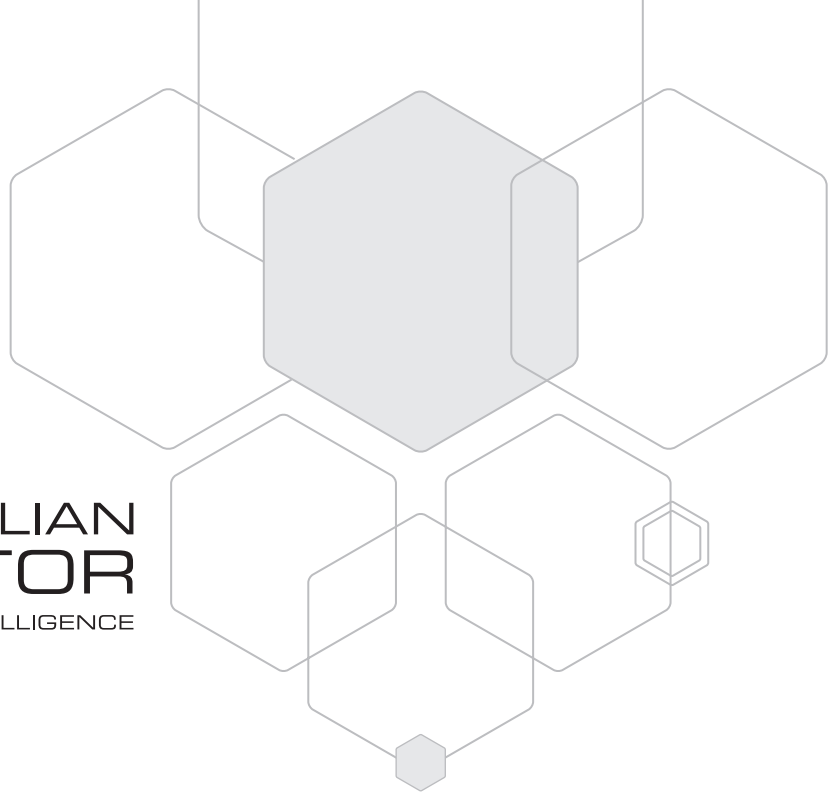




AUSTRALIAN
MONITOR
INTEGRATION INTELLIGENCE



INSTALLATION AND OPERATION MANUAL

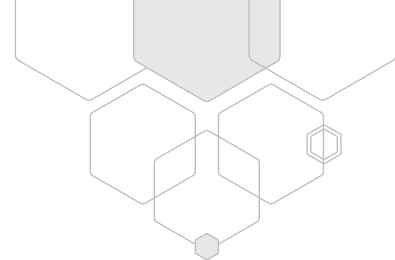
ZONEMIX

MIXERS

ZONEMIX4 / ZONEMIX 8



IMPORTANT SAFETY INFORMATION

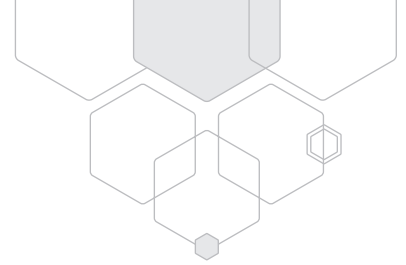


1. READ these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.
16. Plug this apparatus to the proper wall outlet and make the plug to be disconnected readily operable.
17. Mains plug is used as disconnected device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.
18. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
19. An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.
20. The apparatus should be disconnected from the mains completely before speaker wiring. The speaker output should be proper protected from direct contact and pay attention to speaker connections, terminals and speaker wiring during normal operation.

PRÉCAUTIONS DURANT UTILISATION

1. LISEZ ces instructions.
2. Tenez ces instructions.
3. Notez tous les avertissements.
4. Suivez toutes les avertissements.
5. N'utilisez pas ce produit près de l'eau (la piscine, la plage, le lac, etc.).
6. Nettoyez seulement avec une étoffe sèche.
7. Ne bloquez aucuns trous de ventilation. Installez en accord avec les instructions du manufacturier.
8. N'installez près aucunes sources de chaleur comme radiateurs, registres de chaleur, fours ou les autres équipements (y compris amplificateurs) qui produisent la chaleur.
9. Ne défaites pas le but de sécurité de la fiche polarisée ou base-type. Une fiche polarisée a deux tranchants avec un plus large que l'autre. Une fiche de base type a deux a deux tranchants et une troisième pointe de base, le tranchant large ou la troisième pointe est fourni pour votre sécurité. Si la fiche donnée ne conforme pas votre prise de contact, consultez un électricien pour remplacement de la prise de contact obsolète.
10. Protégez le cordon de secteur contre être marchée dessus ou pincé en particulier aux fiches, aux douilles de convenance, et au point où ils sortent de l'appareil.
11. Seulement utilisez attachements/accessoires spécifiés par le manufacturier.
12. Utilisez seulement avec un chariot, un stand, un trépied, un support ou une table indiquée par le manufacturier, ou vendue avec l'appareil. Quand un chariot est utilisé, faites attention en déplaçant la combinaison d'appareil/chariot pour éviter de se déséquilibrer.
13. Arrachez la fiche du dispositif durant éclair et orage ou quand pas utilisé pour longues périodes de temps.
14. Référez au personnel qualifié de service pour toutes réparations. La réparation est donnée quand le système a été endommagé à n'importe façon, par exemple un fil ou une fiche endommagé(e) de la source d'alimentation. Avoir été exposé à pluie ou humidité, n'opère pas normalement, ou avoir été tombé.
15. L'appareil ne doit pas être exposé aux écoulements ou aux éclaboussures et aucun objet ne contenant de liquide, tel qu'un vase, ne doit être placé sur l'objet.
16. Branchez l'appareil à une source appropriée et faire que la prise à débrancher soit facilement accessible.
17. La prise du secteur ne doit pas être obstruée ou doit être facilement accessible pendant son utilisation. Pour être complètement déconnecté de l'alimentation d'entrée, la prise doit être débranchée du secteur.
18. **AVERTISSEMENT:** Pour éviter le risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à l'humidité.
19. Un appareil avec la borne de terre de protection doit être connecté au secteur avec la connexion de terre de protection.
20. Assurez-vous que l'appareil est hors tension avant de connecter les hauts parleurs. Vérifiez que la sortie des enceintes soit protégées contre un contact physique. Respecter les polarités des terminaux ainsi que le câblage des enceintes pendant le fonctionnement afin d'assurer une utilisation sécurisée.

INTRODUCTION & CONTENTS



ZONEMIX

The Australian Monitor ZONEMIX system provides a 4 or 8 zone mixing and paging solution featuring USB, Ethernet and RS232 connectivity. Optional wall panel accessories include 3 controller models, a Bluetooth receiver, and a mic/line level input.

The ZMPS paging station can also be included, with each ZONEMIX unit supporting up to 16 stations.

A PC application allows for setup and control of the ZONEMIX and customisation of the wall panels and paging stations.

Features	4	Tone Generator	9	Accessory Wiring Guide	23
Block Diagram	4	SD Card	10	Third Party Control	30
Front Panel	5	PC Control Software	10	Factory Defaulting & IP Address Resetting	31
Rear Panel	6	Connecting ZMPS Paging Stations	16	Dimensions	31
Basic Setup and Operation	7	Connecting Wall Panels	19	Specificaitons	32
Front Panel Controls	9	WP4R / ZMPS / WP10 Programming Options	20		

Revision 2.2: July 2024

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.

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



WARNING

TO REDUCE THE RISK OF SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



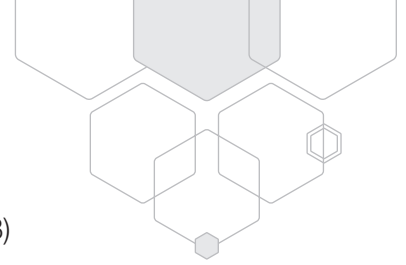
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



For European Union countries: This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. Please contact your local authority for further details of your nearest designated collection point.

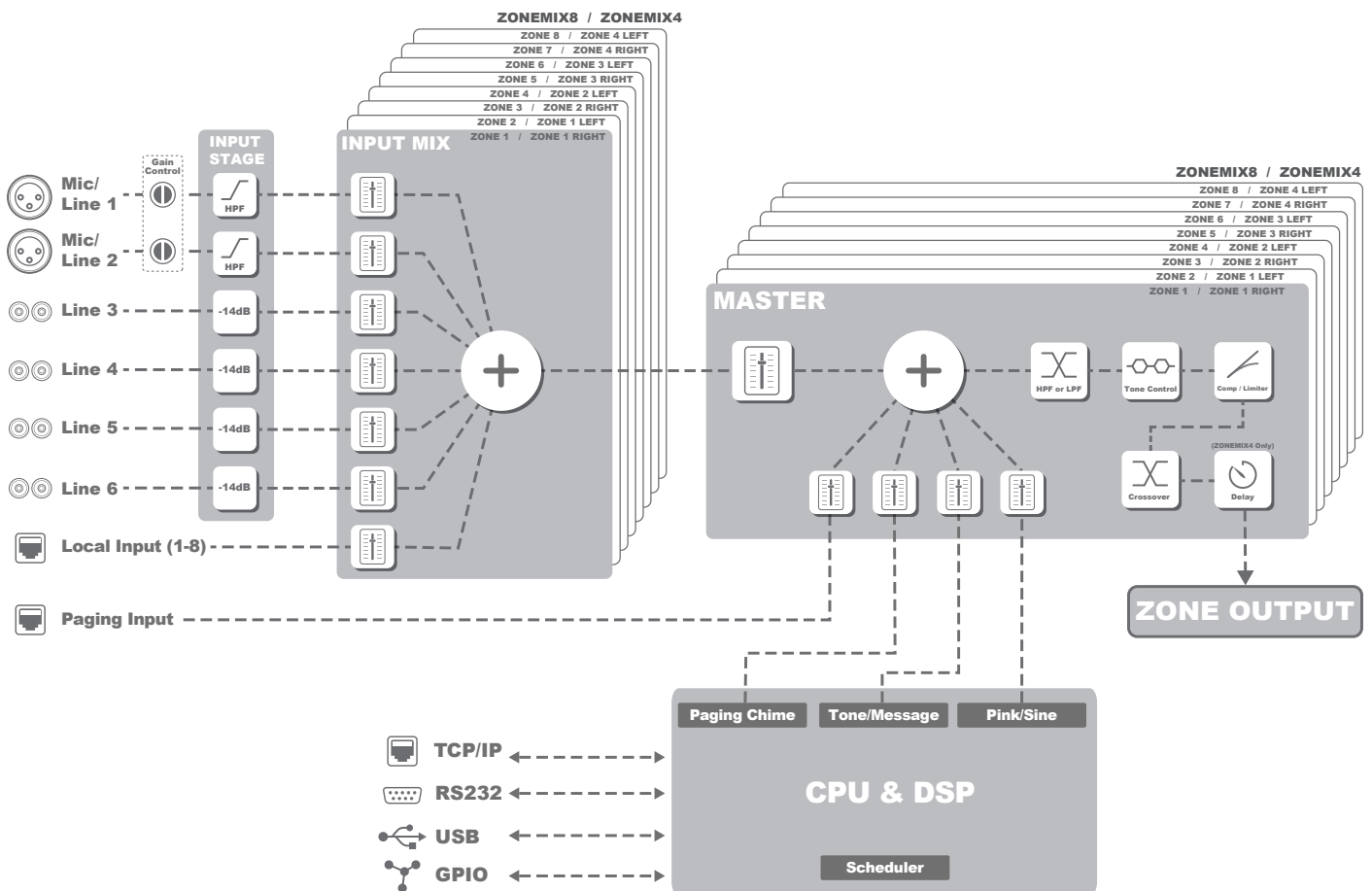
Rating plate and caution marking are marked on the back enclosure of the apparatus

FEATURES

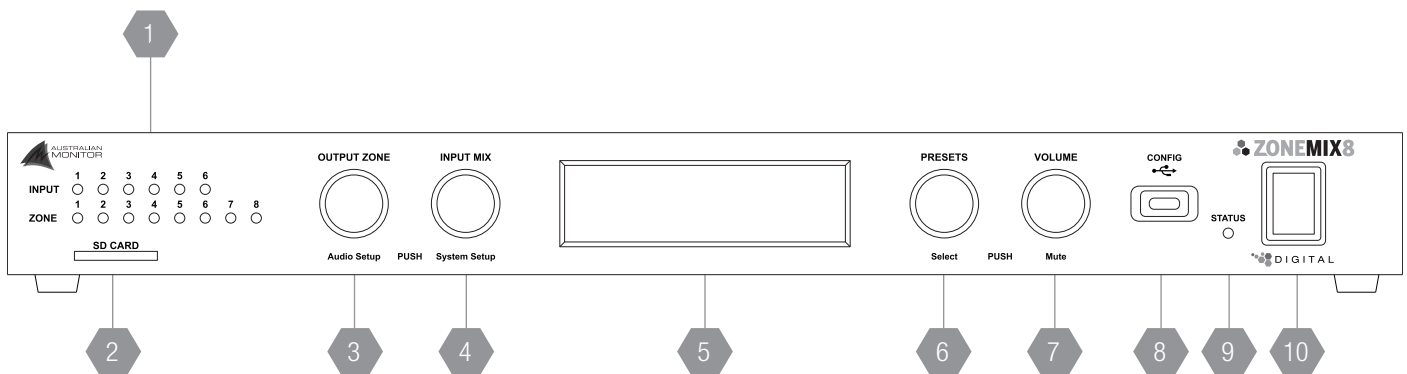


- 4 mono/stereo zone outputs (ZONEMIX4), 8 mono zone outputs (ZONEMIX8)
- 2 Mic/line and 4 stereo line inputs plus 1 local input per zone
- USB, Ethernet and RS232 connectivity
- miniDSP - Filters, Tone Control, Compressors/Limiters, Delay (ZONEMIX4)
- Built-in Tone Generator, Message Player and Scheduler
- Multi-stage priority control
- General purpose inputs/outputs, 4 (ZONEMIX4), 8 (ZONEMIX8)
- Supports up to 16 ZMPS Paging Stations and 16 WP10, WP4R, WPVOL wall panels
- Supports 4 or 8 local inputs,(ZONEMIX4/ZONEMIX8) such as WPBT, WPML or WPXLR wall panels
- ZONEMIX PC control software free via download

BLOCK DIAGRAM



FRONT PANEL



1 SIGNAL PRESENCE LEDS
A green LED will illuminate to show a signal is present on the corresponding audio input or output zone. The ZONE LEDs will flash green every second when the corresponding output is muted. A red LED will illuminate when clipping occurs due to an excessive input signal or overdriven output. If clipping occurs reduce the input or output gain settings.

