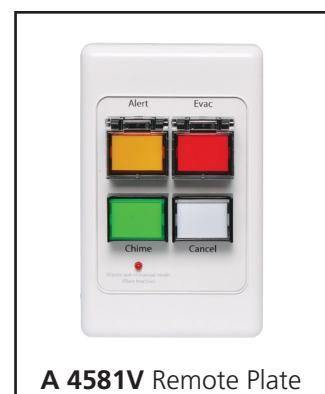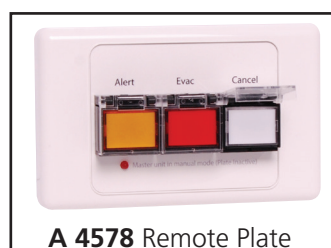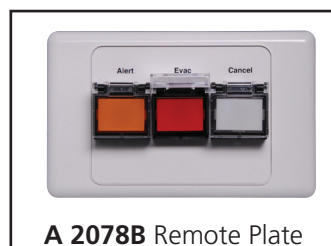REDBACK

AUSTRALIAN MADE

Operating Manual

A 4565 Evacuation Controller

Optional Accessories

A 2078B Alert/Evac/Cancel Remote Wall Plate (Hard Wired)
A 2081 Alert/Evac/Chime/Cancel Remote Wall Plate (Hard Wired)
A 4578 Alert/Evac/Cancel Remote Wall Plate (U/UTP Cat5)
A 4581 Alert/Evac/Chime/Cancel Remote Wall Plate (U/UTP Cat5)
A 4581V Alert/Evac/Chime/Cancel Remote Wall Plate (U/UTP Cat5)
A 4597 Fire Test/Fire/Cancel Remote Wall Plate (U/UTP Cat5)
A 4564 Emergency Paging Microphone Console (U/UTP Cat5)

A 4564 Paging Console

A 2078B Remote Plate

A 2081 Remote Plate

A 4578 Remote Plate

A 4581 Remote Plate

A 4597 Remote Plate

A 4581V Remote Plate

IMPORTANT NOTE:

Please read these instructions carefully from front to back prior to installation.
They include important setup instructions.
Failure to follow these instructions may prevent the unit from working as designed.

Since 1976 Redback amplifiers have been manufactured in Perth, Western Australia. With over 35 years experience in the commercial audio industry, we offer consultants, installers and end users reliable products of high build quality with local product support. We believe there is significant added value for customers when purchasing an Australian made Redback amplifier or PA product

Australian Made Status

All Redback house products will now be sporting the official Australian Made logo. Since starting manu- facturing of commercial audio equipment in the mid 70's we have always taken pride in producing a quality local product.

The new adoption of the Australian Made logo will help us get the word out to local and export markets that our products carry the official compliance seal of the Australian Made campaign. We have always pushed our 'local is better' line in all of our marketing efforts, it's always an added boost when you are backed up by a widely recognised and respected icon.

Industry leading 10 year warranty.

There's a reason we have the industry leading DECADE warranty. It's because of a long tried and tested history of bulletproof reliability. We've heard PA contractors tell us they still see the original Redford amplifier still in service in schools - that's over 37 years of operation - and still going strong!

Should a product become faulty please contact us to obtain a return authorisation number. Please ensure you have all the relevant documentation on hand. We do not accept unauthorised returns. Proof of purchase is required so please retain your invoice.

1.0 Overview

2.0 Setup

3.0 Remote Wall Plates

4.0 Paging Console

5.0 Troubleshooting

1.0 OVERVIEW

1.1 INTRODUCTION

This Evacuation controller is easy to operate and is designed around industry standard building emergency alert/evacuate requirements. When connected to a paging system amplifier, building occupants can be alerted and/or evacuated in the event of an emergency e.g.: fire, gas leak, bomb scare, earthquake. Auto or manual modes are selected by the front panel key switch which uses an industry standard 003 key. Alert & evac switches are fitted with safety covers to prevent accidental operation. Also inbuilt, is a Bell function tone for signalling lunch breaks, start of class etc.

The Alert, Evacuation, Bell, Fire Test and Fire tones and Emergency Messages are all MP3 based and stored on a Micro SD card which is accessible from the rear of the unit. The Alert, Evacuation and bell tones and cancel function are triggered by the front switches when in manual mode or by the rear terminal contacts when in Auto mode for remote activation i.e. a clock, remote switch or remote wall plate. These functions can also be activated by optional wall plates and paging consoles. The Fire tone is activated from the rear Fire trigger or from the A 4597 remote plate. The Fire Test tone is activated by the A 4597 remote plate only.

Provision has been made for a BGM (background music) source to be played through the controller. BGM is automatically muted when any other function is operated. A mic input is provided on the front panel and paging is also available through the A 4564 paging console. These can be used for either general or emergency paging and overrides all other functions. A pre-announcement chime is available on the microphone input. This can be switched on or off via external dip switches. Switched 24V Out connections are provided for all emergency and paging conditions. These contacts are for connection of override relays in remote volume controls, warning strobes, bells etc.

1.2 FEATURES

- Tones conform to AS 1670.4
- Standard 1U 19" rack mount case
- Interfaces with Fire Indicator Boards
- Remote operation of Alert, Evac, Chime, Fire Test, Fire Alarm & Cancel tones
- MP3 based tone playback (with backup hard coded Alert, Evac and Bell tones)
- 24V DC operation
- Auto/Manual/Isolate keyswitch
- Key switch to 003 standard
- Local operation of Alert, Evac and PA
- MP3 based Voice Over messages for Alert and Evac cycles
- Microphone socket for PA use
- Provision for BGM (back ground music)
- Provision for Auxiliary input with front volume control
- Bell chime facility
- Switched 24V DC output for override relays on volume controls
- Switched 24V DC output for strobe operation for Alert mode
- Switched 24V DC output for strobe operation for Evac mode
- Switched 24VDC output for bell mode
- On-board timer for automatic Alert to Evac switchover, adjustable from 30secs to 7.5min in 30 second increments
- Externally operated inputs are activated by switching to ground
- Auxiliary level output
- Suitable for any amplifier with an auxiliary input
- 10 Year Warranty
- Australian Designed and Manufactured

1.3 WHAT'S IN THE BOX

A 4565 Alert/Evacuation Controller
24V DC 2amp Plugpack
Instruction Booklet

1.4 FRONT PANEL GUIDE

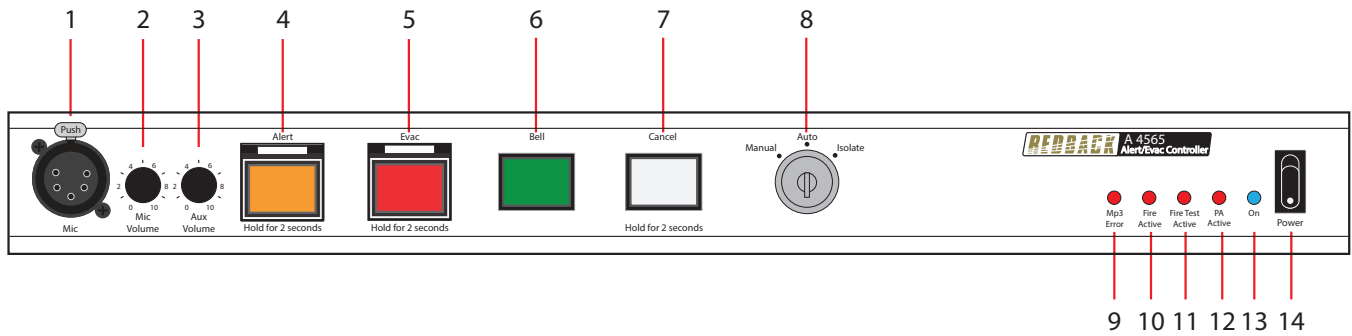The layout of the A 4565 front panel is shown below in figure 1.4.

Fig 1.4

1   Microphone socket
Use this socket to connect a PTT (push to talk) microphone with a 5 pin male XLR plug. Suitable microphones with PTT function include the C 0379 desk paging microphone and the C 0334 CB type fist microphone. This microphone is used for emergency paging.

2   Microphone input volume control

Use this control to adjust the volume of the front microphone input.

3   Auxilliary input volume control

Use this control to adjust the volume of the rear auxilliary input.

4   Alert Tone Activation Switch

This switch is used to activate the Alert tone. This switch will only function when the unit is in manual mode (see section 2.1 for more details). Press for 2 seconds to activate.

5   Evac Tone Activation Switch

This switch is used to activate the Evacuation tone. This switch will only function when the unit is in manual mode (see section 2.1 for more details). Press for 2 seconds to activate.

6   Bell Tone Activation Switch

This switch is used to activate the Bell tone.

7   Cancel Tone Activation Switch

This switch is used to cancel the Alert, Evac or Bell tones. This switch will only function when the unit is in manual mode (see section 2.1 for more details). Press for 2 seconds to activate.

8   Operational Mode Keyswitch

Use this to key switch to select which mode the unit will operate under. There are 3 modes available which are Auto, Manual and Isolate Mode (see section 2.1 for more details). This key is an industry standard 003 key.

9   MP3 Error Mode Indicator

This LED will illuminate when the unit has trouble reading an MP3 file.

10   Fire Active Indicator

This LED will illuminate when the Fire trigger has been activated, resulting in the MP3 file in the Fire folder being played.

11   Fire Test Active Indicator

This LED will illuminate when the Fire test mode has been activated from the A 4597 remote plate, resulting in the MP3 file in the Firetest folder being played.

12   PA Active Indicator

This LED will illuminate when paging has been activated by the A 4564 paging console.

13   On Indicator

This LED indicates the unit has power.

14   Power Switch

Use this to turn the unit on.

1.5 REAR PANEL CONNECTIONS

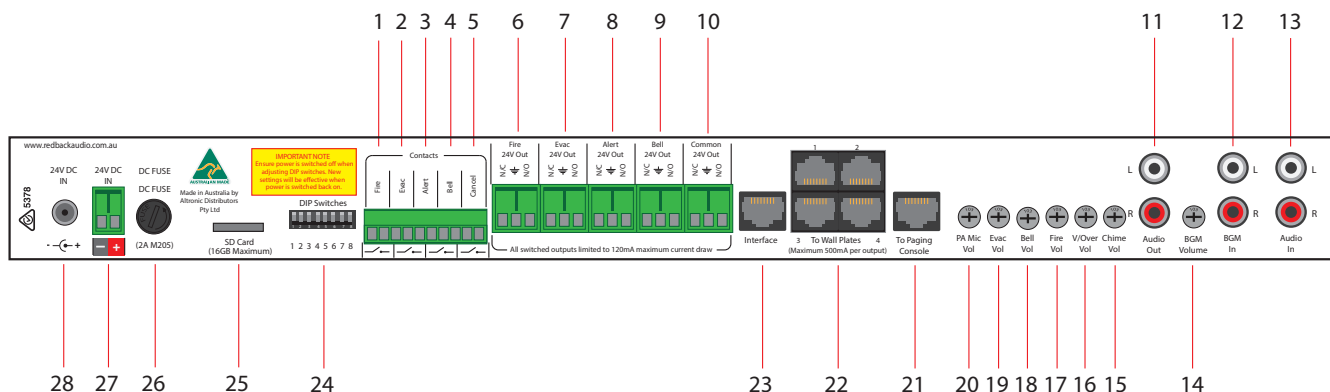The layout of the A 4565 rear panel is shown below in figure 1.5a.

