	482 x 88.4 x 349 mm
Weight	7.1 kg

SX-2000 series Control Input Unit SX-2000CI



SX-2000CI

Features

- Decentralized installation possible
- 32 control inputs
- Control input line failure detection
- Front panel LED for monitoring the line status
- Supply of stabilized 24 V DC
- 2 independent power inputs
- RJ45 connectors

Options

- SX-2100AO Audio Output Unit
- SX-2000AO Audio Output Unit

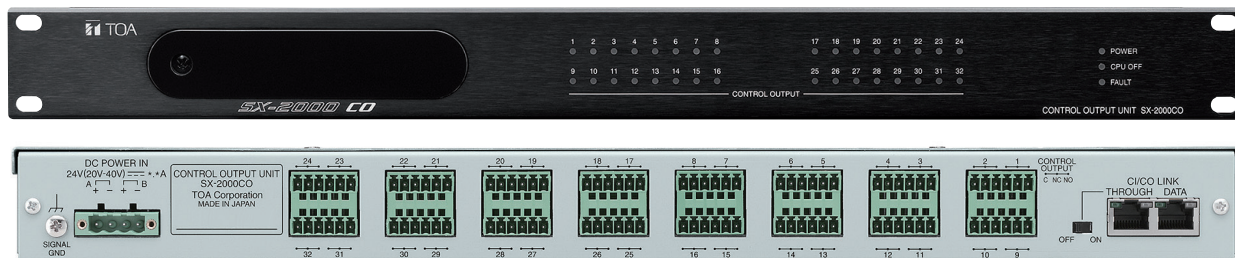
Applications

- Airports, Exhibition Centers,
Event Centers, Hotels

Specifications

	SX-2000CI
Power Source	24 V DC, 2 independent Inputs
Current Consumption	Under 0.55 A (when operated on 24 V DC)
Control Inputs	32 inputs
CI/CO Link	1 input / 1 output, RJ45 connector Connection cable: CAT5-STP, Max. Cable 800m
24 V DC Output section	1 input, RJ45 connector Connection Cable: Removable terminal block (2P)
Finish	Panel: Aluminum black, alumite, Case: Steel plate
Dimensions (W x H x D)	482 x 44 x 331.5 mm
Weight	3.6 kg

SX-2000 series Control Output Unit SX-2000CO



SX-2000CO

Features

- Decentralized installation possible
- 32 control outputs
- Control input line failure detection
- Front panel LED for monitoring the line status
- Supply of stabilized 24 V DC
- 2 independent power inputs
- RJ45 connectors

Options

- SX-2100AO Audio Output Unit

Applications

- Airports, Exhibition Centers, Event Centers, Hotels

Specifications

	SX-2000CO
Power Source	24 V DC, 2 independent Inputs
Current Consumption	Under 0.29A (when operated on 24V DC)
Control Outputs	32 outputs
CI/CO Link	Input: 1 input, output: 1 output, input/output connector : RJ45 connector Connection cable: Shielded category 5 twisted pair cable (CAT5-STP)
Maximum Cable Distance	800 m
Finish	Panel: Aluminum black, alumite, Case: Steel plate
Dimensions (W x H x D)	482 x 44 x 331.5 mm
Weight	3.6 kg

SX-2000 series Emergency Remote Microphone



Features

- Exclusively for emergency broadcasts made by firemen to evacuate
- For activation of emergency mode, start and stop automatic broadcasts of emergency announcements, reset emergency signals, and live microphone announcements
- CPU OFF switch allows all-zone calls (simultaneous attenuator-free global calls).
- No general broadcasts can be made.
- RM-210: Key extension unit
- 10 additional keys

Specifications

	RM-200SF
Power Requirement	24 V DC (Operating range: 15 - 40 V DC)
Current Consumption	240 mA or less
Distortion	1% or less
Frequency Response	200 - 15,000 Hz
Signal-to-Noise Ratio	55 dB or more
Audio Output	0 dBV, transformer - balanced
Microphone	Unidirectional dynamic microphone, AGC
Volume Control	Microphone, buzzer
Operation key	Emergency key, Evacuate key, Alert key, Emergency reset key, CPU switch, Reset switch
Key Extension	10 keys extension per RM-210, extension connector
Connection Cable	Shielded CPEV cable or Category 5 STP cable, M3 screw terminal
Finish	ABS resin, bluish gray
Dimensions (W x H x D)	200 x 215 x 95 mm
Weight	1.48 kg

SX-2000 series Remote Microphone



RM-200SA/RM-210



RM-210

Features

- > Elegant design
- > 13 function switches
- > Zone, group, all-call paging, and starting pre-recorded messages
- > Emergency sequence can be started with the alarm button which is covered by a hinged lid
- > Indication of system failure, line failure, busy zones etc.
- > Extraordinary clarity and freedom from distortion by built-in compression circuit
- > Up to 64 remote microphones can be connected
- > Covered switch prevents against accidental use
- > RM-210: Allows extended zone selection
- > Color: Bluish gray

