TOA

VX-3000 Series Brochure

Providing safety with superior sound quality.

The culmination of a highly integrated voice evacuation, public address, and BGM system.

Keeping safety at the forefront of design considerations, without compromising on other desired features.

The VX-3000 is a reliable and energy-saving voice evacuation system. It combines a plethora of desirable functions for PA/VE/BGM applications into a single VX-3000 frame. The reduction in the number of required components also allows for a non-complex design, as well as a much quicker and easier installation altogether. Meaning that installers are able to cherish the reduced complexity, space-saving, and a reduction in cable runs. This series also boasts a rapid system configuration, making the VX-3000 a flexible but cost-effective system.

The system includes low-loss modular class D amplifiers with 3 different output ratings. These can easily be removed, or mounted simply by unplugging them, meaning that there is no need for special tools. By using low-loss modular class D amplifiers and modern power supply switching technology, the system becomes much more energy efficient, meaning low operating costs for the user.

Due to its flexible and scalable system architecture, the VX-3000 system can be used for both small and large applications, with up to 1,280 remote microphones, 1,920 audio inputs and 2,560 speaker zones. Additionally, you can also connect one audio source (i.e. music player) to each remote microphone and broadcast it. The system can be installed both centralized as well as de-centralized, with the latter reducing the cabling cost drastically.

The automatic emergency announcements (pre-recorded messages) can be arranged in three phases, for example; broad-casting a coded message first, then a warning, and lastly another message signifying the end of an evacuation. A simultaneous broadcast of warning and evacuation messages is also possible and can be initiated by a single activation.

The two remote microphone models can be set for normal, emergency, and both modes with a different setting for the talk button (implemented zone selection or not, PPT or lock mode).

In emergency mode, emergency messages can manually be assigned to broadcast areas. Built-in chimes or individually re-corded chimes or tones can be set before and after paging, and different tones for normal and emergency broadcasts.

Different access levels restrict the access to the setting software according to the operator's education level. As an example, the advanced user level allows the end user to configure settings regarding the built-in timer, as well as changing audio files for general broadcasts (such as pause chimes in schools and factories, or general or advertisement announcements in shopping areas).

Please note that this is a pre-launch edition of the VX-3000 Series brochure, and as such should be used for review purposes only. Specs subject to change upon launch.

REMOTE MICROPHONES

RM-200SF

RM-320F

RM-300X

RM-210F

FRAMES

VX-3004F

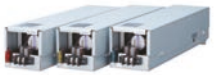
VX-3008F

VX-3016F

PREAMP MATRIX PANEL

VX-3000PM

AMPLIFIER MODULES



VX-015DA / VX-030DA
VX-050DA

LINE OUTPUT MODULE

VX-300LO

CONTROL PANEL

VX-3000CT

POWER SUPPLY

VX-2000DS

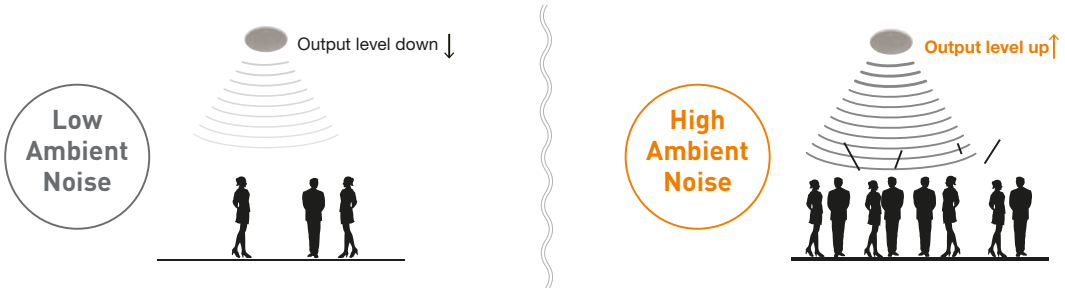
Flexible Broadcasting

Broadcast of many different audio signals to multiple zones simultaneously, flexible speaker driving

- Broadcast initiation: Remote microphone key operation, VX-3000CT key operation, internal timer, voice control, and more
- Selectable audio sources: audio inputs for microphones for paging or music players for BGM or FGM broadcast, pre-recorded messages, and more.
- Broadcast priority setting with 1024 levels

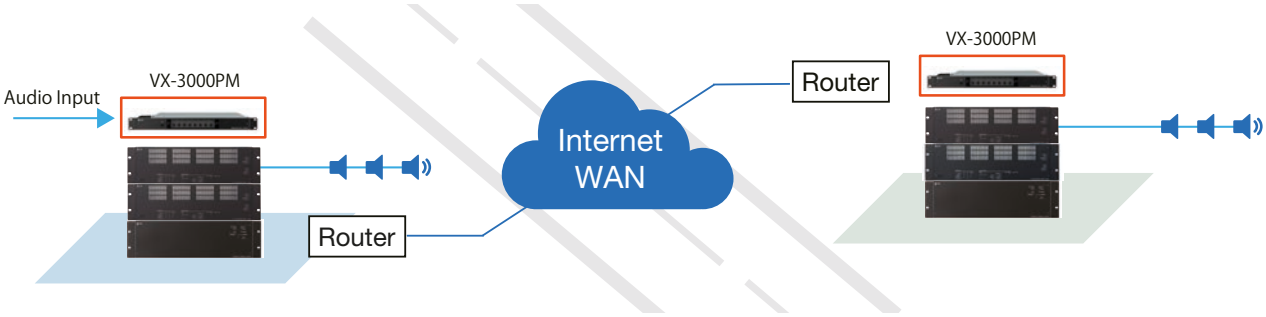
High Sound Quality & Intelligibility

- Comprehensive DSP functions for inputs and outputs including automatic feedback suppressor
- Automatic output volume adjustment depending on the ambient noise level (Ambient Noise Control function)



