



**EN60849/IEC60849
compliant**



VX-2000 SERIES INTEGRATED VOICE EVACUATION SYSTEM



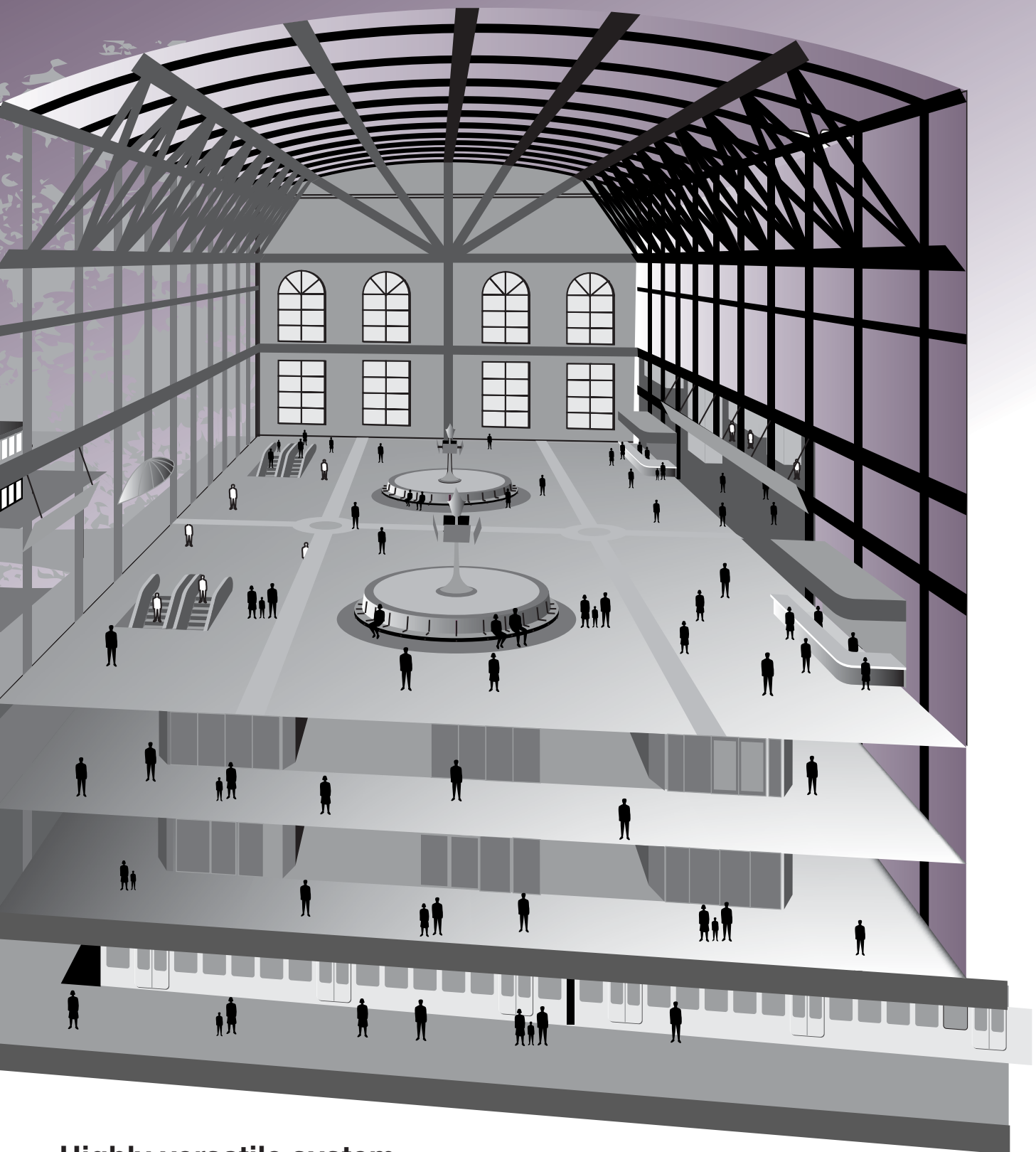
***Full compliance with EN60849/IEC60849 standards
System status can be confirmed on Remote Microphones
Fireman's Microphone included as standard equipment
Simultaneous dual-origin recorded message broadcasts***

