



**Professional Public Address System**

**EMMA-45  
EMMA-60  
EMMA-120  
Mixing Amplifier**



# USER MANUAL

Before operating, please read this manual completely

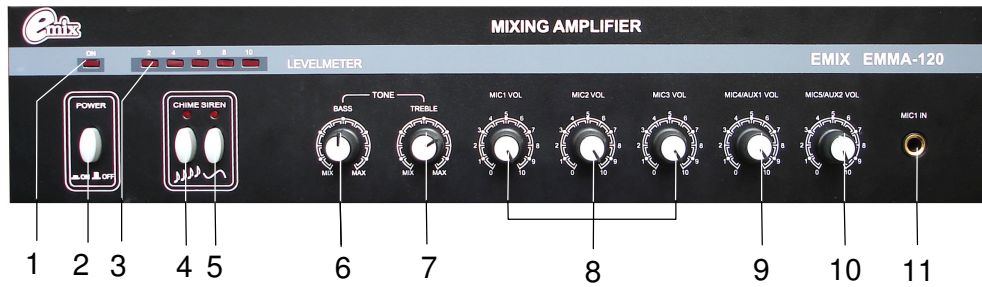
## FEATURES:

- 5 MIC inputs, 2 AUX inputs, 1 Record input, 1 Record output
- Priority muting for chime and siren
- Three levels of priority muting: MIC1 > siren > chime
- 5 LED level meter
- Individual volume control for each input, master bass and treble control
- Speaker outputs 100V, 70V and 4Ω
- Power supply AC 220V-240V or DC 24V
- Thermal, over load, short circuit protection and siren

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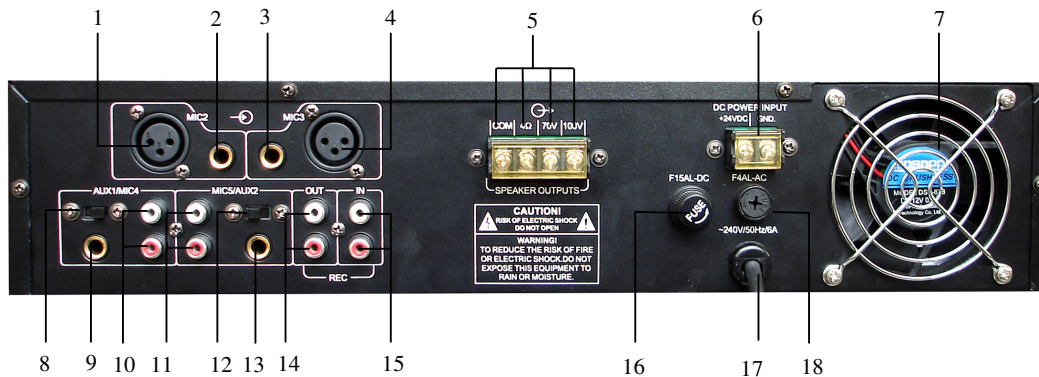
# FRONT PANEL



- |                        |                                |
|------------------------|--------------------------------|
| 1. Led Power Indicator | 7. Treble Control              |
| 2. Power Switch        | 8. Mic1, 2, 3 Volume Control   |
| 3. Led Level Meter     | 9. Mic4 / Aux1 Volume Control  |
| 4. Chime               | 10. Mic5 / Aux2 Volume Control |
| 5. Siren               | 11. 6.3mm Jack Type Mic1 Input |
| 6. Bass Control        |                                |

