TOA

9000M2 Series

Modular Digital Matrix Mixer and Mixer/Amplifiers

Unparalleled DSP mixer ideal for multi-zone paging, music distribution and room-combining applications.

The 9000 Series Modular Digital Matrix Mixer and Mixer/Amplifiers redefine the conventional mixer/amplifier category by combining a modular matrix mixer, digital signal processor and amplifiers in a compact, two rack space package. The versatile series is ideal for multi-zone paging, music distribution and room-combining applications.

The series allows for easily configured, custom systems with up to eight mic/line inputs and eight outputs. Each 9000 Series chassis has two output channels with built-in DSP, including ten band parametric EQ, compressor, delay and more. Input and output modules include additional DSP.

An integrated operating mode provides powerful functionality for both simple mixing and complex multi-zone paging applications. Features include telephone zone paging, automatic microphone mixing and ambient noise control.

Features

- Combination of Matrix and Mixer Mode
- 8 slots for modules
- 4 priorities selectable
- 2 DSP output channels included
- 10-band parametric equalizer
- Ducker-function (priority)

Applications

- Restaurants & bars
- Hotels
- Conference & board rooms
- Auditoriums
- Offices
- Museums
- Fitness clubs
- Theme parks
- Houses of worship

M-9000M2 Digital Mixer

Features:

- Flexible modular design - up to 8 mic/line inputs and 8 outputs
- Any combination of inputs may be routed to any combination of outputs
- Detailed GUI software screens make even complex settings intuitive and easy to understand
- Use up to 16 dedicated RS-485 wall-mount remote controls, or control from 3rd party systems using RS-232
- 32 scene memories and 32 paging memories
- Accepts 9000 and 900 series modules (9000 modules are dual input and include DSP, except for the ZP-001T)
- 2 built in line level outputs on frame
- Requires at least one input module

Specifications

	M-9000M2
Power Source	120 V AC, 60 Hz
Power Consumption	40W
Audio Input	Max. 8 channels, modular construction (modules optional)
Audio Output	Preamplifier output 1, 2: 0 dB, 600 Ω, balanced, removable terminal block (3 pins)
Module Slot	Analog input (slot 1 - 8): -10 dB, 10 k Ω, unbalanced; Digital input (slot 1 - 4): 24 bit/48 kHz; MIX output (slot 1 - 8): -14 dB, 330 Ω (CH 1 prefader output), unbalanced; Digital output (slot 5 - 7): 24 bit/48 kHz; Power supply (slot 1 - 8): +24 V, -24 V, +6 V DC
Digital Audio Signal Reference Level	-20 dBFS
Power Bandwidth	20 - 20,000 Hz, 0.008% THD
Frequency Response	20 - 20,000 Hz, +1, -3 dB
Total Harmonic Distortion	0.008% (at 22 kHz LPF, 1 kHz, +10 dB output)
S/N Ratio	At Input short, 20 - 20,000 Hz, set to ALL FLAT or OFF setting; Output volume min.: 90 dB; Output volume max.: 61 dB (Input 1 volume: 0 dB, Other Inputs: OFF)
Cross Talk	Over 64 dB (at 20 kHz)
Tone Control	Bass: ±12 dB (at 100 Hz), Treble: ±12 dB (at 10 kHz)
Parametric Equalizer	**10 bands, Freq: 20 - 20,000 Hz, 31 points, various range: ± 12 dB, Q: 0.3 - 5**
High-pass Filter	-12 dB/oct, Variable frequency range: 20 - 20 kHz, 31 points
Low-pass Filter	
Compressor	Depth: 1 - 5
Delay	0 - 40 ms (1 ms steps), maximum 40 ms (CH 1 + CH 2) (mixer mode only)
Scene/Event Memory	32
Auxiliary Function	Key lock function
Control Input/Output	RS-232C, D-sub connector (9P, female); Control input: 4 inputs, no-voltage make contact input, open voltage: 3.3 V DC, short-circuit current: Under 1 mA, removable terminal block (14 pin); Control output: 4 outputs, open collector output, with stand voltage: 27 V DC, control current: 50 mA, removable terminal block (14 pin); Remote volume: 2 channels, connect a 10 kΩ/linear taper variable resistor (AT-10K) or input DC voltage of 0 to +10 V, removable terminal block (14 pin)
Operating Temperature	-10°C to +40°C / 14°F to 104°F
Operating Humidity	35% to 80% RH (no condensation)
Finish	Panel: Aluminum, hair-line, black; Case: Surface-treated steel plate, black, paint
Dimensions	16.54" (W) x 4.24" (H) x 13.9" (D) / 420 (W) × 107.6 (H) × 353 (D) mm
Weight	13.23lbs / 6kg
Included Accessories	Power cord (6.56ft [2m]) x 1, Rack mounting bracket x 2, Bracket mounting screw x 4, Blank panel x 7, Blank panel mounting screw x 14, Removable terminal plug (3 pin) x 2, Removable terminal plug (14 pin) x 1 , CD x 1