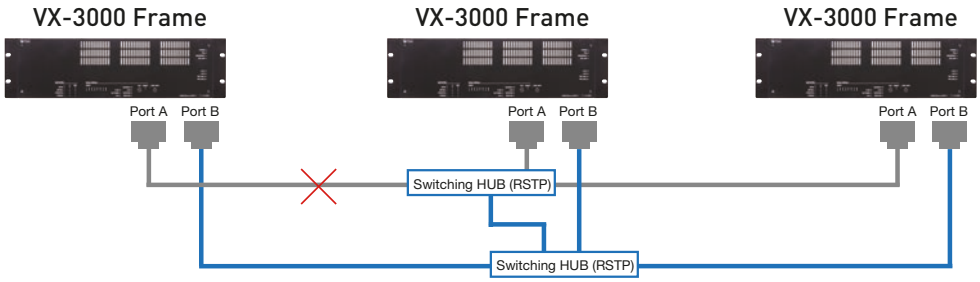
Audio Streaming over the WAN

VX-3000PM Preamp Matrix Panel enables unicast audio streaming via routers, which allows long-distance broadcasts even between buildings across public roads.



Redundant network

Redundant LAN connection can be configured for a more reliable system.



Integration

- Connectable with TOA's NX-300 Network Audio Adapter
- Remote Protocol enables VX-3000 to be controlled by external devices
- VX-3000 can be controlled with the Modbus protocol

Reliability

- Redundant system configuration - network connection, standby amplifier setting and backup power supply.
- Advanced failure detection
- Fault indications assignable to control outputs, remote microphone function keys, VX-3000 Frame's LEDs, buzzers, e-mail notifications, etc.

Redundant amplifier

A standby amplifier can be shared among the multiple VX-3000 Frames.

Ideal for Small to Large Scale Applications

- Minimized configuration - All functions; all inputs and outputs are incorporated in one VX-3000 Frame.
- A small number of system components helps ease system configuration.
- Scalability - One large system with maximum 2560 speaker zones and 1280 remote microphones is possible.

Airport

Shopping Mall

Railway Station

Concert Hall

Stadium

Office

Factory

School

Integration

- Connectable with TOA's NX-300 Network Audio Adapter and IP-3000 Series IP Public Address System
- Remote Protocol enables VX-3000 to be controlled by external devices.
- Furthermore, VX-3000 complies with Modbus protocol.

Eco-Friendly

- Light-weight and energy saving - Modern power supply switching technology and power-efficient digital amplifiers
  Battery saving - Standby function for low power consumption during battery backup reduces the required battery capacity

Intuitive, yet Sophisticated Setting Software

- Setting software provides different modes according to the user role or level.

Extreme Flexibility

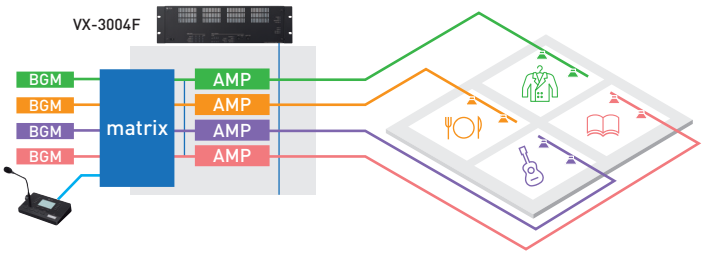
The underlying VX-3000 Frames of the system are selectable according to the required broadcast pattern.

Requirements

- The floor is divided into four zones.
- Each zone needs individual background music
- Announcement is sent to selected zone(s)
- Background music is overridden by announcement

VX-3004F

- Up to 4 modular amplifiers mountable
- Multi-route architecture
- Each zone has an exclusive amplifier
- One of the mounted amplifiers can serve as a standby amplifier

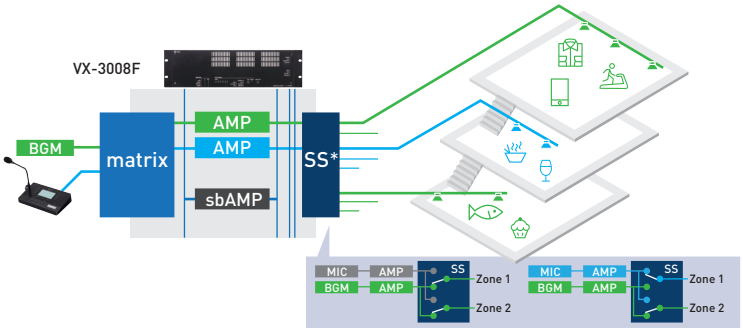


Requirements

- The floor is composed of multiple zones.
- Common background music is delivered to all zones
- Announcement is sent to selected zone(s) without disrupting the background music in the other zones.
- Background music is overrode by announcement

VX-3008F

- Up to 3 modular amplifiers mountable, one of which serves as a standby amplifier
- 2 bus lines and 8 switching zones
- One amplifier covers multiple zones

