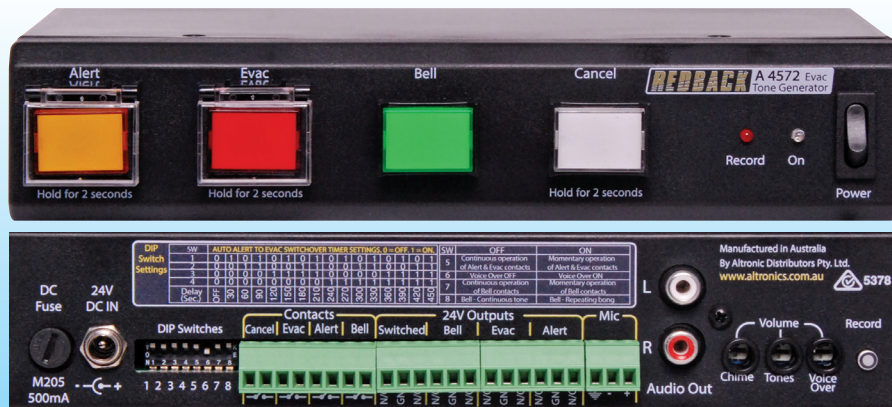# REDBACK ®

A 4572 Emergency Evacuation Controller

Operating Instructions

-This half rack unit has both Alert and Evacuation tones based on Australian standard AS1670.4. The unit is triggered via standard alert/evac switches on the front of the unit or via remote trigger contacts on the rear. It features a 24V switched output which is enabled when the Alert, Evac or Chime tones are triggered. It is powered from a 24V DC source and features a line out facility and Voice Over.

Features

- Level controls for alert/evac, bell and voice over
- Front panel alert/evac/bell and cancel switches
- External contacts for alert, evac or bell by switching to ground
- All tones crystal locked
- Emergency tones can be configured for momentary or continuous operation
- 1U half rack cabinet
- Tones conform to AS 1670.4
- Compatible with fire indicator boards & break glass alarms
- Remote operation of alert , evac, bell tones & cancel.
- Local operation of alert, evac and bell
- Evac voice over message on board
- Bell chime facility
- Switched 24V DC out for override relays on volume controls
- Switched 24V DC out for strobe operation for alert mode.
- Switched 24V DC out for strobe operation for evac mode.
- Switched 24VDC out for bell mode.
- On-board timer for remote alert activation adjustable from 30secs to 7.5min in 30 second increments. Switches from alert to evac after preset time.
- Auxiliary level output
- 10 year warranty
- Australian designed and manufactured

Proudly Assembled in Australia

Wiring Up The Unit

Power Connections

24VDC input is provided via 2.1mm DC jack.

Microphone Input

Microphone input is provided by 3 pin euro block connection.

Remote Contacts (Rear of unit)

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).

Alert contact: These contacts are for remote triggering of the alert tone ie: for use with Fire Indicator Boards, break glass alarms etc. These contacts can be set to either continuous or momentary operation via dip switch 5. (refer Table 2)

In continous mode the alert tone will continue while the alert contact is triggered.

In momentary mode the alert tone will continue to sound after a momentary trigger of the alert contact.

Evac Contacts: These contacts are for remote triggering of the evac tone. Connecting these terminals together will activate the evac tone. These contacts can be set to either continuous or momentary operation via dip switch 5. (refer Table 2)

In continous mode the evacuation tone will continue while the evac contact is triggered.

In momentary mode the evacuation tone will continue to sound after a momentary trigger of the evac contact.

Cancel contact: These contacts are for remote cancelling of the alert or evac 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 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 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 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:

Switches 1-4 Evacuation Timer Settings: These switches control the time period before the unit switches from the alert to the evac tone (rear contacts only). 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.

DIP Switch Settings				
Auto Evac Timer	DIP Switch 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 switch 5 & 6 settings		
DIP sw.	OFF	ON
5	Latched/Continuous operation of alert & evac on rear contacts	Momentary operation of alert & evac on rear contacts
6	Voice-over off	Voice-over on

Table 2.

