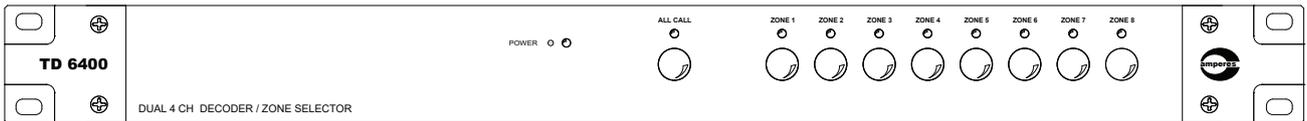




INSTRUCTION MANUAL

TD6400

2 x 4 Ch Decoder / Zone Selector



Thank you for choosing another quality product from Amperes Electronics.

TD6400 is a dual 4 channel zone decoder and selector which provides more flexibility in zone assignment. This is useful when it is to work with Matrix Controller (MxP2288) as matrix zone extender. Number of unused zone shall be reduced in matrix grouping.

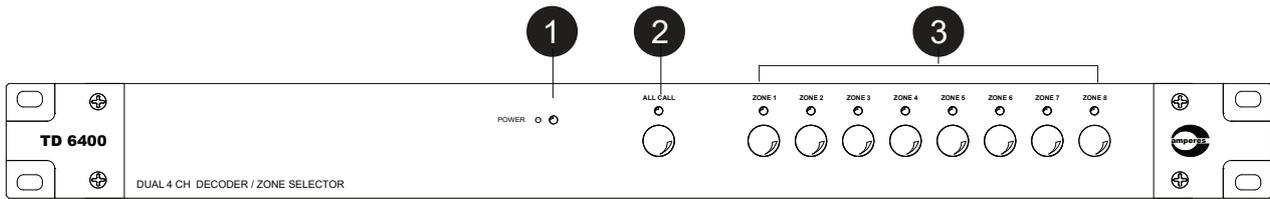
It works similarly to TD6080. Each group of 4 zones can be assigned a starting zone address, thus it is far more flexible in zone configuration.

This manual is suitable for TD6400 firmware version 2.22 and above

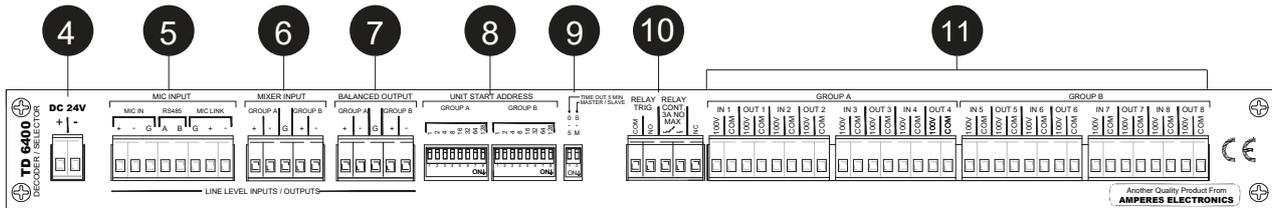


Parts Identification

Front View:



Rear View:



1. LED INDICATORS

POWER LED indicator.

2. ALL CALL SWITCH

All zones will be activated by pressing this switch, regardless of any inactive zone.

3. FRONT PANEL ZONE SWITCH - ZONE 1 - 8

Switching for zone 1 to 8. For grouping of zones using matrix, please refer to page 7.

4. DC SUPPLY INPUT

24V DC supply is required to operate this unit. Ensure the polarity is correctly terminated to the port. It is recommended that the supply with 1A rating of regulated source is used. Amperes PS9400 is recommended as a DC supply source to your entire installation.

5. MIC INPUT

MIC IN : The connectors are to link to PD series of paging microphones via EX2800 using 2 pair screen cable . In the event that the paging mic is located nearby, EX2800 can be omitted and terminated directly from paging mic's RJ45 to these connectors.

RS485 : Communication port link to paging mic or external devices.

MIC LINK : Link a paging mic audio signal to the microphone input (MIC IN) of the TD6400.

6. MIXER INPUT (GROUP A & GROUP B)

BGM source from mixer output. This shall be used when there is audio (BGM) grouping in the system.

Parts Identification (Con't)

7. BALANCED OUTPUT (GROUP A & GROUP B)

Balanced audio signal from paging mic and BGM are connected to amplifier audio inputs via these terminals.

When user activate Group A zones via TD6400 front panel switches, the GROUP A - BALANCED OUTPUT will play BGM, and activation from a paging mic will broadcast paging announcement.

While BGM is playing, activation of paging mic will override the BGM to the group zones and broadcast paging announcement. Paging signal shall have priority over BGM.