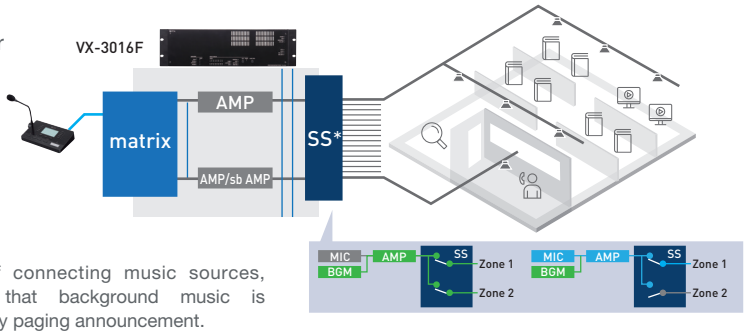


Requirements

- The floor is divided into multiple zones with individual attenuator
- No background music required
- Announcement is sent to selected zone(s)

VX-3016F

- Up to 2 modular amplifiers mountable 16 switching zones
- Broadcasting to multiple zones with only one amplifier is possible

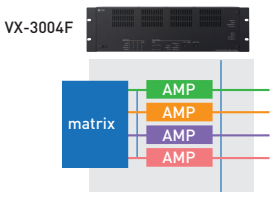


*SS stands for speaker selector

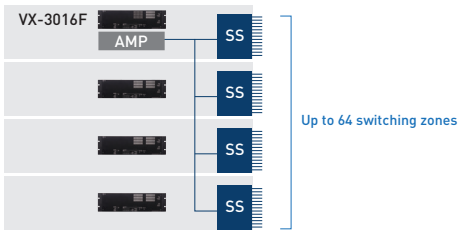
In cases of connecting music sources, be noted that background music is interrupted by paging announcement.

Flexible speaker driving from 1 zone per amplifier up to 64 zones per amplifier

1 zone per amplifier



Speaker selector expansion

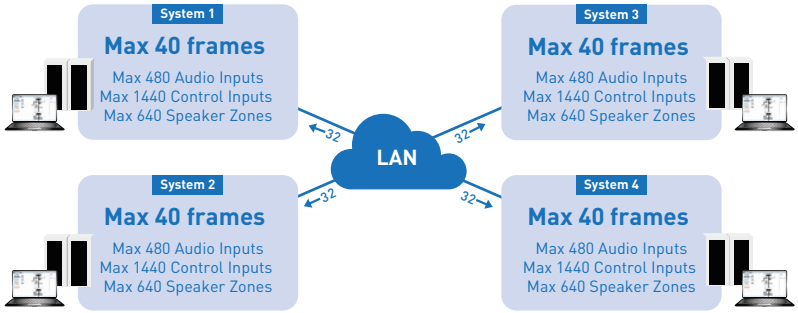


Scalability

One system can be configured with max 40 frames, one of which is set to ID:0 and serves as a master frame. Up to 4 systems can be integrated via LAN, allowing to configure one large–scale system with maximum 1,920 Audio Inputs and maximum 2,560 speaker zones.

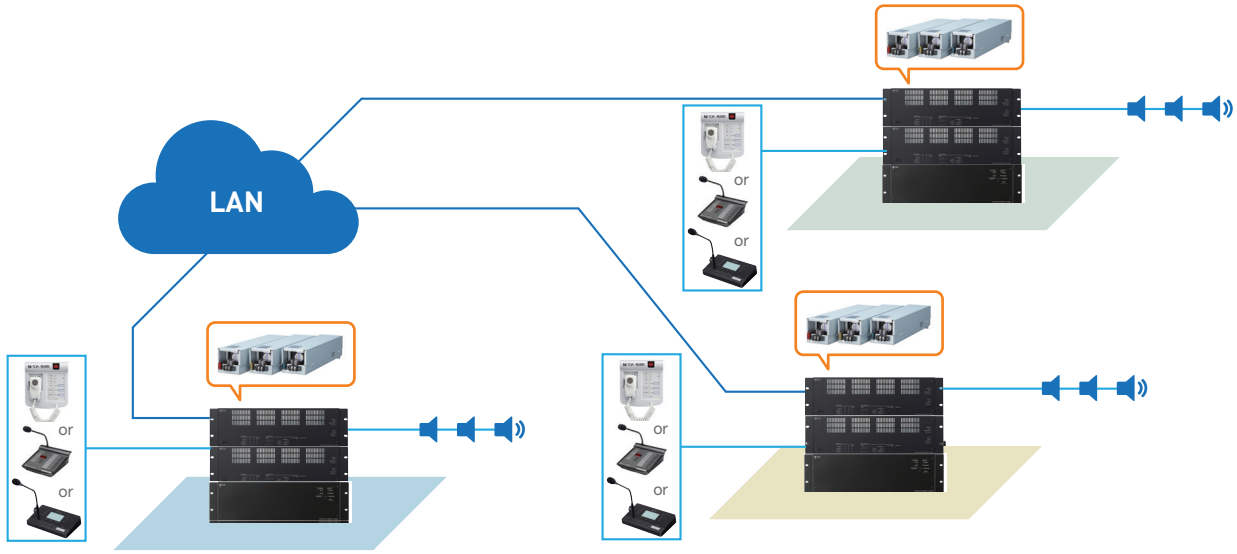
Maximum System Capacity	
Output Power	320,000 W
Speaker Zones	2,560 *1
Remote Mics	1,280

*1 When VX-3016Fs are used.



Decentralized

IP Network based, hub-less and the ring topology.



