INSTALLATION AND OPERATION MANUAL

MUSIC ALL

CLASS-D
1, 2 or 4 CHANNEL AMPLIFIER

DA-120	**DA-2120**	**DA-4120**
DA-240	**DA-2240**	**DA-4240**
DA-500	**DA-2500**	**DA-4500**

Important Safety Information

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
9. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
10. Connect the device to a mains outlet with a protective earth connection.

Safety Warning

WARNING!

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT USE THE PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
TO PREVENT ELECTRICAL SHOCK
MATCH WIDE BLADE PLUG TO WIDE SLOT, FULLY INSERT.

Contents

Introduction

Features:

- Switching power technology power amplifier
- Class-D PA power amplifier of minimum power consumption
- Less rack space and less heat generation
- Single, double and quadruple channel power amplifier in 1HE 19" rack housing
- Rated power output at 120W, 240W or 500W
- Separate speaker outputs 8Ω/100V
- Balanced XLR input by phoenix connector
- Each input with separate gain control.
- Each channel with high-cut filter
- Built-in auto standby energy saving feature
- Separate channel indicators for protection, clip, input and output
- Complete short circuit, overload, high temp, clip and DC protection
- Wide AC input from 110V to 240V input

Description:

The DA range class-D power amplifier range uses switching power technology, which results in minimum power consumption and much higher efficiency up to 85%, and it helps to save installation rack space, generate less heat so as to extend its performance life span as a result.

The class-D amplifiers have a rated power output of 120W, 240W or 500W, so it could be used as digital public address system at minimum cost. The versatile loudspeaker outputs of both high impedance 100V & low impedance 8 ohms. It can be used in PA fixed installation or Hi-fi stereo sound installation jobs.

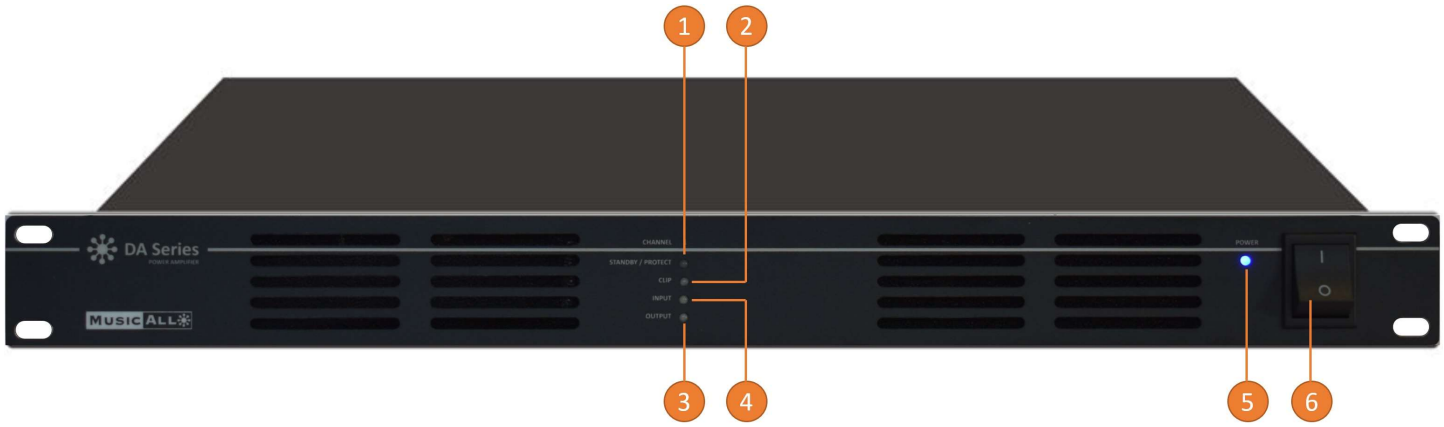
There is one balanced input by phoenix connector for each channel with individual gain control.

The built-in high-pass filters and auto-standby can be enabled (or disabled) through the dip switch pre-setting.

Automatic standby is activated when there is no signal input for one minute, and wakes up at sight of any input. Visual working status indicators include protection, clip, input and output for easy supervision. With complete short circuit, overload, high temp, clip and DC protection.

Wide AC power supply from 110V to 240V, thus it supports worldwide sound system installation.

