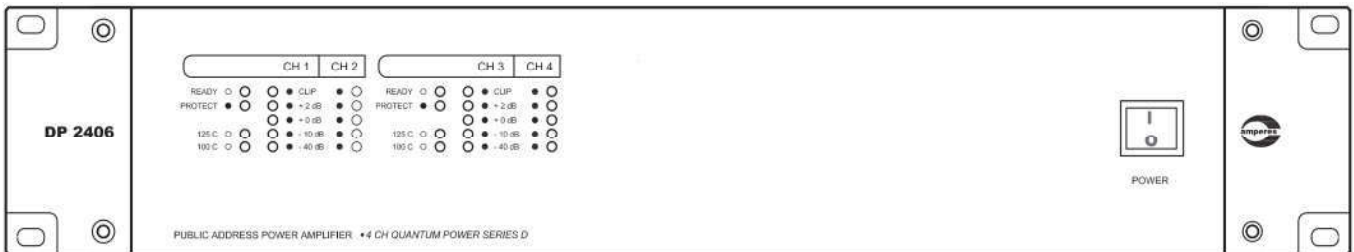




INSTRUCTION MANUAL

DP2406

4 CH 60W 100V Multi Channel Amplifier



Thank you for choosing another quality product from Amperes Electronics.

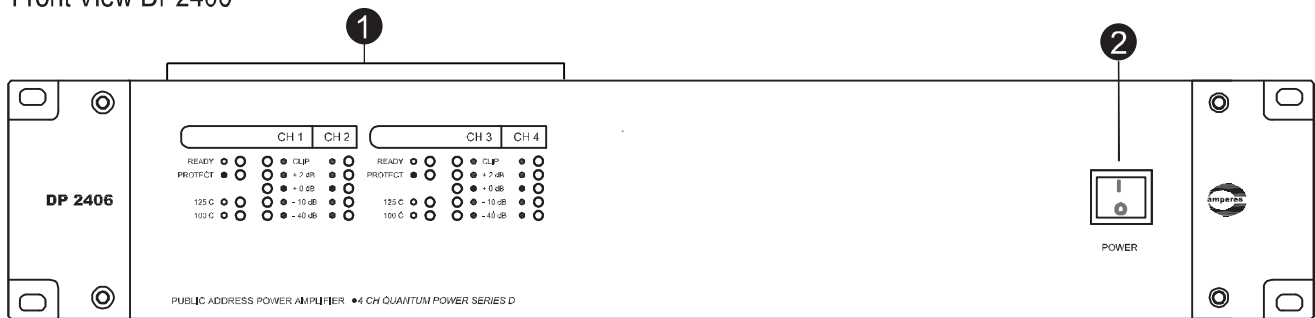
DP2000 Series are the new models of amplifiers which had been further refined to meet the market demands. DP2406 is a quad channel version with 60W 100V output per channel whereas DP2212 shall be dual channel with output capacity of 120W 100V per channel.

Class D power engine is the core driver of the DP2000 series, which has various advantages over conventional circuitries, among them are the higher amplification efficiency thus emitting lesser heat and current draw, flatter frequency response and able to withstand higher operating temperature while maintaining its amplification characteristics.

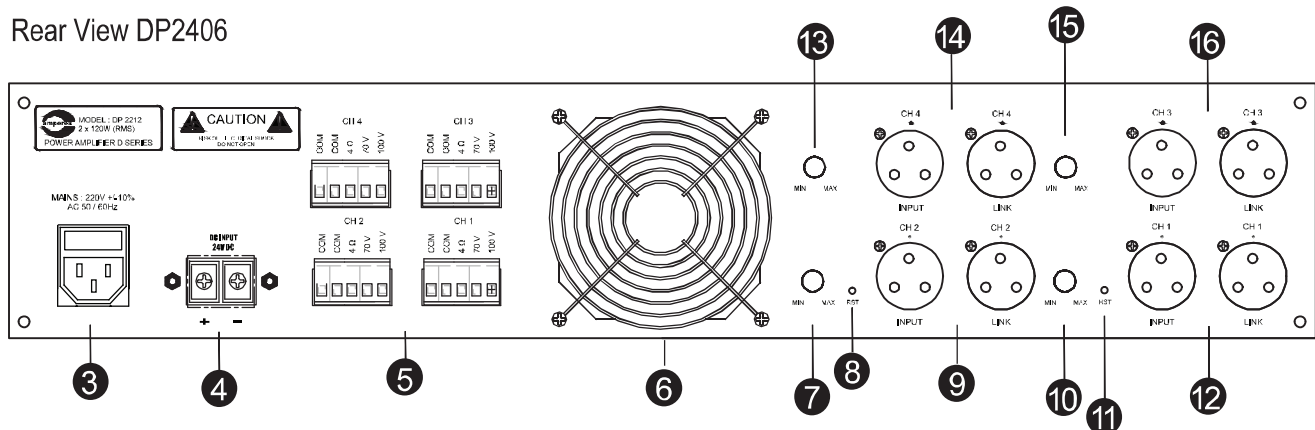
It is most suitable for application in Matrix paging setup, where multiple channels of amplifiers are required. In system which has small load for each channel, DP2000 amplifiers shall be the right choice as the unit count shall be greatly reduced, which translates into rack space savings.