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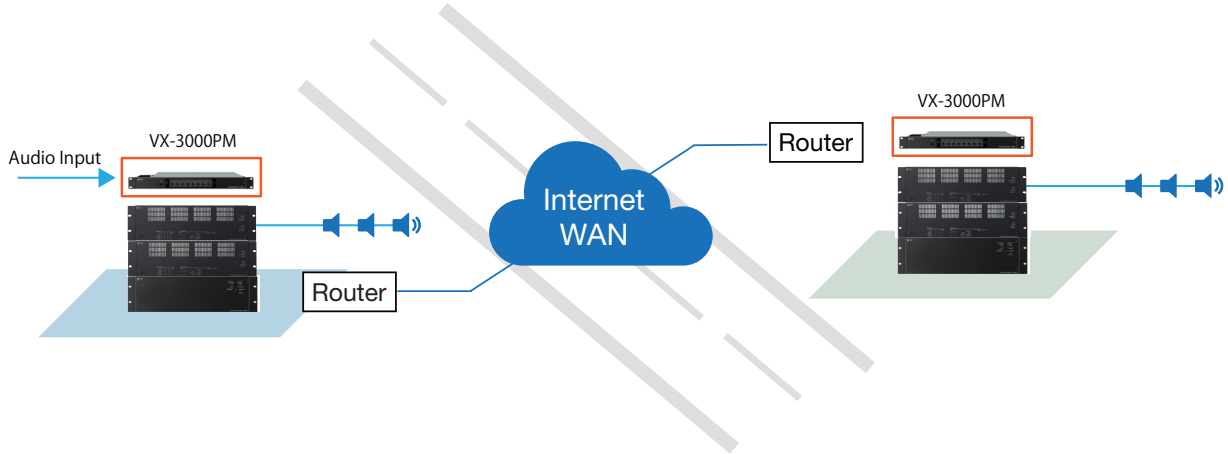
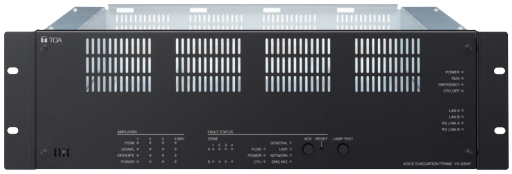
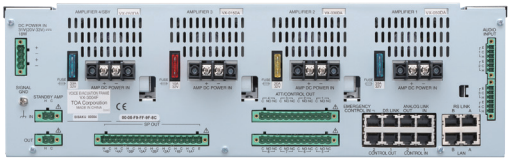
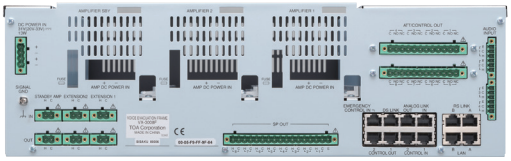




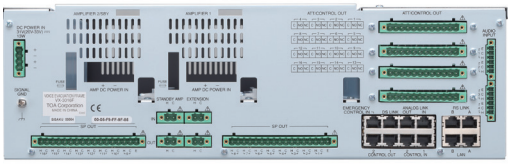
VX-3004F front



VX-3004F rear (with amplifier modules installed)



VX-3008F rear



VX-3016F rear

- Main control units incorporated with voice evacuation and public address system functionality
- VX-3004F: up to 4 amps (1-zone - 1 amp, 4 AB-zones or 3 AB zones + standby amp)
- VX-3008F: up to 3 amps (8 zones switching between 2 amps + standby amp or 8 zones freely assignable to 1 of 2 amps)
- VX-3016F: up to 2 amps (16 switched zones + standby amp or 2 x 8 switched zones)
- Operation and audio signal status indication per amplifier
- Fault status indication for each speaker line
- Input DSP: 3-point filters(PEQ/HPF/LPF/High shelving/Low shelving), feedback suppressor, voice-controlled broadcast (VOX) and compressor.
- Output DSP: 6-point filters(PEQ/HPF/LPF/High shelving/Low shelving/All pass/Notch/Horn EQ), compressor and delay
- Ambient Noise Control (ANC)

