

1 Introduction

1.1 Notice

- The material and instructions covered in this document have been carefully checked for accuracy and are presumed to be correct. However, the manufacturer assumes no responsibility for inaccuracies and reserves the right to modify and revise this document without notice.
- These instructions cover the installation of the Active (ZXR5B-UL) and Passive (ZXR4B-UL) Remote Annunciators. Refer to the Fire Alarm Control Panel Manuals for instructions on powering up, operating and programming the system.

1.2 Warnings and Cautions



These instructions contain procedures to follow in order to avoid injury and damage to equipment. It is assumed that the user of this document is a suitably trained installer who is familiar with the relevant regulations.



Electro-static Sensitive Devices.

Take suitable ESD precautions when removing or installing printed circuit boards.

1.3 UL / National Approvals



This equipment must be installed in accordance with NFPA72 and the appropriate national, regional and local regulations applicable. Consult with the appropriate Authority Having Jurisdiction (AHJ) for confirmation of the requirements. Failure to follow these instructions may result in the failure of the system to initiate an alarm. MORLEY-IAS is not responsible for incorrect installation, maintenance or testing of devices.

2 Description

- The Remote Annunciator provides an extension to the operation of the Fire Alarm Control Panel (FACP). Both types of annunciator show (repeat) the operational state of the FACP using the 2x40 LCD and the LED indicators.
- The ZXR4B Passive Annunciator will only show (repeat) the operational state of the FACP.
- The ZXR5B Active Annunciator will show (repeat) the operational state of the FACP and can also control the FACP using the FIRE DRILL, ALARM SILENCE, TROUBLE SILENCE and RESET functions.
- The Annunciators are connected to the FACP via the Peripheral Bus RS485 data link. The FACP supervises the ZXR5B Active Annunciator. A System Trouble will be indicated, at the FACP, if communications is lost with the Annunciator.
- The ZXR4B and ZXR5B Annunciators are compatible with the ZXa and ZXe Fire Alarm Control Panels.

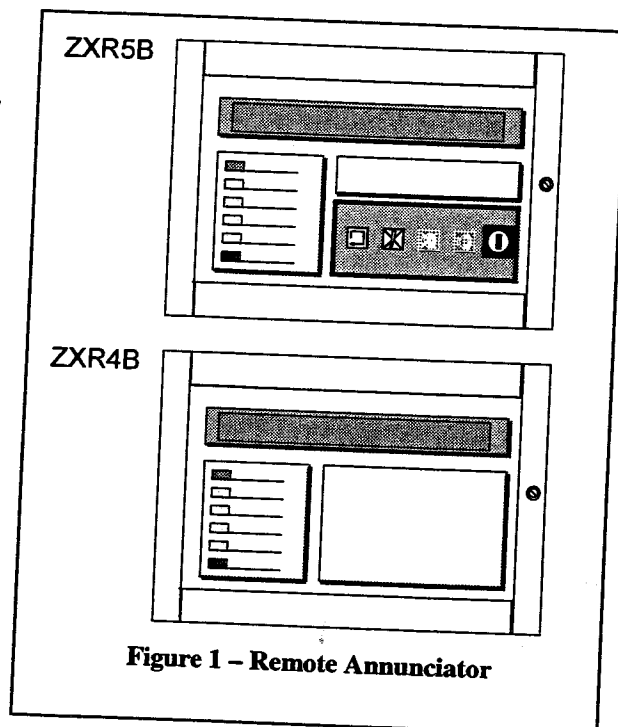


Figure 1 – Remote Annunciator

- The main board is equipped with four LED status indicators to provide diagnosis information on the operational status of the annunciator.
- The following table details the operation of these LED indicators.

Indicator	Colour	Function
LED 1 (top right)	Green	Turns ON when DC Supply present
LED 2 (top left)	Green	Flashes when the CPU is running
LED 3 (bottom left)	Yellow	Flashes when data is received from the FACP
LED 4 (bottom right)	Red	Flashes when the annunciator replies to the FACP. (Applicable to ZXR5B only).

