ZT 37 -250
PREMIER AL Local Panel Repeater Application, Installation and Commissioning Manual For the PREMIER AL

Contents

1.0 Introduction

The A1575 Premier AL Repeater (**REP AL**) range of repeaters is designed for use with the Premier AL Panel. Three versions are available for each panel: -

1) The Basic LCD display Repeater with user controls (Please refer to the section on user controls for a full specification). It is powered from the panel and comes in a smaller cabinet size as shown in the Cabinet Specifications.

2) The repeater complete with power supply, in the smaller enclosure as above.

3) The repeater complete with zone LEDs and space for optional printer. This unit is housed in the larger cabinet detailed in the Cabinet Specifications.

The display with the data cable terminations is fitted to the removable door. The power supply option is fitted to a detachable chassis, thus facilitating a completely empty enclosure for first fix installation. Top entry plastic grommets, bottom/rear entry plastic grommets (for mains) and rear entry knockouts are designed to assist with cable installation.

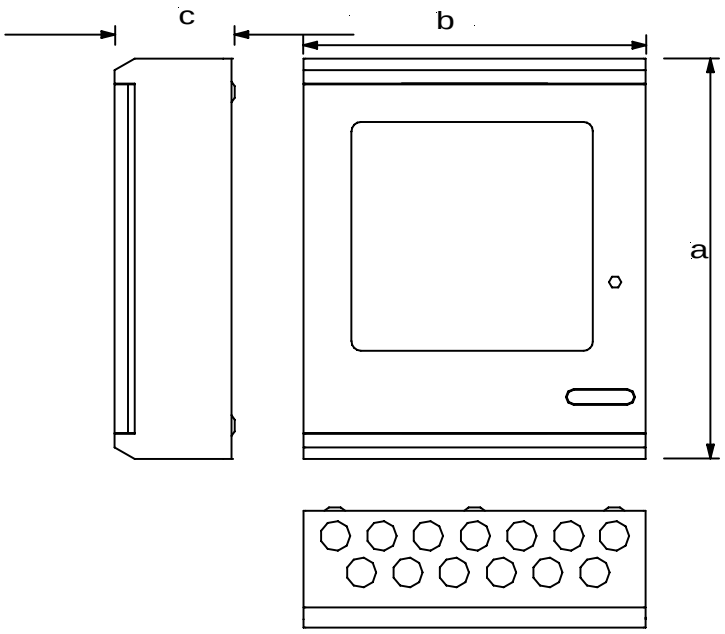
The repeater has a 4 line x 20 character backlit LCD display, showing device address, zone, type, status and location text. The user controls are accessed by means of keyswitch enabled membrane controls.

Up to 14 repeater panels can be connected to the RS 485 repeater terminals. The basic repeater can be powered either from the panel's auxiliary supply (See Battery and Loop calculator for maximum values) or from a local power supply.

Only One Repeater can be powered from the Premier AL Aux Power Rail. (28v 0v). Any additional Repeater will need a separate power source, unless a power supply is fitted in the Unit.

2.0 Cabinet Specifications

The repeater panels are available with surface, semi flush or fully flush enclosures to match the PREMIER AL panels. The section of this manual shows the two panel cabinet options.