Parts Identifications

Front View DP2406



Rear View DP2406



1. CHANNEL 1, 2, 3 & 4 INDICATION LEDs

Mains LED for incoming mains supply & protect LED is to indicate if the unit is switched to protection mode. Clip LED shall lit if the incoming signal is too high whereas others to indicate signal level in two level i.e. -40 dB & -10 dB.

2. MAINS SWITCH

For switching mains ac supply and the corresponding LED shall lit accordingly. Mains LED shall not lit if the back up DC supply is available.

3. MAINS AC CORD

Mains AC cord comes with standard British 3 pin plug with fuse rating of 5A.

4. DC 24V INPUT

The unit operates on 24V DC. It is preferred that the unit to be supplied directly from the uninterrupted power source, ie: Back up batteries. Alternatively, connect it to regulated power supply unit which is in turned has back up supply.

5. SPEAKER OUTPUT TERMINAL (CHANNEL 1, 2, 3 & 4)

Outgoing terminals to speakers available in 4 Ohm, 70 and 100V line for usage with transformer coupled speakers. The total speakers combined should have impedance higher than stated in the corresponding output terminals to avoid overloading.

Loudspeakers with suitable matching transformer can be connected to the 30 or 70 or 100V line outputs in parallel. However the total load should not exceed the nominal power output rating of the amplifier.

Do not parallel two power amplifiers in order to gain higher power rating as this may cause overloading in the event that any one of them failed.

Parts Identifications

6. VENT FAN

The vent fan draws internally generated hot air & dispersed by the fan. The fan operates continuously with low speed. To allow proper cooling, please ensure that the ambient is properly ventilated.

7. VOLUME KNOB (CHANNEL 2)

Output volume is adjustable from -15 dB to 0 dB

8. RESET BUTTON (CHANNEL 2 and 4)

Button for resetting the unit, when amplifier is overloaded or overheat protection cut off is activated. The buffering is for 2 channels.

9. INPUT JACKS (CHANNEL 2)

Incoming signal to the unit is via 3 pin XLR female socket and the adjacent male jack is for parallel linkage to the next unit.

10. VOLUME KNOB (CHANNEL 1)

Output volume is adjustable from -15 dB to 0 dB

11. RESET BUTTON (CHANNEL 1 and 3)

Button for resetting the unit, when amplifier is overloaded or overheat protection cut off is activated. The buffering is for 2 channels.

12. INPUT JACKS (CHANNEL 1)

Incoming signal to the unit is via 3 pin XLR female socket & the adjacent male jacks is for parallel linkage to the next unit.

13. VOLUME KNOB (CHANNEL 4)

Output volume is adjustable from -15 dB to 0 dB

14. INPUT JACKS (CHANNEL 4)

Incoming signal to the unit is via 3 pin XLR female socket and the adjacent male jack is for parallel linkage to the next unit.

