

# JMA-E Series Mixer Amplifiers

**JMA-30E**  
**JMA-60E**  
**JMA-120E**

Installation & Operation Manual



**IMPORTANT:**

Read this manual carefully before operating the equipment.

Improper use may result in damage that is not covered by the warranty.

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## SAFETY WARNINGS

Please read all safety instructions before operating this equipment. Failure to follow these warnings may result in electric shock, fire, or injury.

1. Read and retain all instructions. Keep this manual available for future reference.
2. Follow all warnings and safety notices printed on the product and in this manual.
3. Avoid using the unit near water or in environments where moisture is present.
4. Ensure proper ventilation. Do not block airflow openings. Install the amplifier according to the manufacturer's recommendations.
5. Keep the unit away from heat sources, such as radiators, stoves, or other devices that generate heat.
6. Do not modify or bypass the safety features of the polarized or grounding-type AC plug. If the plug does not fit your outlet, consult a qualified electrician.
7. Protect the power cord from being pinched, stepped on, or damaged—especially at plugs, receptacles, and points where it exits the unit.
8. Use only accessories and attachments approved or supplied by the manufacturer.
9. Use only the recommended stands, brackets, or mounting hardware. Exercise caution when moving equipment mounted on a cart to avoid tip-over.
10. Unplug the unit during lightning storms or when it will not be used for long periods.
11. Service must be performed only by qualified technicians. Seek service if the unit has been damaged, exposed to liquid, does not operate normally, or has been dropped.
12. Do not expose the amplifier to dripping or splashing liquids. Do not place containers filled with liquids (such as vases) on or near the product.
13. Connect the amplifier only to a properly grounded AC outlet. The AC plug must remain easily accessible for disconnection.
14. To completely disconnect the unit from the mains, unplug the AC power cord from the wall outlet.
15. WARNING: To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.
16. If the amplifier includes a protective earth terminal, ensure it is connected to a mains outlet with a functional earth connection.

### WARNING!

#### To reduce the risk of fire or electric shock:

- Do not use this product with extension cords, adapters, or outlets that prevent the AC plug blades from being fully inserted. Proper insertion is required to avoid exposed metal parts.
- Do not expose this equipment to rain, moisture, or liquids of any kind.
- Ensure the polarized plug is fully inserted into a matching outlet. The wide blade must be properly aligned with the wide slot to maintain electrical safety.

The symbols shown below are internationally recognized indicators used to identify potential electrical and operational hazards. Please read and understand their meaning before operating the equipment.



**Lightning Flash:** indicates dangerous voltages inside the unit that can cause electric shock.

**Exclamation Mark:** indicates important operating and safety instructions included in this manual.

**WARNING Label:** alerts to conditions that may cause serious injury, electric shock, fire, or equipment damage if instructions are not followed.

## 1.0 INTRODUCTION

### 1.1 Description:

The JMA-E Series mixer amplifiers from JCI Audio are designed for reliable, daily operation in commercial sound installations. Each model combines a compact form factor with versatile input options, built-in media playback, and both high-impedance (70V/100V) and low-impedance loudspeaker outputs.

These amplifiers are well suited for background music distribution, announcements, and paging in classrooms, offices, retail stores, restaurants, cafés, houses of worship, and public facilities. Their intuitive front-panel layout simplifies operation for non-technical users, while the internal protection circuitry ensures stable performance even under demanding conditions.

The JMA-E Series includes three power levels—30W, 60W, and 120W—to accommodate systems of different sizes. All models provide microphone and line-level inputs, an integrated MP3/FM/Bluetooth media module, and a telephone input with VOX priority for paging applications. Dual-power capability (AC or 24V DC) allows operation in fixed installations with battery-backup requirements.