8. UNIT ADDRESS DIP SWITCHES

Each TD6400 caters for 2 sets of 4 consecutive zone outputs. Zone assignment is achieved by configuring the DIP switch setting to the binary number of the starting zone. TD6400 allows flexible starting number of each group of zones. Maximum zone number allowed is 248 (starting zone at last unit must be set to 245).

	<u>GROUP A</u>	<u>GROUP B</u>
Example 1:	1000 0000 - Zone 1 to 4	1010 0000 - Zone 5 to 8
Example 2:	0110 0000 - Zone 6 to 9	1000 0111 - Zone 225 to 228

Note: On DIP switch, ON corresponding to binary 1; OFF corresponding to binary 0.

9. DIP SWITCH

DIP setting for Time out, Master and Slave setting

<u>PIN 1</u>	<u>PIN 2</u>
<u>TIME OUT SETTING</u>	<u>MASTER & SLAVE SETTING</u>
ON = TIMER 5 MIN	ON = MASTER
OFF = TIMER INFINITY	OFF = SLAVE

10. EMERGENCY OVERRIDE TERMINAL

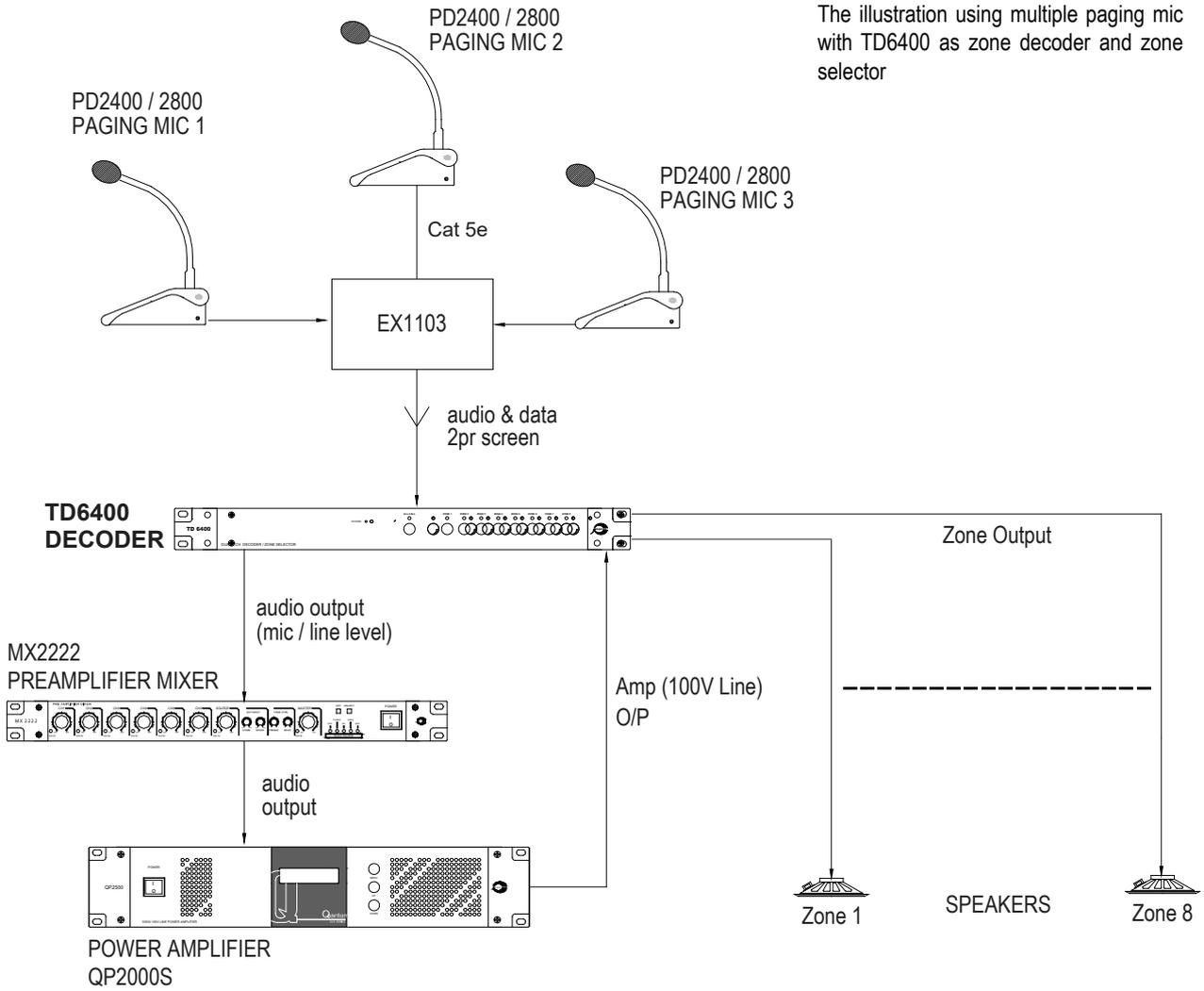
External switch (eg. from emergency paging mic with dry contact) can be connected here, which shall trigger the built in relay when pressed. This shall then provide a dry contact in which would enable the installer to apply several functions such as providing 24V DC output for volume controller overriding purpose, trigger external device or link to BAS system, etc. Refer to page 10 for connection diagram.

