

# MIXER POWER AMPLIFIERS

A-1800 SERIES



## DESCRIPTION

The A-1800 Series are designed to provide all-in-one solutions to PA requirements, featuring versatility and high-performance as well as being cost-effective. Targeting applications in intermediate size environments such as schools, offices and similar locations, the A-1800 Series offers a wide range of power outputs (A-1803: 30W, A-1806: 60W, A-1812: 120W) and dual zone coverage to suit user requirements as well as related useful functions such as paging. Multiple inputs for mics, aux 1-3, as well as telephone and emergency equipment allow each A-1800 amplifier to function as a complete communications center. A chime function assists paging operations and a selectable input priority feature. In addition, the P-1812 amplifier provides an option for increasing power amplification when a system is expanded with more speakers.

## FEATURES

- **Versatility plus**  
The A-1800 Series amplifiers are distinctive for their input versatility. Each has three mic inputs, three auxiliary inputs, an emergency input as well as a telephone paging input. Paging can be initiated and the chime function can also be set to automatically output to two zones.
- **2 Zone Capability**  
A-1800 Series amplifiers feature 2 speaker zones to which broadcasts can be sent independently or combined as desired. Emergency broadcasts will be heard in both zones. Even when the amplifier power is switched off, an emergency broadcast will be initiated to both zones.
- **Phantom Power Provided**  
The A-1800 Series of amplifiers provide phantom power to all connected microphones. Phantom power can be switched on or off as needed. The microphone inputs feature a balanced configuration with XLR connectors, allowing long cable runs without any problems.
- **Chime on input**  
The Mic 1 input incorporates chime on capability when the optional PM-660D Paging Microphone is used. Chime on can also be activated for the telephone paging. A selection of chime tones are available such as single, two-tone and four-tones which can either be in ascending or descending order.
- **Equalization**  
Each amplifier allows easy tonal adjustment of all output signals with bass and treble controls.
- **Line output**  
A line output is useful for adding more power in a particular zone by providing the input signal for a booster amplifier such as the P-1812.

- **Remote control**

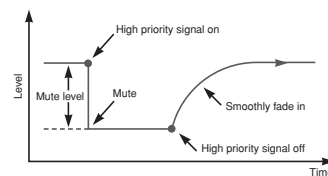
In an expanded system with the P-1812 amplifier, an emergency will activate the P-1812, even if had not be switched on to enable the broadcast.

- **Record Output**

The back panel includes a record output for connecting an external recorder to archive or back up broadcasts.

- **Input priority override and muting**

Each input can be set for priority override as well as mute. This facilitates making emergency announcements and messages as well as paging. Priority is in order starting with emergency, telephone paging, Mic 1\* input.



\* Mic 1 has priority by default unless switched or when the optional PM-660D Paging Microphone is used. Priority will also automatically decrease the levels of other inputs.

- **Dual power supply**

A-1800 Series amplifiers can conveniently be operated on AC or on DC24V to suit installation requirements.

- **Music On Hold (MOH) output-equipped**

For adding convenient music or messages when telephone call waiting, music from a CD or cassette player connected to the Aux 1 input will activate MOH to fill the silence.

## P-1812 120W Power Amplifier



- **System amplification option**

When additional power amplification is required to power more speakers in a system, the TOA P-1812 Booster Amplifier can be connected to an A-1800 Series amplifier's line out which provides an optimal level and impedance to efficiently drive the P-1812.