TOA's VX-2000 Series is a broadcast and public address system that satisfies all the requirements for general purpose and emergency broadcasts for a wide range of environments and configured for simple as well as complex installations. The total system is composed of a System Manager, Surveillance Frame, Power Amplifiers, Power Supply, Emergency Power Supply, Fireman's Microphone and a user-specified number of Remote Microphones. The most important factor in any emergency system is total reliability.

TOA brings its accumulated expertise in producing public address and surveillance systems that are absolutely relied on in numerous installations around the world. Fully compliant with EN60849/IEC60849 standards to allow use in the most demanding environments, the VX-2000 outstanding features include sophisticated failure detection measures that constantly check components and speaker lines for any faults or abnormalities which are brought to the notice of concerned personnel via indicators and buzzers.

EN 60849
IEC60849
CE100-55
DIN EN 60849
VDE 0828-1
NEN-2575:2004.
BS-5839
SANS 60849
CP 25





Highly versatile system

The VX-2000 has been designed to offer a very high level of versatility to allow its use in various environments and features a scalable architecture that can be easily expanded as requirements dictate. A fully modular configuration facilitates assembling a system that is ideally optimized for a particular application with specific modules. The VX-2000 offers a high-performance cost-effective solution to any environment's broadcast and public address requirements.

The VX-2000 system can be configured to accept a maximum of 8 input slots for various input source modules, up to 8 remote microphones including 4 Fireman's Microphones, 2 voice-announcement boards as well as a built-in announcement chime. Up to 50 output zones using a maximum of 5 surveillance frames can be administered.



Fireman's Microphone included

The VX-2000 provides a Fireman's Microphone as part of its standard equipment that also functions for acoustic monitoring and surveillance of the emergency microphone unit (including the microphone capsule voice coil). In the event of a CPU failure, there is a CPU cutoff switch right on the Fireman's

Microphone and an all-call function is still available at the Fireman's Microphone.



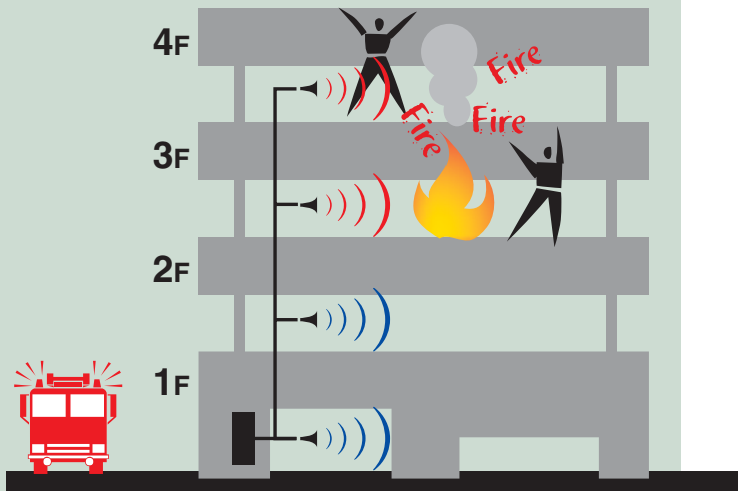
Confirming status

System status can be confirmed at each remote microphone location. Each microphone may have priority set for it but in emergency broadcasting, the emergency microphone will have priority and other microphone's status will not be indicated.



Non-interruptive surveillance

The surveillance function of the VX-2000 is non-interruptive of program material such as BGM distribution and paging announcements.



Automatic dual broadcasting

When activated by a remote microphone or fire detection system link, simultaneous dual broadcasting is possible by using 2 voice announcement cards to allow different messages* to be available at the same time such as alert and evacuation messages.

*A maximum of 4 broadcasts are simultaneously possible.

