

REDBACK®

A 4575 Emergency Evacuation Controller

OPERATING INSTRUCTIONS



This easy to install controller features Auto, Manual, and Isolate modes.

Auto Position: When selected to the auto position the panel will respond to any signal received from the buildings Fire Indicator Board (FIB), if connected. This signal then activates the alert tone. If, after a pre-set time this condition has not been attended to, the panel will change to the evacuation mode. The evacuation tone will continue to sound until the panel has been reset. In the auto position the front panel alert, evac and cancel controls are inoperative. All other functions will work, ie. paging, bell chime and BGM.

Manual Position: In the manual position any of the functions may be initiated from the controls on the front panel, i.e. Alert, Evac, Cancel or PA. This allows the operator to select either of these functions as required.

Other Functions: Provisions have been made for a BGM source to be played through the controller. BGM is automatically muted when any other function is operated. A microphone input has been included on the front panel. This can be used for either general or emergency paging. Paging over-rides all other functions. A pre-announcement chime is available on the microphone input. This can be switched on or off as preferred via DIP switches on the back of the unit. 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 ie. by a time clock or remote switch.

FEATURES

- Tones conform to AS 1670.4
- Standard 1U 19" rack mount case
- Interfaces with Fire Indicator Boards
- Remote operation of Alert, Evac, Chime & Cancel tones.
- 240V mains and 24V DC operation
- Auto/Manual/Isolate keyswitch
- Internationally accepted IEC mains socket (240V AC operation).
- Key switch to 003 standard
- Local operation of Alert, Evac and PA
- Voice over message on board
- Microphone socket for PA use
- Provision for BGM
- 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 remote alert activation adjustable from 30secs to 7.5min in 30second 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

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Proudly Assembled in Australia

REDBACK A 4575 Emergency Evacuation Controller

WIRING UP THE UNIT

Power Connections

The unit is powered by 240V AC via a standard IEC connector which is fused at 500mA.

There is also a 24VDC IN input connector which is for connection to a 24V power supply (battery backup) so that the unit will function in case of a mains power failure.

Microphone Input

Connection details for the 5 pin XLR connector are shown in fig 1. Suitable microphones with the PTT function include Altronics C 0379 desk paging microphone or C 0334 CB type fist microphone. To use an unbalanced microphone, short pins 1 and 2 together on the microphone plug.

Remote Contacts

Provision has been made for four remote contacts on the back of the unit. These are all activated by closing the corresponding contact (connecting the terminals together). These contacts can only be triggered when the unit is in 'Auto' mode.

Alert contact: These contacts are for remote triggering of the alert tone ie: for use with Fire Indicator Boards, break glass alarms etc.

Evac Contacts: These contacts are for remote triggering of the evac tone in auto mode. Connecting these terminals together will activate the evac tone.

Cancel contact: These contacts are for remote cancelling of the alert, evac or bell tones.

The alert, evac and cancel remote contacts can be triggered with the Altronics A 2078A remote wall plate (see figure 3 - typical wiring diagram) or any closing contact.

Bell Chime Contacts: These contacts are for remote triggering of the bell chime sound. This bell chime can be used for signalling lunch breaks, start of classes, and

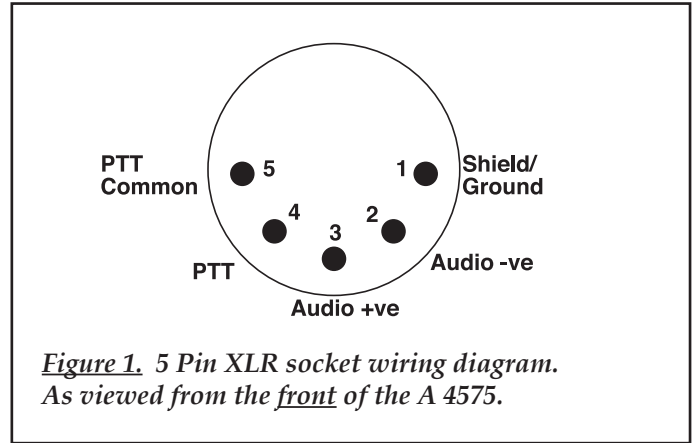


Figure 1. 5 Pin XLR socket wiring diagram. As viewed from the front of the A 4575.

can be triggered from a time clock or similar device. For details of this, see Installation instructions for the bell tone. Connecting these terminals will activate the bell.