11. AMPLIFIER ZONE OUTPUT CONNECTOR (ZONE 1 - 8)

Outputs from amplifiers are connected to these terminals and speaker zoning is configured to the respective unit of amplifier. The user has the flexibility to configure the zoning system as each zone comes with single amplifier output connection. Please observe polarity when terminating the amplifier / speaker zones and ensure that each zone is not overloaded (max load 500W 100V line).

General Schematic Diagram

The illustration using multiple paging mic with TD6400 as zone decoder and zone selector

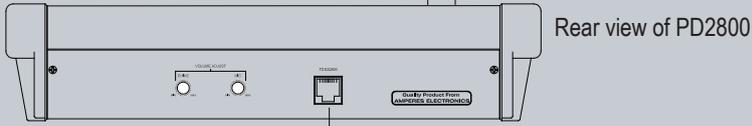


Note:

All PD Series of Amperes paging microphones can be used with TD6400.

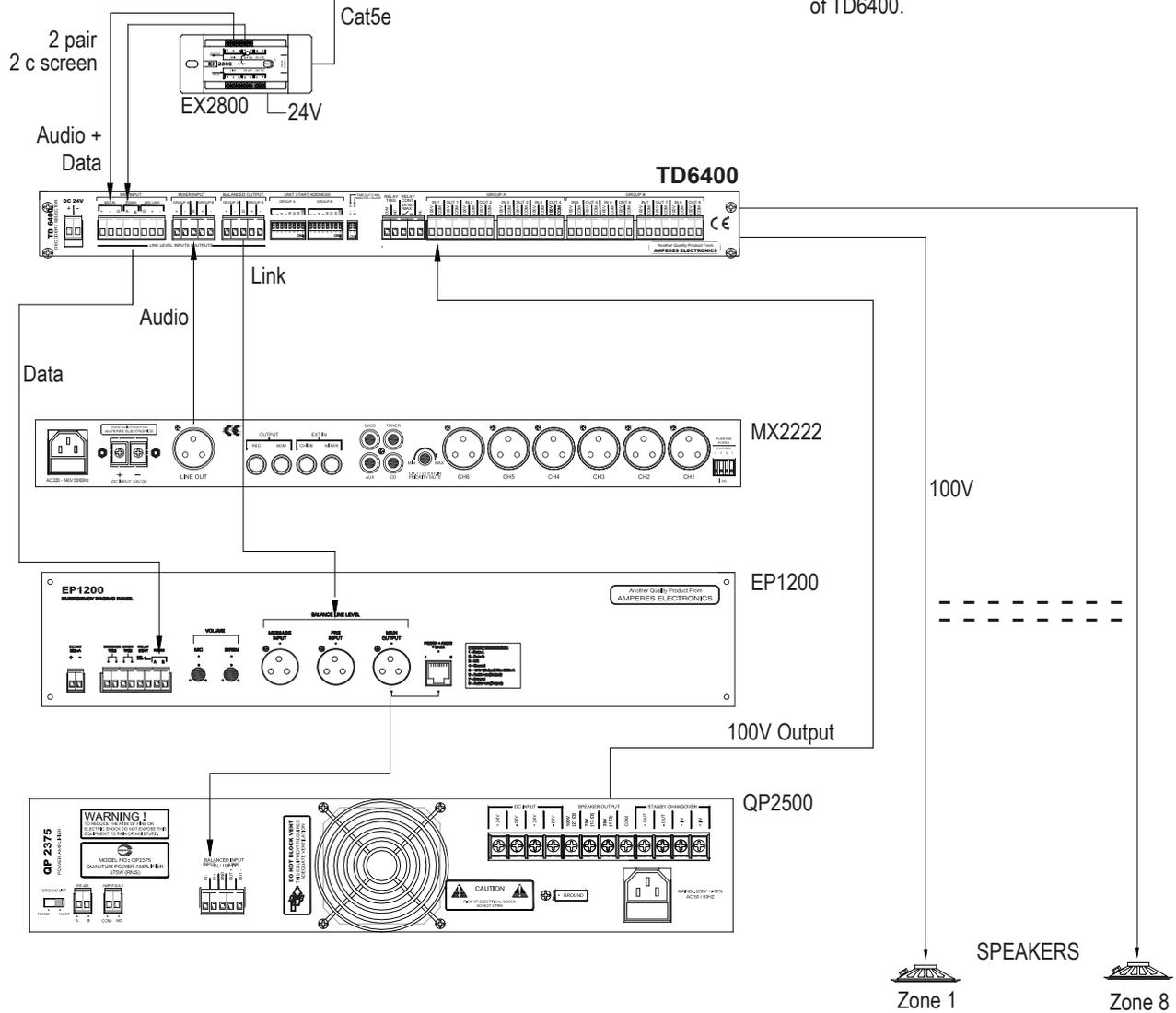
Connecting The Unit - Single Unit Installation