Options

- > WH-4000A: Headset
- > WB-RM200: Wall mounting bracket



WB-RM200

Specifications

	RM-200SA	RM-210
Power Requirement	24 V DC (Operating range: 15 - 40 V DC)	From RM-200SA
Current Consumption	Under 240 mA	80 mA max. (RM-200SA's or RM-200FS's DC power input)
Distortion	Under 1%	-
Frequency Response	100 - 20,000 Hz	-
Signal-to-Noise Ratio	Over 60 dB	-
Audio Output	0 dBV, 600 Ohm, balanced	-
Microphone	Unidirectional electret condenser microphone with AGC	-
Volume Control	Microphone, buzzer, monitor speaker	-
Emergency Broadcast	Activation of emergency broadcast (pre-recorded announcement or live microphone announcement) by emergency broadcast switch	-
Voice Message Control	Activation of 5 messages	-
Key Extension	10 keys extension per RM-210, extension connector	10
Connection Cable and Connector	Category 5 STP cable, RJ45 connector	Connection to RM-200M, RM-200X or RM-200XF by way of dedicated cable
Finish	ABS resin, bluish gray	ABS resin, bluish gray (PANTONE 538 or its equivalent)
Dimensions (W x H x D)	190 x 76.5 x 215 mm (Gooseneck microphone excluded)	110 x 76.5 x 215 mm
Weight	880 g	350 g

SX-2000 series Terminal Unit



RM-200RJ

Features

- The RM-200RJ is designed to convert the RJ45 connector into a screw terminal block. It is used to connect between a trunk cable (such as CPEV cable) and a feeder cable (such as LAN cable) in wiring a remote microphone.
- The built-in indicator shows the voltage status of DC power cable when the remote microphone cable for the SX-2000 series system is connected.

Specifications

	RM-200RJ
Applied Voltage	Under 40V
Withstand Voltage	1A
Voltage Indicator	Monitor terminals: Terminal No 7 (+) and terminal No 8 (-), extinguish voltage: 14V or less, lighting voltage: 21V or more, indicator ON/OFF switchable
Connector	RJ45 connector: 1
Terminal	M3 screw terminal (10 pins), distance between barriers: 6.62mm
Dimensions (W x H x D)	84 x 116 x 25.7 mm



Meanwell RCP-1000-24 and RCP-1UI Frame

Meanwell RCP-1000-24 Power Supply and RCP-1UI Frame

Power supply module, RCP-1000-24, current range 40A.
RCP-1UI mainframe supports up to 3 modules.

SX-2000 series IP Remote Microphone Station



N-8610RM

Features

- Connects directly to network
- Can make a paging call to any selected zone(s) of SX-2000 System
- Two way communication capability with other stations in N-8000 Intercom System
- 14 function keys
- Up to 4 RM-210 Extension units can be connected
- Powered by PoE-compatible switching hub or optional AV adapter

Options

- RM-210: Key extension unit
- WB-RM200: Wall mounting bracket

Specifications

	N-8610RM
Power Source	Power supply device that complies with IEEE802.3af standard or 12V DC (supplied from the AC adapter (option))
Power Consumption	Use of the AC adapter (12 V DC): 4W (microphone only), 8.5W (when connecting 4 RM-210 Extension units) Use of the PoE (48 V DC): 5.2W (microphone only), 7.5W (when connecting 4 RM-210 Extension units)
Speech Method	Hands-free conversation (use of goose-neck microphone)
No. of Connectable Expansion	Max.4 units (maximum 2 units at PoE power supply)
Network Section	
Network I/F	10BASE-T/100BASE-TX (Automatic-Negotiation)
Network Protocol	TCP/IP, UDP, ARP, ICMP, HTTP, RTP, IGMP
Audio Packet Transmission System	Unicast, Multicast
Voice Packet Loss Recovery	Silence insertion
Audio Delay Time	80ms, 320ms (controllable on the software)
Finish	ABS resin, blueishgray
Dimensions (W x H x D)	190 x 76.5 x 215 mm (excluding microphone)
Weight	700 g
Option	Remote microphone extension: RM-210 Wall mounting bracket: WB-RM200, AC adapter, AD-1210P, AD-1215P

