



Operating Manual

A 4488 Paging Console

A 4489A Audio Switcher

A 4580 16 Zone Switcher



A 4488

A 4489A



A 4580



1.0 Overview

The A 4488 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. The paging microphones can be used in conjunction with the A 4489A Audio Switcher or the A 4580 16 Zone Paging System.

A maximum of two paging consoles can be connected to the A 4489A 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. A maximum of six paging consoles can be connected to the A 4580.

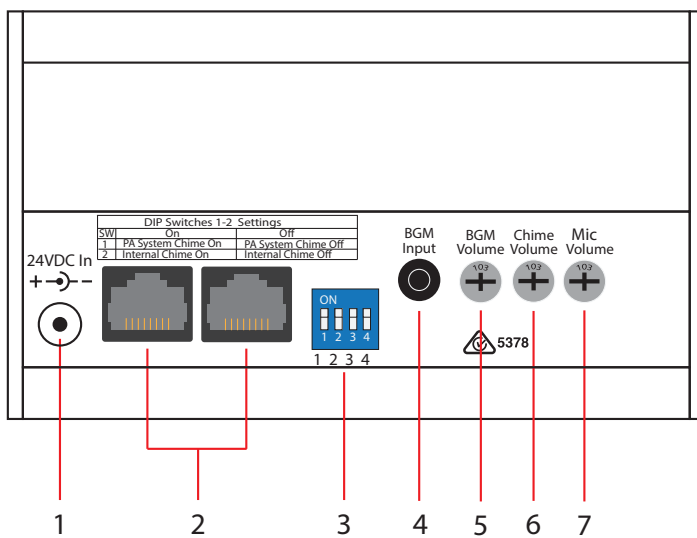
The A 4489A Audio Switcher provides a Microphone level or Line level output which can be connected directly to the inputs of up to four amplifiers to provide up to four zones of audio. Connection between the A 4488 and A 4489A is via a Cat5e cable which carries power and the balanced audio output from the microphone. A BGM input on the rear of the A4489A directs background music to all zones until over-ridden by zone paging.

2.0 Features

- Four zones of paging.
- 3.5mm BGM input on rear of microphone
- Pre-announcement chime.
- Mic volume adjustment
- BGM input for background music to all zones
- High level balanced output via Cat 5 cable
- 24V DC power supplied via Cat 5 cable *
- Chime volume adjustment
- BGM (paging microphone) volume adjustment

Redback® A 4488 Paging Console

3.0 A 4488 Rear Panel Connections



- 1 24V DC connector**
2.1mm DC jack (centre pin positive).
- 2 RJ45 connector**
For connection back to the A 4489A.
Either port can be used.
- 3 DIP switch options**
These switches set the chime options.
- 4 BGM (Background Music) 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

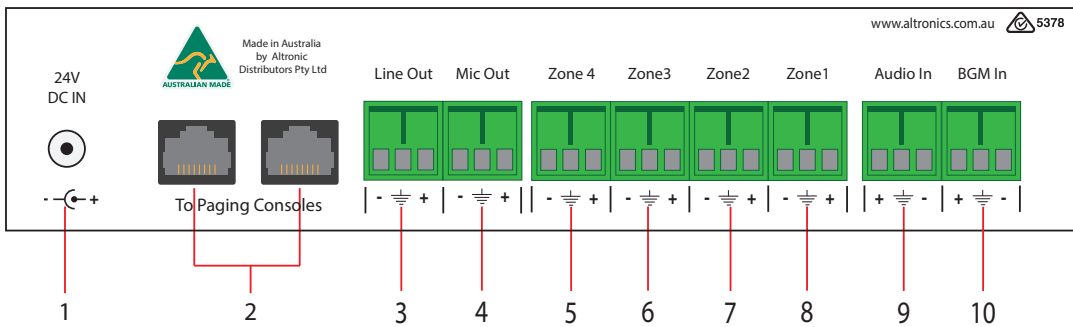


Fig 1b

4.0 A 4489A Rear Panel Connections

- 1 24V DC connector**
2.1mm DC jack (centre pin positive).
- 2 RJ45 connector**
For connection back to the A 4488 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 to supply audio to the zone outputs.
- 10 BGM In**
This is the input used to supply Background Music to the zone outputs.