For Single unit paging mic, set priority level to 0 (PD2800) or 00 (PD2400). Priority 1 is highest.



Remote location

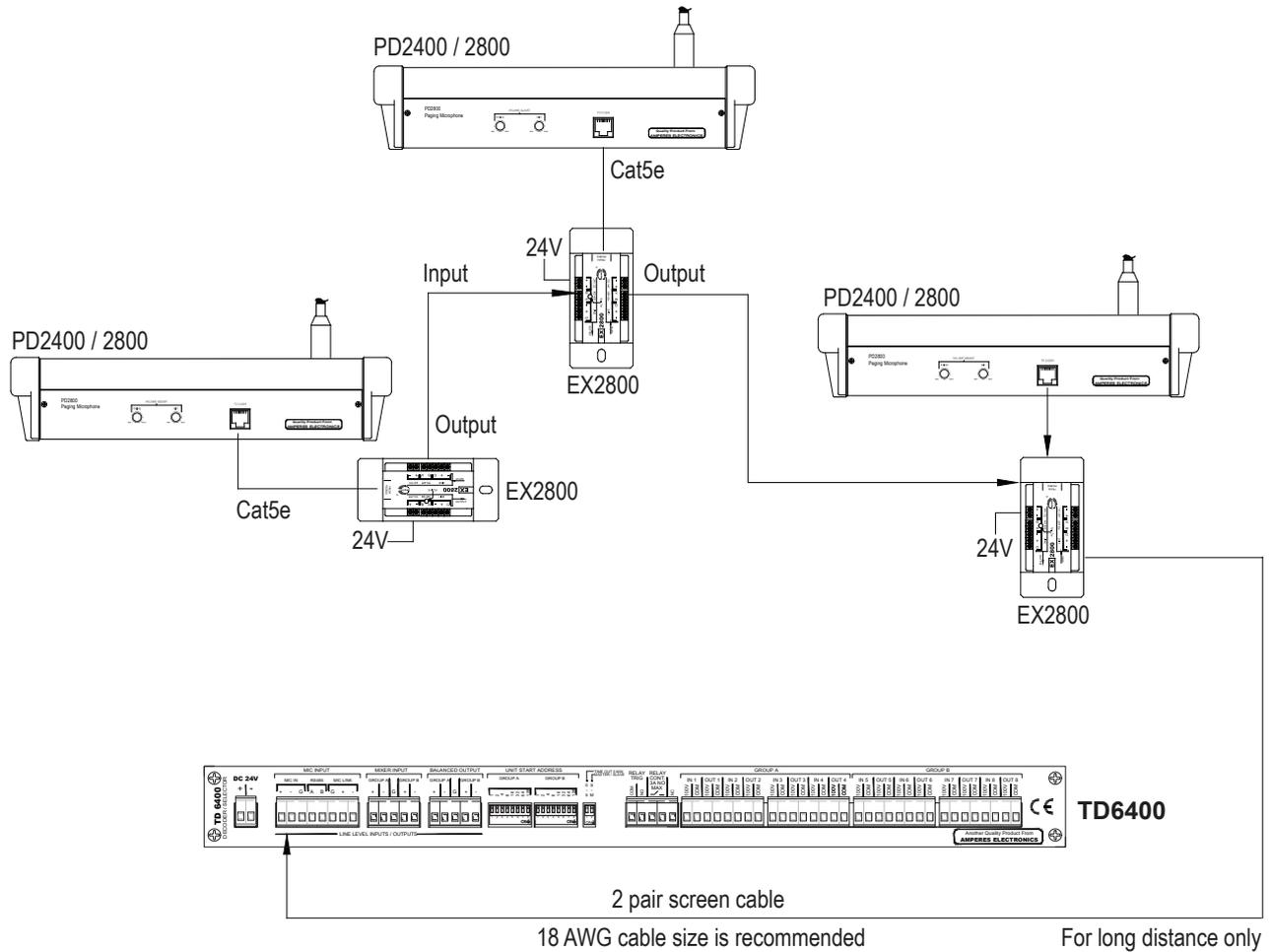
This illustration is used when a single mic is to be connected to 8 zones of TD6400.