Fig 1.5

1   Fire Contact
These contacts are for remote triggering of the Fire tone. Requires a closing contact to operate.

2   Evac Contact
These contacts are for remote triggering of the Evacuation tone. These could be triggered by a fire indicator board, break glass alarm etc or by connecting the A 2078B or A 2081 remote plates to these contacts (see section 3.1 for more details). Requires a closing contact to operate.

3   Alert Contact
These contacts are for remote triggering of the Alert tone. These could be triggered by a fire indicator board, break glass alarm etc or by connecting the A 2078B or A 2081 remote plates to these contacts (see section 3.1 for more details). Requires a closing contact to operate.

4   Bell Contact
These contacts are for remote triggering of the Bell tone. These could be triggered by a remote switch or by connecting the A 2081 remote plate to these contacts (see section 3.1 for more details). Requires a closing con tact to operate.

5   Cancel Contact
These contacts are for remote triggering of the cancel function. These could be triggered by a remote switch, or by connecting the A 2081 remote plate to these contacts (see section 3.3 for more details). Requires a closing contact to operate.

6   Fire 24V Out
This is a 24V DC output which is activated when the Fire contact is triggered. The terminals provided can be used for "Normal" or "Failsafe" modes (see section 2.5 for more details).

7   Evac 24V Out
This is a 24V DC output which is activated when the Evac tone is activated. The terminals provided can be used for "Normal" or "Failsafe" modes (see section 2.5 for more details).

8   Alert 24V Out
This is a 24V DC output which is activated when the Alert tone is activated. The terminals provided can be used for "Normal" or "Failsafe" modes (see section 2.5 for more details).

9   Bell 24V Out
This is a 24V DC output which is activated when the Bell tone is activated. The terminals provided can be used for "Normal" or "Failsafe" modes (see section 2.5 for more details).

10   Common 24V Out
This is a combined 24V DC output which is activated when any of the Bell, Alert or Evac tones are activated. The terminals provided can be used for "Normal" or "Failsafe" modes (see section 2.5 for more details).

11   **Audio Out RCA Connectors**
Connect these outputs to the input of the background music amplifier.

12   **BGM In RCA Connectors**
Connect these to a background music source. The volume control for this is on the rear of the unit (see trimpot in point 14) so that it cannot be tampered with (see section 2.3 for more details).

13   **Aux In RCA Connectors**
Connect these to a background music source. The volume control for this is on the front of the unit. (see section 2.3 for more details). This provides a music source with a volume that can be controlled from the front of the unit.

14   **BGM Volume**
Adjust this trimpot to adjust the volume from the BGM IN RCA's.

15   **Chime Volume**
Adjust this trimpot to adjust the pre-announcement chime volume.

16   **Voice-over Volume**
Adjust this trimpot to adjust the MP3 Voice-over message playback volume.

17   **Fire Volume**
Adjust this trimpot to adjust the MP3 Fire tone playback volume.

18   **Bell Volume**
Adjust this trimpot to adjust the MP3 Bell tone playback volume.

19   **Evac Volume**
Adjust this trimpot to adjust the MP3 Alert and Evac tones playback volume.

20   **PA Volume**
Adjust this trimpot to adjust the paging microphone volume.

21   **RJ45 connector for A 4564 Paging Console**
Use this RJ45 port to connect to the A 4564 paging console.

22   **RJ45 connectors**
These RJ45 ports are used to connect to the remote wall plates for activating the tones remotely (see section 3.3 for more details).

23   **RJ45 connector**
This RJ45 port is for future peripheral devices. Not operational in this model.

24   **Dip Switches**
These are used to select the automatic switch-over time between the Alert and Evacuation tones and to also determine chime, voice-over and latching options (see section 2.4 for more details).

25   **Micro SD Card Socket**
This socket holds the Micro SD card which is used to store all the tones or audio MP3 files.

26   **DC fuse (2A M205)**
This fuse protects the internal power supply. Replace with 2A rated fuse only.

27   **24V DC Input (Backup)**
Connects to a 24V DC backup supply with at least 1.5 amp current capacity. (Please observe the polarity)

28   **24V DC Input (Main Supply)**
Connects to a 24V DC supply with at least 1.5 amp current capacity. (Please observe the polarity)

2.0 SETUP GUIDE

2.1 MANUAL, AUTO AND ISOLATE MODES

The unit features 3 modes of operation.

These are Auto, Manual and Isolate, selectable via the keyswitch on the front of the unit. The switch is keyed to a 003 standard key profile, and will allow removal of the key in the "Auto" position only.

Manual Mode:
In the manual position any of the Alert, Evac or Bell functions may be initiated from the switches on the front panel. (Note the Alert, Evac, Bell and Cancel buttons may need to be depressed and held in for 2 seconds).
Paging is also operative in manual mode through the A 4564 Paging Console or the front panel microphone input. This allows the operator to select any of these functions as required.
With the key in this position the rear panel contacts are all inoperative except for the Bell contact.

   Manual Operation:
   ALERT MODE: Depressing the Alert switch will activate the Alert mode and play the MP3 file located in the Alert Folder on the Micro SD card. The Alert tone is played three times in an Alert cycle on a rotation basis and will ascend in volume. If an Alert Message is available in the Alert Message Folder (see section 2.6) it will be played twice for every three cycles of the Alert tone. This cycle will continue until either the Cancel switch is pressed or the Evac switch is pressed (which will activate the Evacuation mode).
   The alert tone can be changed to an evacuation tone at any stage of the Alert cycle simply by depressing the evac switch.
   EVAC MODE: Depressing the Evac switch will activate the Evacuation mode and play the MP3 file located in the Evac Folder on the Micro SD card. The Evac tone is played three times in an Evac cycle on a rotation basis. If an Evacuation Message is available in the Evac Message Folder (see section 2.6) it will be played twice for every three cycles of the Evac tone. This cycle will continue until the Cancel switch is pressed.
   BELL MODE: Depressing the Bell switch will activate the Bell tone. The Bell tone will play the MP3 file located in the Bell Folder on the Micro SD card.

Auto Mode:
When selected to the auto position the panel will respond to any trigger from the rear contacts of the unit. This could be the Alert, Evac, Bell, Fire or Cancel trigger which could be triggered from a Fire Indicator Board or Break Glass Alarms, etc. In the auto position the front panel alert, evac and cancel controls are inoperative. But all other functions will work, i.e.. front panel microphone paging, bell (front or rear)and music inputs on the rear of the unit whether they be the BGM or Aux inputs. In Auto mode the Alert, Evac, Bell, Fire Test and Fire switches on remote plates and the paging console will all function.

   Auto Operation:
   ALERT MODE: If the Alert tone is triggered it will activate the Alert mode and play the MP3 file located in the Alert Folder on the Micro SD card. The Alert tone is played three times in an Alert cycle on a rotation basis and will ascend in volume. If an Alert Message is available in the Alert Message Folder (see section 2.6) it will be played twice for every three cycles of the Alert tone. This cycle will continue until either the Cancel trigger is activated, the Evac trigger is activated (which will activate the Evacuation mode) or the Alert/Evac switchover preset time is reached (at which stage the unit will automatically switch into Evac Mode).
   The alert tone can be cancelled by pressing the cancel switch on a remote plate or the paging console, by triggering the rear contacts of the A 4565 or by using the key to put the unit into manual mode and then pressing the cancel switch on the front of the A 4565.
   EVAC MODE: If the Evac tone is triggered it will activate the Evac mode and play the MP3 file located in the Evac Folder on the Micro SD card. The Evac tone is played three times in an Evac cycle on a rotation basis. If an Evac Message is available in the Evac Message Folder (see section 2.6) it will be played twice for every three cycles of the Evac tone. This cycle will continue until the Cancel trigger is activated. The Evac tone can be cancelled by pressing the cancel switch on a remote plate or the paging console, by triggering the rear contacts of the A 4565 or by using the key to put the unit into manual mode and then pressing the cancel switch on the front of the A 4565.
   BELL MODE: Depressing the Bell switch will activate the Bell tone. The Bell tone will play the MP3 file located in the Bell Folder on the Micro SD card.

Isolate Mode:

This isolates the unit so that the Alert,Evac, Fire or Fire Test functions cannot be activated either by the front panel switches, the rear contacts, the remote wall plates or the A 4564 paging console. The Bell function is still operational.

2.2 PRIORITIES

The order of priority for the functions of the A 4565 are as follows.

1) Paging (Via the paging console)
2) Paging (via the front panel microphone)
3) Evacuation Tone
4) Alert Tone
5) Fire Tone
6) Fire Test Tone
7) Bell Tone
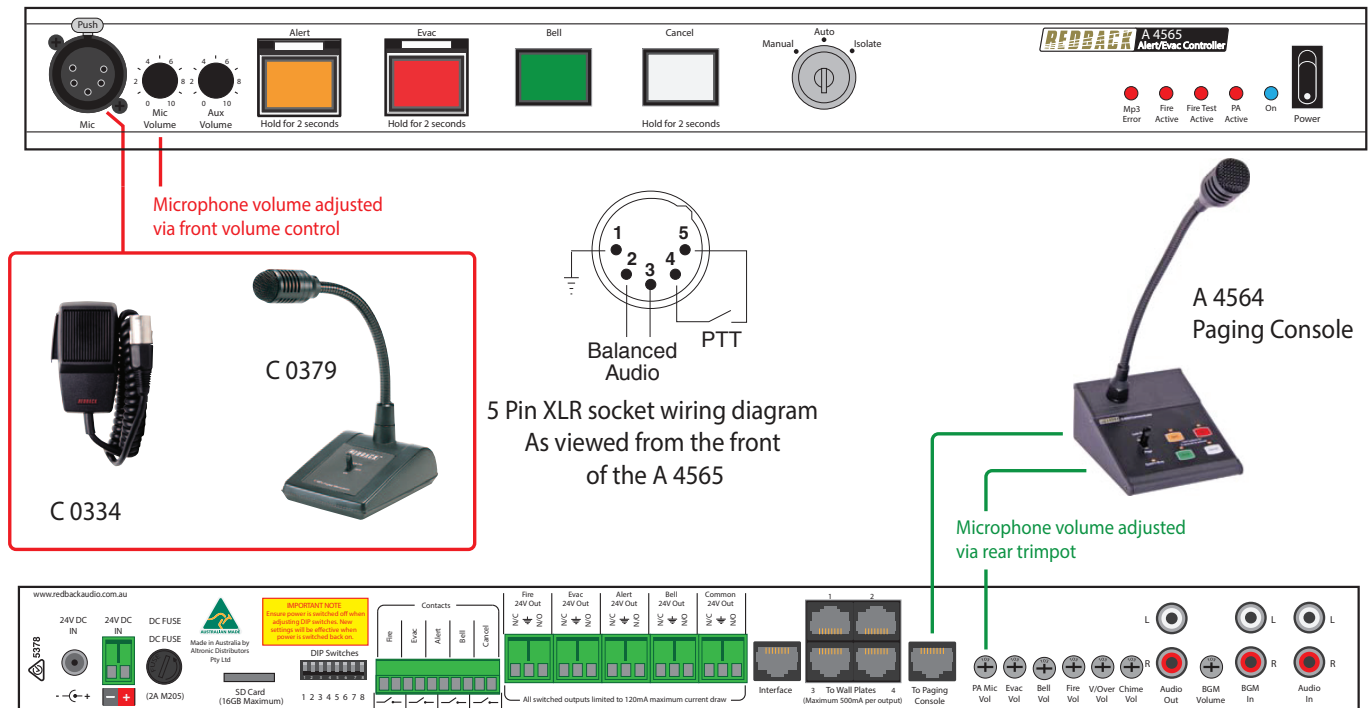8) BGM (background music) or Auxilliary Input

Fig 2.2

Microphone Input

The A 4565 has a microphone input on the front of the unit. This microphone can be used for either general paging or emergency paging. Paging overrides all other functions of the A 4565. Suitable microphones with the PTT function include the C 0334 CB type microphone and the C 0379 desk paging microphone. The connection details are shown in fig 2.2. To use an unbalanced microphone, short pins 1 and 2 together on the microphone plug. The output level of the microphone is adjusted via the volume pot on the front of the unit (refer to fig 2.2).