SX-2000 series System Configuration

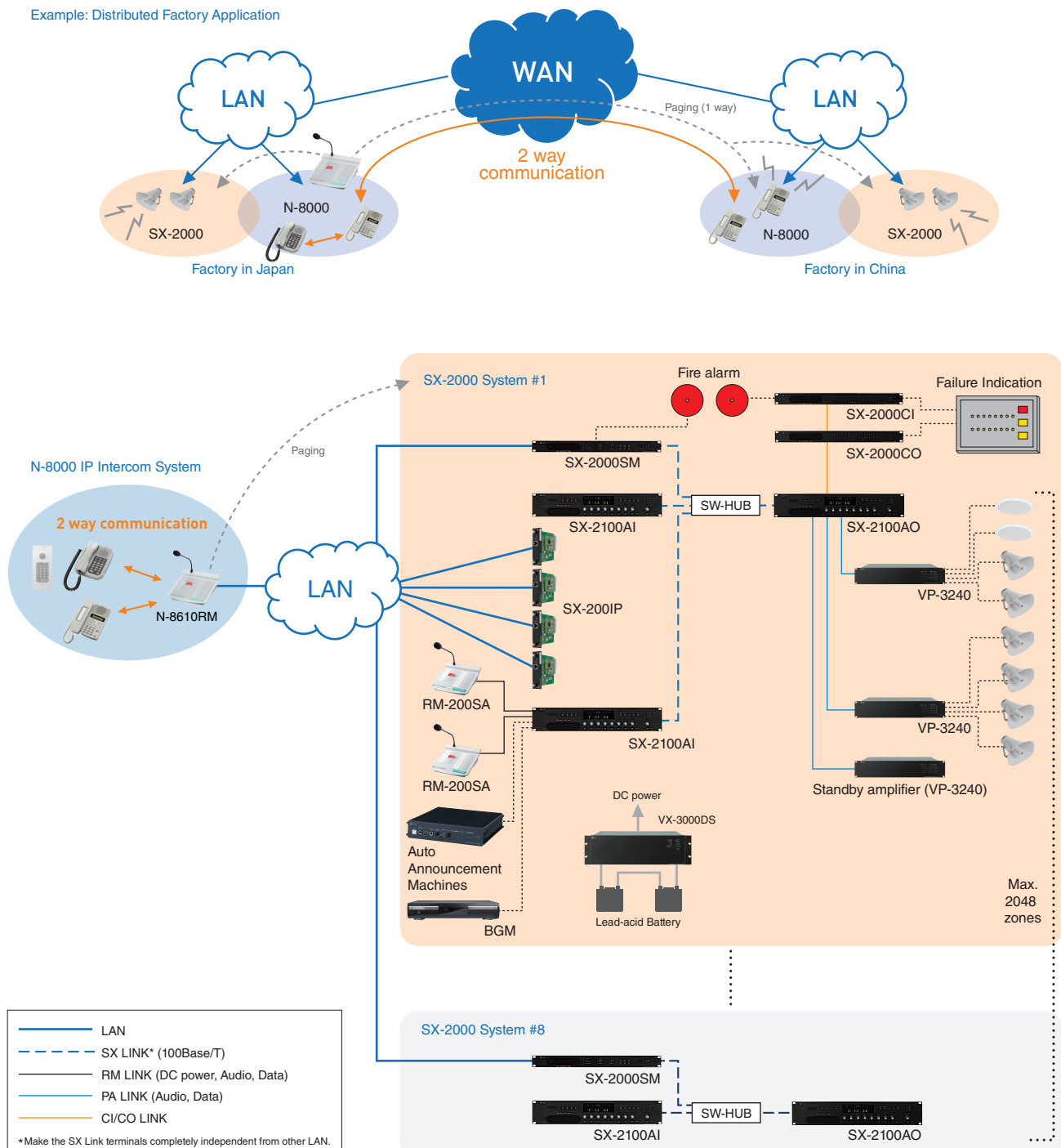
Integration of SX-2000 with N-8000 IP Intercom strengthens system capabilities.

A large system with up to 2048 zones is realized on the IP Network.

From a remote location, IP Station* can make a paging call to any selected zone(s).