2 SD CARD CONNECTOR
Input connector for a full size SD card. Maximum density 2TB.
Consult the **Support of SD cards larger than 32GB** section on page 10 for further details.
Note: Format the card to the FAT32 file system. Use a full size SD card adapter to support mini or micro sized SD cards.

3 OUTPUT ZONE KNOB
Rotate left and right to select the output zone
Pushing the knob will enter Audio Setup mode.
Consult page 9 for more details.

4 MIX KNOB
Rotate left and right to select the desired input channel mix for the output zone.
Pushing the knob will enter System Setup mode.
Consult page 9 for more details.

5 LCD CHARACTER DISPLAY
20x2 blue LCD character display

6 PRESETS KNOB
Rotate left and right to cycle through the available presets. Push the knob to select or save the preset.

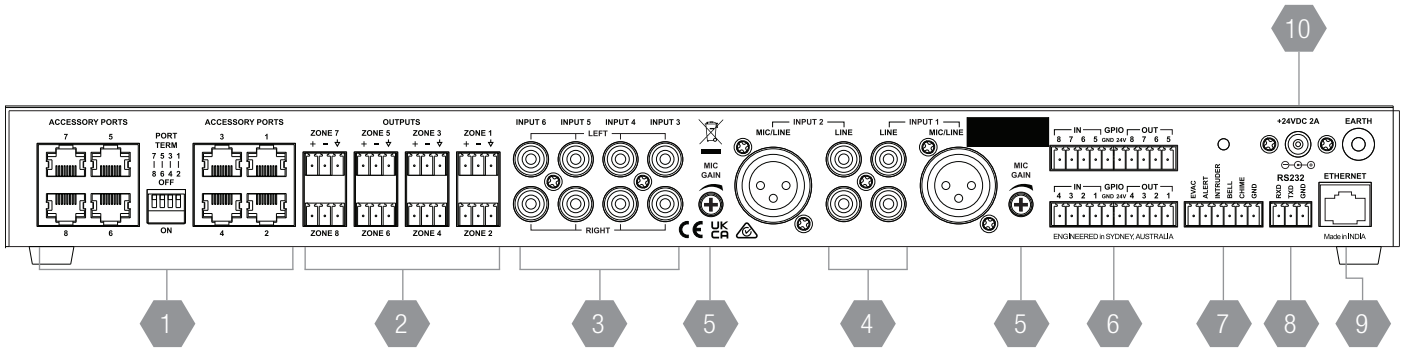
7 VOLUME KNOB
Rotate left and right to adjust the volume level of the currently selected input or output.
Push the knob to mute or unmute.

8 USB-C CONFIG PORT
Connect to a PC using a USB-C cable to control the ZONEMIX via the PC Control Software

9 STATUS LED
This blue LED will illuminate indicating that the ZONEMIX is on and receiving mains power.

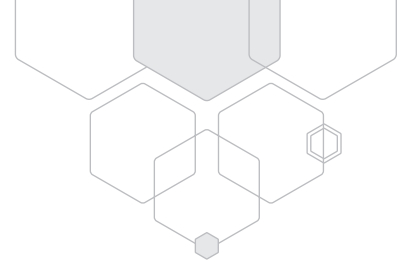
10 POWER SWITCH
Press the switch up to power on and down to power off.

REAR PANEL



- 1** **ACCESSORY PORTS**
Allows connection of wall panel controllers, paging stations and audio wall panel inputs.
See **Paging Station and Wall Panels** section on page 16 for further details.
- 2** **ZONE OUTPUTS**
The ZONEMIX4 has 4 stereo, 4 crossover or 4 mono balanced line level outputs (Software configurable).
The ZONEMIX8 has 8 mono line balanced level outputs.
Balanced male 3-pin (3.81mm) euroblock connector.
- 3** **STEREO RCA UNBALANCED INPUT**
A standard stereo RCA female socket for each input. This is summed to mono inside the ZONEMIX8. The ZONEMIX4 will maintain the stereo audio path unless mono output mode is selected.
A -14dB pad can be applied, via software, using the front panel or PC control software.
- 4** **XLR MIC/ RCA LINE INPUT, CH1-2**
A standard female XLR balanced socket is provided on each microphone input:
Pin 1 = Signal Ground
Pin 2 = Hot (non-inverting or in phase)
Pin 3 = Cold (inverting or reverse phase)
- 5** **MIC GAIN**
Provides a rear panel input gain adjustment for Inputs 1 and 2.
- 6** **GENERAL PURPOSE INPUTS AND OUTPUTS**
Configurable in the PC control software to perform various actions. See page 15 for further details.
- 7** **tone GENERATOR**
Connect any of the EVAC, ALERT, INTRUDER, BELL and CHIME inputs to the GND input to play the tone.
- 8** **RS232**
3-pin (3.81mm) euroblock connector for connection to external control systems.
- 9** **ETHERNET**
Ethernet is used to communicate with the device over a LAN. The supported network speed is 100Base-T. Consult the **Network Setup** section on page 10 for further details.
- 10** **POWER INPUT CONNECTOR**
Your mixer is powered via a 24VDC 2A universal power adapter. The power adapter is included with your mixer. The DC input accepts a 5.5/2.1mm plug with tip positive and ring negative connection.

BASIC SETUP AND OPERATION



POWER REQUIREMENTS

The ZONEMIX operates at 24V with a maximum 2A current draw (dependant on number of accessories and paging stations connected). The DC input accepts a 5.5/2.1mm plug with tip positive and ring negative connection.

MOUNTING

The ZONEMIX is a one rack unit high (1RU) and will fit a standard EIA 19" rack.

BALANCED INPUT WIRING

WARNING: Input signal ground should NOT be used as a safety ground (earth).

The balanced input to the ZONEMIX is 3-pin configuration and requires all three pins to be connected. Only high quality twin-core shielded cable should be used.

Pin 1 = Signal Ground

Pin 2 = Hot (non-inverting or in phase)

Pin 3 = Cold (inverting or reverse phase)

When wiring from an unbalanced source you must ensure that pin 3 is connected to pin 1 (input ground), either by linking the pins in the input connector or by the source equipment's output wiring.

When wiring for an unbalanced source:

Pin 1 = Signal Ground

Pin 2 = Hot (non-inverting or in phase)

Pin 3 = Signal Ground

SENSITIVITY

Each channel of the ZONEMIX has a nominal balanced input impedance of 30kOhms (@1kHz) and should not present a difficult load for any signal source.

Your signal source (i.e. the equipment feeding signal to the mixer) should have an output impedance of 600 Ohms or lower to avoid unwanted high frequency loss in the cabling.

BASIC SETUP AND OPERATION CONT.



INSTALLATION AND BASIC SETUP & OPERATION

The inputs of the ZONEMIX can accommodate a wide range of sources including dynamic microphones, DVD and CD players. Each installation will require setting the appropriate relative mix of levels between microphones and program sources. Due to the variation in levels between the possible sources, the ZONEMIX offers a number of gain stage adjustments in order to set the correct levels for your application.

Setting up correct gain structure through the whole system is important to achieve optimal results. The following step by step setup has been devised to assist during the setup process.

INITIAL SETTINGS (FACTORY DEFAULT)

- Input
- Zone output and Equaliser controls.
 - Set to 0dB
- XLR Phantom power
 - OFF
- Audio Inputs/Outputs
 - Unmuted, -96dB
- Audio DSP settings
 - Disabled
- RS232
 - 115200, 8, 1, None
- Ethernet
 - DHCP Mode = True
 - DHCP Default IP = 192.168.1.10
 - TCP Port = 2626
 - UDP Port = 2626

STEP BY STEP SETUP

- 1 CONNECT THE SOURCES**

First connect all the required sources to the appropriate input connectors. If the source is an electret or condenser microphone, turn on the phantom power via the front panel or the PC control software.
- 2 TEST THE INPUT LEVELS**

For each source, try to achieve the highest signal level possible. i.e. for a CD player, radio or other music source, put on the loudest anticipated program music or for a paging mic make a 'loud' page. During this signal condition, the input level meter should light green and may occasionally turn red for a short period. If the level meter stays red (more than 10% of the time), you should reduce the audio source level or alternatively reduce the 'MIC GAIN' trim for input 1+2 on the rear panel or apply the -14dB for inputs 3-6 via the front panel or software.
- 3 SET THE LEVELS**

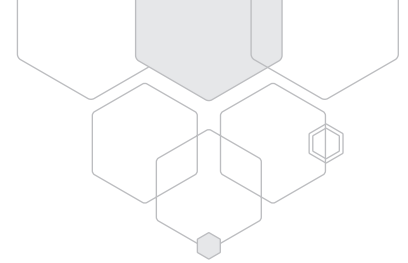
Turn the channel input volume controls up to -20dB on each channel being used. Turn up the master volume control until it is at an appropriate level for the listening environment. Now adjust the relative levels of each of the input channels to achieve a good balance. The aim of these adjustments is to have all level controls between -40dB and 0dB.
- 4 TURN DOWN UNUSED CHANNELS**

All input channels add noise into the system. To maximise the performance of your system turn down any unused channel volume controls.
- 5 PAGING / TONE GENERATOR / MESSAGE PLAYER**

The paging, tone generator and message player have independent volume controls that bypass the zone master and directly feed to the zone output. Each volume control should be set to the appropriate level required for the zone.
- 6 PAGING STATIONS**

Firstly, set the Paging input level to -20dB for the output zone being used. Next, perform a loud page by speaking closely to the paging station microphone. Increase the ZMPS rear level control until slight distortion is heard and then reduce the level slightly. Next, set the listening level required for each output zone by setting the paging input volume level using the software or front panel for each output zone.

FRONT PANEL CONTROLS



The following settings can be viewed or modified using the front panel menus

AUDIO SETUP

- Input 1 Mode Line/Mic/Mic+Phantom
- Input 2 Mode Line/Mic/Mic+Phantom
- Input 3 Pad (-14dB) Enabled/Disabled
- Input 4 Pad (-14dB) Enabled/Disabled
- Input 5 Pad (-14dB) Enabled/Disabled
- Input 6 Pad (-14dB) Enabled/Disabled
- Output Bass Zone1-8 ± 10 dB
- Output Treble Zone1-8 ± 10 dB

SYSTEM SETUP

- Date/Time Setup
- Scheduler:
 - On/Off
 - Override Status
 - Override Select
 - Override Cancel
- Display Brightness
- Display Contrast
- RS232 Baud Rate
- Serial Number
- MAC Address
- IP Address
- Host Name
- Firmware Version

TONE GENERATOR

The ZONEMIX includes 5 factory programmed default tones. Tones can be played by shorting the appropriate contact to GND on the back panel 10 way euroblock connector.

- The tone volume is set by adjusting the Tone/Message input level control on the front panel or software
- The internal tones can be optionally overridden by placing files on an SD card
- IMPORTANT: Do NOT drive external voltages into the pins or damage to the unit will occur.

TONES

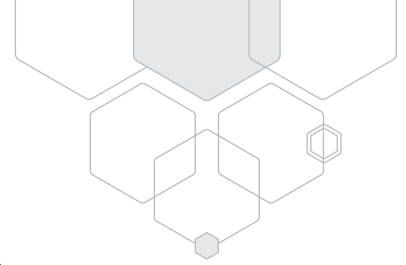
1. 'EVAC': a long continuous repeating tone with a ramped frequency.
Triggered by shorting EVAC to GND, the sound will continue to repeat until the short is released.
2. 'ALERT': a short tone burst repeated every 0.5s.
Triggered by shorting ALERT to GND, the sound will continue to repeat until the short is released.
3. 'INTRUDER': a two tone 'low' 'high' alert repeating every 0.4s.
Triggered by shorting INTRUDER to GND, the sound will continue to repeat until the short is released.
4. 'BELL': a short repeating tone burst with decay and reverb.
Triggered by shorting BELL to GND, the sound will continue to repeat until the short is released.
5. 'CHIME': a four note increasing tone suitable for paging preannouncement.
Triggered by shorting CHIME to GND, it will sound only once each time the trigger is activated. Please note: 'CHIME' tone must play to completion before it may be retriggered.

