



# A-1800 SERIES MIXER POWER AMPLIFIERS

A-1803 (30W)/A-1806 (60W)/A-1812 (120W)



***Ideal PA solutions for mid-sized locations  
combining total flexibility of use  
with high-performance amplification.***

# Features and functions that add the m

Multi-purpose, multi-function mixer/power amplifiers specifically designed for maximum versatility and cost-effective high-performance are ideal units for any PA requirement in locations such as schools and offices and other intermediate size environments. A choice of different power outputs are offered as well as functions such as paging and dual zone coverage.



A-1803(30W) A-1806(60W) A-1812(120W)

## Versatility plus

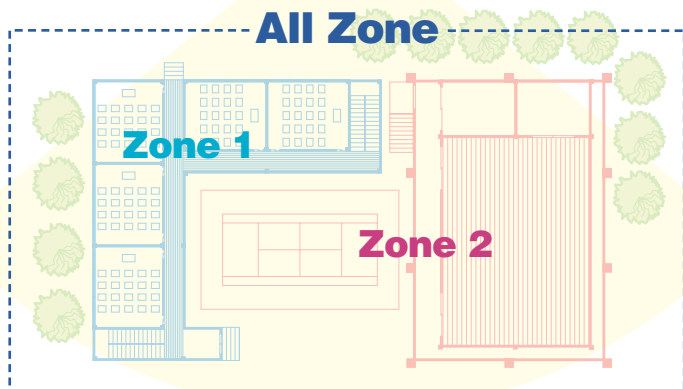
The A-1800 Series amplifiers are distinctive for their input versatility. Each has three mic inputs, three auxiliary inputs, an emergency input as well as a telephone paging input. Paging can be initiated and the chime function can also be set to automatically output to two zones.

## 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.

## 2 Zone coverage

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.



## 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.

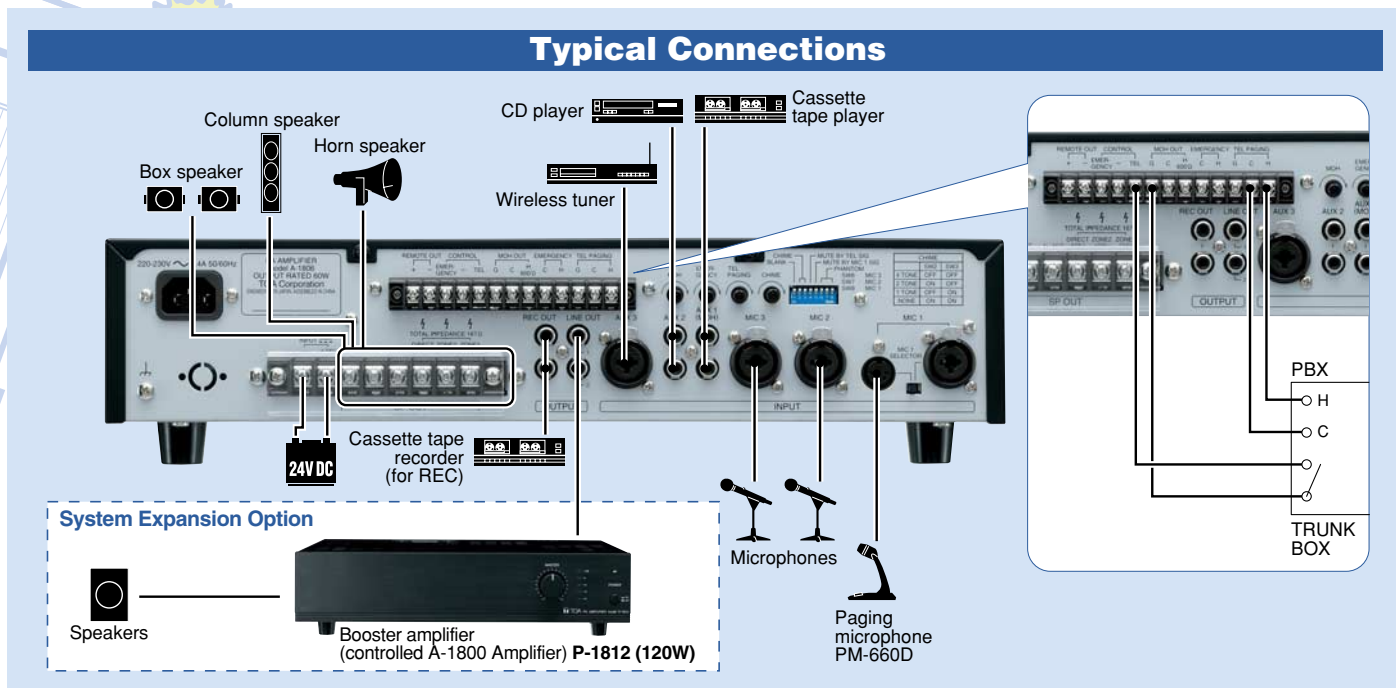
## Remote control

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

## Record output

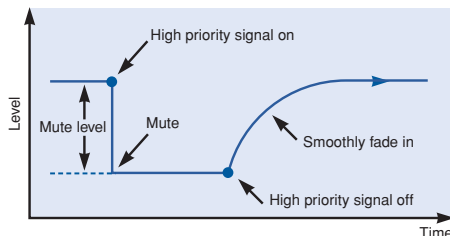
The back panel includes a record output for connecting an external recorder to archive or back up broadcasts.