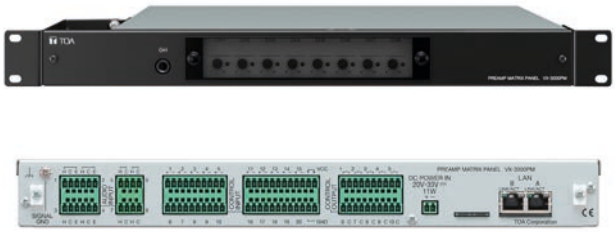
Specifications

	VX-3004F	VX-3008F	VX-3016F
Power Source	20 - 33 V DC, removable terminal block (4 pins)		
Speaker Line	4 channels (with AB LINE speaker out) 1 Earth terminal	8 channels 1 Earth terminal	16 channels 2 Earth terminals
	Max. Voltage/Current: 100 VRMS, 5 ARMS; Connector: Removable terminal block (17 pins) x 1; Fault detection system: Short circuit, Open circuit, Ground fault, Method: Impedance or End of line		
LAN A, B	Number of Connectors: 2 (LAN A, LAN B) ; Network I/F: 100BASE-TX ; Network Protocol: TCP, UDP, ARP, ICMP, RTP, IGMP, FTP, HTTP, NTP; Spanning tree Protocol: RSTP; Audio Transmission System: TOA Packet Audio(*1); Audio Encoding Method: PCM; Audio Sampling Frequency: 48 kHz, Audio Quantifying Bit number: 16 bits; Connection Device: other VX-3004F, VX-3008F, VX-3016F, NX-300 and Switching HUB, Connector: RJ45 connector ; Connection; Number of Stages of Cascade Connection: Up to 7		
RS Link A, B	Number of Connectors: 2 (RS LINK A, RS LINK B), Audio input level; 0 dB (*2); Connector: RJ45 connector		
DS Link	Connection Device: DS LINK of Power supply units; Connector: RJ45 connector		
Analog Link	Number of Connectors: 1 input, 1 output; Connection Device: VX-3004F, VX-3008F, VX-3016F; Connector: RJ45 connector		
Control Input 1,2	16 inputs, no-voltage make contact input, open voltage: 24 V DC; short-circuit current: 2 mA Fault Detection System: Short circuit, Open circuit; Method: Voltage detect; Connector: RJ45 connector		
Emergency Control IN	Input 2: Isolated voltage input, -24 to +24 V; Connector: RJ45 connector		
VOX Function	Threshold: –60 to 0 dB (1 dB steps); Hysteresis: 0 to +10 dB; Hold time: 10 ms – 10 s, Settable for each audio input		
Control Output 1,2	General outputs : 8 with CONTROL OUTPUT 1; Exclusive outputs : 3 with CONTROL OUTPUT 2; GENERAL FAULT, CPU FAULT, CPU OFF No-voltage make contact, electrical contact output, control current: 10 mA ; withstand voltage: 28 V DC; Connector: RJ45 connector		
ATT/Control Output	8 outputs, no-voltage make contact, relay contact (NC, NO, C), control current: 2 mA to 5 A; withstand voltage: 125 V AC, 40 V DC; Connector: Removable terminal block (12 pins) x 2		16 outputs, no-voltage make contact, relay contact (NC, NO, C), control current: 2 mA to 5 A; withstand voltage: 125 V AC, 40 V DV ; Connector: Removable terminal block (12 pins) x 4
DSP	Feedback suppression, Equalizer/Filter, Compressor, Delay and Ambient Noise Control (ANC)		
Audio Input 1,2,3,4	4 inputs (Line: -20 dB(*2)/ MIC: -60 dB(*2) / ANC sensor (changeable with setting software); Gain Control: volume adjustable with volume control (internal front panel) -∞ to 0 dB; Input Impedance: 47kΩ electronically-balanced; Phantom power supply: 24 V DC, can be set with setting software; Connector: Removable terminal block (6 pins x2)		
Program Timer	Weekly program method; Daily program: 50 events, 10 types; Holiday program: 50 types		
Standby Amplifier	Input: 1, Output: 1; Max. Voltage/Current: 100 VRMS, 5 ARMS; Connector: Removable terminal block (2 pins) x 2		
Module(*3)	Number of modules: 4	Number of modules: 3	Number of modules: 2
Extension Amplifier	-	Input: 2, Output: 2, Max. Voltage/Current: 100 VRMS, 5 ARMS, Connector: Removable terminal block (2 pins) x 4	Input: 1, Output: 1 ; Max. Voltage/Current: 100 VRMS, 5 ARMS ; Connector: Removable terminal block (2 pins) x 2
Dimensions (W x H x D)	483 x 132.6 x 345 mm		
Weight	7.6kg	7.9 kg	8.1 kg

(*1) TOA's unique technology which makes it possible to transmit high-quality audio signal in real time over an IP network.
(*2) 0 dB = 1 V
(*3) Module: Digital power amplifier module. Line output module

VX-3000 Series / Preamp Matrix Panel / **VX-3000PM**

With the VX-3000PM audio streaming is possible between networks, (i.e. via a router). The matrix panel comes in a 1U 19” housing for rack mounting and provides 8 additional audio inputs, 20 control inputs, and 10 control outputs. A phone jack on the front allows connecting a microphone. One unit can be used per VX-3000F frame.



Features

- Preamplifier matrix panel enabling the additional audio inputs, control inputs and control outputs to the VX-3000 system
- Equipped with 8 audio inputs with volume controls, 20 control inputs and 10 control outputs
- Unicast audio streaming functionality among VX-3000PMs allows connection through other networks
- 1 unit can be connected per VX-3000 Frame and a maximum of 40 units can be configured per system

Specifications

	VX-3000PM
Power Source	20 – 33 V DC, removable terminal block (2 pins)
Current Consumption	0.33 A at 33 V DC input, 0.35 A at 24 V DC input
LAN A, B	Number of Connectors: 2 (LAN A, LAN B) Network I/F: 100BASE-TX Network Protocol: TCP, UDP, ARP, ICMP, RTP, IGMP, HTTP Spanning Tree Protocol: RSTP Audio Transmission System: TOA Packet Audio (*1) Audio Encoding Method: PCM Audio Sampling Frequency: 48 kHz Audio Quantifying Bit Number: 16 bits Connection Device: VX-3004F, VX-3008F, VX-3016F, NX-300, VX-3000CT, VX-3000PM, Switching HUB Connector: RJ45 connector Connection Cable: Category 5 twisted pair cable (CAT5) or greater Maximum Cable distance: 100 m
Audio Input	8 inputs Input Level: Input 1 - 4: -60 dBV / -40 dBV / -20 dBV /0 dBV selectable, input impedance 600 Ω, transformer-balanced Input 5, 6: -20 dBV, input impedance 10 kΩ, unbalanced Input 7, 8: 0 dBV, input impedance 10 kΩ, unbalanced Frequency Response: -60 dBV): 200 Hz - 10 kHz, -2 dB ±3 dB -40 dBV / -20 dBV / 0dBV: 100 Hz - 15 kHz, -2 dB ±3 dB Distortion: 1% or less Signal to Noise Ratio: 60 dB or more Removable terminal block (6 pins x 2, 4 pins x 2) Only Input 1 is used in common with the front-mounted ø6.3 mm phone jack
Control Input	20 channels, no-voltage make contact input, open voltage: 30 V DC, short-circuit current: 2 -10 mA Connector: Removable terminal block (10 pins x 2, 12 pins x 2)
Control Output	Channels 1 - 5, relay (a contact), withstand voltage: 30 V DC, control current: 1 A Channels 6 - 10, open collector output (polarized), withstand voltage: 30 V DC control current 100 mA Connector: Removable terminal block (10 pins) x 2
Indicators	Signal Indicator (Green) x 8, Run (Green) x 1, LINK/ACT (Green) x 2
Volume Control	8 channels
Operation	Input level setting switch x 1, IP address setting switch x 1
Dimensions (W x H x D)	482 x 44 x 292.4 mm
Weight	3.2 kg

(*1) TOA's unique technology which makes it possible to transmit high-quality audio signal in real time over an IP network.