- To activate a tone trigger input, short the relevant input to GND. The selection must be stable for longer than 150ms.
- Each tone is played to completion even if the trigger selection is removed during playback.
- A higher priority tone trigger will interrupt a lower priority tone being played.
- After deselection and completion of playing a higher priority tone, any selected lower priority tone will be played. Exceptions are BELL and CHIME tones which will not be played and must be re-triggered.

DURING TONE PLAYBACK:

- > EVAC, ALERT and INTRUDER tone playback mute all input channels (except a Master Override input)
- > BELL and CHIME tone playback will mute or mix with other inputs depending on Priority Configuration settings.

SD CARD



OVERRIDING DEFAULT TONE GENERATOR SOUNDS

The default tones of the ZONEMIX can be overridden by adding tones to a user supplied SD card. Simply place the tone WAV file on the root of the SD card and it will be played instead of the inbuilt tone.

Format: evac.wav, alert.wav, intruder.wav, bell.wav, chime.wav

- **Only WAV files are supported. Do NOT use MP3 or other audio formats**

NOTE: If the tone on the SD card is unplayable, e.g due to being the wrong format, a fault code will flash on the STATUS LED and the default tone will be played instead.

PAGING & SCHEDULER ANNOUNCEMENTS

Pre-recorded paging announcements and scheduler messages can be programmed for playback via the control software. Place audio WAV files on the root of the SD card.

The audio files can then be selected using the ZONEMIX control software file explorer menu.

Format: message.wav

- **Only WAV files are supported. Do NOT use MP3 or other audio formats**

CUSTOM PAGING CHIME

The ZMPS paging station chime can be optionally overridden by placing an alternative file on the root of the SD card.

Format: pagingchime.wav

- **Only WAV files are supported. Do NOT use MP3 or other audio formats**

SUPPORT OF SD CARDS LARGER THAN 32GB

The ZONEMIX supports the FAT32 file format which is limited to a maximum of 2TB.

However, SD cards larger than 32GB are shipped with the exFAT format. These must be reformatted to the FAT32 format.

- **Note: Windows does NOT natively support formatting of SD cards larger than 32GB to FAT32.**
- **You must use third party applications to format SD cards larger than 32GB to the required FAT32 format.**

PC CONTROL SOFTWARE

The ZONEMIX comes with a free PC application to allow advanced configuration and control of the system. The software can be downloaded from www.australianmonitor.com.au and can be accessed from either the USB or Ethernet connection.

USB CONNECTION

1. Simply connect the supplied USB cable from your PC to the ZONEMIX front panel connector.
2. Open the ZONEMIX Control Software
3. Select the device from the USB port dropdown list and select CONNECT

- **Note: If the ZONEMIX does not show in the list press the DISCOVER button to perform a re-scan.**

ETHERNET CONNECTION

The ZONEMIX can also be controlled over a network using the ethernet port. By default, the ZONEMIX uses DHCP to be automatically assigned an address from the network. The PC Control Software will then scan the network and list available devices for connection.

If no address is provided by the network the ZONEMIX will default to an IP address of 192.168.1.10.

PLUG AND PLAY (DYNAMIC/DHCP IP)

1. Connect an Ethernet cable from the ZONEMIX to the network
2. Open the ZONEMIX Control Software
3. Select the device from the Ethernet dropdown list and select CONNECT

- **Note: If the ZONEMIX does not show in the list press the RESCAN FOR DEVICES button to perform a re-scan.**

- **Note: If the ZONEMIX still does not show, confirm the network has assigned an IP address by accessing the front panel System Setup menu and viewing the IP address. If the ZONEMIX states it's IP address is 192.168.1.10 it has failed to get an address and gone to the default address**

- **Note: If you are attempting to connect with a ZONEMIX via PC that is connected to the same network wirelessly (e.g. WiFi) then the Scan for Devices button will not find any ZONEMIX products due to a limitation of the network discovery technology. The workaround for this is to obtain the IP address from the device using the front panel system settings and then connect to the device using the Custom Network Connection button with the known IP address.**

PC CONTROL SOFTWARE CONT.



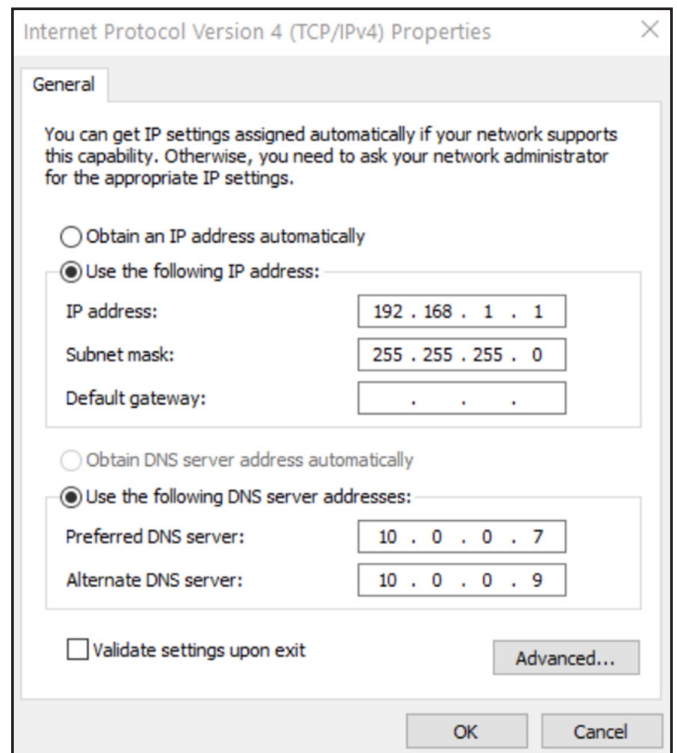
POINT TO POINT CONNECTION

This is direct connection method between the PC and ZONEMIX which does not require a DHCP server or router. A standard ethernet cable or crossover cable can be used.

1. Connect an Ethernet cable to the PC and ZONEMIX and ensure both are powered on.
2. The ZONEMIX factory default IP address is 192.168.1.10. To follow steps below the IP address should be checked to ensure it is on the factory default IP address. This can be verified by USB connection to the PC application and viewing the Network Settings or by viewing in the System Setup on the LCD screen. If the IP address is NOT on the factory default IP address then it should be set to 192.168.1.10 using the static IP mode.

Configure your PC ethernet connection as follows,

1. Click Start Menu > Control Panel > Network and Sharing Center or Network and Internet > Network and Sharing Center.
2. Click Change adapter settings.
3. Right-click on Local Area Connection that the ZONEMIX is connected to. Click Properties
4. Make sure IPv4 is enabled and select Internet Protocol Version 4 (TCP/IPv4). Click Properties.
5. Select Use the following IP address.
6. Enter the following as per the screenshot below:
 - a. IP address: **192.168.1.1**
 - b. Subnet mask: **255.255.255.0**
 - c. Default gateway: **192.168.1.1**
 - d. Do not modify the DNS settings and click ok and then close to set the new IP address.
7. Using the PC control software, select the Custom Network Connection option
8. Enter the settings as shown below and press connect

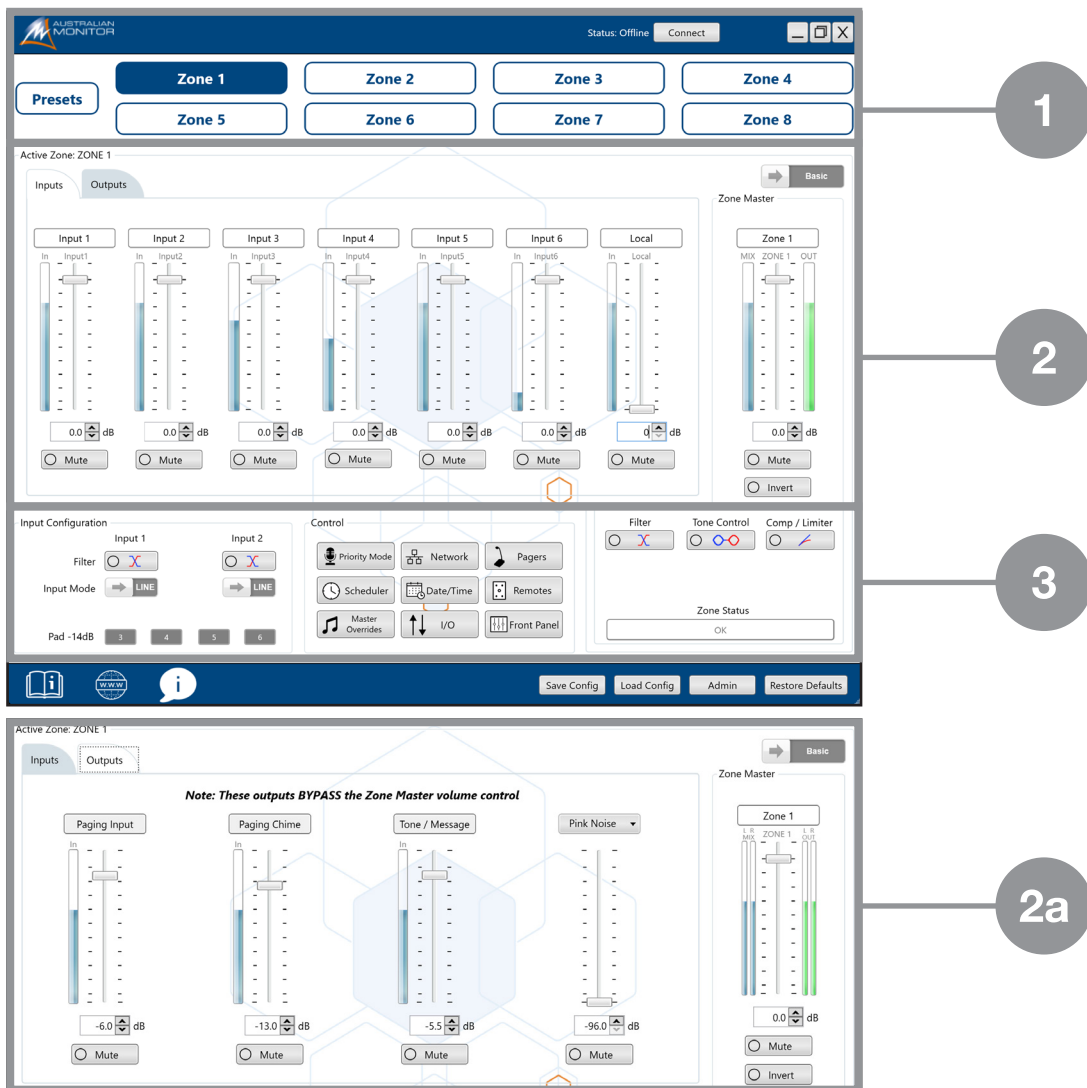


✦ Forgotten or Lost the IP address?

- You can read the ZONEMIX IP address from the System Setup menu on the front panel or
- Change the IP address using a USB connection to the ZONEMIX Control Application and open the network settings.

PC CONTROL SOFTWARE CONT.

OVERVIEW



The control software consists of three main sections

Section 1 shows 4 zones for the ZONEMIX4 or 8 zones for the ZONEMIX8

- Select the output zone to control
- Set and adjust presets

Section 2 for the currently selected output zone

- Adjust the input channel volume levels, filters, compressor/limiter, crossover (ZONEMIX4 only), tone control and zone master volume level.
- Apply maximum and minimum volume levels using the “Advanced” tab

Section 2a (accessed by selecting the “outputs” tab)

- Adjust the post zone master volume audio mix for paging, paging chime and message levels.
- Pink Noise and sine waves can also be activated for use during system commissioning

Section 3

- Mic or Line setting for Inputs 1 and 2 and stereo mode (ZONEMIX4 only)
- Apply high pass filters and turn on phantom power
- Apply delay to the output (ZONEMIX4 Only)
- Set output mode - Stereo, Crossover, Mono (ZONEMIX4 Only)
- Set various control options including paging station and wall panel setup, priority levels, scheduling, GPIO and front panel functions. See below for detailed information

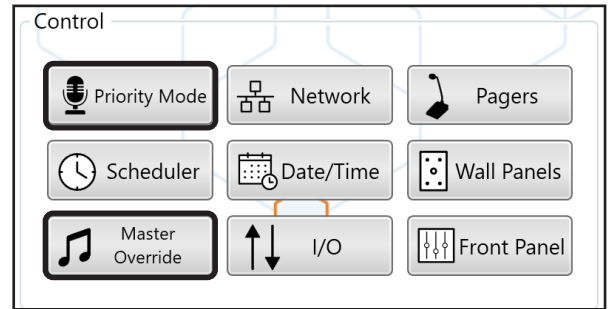
PC CONTROL SOFTWARE CONT.

CONTROL SECTION

PRIORITY CONTROL & MASTER OVERRIDE

The ZONEMIX has an advanced priority scheme which can be customised for each individual zone.