Audio Connections:

Provision has been made for two different audio sources to be connected to the unit.

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.

Aux Input: This input is for connecting an auxiliary source to the controller where the source volume is controlled via the front panel volume control. 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.

24V Output Connections:

Switched 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

Auto Evac Timer	DIP Switch Settings			
	1	2	3	4
30 sec	ON	OFF	OFF	OFF
60 sec	OFF	ON	OFF	OFF
90 sec	ON	ON	OFF	OFF
120 sec	OFF	OFF	ON	OFF
150 sec	ON	OFF	ON	OFF
180 sec	OFF	ON	ON	OFF
210 sec	ON	ON	ON	OFF
240 sec	OFF	OFF	OFF	ON
270 sec	ON	OFF	OFF	ON
300 sec	OFF	ON	OFF	ON
330 sec	ON	ON	OFF	ON
360 sec	OFF	OFF	ON	ON
390 sec	ON	OFF	ON	ON
420 sec	OFF	ON	ON	ON
450 sec	ON	ON	ON	ON

Table 1.

DIP sw.	DIP switch 5 & 6 settings	
	OFF	ON
5	No mic pre announcement chime	Mic pre announcement chime active
6	voice-over off	voice-over on

Table 2.

DIP sw.	DIP switch 7 & 8 bell options	
	OFF	ON
7	Continuous operation	Momentary operation
8	Not used	Not used

Table 3.

REDBACK A 4575 Emergency Evacuation Controller

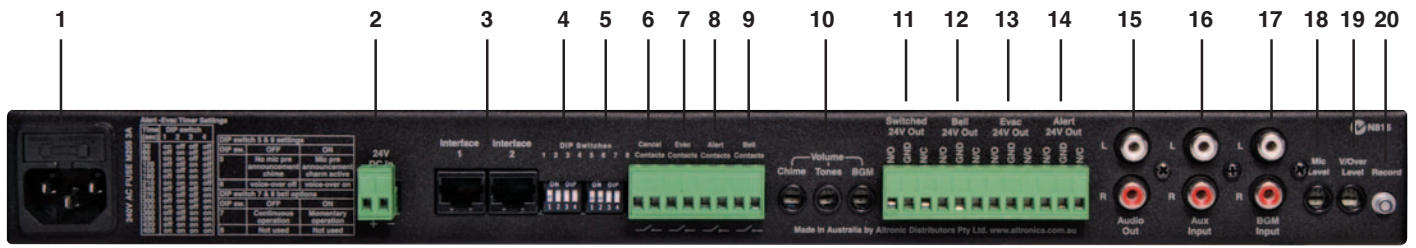


Figure 2. Rear panel

- | | | |
|-------------------------------|------------------------------|-------------------------|
| 1. 240V AC Input | 8. Alert contacts | 15. Audio RCA output |
| 2. 24VDC Input | 9. Bell contacts | 16. Auxiliary RCA input |
| 3. RJ45 Interface Connections | 10. Chime, tone & BGM levels | 17. BGM RCA input |
| 4. DIP switches 1-4 | 11. Switched 24V output | 18. Microphone level |
| 5. DIP switches 5-8 | 12. Bell 24V output | 19. Voice over level |
| 6. Cancel contacts | 13. Evac 24V output | 20. Record button |
| 7. Evac contacts | 14. Alert 24V output | |

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 switched 24V out contacts ie: 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 ie: 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.

DIP Switches:

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

Switches 1-4 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 table 1 for more information. Factory preset is 30s.

Switch 5 Pre-announcement Setting: DIP switch 5 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 6 Voice Over Setting: DIP switch 6 is used to configure the voice over message.

OFF: Voice over will not play during the evac cycle

ON: Voice over will play during the evac cycle.

Switch 7 Bell Setting:

DIP switch 7 sets the bell to either continuous or momentary mode. This is regardless of the bell being activated via the front bell switch or the rear bell contact.

