

AARC-EVAC Indoor Standalone Wireless Linked Message Player & Message Player/Repeater Units

Installation & Operation Manual



Components Supplied

2 Speaker

1 x **ARX43E52**
Message Player Unit

OR

1 x **ARX43E52R** Message Player/
Repeater Unit

1 x 15 VDC Power Supply

2 x 15 Watt Speakers*

1 x AARC Antenna

3 Speaker

1 x **ARX43E53**
Message Player Unit

OR

1 x **ARX43E53R** Message Player/
Repeater Unit

1 x 15 VDC Power Supply

3 x 15 Watt Speakers*

1 x AARC Antenna

4 Speaker

1 x **ARX43E54**
Message Player Unit

OR

1 x **ARX43E54R** Message Player/
Repeater Unit

1 x 15 VDC Power Supply

4 x 15 Watt Speakers*

1 x AARC Antenna

*A combination of Horn and Box Speakers as required.

The AARC-EVAC Wireless Emergency and S.O.S. Assist Message Player is a standalone system incorporating a wireless receiver, message player, audio amplifier and UPS backup battery system. The Message Player/Repeater is the same as above plus incorporates a signal repeater.

A wireless radio linked signal from a system Alert Panel or a wireless Signal Repeater unit triggers standard emergency alert sirens, a lockdown message and up to 7 unique S.O.S. assistance zoned messages.

Audio outputs include standard emergency alert sirens including "Alert" and "Evacuation". "Evacuation" also includes user-defined "Voice Evacuation Instructions". Features unique user defined audio messages for "S.O.S." (Duress) assistance and if applicable a "Lockdown" message.

"Alert" activation outputs the Australian Standard alert tone (complying to AS1670.4). Units can be ordered with 2 options:

- 1) Alert will continue until cancelled.
- 2) Unit can be factory set to sound for between 1-255 seconds and if not cancelled before the set time, the unit will automatically trigger the Evacuation Alert.

"Evacuation" activation outputs the Australian Standard evacuation tone (complying to AS1670.4). To comply with Australian Standards for evacuation tones, a custom message

may be played after every third cycle providing evacuation instructions to occupants. Voice message could be something like "please evacuate the building by the closest exit and assemble at the designated assembly point".

If used, "Lockdown" activation outputs an audio custom message to suit your application, chimes, tones, music track or voice message or any combination thereof.

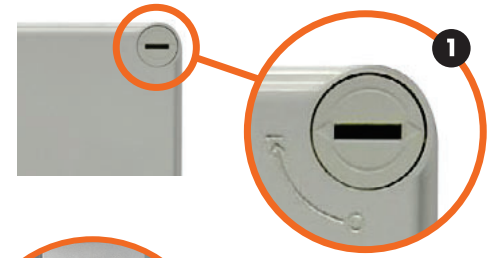
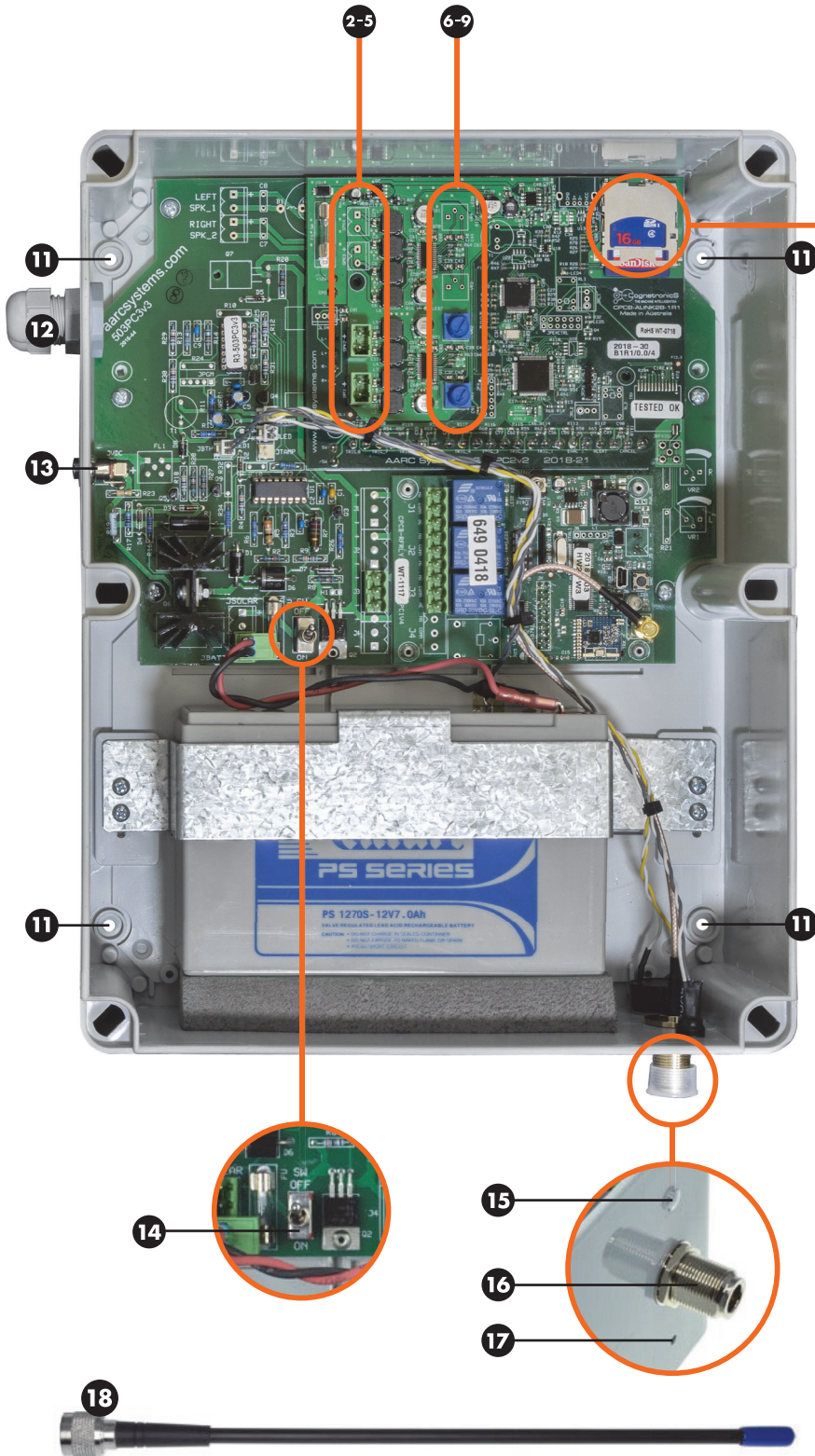
Up to 7 unique "S.O.S" zoned messages can also be triggered. (e.g. "[ding...dong] assistance to front desk" etc.)

