EMIX

Version 1.6

Product Overview

The **EMZS-8012** is a 1U rack-mounting unit, provide 12 channel direct zone switching for single source public address system setup via front panel setting buttons. Hardwire connection port are available to cater analogue series (EMTM-3001) paging console. Digital CAT-5E communication system are built in, travel can up to 1.2KM.

The loud speaker zone selector to select BGM rated at a maximum current of 5A rated at 100V line. Front panel soft touch button for manual selection while a green connector is provided at the rear panel for remote or external switching of zones and this is the highest priority for controlling the zone. A paging microphone logo shall light up in the LCD display whenever there is an external triggering for visual monitoring. Each unit of 12CH zone selectors is linkable by a single CAT5E cable by just setting up the different ID.

Features

- 12CH Zone Selector, expandable up to 180 zones (15units)

- Single CAT5 cable inter-link up with other zone selector units

- An override activates a voltage free contact (all call & call active) available for external control

- Single CAT5 cable inter-link up with other zone selector units

- Selectable Hardwire (analogue Trigger) compatible with EMIX old System

- RJ45 communication port (Digital +/- Data) through CAT-5E cable

- Digital remote control from EMIX paging console through CAT-5 up to 1.2KM**

- Negative and positive trigger by setting a internal jumper

    Negative Trigger - Limited length can be up to 200ft

    Positive Trigger – Theoretically there is no limit length

- 500W (100V line) maximum power handling per output

- 2X 16 characters Liquid crystal display (LCD) to display system status & message

- Software base ID address setting to eliminate complicated DIP switches setting

- Programmable background music (BGM) setting with recall function

- Built-in Microchip controller makes every step of control simple to operate

Front View and Rear View
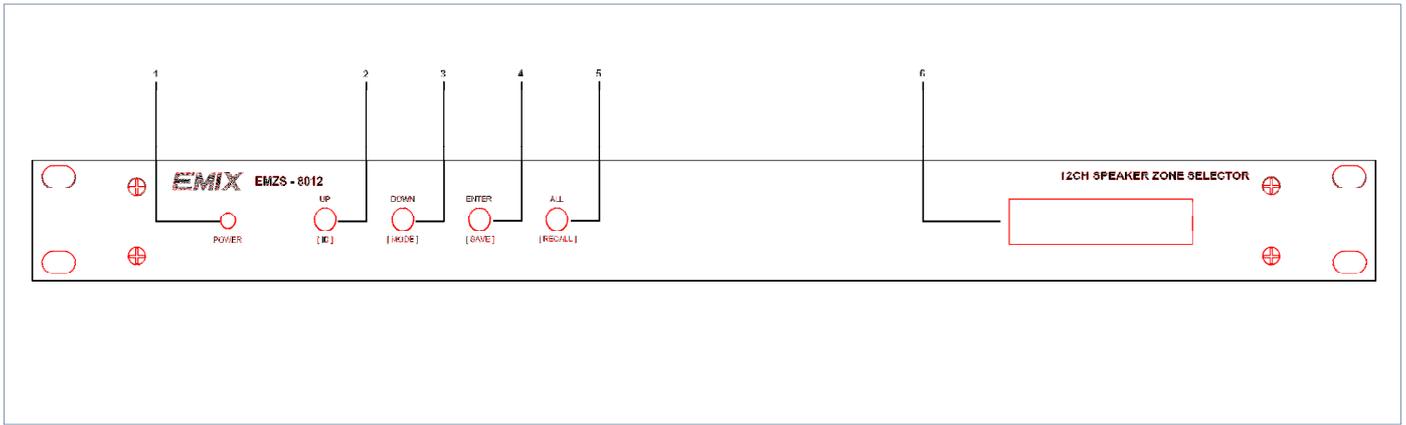
Figure 1.1 Front view of the 12CH Speaker Zone Selector
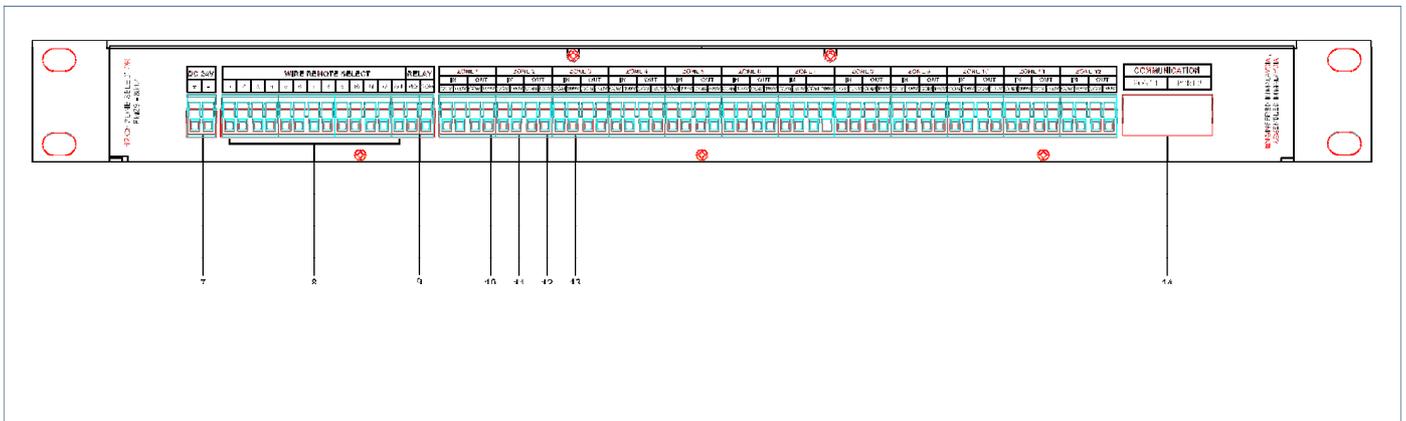
Figure 1.2: Rear view of the 12CH Speaker Zone Selector

