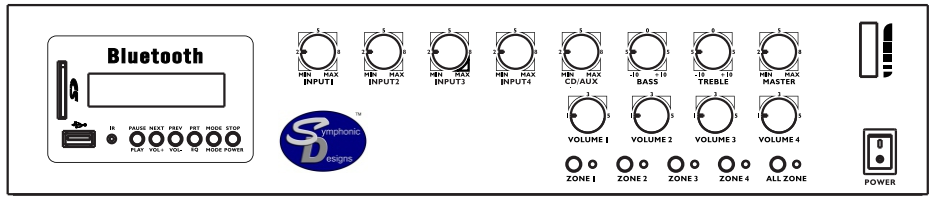
SD-MA240W

User Manual

FOUR ZONE AUDIO MIXING AMPLIFER



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SYMPHONIC DESIGNS 2-Year Limited Warranty

SYMPHONIC DESIGNS. (the "Company") warrants to the Original Purchaser that the item purchased is free from defects in workmanship or material under normal use. This warranty starts on the date of shipment of the hardware to the Original Purchaser.

During the warranty period, the Company agrees to repair or replace, at its sole option, without charge to Original Purchaser, any defective component. To obtain service, the Original Purchaser must return the item to the Company properly packaged for shipping. All defective products must be returned to the Company within thirty (30) days of failure. Products must be returned with a description of the failure and Return Merchandise Authorization (RMA) number supplied by the Company. To receive a RMA number and a return shipping address on where to deliver the hardware, call 610-429-1821. The shipping, and insurance charges incurred in shipping to the Company will be paid by Original Purchaser, and all risk for the hardware shall remain with the Original Purchaser until such time as Company takes receipt of the hardware. Upon receipt, the Company will promptly repair or replace the defective unit, and then return said unit to Original Purchaser, shipping prepaid. The Company may use reconditioned or like-new parts or units, at its sole option, when repairing any hardware. Repaired products shall carry the same amount of outstanding warranty as from original purchase. Any claim under the warranty must include dated proof of purchase or invoice. In any event, the Company's liability for defective hardware is limited to repairing or replacing the hardware.

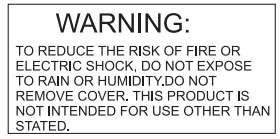
This warranty is contingent upon proper use of the hardware by Original Purchaser and does not cover: if damage is due to Acts of God (including fire, flood, earthquake, storm, hurricane or other natural disaster), accident, unusual physical, electrical, or electromechanical stress, modifications, neglect, misuse, operation with media not approved by the Company, tampering with or altering of the hardware, riot, war, invasion, act of foreign enemies, hostilities (regardless of whether war is declared), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, nationalization, government sanction, blockage, embargo, labor dispute, strike, lockout or interruption or failure of electricity, air conditioning, or humidity control, internet, network, or telephone service

The warranties given herein, together with any implied warranties covering the hardware, including any warranties of merchantability or fitness for a particular purpose, are limited in duration to two years from the date of shipment to the Original Purchaser. Jurisdictions vary with regard to the enforceability of warranty limitations, and you should check the laws of your local jurisdiction to find out whether the above limitation applies to you.

The Company shall not be liable to you for loss of data, loss of profits, lost savings, special, incidental, consequential, indirect, or other similar damages arising from breach of warranty, breach of contract, negligence, or other legal action even if the Company or its agent has been advised of the possibility of such damages, or for any claim brought against your by another party. Jurisdictions vary with regard to the enforceability of provisions excluding or limiting liability for incidental or consequential damages. You should check the laws of your local jurisdiction to find out whether the above exclusion applies to you.

This warranty allocates risks of product failure between Original Purchaser and the Company. The Company's hardware pricing reflects this allocation of risk and the limitations of liability contained in this warranty. The warranty set forth above is in lieu of all other express warranties, whether oral or written. The agents, employees, distributors, and dealers of the Company are not authorized to make modification to this warranty, or additional warranties binding on the Company. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by the Company and should not be relied upon.

This warranty gives you specific legal rights. You may also have other rights which vary from one jurisdiction to another.



GRAPHICAL SYMBOLS EXPLANATION

This symbol, wherever used,alerts you to the presence of uninsulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock.

This symbol, wherever used, alerts you to important operating and maintenance instructions. Please read.