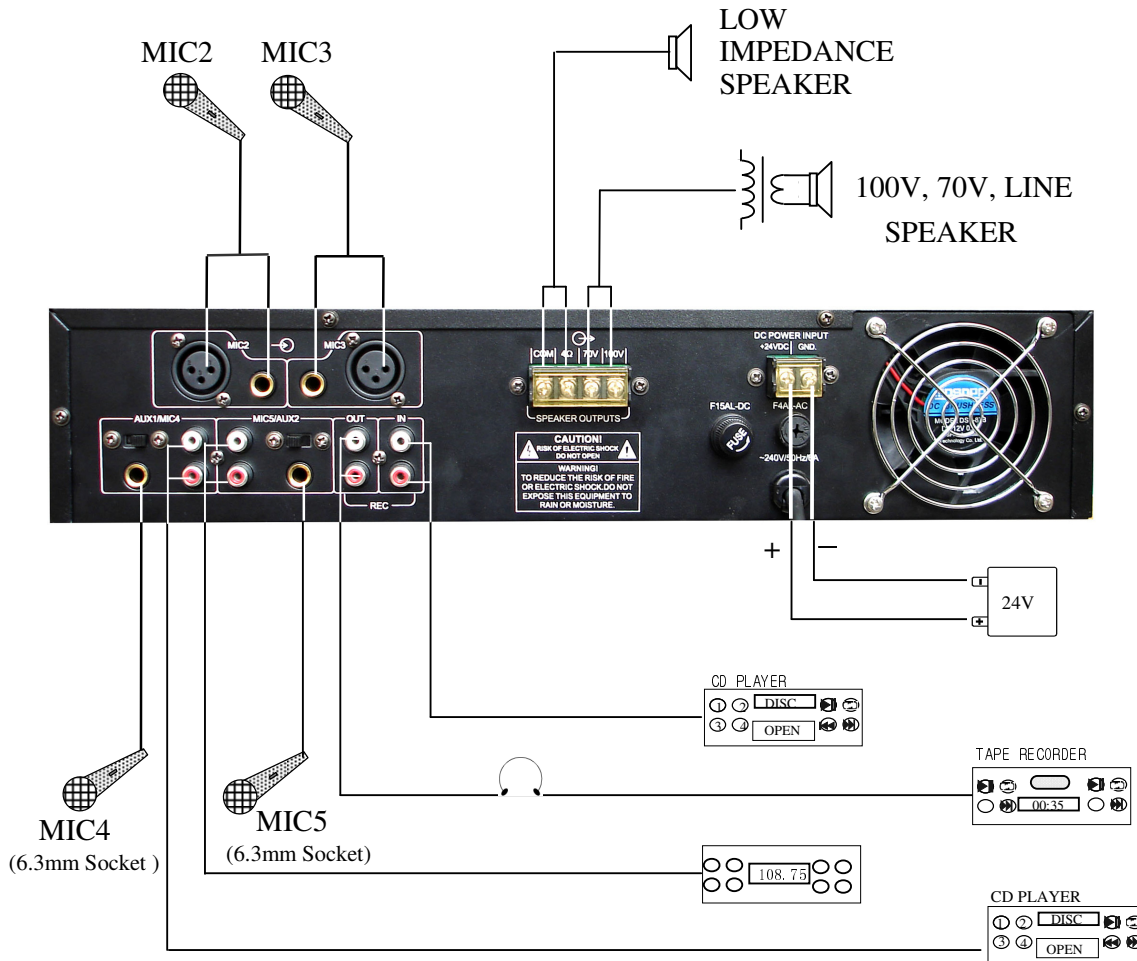
**NOTE:** When all 5 LED level meters remain lit, sound is distorted. In such case, adjusting each volume control button till LED 4 (+8dB) and LED 5 (+10dB) flash.

# REAR PANEL



- |                                 |                         |                                     |
|---------------------------------|-------------------------|-------------------------------------|
| 1. Mic2 : XLR Input             | 7. Fan Exhaust Window   | 14. Record output or Amplifier link |
| 2. Mic2 : 6.3mm Input           | 8. AUX 1 / Mic4 Switch  | 15. Record input                    |
| 3. Mic3 : 6.3mm Input           | 9. Mic4 : 6.3mm Input   | 16. 24V DC Fuse                     |
| 4. Mic3 : XLR Input             | 10. AUX 1 : Line Input  | 17. AC Power cord                   |
| 5. Output Terminals             | 11. AUX 2 : Line Input  | 18. AC Fuse                         |
| 6. 24V DC Supply Input Terminal | 12. AUX 2 / Mic5 Switch |                                     |
|                                 | 13. Mic5 : 6.3mm Input  |                                     |

# CONNECTION



Speaker output terminals are on the rear panel. The terminal under the label “COM” is COMMON. The terminals under the labels “4Ω, 70V, 100V” are Hot. The connection ways shall be COM-4Ω / COM-70V / COM-100V.

Normally the “rated power” (70V / 100V) output terminal is used in output connection. The connected speaker should be with a transformer, and the gross power of speakers should be less than the rated power of the amplifier.

“Rated Impedance”(4-16Ω) output terminal can be used when speakers are fixed closely, and the gross impedance of speakers should be 4-16Ω.

