CMA2120 CMA2240

2×120W / 2×240W 2-Channel Matrix Mixer Amplifier

Description

This 2-channel matrix mixer amplifier is an all-in-one audio solution engineered for flexible and scalable systems. It perfectly integrates a high-efficiency Class D amplifier with a intelligent matrix mixer. Delivering robust 2×120W / 2×240W power with selectable constant voltage/constant resistance operation, it features extensive I/O connectivity. The core matrix mixing capability allows for free signal routing, enabling independent or combined playback from multiple audio sources to different zones. With added remote paging and volume control, all packed into a compact 1U chassis, it stands as the ideal choice for background music, public address, and multimedia applications, ensuring precise audio management and reliable performance in complex scenarios.

Features

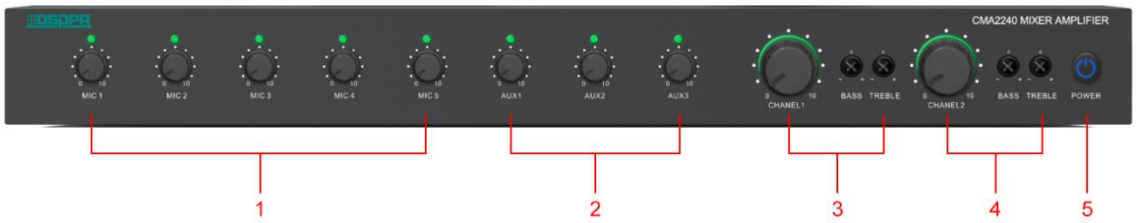
- Utilizes a high-efficiency Class D digital amplifier, delivering robust 2×120W / 2×240W of independent dual-channel output. It supports constant voltage and constant resistance switching, and features independent volume control for easy compatibility and flexible management of various speaker systems.
- Integrates 5 MIC/LINE inputs, 3 AUX inputs, and 1 TEL/EMG input, offering abundant connectivity to meet diverse audio source needs in various scenarios.
- Features a built-in matrix mixing function, supporting the free assignment of input signals to output channels for precise audio routing and scheduling.
- Supports remote paging functionality, enabling live broadcast and announcements directly through a connected microphone.
- Equipped with a remote volume control interface for connecting external control panels, allowing for convenient long-distance adjustment of output levels.
- Features a compact 1U chassis design, saving valuable rack space.
- Accommodates a 100-240V wide-range power supply, ensuring stable operation across various grid environments worldwide.

Specifications

Model	CMA2120	CMA2240
Operation Mains Voltage	110~230 VAC +10/-10%, 50Hz/60Hz	
Rated Output (RMS)	2×120W	2×240W
Max Power Consumption	650VA	1344VA
Distortion (THD) 85Hz~18kHz	100V output <1% 70V output <1% 4Ω <1%	
Frequency Response @-10dB ref. Rated Output	100V output: 85Hz~18kHz +1/-3dB 70V output: 85Hz~18kHz +1/-3dB 4Ω: 20Hz~20kHz +1/-3dB Line out: 20Hz~20kHz +1/-3dB	
Phase 1kHz	0~ 10 degree	
Output	Direct output: 100V or 70V~0. +1/-3dB; Line out balance 1V +1/-3dB 24VDC output: 24VDC/100mA	
TEL/EMG -(Balance)	Sensitivity: 40dB (100V) / 0dB (1V) Frequency: 100Hz~12kHz Priority: Fixed, threshold level >30V S/N: >70dB	
MIC1~5: -(Balance)	Sensitivity: Mic -56.47dB (1.5mV) Line -13.9dB (200mV) Frequency: Mic 450~15kHz (built in filter 315Hz) Line 60~15kHz S/N: Mic >60dB; Line >70dB Priority: MIC 1, Short trigger input MIC2, VOX set to min, threshold level 0.3~0.8mV Phantom: 24VDC Headroom: 20~30dB	
AUX1~3: -(Unbalance)	Sensitivity: -6dB (500mV) Frequency: 20Hz~20kHz S/N: >75dB	
Tone Control	Low 100Hz: +10~-10dB High 10kHz: +10~-10dB	
VU-Meter	Green: -40+/-3dB RED: -3+/-1dB	
Protection	Output short, Overheat, Overload	
Operating Temperature	-10ºC~+45ºC	
Storage Temperature	-40ºC~+70ºC	
Relative humidity	<95%	
Dimensions (H×W×D)	44×430×315 mm (19" 1/2wide, 1U high, with feet)	
Net Weight	4.9kg	5.9kg
Gross Weight	6.5kg	7.5kg