Front Panel and Rear Panel Indication

EMZS-8012 12 Channel Zone Selector

1.1.0 Front Panel Indicator

1   **Power LED**   - This LED indicates the unit is powered "on"
2   **UP** button   - To select an input source.
         ID button   - Press and hold more than 3sec to enter ID mode

3   **DOWN** button - To mute the selected input
         MODE button – To enter to the remote trigger menu for selection All Call or Call Active

4   **ENTER** button - BGM On / Off Switch
         SAVE button   - Press and hold more than 3 sec so save the setting

5   **ALL** button   - Select All zones or clear All zones
         Recall button - Recall the previous saved setting.

6   **LCD Display** – Display the status of the unit and the selected input source.

1.2.0 Rear Panel connection

7   **Power Inlet** – Power terminal connection for the 12CH speaker zone selector EMZS-8012 using 24VDC (±10%) power supply. When connecting the power inlet, ensure the polarity is correct. EMIX EMPS-8024 power supply unit is highly recommended.
         ☛ NOTE: Observe the (+) and (-) polarity carefully before get connected

8   **Hardwire Remote Select** – These pluggable terminal blocks is used to connect to analogue type remote paging microphone such as EMTM-3001 for remote zone triggering. Upon triggering the zone via this port should have the highest priority. External triggering switches or others made of paging microphones can utilize this facility provided negative (-) or positive (+) triggering method are used.

9   **Remote Trigger –** This pluggable terminal provides a voltage free contact (all call & call active) when making a call available for external control with selectable mode (refer to figure 3.1 & 3.2)

10   **Amplifier Input** – These pluggable terminal blocks connect the speakers output of the amplifier used for the BGM or PAGING sources respectively.