5.0 DIP Switch Settings

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

NOTE: The ID must be set to either ID1 or ID2 when using the A 4488 with the A 4489A. When using the A 4488 with the A 4580 the ID's must be set between 3-8. (Therefore a maximum of six A 4488 paging consoles can be connected to the A 4580.)

DIP Switches 2 - 4 Set the Paging Console ID			
2	3	4	ID
Off	Off	Off	1
Off	Off	On	2
Off	On	Off	3
Off	On	On	4
On	Off	Off	5
On	Off	On	6
On	On	Off	7
On	On	On	8

IMPORTANT NOTE:

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

Fig 2

6.0 Connecting the Paging Console/s and the A 4489A Audio Switcher

The Paging console/s and Audio Switcher are connected by CAT5e cables 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 24V DC 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. We recommend fitting the power supply with the P 0602 2.1mm DC Plug with collar which can be screwed onto the DC socket to prevent accidental disconnection of power.

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 A 4489A 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 A 4489A audio switcher. Take the low level balanced signal from the "Mic Out" terminals on the rear of the A 4489A and feed them back into the "Audio In" terminals on the rear of the A 4489A 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 amplifiers used have line level inputs use the configuration outlined in option 2.

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

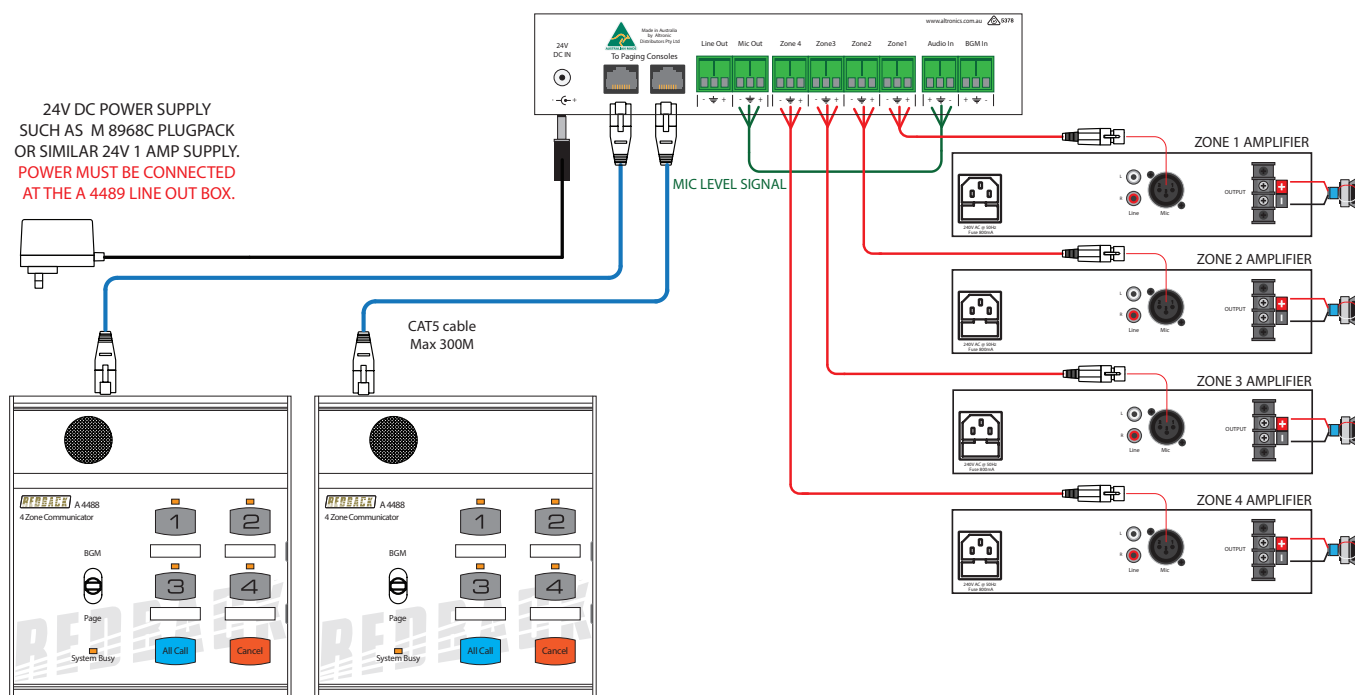


Fig 3

Option 2 : Individual Zone Amplifiers using Line Level Signals

The audio from the paging console/s is fed down the Cat5e cable to the A 4489A audio switcher. Take the line level (1V balanced signal) from the "Line Out" terminals on the rear of the A 4489A and feed them back into the "Audio In" terminals on the rear of the A 4489A 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 and are not present unless the zone is

Redback® A 4488 Paging Console

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.