In continuous operation the bell will sound for as long as the bell switch or rear contact is triggered.

In momentary operation the bell will sound for only a short period regardless of how long the bell is triggered.

OFF: Continuous operation

ON: Momentary operation

Switch 8 Not Used.

Record Button: This button is used to activate recording mode for voice over message.

INSTRUCTIONS FOR USE

Mains Power Switch. This switches mains power to the unit on and off. When switched to the off position, 24V DC connected to the unit's rear panel terminal will still power the unit.

LED Power Indicator. This LED will be lit when the unit is being powered by either 240V AC or 24V DC.

Key Switch. The unit features 3 modes of operation. These are **Auto**, **Manual** and **Isolate**, selectable via the keyswitch. The switch is keyed to a 003 standard key profile, and will allow removal of the key in the Auto position only.

Isolate Position: This isolates the unit so that the **Page 3**

REDBACK A 4575 Emergency Evacuation Controller

alert, evac and bell tones will not function.

Auto Position: In the auto position the unit will respond to the rear panel alert or evac contact inputs. The front panel alert, evac and cancel switches are inoperative in this mode. This is designed for interfacing to Fire Indicator Boards or "Break Glass" alarms, etc. If the alert tone is triggered the unit will sound for a preset time, and will change to the evacuation mode. This preset time is determined by the internal DIP switch settings (see Internal Settings). The evacuation tone will continue to sound until the panel has been reset.

Once the alert tone has been triggered, triggering the evac contact will automatically change the unit from alert to evac mode.

When the alert is triggered, the unit will sound the alert tone for a preset time, then the evac tone for four cycles, sound the voice over message twice, then sound the evac tone for four cycles, and continue in this evac/voice over sequence.

Note 1: The tone that is being sounded (ie alert, evac, bell) will be indicated by the illumination of the relevant front panel indicator.

Note 2: In the Auto position, all other functions will work, eg BGM, bell chime, and paging.

Note 3: To cancel a tone in Auto mode, either use the remote cancel contacts or the key switch switched to manual mode & the cancel button. Note the cancel button will need to be depressed for 2 seconds. This is to prevent accidental cancelling of a tone.

Manual Position: In the manual position any of the functions may be initiated from the front panel controls (ie alert, evac, bell chime, and cancel). This allows the operator to select any of the functions as required.

In this position the rear panel alert and evac contacts are inoperative.

Depressing the alert switch will activate the alert tone until it is reset. The alert tone is reset by depressing the cancel button. Note the cancel button will need to be depressed and held in for 2 seconds.

The alert tone can be changed to an evacuation tone simply by depressing the evac switch. Note the evac button will need to be depressed and held in for 2 seconds.

Where the unit has the voice over option activated, the evacuation tone will sound for four cycles, then play the voice over message twice, and repeat this sequence until it is cancelled.

Microphone Input: This microphone input can be used for either general or emergency paging. Paging overrides all other functions. A pre-announcement chime is available on the microphone input (refer Installation Instructions). Note that a push to talk microphone is required.

Background Music: BGM is automatically muted when any other function is operated.

Auxiliary Input: This is automatically muted when another function apart from BGM input is operated.

Rear Panel Volume Controls: Volumes are set as follows:

Tones: This sets the output level of the alert & evac tones.

Chime: This sets the output level of the chime.

V/over: This sets the output level of the message voice over.

BGM: This sets the output level of the background music source connected to the BGM input RCA sockets.

Mic.: This sets the paging output level. Set this control 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.

FUNCTION PRIORITY

The order of priority for the functions on the unit is as follows:

1. Paging
2. Evac Tone
3. Alert Tone
4. Bell Chime
5. BGM/AUX

RECORDING OF VOICE OVER MESSAGE

1. Connect a push to talk microphone to the front panel XLR input socket. Set keyswitch to "manual" (unit will not record in "auto" or "isolate" positions).
2. Push the "record" button on the back of the unit. The record LED on the front of the unit will illuminate to indicate it is ready to record.
3. Use the microphone PTT button to start recording your message. The message can be any length from 1 to 16 seconds. Recording will not begin until the PTT is activated.
4. Message recording will finish when the PTT microphone is de-activated. The recording message will then be played back.
5. To re-record the message simply follow steps 2 to 4 again.