10   **Speaker Output** – These pluggable terminal blocks connect to the speaker runs for each respective zone

11   **Communication Port** – This RJ45 socket accepts the CAT5 straight cable from paging console and also link to extension unit where user configure more than 12 zones

## Installation Diagram / Schematic Diagram
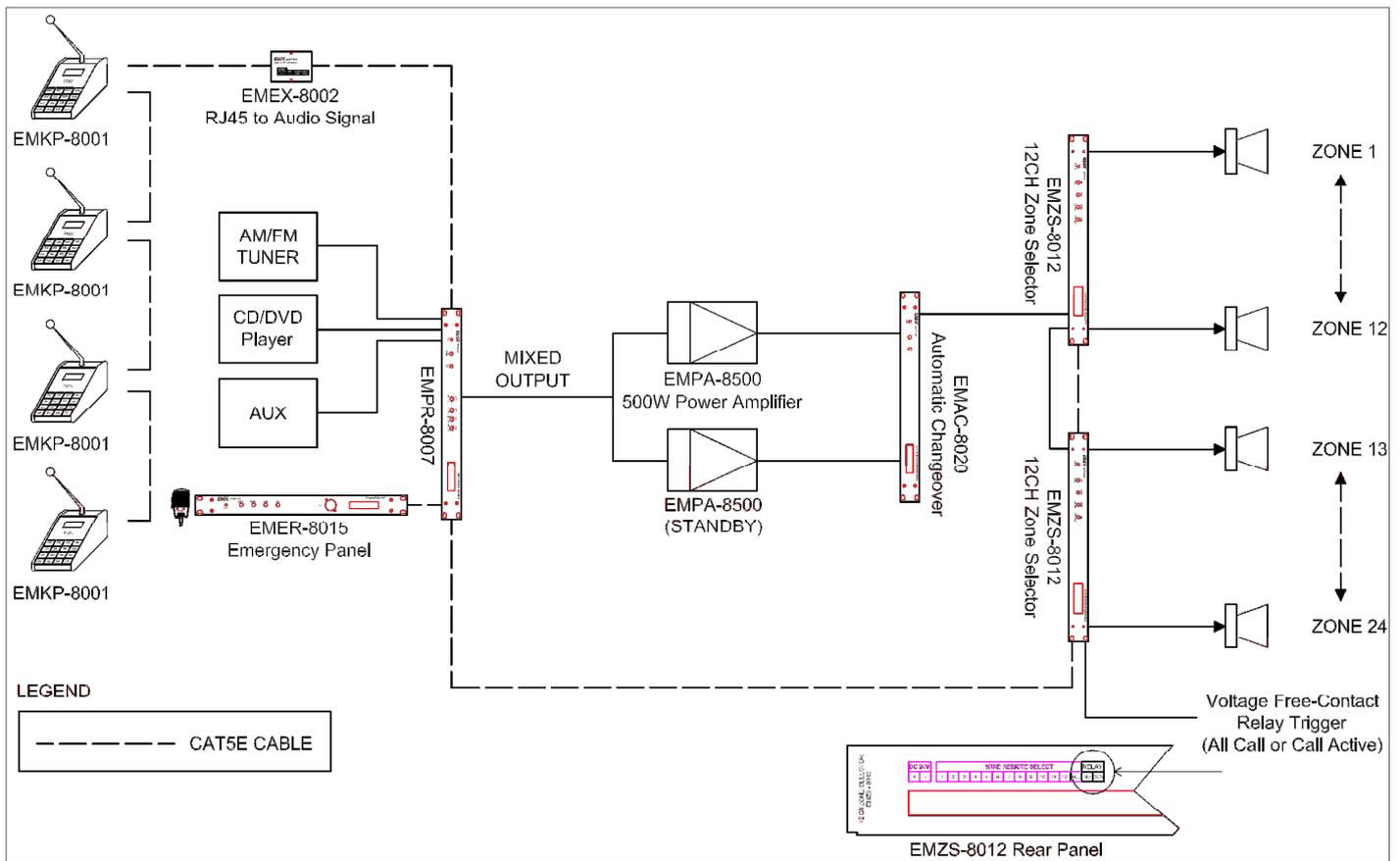
Figure 1.3: There are 4nos of 180zones Digital Paging Console connected up with 2nos of 12CH Zone selector EMZS-8012 through one unit of EMEX-8002 RJ45 to Audio & Data decoder. All of the paging consoles have a loop through connection to add an additional paging console. From the single line shown above, there are a total of 9 nodes taken up for the system.

☞ Notes: Maximum 32nos nodes can be connected up.