⏚ Protective Ground Terminal

~ AC mains (Alternating Current)

ϟ Hazardous Live Terminal

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.

CAUTION

Describes precautions that should be observed to prevent damage to the product.

WARNING

Power Supply

Ensure that the mains source voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user.

Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock or fire. If in doubt, seek advice from a registered electrician.

Do not Remove Any Cover

Within the product are areas where high voltages may be present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed.

Covers should be removed by qualified service personnel only.
No user serviceable parts inside.

Fuse

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder.
Before replacing fuse, make sure that the product is OFF and disconnected from the AC outlet.

USE ONLY W*I*TH 250V FUSE

Protective Ground

Before turning the product ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock.

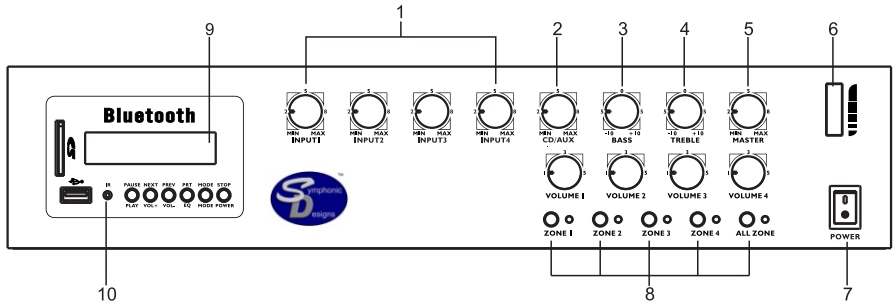
Never cut internal or external Ground wires. Likewise, never remove Ground wiring from the Protective Ground Terminal.

Operating Conditions

Always install in accordance with the manufacturer´s instructions.

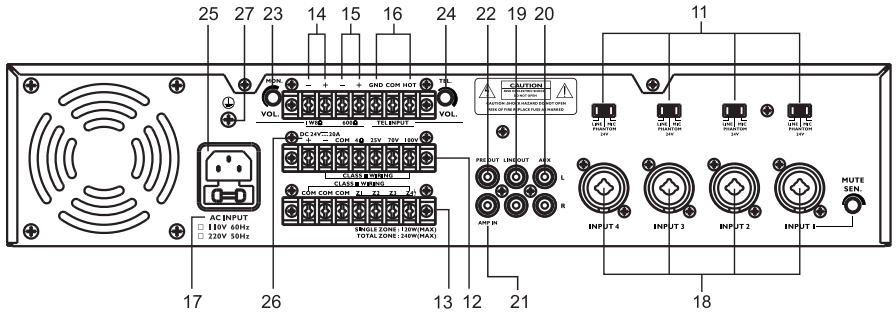
To avoid the risk of electrtic shock and damage, do not subject the product to any liquid/rain or moisture.
Do not use this product when in close proximity to water.
Do not install this product near any direct heat source.
Do not block areas of ventilation.

FRONT PANEL



1. Input 1 - 4 Volume Controls	6. Output level indicator LED
2. CD/AUX Volume Control	7. Power On / Off switch
3. Master Tone Control (Bass)	8. Zone paging select switches
4. Master Tone Control (Treble)	9. Mp3 player interface with bluetooth
5. Master Volume Control	10. IR input window

REAR PANEL



11. Input 1-4 (Line/Phantom/Mic) selector switch	20. AUX input (2 x RCA)
12. Loudspeaker output terminals	21. Audio input (RCA)
13. Zone output terminals	22. Pre output (RCA)
14. Monitor output terminals	23. Monitor output level control
15. Priority switch terminals	24. TEL/EMER input level control
16. TEL/EMER input terminals	25. AC in socket
17. Mains voltage 110/220	26. DC24V in socket
18. Input 1-4 (COMBO(XLR3P-Jack)/balanced)	27. Earth /Ground connection screw
19. Line out (2 x RCA)	