A-9000 Series Digital Matrix Mixer/Amplifier

The TOA A-9000M2 Series Digital Matrix Mixer/Amplifier redefines the conventional mixer/amplifier by combining a modular frame, matrix mixer, digital signal processor (DSP) and amplification in a compact, two rack space package. The A-9000M2 series is ideal for multi-zone paging, music distribution and room-combining applications. The A-9000M2 Series allows for easy configuration of custom systems with up to eight discrete mic/line inputs and eight discrete outputs. Each A-9000M2 Series chassis has two output channels (amplified or line level depending on model) with built-in DSP, including ten band parametric EQ, compressor, and delay. Additional DSP is provided by adding input output cards as required. The A-9000M2 system provides powerful tools for both simple mixing and complex multi-zone paging applications. Input modules include SIP-based multi-zone paging, analog (DTMF) telephone zone paging, and ambient noise control. Dual-channel output modules are available (up to 3 per frame). Contact closure interface and RS-485 control interface cards (for TOA ZM series remote controls) are also available.

Specifications

	A-9060DHM2	A-9120DHM2
Power Source	120 V AC, 60 Hz	
Power Consumption	150 W	250 W
Audio Input	Max. 8 channels, modular construction (modules optional); Power amplifier input 1, 2: 0 dBV, 10k Ω, RCA pin jack	
Audio Output	Preamplifier output 1, 2: 0dBV, 300Ω, unbalanced, RCA pin jack	
	Speaker output 1, 2: 60W, 70.7V line, 83Ω x 2, BTL output, removable terminal block (4 pins)	Speaker output 1, 2: 120W, 70.7V line, 41Ω x 2, BTL output, removable terminal block (4 pins)
Module Slot	Analog input (slot 1 - 8): -10 dB, 10 kΩ, unbalanced; Digital input (slot 1 - 4): 24 bit/48 kHz; MIX output (slot 1 - 8): -14 dB, 330Ω (CH 1 prefader output), unbalanced; Digital output (slot 5 - 7): 24 bit/48 kHz; Power supply (slot 1 - 8): +24 V, -24V, +6V DC	
Digital Audio Signal Reference Level	-20 dBFS	
Power Bandwidth	20 - 20,000 Hz, 0.008% THD	
Frequency Response	Power amplifier section: 20 - 20,000 Hz, +0, -1 dB; Analog input module to speaker output: 20 - 20,000 Hz, +1, -3 dB	
Total Harmonic Distortion	Power amplifier section: 0.0008% (22 kHz LPF, 1 kHz, rated power); Analog input module to speaker output: 0.008% (22 kHz LPF, 1 kHz rated power)	
S/N Ratio	At input short, 20 - 20,000 Hz, ALL FLAT or OFF setting; Output volume min.: 90dB (preamplifier output); Output volume max.: 61dB (preamplifier output, input 1 volume: 0 dB, other inputs: OFF); Power amplifier section: 110dB	
Cross Talk	Over 64 dB (at 20 kHz)	
Tone Control	Bass: ±12 dB (at 100 Hz) Treble: ±12 dB (at 10 kHz)	
Parametric Equalizer	10 bands, Freq: 20 - 20,000 Hz, 31 points, various range: ± 12 dB, Q: 0.3 - 5	
High-pass Filter	-12 dB/oct, variable frequency range: 20 Hz - 20 kHz, 31 points	
Low-pass Filter		
Compressor	Depth: 1 - 5	
Delay	0 - 40 ms (1 ms steps), maximum 40 ms (CH1 + CH2) (Mixer mode only)	
Scene/Event Memory	32	
Auxiliary Function	Key lock function	
Control Input/Output	RS-232C; D-sub connector (9P, female); Control input: 4 input, no-voltage make contact input, open voltage: 3.3V DC, short-circuit current: Under 1 mA, removable terminal block (14 pins); Control output: 4 outputs, open collector output, withstand voltage: 27V DC, control current: 50 mA, removable terminal block (14 pins); Remote volume: 2 channels, connect a 10k Ω/linear taper variable register or input the DC voltage of 0 to +10 V, removable terminal block (14 pins)	
Operating Temperature	-10°C to +40°C (14°F to 104°F)	
Operating Humidity	35% to 80% RH (no condensation)	
Finish	Panel: Aluminum, hair-line, black; Case: Surface-treated steel plate, black paint	
Dimensions	16.54" (W) x 4.24" (H) x 15.55" (D) / 420 (W) x 107.6 (H) x 395 (D) mm	
Weight	19.84lbs (9kg)	24.25lbs (11kg)
Accessory	Power cord (2 m (6.56ft)) x 1, Rack mounting bracket x 2, Bracket mounting screw x 4, Blank panel x 7, Blank panel mounting screw x 14, Removable terminal plug (4 pins) x 1, CD x 1, Removable terminal plug (14 pins) x 1	