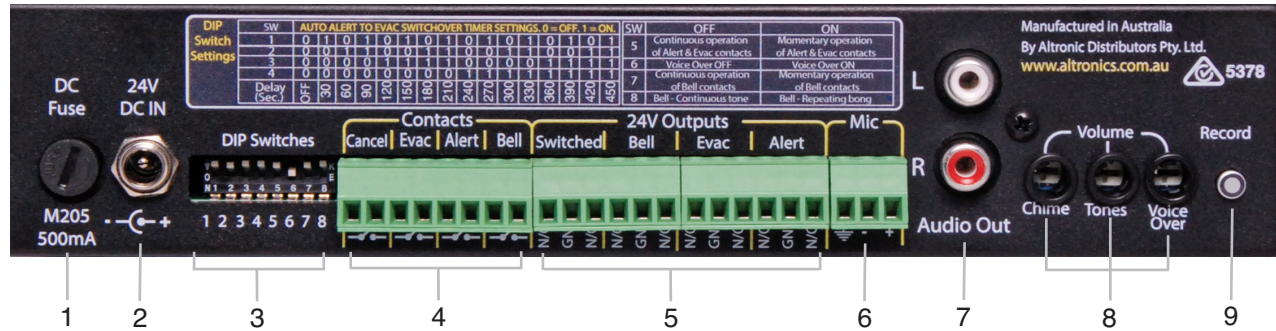| DIP switch 7 & 8 bell options		
DIP sw.	OFF	ON
7	Latched/Continuous operation	Momentary operation
8	Latched/Continuous tone	Repeating bong

Table 3.

Figure 2. Rear panel

1. DC Fuse
2. 24VDC Input
3. DIP Switches 1-8
4. Contacts Cancel/Evac/Alert/Bell
5. 24V Output Switched/Bell/Evac/Alert
6. Microphone Input
7. Audio Output
8. Volume Level Chime/Tones/Voiceover
9. Message Record Button

Switch 5: DIP switch 5 is used to set the 'Alert and Evac' contacts to momentary or alternate (See 'Remote Contacts' on page 2).

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: Latched/Continuous operation

ON: Momentary operation

Switch 8 Bell Output Setting: DIP switch 8 sets the bell output to either a continuous or repeating "bong" tone.

OFF: Single continuous tone

ON: Repeating "bong" tone

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

Instructions for Use

Mains Power Switch. This switches 24V DC power to the unit on and off.

LED Power Indicator. This LED will be lit when the unit is being powered.

Alert/Evac Tones: If the alert tone is triggered via the rear contacts and is set to continue the alert tone will sound for a preset time determined by DIP switches 1-4 (see Table 1). After this preset time the unit will automatically switch over to the evacuation tone. The unit will sound the evac tone for four cycles, sound the voice over message twice (if selected "on" via dip switch 6), then sound the evac tone for four cycles, and continue in this evac/voice over sequence until the tone is cancelled. The tone can be cancelled by triggering the cancel trigger on the rear of the unit or by pressing the cancel switch on the front of the unit.

Alert/Evac Switches (Front Panel):

The alert and Evac switches on the front of the unit both work in momentary mode. ie. The alert tone will continue to sound after the alert switch is momentarily pressed and the evac tone will continue to sound after the evac switch is momentarily pressed. **There is no automatic alert to evac switch-over option associated with the front panel switches.**

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: To cancel a tone either use the remote cancel contacts or the front cancel button. Note the cancel button will need to be depressed for 2 seconds. This is to prevent accidental cancelling of a tone.

Rear Panel Volume Controls:

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

Chime: This sets the output level of the bell.

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

Recording of Voice Over Message

1. Connect a microphone to the 3 pin euro block on the rear of the unit.

2. Hold down the record button on the rear of the unit. Recording will start when the button is pressed and held. Recording will continue until the button is released. The recorded message will play back when the record button is released.