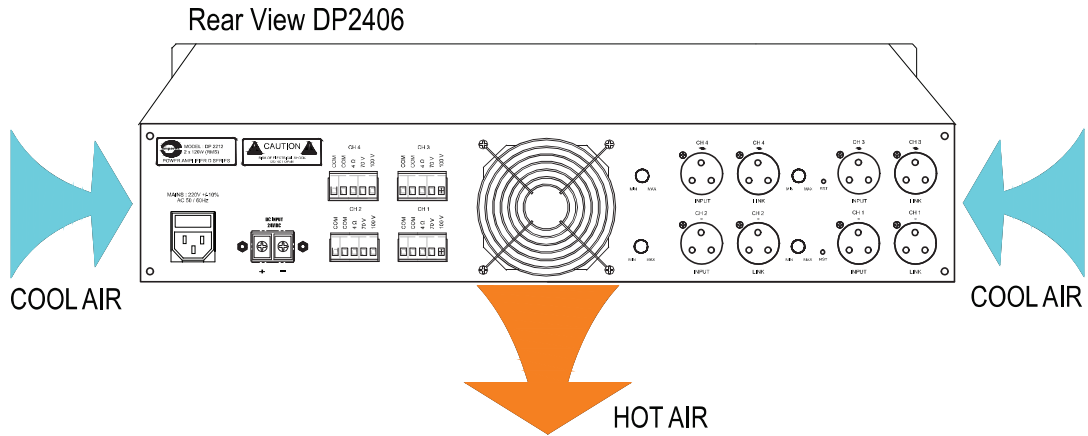
15. VOLUME KNOB (CHANNEL 3)

Output volume is adjustable from -15 dB to 0 dB

16. INPUT JACKS (CHANNEL 3)

Incoming signal to the unit is via 3 pin XLR female socket & the adjacent male jacks is connected parallel for linkage to the next unit.

Unit Installation



The above diagram depicts the air flow pattern for amplifier cooling system. Cool air is pulled from the side vent holes and warm air shall be dissipated via the continuous rotating fan.

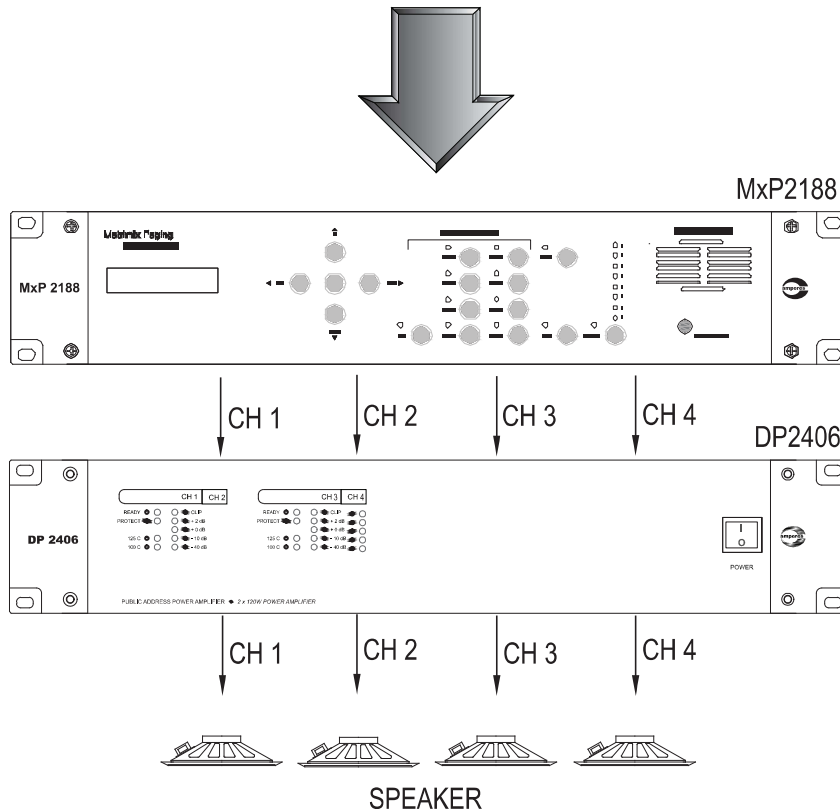
Please ensure these vent holes are not blocked in order to keep the operating temperature at optimum. Allow a breathing space of 100 mm for each vent outlet.

For installation in rack, we recommend that internal rack ventilation fans are installed, one for cool air intake and the other for heat dissipation.

The optimum operating temperature of the unit shall be kept at approximately 40 degree Celsius.