A-9000 Series Digital Matrix Mixer/Amplifier

- Flexible modular design - up to 8 mic/line inputs and 8 total outputs
- Intuitive GUI software
- RS-232 control for 3rd party control systems
- EQ presets for 30 TOA loudspeakers included
- Accepts TOA ZM series remote controls (RC-001T may be required)
- 32 scene memories and 32 paging memories
- Up to 12 filters plus compressor available for each input and output channel

Specifications

	A-9060SM2	A-9120SM2	A-9240SHM2
Power Source	120 V AC, 60 Hz		
Power Consumption	100W	150W	250W
Audio Input	**Max. 8 channels, modular construction (modules optional); Power amplifier input 1, 2: 0 dBV, 10k Ω, RCA pin jack**		
Audio Output	Preamplifier output 1: 0 dB, 300 Ω, unbalanced, RCA pin jack Preamplifier output 2: 0 dB, 600 Ω, unbalanced, removable terminal block (3 pins)		
	Removable terminal block (7 pins); Direct: 60W, 4Ω, unbalanced, Transformer: 60W, 8Ω 25V and 70V, balanced	Speaker output: Removable terminal block (7 pins); Direct: 120 W, 4Ω, unbalanced; Transformer: 120 W, 8Ω 25V & 70V, balanced	Speaker output: 240 W (70 V) removable terminal block (4 pins)
Module Slot	Analog input (slot 1 - 8): -10 dB, 10 k Ω, unbalanced; Digital input (slot 1 - 4): 24 bit/48 kHz; MIX output (slot 1 - 8): -14 dB, 330 Ω (CH 1 prefader output), unbalanced; Digital output (slot 5 - 7): 24 bit/48 kHz; Power supply (slot 1 - 8): +24 V, -24 V, +6 V DC		
Digital Audio Signal Reference Level	-20 dBFS		
Power Bandwidth	(D): 20 - 20,000 Hz, 0.02% THD (T): 50 - 20,000 Hz, 0.5% THD		20 - 20,000 Hz, 0.008% THD
Frequency Response	Power amplifier section: 20 - 20,000 Hz, +0, -1 dB Analog input module to speaker output: 20 - 20,000 Hz, +1, -3 dB		
Total Harmonic Distortion	Power amplifier section: 0.008% (22 kHz LPF, 1 kHz, rated power) Analog input module to speaker output: 0.008% (22 kHz LPF, 1 kHz, rated power)		
S/N Ratio	At Input short, 20 - 20,000 Hz, set to ALL FLAT or OFF setting; Output volume min.: 90 dB (preamplifier output); Output volume max.: 61 dB (preamplifier output, input 1 volume: 0 dB, other inputs: OFF); Power amplifier section: 110 dB		
Cross Talk	64 dB or more (at 20 kHz)		
Tone Control	Bass: ±12 dB (at 100 Hz), Treble: ±12 dB (at 10 kHz)		
Parametric Equalizer	**10 bands, Freq: 20 - 20,000 Hz, 31 points, various range: ± 12 dB, Q: 0.3 - 5**		
High-pass Filter	-12 dB/oct, Variable frequency range: 20 - 20 kHz, 31 points		
Low-pass Filter			
Compressor	Depth: 1 - 5		
Delay	0 - 40 ms (1 ms steps), maximum 40 ms per output		
Scene/Event Memory	32		
Auxiliary Function	Key lock function		
Control Input/Output	RS-232C, D-sub connector (9P, female); Control input: 4 inputs, no-voltage make contact input, open voltage: 3.3 V DC, short-circuit current: Under 1 mA, removable terminal block (14 pins); Control output: 4 outputs, open collector output, with stand voltage: 27 V DC, control current: 50 mA, removable terminal block (14 pins); Remote volume: 2 channels, connect a 10 kΩ/linear taper variable resistor or input DC voltage of 0 to +10 V, removable terminal block (14 pins)		
Operating Temperature	-10°C to +40°C (14°F to 104°F)		
Operating Humidity	35% to 80% RH (no condensation)		
Finish	Panel: Aluminum, hair-line, black; Case: Surface-treated steel plate, black, paint		
Dimensions	16.54" (W) x 4.24" (H) x 13.98" (D) / 420 (W) × 107.6 (H) × 355 (D) mm		16.54" (W) x 4.24" (H) x 15.55" (D) 420 (W) × 107.6 (H) × 395 (D) mm
Weight	**24.25lbs (11kg)**	28.66lbs (13kg)	24.25lbs (11kg)
Accessory	Power cord **(2 m / 6.56ft)** x 1, Rack mounting bracket x 2, Bracket mounting screw x 4, Blank panel x 7, Blank panel mounting screw x 14, Removable terminal plug (3 pins) x 1, Removable terminal plug (4 pins) x 1, Removable terminal plug (14 pins) x 1 , CD x 1		