Multiple Alert Panel transmitters can be used within the same "S.O.S." zones, if required. Multiple message message player units can be used within the same system to increase the coverage area. A wireless "Cancel" activation (hidden button located on transmitters with "Lockdown" function) will stop any of the alerts and reset the system.

Alternatively, Standalone Message Player units can also be used in conjunction with the rack mount PA System Message Player to augment the system or fill in areas not covered by the PA System. (Note: An adequately-sized UPS is always recommended to power the PA system in case of mains failure.)

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Installation Diagram



- 1 Plastic Screw Locks
- 2 Speaker Connection SPK1
- 3 Speaker Connection SPK2
- 4 Speaker Connection SPK3 (if applicable)
- 5 Speaker Connection SPK4 (if applicable)
- 6 Speaker Volume Control SPK1
- 7 Speaker Volume Control SPK2
- 8 Speaker Volume Control SPK3 (if applicable)
- 9 Speaker Volume Control SPK4 (if applicable)
- 10 SD Card (Pre-installed alert messages & MP3 files)
- 11 1 of 4 Wall Mounting holes, these are pre-drilled.
- 12 Cable gland entry for SPK1 - SPK4 Speakers
- 13 Power Supply input
- 14 On/Off Switch
- 15 LED Status Indicator
- 16 Antenna Connection or pre-installed antenna ('N' Type Socket)
- 17 Alarm Buzzer (sounds if battery requires servicing)
- 18 AARC-EVAC TXANT443N Antenna

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Installation Instructions

1. Removing Front Cover

Using a flat bladed screwdriver unlock 6 plastic screws **1** by turning anti clockwise quarter of a turn from "1" to "0" as indicated on front cover embossed around individual screws. Front cover can then be removed, a special retaining screw in bottom corner of cabinet will prevent lid from completely detaching itself off the unit so lid can now be left loose at bottom of unit.

2. Fixing to the wall

Using the paper template supplied, mark and drill suitable mounting holes and use appropriate fixings to screw unit to wall through holes designated. **11**

3. Connecting to Power Supply

Plug on end of Power Pack Lead should be pushed into Socket on left hand side, there is slight pressure felt as plug moves to home position. Socket is toward top of case **13**, locking ring should be turned to screw onto socket and this should be turned until it meets plastic case. Do not overtighten.

4. Attaching the antenna

Plug in the AARC-EVAC Antenna supplied and screw on antenna ferrule until firm. Do not overtighten.

Note: In larger systems, a 3.6m or 5.0m cable and antenna mounting bracket can be supplied so that the position of the antenna can be optimised to improve signal strength & radio range. Available as accessories TXANT443S-N-3.6 (3.6m) or TXANT433S-N-5.0 (5.0m).

5. Fitting the external speakers

External speakers are connected through Cable Glands in Top Left of Cabinet **12**, the two wires in each speaker cable are to be screwed into removable two-way terminal blocks in top left of Printed Circuit Board **2 3 4 5** indicated with "SPK1" through "SPK4" screw cables into screw terminal block. It is very important to keep speakers in phase by connecting common (-) and Hot (+) wires respectively to their correct terminals. Once done insert back into PCB. Ensure glands are then tightened around incoming wires.