INSTALLATION NOTES

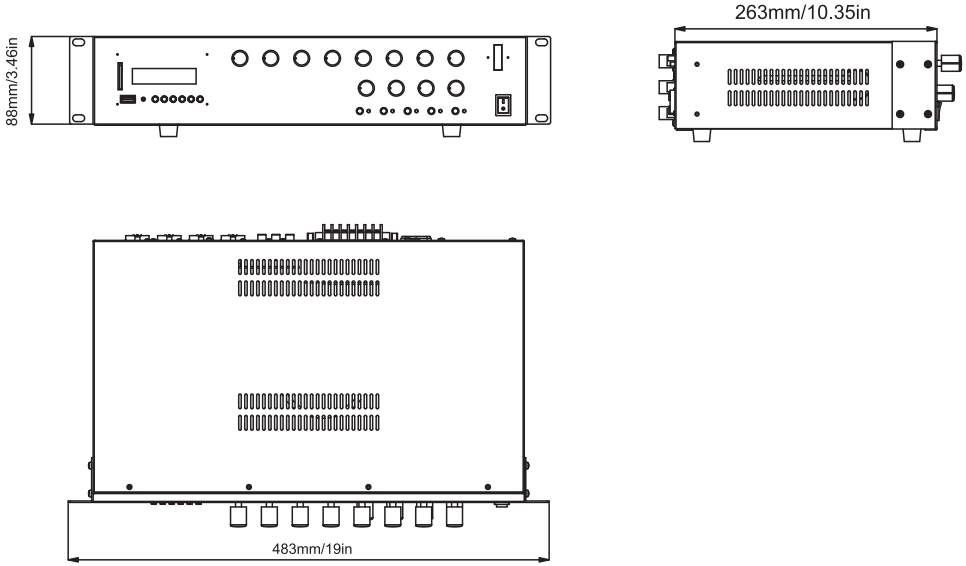
At all times the amplifier must be operated under appropriate conditions. This includes sufficient ventilation for the device and not exposed to direct sunlight, radiation or reflection from any heat source. When installing the amplifier, choose a location that is not affected by vibration. Install the amplifier in an environment that is free from dust and moisture.

CAUTION

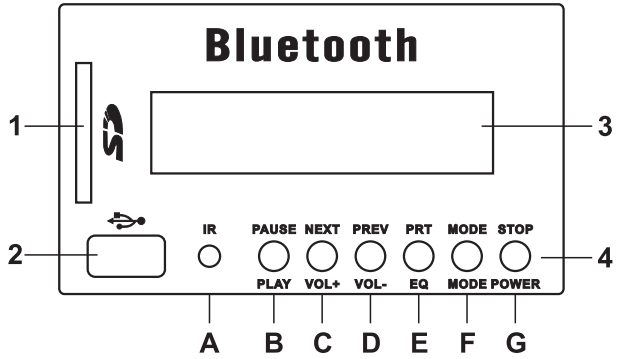
To reduce the risk of shock, all connections must be made before connecting the amplifier to the main supply. **Follow all building codes!**

*ENSURE PROPER GROUNDING AND BONDING OF THE UNIT

DIMENSIONS



MP3 PLAYER INTERFACE



1.SD(Input)

This slot is used to insert a SD, non-volatile memory card with Mp3 files to be read.

2 USB(Input)

Plug in any USB memory stick with Mp3 files to be played.

3.LCD

LCD screen displays all relevant information about the function being selected or the Mp3 file being played.

4.FUNCTION SELECTOR:

This section provides front-selectable push switches , allowing you to choose between one of the available functions.

A. IR Remote window

B. Play /Pause

- Press this button once to play the chosen song. Press and hold to momentarily pause the song.

C. Next /Vol+

- Press this button once to go to the next song.
- Press and hold this button to increase the volume of the Mp3 player.

D. Previous /Vol-

- Press this button once to go back to the previous song.
- Press and hold this button to lower the volume of the Mp3 player.

E. Repeat /EQ

- Press this button once to play the current song repeatedly until the stopped.
- Press and hold this button to select among different types of equalization applied to the song currently playing.

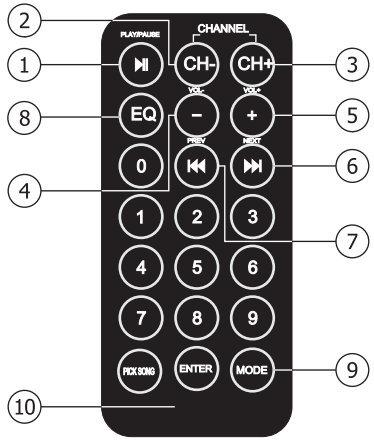
F. USB /SD/BLUETOOTH

- Press this button once to select USB and SD or BLUETOOTH

G. STOP/POWER

- Press this button once to stop the Mp3 player .
- Press and hold this button to turn on or turn off the Mp3 player.

