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

- Modular Digital Matrix Mixer for a multitude of applications including audio-visual, zone paging, room combining and many more
- Dual Modes (MIXER and MATRIX) – two separate feature sets to suit both simple mixing and complex multi-zone distribution applications
- Easy to Configure and Operate
- Exceptional Audio Quality
  - 24-bit, 48 kHz sampling
  - Low Distortion - 0.008%
- Modular System – up to 8 mic/line inputs and 8 outputs
- Dual Channel Digital Signal Processor (DSP):
  - 10-Band Parametric EQ
  - High and Low Pass Filters
  - Compressor/Loudness Contour
  - Bass and Treble
  - Delay (MIXER mode)
  - TOA Speaker EQ Presets
  - Additional DSP included on D-001T, D-001R and T-001T modules
- Telephone Zone Paging – access up to eight zones with optional ZP-001T module
- Ambient Noise Control – automatically increase or reduce output levels in response to changes in ambient noise
- Multi-function Display allows programming and operation without a PC
- Rack-mount Kit Included (2RU)

MIXER Mode

- Ideal for Speech and Sound Reinforcement Applications in hotel meeting rooms, houses of worship, and conference rooms
- Automatic Mixing
  - Automatically adjusts output level based on the total number of open microphones (NOM)
  - Adjustable output attenuation from 0 to 20 logNOM
- 32 Programmable Scenes – activate via front panel, switch closure, RS-232 or optional remote panels, models ZM-9001, ZM-9002 and ZM-9003
- Flexible Input-to-Output Routing – assign any input to one or more outputs with adjustable cross-point gain
- Stereo Link – control two inputs or outputs with one volume control
- Paging Function
  - Assign outputs to up to four zones
  - Trigger paging function with VOX (one routing), control input (up to four routings) or optional ZP-001T module
  - Selectively disable outputs from programmed paging zone with contact closures

APPLICATIONS

- Restaurants
- Retail Stores
- Training Rooms
- Bars/Lounges/Clubs
- Boardrooms
- Conference rooms
- Fitness Clubs/Gyms
- Educational Facilities
- Houses of Worship
- Museums
- Offices
- Theme Parks
Two Remote Volume Control Terminals
• Assignable to any input or output channel
• Control with 10k ohm linear potentiometer, 0-10 VDC or optional ZM-9001/ZM-9002 remote panels
• Assign remote volume control to background music (Priority 8 inputs without affecting paging input volume)

Four Control Inputs (expandable to twelve with C-001T module)– programmable to activate Memory, Volume Up/Down, Mute, Power On/Off, Emergency Mute
• ZM-9003 can also be connected.

Four Control Outputs (expandable to twelve with C-001T module) – programmable to activate external relays synchronized with Memory, Channel On/Off and Power On/Off

RS-232 Port
• Control protocol available for external devices (see protocol for controllable parameters)
• AMX and Crestron control modules available

Additional Features
• Software Utility for saving unit parameters to PC, updating unit firmware, virtual control activation and status indication
• MS Excel Programming Templates – use Microsoft(R) Excel for off-site programming
• Keylock Security sets password-protected access to Input, Output, Utility & Power functions
• Input and Output Metering (D-001 modules required for input metering)
• Alphanumeric Channel and Memory Naming
• Power On Memory sets the Event/Scene selected when unit powers up
• Detachable AC Cable

Flexible Remote Control

Matrix Mode
• Multiple Simultaneous Event Activation for paging and BGM distribution applications
• Flexible Routing – each audio input can be simultaneously routed to multiple outputs
• Eight Level Ducker – assignable priority levels and mute depth attenuates all other lower priority input signals
• 32 Programmable Events – activate via control input, RS-232 or optional remote panels, models ZM-9001, ZM-9002 and ZM-9003

Input Priority Modes sets priority order when multiple inputs with the same priority level are broadcast
• First-In-First-Out (FIFO): input that occurs first is broadcast
• Last-In-First-Out (LIFO): most recent input is broadcast
• MIX: all inputs are mixed and broadcast
• Voice Operated (VOX) Event Activation with adjustable threshold/sensitivity and gate release time