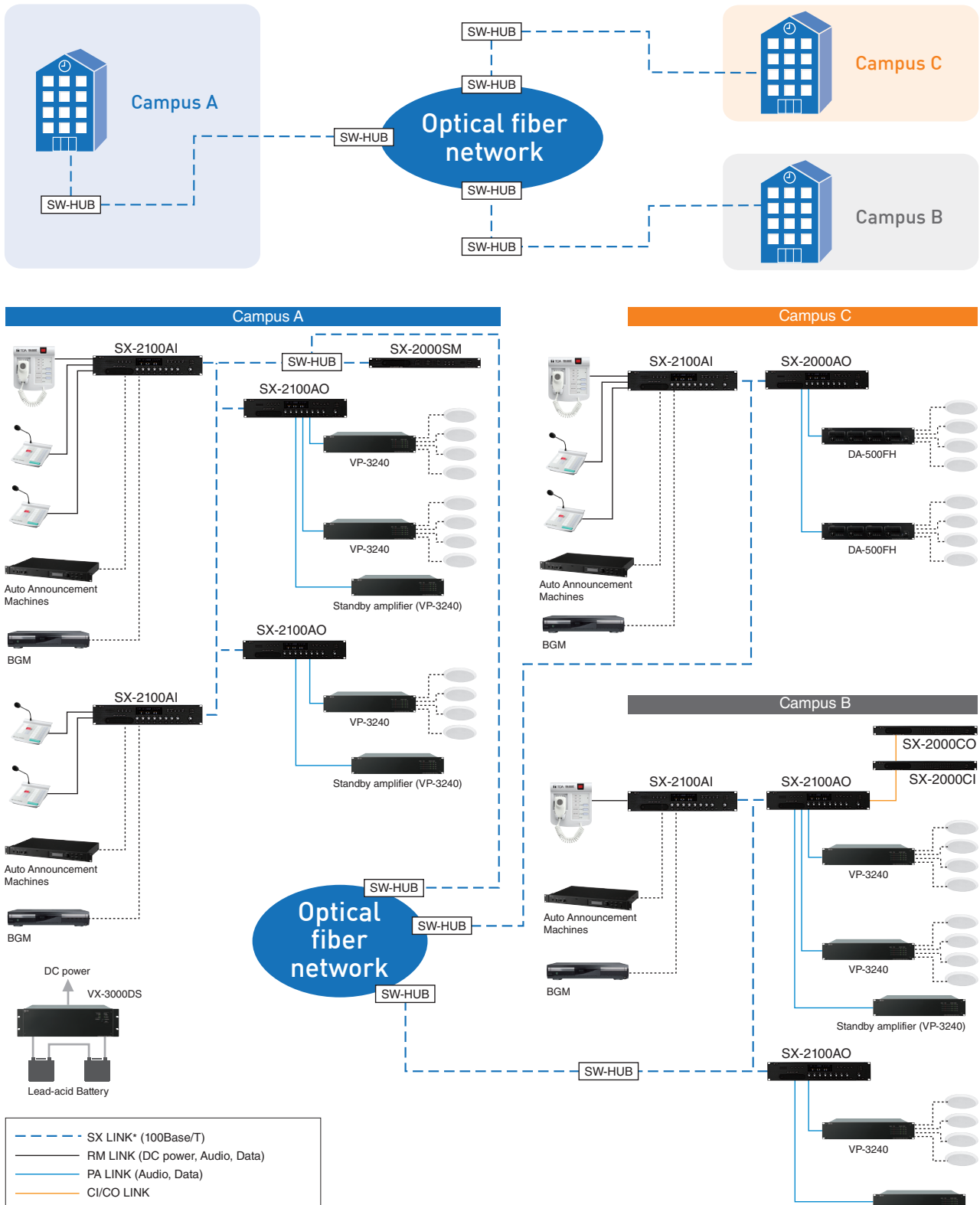
*N-8610RM and N-8600MS.

Example: Distributed Factory Application



SX-2000 series System Configuration

Distributed Control System Example (University)





Indicates that the speaker EN54-24 certified and is therefore legalized for use in conjunction with fire detection systems



Indicates that the speaker is fully compliant to the BS5839 part 8 code of practice

SPEAKER lineup

Flush Mount Type Ceiling Speakers



Specifications

	PC-648R	PC-2369	PC-580RU*	PC-580RVU*
Rated Input	6W	6W	5W	5W
Tap Settings	100V: 6W, 3W, 1W 70V: 3W, 1.5W, 0.5W	100V: 6W, 3W, 1.5W, 0.8W 70V: 3W, 1.5W, 0.8W, 0.4W	70V: 5W, 2W, 1W, 0.5W, 0.25W 25V: 5W, 2W, 1W, 0.5W, 0.25W	70V: 5W, 2W, 1W, 0.5W, 0.25W 25V: 5W, 2W, 1W, 0.5W, 0.25W
Sensitivity (1W, 1m)	90dB**	93dB**	97dB	97dB
Frequency Response	100Hz – 18kHz	45Hz – 20kHz	50Hz – 16.5kHz	
Mounting Hole Diameter	ø145 +/-5mm	200 +/-3mm	203.2(Dia.) mm	
Speaker Component	5" cone-type	6" double cone-type	8" Dual cone type	
Color	off-white (RAL 9010 or equivalent color)		White	
Dimensions	168(Dia.) x 77(D) mm	230(Dia.) x 79 (D) mm	324(Dia.) x 85(D) mm	324(Dia.) x 96.2 (D) mm

*UL1480 UUMW
2043 (w/backcan HY-BC580U)