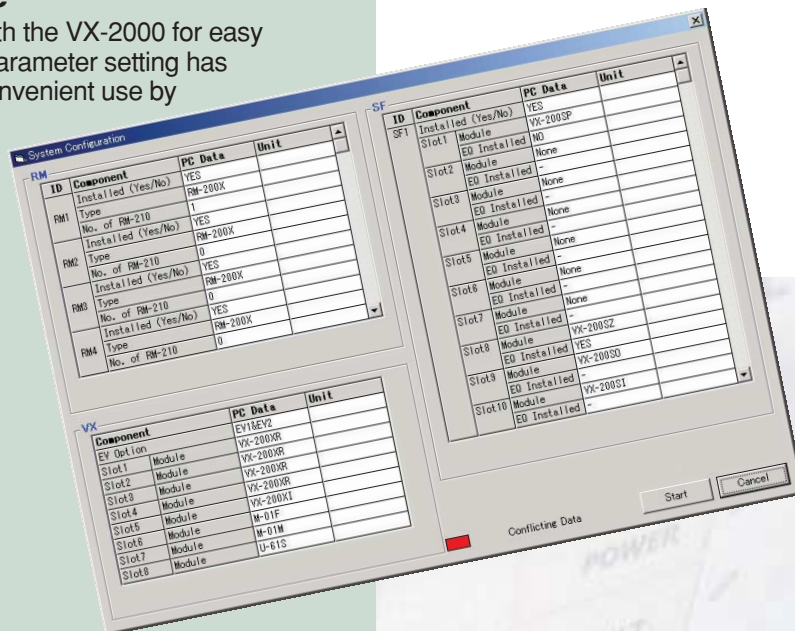
Simultaneous Dual Broadcast Example
(2 EV-200M voice announcement boards installed in the VX-2000)

Red
In an emergency, the system automatically broadcasts one evacuation message to the buildings 3rd and 4th floors.

Blue
Along with the evacuation message, the system automatically broadcasts an alert message to the 1st and 2nd floors simultaneously.

Versatile software

The software provided with the VX-2000 for easy system configuring and parameter setting has multilingual options for convenient use by personnel in any location.