6. Turning the unit on

a) 2x AAA Alkaline batteries should be fitted into the Alert Panel unit/s. After fitting batteries Red Light should be off, if a button is

pushed on the Alert Panel the Red Light will come on and stay on while button is pushed.

Note: When batteries are no longer serviceable/flat the light will flash when button is pressed. AAA Lithium batteries MUST NOT BE USED – ONLY USE ALKALINE BATTERIES.

- b) SD Card can be removed to re-program the unique messages when required.
- c) Make sure an SD Card with the appropriate messages is plugged into holder on message player.
- d) Turn on the AC mains Switch to Plug Pack Power Supply, the Power Switch **14** on PCB can now be turned ON.

Note: The guide on Page 4 indicates state of the AC Mains Supply and UPS Condition by colour of LED on bottom of enclosure and what the different states mean. With AC Power connected and Power Switch **14** ON, the LED colour should be Constant Green.
- e) With Volume set to 1/4, turn on each speaker volume control (**6 7 8 9**). The Alert Panel unit(s) can now be checked for correct operation, push EVAC Button and hold for 3 seconds, EVAC message should sound, then push the "Hidden CANCEL" button and hold for 3 seconds. Message player will now have been reset. Check all transmitters for basic operation.
- f) Speaker Volume **6 7 8 9** may now be adjusted, again push "EVAC" button on Alert Panel, this time adjust respective Volume Control clockwise for up or anti-clockwise for Volume down until desired volume is coming from each speaker.

Note: The guide on Page 4 provides more details of setting sound levels for each speaker.

7. Replacing the lid

At this point the lid may be replaced and screwed back on to the unit.

Specifications

Digital Data Radio Receiver	11 unique data channels (secure system has over 4 billion unique data codes)
Audio File Format	MP3 Digital Audio Files
Audio Data Storage Device	SD Card
Audio Output	ARX43E52 & ARX43E52R: 2 x 10W RMS into 8Ω ARX43E53 & ARX43E53R: 3 x 10W RMS into 8Ω ARX43E54 & ARX43E54R: 4 x 10W RMS into 8Ω
Internal UPS Battery Backup	7Ah 12V Battery
Power Supply	15V DC 2A Plug Pack with 5.5mm x 2.1mm DC Plug
Dimensions	325mm (H) x 250mm (W) x 132mm (D)
Antenna	320mm (L) with 'N' Type plug

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Maintenance

The UPS Battery condition should be checked regularly for correct operation. This can be done by observing the battery condition indicator on the bottom of the unit (see below for details).

This procedure should be added to your company or organisation's maintenance schedule.

AC Power & UPS Battery Condition Indicator

The LED light in the clear lens at the bottom of the box will indicate the condition of the UPS battery/AC power supply to the unit.

-  **Constant Green**
Battery Voltage good, AC Power Supply connected, system running.
-  **Green Slow Flash**
Battery Voltage good, AC Power Supply off line system running on UPS.
-  **Green Rapid Flash**
Power supply connected, unit internal power switch (14) is in the off position (system switched off).
-  **Red Constant**
AC Power connected Battery charging Condition, system off, whilst Battery Low.
-  **Red Rapid Flash**
Battery test failed but battery serviceable, AC Power Supply offline, System running on UPS.
-  **Red Flash once every 15s, Buzzer sounds every 60s**
Battery voltage low, AC Power Supply offline, system off.
-  **Green Constant with Brief Red Flash and Buzzer every 4s**
AC Power Supply connected, system running, UPS Battery Voltage Low, not serviceable and battery replacement required.

Replacement Battery: 7Ah 12V Sealed Lead Acid (SLA) Battery

Guide to Setting Sound Levels

Precheck the normal background noise level (the Base noise level) in each area to be covered by the AARC-EVAC system. This should be done using a standard Sound Pressure Level (SPL) meter. This will display an SPL in dB. Record the SPL for each area on a floor plan.

In setting the audio level for each speaker the goal is to have an alarm audio level at minimum 3dB higher than the Base noise level.

1. Go to the furthest point away from the speaker or the highest noise level (as previously mentioned and recorded) within the area to be covered by that speaker.
2. Activate the Evac and measure the sound pressure level at that point.
3. Adjust the respective volume control (6, 7, 8, or 9) whilst monitoring the audio SPL so that the Alarm SPL is set 3dB above the Base noise level.
4. Check the SPL within the coverage area, in particular closer to the speaker. The maximum SPL within the area should be no more than 6dB above the Base noise level.
5. If the alarm SPL is higher than 6dB above the Base noise level, try increasing the height of the speaker to take it further away from the working height of a person standing within that space. If this is not practical or the SPL is still greater than 6dB above the Base noise level then the speaker needs to be moved closer to the noise source so as to achieve the 3dB–6dB SPL alarm level goal range. The other alternative is to change to an EVAC unit with more speakers or add an additional EVAC unit so that the sound can be better distributed.