Operation

Operation

100V Line Input

Connect the power amplifier to Amplifier Input (100V & Com) via pluggable terminal block. The inputs receive 100V Line from power amplifier. User can select the local back ground music (BGM) zone selection. The selected zone(s) will be shown in the LCD panel. For selecting another zone for background music, user can straight away press the select button ENTER button.

ID Setting

Press and hold the [ID] button for 3 seconds go into the Identity setting menu.
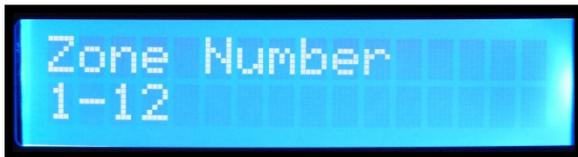
Figure 1.3: Page 01 (Zone no.1 to no.12)
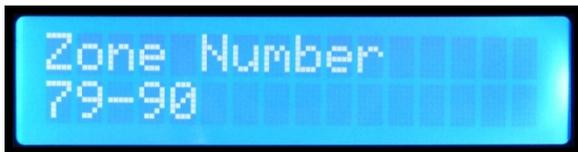
Figure 1.4: Page 14 (Zone no.79 to no.90)

Page 01: Z1 to Z12	Page 16: Z91 to Z102
Page 02: Z7 to Z18	Page 17: Z97 to Z108
Page 03: Z13 to Z24	Page 18: Z103 to Z104
Page 04: Z19 to Z30	Page 19: Z109 to Z120
Page 05: Z25 to Z36	Page 20: Z115 to Z126
Page 06: Z31 to Z42	Page 21: Z121 to Z132
Page 07: Z37 to Z48	Page 22: Z127 to Z138
Page 08: Z43 to Z54	Page 23: Z133 to Z144
Page 09: Z49 to Z60	Page 24: Z139 to Z150
Page 10: Z55 to Z66	Page 25: Z145 to Z156
Page 11: Z61 to Z72	Page 26: Z151 to Z162
Page 12: Z67 to Z78	Page 27: Z157 to Z168
Page 13: Z73 to Z84	Page 28: Z163 to Z174
Page 14: Z79 to Z90	Page 29: Z169 to Z180
Page 15: Z85 to Z96	Page 30: Z175 to Z180

Figure 1.5: Press and hold [SAVE] button for 3 seconds to save the setting user selected.


Figure 1.6: You will see the picture appear on the screen means the setting has been saved

<u>Background Music Setting</u>

Encourage and friendly atmosphere in retail or leisure environment with foreground or background music. Selectable music source at the right zone to suit the clients exact needs.

Figure 1.7: Press [UP] button user will find the particular zone is blinking (CH-1) and to select particular zone where user wish to switch on background music

Figure 1.8: Press [ENTER] for Selection for ON background music, Zone 1 has been selected ON background music

Figure 1.9: Press [ENTER] for Selection for ON background music, Zone 1, 3 & 5 has been selected ON background music

Press and hold [SAVE] button for 3 seconds to save the setting user selected.

Figure 1.10: You will see the picture appear on the screen means the setting has been saved

All Call Setting

If the background music applied in every zone, user suggest to press [ALL] Button to select all the zones in the zone selector

Figure 2.1: The LCD display shown once the [ALL] button pressed

Figure 2.2: Press and hold [SAVE] button for 3 seconds to save the setting user selected.

Figure 2.3: You will see the picture appear on the screen means the setting has been saved

Remote Trigger

To select type of relay trigger mode (call active and all call) when making a call.

Press and hold the [MODE] button for 3Sec to enter into the manual

Figure 3.1: The LCD display shown once the [MODE] button pressed

Figure 3.2: Press [Up] & [Down] button to choose the mode

Lastly, press and hold [SAVE] button for 3 seconds to save the user's selected setting.

After all the setting done, kindly proceed to the diagram below that shows the contact-free output
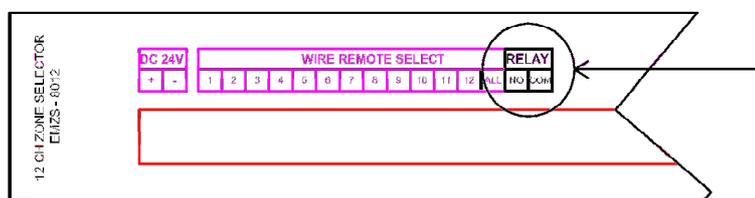
Figure 3.3: Rear panel of the EMZS-8012's relay output.