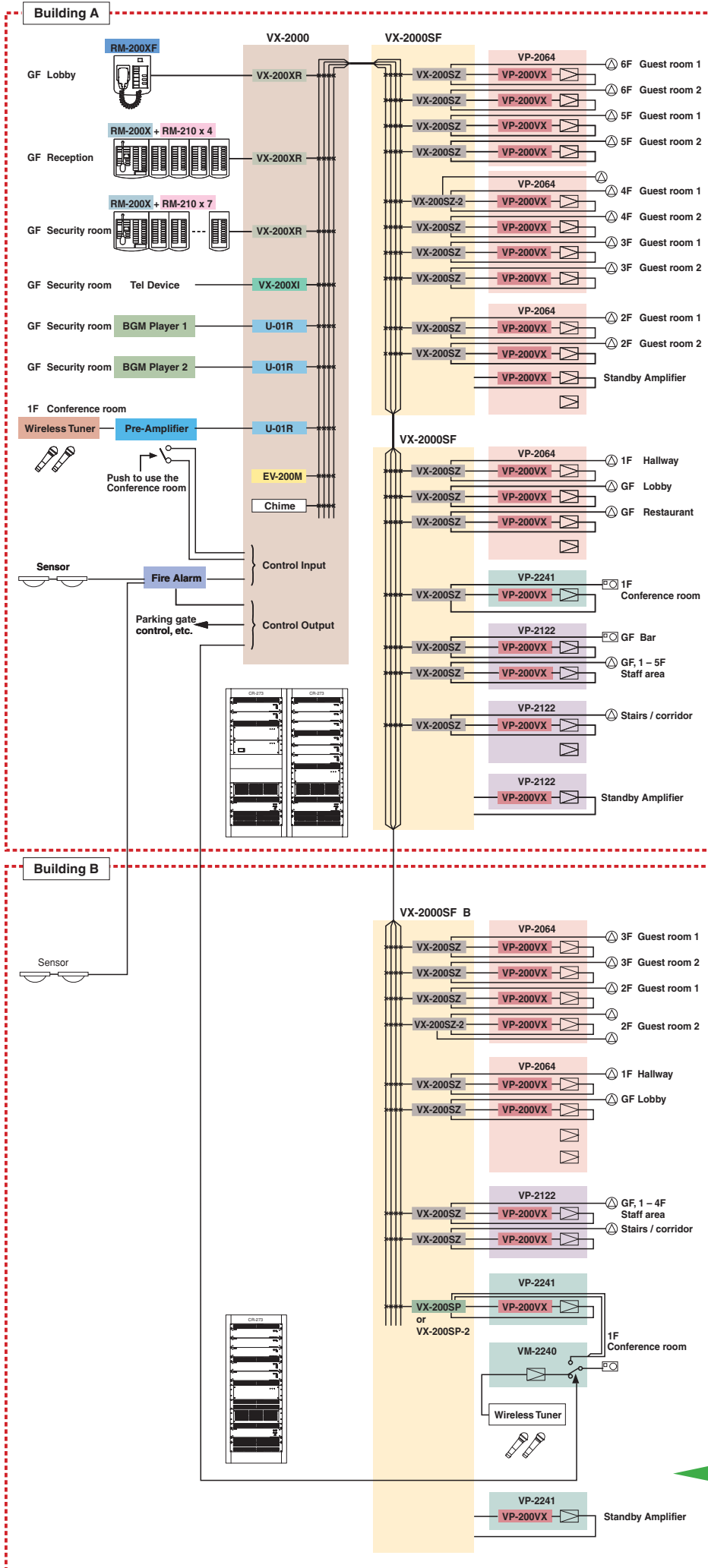


Automatic power reduction

During power outages, there is a special mode to reduce battery power consumption effectively allowing smaller batteries to be used without compromising system performance.



System Configuration



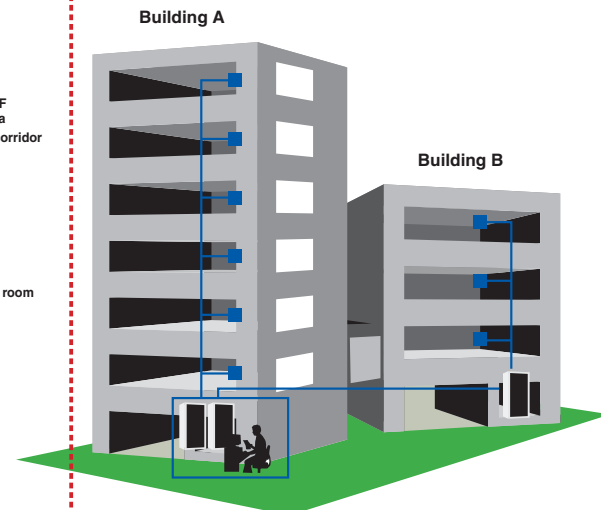
VX-2000 System Manager

The VX-2000 System Manager is an input matrix unit that assigns input signals to 4 audio buses, and functions as the VX-2000 system's main controller. A total of up to 8 units of the VX-200XI, VX-200XR, and 900 Series input modules can be mounted in a System Manager. The VX-2000 can control audio signal routing, priorities, and peripheral equipment, while input and output control settings are performed by way of a PC. Up to 2,000 system events and failures can also be recorded, and the log can be viewed from a PC.



VX-2000SF Surveillance Frame

The VX-2000SF Surveillance Frame is the output matrix section of the VX-2000 system that assigns audio signals to individual zones from 4 audio buses. It can be extended to up to 5 units. A total of 10 units of output modules and control modules can be installed per VX-2000SF. 6 types of modules can be used: the VX-200SP Pilot Tone Detection module, the VX-200SP-2 Pilot Tone Detection module, the VX-200SZ Impedance Detection module, the VX-200SZ-2 Impedance Detection module, the VX-200SI Control Input module, and the VX-200SO Control Output module.





