FEATURES

- ✓ Four zones of paging
- ✓ Pre announcement chime
- ✓ Mic volume adjustment
- ✓ High level balanced output via Cat 5 cable
- ✓ 24Vdc power supplied via Cat 5 cable
- ✓ Chime volume adjustment
- ✓ BGM volume adjustment

PRODUCT DESCRIPTION

The paging microphone is a simple to use and elegant desk top design which provides up to 4 zones of paging. It allows the operator to manually select any zone or any combination of zones. Also included is an All Call & Cancel button. A pre-announcement chime is available at the paging console and through the PA system. Both of these are set by DIP switches on the rear of the unit. Provision has also been made on the rear of the unit for a 3.5mm BGM input for background music.

A maximum of two paging consoles can be connected to the audio switcher at the same time. These work in a "first in, best dressed" arrangement. Each unit must be assigned an ID number through DIP switch settings on the rear of the unit.

The audio switcher provides a microphone level or line level output which can be connected directly to the inputs of up to four amplifiers to provide up to four zones of audio. Connection between the paging console and audio switcher is via a Cat5e cable which carries power and the balanced audio output from the microphone.

PAG-CON-4Z REAR PANEL CONNECTIONS

1. 24Vdc Connector	2.1mm DC jack (centre pin positive).
2. RJ45 Connector	For connection back to the Line Out Box. Either port can be used.
3. DIP Switch Options	These switches set the chime options.
4. BGM Input	The background music can be connected via a 3.5mm Stereo Jack
5. BGM Volume	Use this volume to adjust the background music level.
6. Chime Volume	Use this volume to adjust the chime level.
7. Microphone Volume	Use this volume to adjust the microphone level.

Fig 1a
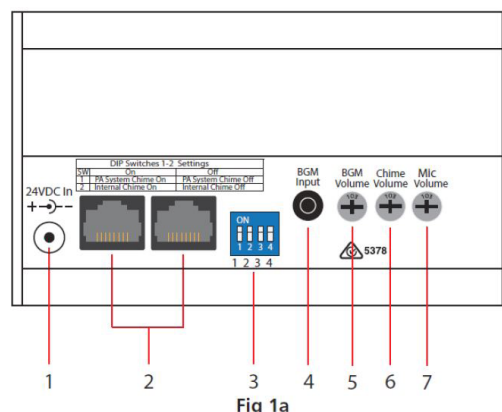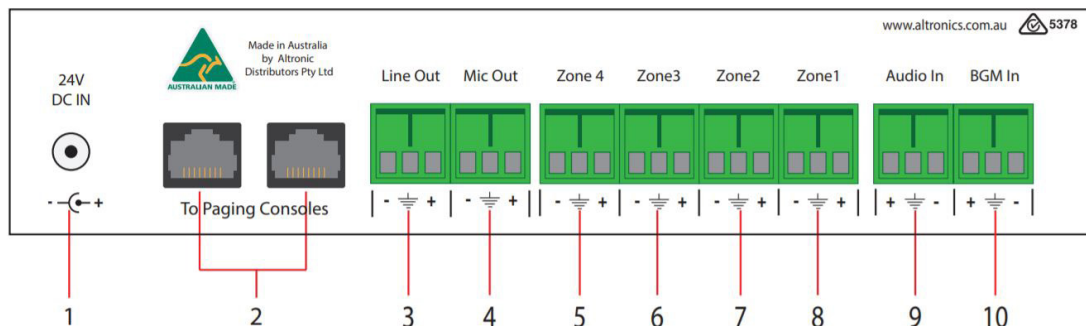
Fig. 1b.

PAG-AUDIO-SWITCH REAR PANEL CONNECTIONS

1. 24Vdc Connector	2.1mm DC jack (centre pin positive).
2. RJ45 Connector	For connection back to the Paging Consoles. Either port can be used.
3. Line Out	This is the line level audio output from the paging console/s.
4. Mic Out	This is the low level audio output from the paging console/s.
5-8. Zone 1-4 Audio Outputs	These are switched audio outputs which output the signal present at the "Audio In" terminals when the particular zone is triggered by a paging console.
9. Audio In	This is the input used in supply audio to the zone outputs.
10. BGM In	This is the input used to supply Background Music to the zone outputs.