Splashproof Ceiling Speaker



Clean Room Ceiling Speaker



Specifications

	PC-3CL	PC-5CL
Rated Input	3W	5W
Tap Settings	100V: 3W, 1W 70V: 1.5W, 0.5W	100V: 5W 70V: 2.5W
Sensitivity (1W, 1m)	87dB	87 dB
Frequency Response	150Hz - 20kHz	
Mounting Hole Diameter	ø100 mm	150 (Dia.) ±3 mm
Speaker Component	—	3" cone-type
Color	Stainless steel punching net	
Dimensions	139(Dia.) x 104.5 (D)mm	116(Dia.) x 110 (D) mm

Plane Wave Speakers



Specifications

	PW-1230DB/DW	PW-1230SB/SW	PW-1430DB/DW	PW-1430SB/SW
Rated Input	30W		30W	
Tap Settings	100V: 30 W, 15 W, 10W, 5 W 70V: 30 W, 15 W, 7.5W, 5 W, 2.5W		100V: 30 W, 15 W, 10W, 5 W 70V: 30 W, 15 W, 7.5W, 5 W, 2.5W	
Sensitivity	86dB (1 – 10kHz)		88dB (1 – 10kHz)	
Frequency Response	300Hz – 17.5kHz		250Hz – 17.5kHz	
Speaker Unit	Plane wave unit (152 × 214 mm (5.98" × 8.43")) × 2		Plane wave unit (152 × 214 mm (5.98" × 8.43")) × 4	
Finish	black/ light ivory		black/ light ivory	
Dimensions	524 (W) x 355 (H) × 60 (D) mm		831 (W) x 355 (H) × 60 (D) mm	

*Double-sided radiation

*Single-sided radiation

*Double-sided radiation

*Single-sided radiation

Wall Mount Box Speakers



Specifications

	BS-678	BS-680U*	BS-1034	BS-1034S
Rated Input	6W	6W	10W	10W
Tap Settings	100V: 6W, 3W, 1.5W, 0.8W 70V: 3W, 1.5 W, 0.8 W, 0.4 W	100V: 6W, 3W, 1.5W, 0.8W 70V: 3W, 1.5 W, 0.8 W, 0.4 W	100V: 10W, 5W, 3W, 1W 70V: 10W, 5W, 2.5W, 1.5W, 0.5W	100V: 10W, 5W, 3W, 1W 70V: 10W, 5W, 2.5W, 1.5W, 0.5W
Sensitivity (1W, 1m)	94dB	94dB**	90dB	
Frequency Response	150Hz – 20kHz		120Hz – 18kHz	
Speaker Component	6" double cone-type		Low: 5" cone-type, High: Balance dome-type	
Color	off-white or black	off-white	off-white	silver
Dimensions	250(W) x 190(H) x 110(D)mm	310(W) x 190(H) x 87.2(D)mm	210(W) x 330(H) x 80(D)mm	

**1 500Hz - 5kHz, pink noise

*UL1480 UUMW

Wall Mount Box Speakers



Specifications	BS-1030B/BS-1030W
Rated Input	30W
Tap Settings	100V: 30 W, 20W, 15 W, 10W, 5 W 70V: 30 W, 20W, 15 W, 10W, 5 W 8Ω
Sensitivity (1W, 1m)	90dB
Frequency Response	80Hz – 20kHz
Speaker Component	5" cone-type + dome-type
Color	BS-1030B: black (RAL 9011) BS-1030W: White (RAL 9010)
Dimensions	196 (W) x 290 (H) x 150 (D) mm

Combination Type Reflex Horn Speakers



Specifications	SC-610T	SC-615T	SC-630T	SC-630TU*
Rated Input	10W	15W	30W	30W
Rated Impedance	70V line: 500, 1k, 2k, 3.3k, 10k	70V line: 330, 670, 1k, 2k, 3.3k	70V line: 170, 330, 670, 1k, 2k	70V: 30 W, 15W, 7.5W 25V: 30W, 15W, 3.9W, 2.1W, 1.1W
Sensitivity (1W, 1m)	110dB	112dB	113dB	113 dB
Frequency Response	315 – 12,500 Hz	280 – 12,500 Hz	250 – 10,000 Hz	250Hz - 10kHz
Color	Horn flare: Aluminum, off-white, powder coating/Reflector horn: ABS resin, off-white Bracket holder: Aluminum, gray, powder coating/Bracket: Stainless steel			off-white
Dimensions	172 (W) x 161 (H) x 188 (D) mm	222 (W) x 179 (H) x 234 (D) mm	285 (W) x 227 (H) x 277 (D) mm	285(W) x 227(H) x 277(D) mm