A pre-announcement chime (located in the Chime folder on the SD card) which is available on the microphone input is activated by DIP switch 5 on the rear of the unit (see section 2.4 for more details).

Evacuation Tone

This tone conforms to Australian Standard 1670.4 and once activated has the second highest priority. This can be overriden only by the paging microphone.

Alert Tone

The Alert tone once activated can be overridden by the Evac tone or by the paging microphone.

Bell Tone

Included is a unique tone or bell chime for signalling lunch breaks, start of class etc. This can be operated from the front panel or via contacts on the rear panel for remote activation i.e. by a time clock or remote switch. This can be overriden by the Alert or Evac tones and by the paging microphone.

BGM and Aux Input

Provisions have been made for a BGM source to be played through the controller. The BGM and Aux inputs are automatically muted when any other function is operated (see section 2.3 for more details).

2.3 AUDIO CONNECTIONS

Provision has been made for two different audio sources to be connected to the unit. These are the BGM input and the Aux input. Both of these inputs have the same priority and are automatically muted when any other function is activated i.e. Paging, Alert, Evac or Chime triggering.

BGM Input:
This input is for connecting a background music source to the controller. The stereo sockets are combined internally to form a mono signal. The volume level is set via the BGM level control on the rear of the unit (See Fig 2.3) so that the volume cannot easily be tampered with.

Aux Input:
This input is for connecting an auxiliary source to the controller for the purposes of background music where the source volume is required to be accessible from the front panel. The stereo sockets are combined internally to form a mono signal.

Audio Output:
This output consists of stereo RCA sockets with an output of 0dBm into a 600Ω input. This is suitable for most PA amplifier auxiliary inputs.
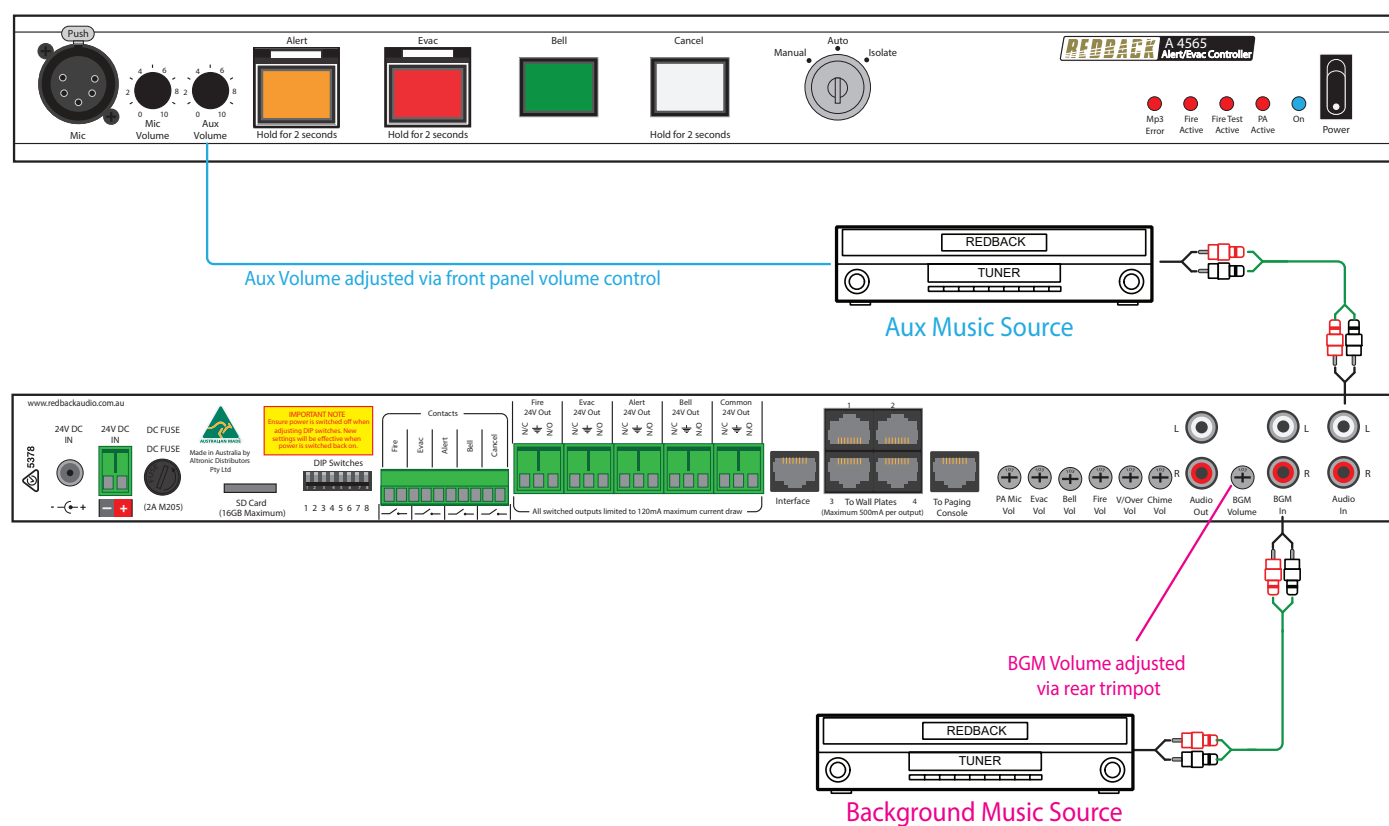
Fig 2.3

Rear Panel Volume Controls:
The output levels of the Alert, Evac and bell/chime tones can all be adjusted via trimpots located on the rear of the unit. Volumes are set as follows:
Evac Vol: This sets the output level of the alert & evac tones.
Chime: This sets the output level of the chime.

NOTE: The microphone volume is affected by the tones level. Set this level after setting the tones volume control as the mic volume is relative to the tones volume. Adjusting the tones volume up will increase the mic volume, and adjusting the tones volume down will decrease the mic volume.

2.4 DIP SWITCH SETTINGS

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

Switches 1-2 Not Used.

Switch 3 Pre-announcement Setting:
DIP switch 3 is used to configure the pre-announcement chime, which is heard when the PTT microphone paging is activated.
OFF: No pre-announcement chime
ON: Pre announcement chime is activated immediately upon commencement of paging.

Switch 4 Tones Setting:
DIP switch 4 is used to configure the source of the output tones. These can be set to play the MP3 files on the Micro SD card or revert to the internal Alert, Evac and Bell tones stored on the internal microprocessor.
(Note: No Fire Test or Fire tones are stored internally).

OFF: Output tones set by MP3 files on the Micro SD card.
ON: Output tones set by the internal microprocessor.
(Note: In the ON position the A 4565 will start without the Micro SD card inserted).

Switches 5-8 Evacuation Timer Settings:
These switches control the time period before the unit switches from the alert, to the evac tone (in auto mode). This time period can be switched from 30s to 7.5 minutes in 30s increments. See fig 2.4 for more information. Factory preset is 30s.

Alert -Evac Timer Settings

Time (sec)	DIP switch 5	6	7	8
30	on	off	off	off
60	off	on	off	off
90	on	on	off	off
120	off	off	on	off
150	on	off	on	off
180	off	on	on	off
210	on	on	on	off
240	off	off	off	on
270	on	off	off	on
300	off	on	off	on
330	on	on	off	on
360	off	off	on	on
390	on	off	on	on
420	off	on	on	on
450	on	on	on	on

Fig 2.4

2.5 24V OUTPUT CONNECTIONS

The A 4565 is fitted with five sets of 24V switched outputs for driving external devices such as strobes, sirens and attenuators. Each output has a maximum current draw of 120mA. When connecting devices which require more than 24V DC @ 120mA then an external supply and relays will be required.

In the illustration of fig ure 2.5 a high current school bell is to be activated by the Bell 24V switched output. As the current draw of the Bell is more than 120mA, a relay board is used to switch an external power supply. The S 4444 24V Relay Board as shown is an inexpensive and easily installed option designed for this purpose. 24V DC strobes such as the S 5423, S 5430 and S 5435 strobes also draw more than 120mA so they are connected in the same fashion as shown in fig ure 2.5.

Common 24V Out:

These contacts are for connection of override relays in remote volume controls. An override relay is necessary where attenuators are used so that the alert tone, evac tone or message is broadcast at full volume regardless of the volume setting on the individual volume control (attenuator).

The override relay can be set to "NORMAL" mode when connection is made between the N/O (normally open) contact and the GND connection. In this configuration 24V appears when any of the alert tone, evac tone, voice over message or paging functions are activated.

The override relay can be set to "FAILSAFE" mode when connection is made between the N/C (normally closed) contact and the GND connection. In this configuration 24V is removed when any of the alert tone, evac tone, voice over message or paging functions are activated.

Alert/Evac 24V Out:

These contacts are for switched 24V outputs whenever the alert or evac tones are activated. These may be used to run external systems such as strobes in unusually noisy environments. These operate in the same manner as the common 24V out contacts i.e. connection between the N/O contact and the GND contact will operate in NORMAL mode and connection between the N/C contact and the GND will operate in FAILSAFE mode.

Bell 24V Out:

These contacts are for operating an external relay used to operate something like a lunch bell etc.