Front Panel



1. **PROT**

   Protection indicator will light on in orange once the amplifier is in protection status. The protection may be result of a speaker line short circuit, speaker line open circuit, amplifier overload and inner working temperature too high, this indicator gives visual guidance, ask for repair. There are separate protection indicators for each channel.

   WHEN THE AMP IS IN STANDBY MODE, PROTECTION LED WILL TURN ON. When audio signal is back the amplifier will turn on again.

2. **CLIP**

   Clip indicator will light in red once the input or output is too high. There are separate CLIP indicators for each channel.

3. **INPUT**

   Input indicator will light in green once there is input signal detected. There are separate input indicators for every channel.

4. **OUTPUT**

   Output indicator will light in green once there is output signal. There are separate output indicators for each channel.

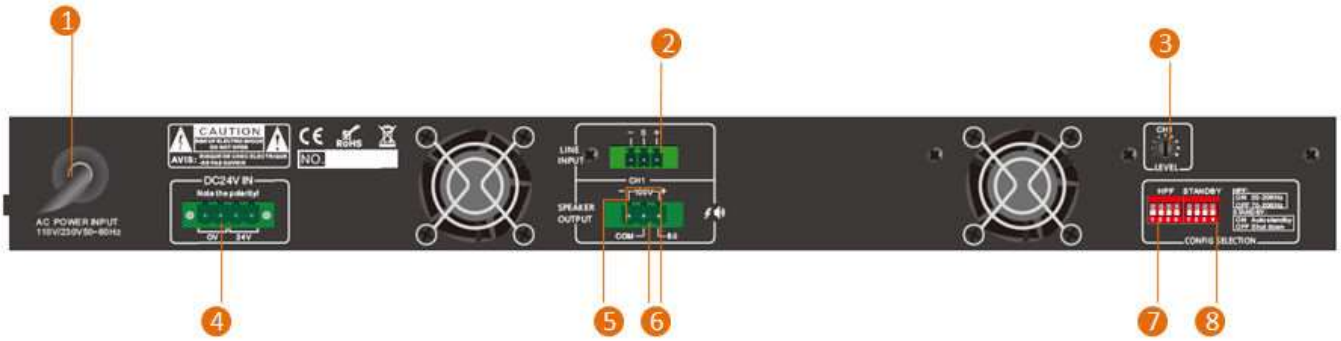
5. **POWER**

   Power indicator will be light in blue once the unit has been powered by AC or DC24V.

6. **POWER SWITCH**

   Power switch used to power on and power off the device.

Rear Panel



1. AC POWER CORD

AC power cord for input from 100V to 240V, auto-switching power supply.

2. LINE INPUT

The line input supports both balanced or unbalanced inputs from audio sources or mixer, these inputs are equipped with phoenix connectors.

3. GAIN CONTROL

The gain control is used to adjust the input from various inputs.

4. 24V DC Input

The 24V DC input is used to connect with battery for backup power supply in case of AC fails.

5. 100V SPEAKER OUTPUT

The speaker outputs shall be connected to 100V line loudspeakers, the negative end to the speaker negative end and the positive end to the speaker positive end. There are separate 100V speaker outputs which could be managed respectively. These speaker outputs are equipped with phoenix connectors.

Never mix the negative end and the positive one, which may cause the short circuit protection.

Never connect a low impedance loudspeaker to the 100V connection.

6. 8Ω SPEAKER OUTPUT

Use the 8Ω and COM connections when using low impedance 8Ω loudspeakers, the negative end to COM connection and the positive end to the 8Ω connection. These speaker outputs are equipped with phoenix connectors.

Never mix the negative end and the positive one, which may cause the short circuit protection.

Never connect a 100V loudspeaker to these 8Ω connections.

7. HIGH PASS FILTER

The high pass filter function will be enabled or disabled by setting the HPF dipswitch. There are high pass filters for every channel.

8. AUTO-STANDBY

The Auto standby function will be enabled or disabled by setting the Standby dipswitch. The enabled auto-standby function will automatically set the amp in standby when no input has been detected within 1 minute. The protect LED will light up. The amplifier will immediately wake up when there is detection of input signal. There are separate auto-standby dipswitches for every channel.