P-9000 Series Power Amplifiers

Features

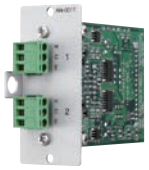
- 2-Channel Power Amplifiers with 70.7V outputs
- Power Amplifier models feature flexible output power allowing up to 50% power from one amplifier channel to be allocated to the second amplifier channel
- Channel 1 & 2 inputs balanced with selectable input sensitivity: 0dB or -20dB
- Channel 1 input may be routed to both channels
- 2 RU Rack Mounting hardware included
- Front panel LED indicators for: Protect, Peak, Signal and Power

Specifications *0 db

	P-9060DH	P-9120DH
Output Power	2x 60W @ 70.7V	2x 120W @ 70.7V
Input	CH 1, CH 2 input: –20 dB* or 0 dB* (switchable), 10 kΩ, electronically-balanced, removable terminal block (3 pins), CH 1 mode ON/OFF switch (ON: CH 1 to All ch, OFF: Each ch)	
Power Bandwidth	20 – 20,000 Hz, 0.08% T.H.D.	
Frequency Response	20 – 20,000 Hz (–3 dB, +1 dB)	
Total Harmonic Distortion	0.008% (22 kHz LPF, 1 kHz, rated output, input level selector switch in 0 dB* position)	
S/N Ratio	At Input short, 20 – 20,000 Hz, Input level selector switch in 0 dB* position Output volume min.: 105 dB, Output volume max.: 97 dB	
Function	Output disconnected for approx. 5 s after switching power on	
LED Indicator	Power (blue) x 1, Protect (red) x 2, Peak (red) x 2, Signal (green) x 2	
Ventilation System	Forced air cooling (fan speed: variable with temperature)	
Power Source	120 V AC, 60 Hz	
Power Consumption	225W (rated output), 106W (UL60065)	404W (rated output), 208W (UL60065)
OperatingTemperature	14° to 104° F (-10° to 40° C)	
Operating Humidity	35% to 80% RH (no condensation)	
Finish	Panel: Aluminum, hair-line, black; Case: Surface-treated steel plate, black paint	
Dimensions (W x H x D)	16.54" x 4.24" x 15.98"	
Weight (without modules)	18.08 lbs (8.2 kg)	22.05 lbs (10kg)