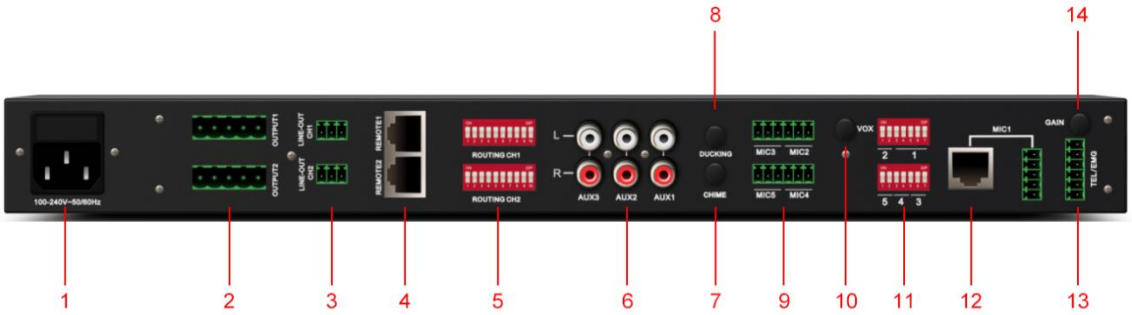
Front / Rear Panel

Front Panel

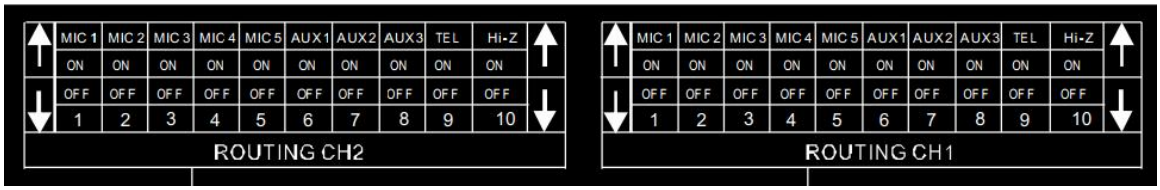


1) MIC 1~5 VR:
Turn left to reduce input level, turn right to increase input level.
These leds light on GREEN when there is a input signal, light on RED if input signal is clipped.
2) AUX 1~3 VR:
Turn left to reduce input level, turn right to increase input level.
These leds light on GREEN when there is a input signal, light on RED if input signal is clipped.
3) CH1 & CH2 Master VR:
Turn left to reduce output level, turn right to increase output level.
The VU-meter led ring lights on Green when there is output signal, lights on RED when output signal is Max.
4) CH1 & CH2 Tone Control:
Bass VR: Turn left to reduce max -10dB, turn right to increase max 10dB output level @ 100Hz.
Treble VR: Turn left to reduce max -10dB, turn right to increase max 10dB output level @ 10kHz.
5) Power Button:
Switch to power on or off the unit. The built in led lights on BLUE when the unit works normally, lights on RED when the unit has an error.

Rear Panel



1) IEC Inlet:
Connect to AC cord.
2) CH1 & CH2 Phoenix Connector:
4ohm - and +: Connect a 4ohm speaker.
70V-100V-COM: Connect a 100V or 70V speaker.
3) CH1 & CH2 Line Out:
Balance output, have audio from MIC1~5, AUX1~3, Call remote and EMG.
4) Remote:
Connect to a wall panel to remotely control the master level.
Connect to a remote paging station to control two-zone paging.
5) CH1 & CH2 Routing Dipswitch Setting:



Pin 1~9: Set to ON (up). The input x is enable to route to Channel x output.
Set to OFF (down). The input x is disable to route to Channel x output.
Pin 10: Set to ON (up) to select HiZ output (100V/70V):
Set to OFF (down) to select 4ohm output.

