# A-2060/2120/2240 Mixer Power Amplifiers 



## A-2060/2120/2240

Mixer Power Amplifiers

## DESCRIPTION

A-2000 Series Mixer Power Amplifiers offer high levels of performance and versatility and are especially well-suited for broadcasting paging and supplying background music in schools, offices, shops, factories, houses of worship, and large meeting rooms.
The A-2000 series makes available a wide range of power outputs (A-2060: 60W, A-2120: 120W, A-2240: 240W), with a frequency response of $50-20,000 \mathrm{~Hz}$ and distortion under $1 \%$ (at $1 \mathrm{kHz}, 1 / 3$ rated). Two balanced/screw terminal MIC inputs, one balanced/screw terminal TEL input and two unbalanced/RCA pin jack AUX inputs, along with high and low impedance balanced (floating) speaker outputs and unbalanced REC outputs ensure operational versatility.
This model provides the Auto-Mute function for voice-activated paging at an adjustable threshold level ( 0 to 64dB for MIC 1 and MIC 2/0 to -23 dB for TEL) which overrides the BGM channels (AUX 1 and AUX 2). Other features include Bass and Treble controls with Signal, Peak and Power LED indicators.

## FEATURES

## High cost-performance

- Suitable for commercial audio systems in schools, offices, restaurants, shops, factories, houses of worship, and large meeting rooms
- Engineered for high performance with wide frequency response, low noise and distortion, and excellent output regulation
-Equipped with balanced mic. inputs for better isolation from external noise, compared to unbalanced inputs
- UL/cUL Listed


## Flexibility

- A wide range of power outputs from 60W to 240 W
- Offers a comfortable acoustic space thanks to tone control at bass and treble
- Phantom power can be provided to MIC 1, for supplying power to a condenser microphone
- Equipped with Auto-mute function which allows voiceactivated paging by Microphone and Telephone paging inputs which override the Auxiliary inputs


## Easy to handle

- Scratch- and fingerprint-resistant front panel
- Easy and quick volume control with master volume knob


## APPEARANCE AND DIMENSIONAL DIAGRAM

A-2060


A-2120/2240


## Frequency Response



A-2120


A-2240


## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

## A-2060/2120/2240 Mixer Power Amplifiers

The mixer power amplifier shall be ideal for a wide variety of installed sound applications such as paging and background music (BGM) distribution.
The amplifier shall control and mix up to two balanced (screw terminal) MIC inputs, a balanced (screw terminal) TEL input and two unbalanced (RCA pin jack) AUX inputs, and deliver an audio output of 60W / 120W / 240W. The MIC input impedance shall be 600 ohms and the TEL input impedance shall be 10k ohms. The AUX impedance shall be 10k ohms. Frequency response shall be 50 to $20 \mathrm{k} \mathrm{Hz}(+/-3 \mathrm{~dB})$ with less than $1 \%$ THD at $1 / 3$ rated output. It shall be capable of operation from a 120 V AC 60 Hz line. The $\mathrm{S} / \mathrm{N}$ ratio shall be over 60 dB .
The mixer power amplifier shall include $25 \mathrm{~V}, 70 \mathrm{~V}$ or 4 ohm transformer-isolated outputs with screw terminal type connections and protective cover plate, and AUX output with dual-RCA jacks for recording or connection to an external booster amplifier. The amplifier shall incorporate an auto-mute function that overrides the BGM channels (AUX 1 and AUX 2), for voice-activated paging at an adjustable threshold level ( 0 to 64dB for MIC 1 and MIC 2/0 to -23 dB for TEL). The mixer power amplifier front panel shall include a master volume control, MIC/TEL and AUX volume controls, Bass/Treble tone controls ( 100 and $10 \mathrm{kHz}+10 \mathrm{~dB}$ ) and Signal, Peak and Power LEDs. Fan cooling ventilation shall be provided (A-2240 only).
Dimensions shall be A-2060: 420(W) $\times 100.9(H) \times 280.3$ (D) ( $16.5^{\prime \prime} \times 4.0^{\prime \prime} \times 11.0^{\prime \prime}$ ), A-2120/2240: $420(\mathrm{~W}) \times 100.9(\mathrm{H}) \times 360.3$ (D) ( $16.5^{\prime \prime} \times 4.0^{\prime \prime} \times 14.2^{\prime \prime}$ ). Net weight shall be A-2060: 7 kg (15.431b), A-2120: 10.8 kg (23.81/b), A-2240: 13.2 kg (29.101b). Front panel finish and material shall be black ABS resin and case finish (and material) shall be black steel plate.
The mixer power amplifier shall be TOA model A-2060/ A-2120/2240
The rack-mount bracket shall be TOA model MB-25B.