DIP SWITCH SETTINGS

DIP switches on the rear of the unit set the Pre-announcement chime options and console number.

DIP switch 1 sets the pre-announcement chime on or off.
DIP switches 2-4 set the paging console number*.

Note: The ID must be set to ID 1 or ID 2 when using the PAG-CON-4Z with the PAG-AUDIO-SWITCH (see Fig. 2 red box).

Note: Ensure power is switched off when adjusting DIP switches. New settings will be effective when power is switched back on.

	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8
Switch 2	Off	Off	Off	Off	On	On	On	On
Switch 3	Off	Off	On	On	Off	Off	On	On
Switch 4	Off	On	Off	On	Off	On	Off	On

Fig. 2.

CONNECTING THE PAGING CONSOLE/S AND AUDIO SWITCHER

The paging console/s and audio switcher are connected by a CAT5e cable with a maximum run distance of 300 metres. This CAT5e cable can be connected to either of the two RJ45 ports provided on the rear of the microphone. A 24Vdc power supply rated at a minimum of 1A is required to power the system. Power connection must be made by connecting power to the audio switcher via a 2.1mm DC Jack. Power is then fed through the CAT5e cables to supply power to the paging consoles.

The balanced audio output from the microphone is transmitted down the CAT5e cable to the audio switcher which splits and converts the signal to microphone and line level outputs. These are provided as screw terminal connections.

Volume controls for the microphone volume and chime volume are located on the rear of the microphone.

CONNECTION CONFIGURATIONS

There are three basic different configurations for switching the audio output from the Audio Switcher to the output zones.

Option 1: Individual Zone Amplifiers using Microphone Level Signals

The audio from the paging console/s is fed down the CAT5e cable to the audio switcher. Take the low level balanced signal from the "Mic Out" terminals on the rear of the audio switcher and feed them back into the "Audio In" terminals on the rear of the audio switcher as shown in Fig 3.

The audio from the "Zone 1" to "Zone 4" terminals are then fed into individual amplifiers to provide the audio for the four zones. The audio from these output terminals are switched internally by relays and are not present unless the zone is activated by the paging console/s. Use this method if using amplifiers with low level balanced inputs. If the ampifiers used have line level inputs use the configuation outlined in option 2.

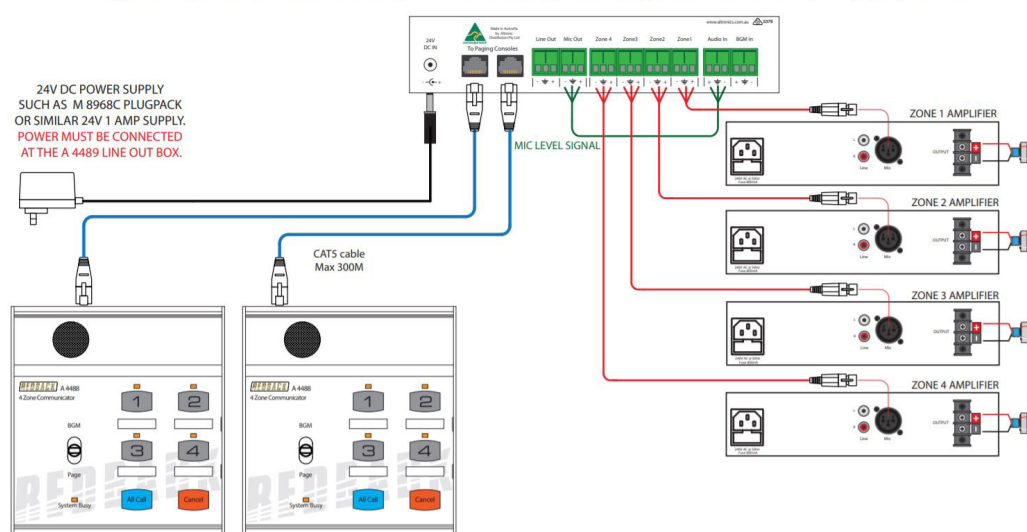Typical connection of the A 4488/s and A 4489A with individual amplifiers for each zone using mic levels

Fig. 3.