Speaker Connection

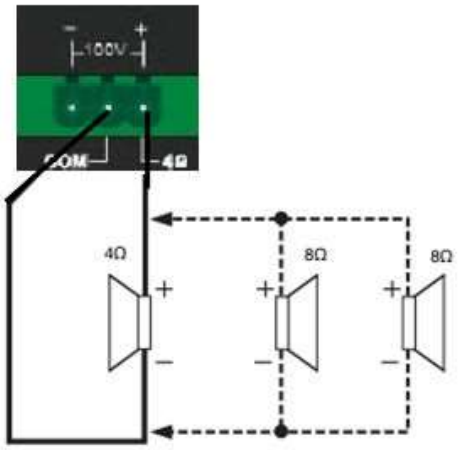
- Connecting 4-16Ω Speaker Systems

When connecting conventional 4-16Ω speaker systems, connect the speaker's positive (+) side to the ter minal labeled 8Ω. Connect the speaker's negative (-) side to the terminal labeled COM.

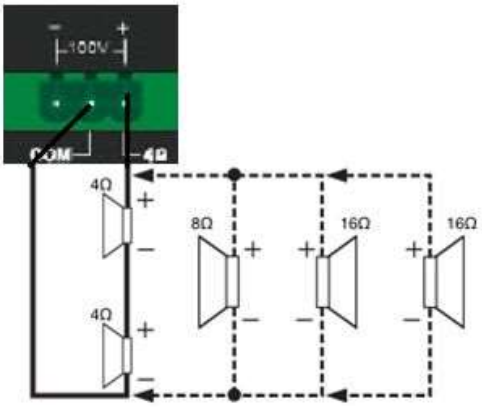
- Connecting 100V Distributed Speaker Systems

When connecting a high-impedance (100V) speaker system in parallel, connect the speaker's positive (+) side to the terminal labeled 100V +. Connect the speaker's negative (-) side to the term inal labeled 100V -.