REMOTE CONTROL



This remote control features all the necessary buttons to easily operate your Mp3 payer at a distance of up to 3 meters (9.84 ft) from the front of the unit.

1. PLAY/PAUSE
2. CHANNEL -
3. CHANNEL +
4. VOLUME -
5. VOLUME +
6. FORWARD
7. BACK
8. EQ SELECT
9. USB/SD/BLUETOOTH
10. BATTERY -The remote control unit needs a Cr2025 button-cell Battery to operate.

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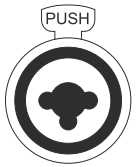
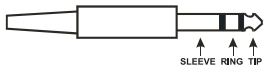
CONNECTIONS

Input Connection
Inputs 1~4 incorporate balanced standard COMBO sockets (1/4" stereo jack, and XLR 3P) on the rear panel.
Wiring is as follows:



Front View



XLR 3P
Pin1 : Screen
Pin2 : Signal (live)
Pin3 : Signal (return)

1/4" STEREO JACK
Tip : Signal (live)
Ring : Signal (Return)
Sleeve : Screen

NOTE: Inputs 1~4 incorporate an input selector **(11)***, according to the input source type (MIC or LINE). They also incorporate a 24V phantom power position for condenser microphones.

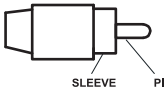
Potentiometers

Turn the front panel knobs (1)* clockwise to increase the volume or counter-clockwise to reduce the volume.

SD-MAW240W provides an auxiliary input **(20)*** which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player (LINE level).

Turn the front knobs (2)* clockwise to increase the volume or counter-clockwise to reduce the volume. .
The CD/AUX INPUT sockets (20)* are standard RCA phonos two sockets are supplied and these are linked together internally in parallel. This allows the stereo signal sources to be used without the need to obtain a special combiner, however you may wish to check with manufacturer of the signal source to ensure no damage will result if the left and right output channels are connected together in parallel.

RCA Phono plug connections



Sleeve - Ground
Pin - Signal

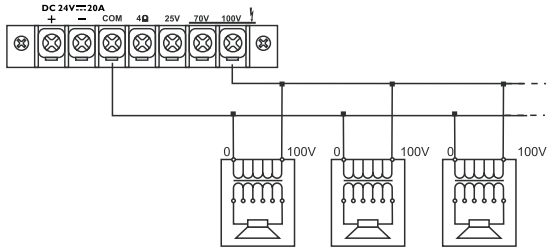
** Refer to Page 9 diagram*

Power In & Pre Out (21-22) ***REFER TO DIAGRAM ON PAGE 9***
These sockets connect the mixer/preamplifier stage to the power amplifier stage. The connecting link must be plugged in for normal operation as a mixer/amplifier. If a compressor/limiter, equalizer, or other external signal processor is used in the sound system, connect the "PRE OUT" to the input of the external processor and the output of the processor to "POWER IN" In the signal chain, "PRE OUT" is after the tone controls and the master volume control.

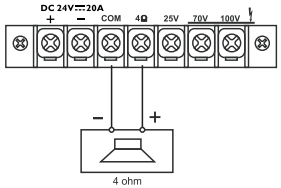
Loudspeaker Direct Outputs and Connection

SD-MA240W provides direct outputs according to the designed use:
- **High impedance lines (25/70/100V)**
- **Low impedance (4, 8, 16Ω)**

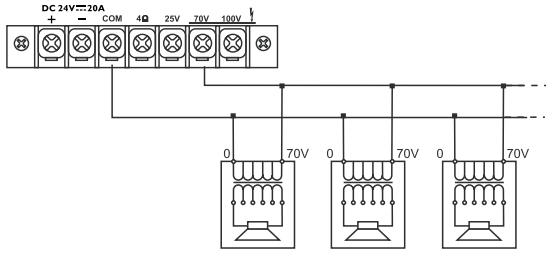
You can only use one of these outputs at any one time, any attempt to use two or more of these may result in damage to the amplifier. These outputs reproduce any input signal into the amplifier (INPUT's 1-4, Mp3 player interface)



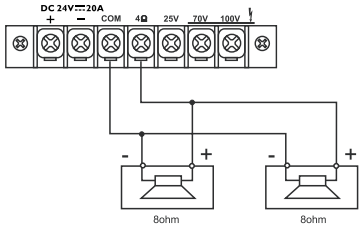
Connecting multiple speakers in parallel to the 100V output



Connecting a single speaker to 4 ohm output



Connecting multiple speakers in parallel to the 70V output



Connection two 8 ohm speakers in parallel to the 4 ohm output.