CONNECTION CONFIGURATIONS

Option 2: Individual Zone Amplifiers using Line Level Signals

The audio from the paging console/s is fed down the CAT5e cable to the audio switcher. Take the line level (1V balanced signal) from the "Line Out" terminals on the rear of the audio switcher and feed them back into the "Audio In" terminals on the rear of the audio switcher as shown in Fig 4.

The audio from the "Zone 1" to "Zone 4" terminals are then fed into individual amplifiers to provide the audio for the four zones. The audio from these output terminals are switched internally by relays unless the zone is activated by the paging console/s.

Use this method if using amplifiers with line level balanced inputs. If the amplifiers used have mic level inputs use the configuration outlined in option 1.
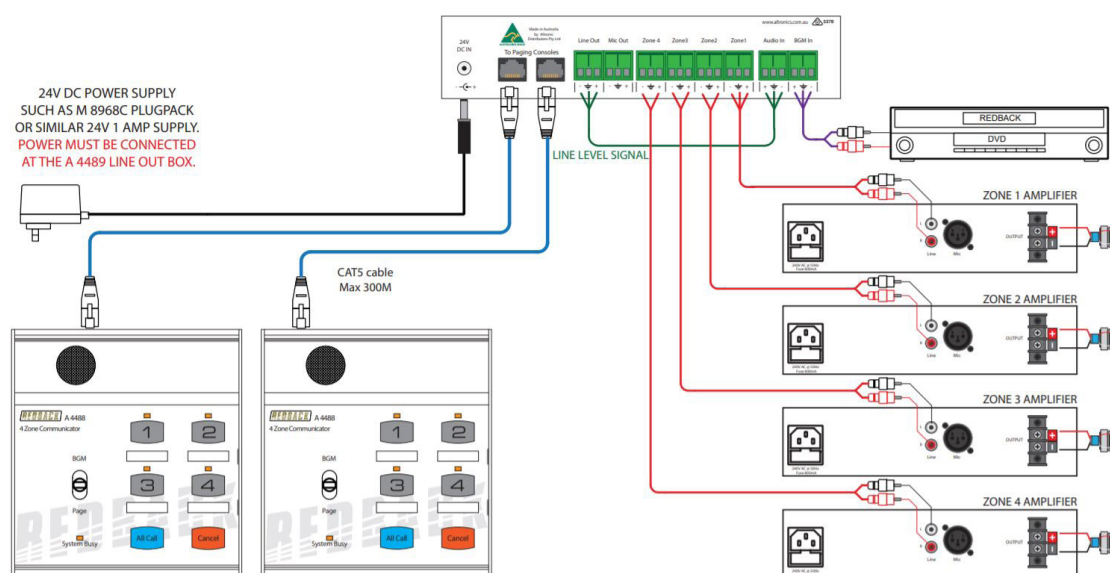

Fig. 4.

Option 3: One Zone Amplifier using Mic or Line Level Signals and individual speakers for each zone

The audio from the paging console/s is fed down the CAT5e cable to the audio switcher. Take the line level (1V balanced signal) from the "Line Out" terminals or the low level balanced signal from the "Mic Out" on the rear of the audio switcher and feed them into the audio inputs of the zone amplifier as shown in Fig 5.

The speaker output of the zone amplifier is then fed into the "Audio In" terminals of the audio switcher.

The audio from the "Zone 1" to "Zone 4" terminals are then fed directly into the speakers to provide the audio for the four zones. The audio from these output terminals are switched internally by relays and are not present unless the zone is activated by the paging console/s.