These operate in the same manner as the switched 24V out contacts i.e.: connection between the N/O contact and the GND contact will operate in NORMAL mode and connection between the N/C contact and GND will operate in FAILSAFE mode.
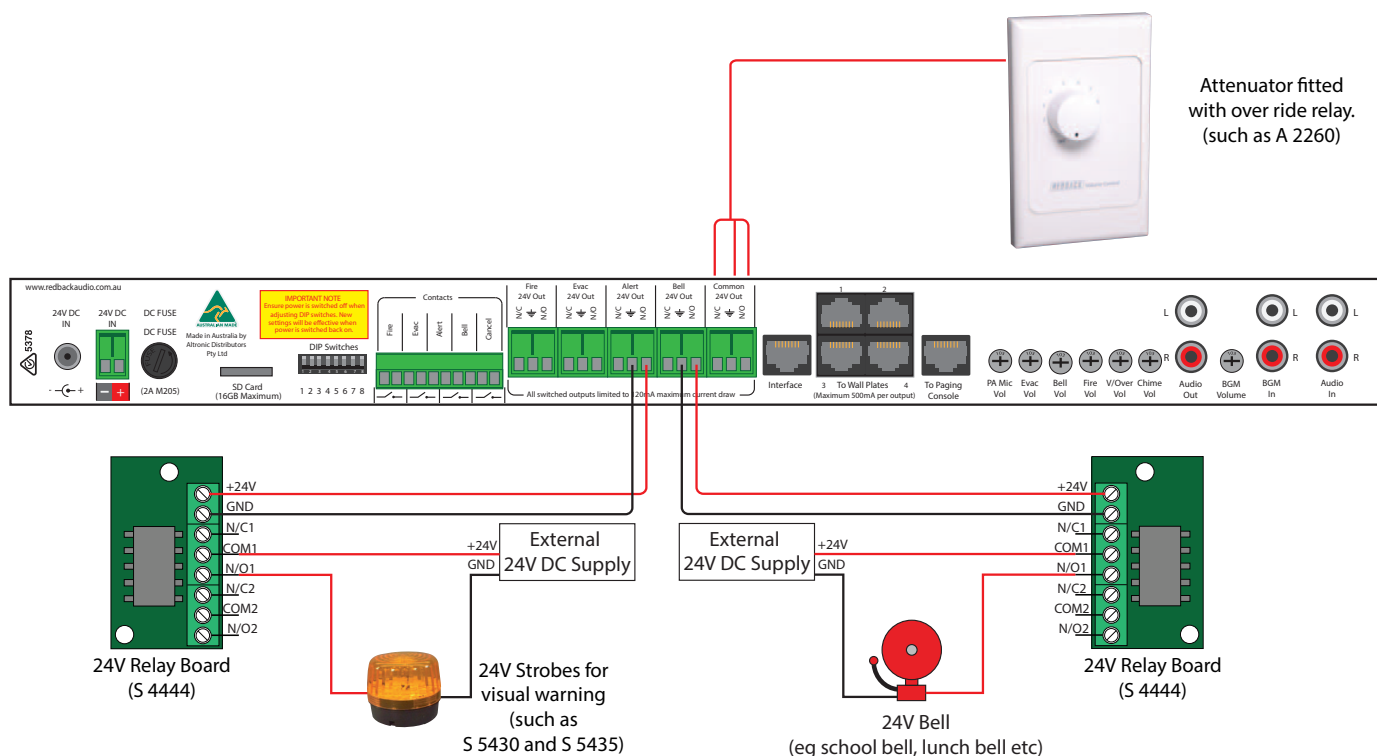

Fig 2.5

2.6 MP3 AUDIO FILES and ALERT and EVAC VOICE OVER MESSAGES

The supplied MIcro SD card houses all the MP3 audio files used for the output tones. These files are stored in seven separate folders (see figure 2.6) and relate to the corresponding output. e.g. the Alert folder houses the MP3 file to be played when the Alert mode is triggered.
These files can be any length and bit rate, but must be in MP3 format (they cannot be Wav files or AAC files).
(NOTE: only one MP3 file can be in each folder).
There is also a folder labelled "#LIBRARY# which contains a host of sample MP3 files.

The "Voice" folder contains the MP3 audio files played as the Alert and Evacuation messages. There are separate folders for both the Alert and Evac messages as shown in figure 2.6.

The messages have to be recordered in MP3 format using any readily available PC software or other means, and then transferred to these folders.

Activating the Voice Over Message:

Voice over messages become active when an MP3 file is present in the relevant folder. If the voice over message is not required leave the folder empty.

Fig 2.6

2.7 ALERT, EVAC and BELL Tones Backup
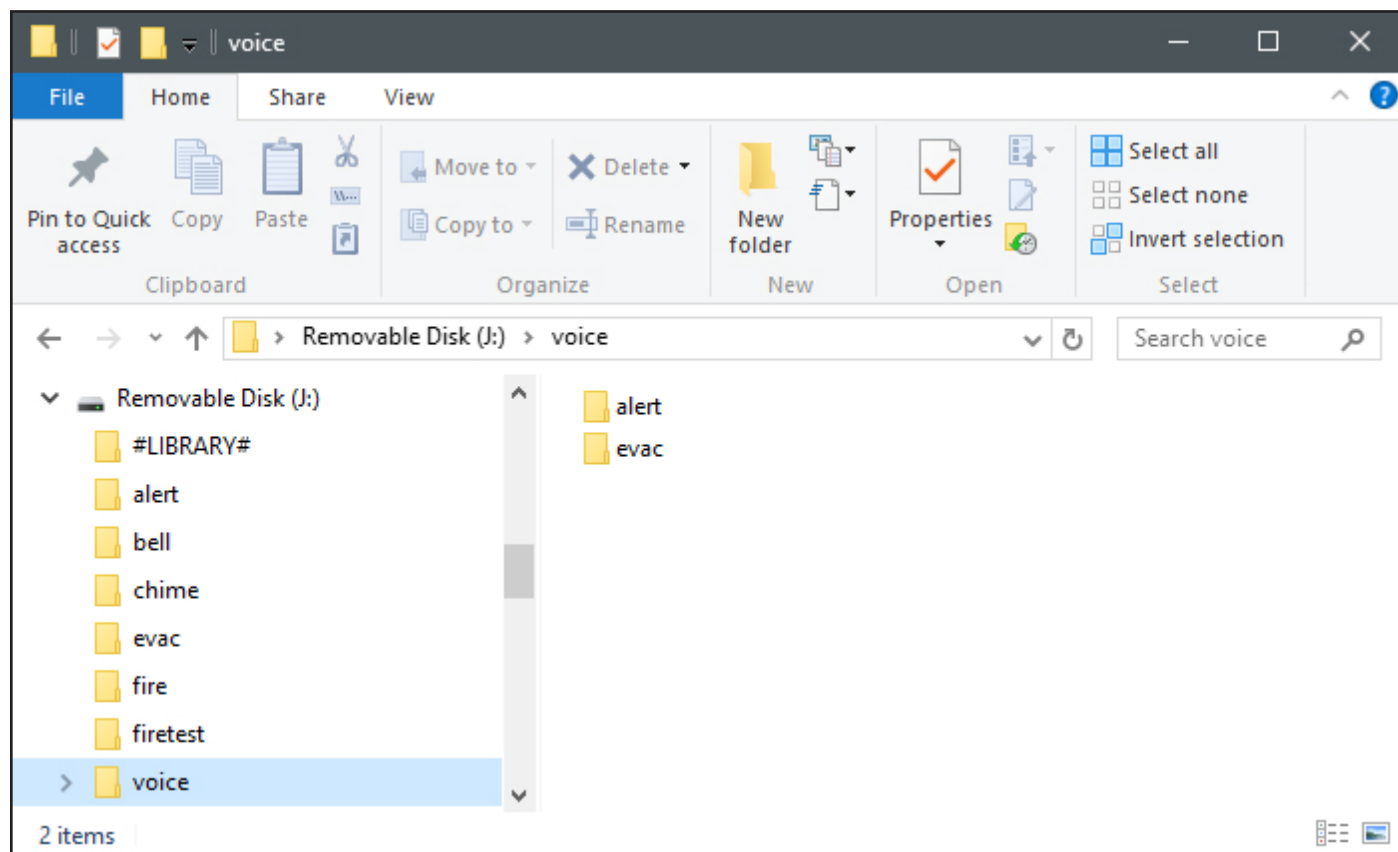
The A 4565 has hard coded Alert, Evacuation and Bell tones in the event of an SD card failure or the removal of the SD card while the unit has power. These tones are played by the internal microprocessor and cannot be modified.
(Note: The unit will not start if the Micro SD card is not fitted on power up).
(NOTE: The hard coded Alert/Evac mode has no voice over messages).

2.8 INSTALLING MP3 FILES

You will first need to remove power from the A 4565 then remove the Micro SD card from the rear of the unit.
To remove the Microp SD card push the card in and it will eject itself.

In order to access the program, the Micro SD card will need to be connected to a PC. You will need a PC or laptop equipped with an Micro SD card reader to do this. If an Micro SD slot is not available then the D 0371A USB Memory Card Reader or similar would be suitable (not supplied).

Step by step guide to installing an MP3 onto the MIcro SD card with a Windows installed PC

Make sure the PC is on and card reader connected and correctly installed. Then insert the SD card into the reader.
Go to "My Computer" or "This PC" and open the SD card which is usually marked "Removable disk".

In this case it is named "Removable disk (J:) as shown in figure 2.7.
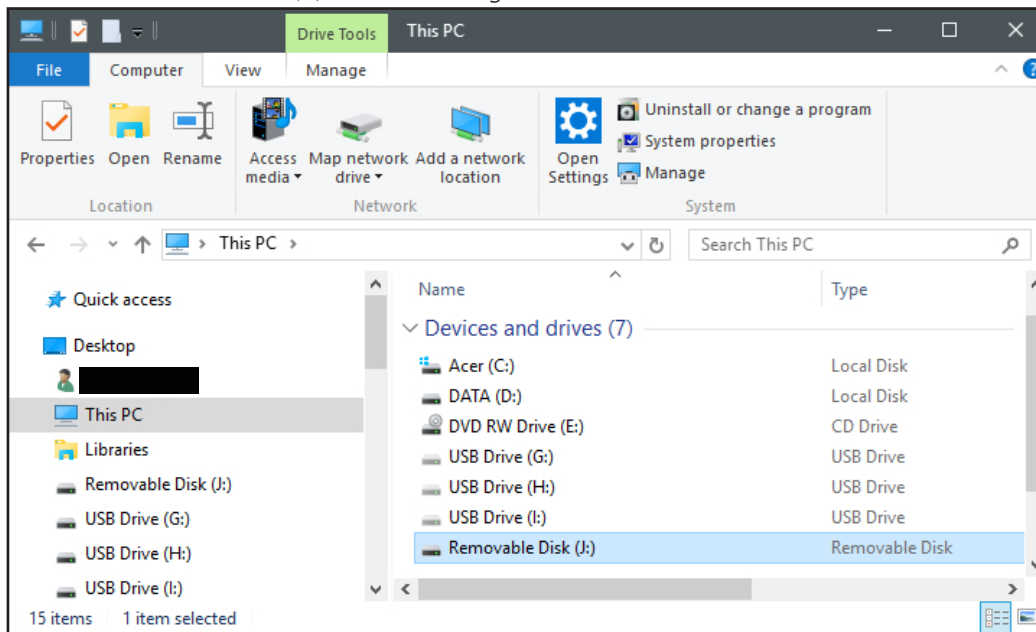
Fig 2.7