### 1.2 Main Features:

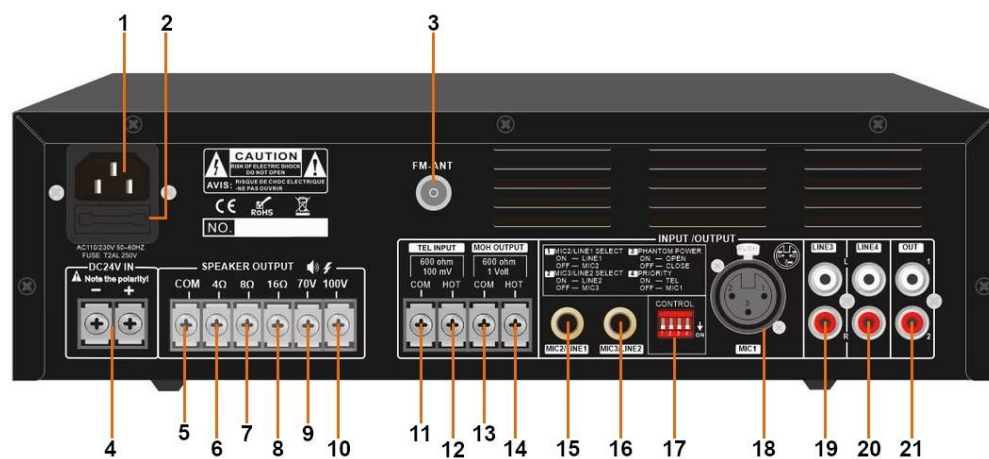
- **Multiple power models:** Available in 30W, 60W, and 120W versions to match small, medium, and large-scale installations.
- **70V/100V and Low-Impedance Outputs:** Each amplifier includes a built-in output transformer for distributed speaker systems, as well as a 4/8/16  $\Omega$  low-impedance output for direct speaker connection.
- **Versatile Input Configuration:**
  - Three microphone inputs, including Mic 1 on balanced XLR with optional phantom power.
  - Mic 2 and Mic 3 on 6.3 mm jacks with mic/line sensitivity selection.
  - Two stereo line inputs on RCA connectors for external audio sources.
  - One RCA line output for connection to additional amplifiers or recording devices.
- **Integrated Media Module:** Provides MP3 playback via USB/SD, FM radio reception, and Bluetooth audio streaming for flexible background music sources.
- **Telephone Paging and MOH:** A dedicated TEL input with automatic VOX priority allows direct connection to telephone systems. Music-on-Hold (MOH) is available for telephony integration.
- **Front-Panel Controls and Indicators:** Individual level controls for all audio inputs, bass and treble tone controls, and a master volume knob. LED indicators display power status, protection mode, clipping, and a three-segment signal level meter (0 / -10 / -30 dB).
- **Comprehensive Protection Circuitry:** Safeguards against short circuits, overload, clipping, and overheating to ensure stable long-term operation.
- **Dual-Power Operation:** Supports AC mains operation (115V/230V) or 24V DC for systems requiring battery-backup capability.

## 2.0 Front Panel Overview



1. MP3/FM/Bluetooth Media Player Module.
2. CLIP Indicator.
3. PROTECT Indicator.
4. POWER Indicator.
5. Output Level Meters.
6. AC Power Switch.
7. MIC 1 Level Control.
8. MIC 2 / LINE 1 Level Control.
9. MIC 3 / LINE 2 Level Control.
10. LINE 3 Level Control.
11. LINE 4 Level Control.
12. TEL Paging Input Level Control.
13. Bass Tone Control.
14. Treble Tone Control.
15. Master Volume Control.

## 3.0 Rear Panel Overview



MIC1 XLR-3P (Female) – Front View



- Pin1 - Ground
- Pin2 - Positive Signal
- Pin3 - Negative Signal

1. AC Power Socket (IEC).
2. AC Fuse.
3. FM Antenna Connector.
4. 24 VDC Backup Power Input.
5. Speaker Output – COM (-).
6. Speaker Output – 4 Ω (+).
7. Speaker Output – 8 Ω (+).
8. Speaker Output – 16 Ω (+).
9. Speaker Output – 70V (+).
10. Speaker Output – 100V (+).
11. TEL Input – COM (-).
12. TEL Input – HOT (+), 600 Ω, 1V.
13. MOH Output – COM (-).
14. MOH Output – HOT (+).
15. MIC2/LINE1 Input (1/4" TS, Unbalanced).
16. MIC3/LINE2 Input (1/4" TS, Unbalanced).
17. DIP Switch – MIC/LINE Select, Phantom Power, and MIC1 Priority.
18. MIC1 XLR Input.
19. LINE 3 RCA Input (Stereo to Mono).
20. LINE 4 RCA Input (Stereo to Mono).
21. Line Output (RCA).