CONNECTION CONFIGURATIONS CONT.

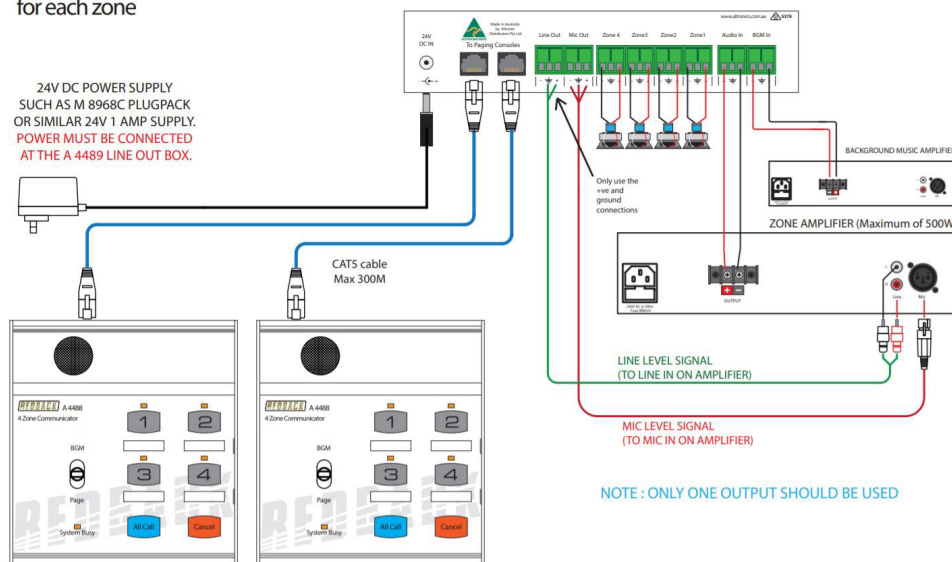Typical connection of the A 4488/s and A 4489A with a single zone amplifier and individual speakers for each zone

Fig. 5.

GENERAL PAGING

To page to a zone, select the desired zone/s by pressing the buttons 1-4 or by pressing the "All Call" button if all zones are desired. Make sure the switch is in the centre position before selecting the zones.

The selected zones' LEDs will illuminate to indicate they have been pressed. Move the "Push to talk" switch down to the "Page" position and speak into the microphone. Release the PTT switch when finished. The selected zones' LEDs will flash for a few seconds after paging has finished. While these LED's are still flashing paging can be directed to these zones again by simply moving the PTT switch back to the "Page" position.

If two paging consoles are connected to the system, one console will be "Locked Out" when the other is in use.

Fig 6 illustrates an example of two consoles being used together. The first console is being used to page to zones 1 and 2. The second console is inactive while the first console is in use.

NOTE: If both paging consoles are fitted then the ID must be set for each.

PAGING WITH TWO CONSOLES CONNECTED

Paging console 1 has zones 1 & 2 selected and the "Push to Talk" switch moved to the "Page" position. The LED's on zone 1 and zone 2 are illuminated.

Paging console 2 is "Locked Out" because paging console 1 is in use. The system busy LED is illuminated to indicate the system is busy.

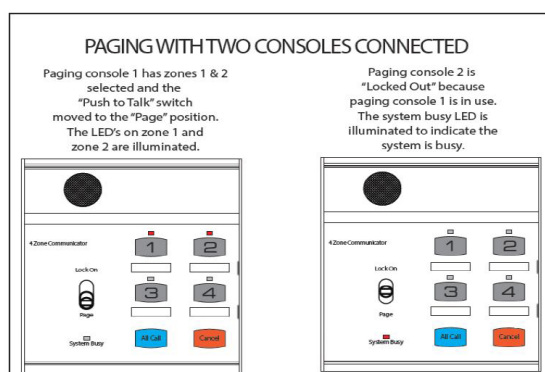Fig. 6.