3. To re-record the message simply follow repeat step 2.

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Figure 3. Typical system wiring diagram.
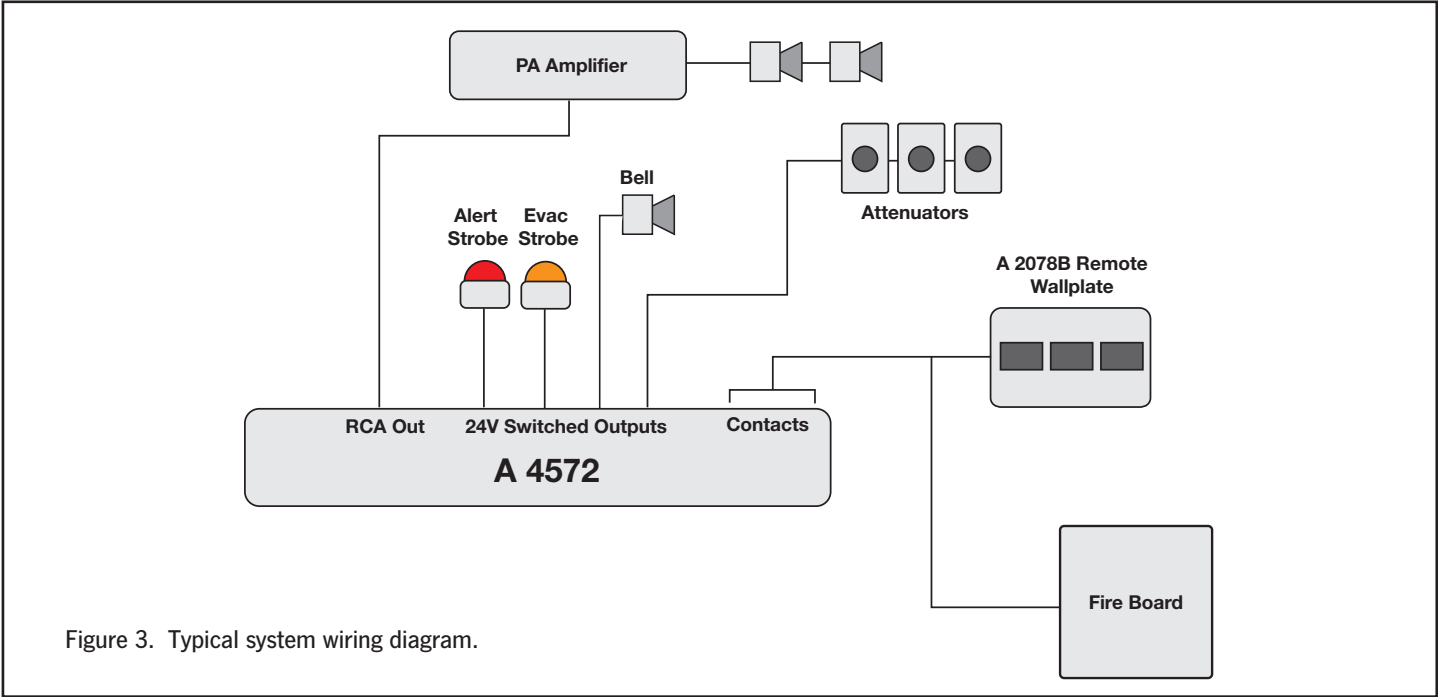
Troubleshooting

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.	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.

Specifications

OUTPUT LEVEL:...0dBm
DISTORTION:...0.01%
FREQ. RESP.:...140Hz - 20kHz
SIGNAL TO NOISE RATIO:
    Alert/Evac/Chime:..-70dB typically
INPUT SENSITIVITY:
    Mic: ....2mV Balanced
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: ....3 Pin Screw Terminals
    24V DC Power:...............................2.1mm DC jack
    Remote Alert, Evac, Bell, Cancel:.................Screw Terminals

CONTROLS:
    Mic Input:...............................Rear Volume
    Alert, Evac, Bell Tones: ....Rear Volume
    Voice over: ....Rear Volume
    Power:...............................On/Off Switch
    Alert Switch: ....Illuminated Push Switch
    Evac Switch: ....Illuminated Push Switch
    Bell Switch:......................Illuminated Push Switch
    Cancel Switch:...........................Push Switch
INDICATORS: ....Power on, Record LED
POWER SUPPLY:...............................24V DC
DIMENSIONS: ....≈ 210W x 145D x 44H
WEIGHT:.. ≈ 0.4 kg
COLOUR:...............................Black
* Specifications subject to change without notice.