Open the Removable Disk and you should get a window that looks like figure 2.8.
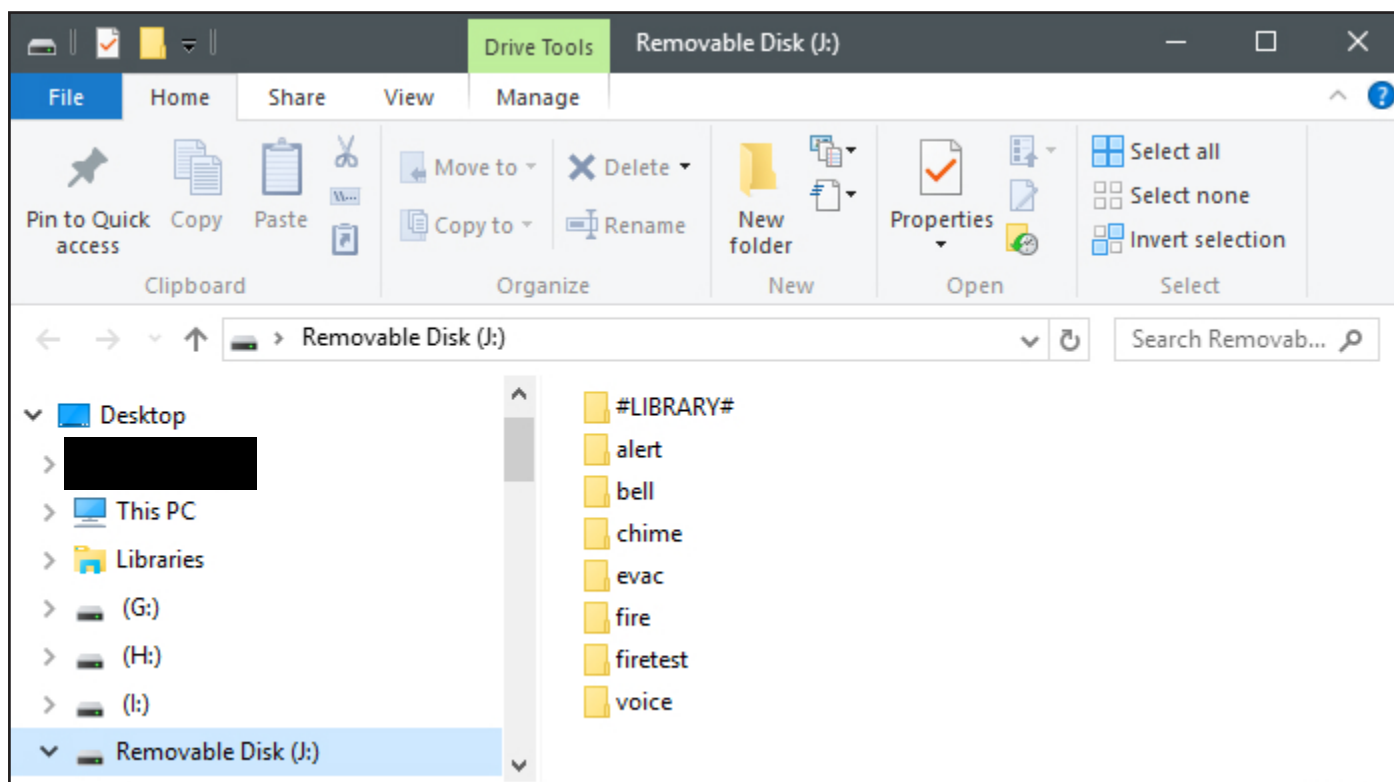
Fig 2.8

The contents of the SD Card include a Library folder of sample MP3 files and seven folders for the MP3 files associated with the various functions of the A 4565.

There should be default MP3 files included in each folder. These will need to be replaced with your own MP3 files.

Open the folder in which you want to install an MP3 (in our case its the Alert folder) and you should see an MP3 file which is named Alert.MP3 as shown in figure 2.9.
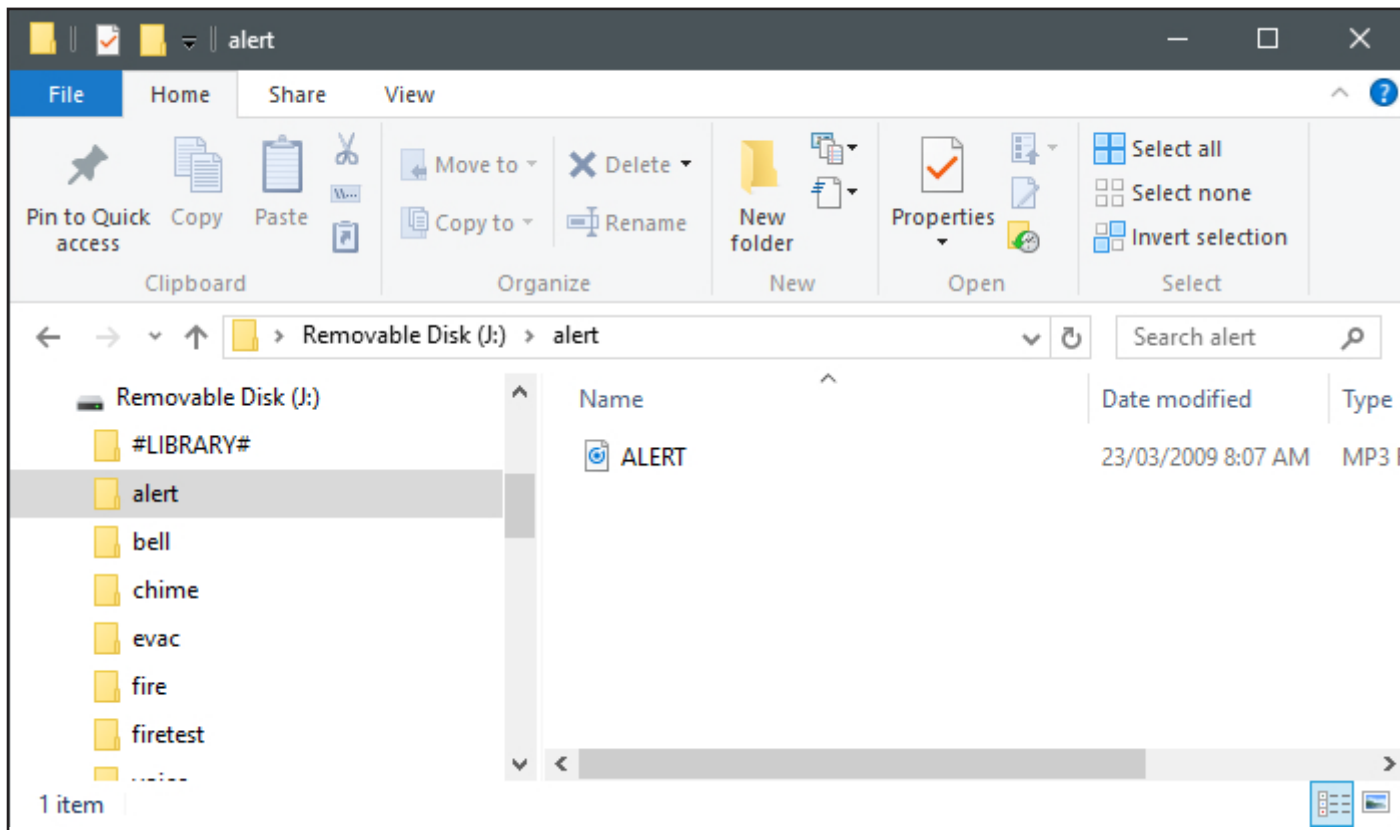
Fig 2.9

This MP3 file needs to be deleted and replaced by the MP3 file you want to play when you activate the Alert mode. The MP3 file name is not important. But it is important that there is only one MP3 file in the Alert folder.

Check the properties of the MP3 file.
NOTE the new MP3 file cannot be "Read only".
To check this, right click on the MP3 file and scroll down and select Properties, you will get a window that looks like figure 2.10.

Make sure the "Read Only" box has no tick in it.

The new MP3 is now installed on the card. Repeat these steps for the other MP3 folders if you need to.

Step 7: The card can be removed from the PC following windows safe card removal procedures. Make sure the A 4565 is OFF and insert the SD card into the slot in the front; it will click when fully inserted.
The A 4565 is ready to use.
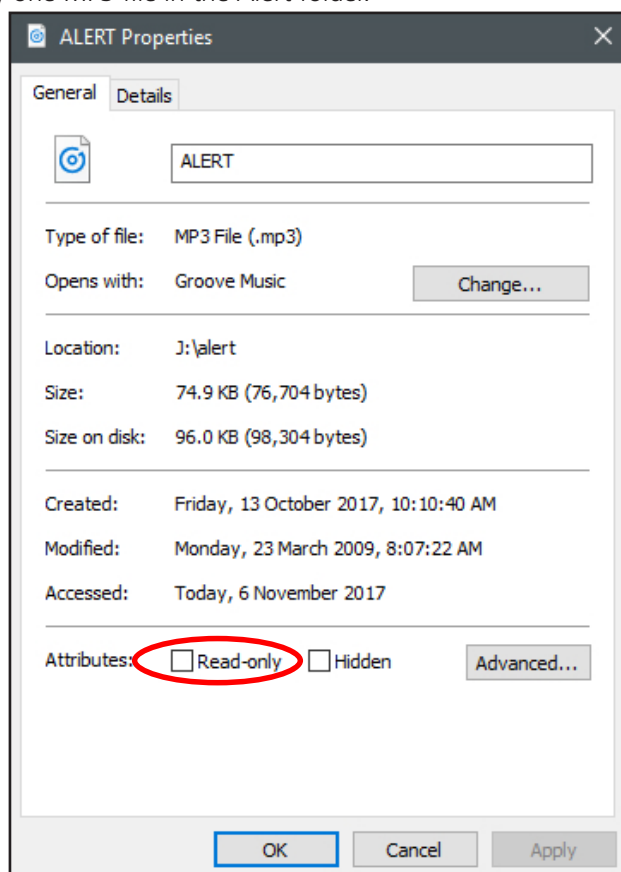
Fig 2.10

3.0 REMOTE WALL PLATES

There are five remote wall plates which can be connected to the A 4565 for remote triggering of the Alert, Evacuation, Bell, Fire Test and Fire Alarm tones and for remotely cancelling any tones which may be active.

3.1 A 2078B Remote Plate

The A 2078B wall plate provides a remote means of triggering the Alert and Evacuation tones and the cancel function. Connection is made to the A 4565 via 6 wires as shown in Fig 3.1B. Remote triggering is only available when the A 4565 is in "Auto" mode which is selected by the key switch on the front of the A 4565. If standard Cat5 cable is used for the wiring, the plate can be located up to 30m away from the main unit. This can be increased to 100m away using heavier guage cable, which reduces the voltage drop across this distance and ensures the switch LEDs illuminate.