CONNECTING THE BGM (BACKGROUND MUSIC)

Background music can be supplied to the paging system by connecting an audio source such as a mobile phone, tablet etc. to the 3.5mm input jack on the rear of the paging microphone.

Figure 7 shows the position of this connector.

To activate the background music, first make sure the Push to Talk (PTT) switch is in the centre position and then select the zones to receive the background music. The selected zones LED indicators will flash to signify they have been selected. Next, move the PTT switch to the up position which is labelled "Lock On". While the switch is in this position and only this position will the background music play out to the zones selected. The volume is adjusted by the BGM volume trimpot on the rear of the microphone. If the PTT switch is moved to the "Page" position, the background music will stop and paging will be active. If the PTT switch is in the centre position, the BGM and paging are not active.

If background music is required again to the same zones as previously selected, then all that is needed to intiate it again is to move the PTT switch back to the "Lock On" position.

If the BGM is to be piped to different zones then it is only a matter of selecting the new zones, and then moving the PTT switch to the "Lock On" position.
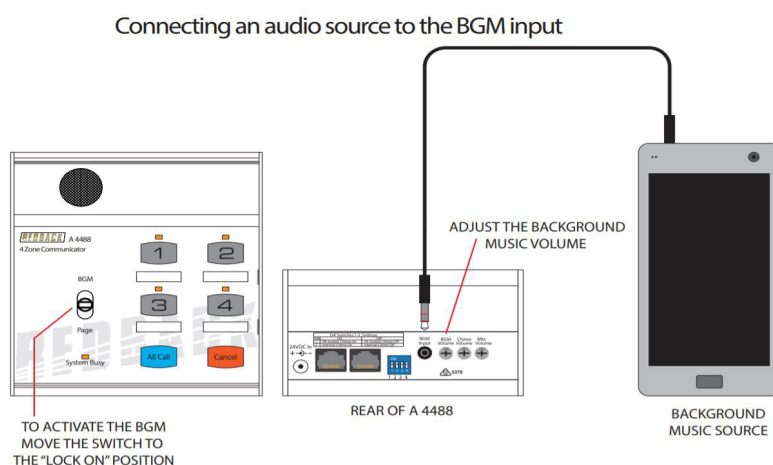

Fig. 7.

UNDERSTANDING THE BGM & PAGING RELATIONSHIP WITH MULTIPLE PAGING CONSOLES

The background music source is connected to the rear of the paging console as shown in Fig 7 (previous page). If two paging consoles are in use, a background music source could be connected to either console, operating on a first in, first serve basis. It is not recommended to use more than one BGM input. Unfortunately when the BGM is active on one paging console there is no visual indication of this fact on the other console.

When the BGM is active on paging console 1 it can be over-ridden by general paging on paging console 2 and vice versa. If the BGM is active on paging console 1 and paging is to be initiated by this same console then the PTT switch will need to be moved to the "Page" position. Once the PTT switch is moved off the "Lock On" position, then the BGM stops.

Fig 8a and 8b illustrate a typical example of BGM on one console and paging on the other console.
In Fig 8a paging console 1 has zones 1 & 2 selected and the PTT switch moved to the "Lock On" position. Background music is being fed to zones 1 & 2. The LED's on zones 1 & 2 are illuminated indicating which zones have background music. Paging console 2 has the PTT switch in the OFF position which means it is not active and has no visual indication that the BGM is active to zones 1 & 2.