## Note:

- Never connect two hot terminals (labeled 4Ω, 70V, 100V) together.
- Only choose one pair of output terminals for speaker connection. The connection ways shall be COM-4Ω / COM-70V / COM-100V.

**Tone and volume:** “BASS” and “TREBLE” knob provides the tone control of overall system. MIC1, 2, 3, 4, 5 have separate volume control. MIC4 and AUX1 or MIC5 and AUX2 have a common volume control knob.

**MIC:** MIC inputs are balanced with phantom power. Two types of MIC inputs available: 6.3mm (MIC1, 4, 5) and XLR (MIC2, 3). MIC4 & 5 inputs are compatible with AUX1 & 2 inputs. “MIC4/AUX1” and “MIC5/AUX2” can be selected through the switches on the back panel. MIC1 has the highest level of priority muting function and can override all input signals.

Note: To prevent howling, keep volume level down to minimum before connecting microphone.

**Chime / Siren:** Pressing the “CHIME” / “SIREN” button will activate the chime or siren circuitry. The LED indicator above the button will be lit up simultaneously. Pressing the “SIREN” button again will stop siren broadcasting and the LED will be turned off.

**Levels of priority muting:** MIC1, siren and chime have priority muting functions. MIC1 has the highest level of priority muting and can override all other input signals. Siren has the second level. Chime has the third level and can override all input signals except for MIC1 and siren.

**REC input / output:** REC input can connect to an external source (CD player, tuner, cassette player, etc.) The volume of this input is not adjustable. While recording program signal can send to REC input and at the same time signal send out to recording equipment through REC output. REC output also can be used for monitoring the other input signals.

## **PRECAUTION OF INSTALLATION**

1. Do not block ventilation holes.
2. Do not use this amplifier if the power cord is frayed or broken.
3. The amplifier should not be placed in any of the areas:
  - 1) poor ventilation
  - 2) exposed to sunlight directly
  - 3) high ambient temperature or adjacent to heat-generating equipment;
  - 4) high humidity or heavy dust;
  - 5) Susceptible to vibration.
4. Make sure the plug conforms to the socket.
5. For safety, please make grounding.
6. Short-circuit fault happens when short alarm rings during operation, In such case, switch off the power immediately and check the faults before switching on again.

## **SPECIFICATIONS:**

<b>Model</b>	<b>EMMA-45</b>	<b>EMMA-60</b>	<b>EMMA-120</b>
<b>Rated Output</b>	<b>45W RMS</b>	<b>60W RMS</b>	<b>120W RMS</b>
<b>Output Regulation Ratio</b>	Less than 3dB from no-load to full load		
<b>Speaker Output</b>	4Ω Balanced, 70V、100V		
<b>REC Output</b>	600Ω 1V		
<b>Inputs</b>	MIC1, 2, 3, 4, 5: 600Ω, 6mV Balanced		
	AUX 1, 2: 10KΩ, 270mV unbalanced; REC IN: 10KΩ, 300mV		
<b>Frequency Response</b>	Line: 50Hz-20KHz (±3dB); Microphone: 100Hz-10KHz (±3dB)		
<b>Distortion</b>	< 0.5% at 1KHz , 1/3rated power		
<b>S/N Ratio</b>	MIC1, 2, 3, 4, 5: 70dB		
	AUX1, 2: 75dB		
<b>Tone Control</b>	Bass: ±12dB at 100Hz		
	Treble: ±12dB at 10KHz		
<b>Protection</b>	AC fuses, DC fuses, overload, short circuit		
<b>Muting Function</b>	MIC1 overrides other input signals (Attenuation: 0 to -30dB)		
	SIREN overrides other input signals (except MIC1) (Attenuation: 0 to -30dB)		
	CHIME overrides other input signals (except MIC1,SIREN) (Attenuation: 0 to -30dB)		
<b>Power Supply Requirements</b>	AC220-240V/50-60Hz, DC24V		
<b>Power Consumption</b>	80W	100W	200W
<b>Dimensions</b>	430×360×88mm	430×360×88mm	430×360×88mm
<b>Gross Weight</b>	10.3kg	11.3kg	13kg
<b>Net Weight</b>	9.3kg	10.2kg	11.9kg

Specifications are subject to change without notice

#### CAUTION

- For safety, when “Power switch” is off, please detach the power plug from the power point.
- The apparatus shall not be exposed to dripping or plashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- To reduce the risk of electric shock, do not remove the cover.
- No user serviceable parts inside. Refer servicing to qualified service personnel.