Table 1 – Main Board LED Functions

3 Installation Guide

- The installation process consists of 6 steps, as follows:
 1. Open the enclosure
 2. Mount the enclosure to the wall
 3. Install and connect the installation wiring
 4. Set the address of the unit (ZXR5B only)
 5. Close the enclosure
 6. Perform an 'Auto Learn' at the FACP

3.1 Identification of Parts

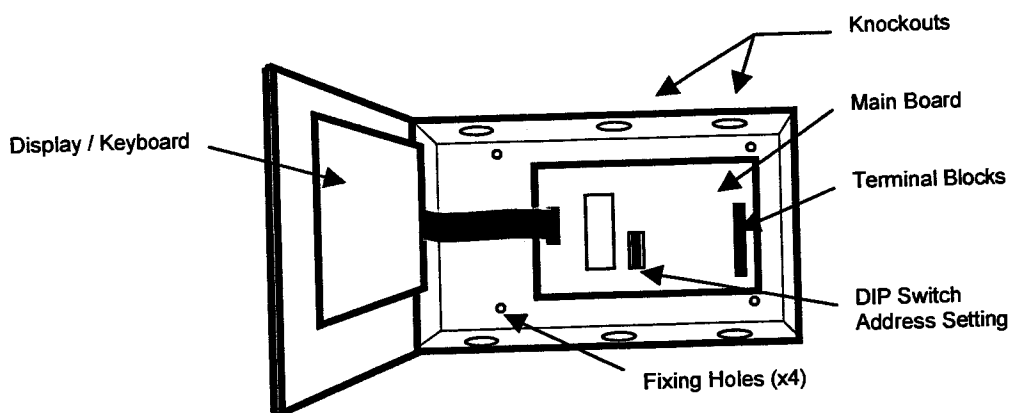


Figure 2 - ZXR4B / ZXR5B Internal Arrangement

3.2 Mounting the Enclosure

- Open the enclosure by unscrewing the fixing screw at the right hand side of the front panel.



DO NOT open the front panel by more than 90 degrees. Failure to observe this requirement may result in damage to the hinges holding the front panel to the enclosure.

- Remove the necessary knockouts for the installation wiring.
- Mount the enclosure to the wall using appropriate fixing hardware. The enclosure is provided with four fixing holes.
- Install the external wiring into the enclosure using the appropriate glands / conduit fittings. Sufficient knockouts are provided at both the top and bottom of the enclosure. If you punch other holes, be sure that they do not interfere with any component mounting positions.



Cables must be megger tested before connections are made to the terminal blocks in the Annunciator and in the FACP.

3.3 Installation Wiring

- Installation wiring will be required for both the RS485 Communications link and for the DC Power Supply to the Annunciator.
- For suitable cables, refer to the FACP Installation Manuals. The use of screened cables for both the communications and power supply wiring is recommended. The Annunciator must be connected to a suitable earth point through the power supply cable.

3.3.1 RS485 Communications

- The ZXR4B and ZXR5B Annunciators are connected to the RS485 Interface Module located in Port 'D' of the FACP.
- The wiring is of the Class 'A' – Style 4 type. Refer to the FACP Installation Manual for further details. If the Annunciator is the last unit on the loop, connect a 150 Ω (0.5W minimum) EOL Resistor (P/N 170-073-151) as shown below.