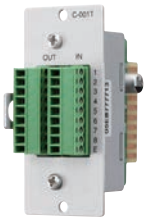
9000M2 Series Modules

AN-001T
Ambient Noise Controller Module
- Automatically adjusts output gain to compensate for changes in ambient noise level
- Each input can be assigned to control a specific output
- 24VDC phantom power for condenser mics
- 14 preset gain ratios
- Use with model AN-9001 sensing microphone (not included)
- Maximum two per chassis



SP-11NPS
SIP Module
- Allows zone paging from SIP phone systems
- Onboard browser provides easy set up from a PC
- Five dry contact outputs can be assigned to control contact inputs on the 9000 to route calls by zone
- Priority function is available

C-001T
Input/Output Control Module
- Eight assignable control inputs for activating event volume, up/down, mute, power on/off, emergency mute or synch on/off
- Eight assignable control outputs for activating external relays
- Removable terminal block
- Maximum one per chassis



RC-001TPS
Control Module
- Supports up to 8 ZM Series remote control panels per port (2 ports per card)
- Bi-directional RS-485 communication provides control and status feedback for each remote function
- May be used in combination with C-001T
- Supports ZM-9011, ZM-9012, ZM-9013, ZM-9014 remote controls
- AD-246 - AC adapter supplied (qty 1 supplied additional AD-246 required for 2nd port)

D-001T
Dual Mic/Line Input Module with DSP
- Two balanced Mic / Line inputs
- Digital signal processing (10-Band Parametric EQ, Bass/ Treble, Loudness, High and Low Pass Filters, Compressor)
- Adjustable sensitivity (-60 to -10 dBV)
- Phantom power (24 VDC)
- Maximum four per chassis

T-001T
Dual Line Output Expansion Module with DSP
- Two balanced line level outputs
- Digital signal processing (10-Band Parametric EQ, Bass/ Treble, Loudness, High and Low Pass Filters, Compressor, TOA speaker EQ presets)
- Maximum three per chassis

D-001R
Dual Line Input with DSP
- Two RCA phono inputs per channel provides stereo summing
- Digital signal processing (10-Band Parametric EQ, Bass/ Treble, Loudness, High and Low Pass Filters, Compressor)

ZP-001T
Telephone Zone Paging Module
- Analog telephone paging to up to eight zones
- Requires DTMF
- Dial up to eight output zones in one operation
- Analog extension or page port compatible
- Page port operation requires contact closure activation
- RJ-11 telephone jack and removable terminal blocks
- Maximum one per chassis

NM-01
Noise Generator
- Generates band-limited pink noise for use in sound masking applications
- In/Out processor loop for external EQ
- Uses 1 9000 Series dual input slot

9000M2 Series Accessories

AN-9001
Ambient Noise Sensing Microphone
- Ceiling or wall-mount condenser microphone
- Fits one gang electrical box
- Use with AN-001T module or DP-L2 processor

ZM-9011
Assignable Remote Button Panel
- Fits in a standard 1-gang electrical box
- Four assignable buttons each with LED status indicator
- Controls Xpoint settings (on/off, select), paging activation, scene and relay activation
- Supplied matching decor plate
- Requires RC-001T

SS-9001PS
4-Zone Speaker Selector
- Switch up to four speaker lines on one amplifier output
- Two speaker amplifier inputs provide uninterrupted BGM for unpaged zones
- Works with built in 9000M2 I/O control output, optional C-001T module or Q-RM9012PS
- Wall-mount bracket included
- Supplied with AD-246 AC Adapter

ZM-9012
Assignable Volume Controller
- Fits standard 1-gang electrical box
- Multi-segment LED indicator provides visual volume level status
- Rotary encoder can be assigned to control any input or output volume
- Multiple input or outputs may be “ganged” for master volume control
- Supplied matching decor plate
- Requires RC-001T

ZM-9001
Remote Panel
- Six buttons to activate preset selection or volume up/down
- Wiring: one pair to chassis remote volume terminals
- Max. loop resistance: 100 ohms (3000 ft. 22AWG)
- Fits one gang electrical box
- Maximum one ZM-9001/ZM-9002/ZM-90003 per remote volume terminal (2 terminals per chassis)

ZM-9013
Assignable Remote Button Panel
- Fits in a standard 2-gang electrical box
- Eight assignable buttons each with LED status indicator
- Controls Xpoint settings (on/off, select), paging activation, scene and relay activation
- Supplied matching decor plate
- Requires RC-001T