In Fig 8b, paging console 2 has the PTT switch in the "Page" position and zones 3 & 4 are now active for paging. Paging console 1 still has the PTT switch in the "Lock On" position. The LED's on zones 1 & 2 stay illuminated indicating which zones have background music. But since Console 2 is now paging, Console 1 has been over-ridden and the paging audio is now sent to zones 3 & 4. The system busy LED is illuminated on Console 1 indicating the system is busy and that Console 1 has now been "Locked Out" until Console 2 finishes paging. The background music has been disconnected. Once Console 2 finishes paging the BGM will be re-stored to zones 1 & 2.
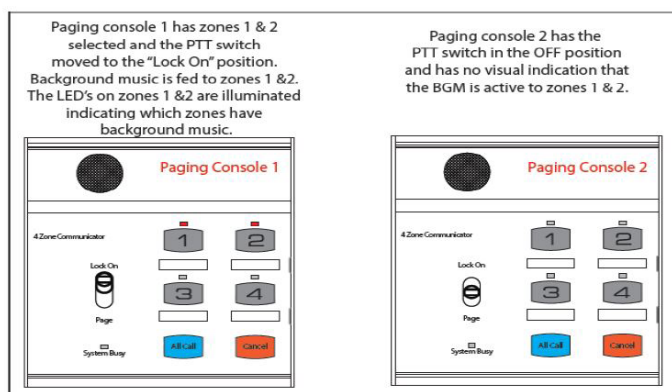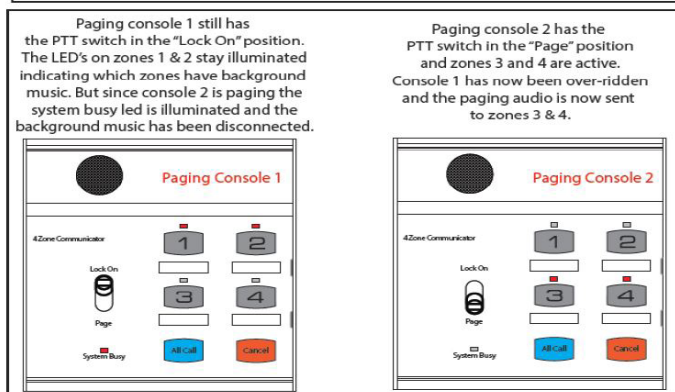

Fig 8a

Fig 8b

RJ45 CABLING CONFIGURATION (586A 'STRAIGHT THROUGH')

System components are connected using "pin to pin" configuration RJ45 data cabling as shown in fig 9. When installing ensure all connections are verified with a LAN cable tester before switching any system component on.

Failure to follow the correct wiring configuration may result in damage to system components and will Void the warranty.

586A
Straight Through
(both ends)

Pins Face Upwards

8	
7	
6 TX-	
5	
4	
3 TX +	
2 RX-	
1 RX+	

1 TX+	
2 TX-	
3 RX +	
4	
5	
6 RX-	
7	
8	

Fig. 9.

TROUBLESHOOTING

SYMPTOMS	REMEDIES
Paging Consoles not responding	Make sure the ID's are set correctly
No audio out of audio switcher	Check CAT5e cable wired correctly
No audio from zone terminals on rear of Audio Switcher	Check wiring to "Audio In" terminals
No background music	Check lead of BGM input of paging console Check BGM Volume
No pre-announcement chime	Check DIP switch settings Check chime volume
No sound from Microphone	Check Mic volume

TECHNICAL SPECIFICATIONS

Output Mic Level	3mV
Output Line Level	1V
BGM Input Sensitivity	500mV
Output Connectors	**Audio Outputs (PAG-AUDIO-SWITCH):** Euroblock terminal **Paging Console (PAG-CON-4Z):** RJ45 8P8C
Input Connectors	**Line Out Box Input:** RJ45 8P8C **24Vdc Power (PAG-AUDIO-SWITCH):** 2.1mm JACK (centre +ve) **24Vdc Power (PAG-CON-4Z):** 2.1mm JACK (centre +ve)
Controls	**Mic Volume:** Rear Volume **Chime Volume:** Rear Volume **BGM Volume:** Rear Volume
Power Supply	24Vdc @ 1A
Dimensions	**PAG-AUDIO-SWITCH:** 210mm W x 122mm D x 44mm H **PAG-CON-4Z:** 117mm W x 135mm D x 350mm H
Weight	**PAG-CON-4Z:** 0.7kg