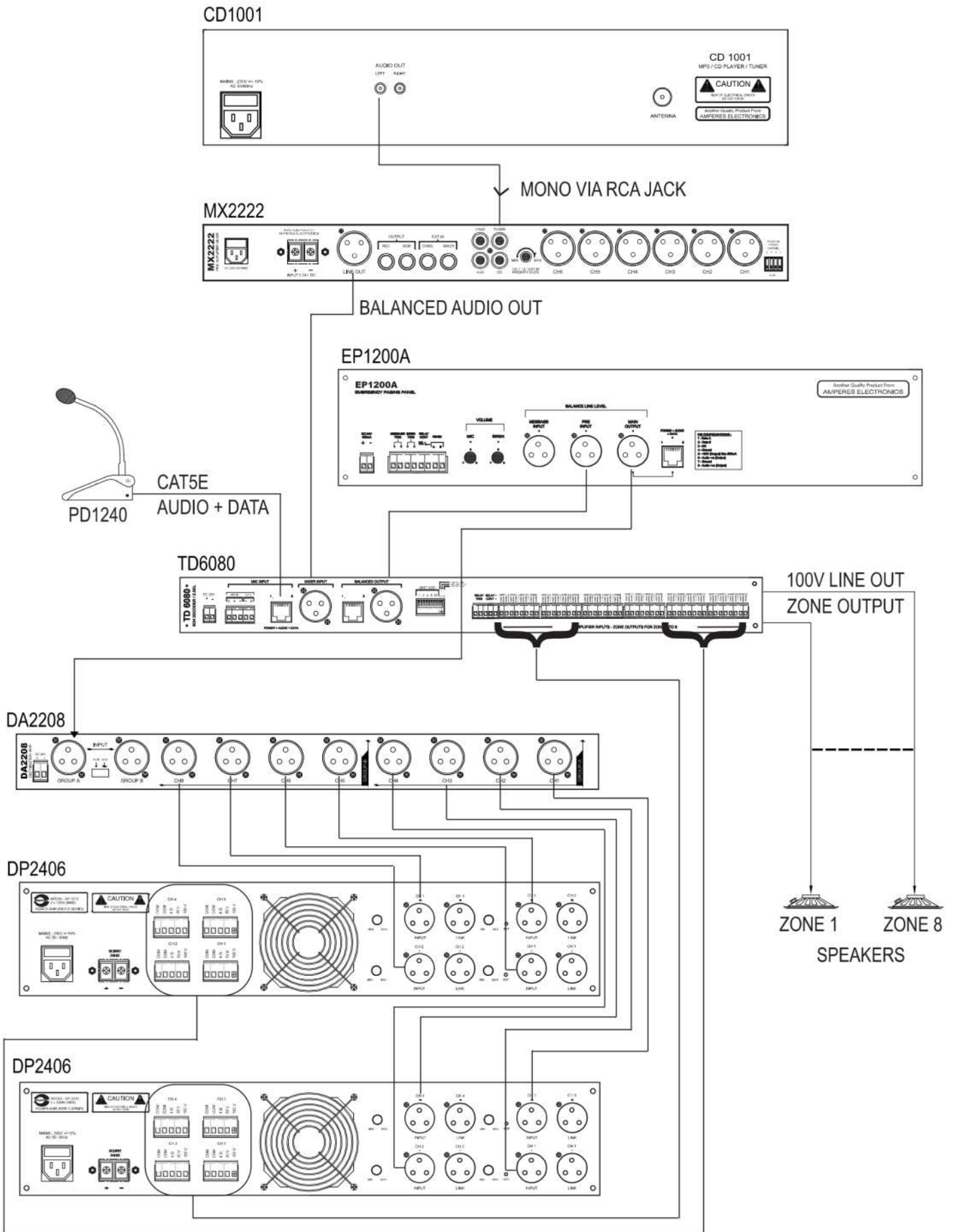
Application Schematic

MULTIPLE INPUT SOURCES



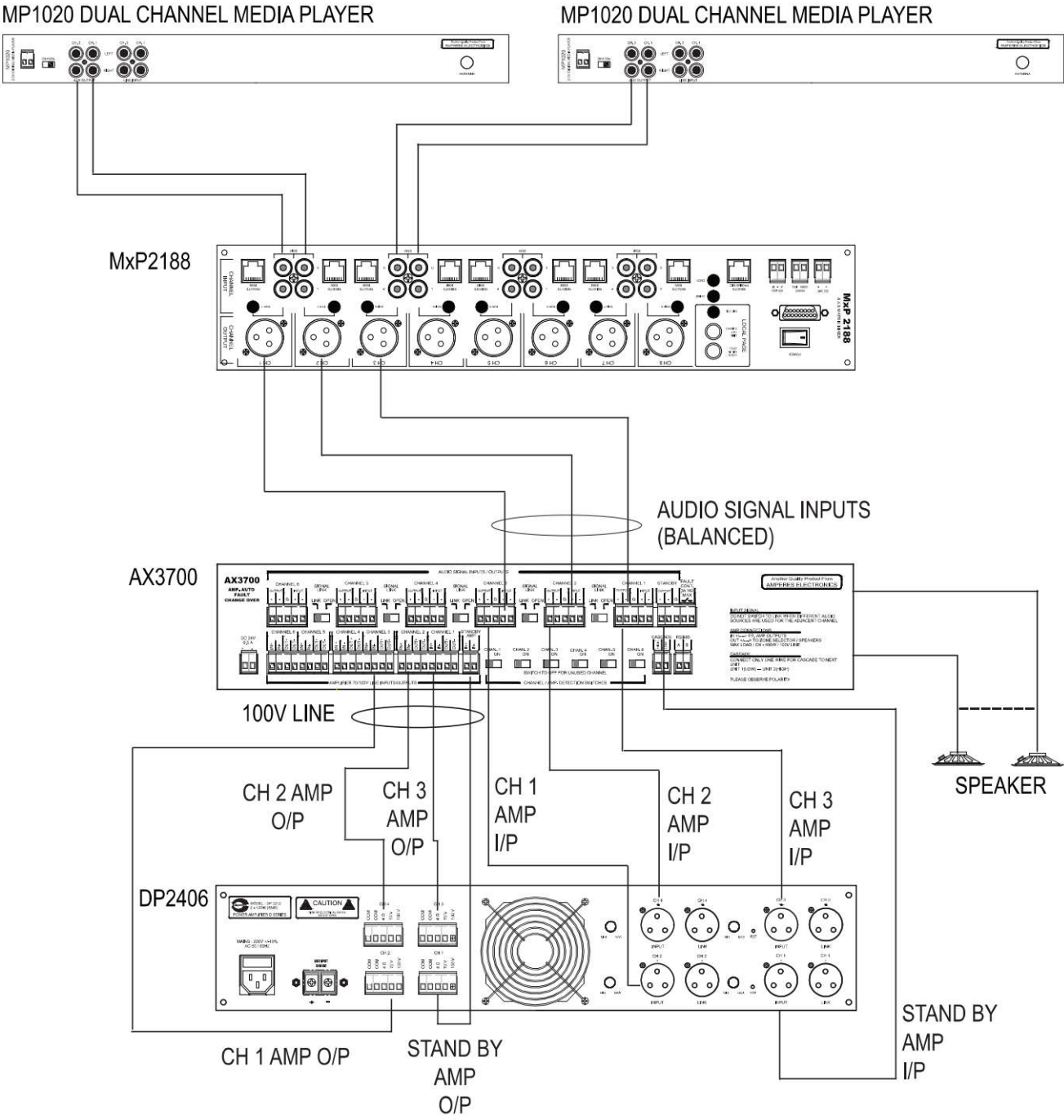
System Connections - Normal Applications

Application example using one duty amplifier with one standby unit connecting to two zones of speakers.



System Connections - With Auto Fault Changeover

Application with Amperes AX3700 as auto amplifier changeover unit. (24V DC power supply connections and incoming 240V ac mains not shown.)



NOTE:
The above diagram shows an application using matrix and AX3700 changeover with DP2406. One of the channel of DP2406 serves as a standby amplifier whereas other 3 channels serve respective zones.

Summary Of Features

- Class D amplifiers for wider frequency response
- Low power loss with higher efficiency circuiting
- Available in 2 x 120W or 4 x 60W 100V Line
- High ambient temperature operating condition
- AC and DC operation

Technical Specifications

Rating	4 x 60W 100V line
Operating Voltage	220 - 240V ac / 24V DC
Current Consumption	1.4A
Current (Load / Standby)	10.2A / 0.7A
Input	4 x XLR
Input Sensitivity	1.25 Vrms Balanced
Outputs	100V, 70V, 30V
Frequency response	100Hz ~ 16kHz + / - 3 dB
Protection	Thermal, Short Circuit AC & DC Fuse
Indicator	Power, Audio Input Level, Over temperature, Amplifier Faulty
Cooling system	Via Continuous Operating Fan
Dimension (WxHxD)	430 x 88 x 300 mm
Weight	13.3 kg

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized master distributor, TNT Links Sdn Bhd / MyPA Systems Sdn Bhd. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

This warranty covers all the material and manufacturing defects and is valid for a period of 12 months from the date of purchase or for a longer period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

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It is recommended that all services and repairs on this product be carried out by AMPERES ELECTRONICS SDN BHD or its authorized service agents.

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