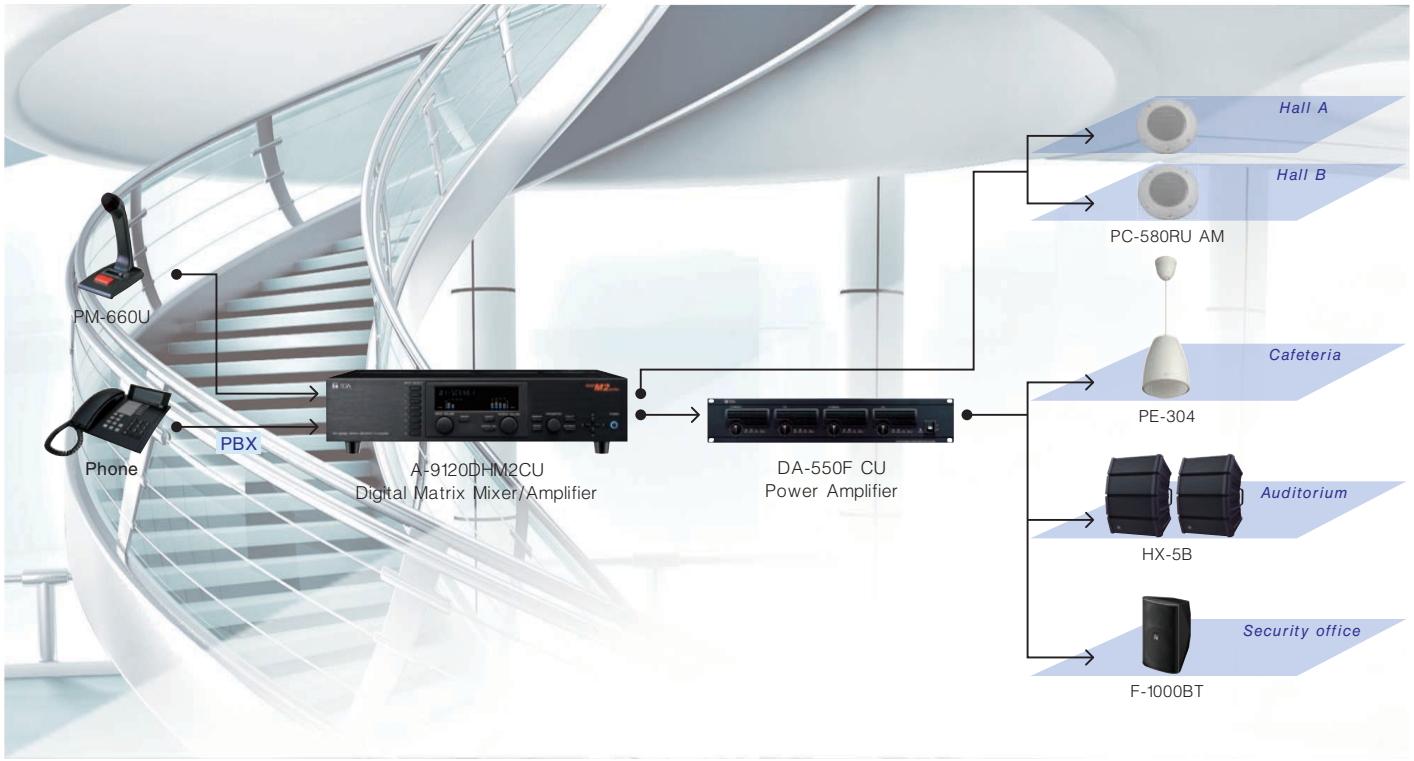
ZM-9002
Remote Panel
- Volume control knob
- Wiring: one pair to chassis remote volume terminals
- Max. loop resistance: 100 ohms (3000 ft. 22AWG)
- Four push buttons to activate preset selection or volume up/down
- Fits one gang electrical box
- Maximum one ZM-9001/ZM-9002/ZM-90003 per remote volume terminal (2 terminals per chassis)

ZM-9014
Assignable Remote Button Panel with Volume Control
- Fits in a standard 2-gang electrical box
- Four assignable buttons each with LED status indicator
- Controls Xpoint settings (on/off, select), paging activation, scene and relay activation
- Assignable ID rotary adjustment on box
- Supplied matching decor plate
- Requires RC-001T