NOTE: To cancel recording a message, switch the key switch to "isolate" or remove the power from the unit.

ACTIVATING THE VOICE OVER MESSAGE

Switch DIP switch 6 to "ON" to activate the recorded message to play during the evacuation tone.

TROUBLESHOOTING

Symptom	Solution
Low Level Recording	Ensure that a good quality mic is being used and the operator is speaking clearly into the mic.
Mic Volume Level is Low	Adjust Mic Volume
Alert/Evac Tone Levels are Low	Adjust Tone Volume
No power to unit from AC Mains.	Check fuse and replace with M205 type 500mA fuse if required. Check power to unit. If power is OK, and unit still fails to power up, refer to authorised servicing centre.
Front Volume control not functioning	Volume control functions on Aux. input only, check connections to rear of unit.

SPECIFICATIONS

OUTPUT LEVEL:.....0dBm
DISTORTION:.....0.01%
FREQ. RESP.:.....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

PLEASE NOTE: Maximum combined output load should not exceed 1Amp.

INPUT CONNECTORS:
Mic:.....5 pin XLR
Aux Input:.....RCA Stereo Socket
24V DC Power:Screw Terminals
240V AC Power:IEC Chassis Socket

Remote Alert, Evac, Bell, Cancel:.....Screw Terminals
MUTING:PTT Via Microphone Switch Contact

CONTROLS:
Mic Input:.....Rear Volume
BGM Input:Rear Volume
Alert, Evac, Chime Tones:Rear Volume
Voice over:.....Rear Volume
Auxiliary Input:.....Front Panel Volume
Power:On/Off Switch
Mode Selection:Keyswitch Keyed to 003 Standard
Alert Switch:Illuminated Push Switch
Evac Switch:.....Illuminated Push Switch
Bell / Chime Switch:.....Illuminated Push Switch
Cancel Switch:.....Push Switch

INDICATORS:.....Power on, Record LED
POWER SUPPLY:240V AC or 24V DC

DIMENSIONS:.....≈ 482W x 125D x 44H
WEIGHT: ≈ 2.2 kg
COLOUR:.....Black

* Specifications subject to change without notice.