The Alert/Evac/Cancel switches on the A 2078B wall plate are connected to the corresponding contacts on the rear of the A 4565. While the Alert and Evac LEDs on the wall plate are connected to the Alert 24V and Evac 24V outputs of the A 4565. The cancel LED is not connected. A mimimum of six wires can be used if the ground connections of the Alert and Evac 24V outputs and the Alert/Evac and cancel switch grounds are linked together (see Fig 3.1B).

If the Alert and Evac switches on the A 2078B are pressed when the A 4565 main unit is in "Manual" or "Isolate" mode, nothing will happen. If the Alert and Evac switches are pressed on the A 4565 while in "Manual" mode the Alert and Evac switches on the A 2078B wall plate will illuminate.

Fig 3.1A

A 4565 REAR CONNECTIONS
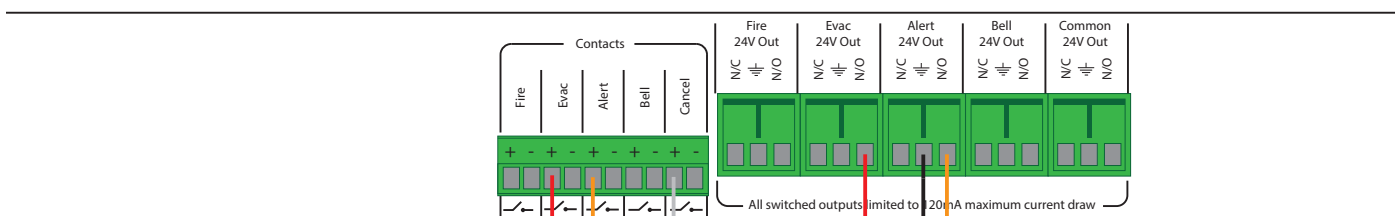
Wall Plate Switches connect to Trigger Contacts

Wall Plate LED's connect to 24V Switched Outputs
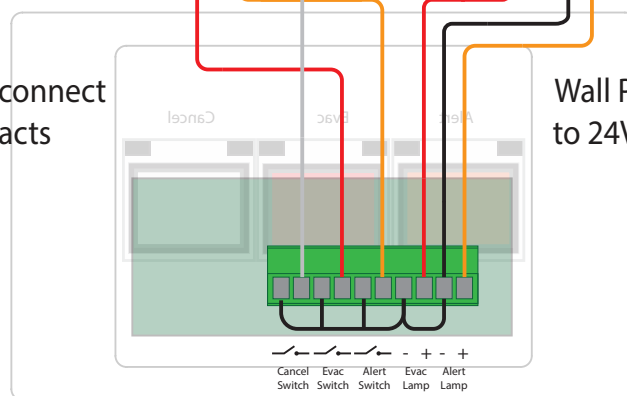
A 2078B REMOTE WALL PLATE

Fig 3.1B

3.2 A 2081 Remote Plate

The A 2081 wall plate provides a remote means of triggering the Alert, Evacuation and Bell tones and the cancel function. Connection is made to the A 4565 via a minimum of 8 wires, if the ground connections of the Alert,Evac and Bell 24V outputs and the Alert/Evac/Chime and cancel switch grounds are linked together (see Fig 3.2B).
(It is possible to use Cat5/6 cable for this purpose). Remote triggering is only available when the A 4565 is in "Auto" mode which is selected by the key switch on the front of the A 4565. If light duty cable is used for the wiring (such as Cat5 cable), the plate can be located up to 30m away from the main unit. This can be increased to 100m away using heavier guage cable, which reduces the voltage drop across this distance and ensures the switch LED's illuminate. The Alert/Evac/Chime/Cancel switches on the A 2081 wall plate are connected to the corresponding contacts on the rear of the A 4565. While the Alert,Evac and Bell LEDs on the wall plate are connected to the Alert,Evac and Bell 24V outputs of the A 4565. The cancel LED is not connected.

If the Alert,Evac and Chime switches on the A 2081 are pressed when the A 4565 main unit is in "Manual" OR "Isolate" mode, nothing will happen. If the Alert, Evac and Bell switches are pressed on the A 4565 while in "Manual" mode the Alert, Evac and Chime switches on the A 2081B wall plate will illuminate.

Fig 3.2A

A 4565 REAR CONNECTIONS

Wall Plate Switches connect to Trigger Contacts

Wall Plate LED's connect to 24V Switched Outputs

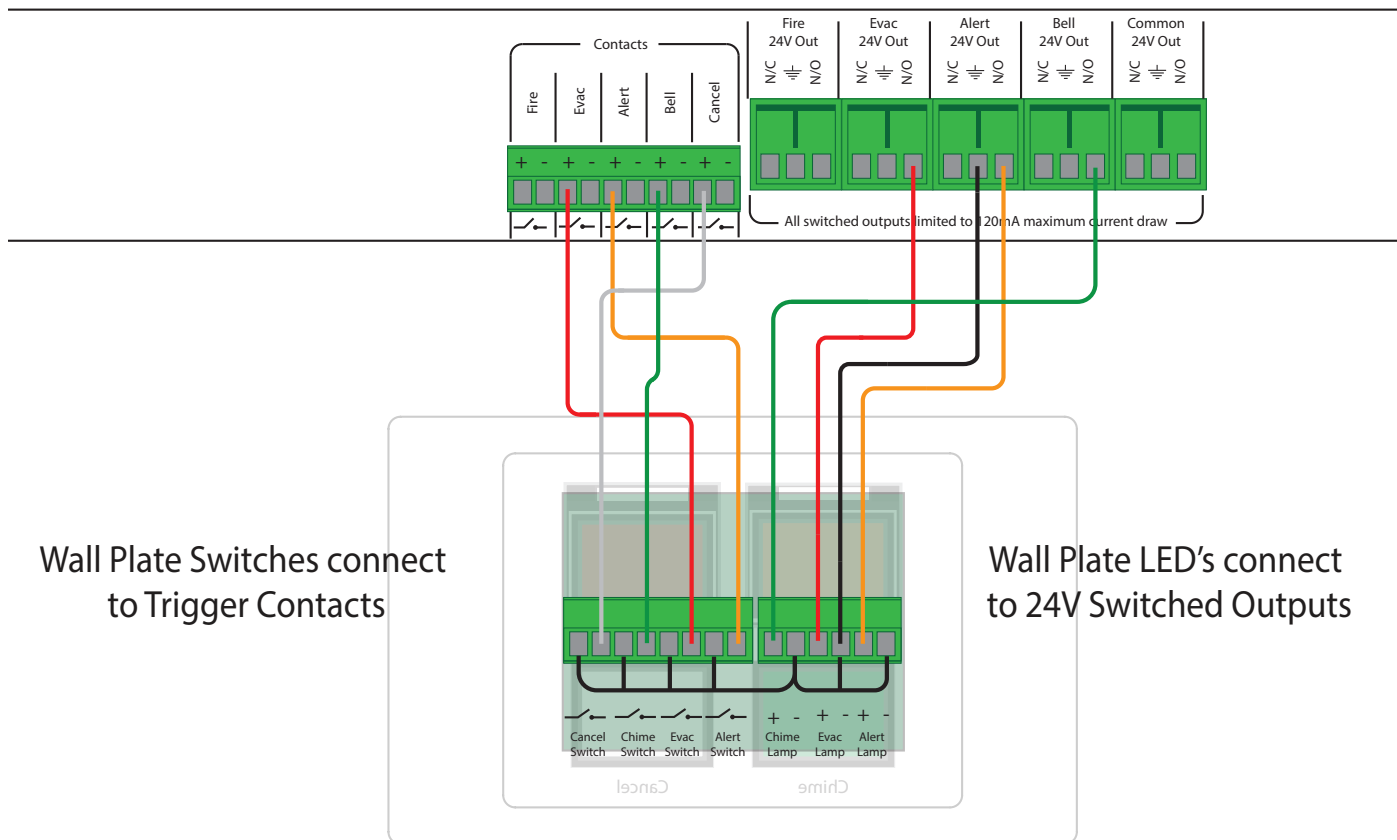A 2081 REMOTE WALL PLATE

Fig 3.2B

3.3 A 4578 Remote Plate

The A 4578 wall plate allows a remote means of triggering the Alert and Evacuation tones and the cancel function. The switches are momentary operation and must be pressed for up to 3 seconds to activate. The switches have protective "flip up" covers to prevent accidental operation.
If the A 4578 has a connection problem with the A 4565 main unit the LED on the wall plate will flash.
Remote triggering is only available when the A 4565 is in "Auto" mode which is selected by the key switch on the front of the A 4565.
If the Alert and Evac switches on the A 4578 are pressed when the A 4565 main unit is in "Manual" or "Isolate" mode, nothing will happen. If the Alert and Evac switches are pressed on the front of the A 4565 while in "Manual" mode the Alert and Evac switches on the A 4578 wall plate will illuminate. An LED on the wall plate will illuminate when the A 4565 main unit is in "Manual" or "Isolate" mode to alert the user that the wall plate is inactive.

3.4 A 4581 and A 4581V Remote Plates

The A 4581 and A 4581V wall plates provide a remote means of triggering the Alert, Evacuation and Bell tones and the cancel function. The switches are momentary operation and must be pressed for up to 3 seconds to activate. The Alert and Evac switches have protective "flip up" covers to prevent accidental operation.
If the A 4581/V has a connection problem with the A 4565 main unit the LED on the wall plate will flash.
Remote triggering is only available when the A 4565 is in "Auto" mode which is selected by the key switch on the front of the A 4565. If the Alert, Evac and Bell switches on the A 4581/V are pressed when the A 4565 main unit is in "Manual" or "Isolate" mode, nothing will happen. If the Alert, Evac and Bell switches are pressed on the front of the A 4565 while in "Manual" mode the Alert, Evac and Bell switches on the A 4581/V wall plate will illuminate. The LED on the wall plate will illuminate when the A 4565 main unit is in "Manual" or "Isolate" mode to alert the user that the wall plate is inactive.

3.5 A 4597 Remote Plate

The A 4597 wall plate provides the means to remotely operate the Fire Test and Fire Alarm tones of the A 4565.
The switches are momentary operation and must be pressed for up to 3 seconds to activate. The switches have protective "flip up" covers to prevent accidental operation.
There are two RJ45 ports on the rear of the A 4597 wall plate, either of which can be used.
If the Fire Test and Fire Alarm switches on the A 4597 are pressed when the A 4565 main unit is in "Manual" or "Isolate" mode, nothing will happen.
NOTE: The FIre Test tone cannot be triggered by any other means than the A 4597 wall plate. The Fire tone can also be triggered by the contact on the rear of the A 4565.

3.6 CONNECTING THE A 4578, A 4581 and A 4597 REMOTE PLATES

Connection is made to the A 4565 via standard Cat5e cabling as shown in Fig 3.6b. There are two RJ45 ports on the rear of the A 4578, A 4581 and A 4597 wall plates, either of which can be used. Connection to the A 4565 is via the four available RJ45 output ports.
Up to a maximum 16 wall plates can be cascaded together through use of the four RJ45 ports from the A 4565.
Any combination of A 4578,A 4581 or A 4597 plates can be used together.
It is recommended that a maximum of four remote plates are connected to each output port.
(The maximum current draw on each port is 0.5amps)

NOTE: If more than 16 wall plates are required contact us for configuration details.