VX-3000 Series /Control Panel / **VX-3000CT**

With the VX-3000CT, audio control is transferred to the rack or any other place. The control panel comes in a 1U 19" housing for rack mounting and provides 9 function buttons and 8 volume controls. The buttons can freely be assigned to any PA function, for example they can be used to activate BGM or paging broadcasts. Each volume control can be assigned to any input or output according to the user's choice. This allows the user to adjust the volume of e.g. music sources or that of zones. In emergency mode the zone volumes will be overridden by the default settings to ensure a sufficient loudness as adjusted at the installation. A cover protects the volume controls against accidental changes. Up to two units can be used per VX-3000F frame.

With volume control section cover

Features

- Control panel with 9 function keys and 8 volume control knobs for easy operation
- Function keys are used for public address operation such as the activation of general broadcast
- Volume controls allow volume level adjustment of the VX-3000 Frame's audio input or audio output (assignable)
- Up to 2 units can be connected per VX-3000 frame

Specifications

	VX-3000CT
Power Source	20 – 33 V DC, removable terminal block (4 pins)
Current Consumption	0.09 A at 33 V DC input, 0.11 A at 24 V DC input
LAN A, B	Number of Connectors: 2 (LAN A, LAN B) Network I/F: 100BASE-TX Network Protocol: TCP, ARP, ICMP, HTTP Connection Device: VX-3004F, VX-3008F, VX-3016F, NX-300, VX-3000CT, VX-3000PM, Switching HUB Connector: RJ45 connector Connection Cable: Category 5 twisted pair cable (CAT5) or greater Maximum cable distance: 100 m
Panel Indicator	Power (Green) x 1, Run (Green) x 1, Link/ACT (Green) x 2, Signal (Green) x 8, Fault (Yellow) x 1, Status (Green/Yellow) x 9, Select (Green) x 9
Volume Control	8 channels
Operation	Function key x 9, Reset Key x 1, IP address setting switch x 1
Dimensions (W x H x D)	482 x 44 x 315.2 mm
Weight	3 kg

VX-3000 Series /Power Supply / **VX-2000 DS**

The VX-2000DS provides DC distribution, Power Monitoring, and battery backup capability for the VX-3000 system.

Features

- Facilitates power status monitoring via DS-Link to the VX-3000 system.
- Automatic switch to auxiliary battery power if the AC power supply is down

Specifications

	VX-2000DS
Power Source	110-120 V AC, 50/60 hz
Power Consumption	240W max
DC Power Output	6 (25 A max, each) M4 screw terminal, distance between barriers: 11 mm (0.43")t
Charging Method	Temperature compensated trickle charging
Charging Output Voltage	27.3 V ± 0.3 V (at 25 ˚C), Temperature correction coefficient: -40 mV/˚C
Battery Connection	1 pair of positive and negative terminals; Applicable cable diameter: AWG 6 – AWG 0 (AWG 1/0) (16 mm² – 50mm²) Line resistance within 4mΩ/ total
Control Connector DS LINK IN/OUT	RJ45 female connector for connecting the system and cascade connection, Shielded Twisted-pair straight cable (TIA/EIA-568A standard) Type of control signal: Battery check, AC power status, DC power status, charging circuit failure, battery failure, and communication
Dimensions (W x H x D)	482 (W) X 88.4 (H) X 377.6 (D) mm (18.98" X 3.48" X 14.87")
Weight	10.5 kg (23.15 lbs)

Specifications

	RCP-1UI Chassis
Remote ON/OFF Control	By electrical signal or dry contact: ON: short; OFF: open
DC OK Signal	Signal Status I/O
DC fail Signal	Signal Status I/O
Over Temp. Warning	Logic “High” for over temperature warning, refer to function manual
Safety Standards	Safety Standards UL60950-1, TUV EN60950-1 approved
Dimensions	Rack: 483.6 (L) x 350.8 (W) x 44 (H) mm (19.09" x 13.81" x 1.73") (19" rack frame)
	RCP-1000-24 Module
DC Voltage	24V
Rated Current	40A
Efficiency (Typ.)	87%
AC Current (Typ.)	10.5A/115VAC
Over Temp Warning	Logic "High" for over temperature warning, refer to function manual
Safety Standards	Safety Standards UL60950-1, TUV EN60950-1 approved
Dimensions	Dimension 295 (L) x 127 (W) x 41 (H) mm (11.614" x 5" x 1.614")

RCP-1UI chassis with RCP-1000-24 module

- Universal AC input / Full Range.
- Protections: short circuit / overload over voltage / over temperature.
- Built-in 5V/0.3A auxiliary power
- Protections: Short Circuit / Overload / Over voltage / Over temperature

- Low-loss modular class D amplifiers
- Modules to be mounted in the VX-3000 Frame
- Three different power levels: 150W, 300W, or 500W
- Can easily be removed or replaced by unplugging them; no need for special tools
- Dust filter, easy to clean
- 100/70/50 V output without transformer resulting in light-weight units
- Fuse easily accessible from rear