All Call Setting

If the user wish to off the background music, user suggest pressing [ALL] Button to de-select or clear all the zones in the zone selector
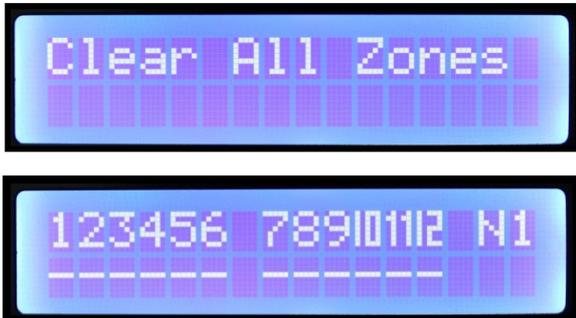
Figure 4.1: The LCD display shown once the [ALL] button pressed

Press and hold [SAVE] button for 3 seconds to save the setting user selected.

Figure 4.2: You will see the picture appear on the screen means the setting has been saved

How is [RECALL] Function works?

Press and hold [RECALL] button for 3 second and the screen will shown as below:-

Figure 5.1: You will see the LCD display shown above after pressing the [RECALL] button

To go back the last setting before [SAVE] button has pressed. This is to prevent others user accidently pressed or selected the incorrect zones.

Internal setting (EMZS-8012 12CH Speaker zone selector)
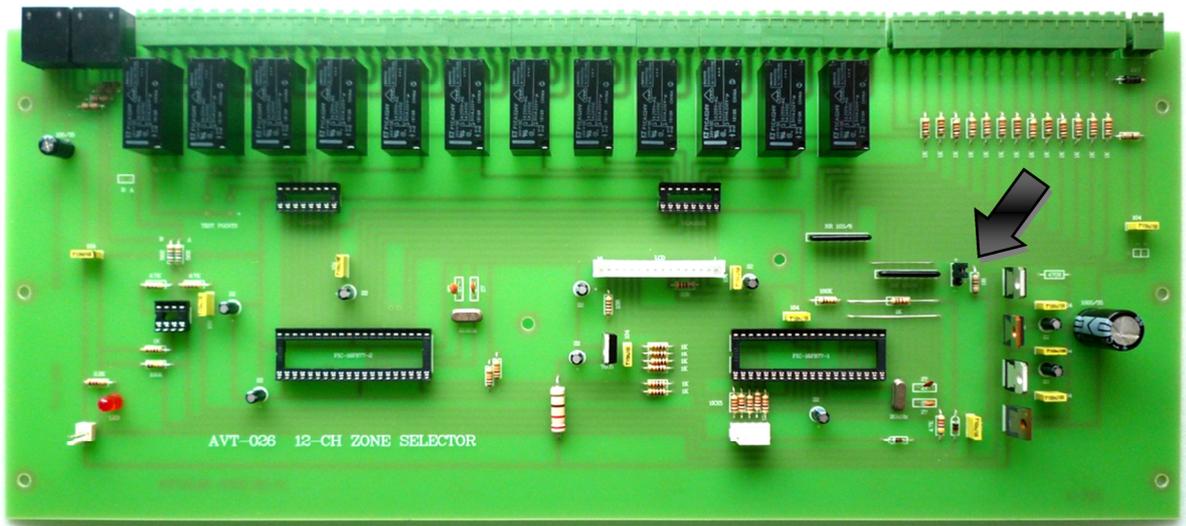