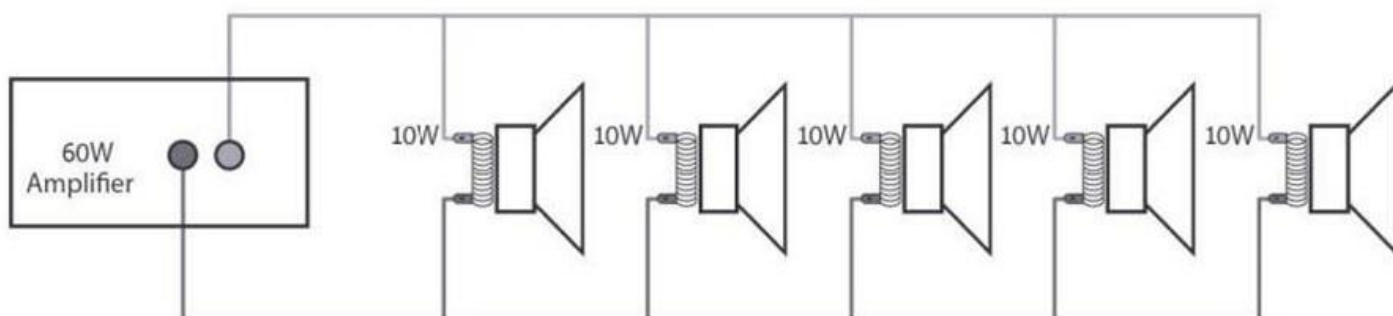
## 4.0 AMPLIFIER OPERATION

### 4.1 High-Impedance (70V / 100V) Line Systems

High-impedance loudspeaker lines (70V/100V) are commonly used in commercial installations where multiple speakers are distributed across long distances. This type of system offers efficient power distribution, simple wiring, and flexible adjustment of individual speaker levels.

#### Basic Connection

- Connect the amplifier's 100V output terminal to the positive (+) terminal of the first loudspeaker.
- Connect the COM terminal to the negative (-) terminal.
- Additional loudspeakers must be wired in parallel, maintaining the same polarity throughout the line.



**System Load Capacity:** The total wattage of all connected speaker taps must not exceed **90% of the amplifier's rated output power** to ensure safe and reliable operation.

**Speaker Transformer Taps:** Most 70V/100V speakers provide selectable transformer taps (e.g., **1.5 W, 3 W, 6 W, 10 W**) that allow the installer to adjust individual speaker volume, balance coverage across different areas, and control the total system load. Always verify that the combined tap settings remain within the amplifier's safe operating range.

### 4.2 Low-Impedance (4Ω / 8Ω / 16Ω) Outputs

The low-impedance output terminals are designed for direct connection to a small number of professional loudspeakers without the need for transformer taps. This configuration is typically used for short-distance, higher-fidelity applications such as small rooms, dedicated program audio, or higher-output speaker cabinets.

**Available Output Impedances:** The amplifier provides low-impedance terminals rated at **4 Ω, 8 Ω, and 16 Ω**. Only **one** impedance output should be used at a time, and the total speaker load must match the selected output.

