VM-3000 Series

Integrated Voice Evacuation System

The worlds first Voice Evacuation System complying with both American and Canadian standards UL 2572 and CAN/ULC-S576 listings.

Voice Alarm Emergency Evacuation System with Audio PA, Paging and BGM

High quality, compact public address system for small and medium venues featuring safety enhancing emergency evacuation functions.

TOA, which boasts 50 years' experience in the development of emergency broadcast systems worldwide, now introduces a system that fully integrates emergency and general-purpose broadcast functions. The TOA VM-3000 Series is a combined emergency voice alarm system and public address system that was developed as part of the Venas Integrated Voice Evacuation System family. TOA has developed and will continue to develop emergency broadcast systems, always ensuring that its products comply with the voice evacuation safety standards, established by the countries where those products are used.

The VM-3000 Series is ideal for small and medium-sized applications. It incorporates such emergency functions as continuous speaker line monitoring and a built-in voice alarm. This easy-to-install system also offers PA broadcasting, paging and BGM functions that ensure consistently high intelligibility.

The VM-3000 Series is digitally audio processed and controlled, and may be set up and operated directly by using the controls and LCD display on the front panel. A dedicated PC software configuration capability is also provided for establishing 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.

Already bearing the European EN 54-16 certification, the VM-3000 and its associated products, including power supplies now carries the UL 2572 and CAN/ULC-S576 certification, which complies with new NFPA 72 code governing Mass Notification Systems.

SYSTEM FEATURES
- Max. 13 MIC/LINE Inputs (Max system comprises 1x VM-3240VA: 4 MIC/LINE Inputs, 9x VM-3240E: 9 Local Inputs)
- 2 BGM inputs - VM-3240VA
- 1 Mic/Line input - VM-3240E
- Up to a combination of 4 Fireman's and remote Microphones *(max. 2 Fireman's Microphones)*
- Max. 60 assignable speaker zone outputs (6 outputs per amplifier)
- BGM 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
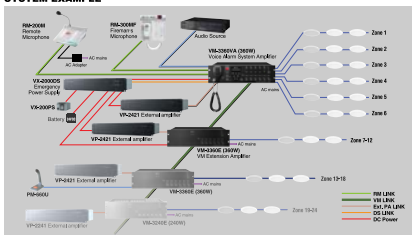
Emergency Functions
- Continuous speaker line monitoring without interruption of BGM distribution or paging announcements
- Complete fault detection and indication
- Off-site log check capability via LAN
- Built-in and remote Fireman's Microphones
- Built-in voice alarm message
- 2-Phased voice alarm 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), VP-2241 **(240W x 1) Power Amplifier**