- **Switchable input levels**

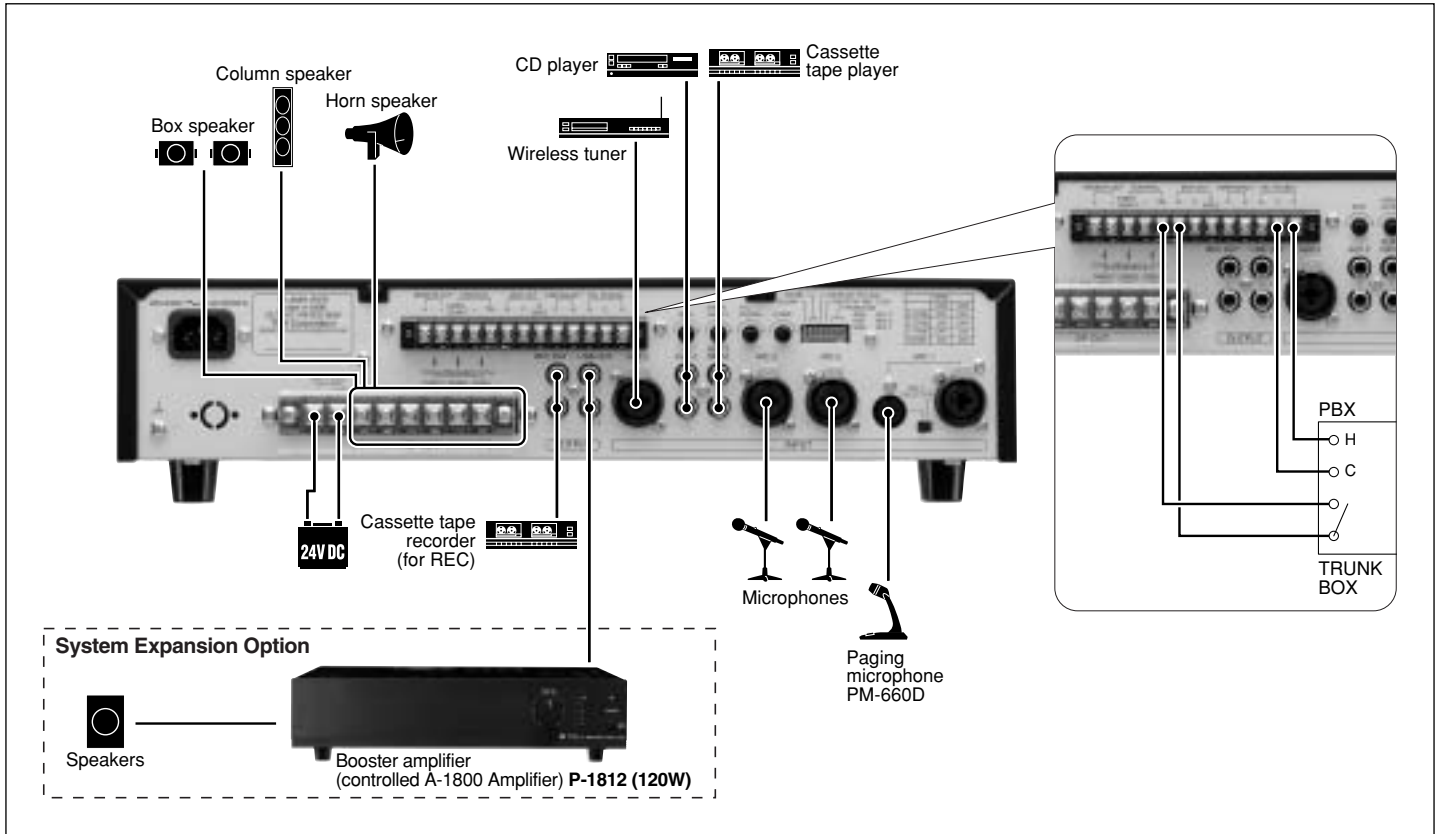
To interface properly with different equipment, input sensitivity can be switched between -10dB and 0dB.