#### Connection Guidelines

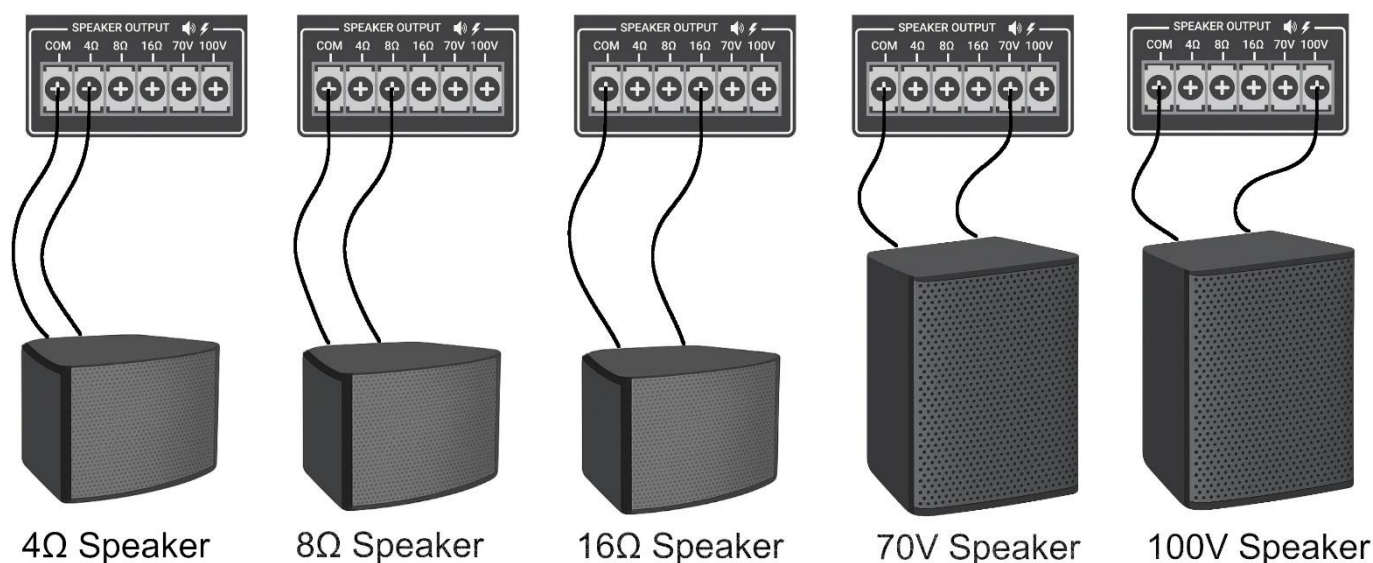
- Connect the loudspeaker's positive (+) lead to the corresponding impedance terminal (4Ω, 8Ω, or 16Ω).
- Connect the negative (-) lead to the COM terminal.
- Do not connect multiple impedance terminals simultaneously. Only one impedance output may be used at a time.
- Ensure the total loudspeaker impedance matches the output selected. Mismatched loads can result in reduced performance or amplifier damage.

## Important Considerations

- Low-impedance operation is intended for short cable runs, as longer distances may cause signal loss or reduced damping factor.
- The total power handling of the connected speakers must meet or exceed the amplifier's output rating.
- Never mix low-impedance and 70V/100V connections on the same amplifier output.

Low-impedance wiring is ideal when the installation requires improved clarity, higher SPL, or when using professional passive loudspeakers designed for direct amplifier connection.

## Speaker Connections



## 4.3 Operation Steps

- Before powering on the unit, ensure all connections are properly made. Set all rotary controls to minimum, then switch on the amplifier. The Power LED will illuminate. Set BASS and TREBLE to the center (12 o'clock) position and raise the MASTER control partway for testing.
- Feed an audio signal to one of the LINE inputs (1–5) and gradually increase the corresponding channel volume until audio is heard through the speakers. Adjust the MASTER control to the desired overall level and use the channel volume control for fine tuning.
- The initial test can also be performed using the built-in USB/SD/FM media player. The output level is indicated on the LED meter; the red "0" LED should only flash occasionally. Continuous illumination indicates clipping—reduce the MASTER level if necessary.
- For microphone use, connect a mic to MIC 1, ensure it is switched on, and enable phantom power if required. Increase the MIC 1 volume gradually while speaking. The microphone should not face the speakers to avoid acoustic feedback.
- If the VOX function is enabled, audio playback on channels 2–5 will automatically attenuate when speaking into MIC 1. Adjust the VOX attenuation control to set the mute depth.
- Use the BASS and TREBLE controls to shape the overall tone. At the 12 o'clock position, no EQ is applied. Turning clockwise boosts low or high frequencies; counter-clockwise reduces them. Adjust as needed for the program material or room acoustics.

## 4.4 Media Playback Functions

### 4.4.1 USB/SD Playback

- Insert a USB flash drive into the USB port and/or an SD card into the SD slot.
- Press the CD/USB/SD button to select the corresponding playback source.
- Press PLAY/PAUSE to start or pause playback.
- Track navigation follows standard operation: use Previous or Next to select tracks.

### 4.4.2 FM Tuner

- Press the FM button to activate the tuner mode.
- Use Previous or Next to select a stored preset station.
- Tuning and Storing Stations
- Use the Forward/Reverse Seek buttons to tune manually in 0.05 MHz steps.
- Press and hold a Seek button to start automatic search. The search stops when a valid station is found.
- To store the station, press PLAY/PAUSE. The display will flash a channel number.
- Use Previous/Next to select a memory slot, then press PLAY/PAUSE again to confirm.
- Automatic search can be stopped at any time by pressing a Seek button.