SYSTEM EXAMPLE

SPECIFICATIONS	VM-3240VA AMQ Voice Alarm System Amplifier	VM-3240E AMQ VM Extention Amplifier
Power Source	120 V AC, 60 Hz	
Power Consumption	690 VA (at rated output), 260 W (According to UL60065), 63 W (at no signal)	
Rated Output	240 W, 21 Ω (according to UL60065); 200 W, 25 Ω (according to UL2572); 200 W, 25 Ω (according to CAN/ULC-S576 with separate UPS); 100 W, 50 Ω (according to CAN/ULC-S576); (All total of Speaker output 1 – 6 and Direct Output)	
Frequency Response	50 Hz – 20 kHz, ±3 dB (at 1/3 rated output), 800 Hz – 2.8 kHz (according to UL2572); 400 Hz – 4 kHz (according to CAN/ULC-S576)	
Distortion	Under 0.7% (at rated output, 1 kHz)	
S/N Ratio	Over 85 dB	
Audio Input/Output Characteristic	Sampling frequency 48 kHz A/D D/A CONVERTER: 24 BIT	--
Input	Input 1 – 3:–50 dB* (MIC) / –10 dB* (LINE) (changeable), 600Ω, electronically balanced, combined XLR connector (female) / phone jack Input 4:–50 dB* (MIC) / –10 dB* (LINE) (changeable), 600Ω, electronically balanced, removable terminal block (14 pins) BGM 1 – 2:–10 dB*, 10 kΩ, unbalanced, RCA pin jack External AMP Input: 70 V line, removable terminal block (14 pins)	External amplifier Input: 70 V line, removable terminal block (14 pins) Local Input: –50 dB* (MIC) / –10 dB* (LINE) (changeable), 600 Ω, electronically balanced, removable terminal block (14 pins)
Output	Speaker output 1 – 2: Max. (240 W) per output Speaker output 3 – 6: Max. (100 W) per output Speaker output 1 – 6: Total within rated output, removable terminal block (14 pins) Allowable minimum load: 245 Ω (20 W) at 70 V line for speaker line failure detection Direct output: Direct output from internal or external amplifier, removable terminal block (16 pins) Recording output BGM/Paging: 0 dB*, 10 kΩ, unbalanced, RCA pin jack Ground faults detection: 0 Ω Wire to wire faults detection: 0 Ω	Speaker output 1 – 2: Max. (240 W) per output Speaker output 3 – 6: Max. (100 W) per output Speaker output 2 – 6: Total within rated output, removable terminal block (14 pins) Allowable minimum load: 245 Ω (20 W) at 70 V line for speaker line failure detection Direct output: Direct output from internal or external amplifier, removable terminal block (16 pins)
RM Link	Input 1 – 2: Connecting the RM-300MF/200M Remote Microphone, RJ45 female connector Maximum distance: Total 800 m 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 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, RJ45 female connector Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)	Input: Connecting the VM-3240VA RJ45 female connector Output: Connecting the VM-3240E RJ45 female connector Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
General Control	Input 1 – 8: No-Voltage make contact input, open voltage: 24 V DC, short-circuit current: 2 mA or less, removable terminal block (14 pins) Output 1 – 8: Isolated open collector output, withstand voltage: 30 V DC, operating current: 10 mA or less, removable terminal block (14 pins)	
Emergency Control	Input 1 – 5: No-Voltage make contact input, open voltage: 24 V DC, short-circuit current: 2 mA or less, RJ45 female connector Input 6: Isolated voltage input, Inactive: –24 V±20%, Active: +24 V±20%, RJ45 female connector Status out: Relay contact output, withstand voltage: 40 V DC, operating current: 2 – 300 mA, RJ45 female connector	
Power Input/Output	Power in: Connecting the VX-2000DS only (operating range: 20 – 40 V DC); PS out: 28 V DC / 18 A; M4 screw terminal, distance between barriers: 11 mm	
22 V DC Output	22 V DC Special Application, Maximum feeding current 0.3 A (for RM-200M only)	
DS Link	Connecting the VX-2000DS, RJ45 female connector; Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)	
Finish	Panel: Aluminum, hair-line, black; Case: Surface-treated steel plate, black, paint	
Operating Temperature	0 to 49°C (32 to 120°F)	
Dimensions	482 (W) × 132.6 (H) × 431.2 (D)mm (18.98" x 5.22" x 16.98")	482 (W) × 132.6 (H) × 407 (D)mm (18.98" x 5.22" x 16.02")
Weight	16.5kg (36.38 lbs)	
Accessories	AC power cord (2m) × 1, Emergency microphone × 1, Plastic foot × 4, Plastic foot mounting screw × 4, Removable terminal plug (14 pins) × 3, Removable terminal plug (16 pins) × 1, Link cable (3m) × 2, Setting software (CD) × 1	AC power cord (2m) × 1, Link cable (3m) × 2, Plastic foot × 4, Plastic foot mounting screw × 4, Removable terminal plug (14 pins) × 3, Removable terminal plug (16 pins) × 1
Option	Input transformer: IT-450	--
UL Certified	UL 2572 and CAN/ULC-S576	