*UL1480 UUMW



Specifications	SC-610	SC-615	SC-630
Rated Input	10W	15W	30W
Rated Impedance	8Ω		
Sensitivity (1W, 1m)	110dB	112dB	113dB
Frequency Response	315 – 12,500 Hz	280 – 12,500 Hz	250 – 10,000 Hz
Color	Horn flare: Aluminum, off-white, powder coating/Reflector horn: ABS resin, off-white Bracket holder: Aluminum, gray, powder coating/Bracket: Stainless steel		
Dimensions	172 (W) x 161 (H) x 188 (D) mm	222 (W) x 179 (H) x 234 (D) mm	285 (W) x 227 (H) x 277 (D) mm

Wide Range Horn Speakers



Specifications	CS-64/U*	CS-154/U*	CS-304/U*
Rated Input	6W	15W	30W
Tap Settings	100V: 6W, 3W, 1W 70V: 6W, 3W, 1.5W, 0.5W	100V: 15 W, 10W, 5 W 70V: 15W, 7.5W, 5 W, 2.5W	100V: 30 W, 20W, 10W 70V: 30 W, 15 W, 10W, 5 W
Sensitivity (1W, 1m)	96dB	97dB	98dB
Frequency Response	130Hz – 13kHz	150Hz – 15kHz	120Hz – 15kHz
Speaker Component	5" cone-type (Treated for splash proof)	5" cone-type	5" cone-type
Color	Horn, cover: off-white Punched net: dark-gray	Horn, cover: off-white/Net: gray	
Dimensions	233 (W) x 224 (H) x 208 (D) mm	366 (W) x 230 (H) x 272 (D) mm	366 (W) x 230 (H) x 272 (D) mm

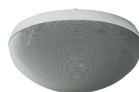
*UL1480 UEAY



Indicates that the speaker complies by the Ingress Protection standard (IP).
This icon will help show how the speaker can perform within different types of weather conditions.

SPEAKER lineup

Interior Design Speaker System



Specifications

	H-1	H-2	H-2WP
Rated Input	12W	12W	12W
Tap Settings	100V: 12W, 6W, 3W 70V: 12W, 6W, 3W, 1.5W 4Ω, 16Ω	100V: 12W, 6W, 3W 70V: 12W, 6W, 3W, 1.5W 4Ω, 16Ω	100V: 12W, 6W, 3W 70V: 12W, 6W, 3W, 1.5W 4Ω, 16Ω
Sensitivity (1W, 1m)	85dB ^{*1}	88dB ^{*1}	88dB ^{*1}
Frequency Response	120Hz – 20kHz	100Hz – 20kHz	100Hz – 20kHz
Speaker Component	Low: 3" x 2" cone-type, High: Balanced dome-type	Low: 4" cone-type, High: Balanced dome-type	Low: 4" cone-type, High: Balanced dome-type
Color		white	
Dimensions	312 (W) x 126 (H) x 90(D) mm	268(Dia.) x 111 (H) mm	268(Dia.) x 111 (H) mm



Specifications

	H-3	H-3WP
Rated Input	30W	30W
Tap Settings	100V: 30W, 15W, 7.5W 70V: 30W, 15W, 7.5W, 3.75W 8Ω, 16Ω	100V: 30W, 15W, 7.5W, 3.75W 70V: 30W, 15W, 7.5W, 3.75W 8Ω, 16Ω
Sensitivity (1W, 1m)	89dB ^{*1}	89dB ^{*1}
Frequency Response	100Hz – 20kHz	100Hz – 20kHz
Speaker Component	Low: 4" cone-type x 2, High: 1" dome-type (neodymium magnet)	Low: 4" cone-type x 2, High: 1" dome-type (neodymium magnet)
Color	Enclosure: black/Frame: off-white/Punched net: off-white	Enclosure: black/Frame: off-white/Punched net: off-white
Dimensions	295 (W) x 318 (H) x 129 (D) mm	295 (W) x 318 (H) x 129 (D) mm

F Series Wide-Dispersion Ceiling Speakers



Specifications

	F-2852C/UC2*	F-2322C/UC2*	F-2352C/UC2*	F-122CU**
Rated Input	60W	30W	30W	30W
Tap Settings	100 V: 60W, 30W, 15W, 3W 70V: 60W, 30W, 15W, 7.5W, 1.5W 25V: 7.5W, 3.7W, 1.9W, 0.9W, 0.2W 8Ω, 16Ω	100V: 30 W, 10W, 3W, 1W 70V: 30 W, 15 W, 5 W, 1.5W, 0.5W 25V: 3.7W, 1.9W, 0.6W, 0.2W, 0.06W 8Ω, 16Ω	100V: 30 W, 10W, 3W, 1W 70V: 30 W, 15 W, 5 W, 1.5W, 0.5W 25V: 3.7W, 1.9W, 0.6W, 0.2W, 0.06W 8Ω, 16Ω	100V: 30 W, 10W, 3W, 1W 70V: 30 W, 15 W, 5 W, 1.5W, 0.5W 25V: 3.7W, 1.9W, 0.6W, 0.2W, 0.06W 8Ω, 16Ω
Sensitivity (1W, 1m)	91dB	90dB	90dB	90dB
Frequency Response	80Hz – 20kHz	70Hz – 20kHz	70Hz – 20kHz	40Hz – 20kHz
Mounting Hole Diameter	250 mm	200mm	200mm	200mm
Speaker Component	Low: 6" cone-type, High: Dome-type	5" cone-type	Low: 5" cone-type, High: Balanced dome-type	5" cone-type
Color			Baffle: black/Rim: white/Punched net: white	
Dimensions	280(Dia.) x 227(D) mm	230(Dia.) x 200 (D) mm	230(Dia.) x 229(D) mm	230(Dia.) x 154(D) mm