### 4.4.3 Bluetooth Playback

The JMA-E Series includes a built-in Bluetooth receiver that allows wireless audio streaming from smartphones, tablets, and other compatible devices.

#### Pairing a Device

- Enable Bluetooth on your mobile device and search for available devices.
- Select **BT-Audio001** (default Bluetooth name of the amplifier).
- Once paired, the amplifier will automatically switch to Bluetooth mode.
- The name of the connected device (for example, "My iPhone") will appear on the amplifier's display to confirm a successful connection.

#### Notes

- The JMA-E Series does not require a PIN code for pairing.
- Only one Bluetooth device can be connected at a time.
- If the connection is lost or a new device is paired, the amplifier will update the displayed device name accordingly.
- The Bluetooth range may vary depending on the environment, obstructions, and the transmitting device.

#### Playback Control

- Use your mobile device to control track selection and volume.
- The amplifier's MASTER volume still applies to the final output level.

## 4.6 Music on Hold (MOH)

The MOH output provides background music to a telephone or PBX system for callers on hold.

- Connect the MOH output terminals COM (-) and HOT (+) to the dedicated Music-on-Hold input of the telephone system.
- If the input cannot be identified, consult a qualified technician or the PBX documentation.

## 4.7 Telephone Paging Input

The **TEL** input allows paging through the amplifier using a telephone set or PBX system.

- When paging is initiated from the telephone system, the amplifier mutes other inputs automatically (except EMC/fire)
- After the announcement ends, normal operation resumes.
- Final paging volume adjustments are made using the **Tel Paging Volume** control on the front panel.

## 4.8 DIP Switch Configuration

The rear-panel DIP switch allows you to configure additional operating functions related to the MIC2/LINE1, MIC3/LINE2, and MIC1 inputs, as well as the priority behavior between MIC1 and the TEL input.

**NOTE:** The switches follow a fixed orientation:

Down = ON, Up = OFF.

Under the section labeled CONTROL, you will find four switches with the following functions:

### Switch 1 – MIC2/LINE1 Mode Selection

Selects the operating level for the MIC2/LINE1 input.

- ON: Sets the input to Line level.
- OFF: Sets the input to Microphone level.

### Switch 2 – MIC3/LINE2 Mode Selection

Selects the operating level for the MIC3/LINE2 input.

- ON: Sets the input to Line level.
- OFF: Sets the input to Microphone level.

### Switch 3 – MIC1 Phantom Power

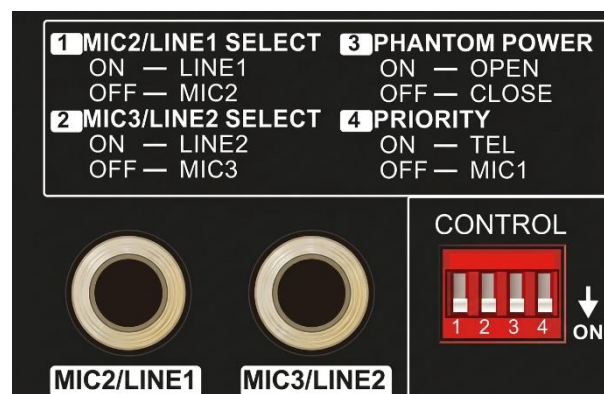
Enables or disables 48V phantom power for the MIC1 balanced XLR input. This feature is required for condenser microphones and other devices that need phantom power.

- ON: Phantom power enabled.
- OFF: Phantom power disabled.