SPECIFICATIONS	RM-300MF: Fireman's Microphone	RM-320F: Fireman's Microphone Extension
Power Source	24V DC (operating range: 15 – 40V DC, supplied from the VM-3000 system or VX-2000DS.)	--
Current Consumption	120mA (RM-300MF), 660mA (with 3 RM-320F connected)	180mA max. (RM-320F)
Frequency Response	200 – 15,000 Hz	--
Distortion	Under 1%	--
S/N Ratio	Over 55 dB	--
Microphone	Unidirectional dynamic microphone with talk key, compressor (on/off switchable)	--
Volume Control	Microphone volume control / Buzzer volume control	--
Connection Cable	Main line: shielded CPEV cable (each one pair of Audio line, Data line, Power supply line) or Category 5 Shielded Twisted-Pair cable for LAN (CAT5-STP), M3 screw terminal, 800m system max.	Connection to RM-300MF by dedicated cable
No. of Connectable RM-320F	Max 3 units	--
No. of Function Keys	--	20
Operation	Emergency key, Evacuate key, Alert key, Emergency reset key, CPU switch, Reset switch	--
Operating Temperature	–5°C to 45°C (23°F to 113°F)	--
Operating Humidity	5% to 95% RH (no condensation)	--
Finish	ABS resin, blueish gray	ABS resin, blueish gray
Dimensions	200(W) x 215(H) x 82.5(D) mm (7.87" x 8.46" x 3.25")	175(W) x 215(H) x 70(D) mm (6.89" x 8.46" x 2.76")
Weight	1.1kg (2.43 lbs) (with wall mounting bracket unit)	700g (1.54 lb)
Accessories	Wall mounting bracket unit x 1, Wall mounting screw x 2,	Wall mounting bracket x 1, Wall mounting screw x 2

RM-300MF   RM-320F   RM-200M   RM-210

* 0 db = 1V; *2 Use the AC adapter AS-246 or equivalent.

SPECIFICATIONS	RM-200M SQ: Remote Microphone	RM-210: Remote Microphone Extension
Power Source	22 V DC Power input jack: Non-polarity type Usable power input plug: Outer diameter ø5.5 mm, inner diameter ø2.1 mm, length 9.5 mm	--
Current Consumption	Under 100mA	20mA max. (in terms of RM-200M's DC power input)
Audio Output	0dB*: 600Ω, balanced	--
Frequency Response	100 – 20 kHz	--
Distortion	Under 1%	--
S/N Ratio	Over 60 dB	--
Microphone	Unidirectional electret condenser microphone	--
Volume Control	Microphone volume control	--
Connection and Cable Connector	Category 5 Shielded Twisted-Pair cable, RJ45 connector	Connection to RM-200M by dedicated cable
Function Keys	Number of keys: 10 Function: "Broadcast zone selector" or "Automatic general broadcast Announcement Start" (Either function is assigned to individual keys by the dedicated software.)	10
Finish	ABS resin, blueish gray (PANTONE 538 or equivalent)	ABS resin, blueish gray
Dimensions	190(W) x 76.5(H) x 215(D) mm (7.48" x 3.0" x 8.5") (Gooseneck microphone excluded)	110(W) x 76.5(H) x 215(D) (4.3" x 3.0" x 8.5") mm
Weight	750g (1.6 lbs)	350g (0.77 lbs)
Accessories	Link cable (3 m) x 1	Extension cable x 1, Linkage bracket A x 2, Linkage bracket B x 1, Screw for linkage bracket x 12
Option	Wall mounting bracket: WB-RM200	Wall mounting bracket: WB-RM200
UL Certified	UL 2572 and CAN/ULC-S576	--

SYSTEM EQUIPMENT

VP-2241 (240W x 1)
Power Amplifier
Power amplifier uses the VP-200VX Power Input Module per channel

VP-200VX
Power Amplifier Input Module
power Amplifier Input module designed to be used in conjuction with the VP-2241 power amplifier.

VX-2000DS AMQ
Emergency Power Supply
The VX-2000DS Emergency Power Supply Unit supplies the DC power to VP-2241 amplifier and the VM-3000 system by connecting the VM-3240VA/E.

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