Background Music can be supplied to each zone by connecting a Background music source to the "BGM In" terminals.

Note: The background music will be present on all zones and is overridden by zone paging (see section 8.0 for more details).

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

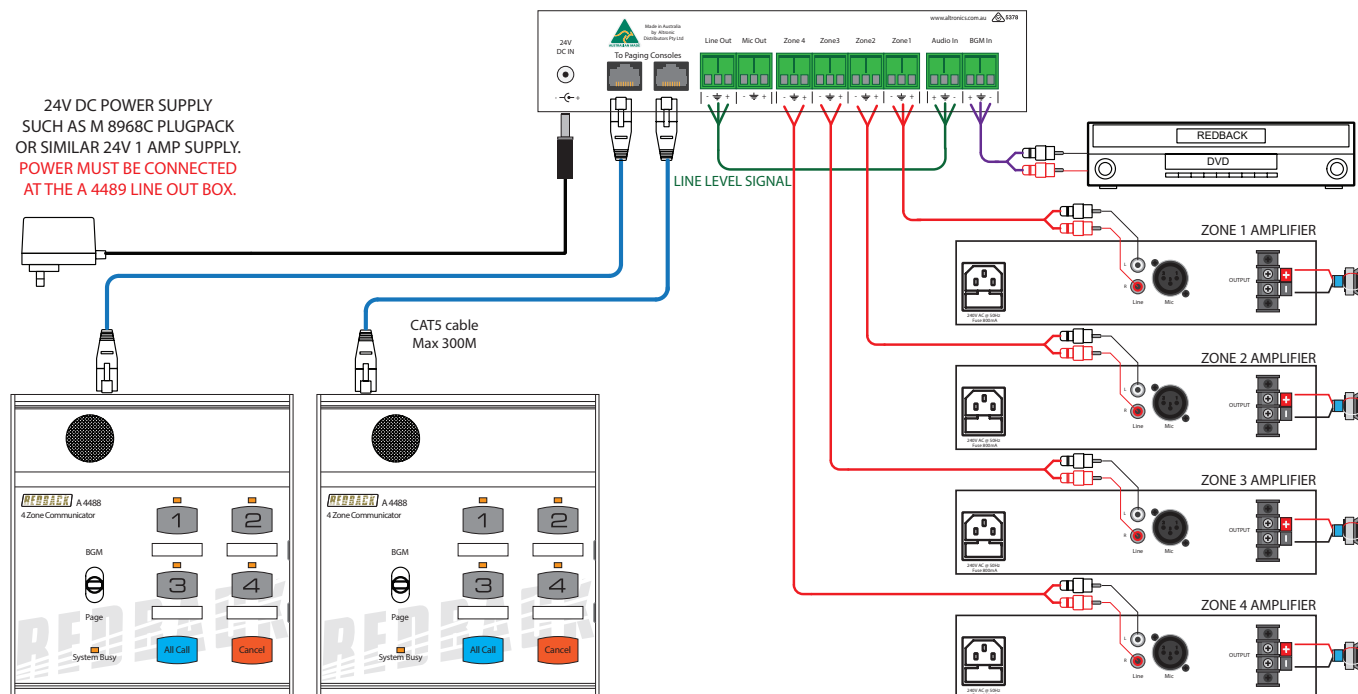


Fig 4

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

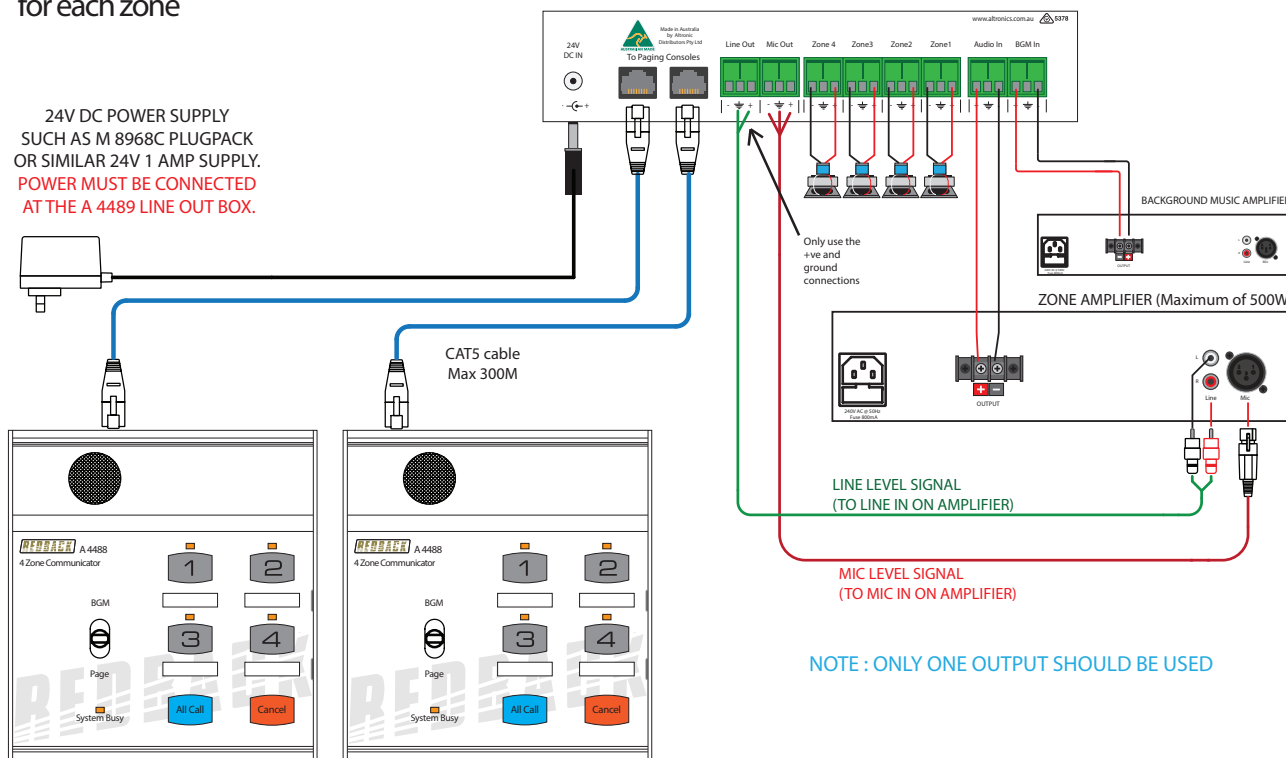


Fig 5

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 A 4489A 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 A 4489A and feed them into the audio inputs of the zone amplifier as shown in Fig 5. (Note: The Zone Amplifier can be up to a maximum of 500 Watts). 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.

Background Music can be supplied to each zone by connecting a Background music amplifier to the "BGM In" terminals.
Note: The background music will be present on all zones and is overridden by zone paging (see section 8.0 for more details).

7.0 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' LED's 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' LED's 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. See the Dip switch setting for details.