### Switch 4 – Priority Selection (MIC1 / TEL Input)

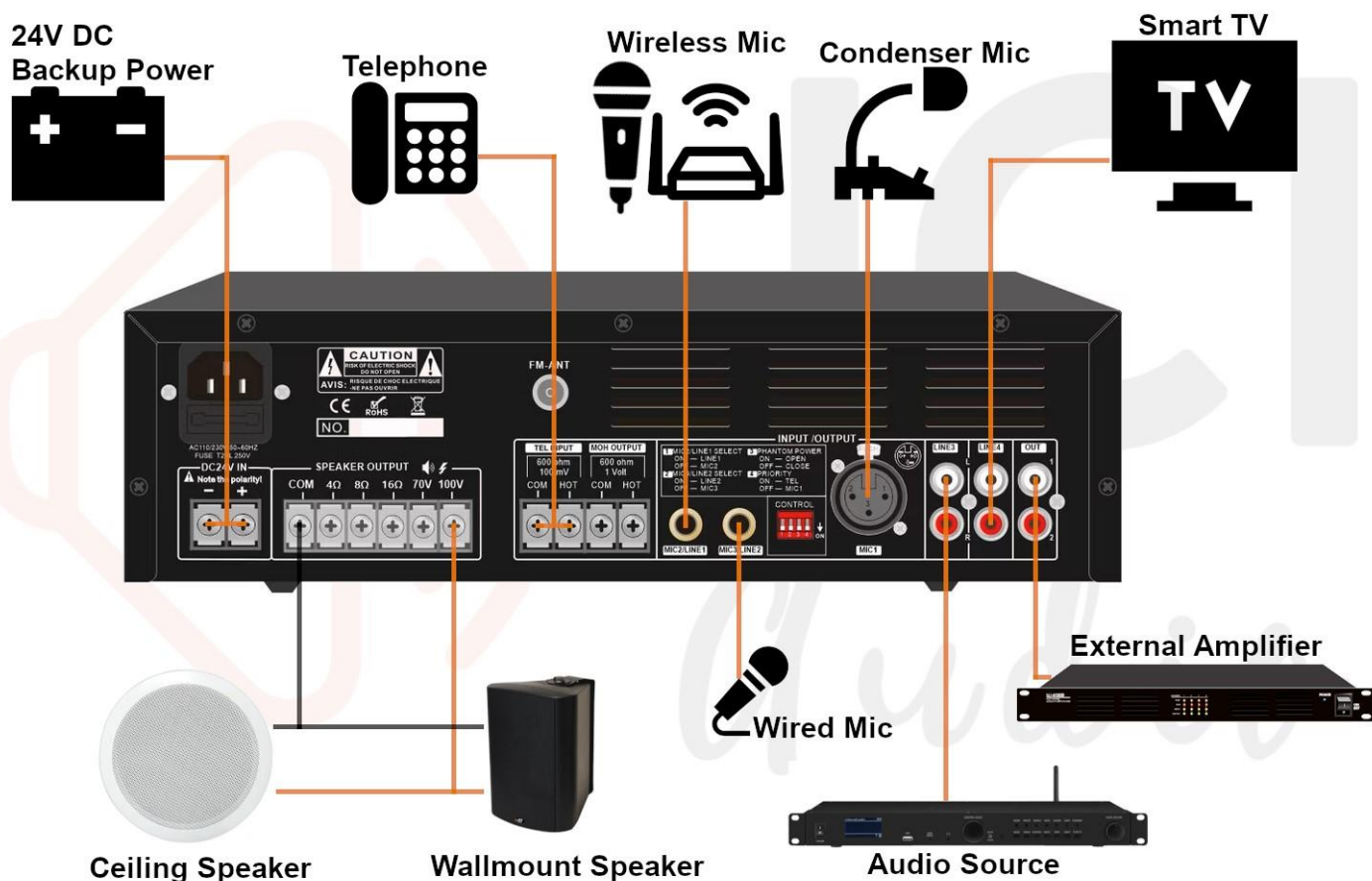
Determines which input will take priority during operation.

- ON: TEL input has priority.
- OFF: MIC1 input has priority.



*DIP Switch on rear panel*

## 5.0 Connection Diagram



## 6.0 Specifications

Model	JMA-30E	JMA-60E	JMA-120E
<b>Description</b>	Compact Commercial Audio Mixer Amplifier		
<b>Rated Power Output</b>	30 W	60 W	120 W
<b>Speaker Output</b>	70V, 100V, 4/8/16 Ω		
<b>Inputs</b>	Mic1 (XLR, phantom, 600 Ω / 5–8 mV); Mic2/Line1 & Mic3/Line2 (6.3 mm jack, mic/line selectable, 600 Ω / 5–8 mV); Line3–4 (RCA, 10 kΩ / 150–470 mV); Telephone input (TEL) with VOX priority + MOH.		
<b>Frequency Response</b>	60 Hz – 15 kHz		
<b>THD</b>	<0.5% at 1 kHz, at 1/3 rated power		
<b>S/N Ratio</b>	Line: >85 dB, Mic: >72 dB		
<b>Protection</b>	High temperature, short circuit, overload		
<b>Power Supply</b>	AC 230V / 115V or DC 24V, 50–60 Hz		
<b>Dimensions</b>	300 (W) × 275 (D) × 88 (H) mm		
<b>Power Consumption</b>	45 W	100 W	200 W
<b>Gross Weight</b>	5.5 kg	6.6 kg	7.8 kg