Master Override is the highest priority and can mute or override all output zones, typically in an emergency situation. Access the Master Override menu from the control section of the PC control software or through the Priority Mode



MASTER OVERRIDE SETUP

1 Select the trigger to activate the Master Override

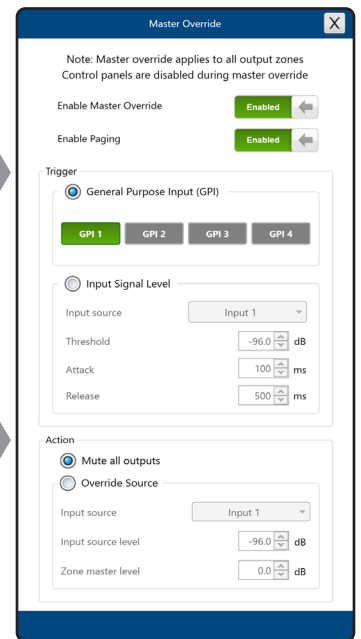
- General Purpose Input
- OR
- Audio input signal

2 Select the action when the Master Override triggers

- Mute all zone outputs
- OR
- Override with a specific input source

1

2



PRIORITY CONTROL

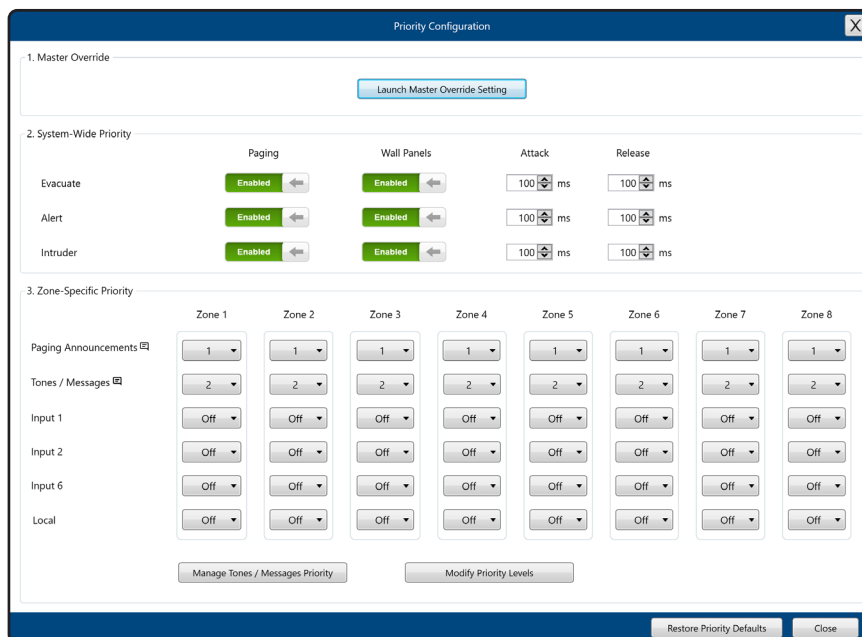
The second highest priority after Master Override are the EVAC, ALERT and INTRUDER tones in descending order.

When active they will mute all other inputs and play the tone out of all zone outputs.

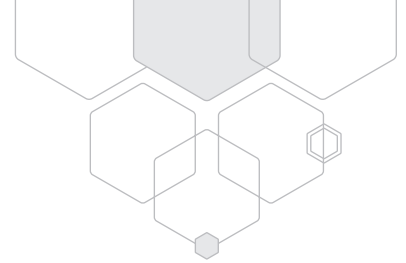
The last priority stage is configurable allowing 6 stages of priority per each output zone.

Each of the input sources can be assigned a priority level from 1 (Highest) to 6 (Lowest) as well as OFF.

- If all inputs for a Zone output are set to OFF then no priority is enabled.
- If a higher priority input is detected it will MUTE or DUCK any lower priority inputs.
 - To MUTE lower priority inputs, set the "Duck Depth" in the "Modify Priority Levels" to -96dB.
 - To MIX lower priority inputs at a reduced volume, set "Duck Depth" level in the "Modify Priority Levels" to a value between -96dB and 0dB.
- If two inputs are the SAME priority level they will MIX together and MUTE or DUCK lower priority inputs depending on the priority level set.



PC CONTROL SOFTWARE CONT.



PRIORITY CONTROL CONT.

The input source priority audio levels can be set from the “Modify Priority Levels” sub window.

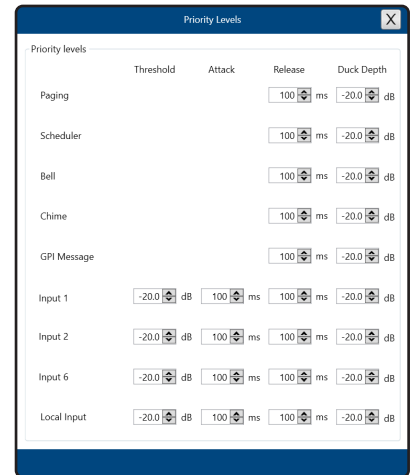
Threshold sets the input level the audio must exceed to trigger the priority.

Attack sets the time the input level must continuously exceed the threshold. This is useful to prevent a spike of loud audio triggering the priority

Release sets the time the priority is still active after the input has dropped below the threshold. This allows for delay to be added if required, up to 25 seconds.

Duck Depth sets the RELATIVE volume reduction for the selected source for all output zones when a higher priority is active. -96dB will mute the channel.

The Tones / Messages (Scheduler Message, GPI Message, Bell and Chime) all share one audio channel from the CPU/DSP. This means only one can be active at a time. If required, the priority of these triggers can also be modified from the “Manages Tones/Messages Priority” sub window.



SCHEDULER

See The ZONEMIX Scheduler and GPIO Manual for details.

NETWORK

The ZONEMIX ships with DHCP mode enabled which allows the network to automatically assign an IP address. The PC Control software will then automatically scan the network for any ZONEMIX systems and display it on the PC control software connection window.

If a static IP address is required, the easiest method is to connect via USB using the PC Control Software and to assign manual network settings using the “Network” button in the Control section.



← The IP address can also be read from the **SYSTEM SETUP** menu on the front panel

PC CONTROL SOFTWARE CONT.



DATE/TIME

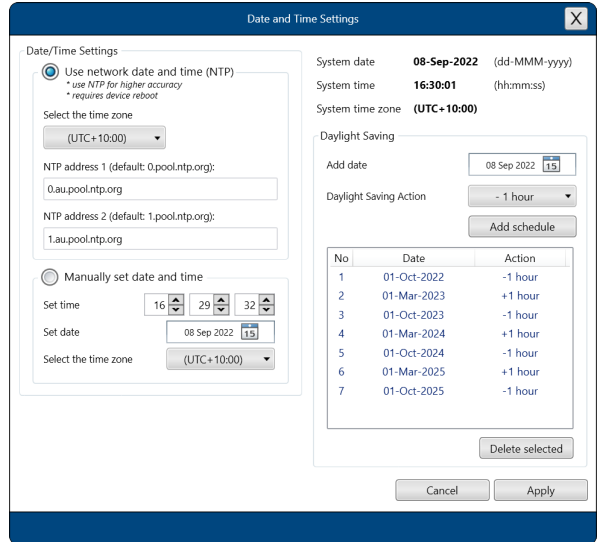
The Date and Time can be set from the front panel system setup menu or from the PC control software. The ZONEMIX has an integrated real time clock (RTC) to maintain the clock however it will drift over time.



CLOCK ACCURACY

If you are using the scheduler, it is HIGHLY recommended to attach the ZONEMIX to a network via the Ethernet connector and to set the Network Time Protocol (NTP) settings. This allows the ZONEMIX to retrieve date and time information from the network to ensure they are always accurate.

- Select the Date/Time control
- Select your time zone
- Use the default NTP address or enter your network NTP server address
- Finally, if required, enter any daylight savings dates for your region



DAYLIGHT SAVING

Daylight savings dates can be entered if required in your territory. The time change will be actioned at 3am on the date specified.

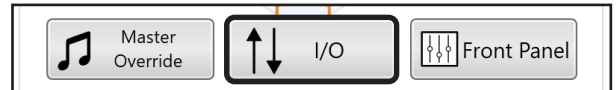
GENERAL PURPOSE INPUTS AND OUTPUTS

The ZONEMIX4 and ZONEMIX8 have 4 inputs and outputs and 8 inputs and outputs respectively. Use the PC control software to configure the I/O.

Use the dropdown menus to select the desired function for the input or output.

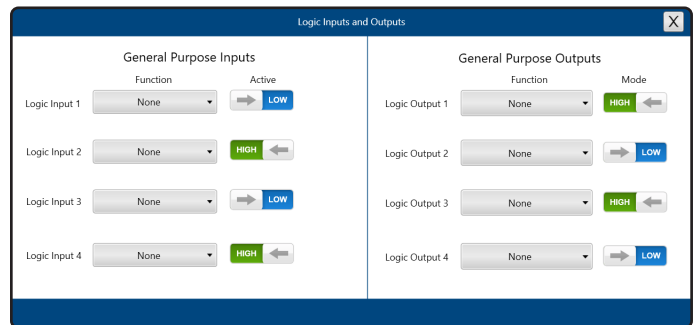
INPUTS

- Enable Master Override
- Mute Zone/s Master
- Recall a preset
- Trigger a message from the SD card



OUTPUTS

- Scheduler controlled
- Paging Active
- Wall Panel Control



See The ZONEMIX Scheduler and GPIO Manual for details.

ELECTRICAL SPECIFICATIONS:

Each INPUT detects the following levels

- Low input must be less than 0.5V
- High must be greater than 3V but less than 12V
- Input triggers must be stable for longer than 150ms.

Each OUTPUT is configured as follows,

- Open collector
- Can be connected to up to 50V systems
- Maximum 300mA sinked current

The 24V output can draw a maximum of 100mA.

CONNECTING ZMPS PAGING STATIONS



CONNECTING AND CONFIGURING THE ZMPS,

Step 1 Wiring and Termination.

Follow the wiring guide section on page 21 to connect and terminate the ZMPS to the accessory ports.

Step 2 Power on the Zonemix4/8

Step 3 Use the PC software to pair and configure the ZMPS

Step 4 Set audio levels

PAIRING THE ZMPS TO THE ZONEMIX4/8

Each ZMPS paging station must be individually paired with the Zonemix4/8 to function.

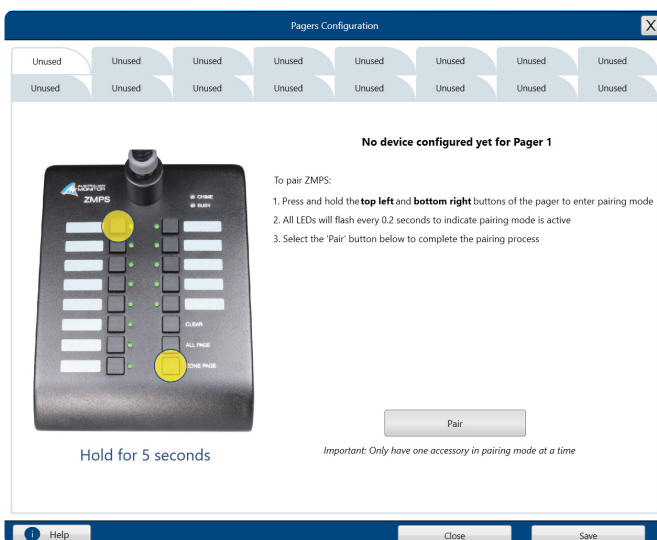
Follow these steps to pair the ZMPS,

On the ZMPS,

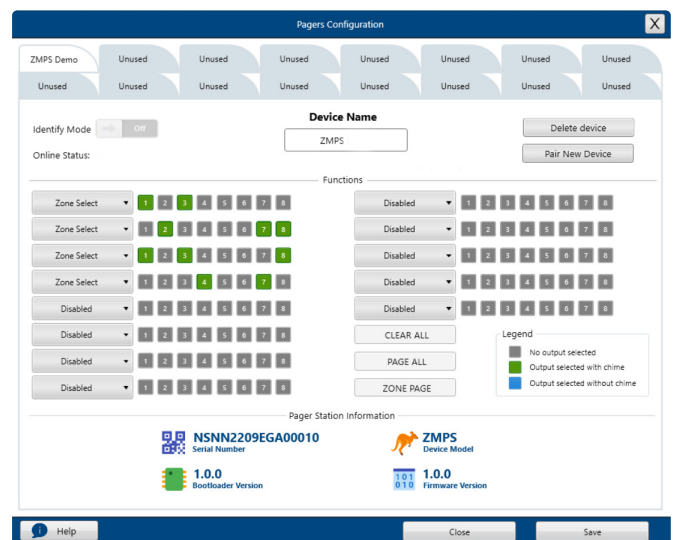
Press and hold the TOP LEFT and BOTTOM RIGHT buttons down for 5 seconds until the LEDs start flashing quickly every 0.2s and then release the buttons. The paging system is now in pairing mode (Press any button on the paging station during pairing mode to cancel the pairing mode).