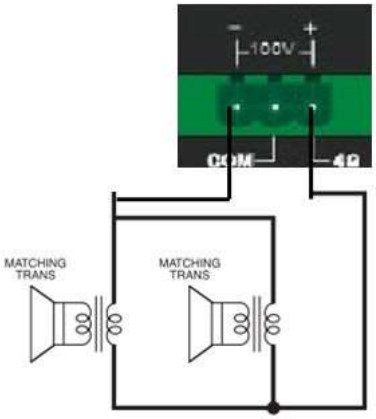
FOR 4Ω LOW IMPEDANCE SPEAKER CONNECTION



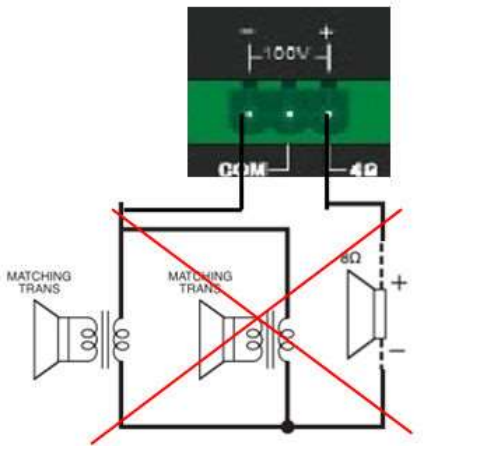
FOR 8Ω LOW IMPEDANCE SPEAKER CONNECTION



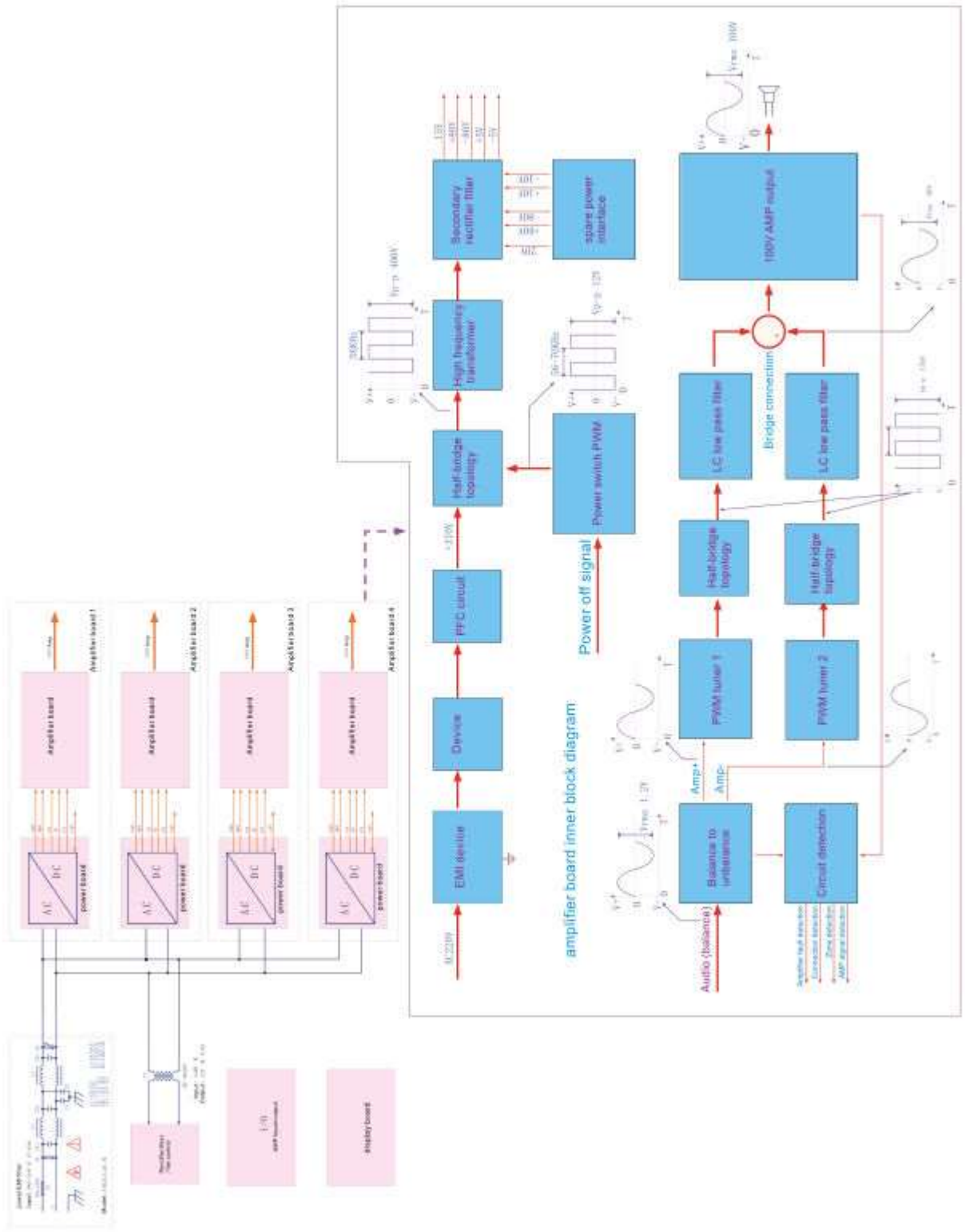
FOR 100V SPEAKER WITH TRANSFORMER CONNECTION



WRONG SPEAKER CONNECTION



Block Diagram



Specifications

Model	DA-120	DA-240		DA-500
Description	Single Channel Class-D Power Amplifier			
Rated Output Power	1x120W	1x240W		1x500W
Weight (Kg)	4.0	4.2		5.0

Model	DA-2120	DA-2240		DA-2500
Description	Dual Channel Class-D Power Amplifier			
Rated Output Power	2x120W	2x240W		2x500W
Weight (Kg)	6.5	7.5		8.5

Model	DA-4120	DA-4240		DA-4500
Description	Quadruple Channel Class-D Power Amplifier			
Rated Output Power	4x120W	4x240W		4x500W
Weight (Kg)	8.3	8.8		9.8

Speaker Output	8Ω & 100V
Frequency Response	HPF OFF 20Hz-20KHz (+1/-2dB) HPF ON 70Hz-20KHz (+1/-3dB)
Input	0.775V, 0dBu, balanced phoenix connector
Input Impedance	10KΩ
THD	<0.1% (1KHz/-3dBv, 100W)
S/N Ratio	>80dB
Crosstalk	>60dB, 1KHz, Max output

Power Supply	Wide AC input from 110V & 240V, 50-60Hz
Dimension	482(W)x420(D)x44(H) mm

Warranty	3 years warranty and free spare parts

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