- **Emergency control**

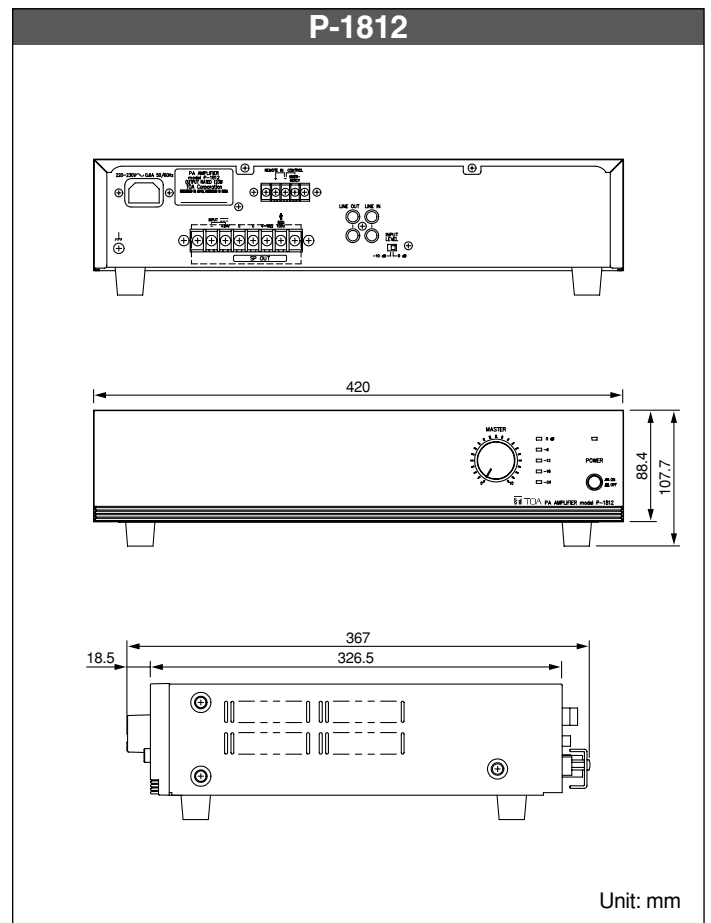
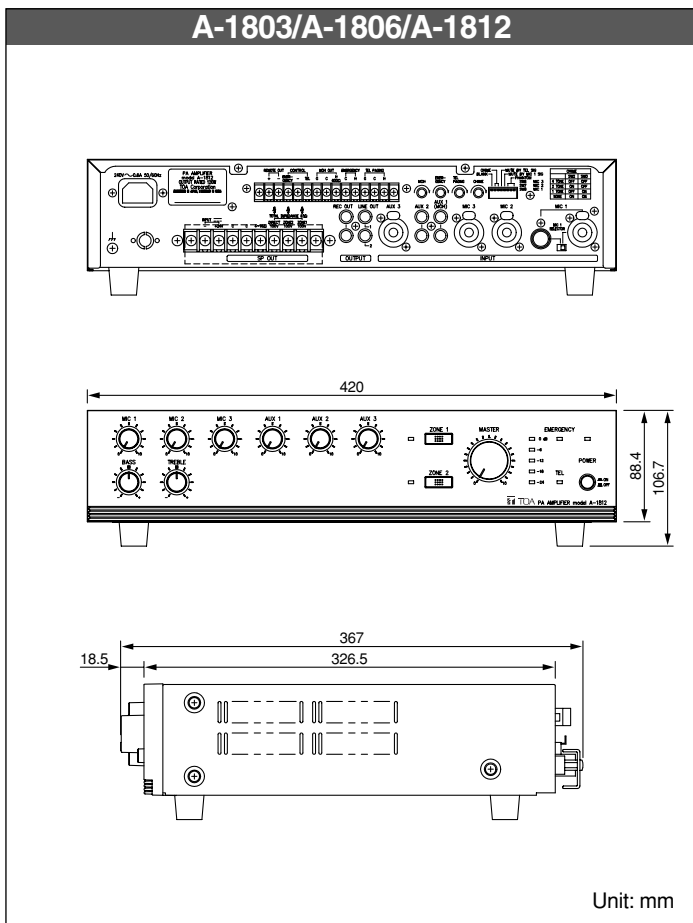
On the back panel of amplifier is a remote-in terminal for emergency control which sets the default output level for the emergency input.