# Most value to all-in-one PA equipment.



## 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

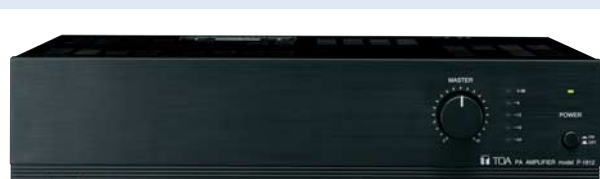
When additional power amplification is required to power more speakers in a system, the TOA P-1812 Booster amplifier can be connected to an A-1800 Series amplifier's line out which provides an optimal level and impedance to efficiently drive the P-1812.

### Switchable input levels

To interface properly with different equipment, input sensitivity can be switched between  $-10\text{dB}$  and  $0\text{dB}$ .

### 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.



P-1812 Front



P-1812 Rear

## 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)<br>24V DC operation: 7.0A (rated output), 2.8A (EN60065)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | AC operation: 158W (rated output), 66W (EN60065)<br>24V DC operation: 3.8A (rated output), 1.6A (EN60065)                                                                                                                                                                                                                                                                                                                                             | AC operation: 80W (rated output), 37W (EN60065)<br>24V DC operation: 2.0A (rated output), 1.0A (EN60065)                                                                                                                                                                                                                                                                                                                                                | AC operation: 258W (rated output), 94W (EN60065)<br>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)<br>MIC 2 – 3: –60dB <sup>*</sup> , 600Ω, electronically-balanced, combined type of XLR-3-31 equivalent and phone jack<br>AUX 1 (MOH): –20dB <sup>*1</sup> , 10kΩ, unbalanced, RCA pin jack<br>AUX 2: –20dB <sup>*1</sup> , 10kΩ, unbalanced, RCA pin jack<br>AUX 3: –20dB <sup>*1</sup> , 10kΩ, unbalanced, combined type of XLR-3-31 and phone jack<br>TEL <sup>*2</sup> : –20dB <sup>*1</sup> , 10kΩ, electronically-balanced, M3 screw terminal<br>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<br>LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack<br>MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal<br>SPEAKER SELECTOR: 2 zone, high impedance (100V line/83Ω), individual selector switch, M4 screw terminal<br>DIRECT SPEAKER OUT: High impedance (100V line/83Ω), M4 screw terminal<br>Low impedance (4 – 16Ω), M4 screw terminal<br>(Both Low and High impedance terminals cannot be used at the same time.)                                                                                                                               | REC: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack<br>LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack<br>MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal<br>SPEAKER SELECTOR: 2 zone, high impedance (100V line/167Ω), individual selector switch, M4 screw terminal<br>DIRECT SPEAKER OUT: High impedance (100V line/167Ω), M4 screw terminal<br>Low impedance (4 – 16Ω), M4 screw terminal | REC: 0dB <sup>*1</sup> , 600 , unbalanced, RCA pin jack<br>LINE 1, 2 <sup>*3</sup> : 0dB <sup>*1</sup> , 600   , unbalanced, RCA pin jack<br>MOH: 0dB <sup>*1</sup> , 600Ω, transformer balanced, M3 screw terminal<br>SPEAKER SELECTOR: 2 zone, high impedance (100V line/330Ω), individual selector switch, M4 screw terminal<br>DIRECT SPEAKER OUT: High impedance (100V line/330Ω), M4 screw terminal<br>Low impedance (4 – 16Ω), M4 screw terminal | LINE: 0dB <sup>*1</sup> , 600Ω, unbalanced, RCA pin jack<br>SPEAKER: High impedance (100V line/83Ω), M4 screw terminal<br>Low impedance (4 – 16Ω), M4 screw terminal<br>(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)<br>Over 76dB (Master volume: max)<br>Over 60dB (MIC 1 – MIC 3)<br>Over 76dB (AUX 1 – AUX 3)<br>Over 90dB (TEL)<br>Over 96dB (EMERGENCY)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Over 100dB (Master volume: min)<br>Over 97dB (Master volume: max, INPUT LEVEL switch: 0dB)<br>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<br>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<br>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<br>TEL: Overrides other inputs except "EMERGENCY", ON/OFF selectable with switch setting<br>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<br>Case: Steel plate, black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Panel: ABS resin, black, hair line<br>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,<br>Terminal block cover x 1,<br>Terminal block cover mounting screw x 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Power cord x 1,<br>Terminal block cover x 1,<br>Terminal block cover mounting screw x 2                                                                                                                                                          |
| Option                               | Rack mounting bracket: MB-25B<br>Volume control cover: YA-920<br>Input transformer: IT-453A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Rack mounting bracket: MB-25B<br>Volume control cover: YA-920                                                                                                                                                                                    |

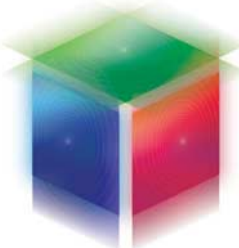
Note: Distance between barriers on the above screw terminals: M3 = 7mm, M4 = 9mm

\*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.)



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TOA Corporation

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