## SPECIFICATIONS

| Model No . | A-2060 | A-2120 | A-2240 |
| :---: | :---: | :---: | :---: |
| Power Source | 120 V AC, 60Hz |  |  |
| Rated Output | 60W | 120W | 240W |
| Power Consumption | $\begin{aligned} & \text { 72W (EN60065), } \\ & \text { 150W (AC operation at rated output) } \end{aligned}$ | 124W (EN60065), 260W (AC operation at rated output) | 238W (EN60065), <br> 520W (AC operation at rated output) |
| Frequency Response | $50-20,000 \mathrm{~Hz}( \pm 3 \mathrm{~dB})$ |  |  |
| Distortion | Under $1 \%$ at $1 \mathrm{kHz}, 1 / 3$ rated power |  |  |
| Input | MIC 1, 2: -60dB* (10mV), $600 \Omega$, electronically balanced, screw terminal TEL: - $10 \mathrm{~dB} \mathrm{~B}^{\star}(300 \mathrm{mV})$, $10 \mathrm{k} \Omega$, transformer isolated balanced, screw terminal AUX 1, 2: -20dB* ( 100 mV ), 10k $\Omega$, unbalanced, RCA pin jack |  |  |
| OutputSpeaker out <br>  <br>  <br>  <br>  <br>  <br> High impedance impedance <br> Rec. out | $\begin{aligned} & \hline \text { Balanced (floating) } \\ & 83 \Omega \text { (70V), } 10 \Omega(25 \mathrm{~V}) \\ & 4 \Omega(15.5 \mathrm{~V}) \\ & 0 \mathrm{~dB}^{\star}(1.0 \mathrm{~V}), 600 \Omega \text {, unbalanced, } \\ & \text { RCA pin jack } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Balanced (floating) } \\ & 42 \Omega(70 \mathrm{~V}), 5 \Omega(25 \mathrm{~V}) \\ & 4 \Omega(22 \mathrm{~V}) \\ & 0 \mathrm{~dB} \text { ( } 1.0 \mathrm{~V} \text { ), } 600 \Omega \text {, unbalanced, } \\ & \text { RCA pin jack } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Balanced (floating) } \\ & 21 \Omega(70 \mathrm{~V}), 2.6 \Omega(25 \mathrm{~V}) \\ & 4 \Omega(31 \mathrm{~V}) \\ & 0 \mathrm{~dB}^{\star}(1.0 \mathrm{~V}), 600 \Omega \text {, unbalanced, } \\ & \text { RCA pin jack } \\ & \hline \end{aligned}$ |
| Phantom Power | DC +21V (MIC1, with ON/OFF switch) |  |  |
| S/N Ratio | Over 60dB |  |  |
| Tone Control | Bass: $\pm 10 \mathrm{~dB}$ at $100 \mathrm{~Hz} /$ Treble: $\pm 10 \mathrm{~dB}$ at 10 kHz |  |  |
| Muting | MIC 1, MIC 2 and TEL overrides other input signals with -30dB attenuation. Sensitivity input level adjustable for MIC 1, MIC 2: 0 to -64dB, TEL: 0 to -23 dB (MIC 1, MIC 2, TEL, same priority level) |  |  |
| Ventilation |  |  | Fan cooling |
| Indicators | Power, signal, peak |  |  |
| Finish | Panel: ABS resin, black/Case: Steel plate, black |  |  |
| Dimensions | $\begin{gathered} 420(\mathrm{~W}) \times 100.9(\mathrm{H}) \times 280.3^{(\mathrm{D}) \mathrm{mm}} \\ \left(16.5^{\prime \prime} \times 4.0^{\prime \prime} \times 11.0^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 420(\mathrm{~W}) \times 100.9(\mathrm{H}) \times 360.3(\mathrm{D}) \mathrm{mm} \\ \left(16.5^{\prime \prime} \times 4.00^{\prime} \times 14.2^{"}\right) \\ \hline \end{gathered}$ |  |
| Weight | $7 \mathrm{~kg}(15.43 \mathrm{lb})$ | $10.8 \mathrm{~kg}(23.81 \mathrm{lb})$ | $13.2 \mathrm{~kg}(29.10 \mathrm{lb})$ |
| Option | Rack mount bracket: MB-25B |  |  |

## TOA Corporation