In the Zonemix PC control software,

1. Select the "Pagers" button in the main window
2. Select any unused Pager tab
3. Select the "Pair" button
4. The Zonemix4/8 will upload the latest firmware to the ZMPS.
Note: this will take approx. 30 seconds. The LEDs will rotate anti-clockwise indicating software is being downloaded to the device. The LEDs will then rotate in a clockwise direction indicating the software is being written.
5. The PC software will then confirm that pairing is complete.
6. Name the paging station using the "Device Name" to identify it in future. If you forget or don't know which paging station is selected, use the "Identify" button which will make the paging station flash all its LEDs every 500ms.
7. Proceed to configuration step below



View before ZMPS paired



View after ZMPS paired

CONNECTING ZMPS PAGING STATIONS CONT.

IDENTIFY MODE

If you need to identify which ZMPS is being controlled by the Zonemix software,

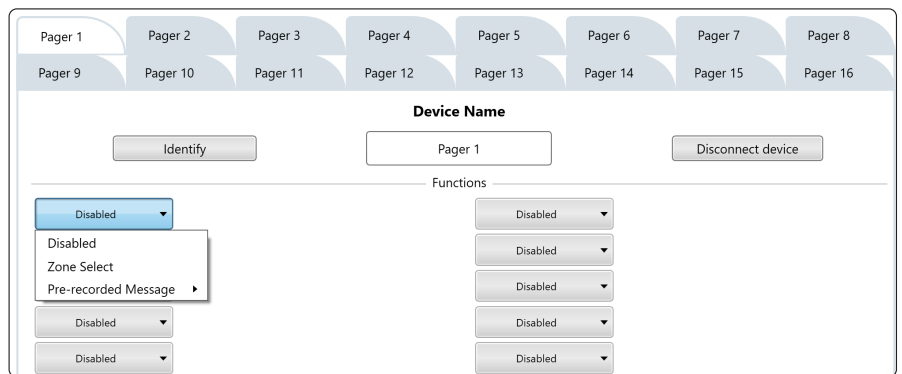
- Press the “Identify” button on the paging station tab in the “Pager Configuration” window
This activates the ZMPS LEDs (Flashes every 500ms)
Press any button on the paging station to cancel the identify state
- Alternatively, read the serial number on the rear of a ZMPS and match it to the paging station info shown in the paging station tabs.

ZMPS CONFIGURATION

The ZMPS allows each button to be configured as either

- Zone Select (Single or Group)
- Pre-recorded Announcement
- Disabled

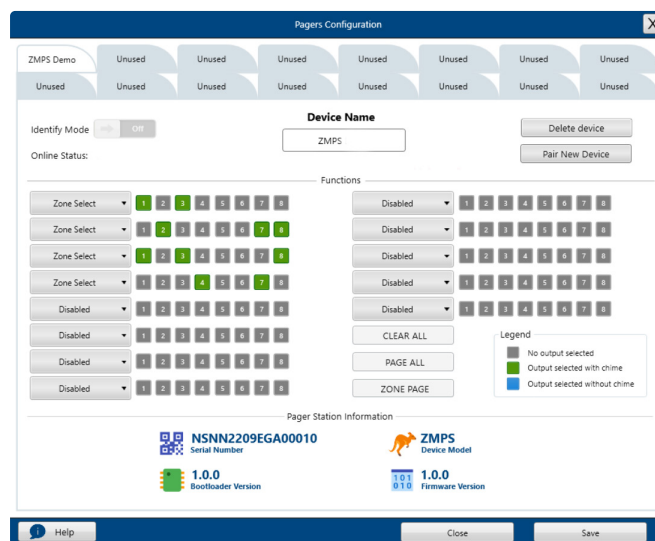
Select a button to show the drop down of assignable actions



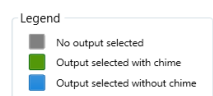
ZONE SELECT

Select the “Zone Select” option from the dropdown list and then select which zone/s it should control using the zone buttons controls. You can select a single zone or multiple zones if you wish to create a paging group.

Example: First two buttons are set as single zone selection, buttons three and four are set as zone group buttons



Each Zone can be set to one of the above states by repeatedly selecting the Zone number



PRE-RECORDED ANNOUNCEMENTS

A button can also be set to play a pre-recorded announcement

1. Select the “Paging Message” option from the button dropdown list
2. Select the message to be played from the file explorer window
Note: You must have an SD card installed with WAV audio files available
3. Select the zones that the message playback should play on from the zone selection display

PRE-RECORDED MESSAGE PLAYBACK

To playback a recorded message simply press the button that the message has been programmed on and the message will play out to the pre-configured zones. To cancel the message simply press the same message button again.

CONNECTING ZMPS PAGING STATIONS CONT.

DELETE (UNPAIR) A ZMPS

If a ZMPS needs to be removed from the system, it can be deleted in the PC control software.

- Go to the appropriate paging station tab.
See the Identify section above if you do not know which station to select.
- Select the “Delete device”
- In order to re-connect the ZMPS follow the pairing instructions section of this manual

Note: You can customize the pre-announcement chime of the paging stations. See the SD card section for details

CUSTOMISE THE PAGING CHIME

The paging chime can be optionally overridden by placing an alternative audio file on the root of a customer supplied SD card.

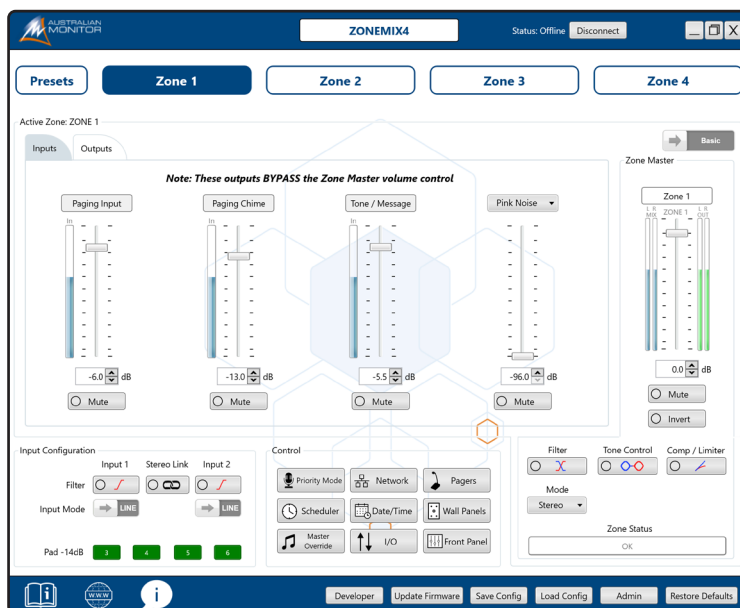
- Format: pagingchime.wav

(Only WAV files are supported. Do NOT use MP3 or other audio formats).

SET AUDIO LEVELS

Important: The paging input, chime and messages BYPASS the Zone master volume control. This is to ensure the paging is not too low or muted if a user turns down the master volume.

1. Select the Zone output you wish to control
2. Select the “Outputs” audio tab in the audio mix section
3. Set the Paging Input, Paging Chime and Message volume controls to the level desired



CONNECTING WALL PANEL CONTROLLERS



See page 23

Step 1 Wiring and Termination.

Follow the wiring guide section of the manual to connect and terminate the wall panels to the accessory ports.

Step 2 Power on the Zonemix4/8

Step 3 Use the PC software to pair and configure the wall panels

Step 4 Set audio levels

PAIRING THE WALL PANELS TO THE ZONEMIX4/8

Each wall panel must be individually paired with the Zonemix4/8 to function.

Follow these steps to pair the wall panels,

On the wall panels,

1. On the WP10,

Press and hold the TOP LEFT and BOTTOM RIGHT buttons until all the LED's start flashing every 0.2s. (Press any button on the wall panel during pairing to cancel the pairing mode)

On the WP4R and WPVOL,

Press and hold the rotary encoder button for 5 seconds until all the LED's start flashing every 0.2s. (Press any button on the wall panel during pairing to cancel the pairing mode)

Only have one wall panel or ZMPS in pairing mode at a time



In the Zonemix PC software,

1. Select the "Wall Panels" button in the main window

2. Select any unused wall panel tab

3. Select the "Pair" button

4. The Zonemix4/8 will upload any firmware updates to the wall panel.

The LEDs will rotate anti-clockwise indicating software is being downloaded to the device.

The LEDs will then rotate in a clockwise direction indicating the software is being written.

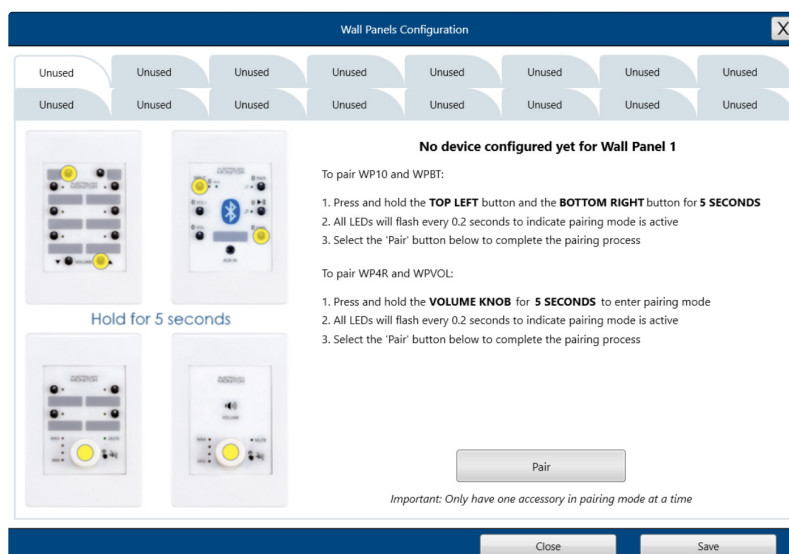
5. The PC software will then confirm that pairing is complete

6. Name the wall panel using the "Device Name" to identify it in future.

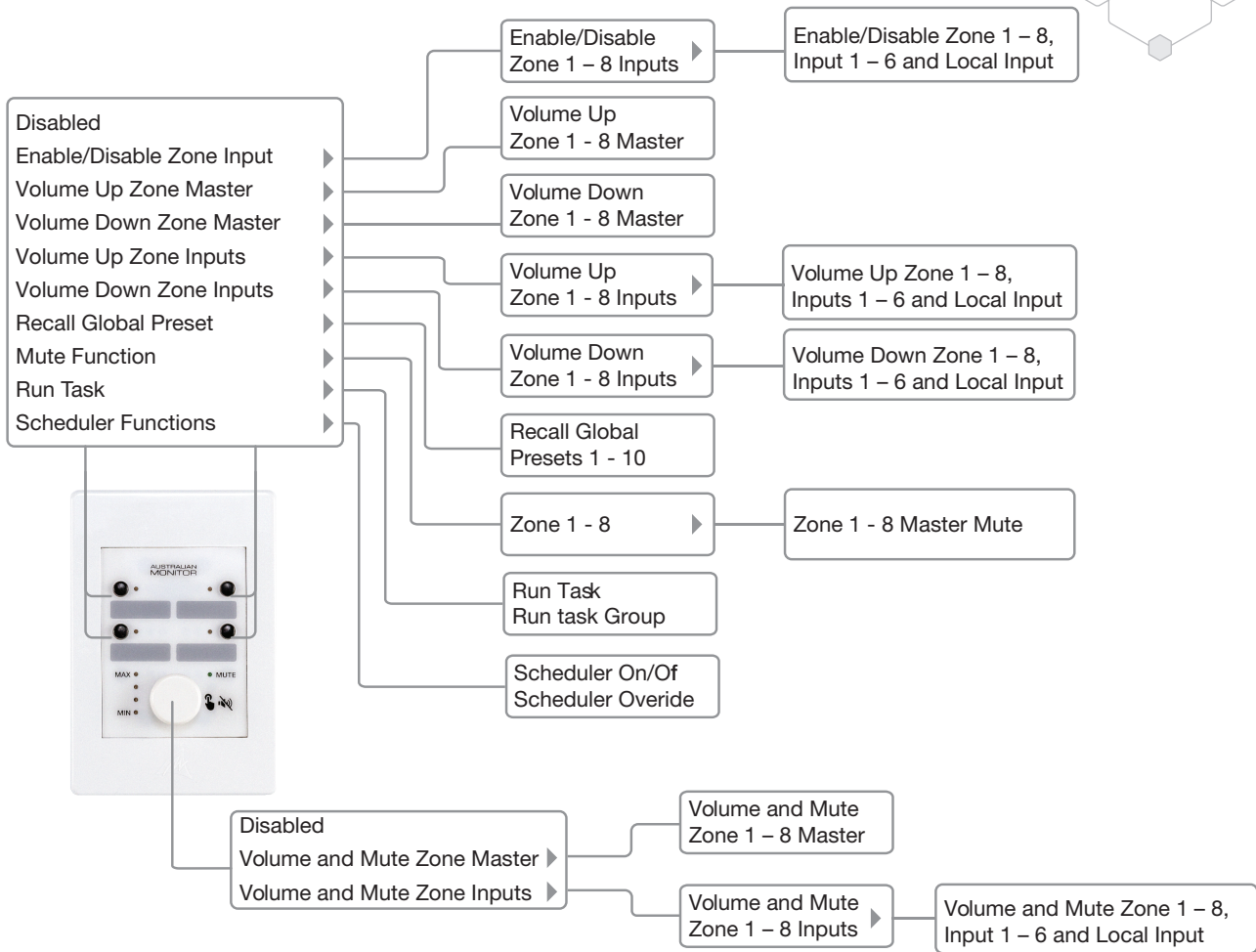
If you forget or don't know which wall panel is selected, use the "Identify" button which will make the wall panel flash all its LEDs every 500ms.