RM-200XF Fireman's Microphone

A dedicated microphone for the VX-2000 system, the RM-200XF is designed to be exclusively used for emergency broadcast, however it can be used for general purpose broadcast applications as well.



RM-200X Remote Microphone

The RM-200X is a dedicated unit for the VX-2000 system, and permits emergency broadcast as well as general-purpose broadcast.

RM-210 Remote Microphone Extension

The RM-210 is an extension unit for increasing the number of function keys of TOA's RM-200X and RM-200XF Remote Microphones.



WB-RM200 Wall Mounting Bracket

The WB-RM200 is to mount RM-200X, RM-200M and RM-210 on the wall.

VX-200XI Audio Input Module with Control Input

The VX-200XI module is designed to be used in conjunction with the VX-2000 System Manager, and comes with control input terminals, low-cut and high-cut filters, and gain controls.



VX-200XR Remote Microphone Input Module

The VX-200XR module is designed to be used with the RM-200X Remote Microphone or RM-200XF Fireman's Microphone. Insert this module into the VX-2000's input module slot for each Remote or Fire Microphone(s) used in the system.



S-20S Sound Repeater Module

The S-20S is EV module to be used in conjunction with VX-2000. Up to 4 types of music and messages (6 minutes total time) can be recorded and played back. The USB port facilitates recording by transferring the supplied sound sources from a PC to the unit.



VX-200SZ Impedance Detection Module

The VX-200SZ is an audio signal output module of the VX-2000 system with speaker line impedance detection. This module is to be mounted in the VX-2000SF Surveillance Frame and detects speaker line short circuits, open circuits by comparing impedance readings, and ground fault.



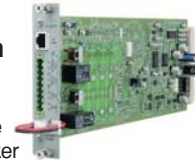
VX-200SZ-2 Impedance Detection Module

The VX-200SZ-2 is an audio signal output module of the VX-2000 system with speaker line impedance detection. This module is to be mounted in the VX-2000SF Surveillance Frame and detects speaker line short circuits, open circuits by comparing impedance readings, and ground fault. Since the module is equipped with 2 speaker outputs (A and B), broadcasts can be maintained even if one of the two outputs fails. Failures are indicated by the LED on the panel.



VX-200SP Pilot Tone Detection Module

The VX-200SP is an audio signal output module of the VX-2000 system with speaker line pilot tone detection. This module is to be mounted in the VX-2000SF Surveillance Frame and detects speaker line short circuits, open circuits by monitoring for the presence of a pilot signal, and ground fault.



VX-200SP-2 Pilot Tone Detection Module

The VX-200SP-2 is an audio signal output module of the VX-2000 system with speaker line pilot tone detection. This module is to be mounted in the VX-2000SF Surveillance Frame and detects speaker line short circuits, open circuits by monitoring for the presence of a pilot signal, and ground fault. Connecting the supplied line to the end of the speaker line eliminates the necessity of using the speaker line for line monitoring. However, the shielded cable must be used for the speaker line.



VX-200SO Control Output Module

TOA's VX-200SO Control Output Module is used to increase the number of control outputs to be used in the VX-2000 system. It features 16 control outputs and is mounted in the VX-2000SF Surveillance Frame.



VX-200SI Control Input Module

TOA's VX-200SI Control Input Module is used to increase the number of control inputs to be used in the VX-2000 system. It features 16 control inputs and is mounted in the VX-2000SF Surveillance Frame.



VX-200SE Equaliser Card

The VX-200SE Equaliser is a 9-band, 1-channel equaliser to be mounted on the circuit board of the VX-200SP Pilot Tone Detection module or VX-200SZ Impedance Detection module.



EV-200M Voice Announcement Board

The EV-200M is playback-only Voice Announcing board to play back the messages recorded on TOA's EV-350R. The EV-200M is designed to be built in the VX-2000.