Note:

Also refer to page 10, in using EP1200 to trigger emergency overriding at volume controllers.

Connecting The Unit - Multipoint Paging Installations



Note :

- 1) Use EX2800 if more than one PD2400 / 2800 are available in the system. The single from last EX2800 shall be directly connected to TD6400 mic input port.
- 2) A higher priority mic shall override any lower priority unit in active.

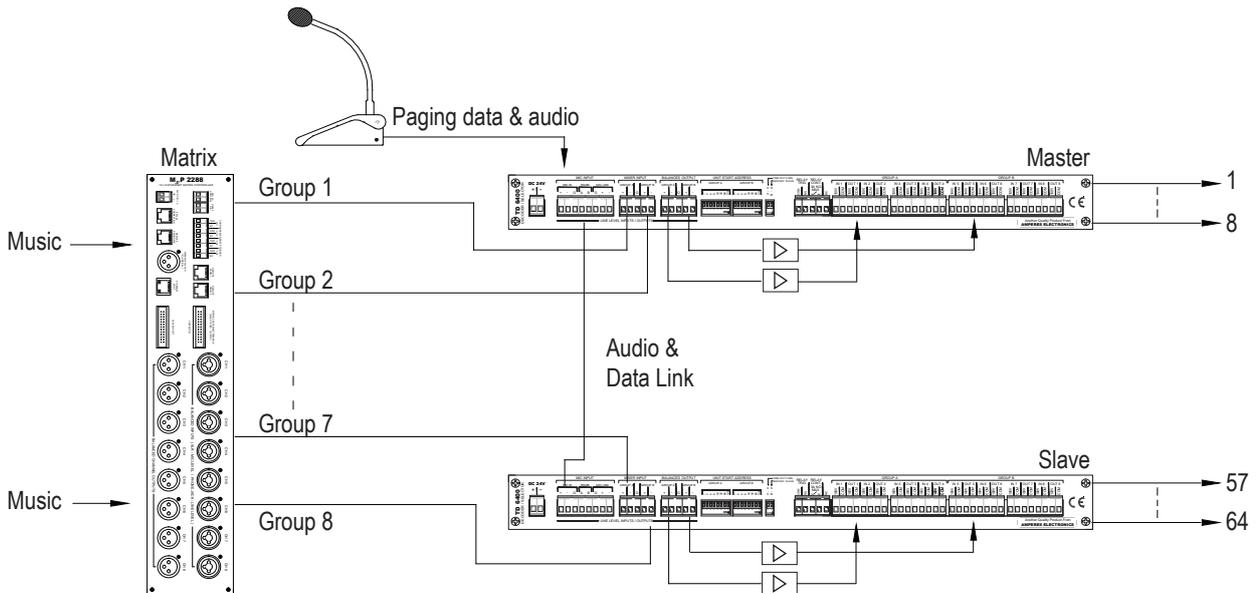
PD2400 :

3 levels of priority available for PD2400.