Specifications

	VX-015DA	VX-030DA	VX-050DA
Applicable Model	VX-3004F, VX-3008F, VX-3016F		
Power Source	31 V DC (operating range: 20 - 33 V DC); DC power in: M4 screw terminal, distance between barriers: 11 mm		
Amplification System	Class D		
Power Consumption	1.3 W (standby mode), 14 W (no audio input), 40 W (1/8 rated output), 190 W (rated output) at 31 V DC, output voltage selection switch: 100 V	1.3 W (standby mode), 14 W (no audio input), 65 W (1/8 rated output), 375 W (rated output) at 31 V DC, output voltage selection switch: 100 V	1.3 W (standby mode), 16 W (no audio input), 100 W (1/8 rated output), 590 W (rated output) at 31 V DC, output voltage selection switch: 100 V
Rated Output Power	150W (at 100V line) 105 W (at 70 V line) 75 W (at 50 V line) (at min. impedance & max. capacitive load) (at AC mains: 187 - 253 V)	300 W (at 100 V line) 210 W (at 70 V line) 150 W (at 50 V line) (at min. impedance & max. capacitive load) (at AC Mains: 187 - 253 V)	500 W (at 100 V line) 350 W (at 70 V line) 250 W (at 50 V line) (at min. impedance & max. capacitive load) (at AC Mains: 187 - 253 V)
Output Voltage	100 V (70 V, 50 V: selectable)		
Min. Resistive Load	67 Ω (100 V), 47 Ω (70 V), 33 Ω (50 V)	33 Ω (100 V), 23 Ω (70 V), 17 Ω (50 V)	20 Ω (100 V), 14 Ω (70 V), 10 Ω (50 V)
Max. Capacitive Load	0.5 µF		
Input	DA CONTROL LINK: Nylon connector (15 pins)		
Output	DA CONTROL LINK: Nylon connector (2 pins)		
Frequency Response	40 Hz - 20 kHz: - 5 to +1 dB(at 100 V line, 30 dB(*1) output)		
Distortion	1% or less (at 100V line, A-weighted)		
Signal to Noise Ratio	100 dB or more (at 100 V line, A-weighted)		
Dimensions (W x H x D)	82.8 x 91 x 358.2 mm		
Weight	1.3 kg		1.4kg

(*1) 0 dB = 1 V

VX-300LO Line Output Module

- Line output module to be mounted in the VX-3000 frame
- Outputs audio signals at the line level from the VX-3000 Frame to an external device

Specifications

	VX-300LO
Applicable Model	VX-3004F, VX-3008F, VX-3016F
Power Source	Supplied from the VX-3000 Frame (DA CONTROL LINK)
Current Consumption (*1)	Max. 2 mA (Current through DC POWER IN)
Input	DA CONTROL LINK: Connector (15 pins)
Audio Output (*1)	1 Channel Output signal level: 0 dB (*2) Adjustable range of the volume control: -∞ to 0 dB Output method: 10 kΩ, transformer-balanced Applicable load impedance: 2 kΩ or more Frequency Response: 40 Hz - 20 kHz ±1 dB Distortion: 1 % or less (0 dB (*2) output, 1 kHz) Signal to Noise Ratio: 60 dB or more Removable terminal block (3 pins)
Finish	Surface-treated steel plate
Dimensions (W x H x D)	76 x 39 x 33.2 mm
Weight	56 g

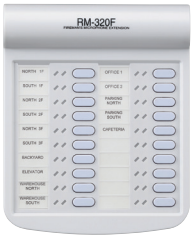
(*1) When installed in VX-3000 Frame.
(*2) 0 dB = 1 V

VX-3000 Series /Wall Mount Remote Microphone & Extension / **RM-200SF / RM-320F**

RM-200SF

Alarm Switch

Microphone



RM-320F

- Wall mount remote microphone for both general and emergency broadcast
- Possible to simultaneously broadcast to all zones or limited to selected zones only.
- VX-3000 setting software permits desired functions to be assigned to individual function keys (equipped with 2 LED indicators).
- CPU-switch for emergency broadcast to all zones even in case of a CPU error
- RM-320F: Key extension unit with 20 additional keys
- Up to 4 RM-320F Extension units can be used with each RM-200SF Remote Microphone.

Specifications

	RM-200SF	RM-320F
Power Source	24 V DC (operating range: 15 – 40 V DC), supplied from the audio input unit	-
Current Consumption	240 mA or less	180 mA max. (in terms of RM-300MF)
Distortion	1% or less	-
Frequency Response	200 Hz – 15 kHz	-
Signal-to-Noise Ratio	55 dB or more	-
Audio Output	0dB V, transformer-balanced	-
Microphone	Unidirectional dynamic microphone with talk key, AGC (ON/OFF switchable), microphone element failure detectable by using a built-in small oscillator	-
Volume Control	Microphone volume, Monitor speaker volume	-
Connection Cable	Shielded CPEV cable(each one pair of audio wire, data wire, monitor/ control wire, and power supply wire) or Shielded Category 5 twisted pair cable (CAT5-STP) or greater, M3 screw terminal	Connection to RM-200SF by dedicated cable
No. of Connectable RM -320F	Max. 4 units	-
Key Operation	Emergency key, Talk key, 3 Function keys	20 Function keys
Finish	ABS resin, bluish gray (PANTONE 538 or its equivalent)	
Dimensions (W x H x D)	200 x 215 x 95mm	175 x 215 x 70mm
Weight	1.48kg	700g
Applicable Box	Wall mounting box: YS-11A	-

RM-300X

RM-210F

- Desktop Microphone for both general and emergency broadcast
- Possible to simultaneously broadcast to all zones or limited to selected zones only.
- VX-3000 setting software permits desired functions to be assigned to individual function keys (equipped with 2 LED indicators).
- RM-210F: Key extension unit with 10 additional keys
- Up to 7 RM-210F Remote Microphone Extension units can be used with each RM-300X Remote Microphone.
- Can be mounted on the wall by using optional wall mounting bracket WB-RM200.