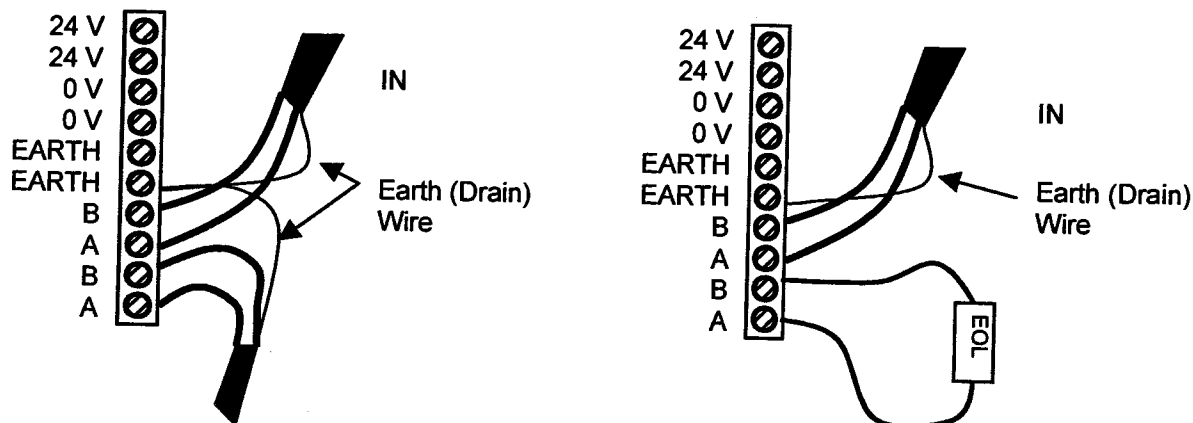


Figure 3 - RS485 Wiring Connections

- Connect signal 'A' on the Annunciator to signal 'A' on the FACP or other unit. Connect signal 'B' on the Annunciator to signal 'B' on the FACP or other unit.

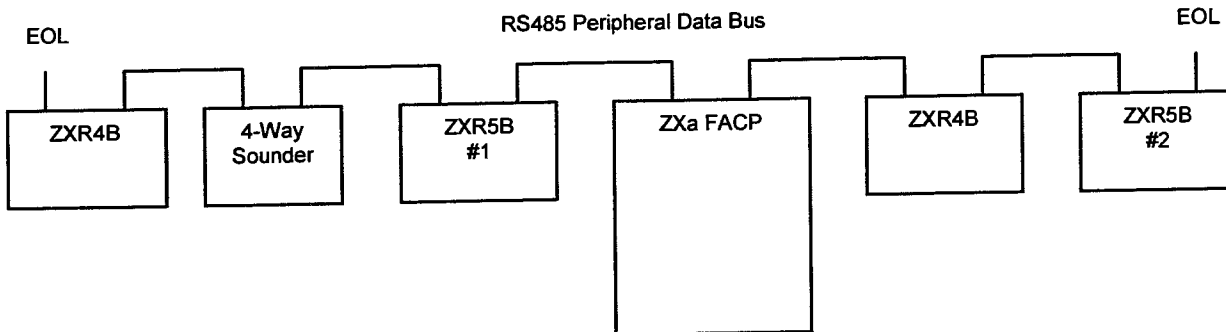


Figure 4 - Typical RS485 Peripheral Bus Arrangement

3.4 DC Power Supply

- The ZXR4B and ZXR5B must be supplied with DC Power from an approved and compatible regulated 24-Volt DC Power Supply, listed for Fire Protection use.
- A suitable power source is the AUX power supply output of the ZXa or ZXe FACP. Ensure that the total loading of the AUX output does not exceed the maximum output rating or the battery standby conditions. Refer to the relevant FACP Installation Manual.
- The DC Power Supply can be daisy chained on to the next unit on the loop. Refer to the diagram opposite.
- Ensure that the correct size of cable is used to maintain the required DC Supply Voltage at the furthest unit.

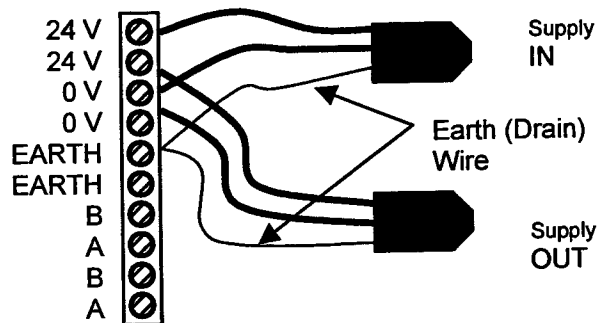


Figure 5 - DC Power Supply Wiring Connections



Take care not to inadvertently connect the 'A' & 'B' RS485 terminals to the DC Power Supply.

Otherwise, damage may occur to the RS485 input of the Annunciator and / or to RS485 Interface Circuit in the FACP or other unit.

3.5 ZXR5B Address Setting

- Set the DIL address switch to any unused peripheral address in the range 1 to 126. Then perform an "auto learn" of peripherals from the panel.
- If there are several ZXR5B Annunciators installed, ensure that each one is given a different address.
- The following table shows the DIL Switch settings for sample addresses. The address is set using a binary coding.