Figure 6.1: Overview on the Main Control Board
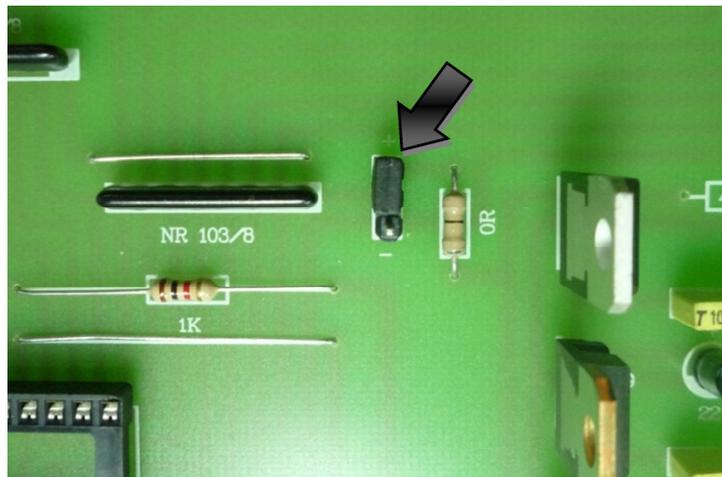
Figure 6.2: Default setting Negative (-) trigger

Figure 6.3: Positive (+) Trigger to extend to the longer length of the connection

Input Connections

For wiring RJ45, Standard straight cable 568 (shielded CAT-5E) is recommended.

CAT 5 cable configuration (Colour code, International Standard)
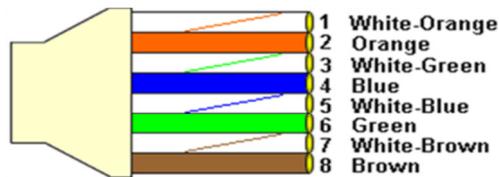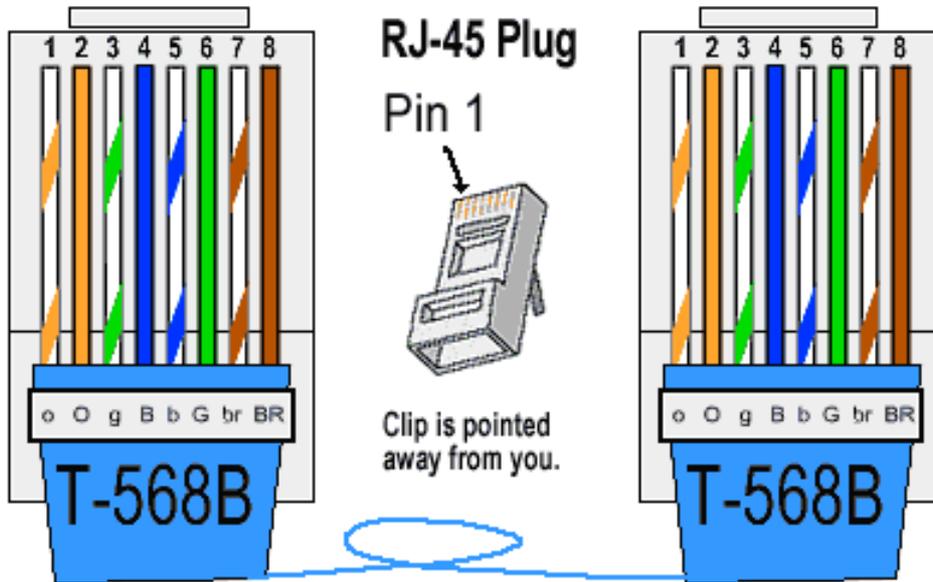
568B Cable Code – Straight Cable

EMIX internal Cable Configuration

Pin 1	White - Orange	Audio Signal (+)
Pin 2	Orange	Audio Signal (-)
Pin 3	White – Green	Data + A
Pin 4	Blue	+ 24VDC
Pin 5	White – Blue	+ 24VDC
Pin 6	Green	Data – B
Pin 7	White – Brown	-24VDC
Pin 8	Brown	-24VDC

How to Build an Ethernet Cable Instructions:

1. Pull the cable off the reel to the desired length and cut using Wire Cutter. If you are pulling cables through holes, it's easier to attach the RJ-45 plugs after the cable is pulled.
2. Start on one end and strip the cable jacket off (about 1") using wire stripper or a knife. Be extra careful not to nick the wires, otherwise you will need to start over.
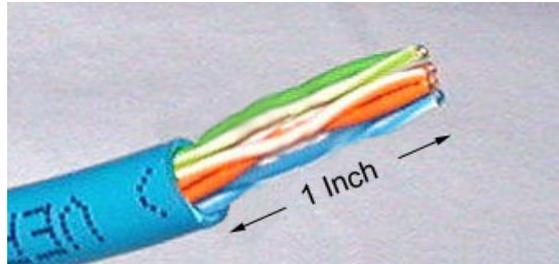
3. Spread, untwist the pairs, and arrange the wires in the order of the desired cable end. Flatten the end between your thumb and forefinger. Trim the ends of the wires so they are even with one another, leaving only 1/2" in wire length. If it is longer than 1/2" it will be out-of-spec and susceptible to crosstalk. Flatten and insure there are no spaces between wires.
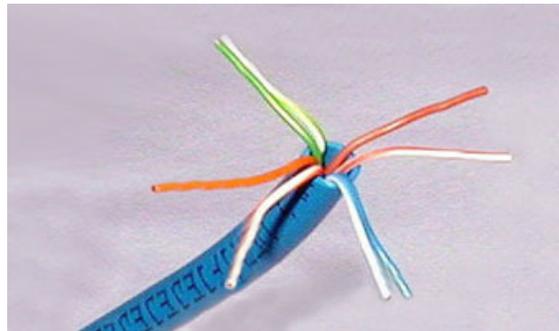
4. Hold the RJ-45 connector (8p / 8C) with the clip facing down or away from you. Push the wires firmly into the plug. Inspect each wire is flat even at the front of the plug. Check the order of the wires. Double check again. Check that the jacket is fitted right against the stop of the plug. Carefully hold the wire and firmly crimp the RJ-45 with the Crimping tools.

5.

6. Check the color orientation, check that the crimped connection is not about to come apart, and check to see if the wires are flat against the front of the plug. If even one of these is incorrect, you will have to start over.


☛ Note: Diagram A, The cable do not go all the way to end of the connector
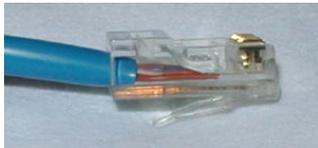
(A) Diagram

☛ Note: Diagram B, Shielding is not inside the connector where it can be locked into place. The wires are too long. They should be ½ inch from the sleeve.
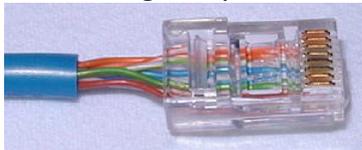

(B) Diagram

Technical Specifications

Input voltage	24VDC
Max. Power consumption	400mA
Min. Power Consumption	100mA
BGM Selection	Front Panel
LCD Display	2 X 16CH
Max. Nodes Connected	32Nodes or 30units (30nos Zone Selector + 2PG Console)
Zone Load Rating	500W / 100V Line (Per Channel)
Number of Input	12nos Amplifier
Number of output	12nos zone Speaker
Paging Selection	Hardwire or software RS485 remote Triggering
Dimension (W x H x D)	483mm x 45mm x 224mm (1U)
I/O connector	RJ45 Female Connector (Paging Console or Link In/Out)
Memory	For BGM selection (Save & Recall)
Net Weight	2.86kg
Gross Weight	3.01kg