Specifications

	RM-300X	RM-210F
Power Source	24 V DC (operating range: 15 - 40 V DC, supplied from the voice evacuation frame) or DC input power supply connector (when the optional AD-246 power supply unit used.)	Supplied from the optional RM-300X
Current Consumption	240 mA or less	80 mA or less
Audio Output	0 dB(*1), 600 Ω, balanced	
External Microphone Input	-40 dB(*1), 2.2 kΩ, unbalanced, ø3.5 mm phone jack (2P) for electret condenser microphone, (phantom power supply:3 V DC) -20 dB(*1), 4,7 kΩ, unbalanced, ø3.5 mm phone jack (2P) (AUX Input)	
Frequency Response	100 Hz – 20 kHz	
Distortion	1 % or less	
Signal-to-noise Ratio	60 dB or more	
Microphone	Unidirectional electret condenser microphone with AGC (ON/OFF selectable)	
Chime	Built inside (PCM sound source), Monitoring possible using built-in speaker	
Level Control	Microphone sensitivity control, Monitor speaker volume control, Chime(adjustable using the software)	
Connection Cables	Main line: Shielded CPEV cable(1 pair of audio wire + 1 pair of data wire + 1 pair of monitor/control wire + 1pair of power supply wire) or Shielded Category 5 twisted pair cable(-CAT5-STP) or greater, Branch line: Shielded Category 5 twisted pair cable (CAT5-STP) or greater, RJ45 connector	
No. of Connectable RM-210F	Max. 7 units	
Operation	Function switch, Covered switch, Broadcast switch	Function key x 10
Finish	ABS resin, black	
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
Option	Remote microphone extension: RM-210F, Wall mounting bracket: WB-RM200 Electret condenser microphone: WH-4000A, YP-M101, YP-M301 etc.	Wall mounting bracket: WB-RM200

RM-200RJ Terminal Unit

- Convert the RJ45 connector into a screw terminal block
- Used to connect between a trunk cable (such as CPEV cable) and a feeder cable (such as CAT-5 or CAT-6 cable) in wiring a remote microphone
- Built-in indicator shows the voltage status of DC power cable when the remote microphone cable for the VX-3000 series system is connected.

WB-RM500 Wall Mounting Bracket

- Desktop Microphone for general broadcast
- Possible to simultaneously broadcast to all zones or limited to selected zones only.
- Group names can be displayed on the LCD screen as the broadcast destinations. In addition, visible and comprehensive icons are adopted for the broadcast status.
- Up to 80 pre-registered zones can be selected by key operation.
- Regardless of microphone announcements or not, the AUX key can control the external audio signals.
- The speech intelligibility function makes it easier to hear the microphone announcements even in noisy environments, and also allows the microphone to pick up the audio signals at an appropriate level even if speaking too close to or too far away.
- Equipped with a control output terminal, external sound equipment can be activated from this microphone.
- Equipped with a control input terminal, arbitrary broadcast can be activated.
- Can be mounted on the wall by using an optional wall mounting bracket (sold separately), with it the orientation of the microphone is changed.

Specifications

	RM-500
Power Source	24 V DC (operating range: 15 to 33 V DC, supplied from the voice evacuation frame) or DC input power supply connector (when the optional AD-246 power supply unit used). Usable DC power supply plug: 5.5 mm (0.22") outer diameter, 2.1 mm (0.08") inner diameter, 9.5 mm (0.37") long, polarized, center positive
Current Consumption	130 mA or less
Audio Output	0 dB*, balanced, RJ45 connector
AUX Input	1 channel, unbalanced, LINE/MIC (selectable with the DIP switch) LINE: –20 dB*, 10k, push-in terminal block MIC: –60 dB*, 2.2k, push-in terminal block
Control Input	1 channel, no-voltage make contact inputs, open voltage: 33 V DC, short-circuit current: 10 mA , push-in terminal block
Control Output	1 channel, open collector output, withstand voltage: 30 V DC, control current: 35 mA, push-in terminal block
Distortion	1% or less
Frequency Response	100 Hz to 20 kHz
Signal-to-noise Ratio	60 dB or more
Microphone	Unidirectional electret condenser microphone
Chime	Uses the built-in sound sources of the main system unit (one of them selectable by the main system settings)
Volume Control	Microphone volume control, AUX volume control
Connection Cable	Shielded Category 5 twisted pair LAN cable (CAT5-STP), RJ45 connector Maximum cable distance: 1200 m (3937.01 ft) (when powered by the optional AD-246 AC adaptor)
External Equipment Connection Cable	Solid copper wire: ø0.4 – ø1.1 mm (AWG 28 – 17)
Operation	Numeric key x 10, Left/right selection key x 2, F1/F2 key x 2, ALL key x 1, Clear key x 1, Talk key x 1, AUX key x 1
Indicator	LCD display: 3" (255 x 160 dots), with backlight Indicator: Talk indicator (green), Microphone indicator (green)
Operating Temperature	0 to 40 °C (32 to 104 °F)
Operating Humidity	90% RH or less (no condensation)
Finish	ABS resin, black, paint
Dimensions (W x H x D)	224 (w) x 47.2 (h) x 136 (d) mm (8.82" x 1.86" x 5.35") (excluding microphone)
Weight	620 g (1.37 lb)
Accessories	Zip tie 2
Option	Wall mounting bracket: WB-RM500, AC adapter: AD-246¨

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