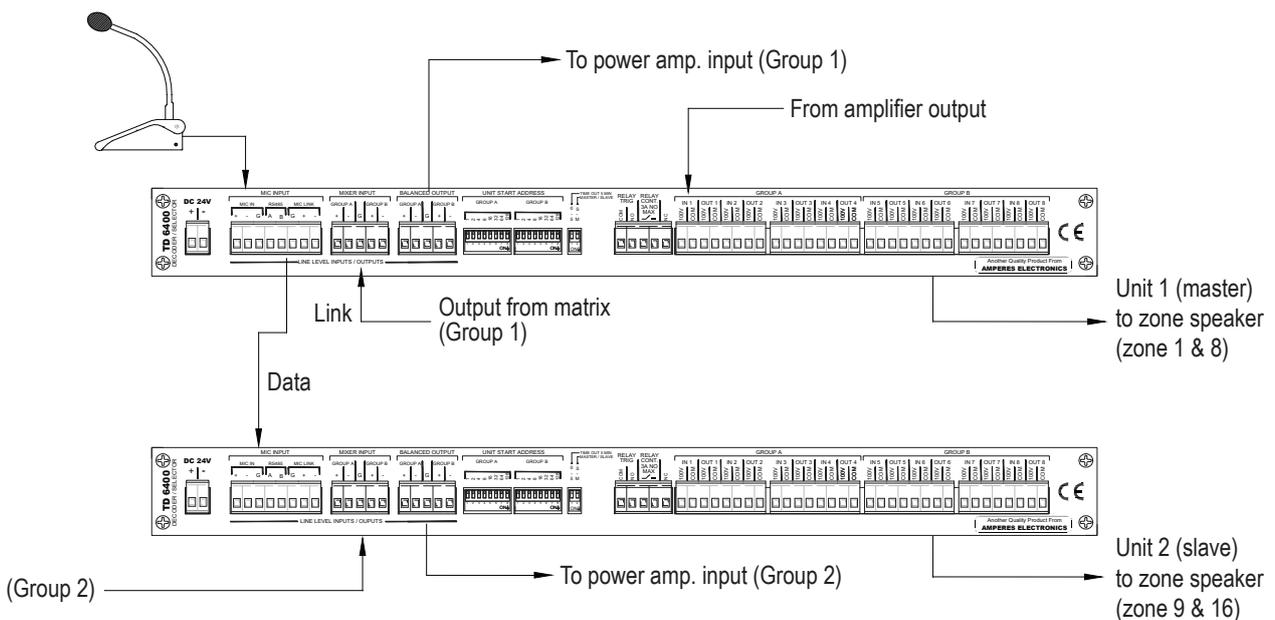
PD2800 :

9 levels of priority available for PD2800.

Connecting The Unit - BGM Grouping (Matrix)



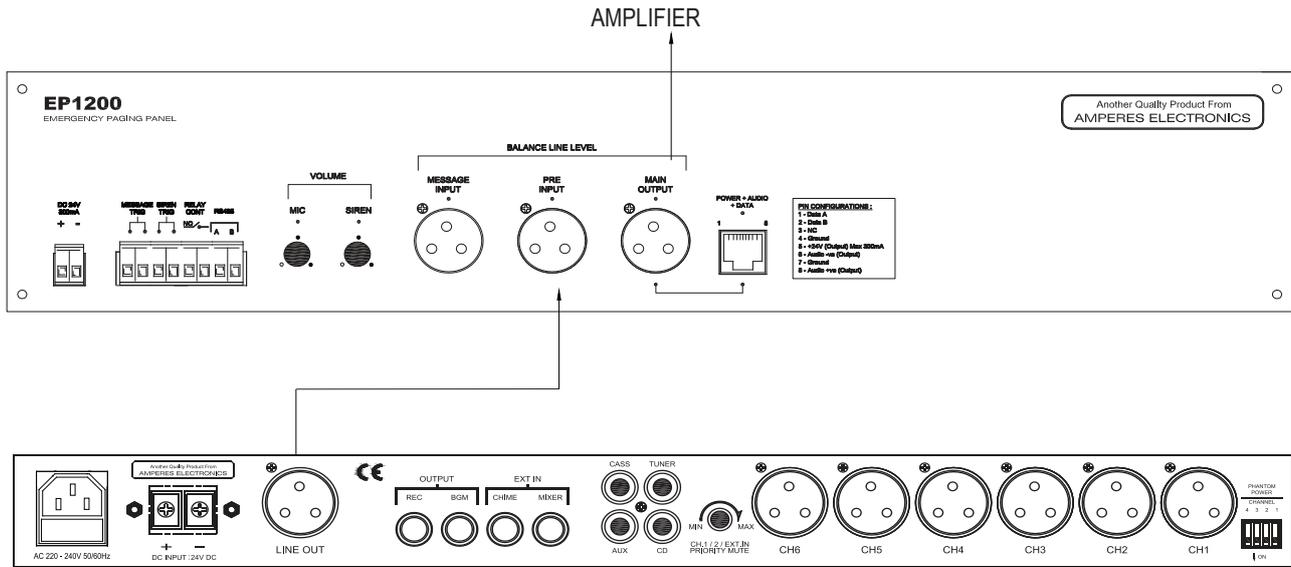
Detailed BGM Grouping



Application Note:

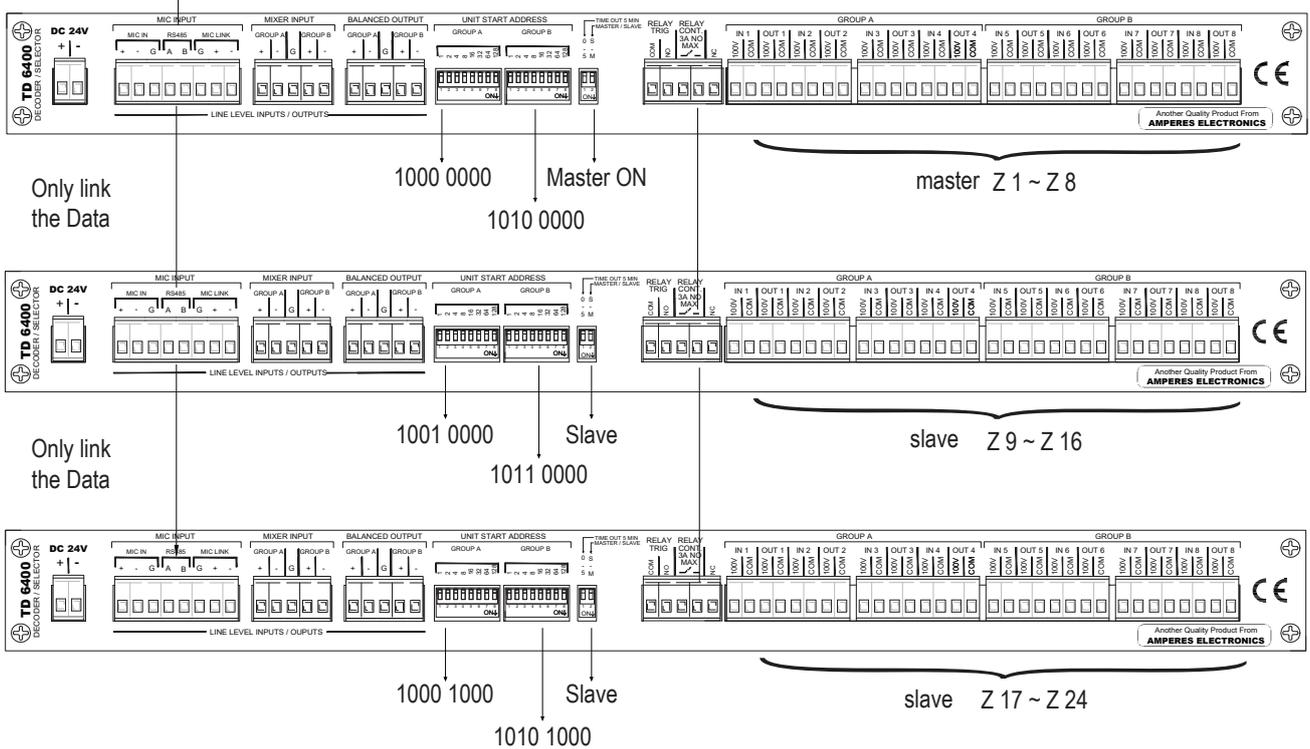
- 1) This configuration shall be used when grouping of zones is required.
e.g: zone 1 to zone 8 to have same BGM input, Group 1 and so forth.
- 2) Paging made to a zone in the same group shall mute other zone within the group but would not interrupt zones in other groups.
- 3) This setup would normally be used together with matrix controller.
- 4) Use of DA2208 at paging mic audio output is required if more than 6 amplifiers are installed in the system.