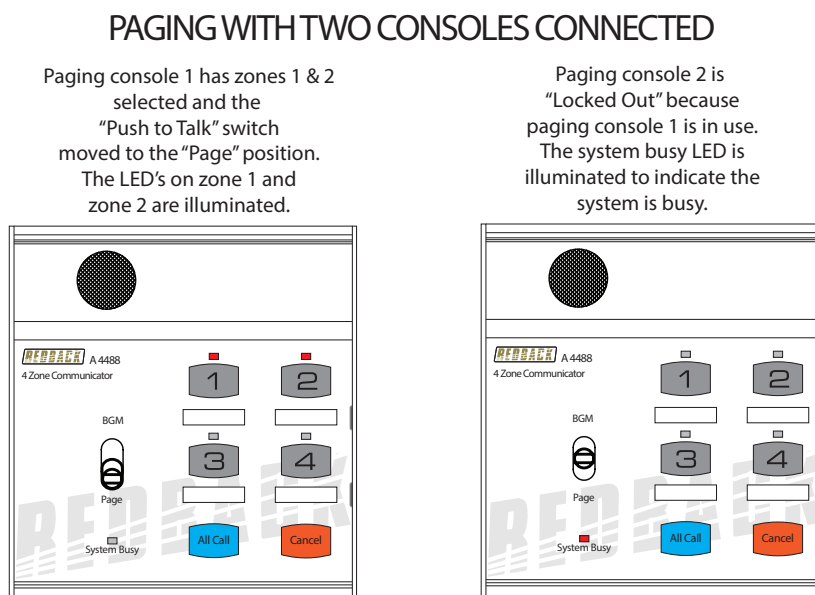


Fig 6

8.0 Connecting the BGM (Background Music)

Background music can be supplied to the paging system via one of two different methods.

8.1 BACKGROUND MUSIC (REAR OF A 4489A)

Firstly the background audio can be connected directly to the rear of the A 4489A either as a line level input as illustrated in figure 4 or a speaker level input as illustrated in figure 5.

When using this method the background music is output to all zones until over-ridden by zone paging.

8.1 BACKGROUND MUSIC (REAR OF A 4488 PAGING CONSOLE)

The second method involves connecting an audio source (such as a mobile phone, tablet etc.) to the 3.5mm input jack on the rear of the paging microphone as shown in Figure 7. This provides a local source of background music.

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.

Redback® A 4488 Paging Console

Next move the PTT switch to the up position which is labelled "BGM". While the switch is in this position and only this position will the background music will be piped 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's needed to initiate it again is to move the PTT switch back to the "BGM" 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 "BGM" position.

9.0 Understanding the BGM (Background Music) and Paging Relationship with multiple paging consoles

The background music source is connected to the rear of the paging console as shown in Fig 7.

Connecting an audio source to the BGM input

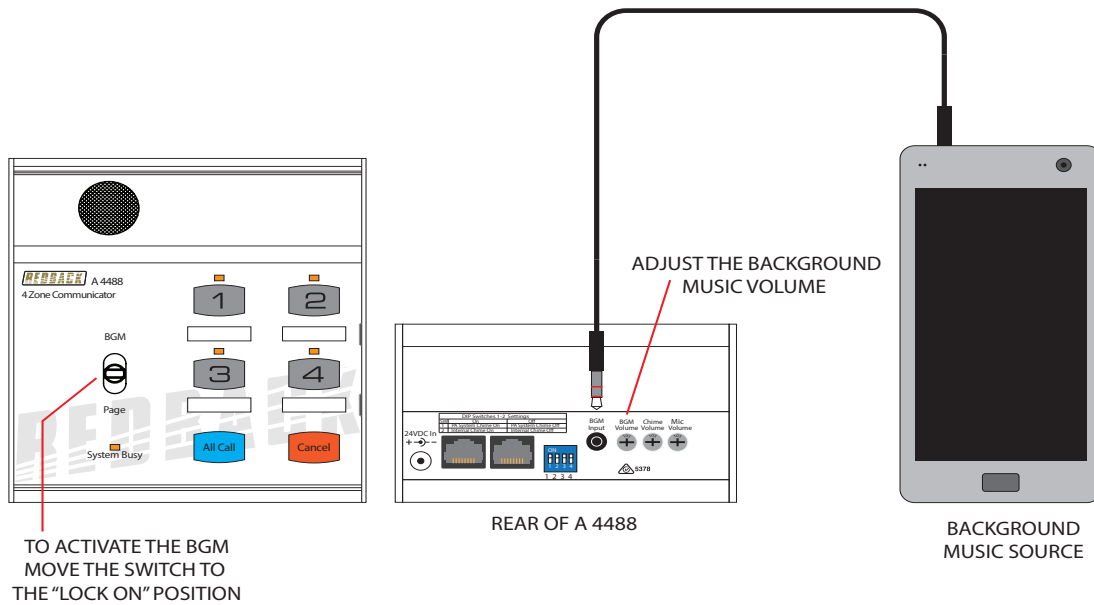
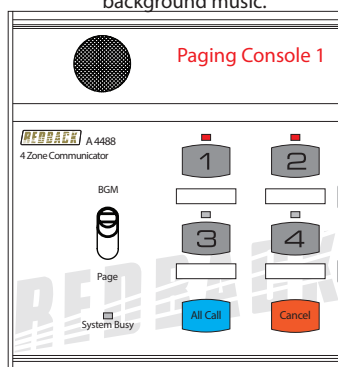


Fig 7

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. But 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. So having two BGM sources would become confusing.