REDBACK A 4575 Emergency Evacuation Controller

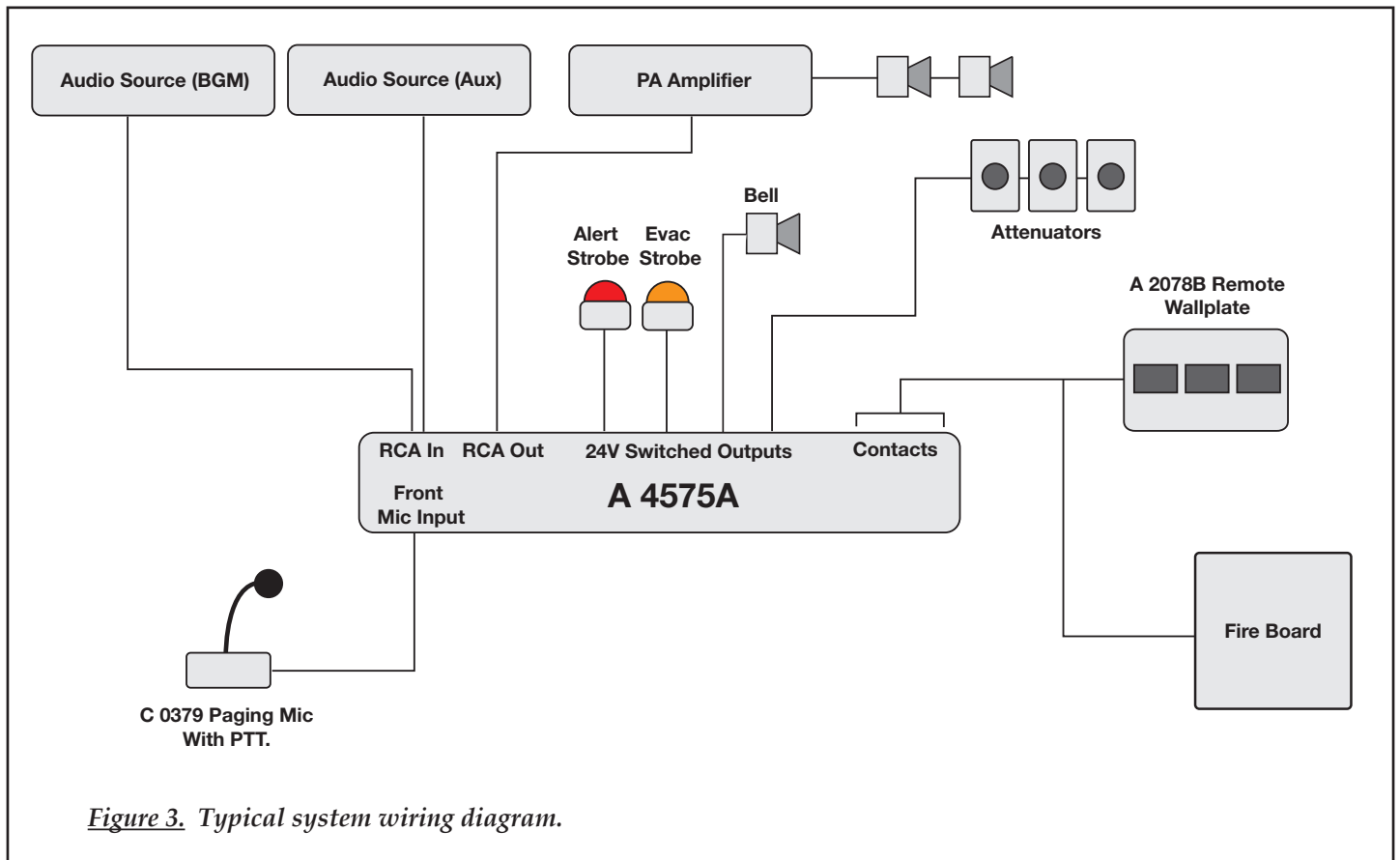


Figure 3. Typical system wiring diagram.

ACCESSORIES



A 2078A Remote Control Wall Plate

Allows the A 4575 unit to be controlled remotely. Featuring alert, evacuation and cancel buttons with protective "flip up" covers to prevent accidental operation.



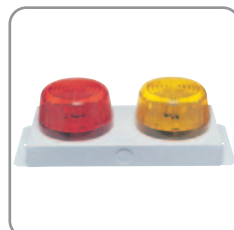
C 0379 Professional Desk Paging Microphones

This desk microphone has a tapered low frequency response for articulate speech reproduction and enhanced clarity. Fitted with a 2 metre lead and terminated with a 5 pin XLR which includes a PTT mute switching pair, featuring both momentary and lock-on positions.



C 0334 CB Type Fist Microphone

Low impedance, 500Ω, omni-directional, dynamic microphone with curly cord (including switch pair). Suitable for CBs, radio transceivers etc. Supplied complete with mounting clip. Tailored frequency response 300Hz - 6kHz. Fitted with a 5 pin XLR plug.



S 5423 DC Evac Strobe Light Pair

Dual red and amber strobe lights for emergency evac systems. Housed on a sturdy, white powder-coated steel chassis for easy bolt on installation. Conduit knockouts provided for cable entry. Terminal block enables 2, 3 or 4 wire operation. 19mm conduit entry.



Redback® 100V Vertical Line Attenuators

A 2245 (10W HPM® Excel), A 2246 (10W Clipsal® 2000)
A 2255 (40W HPM® Excel), A 2256 (40W Clipsal® 2000)

Designed to control 100V line speaker systems these attenuators are fitted to industry standard wall plates and install into an electrical wall box. They feature 11 position switches for fine adjustment of sound level. All circuitry is housed on a PCB with screw terminals for easy installation. They include override relay for emergency paging applications & a 22μF bipolar capacitor for

REDBACK A 4575 Emergency Evacuation Controller