6) AUX 1~3:

Connect a unbalance Stereo or mono signal.

7) Chime VR:

Turn left to reduce chime level, turn right to increase chime level.

8) Ducking VR:

Ducking working when there is a priority/override from MIC1 or MIC2 input, it damp the signal from source input (AUX1~3).

Turn left to reduce ducking, turn right to increase ducking.

9) MIC 2~5 Combi:

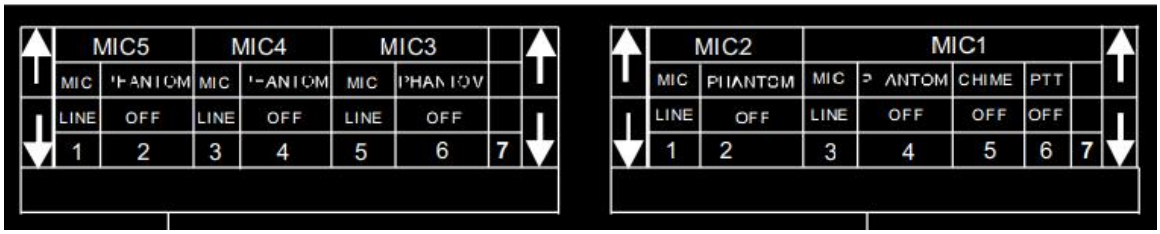
Balance input for Mic 2~5.

When a signal on MIC 2 input is reach the threshold it will override MIC 3~5 and the Source input.

10) VOX VR for MIC2:

Turn left to reduce the threshold level, turn right to increase threshold level.

11) Dipswitch setting for MIC1~5:



Pin 1: Set to ON (up). MIC 5 input is mic level sensitivity.
Set to OFF (down). MIC 5 input is line level sensitivity.
Pin 2: Set to ON (up). MIC 5 input have Phantom power.
Set to OFF (down). MIC 5 input have No Phantom power.
Pin 3: Set to ON (up). MIC 4 input is mic level sensitivity.
Set to OFF (down). MIC 4 input is line level sensitivity.
Pin 4: Set to ON (up). MIC 4 input have Phantom power.
Set to OFF (down). MIC 4 input have No Phantom power.
Pin 5: Set to ON (up). MIC 3 input is mic level sensitivity.
Set to OFF (down). MIC 3 input is line level sensitivity.
Pin 6: Set to ON (up). MIC 3 input have Phantom power.
Set to OFF (down). MIC 3 input have No Phantom power.

Pin 1: Set to ON (up). MIC 2 input is mic level sensitivity.
Set to OFF (down). MIC 2 input is line level sensitivity.
Pin 2: Set to ON (up). MIC 2 input have Phantom power.
Set to OFF (down). MIC 2 input have No Phantom power.
Pin 3: Set to ON (up). MIC 1 input is mic level sensitivity.

Set to OFF (down). MIC 1 input is line level sensitivity.

Pin 4: Set to ON (up). MIC 1 input have Phantom power.

Set to OFF (down). MIC 1 input have No Phantom power.

Pin 5: Set to ON (up). When MIC 1 trigger input is shorted, a chime signal is playback first.

Set to OFF (down). When MIC 1 trigger input is shorted, there is No chime signal playback.

Pin 6: Set to ON (up). MIC 1 PTT function is enable. When MIC 1 trigger input is shorted, it override MIC 2 and Source input. A chime signal is can playback, but depend on pin 6.

Set to OFF (down). MIC 1 PTT function is disable.

12) MIC 1 Phoenix and RJ45:

Mic 1 balance input:

Trigger +/-: shorted to override all other input and have a 2 tone chime playback.

A PPS-A all call microphone can connect to the RJ45 socket and make an All call.

13) TEL EMG Phoenix:

100V~0: Balance 100V input.

+/- /gnd: Balance low level input.

When the input level is reach the threshold it override and mute all other input (MIC 1~6 and source 1~3).

14) TEL/EMG VR:

Turn left to reduce the output level, turn right to increase output level.