*UL listed 1480 UEAY and 2043 for UC2 only.

**UL listed 1480 UUMW and 2043



Specifications

	F-2352SC	F-1522SC
Rated Input	6W	6W
Tap Settings	100 V: 6 W, 3 W, 1W, 0.5W 70V: 6W, 3W, 1.5W, 0.5W, 0.25W 25V: 0.75W, 0.4W, 0.2W, 0.06W, 0.03W 8Ω, 16Ω	100 V: 6 W, 3 W, 1W, 0.5W 70V: 6W, 3W, 1.5W 25V: 0.75W, 0.4W, 0.2W 8Ω, 16Ω
Sensitivity (1W, 1m)	89dB	88dB
Frequency Response	80Hz – 20kHz	65Hz – 18kHz
Mounting Hole Diameter	ø200mm	ø135mm
Speaker Component	Low: 5" cone-type, High: Balanced dome-type	4" cone-type
Color	Baffle: black/Rim: white/Punched net: white/Dust proof bag: black	Baffle: black/Rim: white/Punched net: white/Dust proof bag: black
Dimensions	230(Dia.) x 154(D) mm	155(Dia.) x 117(D) mm

*1 at installation in 1/2 free sound field

F Series Wide-Dispersion Speakers



Specifications

	F-1000BT/WT	F-1000BTWP/WTWP	F-1300BT/WT	F-1300BTWP/WTWP
Rated Input	15W	15W	30W	30W
Tap Settings	100 V: 15W, 5W, 3W, 1W 70V: 15W, 7.5W, 2.5W, 1.5W, 0.5W 8Ω	100 V: 15W, 5W, 3W, 1W 70V: 15W, 7.5W, 2.5W, 1.5W, 0.5W	100 V: 30W, 10W, 3W, 1W 70V: 30W, 15W, 3W, 1.5W, 0.5W 8Ω	100 V: 30W, 10W, 3W, 1W 70V: 30W, 15W, 3W, 1.5W, 0.5W
Sensitivity (1W, 1m)	87dB*1		90dB*1	
Frequency Response	85Hz – 20kHz*1		80Hz – 20kHz*1	
Speaker Component	Low: 4" cone-type, High: Balanced dome tweeter		Low: 5" cone-type, High: 2.5cm dome tweeter	
Color	black or white		black or white	
Dimensions	130 (W) x 202 (H) x 131(D) mm		162 (W) x 250 (H) x 161(D) mm	



Specifications

	F-2000BT/WT	F-2000BTWP/WTWP
Rated Input	60W	60W
Tap Settings	100 V: 60W, 30W, 15W, 3W 70V: 60W, 30W, 15W, 7.5W, 1.5W 8Ω	100 V: 60W, 30W, 15W, 3W 70V: 60W, 30W, 15W, 7.5W, 1.5W
Sensitivity (1W, 1m)	92dB*1	
Frequency Response	65Hz – 20kHz*1	
Speaker Component	Low: 8" cone-type, High: 1" dome tweeter	
Color	black or white	
Dimensions	244 (W) x 373 (H) x 235(D) mm	



MT-S0601
Matching Transformer

Allows SR-S Series and SR-T5 to be used in high impedance applications.



MT-S0301
Matching Transformer

Allows SR-H Series to be used in high impedance applications.