# A-1800 SERIES

## TYPICAL CONNECTIONS



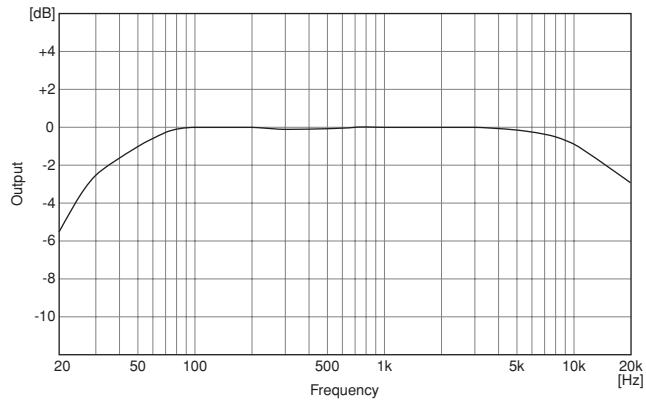
## APPEARANCE AND DIMENSIONAL DIAGRAM



# CHARACTERISTIC DIAGRAMS

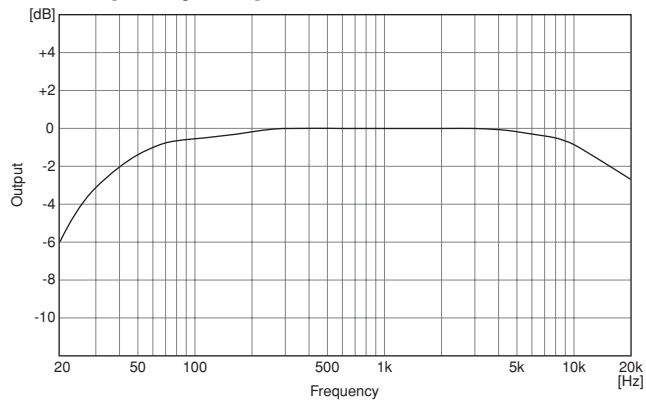
A-1803

Frequency Response



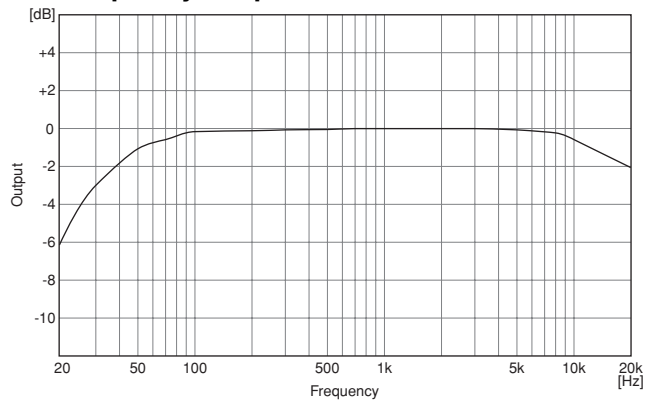
A-1806

Frequency Response



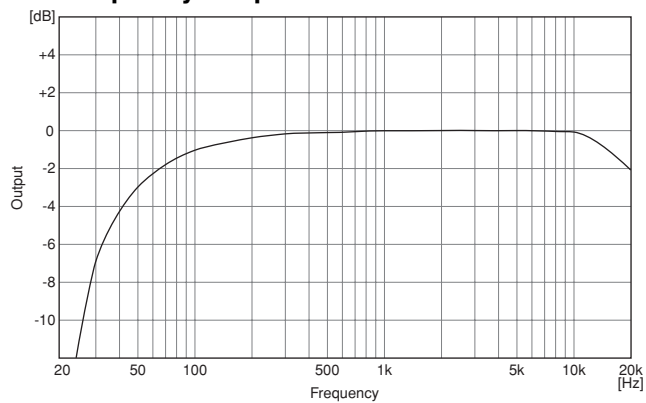
A-1812

Frequency Response



P-1812

Frequency Response



# SPECIFICATIONS

Model	A-1812	A-1806	A-1803	P-1812
Power Source	AC mains 50/60Hz, or 24V DC (M4 screw terminal)			AC mains 50/60Hz, or 24V DC (M4 screw terminal)
Rated Output	120W	60W	30W	120W
Power/Current Consumption	AC operation: 260W (rated output), 110W (EN60065) 24V DC operation: 7.0A (rated output), 2.8A (EN60065)	AC operation: 158W (rated output), 66W (EN60065) 24V DC operation: 3.8A (rated output), 1.6A (EN60065)	AC operation: 80W (rated output), 37W (EN60065) 24V DC operation: 2.0A (rated output), 1.0A (EN60065)	AC operation: 258W (rated output), 94W (EN60065) 24V DC operation: 7.0A (rated output), 2.7A (EN60065)
Frequency Response	50 – 20,000Hz (±3dB)			50 – 20,000Hz (±3dB)
Distortion	Under 2% at 1kHz, rated power			Under 2% at 1kHz, rated power
Input	MIC 1: -60dB <sup>*1</sup> , 600Ω, electronically-balanced, combined type of XLR-3-31 equivalent and phone jack, DIN socket (5 pins) MIC 2-3: -60dB <sup>*1</sup> , 600Ω, electronically-balanced, combined type of XLR-3-31 equivalent and phone jack AUX 1 (MOH): -20dB <sup>*1</sup> , 10kΩ, unbalanced, RCA pin jack AUX 2: -20dB <sup>*1</sup> , 10kΩ, unbalanced, RCA pin jack AUX 3: -20dB <sup>*1</sup> , 10kΩ, unbalanced, combined type of XLR-3-31 and phone jack TEL <sup>*2</sup> : -20dB <sup>*1</sup> , 10kΩ, electronically-balanced, M3 screw terminal EMERGENCY: 0dB <sup>*1</sup> , 600Ω, unbalanced, M3 screw terminal			LINE: 0dB <sup>*1</sup> /-10dB <sup>*1</sup> (switchable), 10kΩ, transformer balanced, RCA pin jack
Output	REC: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal SPEAKER SELECTOR: 2 zone, high impedance (100V line/83Ω), individual selector switch, M4 screw terminal DIRECT SPEAKER OUT: High impedance (100V line/83Ω), M4 screw terminal Low impedance (4 – 16Ω), M4 screw terminal (Both Low and High impedance terminals cannot be used at the same time.)	REC: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal SPEAKER SELECTOR: 2 zone, high impedance (100V line/167Ω), individual selector switch, M4 screw terminal DIRECT SPEAKER OUT: High impedance (100V line/167Ω), M4 screw terminal Low impedance (4 – 16Ω), M4 screw terminal	REC: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal SPEAKER SELECTOR: 2 zone, high impedance (100V line/330Ω), individual selector switch, M4 screw terminal DIRECT SPEAKER OUT: High impedance (100V line/330Ω), M4 screw terminal Low impedance (4 – 16Ω), M4 screw terminal	LINE: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack SPEAKER: High impedance (100V line/83Ω), M4 screw terminal Low impedance (4 – 16Ω), M4 screw terminal (Both Low and High impedance terminals cannot be used at the same time.)