Power Amplifier

VP-2064 (60 W-by-4 channels)
VP-2122 (120 W-by-2 channels)
VP-2241 (240 W-by-1 channel)
VP-2421 (420 W-by-1 channel)

Power Amplifier uses the VP-200VX Power Amplifier Input Module per channel.

VP-200VX Power Amplifier Input Module

The VP-200VX Power Amplifier Input Module is designed to be used in conjunction with the VP-2064, VP-2122, VP-2241 or VP-2421 power amplifier.



VX-2000DS Emergency Power Supply

The VX-2000DS Emergency Power Supply Unit supplies the DC power to each equipment in the VX-2000 system by connecting the VX-200PS Power Supply Unit. It keeps the battery unit that contains 2 x 12 V sealed lead batteries charged compensating for the temperature of the battery charging voltage. When the DC power supply from the VX-200PS stops, the VX-2000DS is automatically switched to the backup battery.

VX-200PS Power Supply Unit

The VX-200PS Power Supply Unit is mounted in the VX-2000PF Power Supply Frame when in use. There are 2 DC output channels per unit. Use the VX-200PS in the number suited to the required total system power.



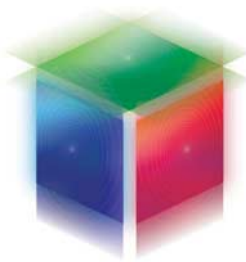
VX-2000PF Power Supply Frame

The VX-2000PF permits the VX-200PS Power Supply Unit to be mounted in an equipment rack. Up to three VX-200PS units can be installed in the unit.



VX-2000 System Specifications

- **Microprocessor-controlled 4 audio signal bus matrix system** comprising System Manager VX-2000 for the input signal matrix and Surveillance Frame VX-2000SF for the output signal matrix.
- **Max. 18 inputs** {8 input slots, 8 Remote Microphones including Fireman's Mic, 2 EVs (Voice Announcement Board) and Chime} and 50 output zones (max. 5 Surveillance Frames) available.
- **Two different emergency messages** (Alert and Evacuation) **simultaneously available** if 2 EV-200M cards are installed.
- **Surveillance function for the critical speech path** from the microphone element of Fireman's Microphone(s) to each speaker line fully complies with the IEC (EN) 60849 standard.
- **Speaker line surveillance method** can be independently selected for each speaker line (Pilot tone detection or impedance check)
- Any **surveillance function will not interrupt** BGM distribution and paging announcements.
- **PC software available** for easy system configuring and parameter setting.
- **Weekly program timer function** for scheduled events. (10-Day Programs of 32 events each, 40 Holiday Programs, setting daylight saving time and adjusting time setting)
- **Monitor bus system allows Remote Monitoring** of the audio signal on output zones.
- Standard configuration of 16 control inputs and 16 control outputs **can be expanded up to 128 inputs and outputs.**
- A **standby amplifier** can be reserved for each Surveillance Frame.
- **All-call function still available at Fireman's Microphone(s)** even with CPU failure.
- All **Remote Microphone** (Fireman's Microphone) **switches** are assignable function switches.
- **LEDs on the Remote Microphone** (Fireman's Microphone) can be set as Fault Indicators.
- Remote Microphone (Fireman's Microphone) **function switches with 2 LEDs can be expanded up to 105 per unit** (with RM-210 Remote Microphone Extension Units).
- **Software-driven logging function** records the last 2000 events and downloads data to a PC.
- **Printable** software-driven Setting list and Block Diagram of Project
- **System configuration and connection check** function available during system installation.
- **9-band Graphic EQ card** available for each output zone.
- **DC power supply for whole system** excluding BGM sources minimizes use of AC cables.
- **System failures are automatically detected** such as general power amplifier failures and faults as well as DC fuse failures and power amplifier thermal faults.
- **Power amplifier standby function** maximizes battery-powered operation time.
- **Inspection mode** can be activated on setting software for emergency operation without requiring actual broadcasting.
- **Automatically cuts power consumption** when using the battery power supply.



**Human Society with
Sound & Communication**

TOA Corporation

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