CASCADING THE A 4578, A 4581 and A 4597 REMOTE PLATES

If more than one remote wall plate is required then the wall plates can be cascaded together with only one connection back to the A 4565 required (see Fig 3.6b). A Maximum of 16 plates is recommended, (If more than 16 wall plates are required contact us for configuration details). There are four RJ45 ports on the rear of the A 4565, any of which can be used for connection to the wall plates.

REMOTE PLATE ID

Every A 4578, A 4581 and A 4597 remote plate must have a unique ID which is set by the DIP switches which are accessed on the rear of the wall plate. A maximum of 63 ID's are available. Fig 3.6a illustrates the DIP switch ID settings.

DIP Switches 7-8 are not used.

A record sheet has been supplied for recording these ID's for future use.

ID	DIP Switch Settings						ID	DIP Switch Settings					
	1	2	3	4	5	6		1	2	3	4	5	6
1	ON	OFF	OFF	OFF	OFF	OFF	33	ON	OFF	OFF	OFF	OFF	ON
2	OFF	ON	OFF	OFF	OFF	OFF	34	OFF	ON	OFF	OFF	OFF	ON
3	ON	ON	OFF	OFF	OFF	OFF	35	ON	ON	OFF	OFF	OFF	ON
4	OFF	OFF	ON	OFF	OFF	OFF	36	OFF	OFF	ON	OFF	OFF	ON
5	ON	OFF	ON	OFF	OFF	OFF	37	ON	OFF	ON	OFF	OFF	ON
6	OFF	ON	ON	OFF	OFF	OFF	38	OFF	ON	ON	OFF	OFF	ON
7	ON	ON	ON	OFF	OFF	OFF	39	ON	ON	ON	OFF	OFF	ON
8	OFF	OFF	OFF	ON	OFF	OFF	40	OFF	OFF	OFF	ON	OFF	ON
9	ON	OFF	OFF	ON	OFF	OFF	41	ON	OFF	OFF	ON	OFF	ON
10	OFF	ON	OFF	ON	OFF	OFF	42	OFF	ON	OFF	ON	OFF	ON
11	ON	ON	OFF	ON	OFF	OFF	43	ON	ON	OFF	ON	OFF	ON
12	OFF	OFF	ON	ON	OFF	OFF	44	OFF	OFF	ON	ON	OFF	ON
13	ON	OFF	ON	ON	OFF	OFF	45	ON	OFF	ON	ON	OFF	ON
14	OFF	ON	ON	ON	OFF	OFF	46	OFF	ON	ON	ON	OFF	ON
15	ON	ON	ON	ON	OFF	OFF	47	ON	ON	ON	ON	OFF	ON
16	OFF	OFF	OFF	OFF	ON	OFF	48	OFF	OFF	OFF	OFF	ON	ON
17	ON	OFF	OFF	OFF	ON	OFF	49	ON	OFF	OFF	OFF	ON	ON
18	OFF	ON	OFF	OFF	ON	OFF	50	OFF	ON	OFF	OFF	ON	ON
19	ON	ON	OFF	OFF	ON	OFF	51	ON	ON	OFF	OFF	ON	ON
20	OFF	OFF	ON	OFF	ON	OFF	52	OFF	OFF	ON	OFF	ON	ON
21	ON	OFF	ON	OFF	ON	OFF	53	ON	OFF	ON	OFF	ON	ON
22	OFF	ON	ON	OFF	ON	OFF	54	OFF	ON	ON	OFF	ON	ON
23	ON	ON	ON	OFF	ON	OFF	55	ON	ON	ON	OFF	ON	ON
24	OFF	OFF	OFF	ON	ON	OFF	56	OFF	OFF	OFF	ON	ON	ON
25	ON	OFF	OFF	ON	ON	OFF	57	ON	OFF	OFF	ON	ON	ON
26	OFF	ON	OFF	ON	ON	OFF	58	OFF	ON	OFF	ON	ON	ON
27	ON	ON	OFF	ON	ON	OFF	59	ON	ON	OFF	ON	ON	ON
28	OFF	OFF	ON	ON	ON	OFF	60	OFF	OFF	ON	ON	ON	ON
29	ON	OFF	ON	ON	ON	OFF	61	ON	OFF	ON	ON	ON	ON
30	OFF	ON	ON	ON	ON	OFF	62	OFF	ON	ON	ON	ON	ON
31	ON	ON	ON	ON	ON	OFF	63	ON	ON	ON	ON	ON	ON
32	OFF	OFF	OFF	OFF	OFF	ON							

Fig 3.6a

The figure below illustrates the wiring required when connecting multiple remote wall plates to the A 4565. The remote plates can be connected to any of four output ports and can be cascaded together by CAt5e cabling.

Up to a maximum 16 wall plates can be cascaded together. (*)
All four RJ45 ports from the A 4565 can be utilised.
Any combination of A 4578, A 4581 or A 4597 plates can be used together.
It is recommended that a maximum of four remote plates are connected to each output port.
(The maximum current draw on each port is 0.5amps)

* (If more than 16 wall plates are required contact us for configuration details).

If any of the A 4578 or A 4581 plates has a connection problem with the A 4565 main unit, the LED on the wall plate will flash.
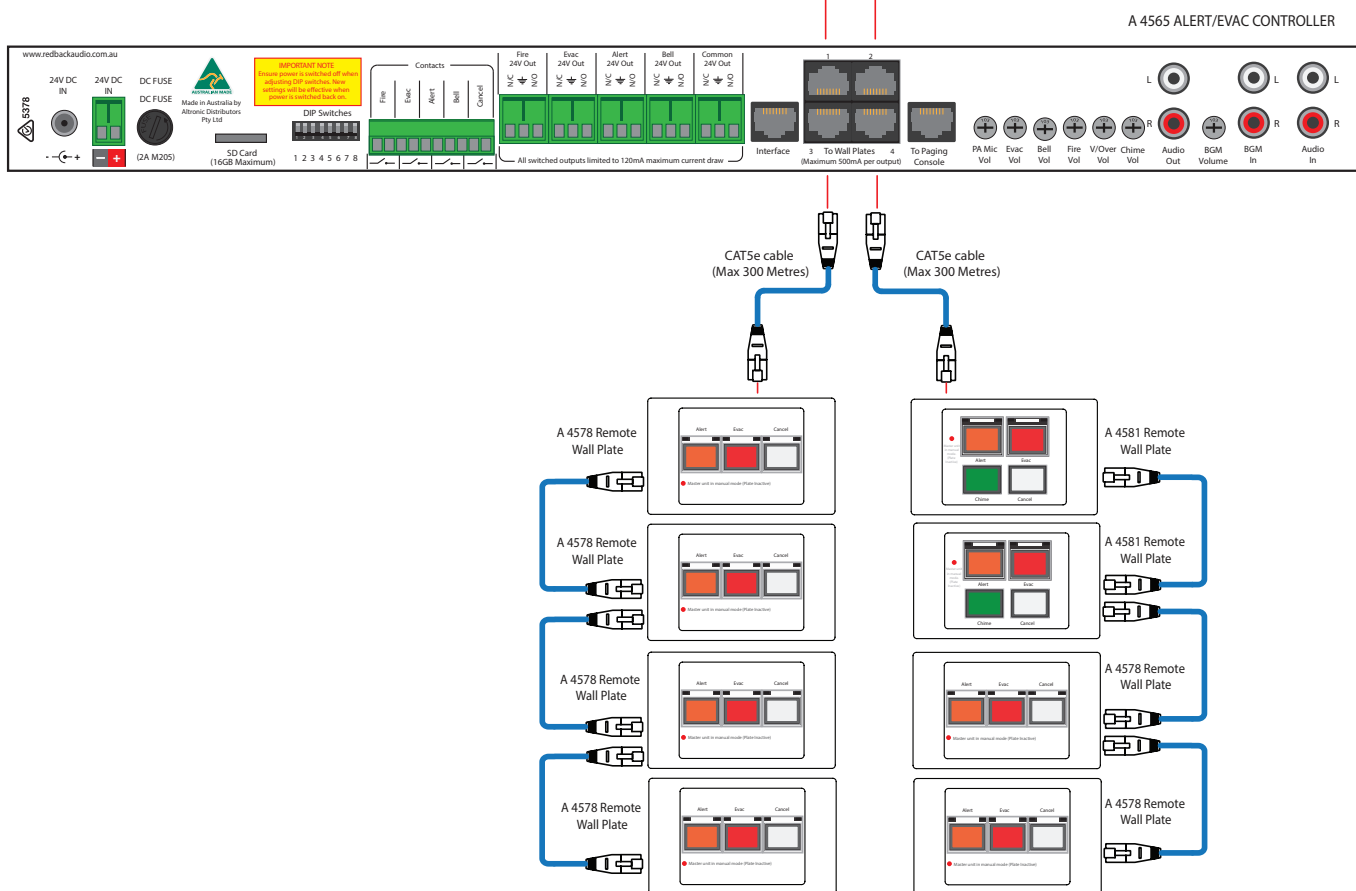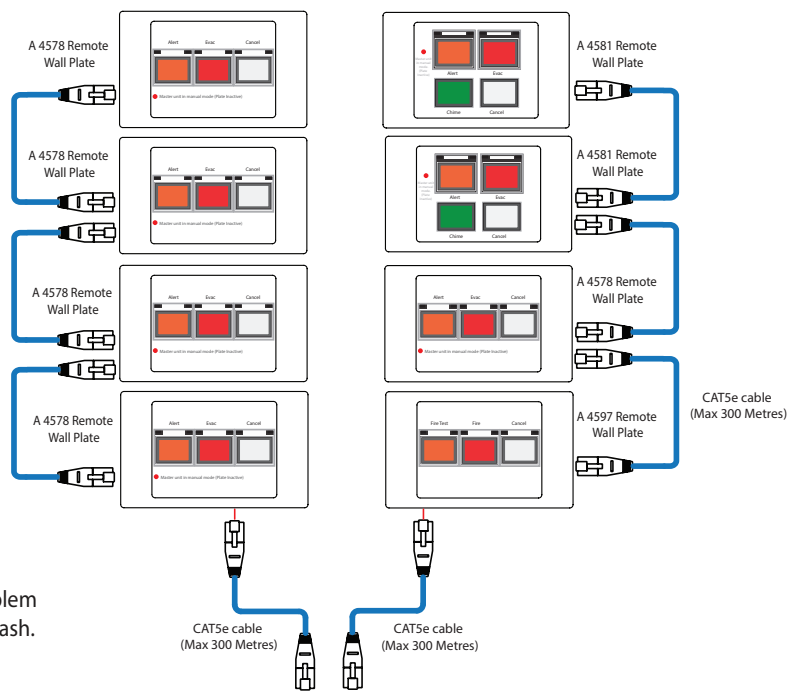
Fig 3.6b

The sheet below is supplied to provide the user with a written record of each remote plate's ID and location.