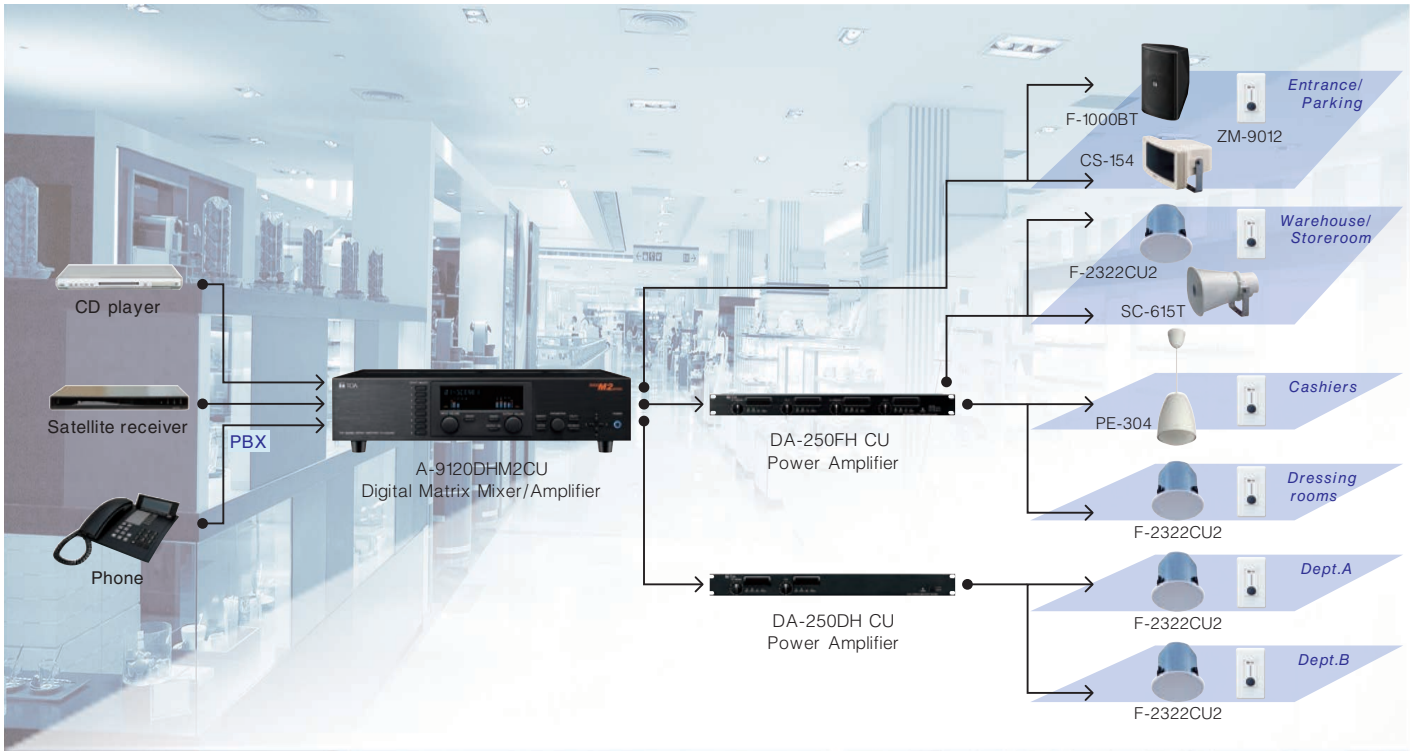
ZM-9003
Contact Closure Remote
- Fits in a standard 2-gang electrical box
- Two momentary buttons and four latching buttons
- Requires C-001T for full functionality
- May be assigned to control program change, volume up/down, channel on/mute, emergency mute, power and paging prohibit function
- Maximum one ZM-9001/ZM-9002/ZM-90003 per remote volume terminal (2 terminals per chassis)

9000M2 Paging Applications

Corporate Office



Retail



9000M2 Music Distribution Applications

Restuarant

Fitness Club

TOA
Smiles for the Public

TOA Canada Corporation

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Specifications are subject to change without notice.

9000M2-063017 - BH2