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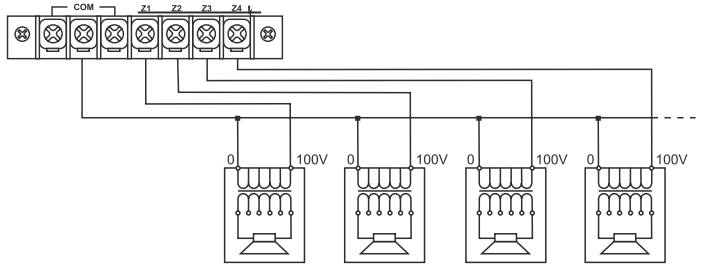
Zone Output Terminals (13) *
The **SD-MA240W** can feed four different 100V line zones. Connect the speakers for each zone using the 3 common terminals and the corresponding zone terminal (see drawing).



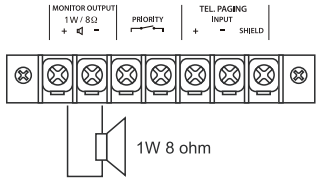
After connecting the load to the selected zone, push that zone's ZONE SELECT push button **(8)*** in order to activate it. The selected zone button will light. You can select any number of zones. Depress the push button to unselect the zone; the button will go off.

NOTE: Avoid switching on the amplifier without any load connected or without selecting any zone with the front panel ZONE SELECT buttons.

NOTE: When using any 100V line zone connections, low impedance speakers should not be used.

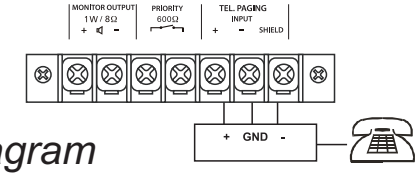
NOTE: The total power load connected to all zones MUST not exceed the nominal amplifier power.

Output terminals for auxiliary loudspeaker (14)*
These terminals allow the connection of a small external loudspeaker that gets driven by an internal auxiliary power amplifier, providing a 1W nominal output. Only the mixed audio signal coming from "INPUT 1" is included in the output. In addition, the output signal is controlled only by the Monitor volume control **(23)**.



Telephone/Emergency (16)*
The Telephone/Emergency input is for emergency announcements/signals and is not affected by the Master volume control. The volume can be set by the tel. paging volume control **(24)**.*
The terminals allow connection of a telephone/paging system interface.

NOTE: The telephone/Emergency input has the highest priority; all other inputs will be overridden.



**Refer to page 9 diagram*

TECHNICAL SPECIFICATIONS

Specifications:

Output Power (Rated):	240 Watts
Output Power (Max):	300 Watts
Audio Inputs:	4 MIC/Line, 1 Line (CD, Tuner, Tape, Aux) level
USB/SD Interface:	MP3/WMA formats
MIC (Impedance/Sensitivity):	600Ω / 2.7mV balanced
Line (Impedance/Sensitivity):	47kΩ / 100 mV
Aux (Impedance/Sensitivity):	20kΩ / 100 mV
CD (Impedance/Sensitivity):	47kΩ / 570 mV
Tuner (Impedance/Sensitivity):	56kΩ / 300 mV
Tape (Impedance/Sensitivity):	1kΩ / 1V
Direct Outputs:	4, 8, 16Ω / 25, 70, 100V
Zone Outputs:	4 Zones: 100V (only)
Pre-out:	600Ω / 1V
Monitor Output:	8Ω / 1W
Frequency Response:	30Hz - 20kHz / +/-3dB
EQ Control (Bass):	+/-10dB / 25Hz - 160Hz / 60Hz Center Frequency
EQ Control (Treble):	+/-10dB / 4kHz - 20kHz / 10kHz Center Frequency
S/N Ratio:	>80 dB (Line), >60 dB (MIC)
Total Harmonic Dist:	<0.5% at 1kHz rated power
Dimensions:	17.16" x 11.93" x 3.5" (436mm x 303mm x 88mm)