ADDRESS	SWITCH POSITION								
	SW1:1	SW1:2	SW1:3	SW1:4	SW1:5	SW1:6	SW1:7	SW1:8	
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	<div>OFF ON</div> <div><div><div><div></div><div></div></div><div>1</div></div><div><div><div></div><div></div></div><div>2</div></div><div><div><div></div><div></div></div><div>3</div></div><div><div><div></div><div></div></div><div>4</div></div><div><div><div></div><div></div></div><div>5</div></div><div><div><div></div><div></div></div><div>6</div></div><div><div><div></div><div></div></div><div>7</div></div><div><div><div></div><div></div></div><div>8</div></div></div>
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	
Etc.									
126	OFF	ON	ON	ON	ON	ON	ON	OFF	

Table 2 - Address Switch Settings

- The ZXR4B Annunciator does not have a DIL Address Switch fitted. The ZXR4B address is fixed at address 0, equivalent to all switches set in the OFF position. It is not required to perform an 'Auto-Learn' of peripherals when connecting ZXR4B units only.

4 Operation and Controls







- The ZXR4B and ZXR5B Annunciators are equipped with a backlit 2x40 Liquid Crystal Display and LED Indicators to show the status of the FACP and the installation.
- In addition, the ZXR5B is equipped with a key operated switch and four control keys.
- The operation of the Annunciator is as follows:

4.1 Liquid Crystal Display

- The operation of the liquid crystal display is identical to the display on the FACP.
- Under normal conditions it will simply show the time and date, together with a message to show that the detectors are working normally.
- If any fault or fire alarm conditions occur, these will be displayed on the display. If several faults or fires have occurred, then these will be scrolled on the display.
- Refer to the FACP Manuals for information on the messages that are displayed.

4.2 LED Indicators

- The LED indicators (except DC Power) will be illuminated under control of the FACP.
- The LED Indicators are a sub-set of the indicators on the FACP. The following table indicates the function of each LED indicator. Refer to the FACP Manuals for further information on the function and operation of each LED indicator and on the operation of the system.

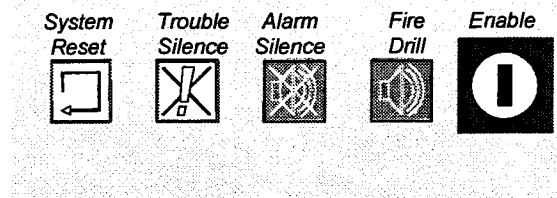
	DC Power
	System Trouble
	Trouble Silenced
	Sounders Silenced
	Point Bypassed
	ALARM

Indicator	Colour	Function
ALARM	Red	The panel has detected a fire alarm condition, or the 'Fire Drill' key has been pressed.
System Trouble	Yellow	The panel has detected a trouble.
Trouble Silenced	Yellow	A trouble has been acknowledged and the internal buzzer silenced. <i>[After pressing the Trouble Silence key at either the FACP or the Annunciator].</i>
Point Bypassed	Yellow	Part of the system, either input or an output, has been disabled.
Sounders Silenced	Yellow	The sounder (NAC) outputs have been silenced. <i>[After pressing the Alarm Silence key at either the FACP or the Annunciator].</i>
Power	Green	ON: Indicates DC Power is present.

Table 3 - LED Functions

4.3 Control Keys

- The ZXR5B Annunciator is equipped with four control keys for FIRE DRILL, ALARM SILENCE, TROUBLE SILENCE and SYSTEM RESET.
- To enable the control keys, insert the key and turn the lock (anticlockwise) to the 'Enable' position.
- Press and hold the key down for two seconds.
- The operation of these keys is identical to the four control keys on the FACP and is detailed in the following table.



Key Legend	Function
Fire Drill	Press to Turn on ALL Sounder Outputs (i.e. evacuate building manually).
Alarm Silence	Press to Turn off all activated sounders. Press again to re-activate the sounders.
Trouble Silence	Press to acknowledge events and silence the internal buzzer. This also silences the internal buzzers of the FACP and any other Annunciators connected to the panel.
System Reset	Press to cancel all alarm conditions and reset the panel.

Table 4 – Control Key Functions



It is recommended that the control keys are not left in the active state.
Turn the key (clockwise) and remove from the Annunciator.

5 Specifications

Criteria	Details
Dimensions	225mm x 156mm x 51mm
Weight	750g
Operating Temperature	0°C - 49°C
Relative Humidity	85% (non condensing)
Power Supply Voltage	21.5 – 25.5 V DC (+10%,-15%)
Power Supply Current (Typical)	125 mA
Panel Software Compatibility (Version)	672-U0

Table 5 - ZXR4B / ZXR5B Specifications