3.7 REMOTE PLATE ID SHEET

ID	LOCATION e.g. Boardroom	REMOTE PLATE e.g. A 4578
1		
2		
3		
4		
5		
6		
7		
8		
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4.0 PAGING CONSOLE

4.1 A 4564 OVERVIEW

The A 4564 paging console provides emergency and general paging and remote selection of "Alert", "Evac", "Chime" and "Cancel" modes.

Paging is achieved by simply pressing the PTT (push to talk) switch and then speaking. General paging will override all other functions of the A 4565 including the Alert and Evacuation modes.
Provision has been made for the connection of one paging console which is wired back to the A 4565 via CAT5E cabling to the RJ45 port on the rear of the unit (see figure 4.1a for details).

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 paging console.

DIP switch 1 sets the PA system chime on or off.
DIP switch 2 sets the internal chime on or off.

DIP switches 3-4 are not used.
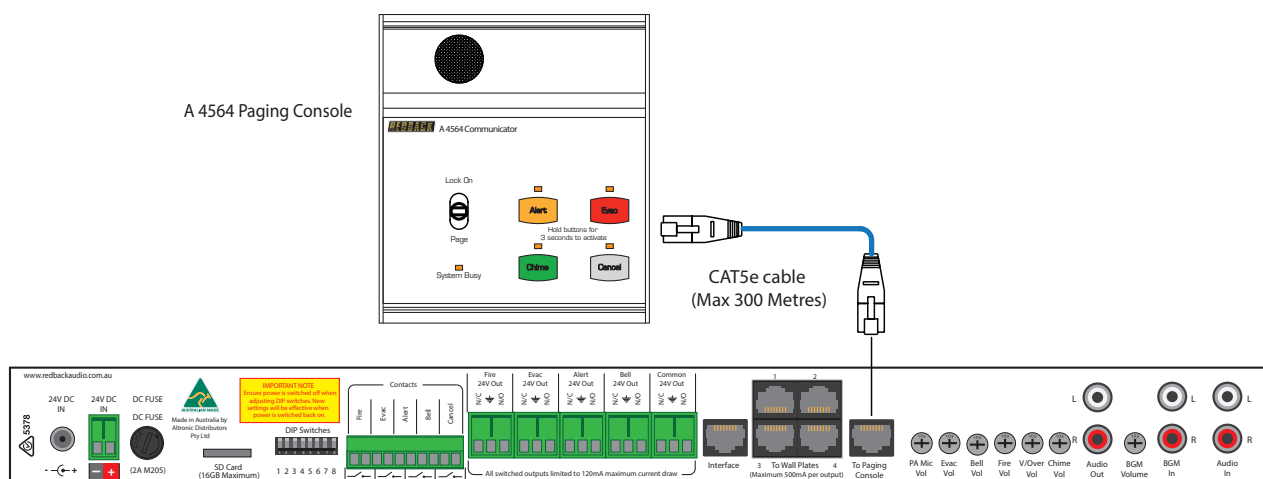
Fig 4.1a

4.2 A 4564 REAR PANEL CONNECTIONS

1   24V DC connector
2.1mm DC jack (centre pin positive).
2   RJ45 connector
For connection back to the A 4565. Either port can be used.
3   DIP switch options
These switches set the chime options.
4   Chime volume
Use this volume to adjust the chime level.
5   Microphone volume
Use this volume to adjust the microphone level.
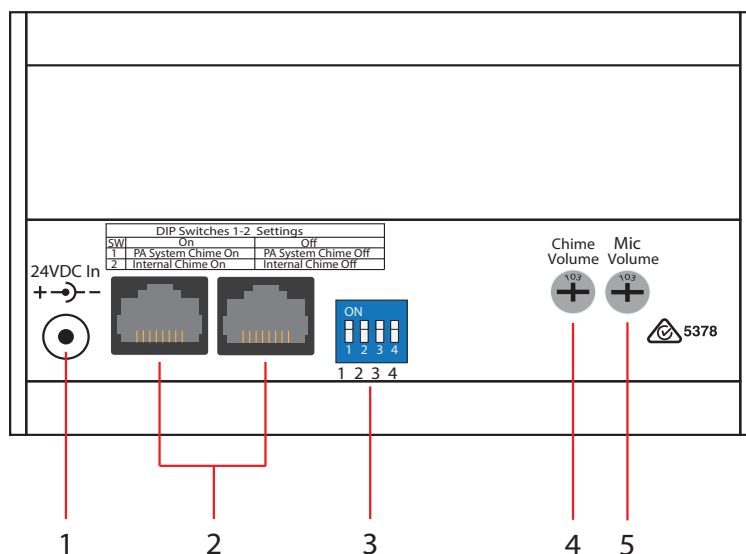
IMPORTANT NOTE:
Ensure power is switched off when adjusting DIP switches.
New settings will be effective when power is switched back on.

5.0 TROUBLE SHOOTING

5.1 SYMPTOMS AND REMEDIES

SYMPTOMS	REMEDIES
Front (XLR) Mic volume level is low.	Adjust mic volume on front of unit.
Audio files not playing.	Make sure they are in MP3 format. Make sure Micro SD card inserted properly. Check MP3 is installed in appropriate folder.
Alert/evac tone levels are low.	Adjust Evac volume on rear of unit.
Pre-Announcement Chime volume is low	Adjust Chime volume on rear of unit.
Paging Console Mic volume level is low.	Adjust PA Mic volume on rear of unit.
Front volume control not functioning	Front volume control functions on aux input only. Check connections to rear of unit.
Remote plate not functioning or recognised.	Make sure plate ID is set correctly. Check wiring.
Alert or Evac message not playing.	Check MP3 is installed in a voice folder.
DIP switch changes not effective.	Turn the unit OFF before changing DIP switch settings. Settings become effective after power is returned.
I don't know how to record a message.	This unit does not have a recording facility. A message MP3 will have to be recorded on a PC or some other equipment.
24V DC outputs stop working.	These outputs are limited to 120mA output and will trip the internal fuse when overloaded. They will reset once they have cooled down.

5.2 RJ45 cabling configuration for system components
(586A 'Straight through')

System components are connected using "pin to pin" configuration RJ45 data cabling as shown in fig 5.2. 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.

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 5.2

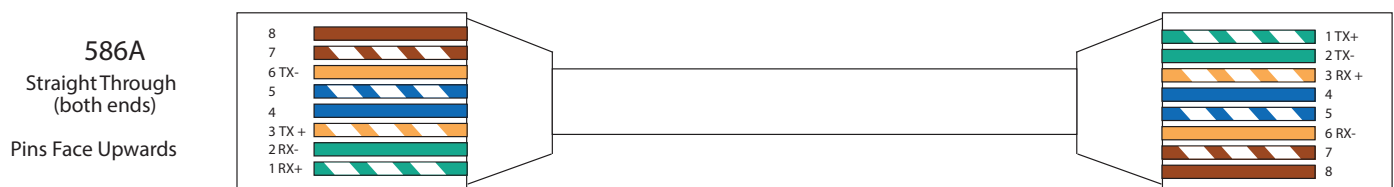**WARNING**
System components are connected using standard "pin to pin" configuration RJ45 data cabling. When installing ensure all connections are verified before switching any system component on.

Failure to follow the correct wiring configuration may result in damage to system components.

For the correct wiring configuration, see section 6.0 "Troubleshooting".

6.0 FIRMWARE UPDATE

It is possible to update the firmware for this unit by downloading updated versions from redbackaudio.com.au.

To perform an update, follow these steps.

1) Download the Zip file from the website.
2) Remove the SD card from the A 4565 and insert it into your PC. (Follow the steps on page 14 to open the SD card).
3) Extract the contents of the Zip file to the root folder of the SD Card.
4) Rename the extracted .BIN file to update.BIN.
5) Remove the SD card from the PC following windows safe card removal procedures.
6) With the power turned OFF, insert the SD card back into the A 4565.
7) Turn the A 4565 ON. The unit will check the SD card and if an update is required the A 4565 will perform the update automatically.

7.0 SPECIFICATIONS

OUTPUT LEVEL:..0dBm
DISTORTION:..0.01%
FREQ. RESPONSE:..140Hz - 20kHz
SIGNAL TO NOISE RATIO:
    Aux/Music Input:..............................-90dB typically
    Alert/Evac/Chime:.............................-70dB typically
INPUT SENSITIVITY:
    Mic:...2mV Balanced
    BGM/Aux Input:.......................300mV Unbalanced
OUTPUT CONNECTORS:
    Audio Output:............................RCA Stereo Socket
    Switched 24V DC Out:...................Screw Terminals
    Alert 24V DC Out :........................ Screw Terminals
    Evac 24V DC Out:..........................Screw Terminals
    Bell 24V DC Out:...........................Screw Terminals
    Fire 24V DC Out:...........................Screw Terminals
    PLEASE NOTE: Output loads limited to 120mA.
INPUT CONNECTORS:
    Mic:...5 pin XLR
    Aux Input:..................................RCA Stereo Socket
    24V DC Power:..............................Screw Terminals
    24V DC Power:...........................2.1mm DC Socket
    Remote Alert,Evac,Bell,Fire,Cancel:.Screw Terminals
MUTING:...........................Via Microphone Switch Contact
AUDIO STORAGE:
    Micro SD Card: ....Max 16GB
CONTROLS:
    BGM Input:...Rear Volume
    Bell, Evac, Chime, Fire Tones:...............Rear Volume
    Voice over,PA Mic:..............................Rear Volume
    Mic Input:................................Front Panel Volume
    Auxiliary Input:.........................Front Panel Volume
    Power:..On/Off Switch
    Mode Selection:.................Keyswitch 003 Standard
    Alert Switch:.......................Illuminated Push Switch
    Evac Switch:.......................Illuminated Push Switch
    Bell Switch:........................Illuminated Push Switch
    Cancel Switch:.....................................Push Switch

INDICATORS:...Power on
    .... MP3 Error
    .... Fire Active
    ....Fire Test Active
    .... PA Active
POWER SUPPLY:...24V DC
DIMENSIONS:≈................................... 482W x 125D x 44H
WEIGHT: ≈... 1.6 kg
DC FUSE: 2A (M205)
COLOUR: ....Black

A 4564 Paging Console

OUTPUT CONNECTION: ....2 x RJ45 8P8C
DATA TRANSMISSION: ....Cat5e cabling max 300m
FRONT PANEL CONTROLS:...............Alert, Evac, Bell, Cancel
REAR PANEL CONTROLS:....................Chime level, Mic level
MIC FREQUENCY RESPONSE: ....100Hz - 10kHz
MIC SENSITIVITY: ....-76dB ±3dB
POWER CONNECTION (24VDC):...2.1mm JACK (centre +ve)
MIC GOOSENECK: ....325mm Cardioid (unidirectional)
DIMENSIONS:≈..............................115W x 140D x 60H mm
    ....(excluding gooseneck)
WEIGHT: ≈... 0.6 kg

* Specifications subject to change without notice