7. Using the dropdown menu for each button, select the function desired.

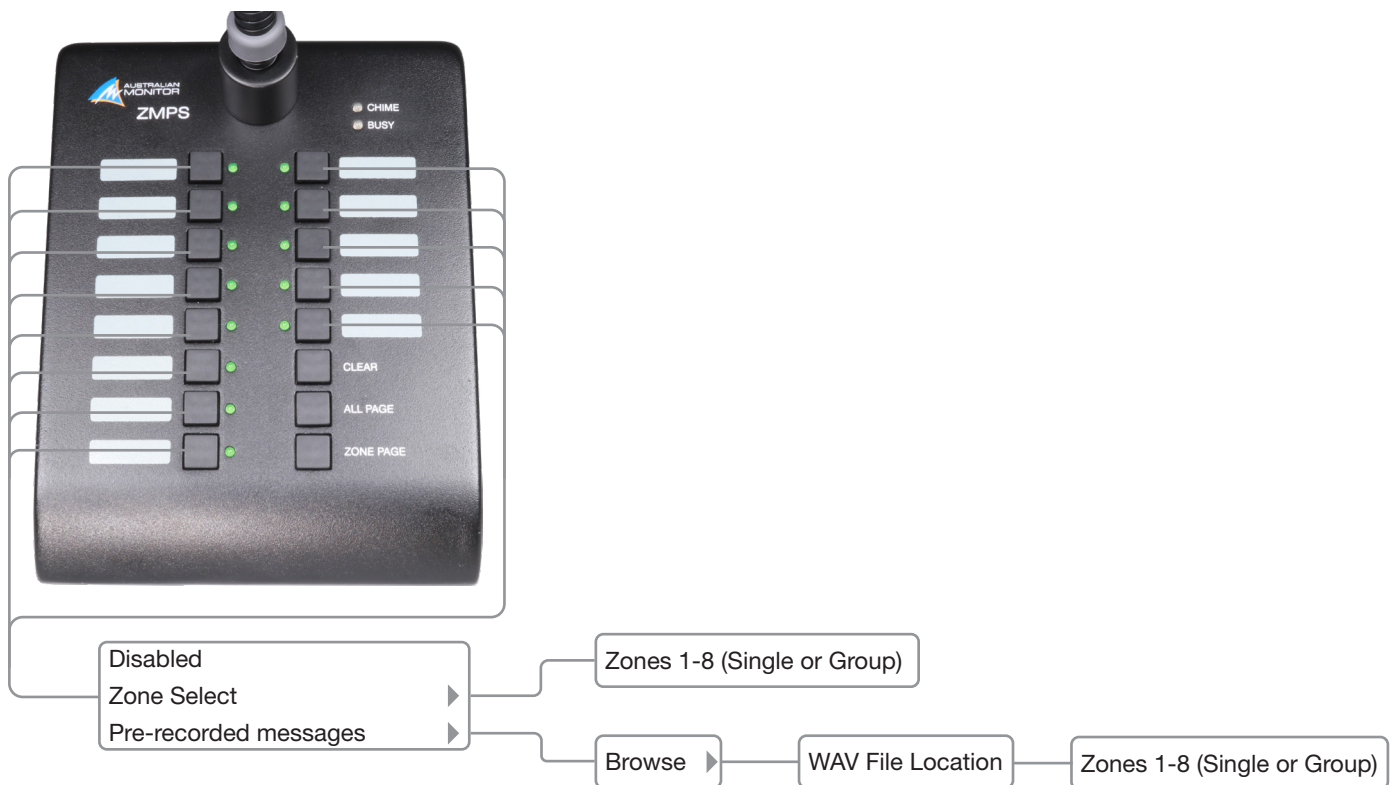
Note: the WPBT does not have any configurable buttons and will instead show the Bluetooth options that can be modified such as Name and PIN number.



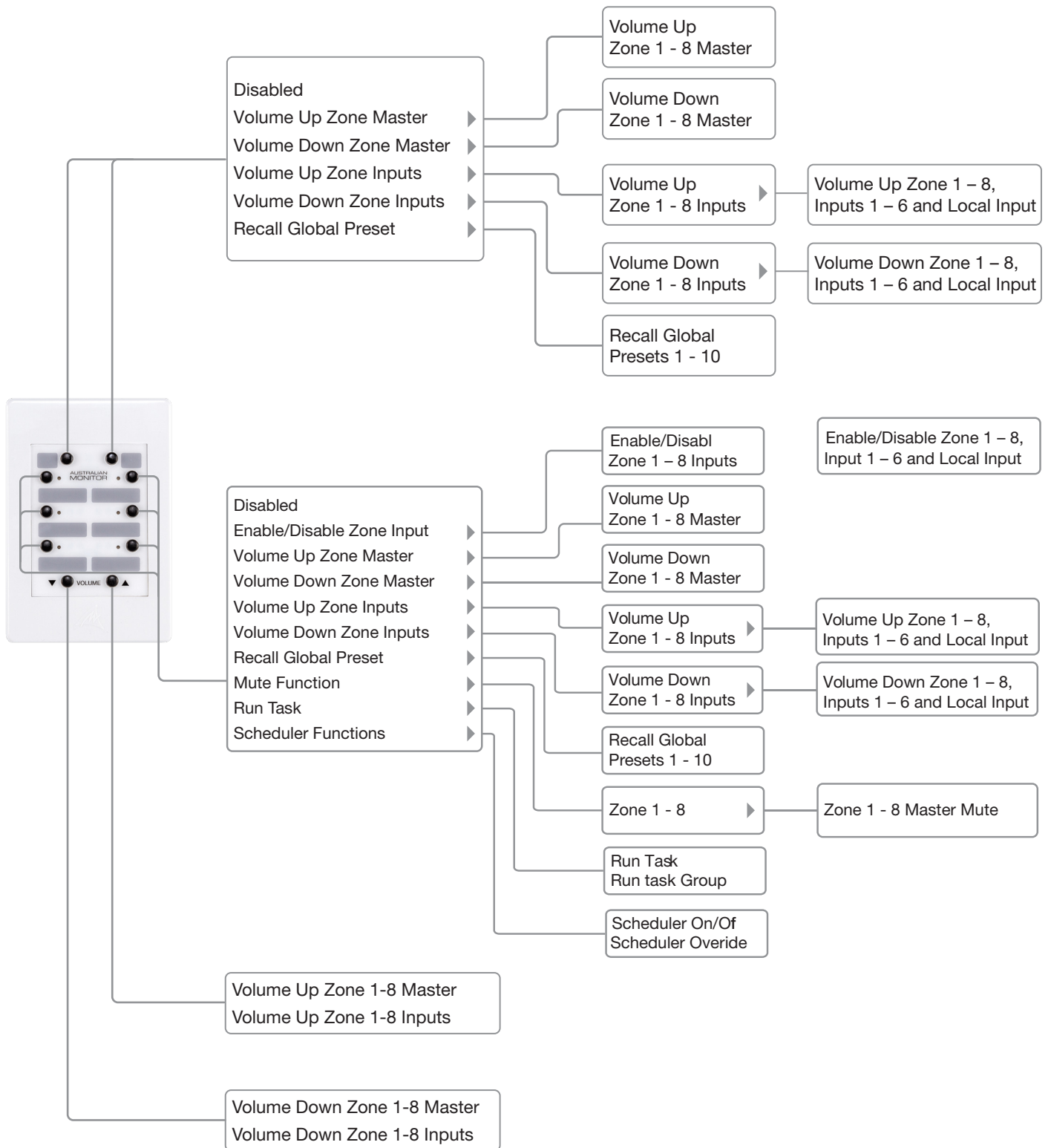
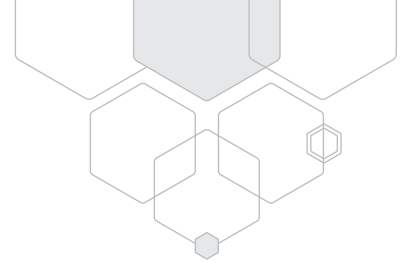
WP4R PROGRAMMING OPTIONS



ZMPS PROGRAMMING OPTIONS



WP10 PROGRAMMING OPTIONS



CONNECTING WALL PANEL CONTROLLERS CONT.

Accessory LED States

LED Status	Meaning	Resolution
All LEDs on, once a second	Not Paired	Put accessory into pairing mode
All LEDs on every 0.2 seconds	Pairing Mode	Pair accessory with ZONEMIX using the PC control software
LED chase anti clockwise, one led on at a time (led changes every 0.5 seconds)	Erasing firmware to prepare for new firmware	Wait until the accessory has finished erasing
LED chase clockwise, one led on at a time (led changes every 0.5 seconds)	Writing new firmware	Wait until the ZONEMIX has finished writing firmware to the accessory
Alternate left, right LEDs every 500ms	Identify Mode	Press any button to cancel identify mode
Top left LED on once a second	Needs firmware download	Download new firmware to the accessory by pairing it to the system
All RED LEDs on	Master Override, Evac, Alert, Intruder Active (Wall panel disabled)	Wait until the master override has finished
Top left LED on (led change state every 2 seconds)	Fault	Return to service

CONNECTING WALL PANEL AUDIO INPUTS

The ZONEMIX accessory ports each have a single balanced audio input for use with a remote audio wall panel. This input is referred to as the LOCAL input.

Each accessory ports LOCAL input is locked to the corresponding output zone. E.g. Accessory Port 1 is the Local input for Zone 1. Connect any balanced audio source to the accessory port.

Compatible wall panels include,

- WPBT – Bluetooth audio receiver
- WPML – MIC/Line active audio input
- WPXLR – passive XLR audio input

✦ **Important: Only 1 audio input wall panel is supported per zone**

Referring to the wiring guide section, the accessory port wiring for the LOCAL input is,

- Pin 5 GND
- Pin 7 Local Input +
- Pin 8 Local Input -

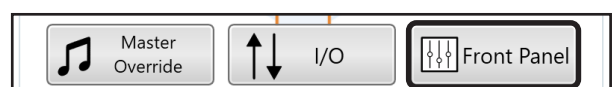
The WPBT must be paired to the ZONEMIX system which then instructs the wall panel to transmit mono audio out. If it is not paired it will transmit stereo out and you will only hear the left channel in the local input.

FRONT PANEL

The front panel allows the control of various features in the ZONEMIX. However, these can be disabled if you wish to prevent end users from modifying the setup.

- Disable input volume level control
- Disable output volume level control
- Disable preset recall/saving
- Disable Audio Setup menu access
- Disable System Setup menu access
- Disable entire front panel.

(Shows device name and displays locked message)



ACCESSORY WIRING GUIDE

ZONEMIX WIRING GUIDE

ZONING • PAGING • CONTROL

INTRODUCTION

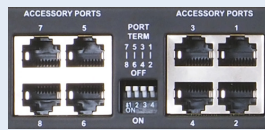
The ZONEMIX accessory ports allow for the connection of wall panels, paging stations and audio input sources. Please follow the guide below to set up your system.

Key:

ZONEMIX 4



ZONEMIX 8



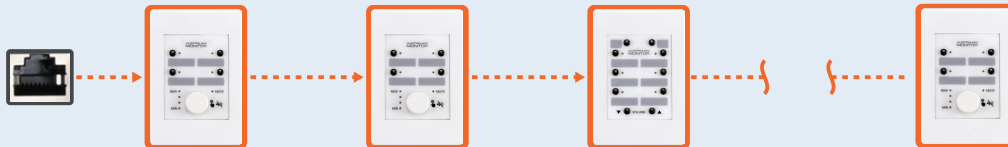
Wall Controllers



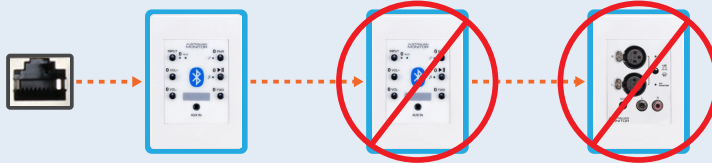
Audio Sources



Supports up to 8 controllers per port. (see page 2 for details)



Supports ONE audio input PER accessory port.



Supports up to 8 paging stations per port. (see page 2 for details) Note: Supports one active page at a time.



Example setup: Lots of controllers, lots of paging stations and ONE audio input.