Applications
• Restaurants
• Retail Stores
• Training Rooms
• Bars/Lounges/Clubs
• Fitness Clubs/Gyms
• Houses of Worship
• Educational Facilities
• Hotels/Hospitality
• Museums
• Auditoriums/Theatres
• Banks
• Offices
• Theme Parks
• Airports
**M-9000 MODULES**

**M-9000 SPECIFICATIONS**
- **Audio Input**: Max. 8 channels, modular construction (modules optional)
- **Audio Output**: Preamplifier output 1: 2, 0 dB, 600Ω, balanced, removable terminal block (3 pins)
- **Frequency Response**: 20 – 20,000 Hz, +/- 1, +2 dB
- **Total Harmonic Distortion**: 0.038% (22 kHz LPF, 1 kHz, +/-1 dBV output)
- **S/N Ratio**: At input short: 20 – 20,000 Hz, ALL FLAT or OFF setting
  - Output volume min.: 90 dB
  - Output volume max.: 61 dB (input 1 vol.: 0 dB, other inputs: OFF)
- **Crosstalk**: 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 steps, Various range: +/-12 dB, Q: 0.3 – 5
- **Compressor**: Depth: 1 – 5
- **Scene/Event Memory**: 32
- **Operation Mode**: Matrix mode/Mixer mode (selector switch)
- **Scene/Event Memory**: Delay
- **Delay**: 0 – 40 ms (1 ms steps), maximum 40 ms (CH1 + CH2) (Mix mode only)
- **Speaker Equalizer**: 15 (presets for TOA speakers)
- **Line Input Module with DSP**: Dual Mic/Line Input Module
  - Two Balanced Mic / Line Inputs
  - Digital Signal Processing
  - 10-Band Parametric EQ
  - Loudness
  - High and Low Pass Filters
  - Compressor
  - Adjustable Sensitivity (nine levels, -60 to -10 dBV)
  - Phantom Power (24 VDC)
  - Remote Terminal Block
  - Maximum four per chassis
  - Required for VOX function and input metering
- **D-001R Line Input Module with DSP**: Two Unbalanced Line Inputs of RCA jacks
  - Digital Signal Processing
  - 10-Band Parametric EQ
  - Loudness
  - High and Low Pass Filters
  - Compressor
  - Adjustable Sensitivity (nine levels, -60 to -10 dBV)
  - Maximum four per chassis
  - Required for VOX function and input metering
- **ZM-9001 Remote Panel**: Six buttons to activate preset selection or volume up/down
  - Wiring: Single conductor shielded cable
  - Max. loop resistance: 50 ohms per line
  - Fits one gang electrical box (American type)
  - Maximum two ZM-9001/9002 per chassis
- **ZM-9002 Remote Panel**: Four push buttons to activate preset selection or volume up/down
  - Volume control knob
  - Wiring: Single conductor shielded cable
  - Max. loop resistance: 50 ohms per line
  - Fits one gang electrical box (American type)
  - Maximum two ZM-9001/9002 per chassis
- **ZM-9003 Remote Panel**: Four interlocking selection buttons and two momentary buttons
  - Max. loop resistance: 250 ohms per line
  - Fits two gang electrical box (American type)
  - Remote Terminal Block
  - Maximum two ZM-9003 per chassis
- **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
  - Two inputs with +24VDC phantom power for condenser mics
  - 14 preset gain ratios
  - Accessory sensing microphone available, model AN-9001
  - Maximum two per chassis
- **C-001T Input/Output Control Module**: Eight assignable control inputs for activating
  - Event, Volume Up/Down, Mute, Power On/Off
  - Emergency Mute
  - Eight assignable control outputs for activating external relays
  - Removable Terminal Block
  - Maximum one per chassis
- **AN-9001 Ambient Noise Sensing Microphone**: Ceiling or wall-mount condenser microphone
  - Fits one gang electrical box (American type)
  - Use with AN-001T module or DP-L2 processor
- **SS-9001 Speaker Selector**: Switch up to four speaker lines on one amplifier output
  - Two amplifier inputs for Paging/BG applications
  - 24VDC power supply

**TOA Corporation**
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Specifications are subject to change without notice.
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