Phantom Power	ON or OFF for each MIC 1 – 3 with switch setting			—
S/N ratio (Band Pass: 20 – 20,000Hz)	Over 100dB (Master volume: min) Over 76dB (Master volume: max) Over 60dB (MIC 1 – MIC 3) Over 76dB (AUX 1 – AUX 3) Over 90dB (TEL) Over 96dB (EMERGENCY)			Over 100dB (Master volume: min) Over 97dB (Master volume: max, INPUT LEVEL switch: 0dB) Over 90dB (Master volume: max, INPUT LEVEL switch: -10dB)
Tone Control	Bass: ±10dB at 100Hz, Treble: ±10dB at 10kHz			—
Control Input	TEL: No-voltage make contact input, open voltage: 24V DC, short-circuit: under 5mA, M3 screw terminal EMERGENCY <sup>*4</sup> : No-voltage make contact input, open voltage: 24V DC, short-circuit: under 10mA, M3 screw terminal			POWER REMOTE: No-voltage make contact input, open voltage: 24V DC, short-circuit: under 1mA, M3 screw terminal EMERGENCY <sup>*4</sup> : No-voltage make contact input, open voltage: 24V DC, short-circuit: under 1mA, M3 screw terminal
Control Output	Power remote: Open collector output, withstand voltage: 35V DC, control current: under 50mA, M3 screw terminal			—
Chime	1-tone, 2-tone, or ascending 4-tone chime, or None selectable with switch setting activated at MIC 1's DIN or CONTROL TEL terminal			—
Indicator	5 point LED output level meter, Power indicator LED, Zone indicator LED, Emergency LED, TEL LED			5 point LED output level meter, Power indicator LED
Priority	EMERGENCY: Overrides other inputs TEL: Overrides other inputs except "EMERGENCY", ON/OFF selectable with switch setting MIC 1: Overrides other inputs except "EMERGENCY & TEL", ON/OFF selectable with switch setting			—
Operating Temperature	-10°C to +40°C			-10°C to +40°C
Finish	Panel: ABS resin, black, hair line Case: Steel plate, black			Panel: ABS resin, black, hair line Case: Steel plate, black
Dimensions	420 (W) x 107.7 (H) x 367 (D)mm			420 (W) x 107.7 (H) x 367 (D)mm
Weight	12.6kg	9.4kg	8.1kg	12.2kg
Accessory	Power cord x 1, Terminal block cover x 1, Terminal block cover mounting screw x 2			Power cord x 1, Terminal block cover x 1, Terminal block cover mounting screw x 2
Option	Rack mounting bracket: MB-25B Volume control cover: YA-920 Input transformer: IT-453A			Rack mounting bracket: MB-25B Volume control cover: YA-920

Note: Distance between barriers on the above screw terminals: M3 = 7mm, M4 = 9mm

\*1 0dB = 1V

\*2 Can be transformer-balanced with the addition of optional IT-453A input transformer.

\*3 LINE 1 and LINE 2 outputs can be interlocked with ZONE 1 and ZONE 2 speaker selectors, respectively. (This function needs internal modification.)

\*4 Operation when activated can be selected from the following: Turning ON the unit's power (factory-preset) or OFF. (The OFF function needs internal modification.)



TOA Corporation

URL : <http://www.toa.jp/>

Specifications are subject to change without notice.  
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