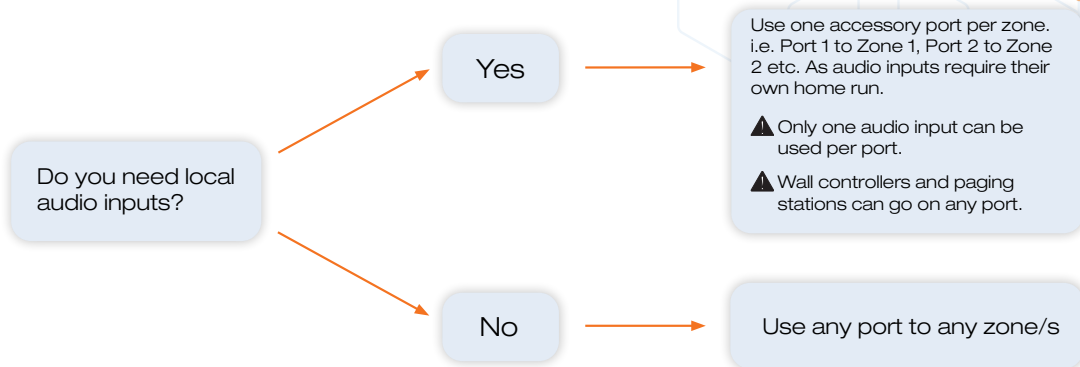


⚠ Please note that accessory port local audio input channels are locked to the corresponding output zone and only one can be used per zone. E.g. Accessory port 1 local input connects to Zone 1. However, multiple wall panels and paging stations can be connected on the same accessory port.

ACCESSORY WIRING GUIDE



STEP 1: DECIDE PORT WIRING LAYOUT



STEP 2: CONFIRM YOU DO NOT EXCEED THE FOLLOWING LIMITS

Maximum cable length per port	Accessories per port	Maximum Accessories in system
130m	8	24
150m	7	
170m	6	
200m	5	
250m	4	
350m	3	
500m	2	

The maximum distances quoted in the table are due to DC current limitations.
The paging stations and wall panels can be locally powered to increase the cable length to a maximum of 500m. Please read the following additional document: **Advanced accessory port wiring guide.**

ACCESSORY WIRING GUIDE



STEP 3: ACCESSORY PORT WIRING

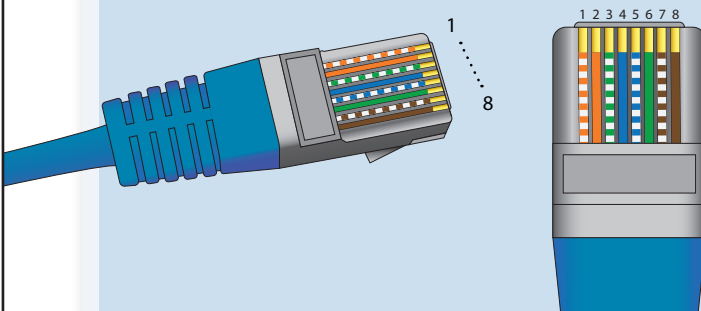
There are two wiring standards which can be used, T-568B and T-568A.

The difference between the two standards are the orange and green wiring pairs are different.

- T-568B (orange pair are on pins 1+2, green pair are on pins 3+6)
- T-568A (orange pair are on pins 3+6, green pair are on pins 1+2)
- We recommend using T-568B but either standard is supported.
- **Pick one standard only and use it for all connections.**

ZONEMIX AND ZMPS WIRING STANDARDS

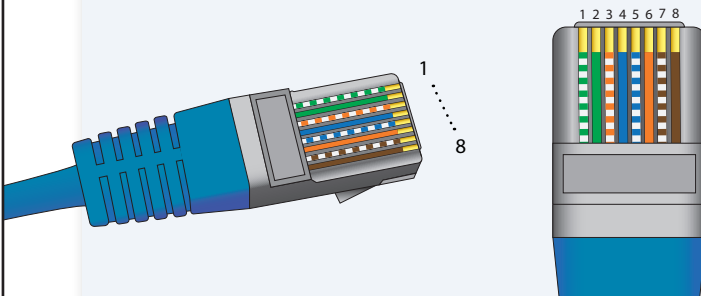
T-568B STANDARD (RECOMMENDED)



Pin	Colour	Signal
1	Orange/White	Paging Audio +
2	Orange	Paging Audio -
3	Green/White	RS485 B
4	Blue	+24V DC
5	Blue/White	GND
6	Green	RS485 A
7	Brown/White	Remote Input +
8	Brown	Remote Input -

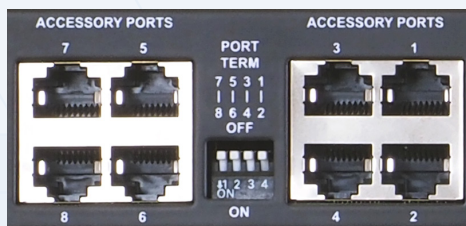
*T-568B wiring standard recommended

T-568A STANDARD



Pin	Colour	Signal
1	Green/White	Paging Audio +
2	Green	Paging Audio -
3	Orange/White	RS485 B
4	Blue	+24V DC
5	Blue/White	GND
6	Orange	RS485 A
7	Brown/White	Remote Input +
8	Brown	Remote Input -

ZONEMIX



ZMPS



australianmonitor.com.au

3

ACCESSORY WIRING GUIDE



STEP 3: ACCESSORY PORT WIRING (CONT.)

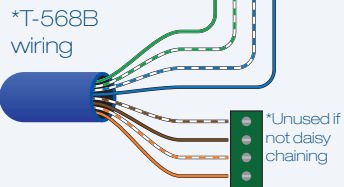
Wire the wall panels as per the images below.

- Category 5, 5e and 6 cabling supported.
- T-568B wiring recommended. However, T-568A also supported.

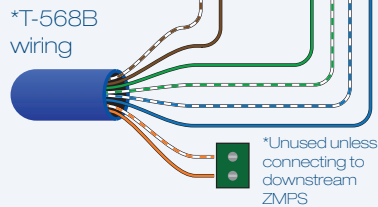
T-568B wiring

1	Paging Audio +
2	Paging Audio -
3	RS485 B
4	+24V DC
5	GND
6	RS485 A
7	Remote Input +
8	Remote Input -

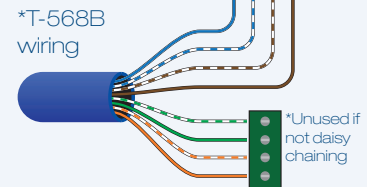
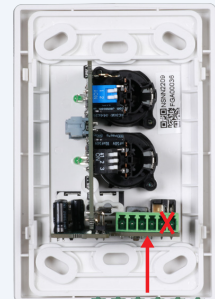
WP4R, WP10, WPVOL WIRING



WPBT WIRING



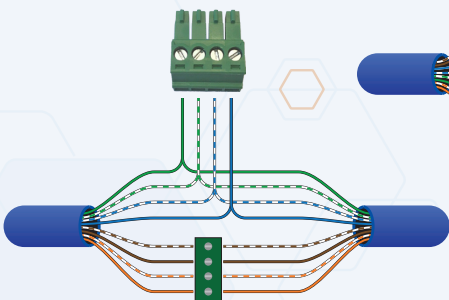
WPML WIRING



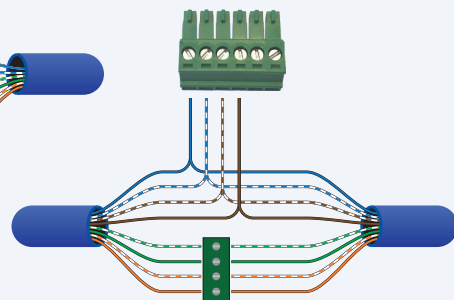
WPBT daisy chain wiring



WP4R, WP10, WPVOL daisy chain wiring



WPML daisy chain wiring



ACCESSORY WIRING GUIDE

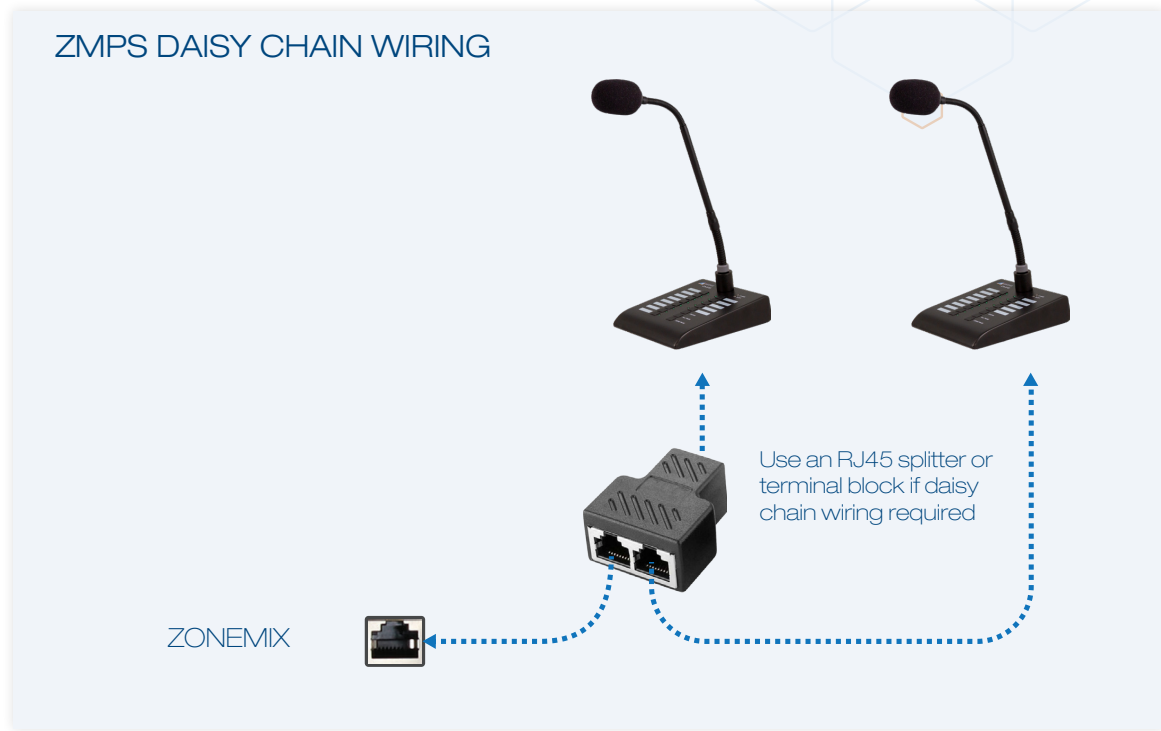


STEP 3: ACCESSORY PORT WIRING (CONT.)

Wire the ZMPS as per the image below.

- Category 5, 5e and 6 cabling supported.
- T-568B wiring recommended. However, T-568A also supported.

ZMPS DAISY CHAIN WIRING



ACCESSORY WIRING GUIDE



STEP 4: PORT TERMINATION – DO NOT SKIP THIS STEP

The ZONEMIX uses the RS485 standard to communicate to wall panels and paging stations. RS485 requires that each end of the cable run is terminated to prevent signal corruption due to signal reflections in the cable. The Accessory Ports are grouped in Pairs. 1+2, 3+4, 5+6, 7+8. You must terminate the ZONEMIX and Accessories based on which ports you use.

1. Terminate the ZONEMIX accessory ports, as per the table, using the PORT TERM switches

ACCESSORY PORT TERMINAL SWITCH SETTING			
ONE PORT USED	TERM	BOTH PORTS USED	TERM
Port 1 OR Port 2 used	ON	Port 1 AND Port 2 used	OFF
Port 3 OR Port 4 used	ON	Port 3 AND Port 4 used	OFF
Port 5 OR Port 6 used	ON	Port 5 AND Port 6 used	OFF
Port 7 OR Port 8 used	ON	Port 7 AND Port 8 used	OFF



2. Terminate the LAST RS485 accessory on the port cable run.

Paging station termination

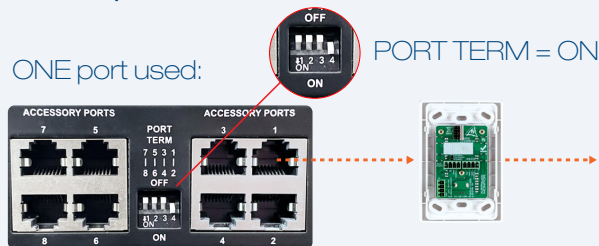


Wall panel termination

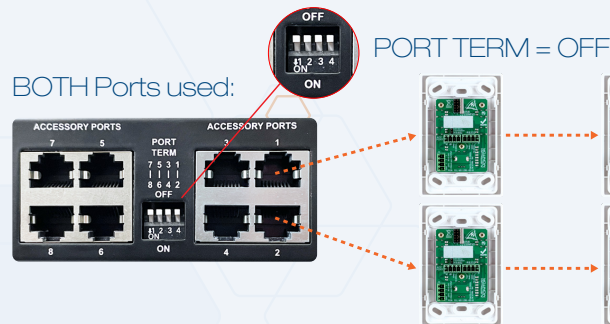


Examples:

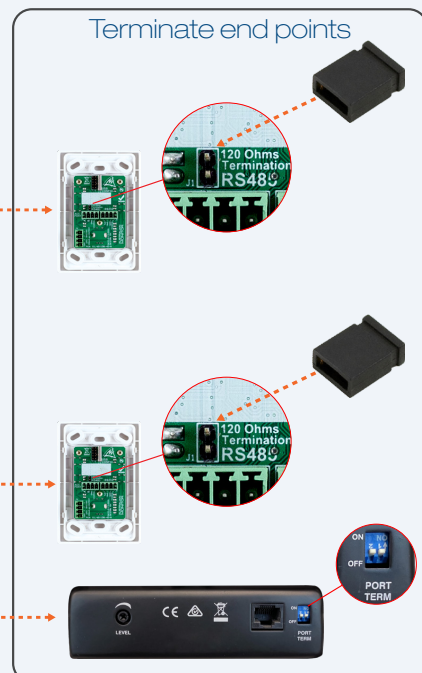
ONE port used:



BOTH Ports used:



Terminate end points

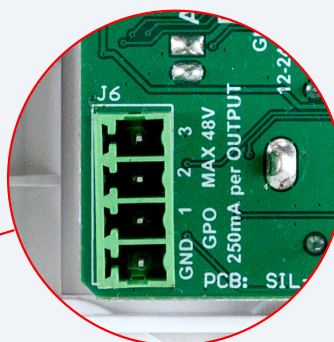
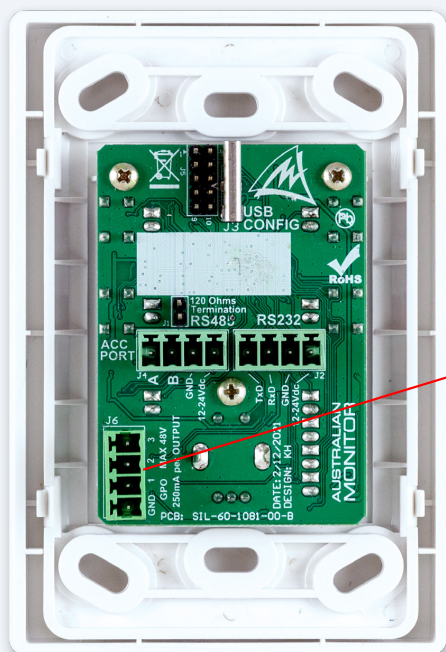


ACCESSORY WIRING GUIDE



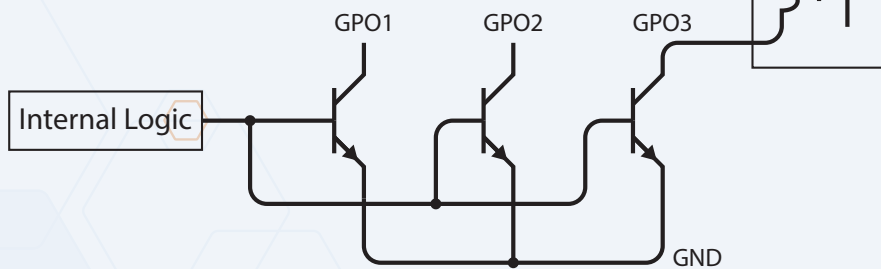
STEP 5: WP4R, WP10 GPO WIRING (OPTIONAL)

The WP4R and WP10 both have 3 general purpose outputs which can be controlled from the wall panel buttons to trigger external devices such as projectors.



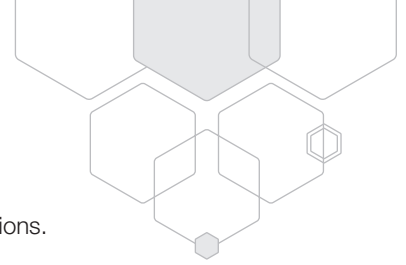
GPO Schematic

Each Output is an open collector transistor.
Maximum Voltage: 48V
Maximum Sink Current: 250mA



Example:
Relay Connection

THIRD PARTY CONTROL



The ZONEMIX can be controlled from third party applications via the Ethernet or RS232 connections.

RS232 CONNECTION

The RS232 ships with the following default settings,

- BAUD 115200
- DATA 8
- STOP 1
- PARITY None
- FLOW None

These can be modified in the PC control software under the “Network” settings.

ETHERNET CONNECTION

Sending commands over the ethernet requires the IP address and PORT number.

The network settings can be accessed from the “Network” section of the control software

- Default IP Address 192.168.1.10
- UDP Port 2626
- TCP Port 2626

ALMA Interface Protocol

The 3rd party control interface is called ALMA, the full protocol can be downloaded from www.australianmonitor.com.au

In addition, the PC control software has a “Developer” mode button that brings up a dialog box which prints out commands sent and received by the ZONEMIX. It is strongly recommended using this feature to easily find the commands necessary to control functions in the product.

Example Commands:

Task	Command	Reply
Set Zone Output 1 to -20dB	set active out1 vol “-20.0”	reply active out1 vol “-20.0”
Set Zone 1, Input 1 to 0dB	set active mixout1in1 vol “0.0”	reply active mixout1in1 vol “0.0”
Unmute Zone 1, Input 2	set active mixout1in2 mute “false”	reply active mixout1in2 mute “false”
Recall preset 1	set device preset recall “1”	reply device preset recall “1”

The volume increment feature is commonly used,

Increment Zone8 Input 6 up 3dB	set active mixout8in6 vol up 3	reply active mixout8in6 vol up “3”
Increment Zone8 Input6 down 3dB	set active mixout8in6 vol down 3	reply active mixout8in6 vol down “3”

Note: Always wait for the reply command to prevent commands falling out of sequence or being send too quickly.

FACTORY DEFAULTING & IP ADDRESS RESETTING

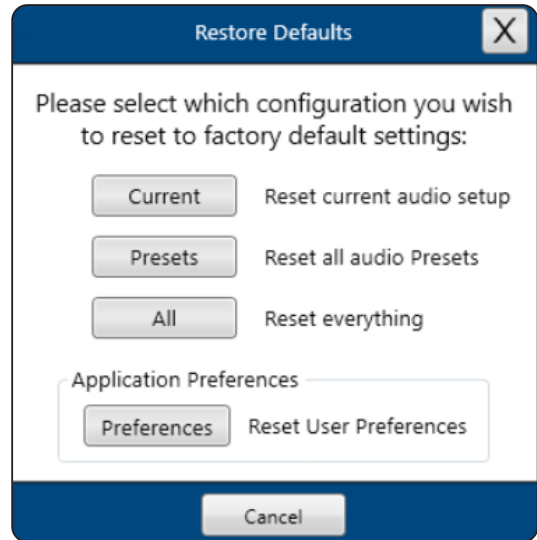
RESTORE DEFAULTS

- Connect PC to ZONEMIX4/8 via USB or Ethernet
- Select Restore Defaults button on bottom task bar



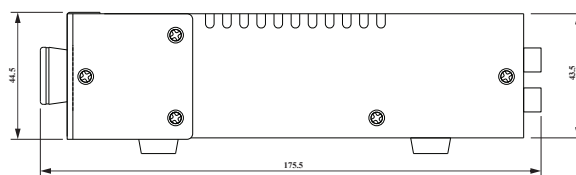
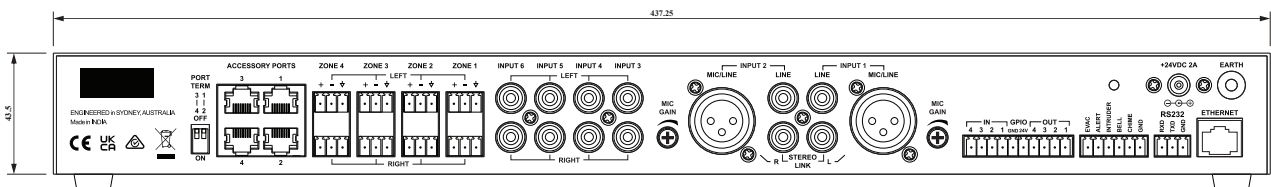
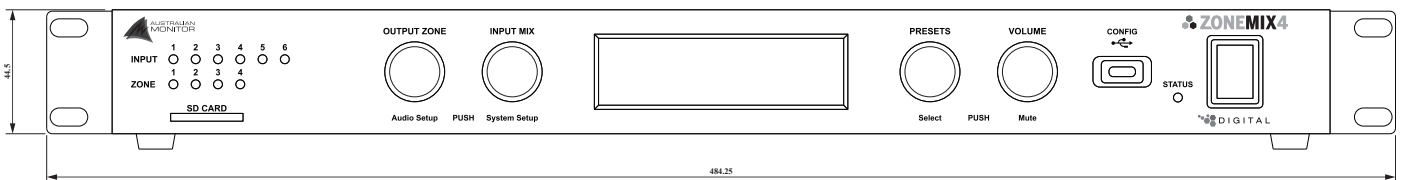
Choose the option required

1. Reset current audio setup:
Reset all audio settings back to the default settings (e.g. All Inputs/Outputs Unmuted, -96dB (see page 8 for further details).
2. Reset all audio presets:
All presets 1 ~ 10 back to the factory default values.
3. Reset everything:
All network, scheduler, GPIO, wall panel / pager accessories and audio settings back to the factory default values.
4. Application Preferences
All application choices such "Tick this to not show again" windows are reset back to the default..

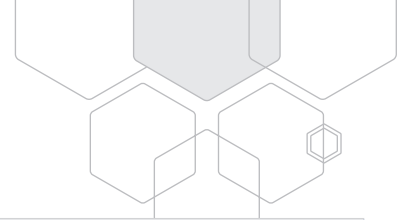


IMPORTANT! To prevent the loss of any setup information please save your current configuration by selecting the "Save Config" button at the bottom of the control panel before attempting to restore any defaults.

DIMENSIONS

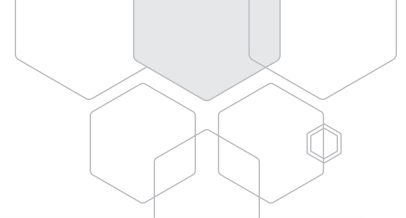


SPECIFICATIONS



	ZONEMIX 4	ZONEMIX 8	COMMENTS
INPUTS/OUTPUTS			
ZONE OUTPUTS	4	8	
OUTPUT MODE	Stereo/Mono	Mono	
MIC/LINE INPUTS	2		
LINE INPUTS	4		
LOCAL AUDIO INPUTS	4	8	Inputs from Accessory Ports
PAGING STATIONS	Up to 16		
WALL PANELS	Up to 16		
AUDIO			
XLR SENSITIVITY	LINE Setting: 200mV, MIC Setting: 10mV		1Vrms output
RCA SENSITIVITY	-12dBu (200mV)		1Vrms output Software controlled -14dB pad available
MAXIMUM ZONE OUTPUT LEVEL	4Vrms		
FREQUENCY RESPONSE	20Hz-20kHz		±0.5dB
THD	< 0.01%		20Hz-20kHz, 20kHz BW, Unity Gain
SNR	> 100dBA		Max Output, 1kHz, 20kHz BW, A-Weighted
miniDSP			
	Volume control Matrix Mixer High/Low pass filters Tone Control - 100Hz ±10dB, 10kHz ±10dB Compressor/Limiter Delay up to 50m(150ms) ZONEMIX4 Only Sine Wave Generator (500, 1k, 5k and 10kHz) Internal Pink Noise Generator		
CONTROL			
USER CONTROLS	Front Panel, Wall Panels		
COMMS INTERFACE	USB-C, Ethernet, RS232		PC GUI and 3rd Party API
GENERAL PURPOSE I/O	4 In, 4 Out	8 In, 8 Out	
TONE GENERATOR	5 Tones		Customisable from SD card
SD CARD	Full size SD card. FAT32 file format. 2TB maximum size		
SD CARD FILE FORMAT	WAV: PCM, 8 or 16 bit, up to 48kHz sample rate		

SPECIFICATIONS



	ZONEMIX 4	ZONEMIX 8	COMMENTS
ADDITIONAL FEATURES			
PHANTOM POWER	24V, 10mA		
POWER REQUIREMENTS			
INPUT VOLTAGE	24V DC		100-240Vac 48W plug pack
INPUT CONNECTOR	5.5/2.1mm Socket. Tip positive		100-240Vac 48W plug pack
POWER CONSUMPTION	8W / 48W		No accessories / Maximum Load
THERMAL DISSIPATION CONSUMPTION	27 BTU		1W = 3.412 BTU/Hr
24V OUT	100mA		Total from both outputs
DC INPUT SOCKET	100mA		Total from both outputs
MECHANICAL			
SHIPPING DIMENSIONS	541 x 281 x 104mm(21.3"W x 11.1"D x 4.1"H)		
PRODUCT DIMENSIONS (with rack ears)	485 x 176 x 44.5mm(19.1"W x 6.9"D x 1.75"H)		Including Knobs and Rear Connectors
PRODUCT DIMENSIONS (without rack ears)	438 x 176 x 44.5mm(17.3"W x 6.9"D x 1.75"H)		Including Knobs and Rear Connectors
NET WEIGHT	2.4kg		
SHIPPING WEIGHT	3.1kg		
MOUNTING	1 RU		
FINISH	Powder coated steel		
COLOUR	Black		
OPERATING TEMPERATURE	0°C to 40°C (95% RH)		
APPROVALS			
	CE, IEC, RCM		



ENGINEERED BY AUSTRALIAN MONITOR

Address: Unit 1, 2 Daydream Street, Warriewood NSW 2102 Australia

Website: www.australianmonitor.com.au

International enquiries email: international@australianmonitor.com.au

ABN 86 003 231 187