Line Array Speaker



Specifications

	SR-S4L	SR-S4LWP	SR-S4S	SR-S4SWP
Power Handling Capacity	Continuous program: 600W(single amp mode) Low: 240W, High: 240W(bi-amp mode)	Continuous program: 600W(single amp mode) Low: 240W, High: 240W(bi-amp mode)	Continuous program: 600W(single amp mode) Low: 240W, High: 240W(bi-amp mode)	Continuous program: 600W(single amp mode) Low: 240W, High: 240W(bi-amp mode)
Rated Impedance	8Ω	8Ω	8Ω	8Ω
Sensitivity (1W, 1m)	94dB	94dB	93dB	93dB
Frequency Response	70Hz – 20kHz	70Hz – 20kHz	70Hz – 20kHz	70Hz – 20kHz
Speaker Component	Low: 4" cone-type x 8, High: 1" balanced dome-type x 24			
Color	white			
Dimensions	160 (W) x 895 (H) x 255(D)mm	160 (W) x 895 (H) x 255(D)mm	160 (W) x 892 (H) x 303(D)mm	160 (W) x 892 (H) x 303(D)mm



Specifications

Specifications	SR-H2L	SR-H2S	SR-H3L	SR-H3S
Power Handling Capacity	Continuous program: 180W	Continuous program: 180W	Continuous program: 360W	Continuous program: 360W
Rated Impedance	8Ω	8Ω	8Ω	8Ω
Sensitivity (1W, 1m)	92dB	90dB	95dB	92dB
Frequency Response	80Hz – 18kHz	90Hz – 17kHz	110Hz – 18kHz	90Hz – 17kHz
Speaker Component	2.8" cone-type x 9		2.8" cone-type x 16	
Color	white			
Dimensions	84 (W) x 668.4 (H) x 115 (D)mm	84 (W) x 663.4 (H) x 115 (D)mm	84 (W) x 1,186 (H) x 115 (D)mm	84 (W) x 1,177.2 (H) x 157 (D)mm



Indicates that the speaker complies by the Ingress Protection standard (IP).
This icon will help show how the speaker can perform within different types of weather conditions.

SPEAKER lineup

Compact Array Speakers



Specifications

	HX-5B	HX-5B-WP	HX-5W	HX-5W-WP
Power Handling Capacity	Continuous program: 600W		Continuous program: 600W	
Rated Impedance	8Ω		8Ω	
Sensitivity (1W, 1m)	96dB (60° mode), 97dB (45° mode), 98dB (30° mode), 99dB (15° mode)		96dB (60° mode), 97dB (45° mode), 98dB (30° mode), 99dB (15° mode)	
Frequency Response	70Hz – 20kHz (60° mode)		70Hz – 20kHz (60° mode)	
Speaker Component	Low: 5" cone-type x 4, High: Balanced dome-type x 12		Low: 5" cone-type x 4, High: Balanced dome-type x 12	
Color	black		white	
Dimensions	408 (W) x 546 (H) x 342(D)mm		408 (W) x 546 (H) x 342(D)mm	

Coaxial Line Array Speaker System



Specifications

	HS-1200BT	HS-1200WT	HS-1500BT	HS-1500WT
Rated Input	60W		60W	
Tap Settings	100V: 60W, 30W, 15W 70V: 60W, 30W, 15W, 7.5W 8Ω		100V: 60W, 30W, 15W 70V: 60W, 30W, 15W, 7.5W 8Ω	
Sensitivity (1W, 1m)	97dB		98dB	
Frequency Response	70Hz – 20kHz		60Hz – 20kHz	
Speaker Component	Low: 12" cone-type, High: Balanced dome tweeter x 6		Low: 15" cone-type, High: Balanced dome tweeter x 6	
Color	black	white	black	white
Dimensions	361 (W) x 448 (H) x 320(D) mm		451 (W) x 560 (H) x 400(D) mm	

Projection Speakers



Specifications	PJ-304
Rated Input	30W
Tap Settings	100V: 30 W, 20W, 15W, 10W, 5W 70V: 30 W, 20W, 15 W, 10W, 5 W 8Ω
Sensitivity (1W, 1m)	91dB* ¹
Frequency Response	70Hz – 20kHz
Speaker Component	5" cone-type + balanced dome tweeter
Color	off-white
Dimensions	186(Dia.) x 369 (H)mm

Pendant Speakers



Specifications	PE-304BU/304WU*	PE-604BU/604WU*
Rated Input	30W	60W
Tap Settings	100V: 30W, 10W, 3W, 1.3W 70V: 30W, 15W, 5W, 1.5W, 0.6W 25V: 3.7W, 1.9W, 0.6W, 0.2W, 0.1W 8Ω	100V: 60W, 30W, 15W, 3W 70V: 60W, 30W, 15W, 7.5W, 1.5W 25V: 7.5W, 3.7W, 1.9W, 0.9W, 0.2W 8Ω
Sensitivity (1W, 1m)	90dB (330Hz – 3.3kHz, pink noise)	
Frequency Response	95 Hz – 20kHz	110 Hz – 20kHz
Speaker Component	5" cone-type + balanced dome-tweeter (coaxial)	
Color	PE-304BU: black PE-304WU: white (RAL 9010 or equivalent)	PE-604BU: black PE-604WU: white (RAL 9010 or equivalent)
Dimensions	186(Dia.) x 275 (H) mm	

*UL1480 UUMW



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Specifications are subject to change without notice.
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