Dimension:-
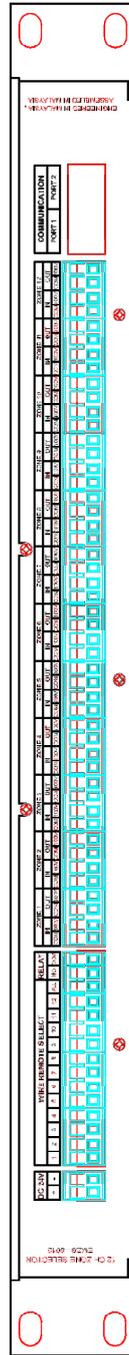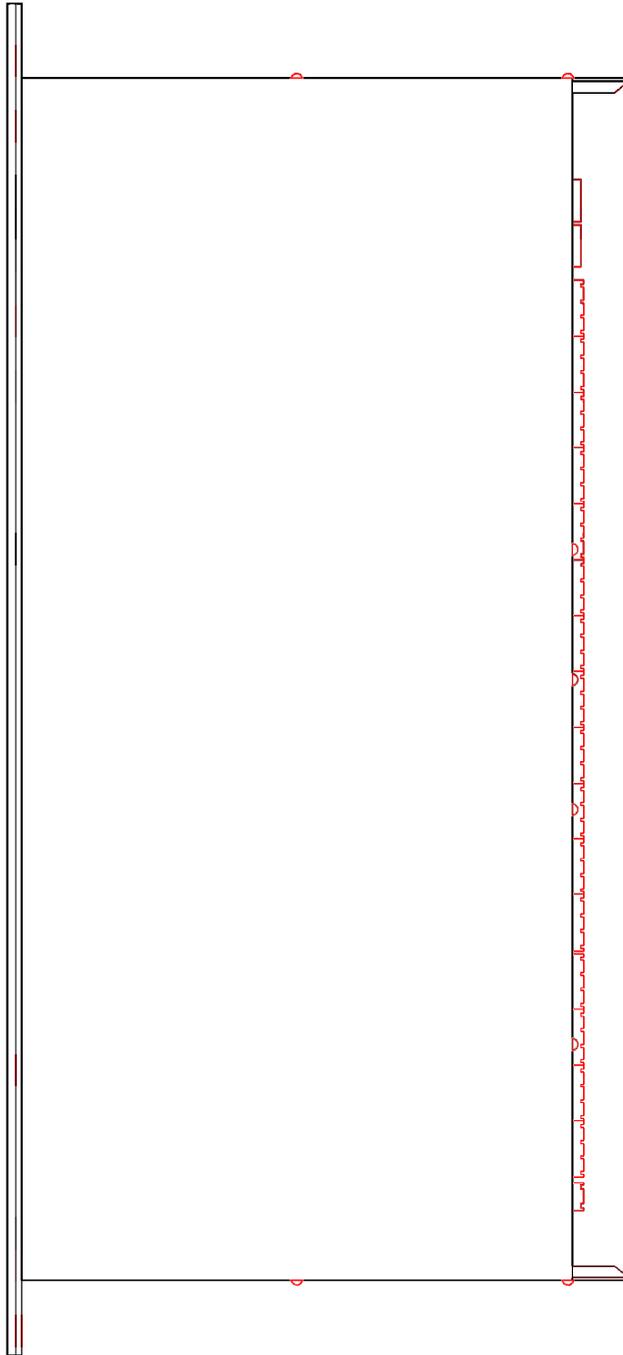
Parts Included:-

Quantity	Component
1	EMZS-8012 12CH Zone Selector
1	Operation Instruction Manual
1	30cm CAT5E cable completed with modular plug

Only EMIX Technical Service Centers are allowed to make warranty repairs. Send the equipment directly to AV Electronics Marketing Sdn Bhd, or contact us for a list of Emix Technical Centers. This warranty is not valid if repairs are performed by unauthorized personnel or service centers.

This warranty covers only repairs and replacement of defective parts. Costs and risk of transportation as well as removal and installation of the product/equipment from the main system are to be borne by 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 products 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 of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the products.

This warranty certificate is valid only for the described product, 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.

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NOTES:

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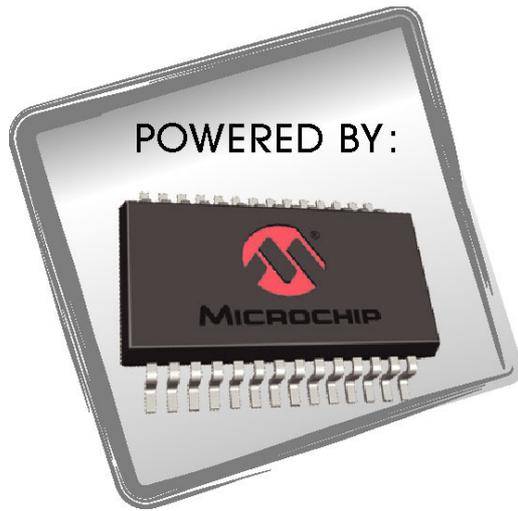
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