## 7.0 Troubleshooting

This section helps identify and resolve common issues that may occur during installation or operation of the JMA-E Series mixer amplifier.

Problem	Solution
No Power / Unit Does Not Turn On	Ensure the AC power cable is firmly connected to the amplifier and to a working power outlet.
	Verify that the rear-panel AC voltage selector matches the local mains voltage (115V / 230V).
	If operating from DC 24V, check polarity and power-source capacity.
	Inspect the fuse and replace it only with one of the same type and rating.
No Sound Output	Confirm that the MASTER volume and the corresponding input channel volume are turned up.
	Ensure a valid audio signal is connected to the selected input.
	Check the SPEAKER OUT wiring and verify correct polarity.
	Make sure the total speaker load does not exceed the amplifier's rated output power.
	If using 70V/100V lines, confirm that all speakers include matching transformers.
Sound Is Distorted or Weak	Reduce the input gain or channel volume if the CLIP indicator lights continuously.
	Lower the MASTER volume to avoid amplifier clipping.
	Check speaker impedance or transformer tap settings.
	Ensure that no wiring short circuits are present on the speaker line.
	Verify that BASS and TREBLE controls are not excessively boosted.
Microphone Feedback (Howling Noise)	Lower the MIC volume and/or MASTER volume.
	Increase the distance between the microphone and the loudspeakers.
	Aim microphones away from speakers and reflective surfaces.
	Reduce BASS and TREBLE if they are significantly boosted.
Built-In Player (USB/SD/FM) Does Not Operate	Ensure the correct playback mode (USB / SD / FM) is selected.
	Verify that the USB drive or SD card is formatted in FAT32 and contains valid MP3 files.
	For FM reception, adjust the antenna position for better signal strength.
VOX / TEL Priority Not Working	Confirm that VOX is enabled for MIC 1.
	Adjust the VOX level control to set the desired mute depth.
	For telephone paging, verify correct wiring to the TEL input and proper PBX configuration.
Excessive Heat or Unexpected Shutdown	Ensure the amplifier has adequate ventilation and is not installed inside a sealed enclosure.
	Avoid placing objects on top of the unit.
	Reduce the output load if the amplifier is driving too many high-wattage speakers.

## 8.0 Service

Before requesting service, verify that the issue is not caused by incorrect operation or by external equipment connected to the system. Refer to the Troubleshooting section of this manual to identify and resolve common issues.

If the problem persists and appears to be product-related, discontinue use and contact your authorized JCI Audio distributor or service provider. Only qualified technicians are authorized to service or repair this equipment.

Unauthorized repair attempts may void the warranty.

## 9.0 Warranty

JCI Audio provides a **three-year limited warranty** for the JMA-E Series mixer amplifiers, covering defects in materials and workmanship under normal use.

Warranty terms may vary depending on the country or region of purchase. To determine the specific warranty conditions applicable to your product:

1. Refer to the warranty policy of the authorized distributor or dealer where the product was purchased.
2. Provide valid proof of purchase when submitting any warranty claim.
3. Ensure the product has not been modified, improperly installed, or serviced by unauthorized personnel, as this may void the warranty.

This warranty does not cover damage caused by misuse, accidents, improper installation, or operation outside the specifications described in this manual.

## 10.0 Document Information

### Copyright Notice

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### Disclaimer

The information in this manual has been carefully reviewed and is believed to be accurate at the time of publication. However, JCI Audio assumes no responsibility for any errors, omissions, or inaccuracies.

### Product Changes

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### Limitation of Liability

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### Contact Information

JCI Audio – Technical Support

Email: [support@jciaudio.com](mailto:support@jciaudio.com)

Website: [www.jciaudio.com](http://www.jciaudio.com)