When the BGM is active on Paging console 1 it can be over-ridden by general paging on Paging console 2 and vice versa.

Paging console 1 has zones 1 & 2 selected and the PTT switch moved to the "Lock On" position. Background music is 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 and has no visual indication that the BGM is active to zones 1 & 2.

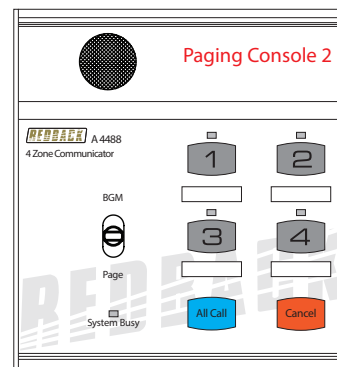


Fig 8a

If 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 "BGM" 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 "BGM" 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's 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 and 4 are now active for paging. Paging console 1 still has the PTT switch in the "BGM" 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 and 2.

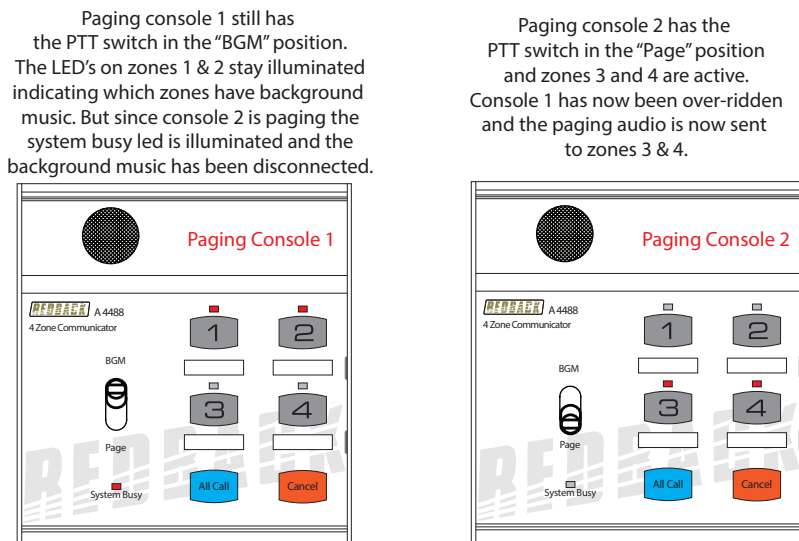
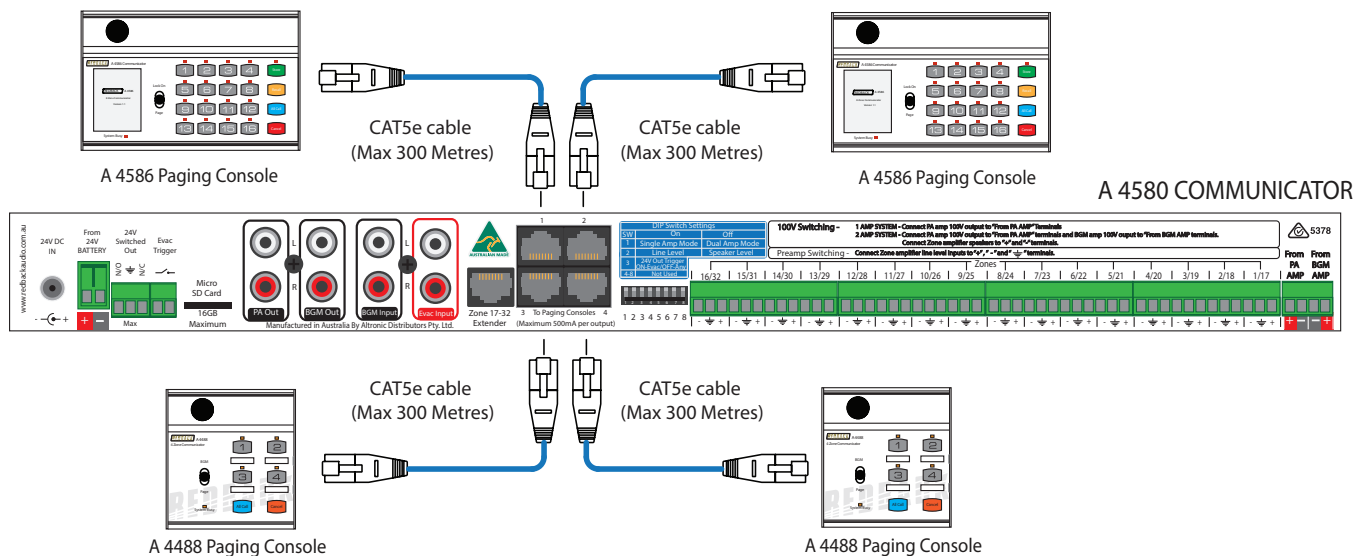