Cascading The Units



Audio From paging microphone
 Data From paging microphone

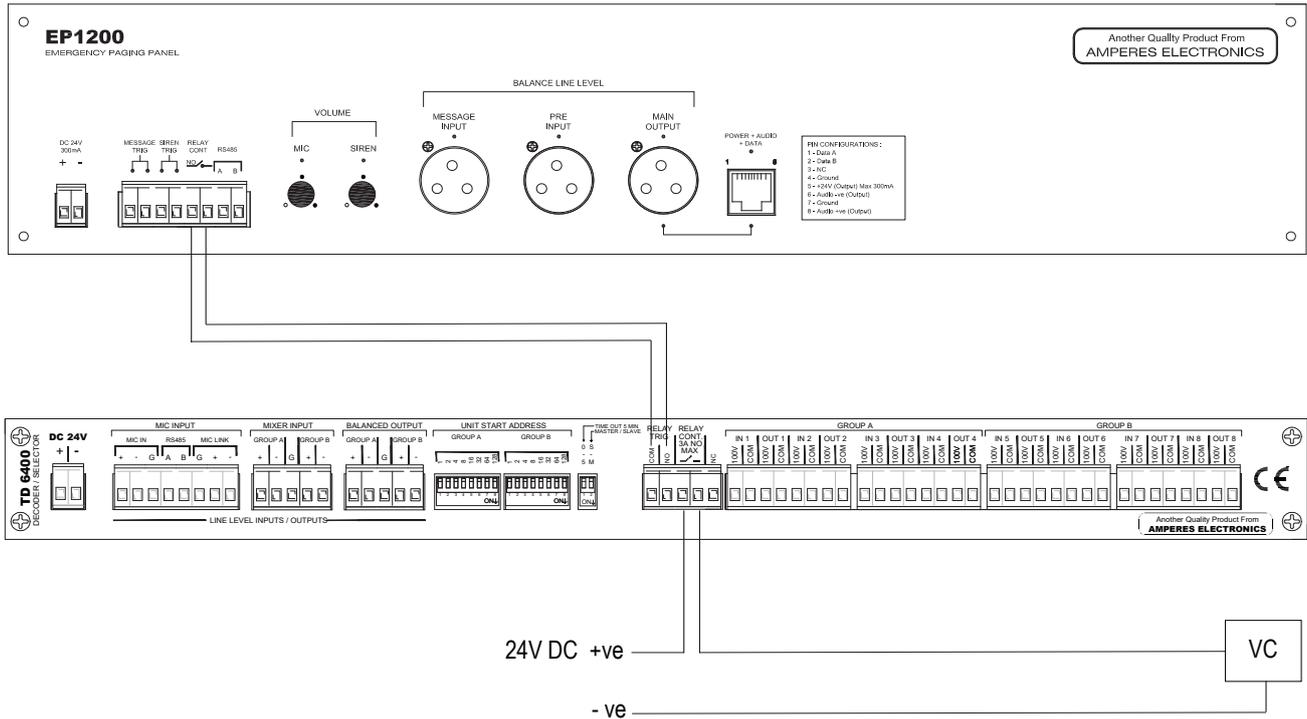
Note: This is alternative connection from paging mic as compared to diagram in page 5.



The above configurations shows cascading for several TD6400.

Note: That the paging mic audio goes to mixer and thereafter to EP1200. In this case, any paging would mute all incoming BGM.

Overriding Volume Controls



OPTION TO TRIGGER RELAY ON ALL CALL

There is an option for Relay Trigger to activate when pressing ALL CALL from the front button (Local All Call) or when ALL CALL paging is made from remote paging microphone.

EP1200 can be used, in case of emergency paging activation to override the volume controllers by using the above configuration.

By default, Relay Trigger for Local All Call and Remote All Call is set to Off.

OPTION FOR PAGING INTERRUPTS TO BOTH GROUPS

TD6400 is separated into 2 groups to facilitate application in Matrix system, which paging within a group shall not interrupt the other. However, in cases which non interrupt system is deployed, it is required to mute the zone(s) at the other group when a paging is made.

Example:

Paging to Zone 1 (Group 1) will mute Zone 6 (Group 2).

Use the setting below to set the configuration accordingly.

SETTING OPTIONS :

Press ALL CALL button upon powering up the device

Hold for 3 seconds, ALL CALL LED will blink slowly and thereafter blinks fast, thus entering configuration mode.

- | | | |
|---------|---------------------------------------------------------------------------------|------------------|
| Press : | Zone 1 - Local ALL CALL trigger relay active | (Default : Off) |
| | Zone 2 - Remote ALL CALL trigger relay active | (Default : Off) |
| | Zone 3 - All zones interrupt (Paging to zone in one group to interrupt other) | (Default : Off) |

To exit setting, press and hold ALL CALL button for 3 seconds.

Technical Data

Operating voltage	24V DC
Consumption	6W (250 mA)
Max load / channels	500W at 100V line
Cascade quantity	31 (248 zone)
Configuration	2 in x 4 zones
Input circuits	3 : 1 mic, 2 BGM
Audio Output	2
Number of zones	8
Amplifier inputs	8
Zone selection	Front panel switch & remote
Indicators	Individual zone switch
Switch mode	Individual, All Call Local zone selection bypassed when remote trigger is activated
AUDIO	
Input impedance (Ohm)	Line : 10 K
Output impedance	600 Ohm balanced
Freq response	70 ~ 15 KHz
Audio input	Line
Max audio output	Line 1.2V
DATA	
Data protocol	RS485
Baud rate	19.2 kbps
Dimension (W x H x D)	482 x 44 x 180 mm
Weight	2.00 kg

Note:

The above specifications are correct at the time of printing and subjected to changes without prior notice due to product improvement policy.

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics authorized service centres may be asked by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor. 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 risk 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, negligence in application as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adapter 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 cause to the people and things during the use of the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or identification labels applied to the unit or any other modifications to the physical unit other than its intended usage.

This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified 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.

The purchaser is deemed to agree to the above warranty conditions once the product packaging is unpacked., Otherwise the product shall be returned to the seller in proper original condition.

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