Fig 8b

10.0 Connecting the Paging Console/s and the A 4580 Communicator

The Paging console/s and A 4580 Communicator are connected by CAT5e cables 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 24V DC power supply rated at a minimum of 1A is required to power the system. Power connection must be made by



PLEASE NOTE : A MAXIMUM OF 4 PAGING CONSOLES CAN BE CONNECTED TO THE A 4580 WITHOUT THE USE OF EXTERNAL POWER SUPPLIES. (AND A MAXIMUM OF 1 PAGING CONSOLE PER PORT)

Fig 9

Redback® A 4488 Paging Console

connecting power to the A 4580 communicator via the euro blocks. Power is then fed through the CAT5e cables to supply power to the paging consoles.

A maximum of six consoles can be connected at one time but only used in certain configurations. There are four RJ45 ports on the back of the A 4580 which can be used to connect the A 4488 paging consoles. Each port can accommodate a maximum of 1 paging console without the aid of external power supplies.

Fig 9 shows how to connect one paging console per RJ45 port. When connecting the A 4488 paging consoles to the A 4580 they must be set to ID3 - ID8. They cannot be set to ID1 or ID2.

RJ45 cabling configuration (586A 'Straight through')

System components are connected using "pin to pin" configuration RJ45 data cabling as shown in fig 10. 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.

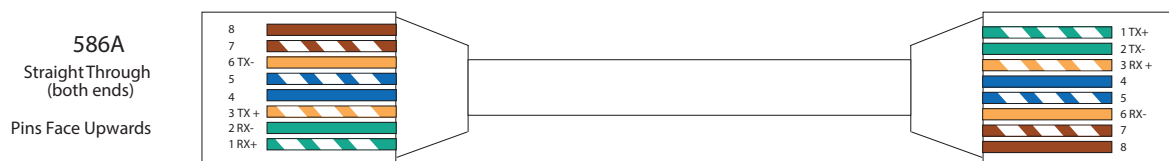


Fig 10

11.0 Trouble shooting

SYMPTOMS	REMEDIES
Paging consoles not responding	Make sure the ID's are set correctly
No audio out of A 4489A	Check Cat5e lead wired correctly
No audio from zone terminals on rear of A 4489A	Check wiring to "Audio In" terminals
No Background music	Check lead on 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

12.0 Specifications

OUTPUT MIC LEVEL:.....3mV
 OUTPUT LINE LEVEL:.....1V
 BGM INPUT SENSITIVITY:.....500mV
 OUTPUT CONNECTORS:
 Audio Outputs: (A 4489A).....Euroblock terminal
 Paging Console (A 4488):..... RJ45 8P8C
 INPUT CONNECTORS:
 Line Out Box Input:..... RJ45 8P8C
 24V DC Power (A 4489A):..2.1mm JACK (centre +ve)
 24V DC Power (A 4488):..2.1mm JACK (centre +ve)
 CONTROLS:
 Mic Volume:.....Rear Volume
 Chime Volume:.....Rear Volume
 BGM Volume:.....Rear Volume
 POWER SUPPLY:.....24V DC @ 1 Amp
 DIMENSIONS:~..... A 4488 - 117W x 135D x 350H
 DIMENSIONS:~.....A 4489A - 210W x 122D x 44H
 WEIGHT: ~.....A 4488 - 0.7 kg