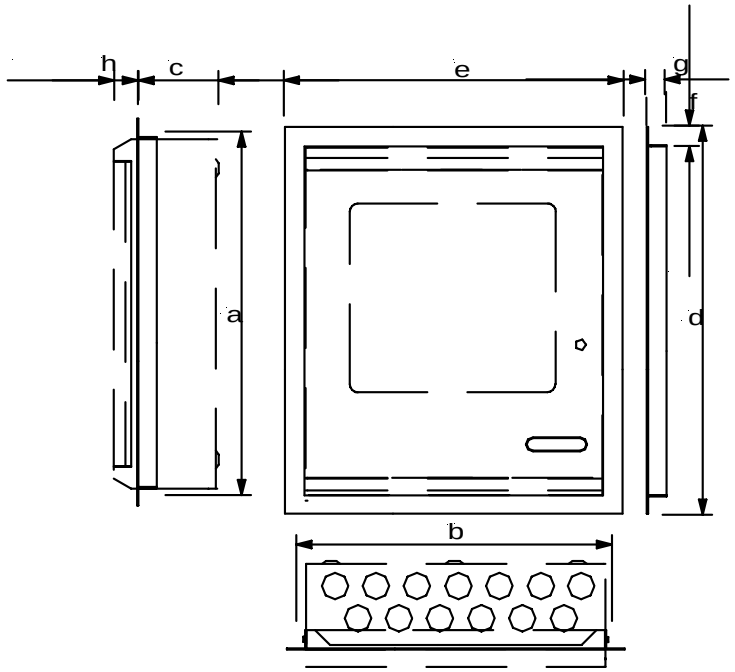


	Dimensions
Protection Plugs	13 off
a	370mm
b	325mm
c	106mm

2.1 Repeater Panel Order Codes & Descriptions

Part No	Description
2500/830	Premier AL LCD repeater panel powered from main panel. Size - 370h x 325w x 100d
2500/842	Premier AL repeater c/w 1A psu). Size 370h x 325w x 100d
2500/844	Premier AL LCD repeater with zone LEDs c/w 1A psu and space for printer. Size – 480h x 410w x 140d

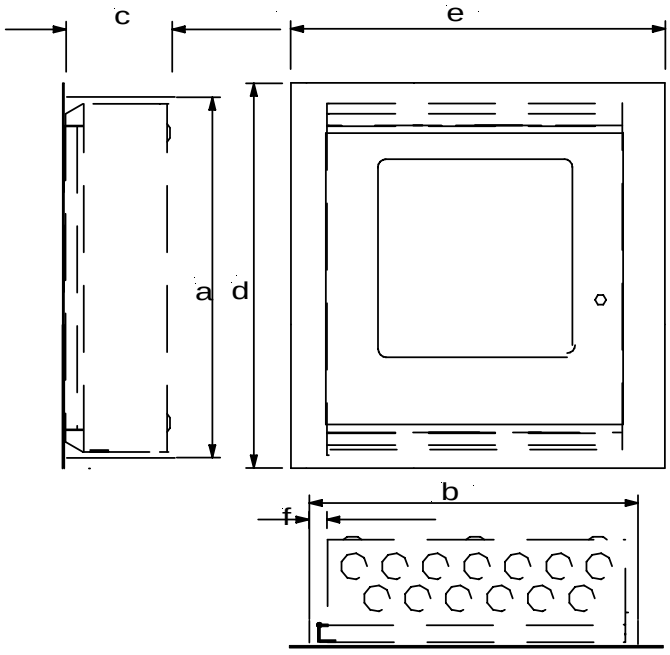
2.2 Small Repeater Semi-Flush Bezel



		Dimensions
Hole height	***a***	375mm
Hole width	***b***	330mm
Hole depth	***c***	76mm
Max bezel height	***d***	435mm
Max bezel width	***e***	388mm
Bezel overlap	***f***	30mm
Bezel depth	***g***	30mm
Door protrusion	***h***	30mm

Part No	Description
2501/121	Semi-flush bezel to fit A1575 Small Repeater
2501/124	Semi-flush bezel to fit A1575 large Repeater

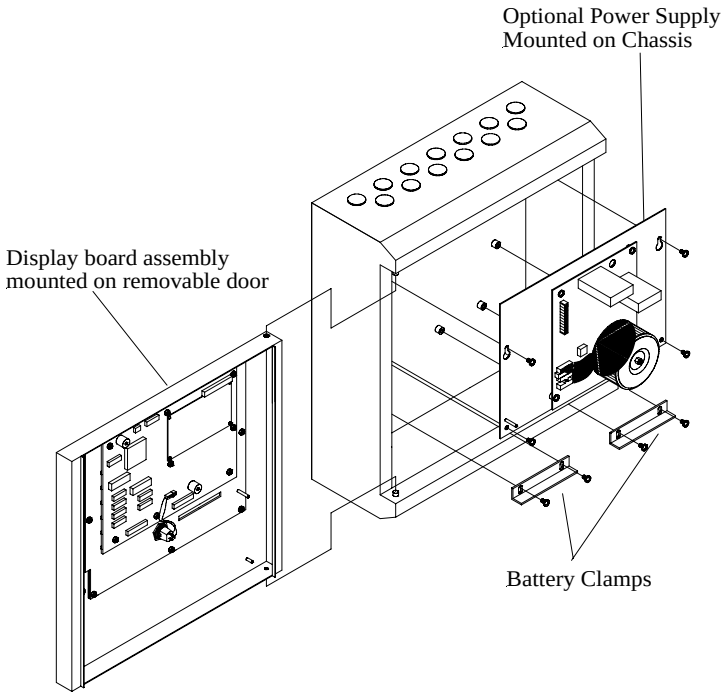
2.3 Small Repeater Fully Flush Bezels

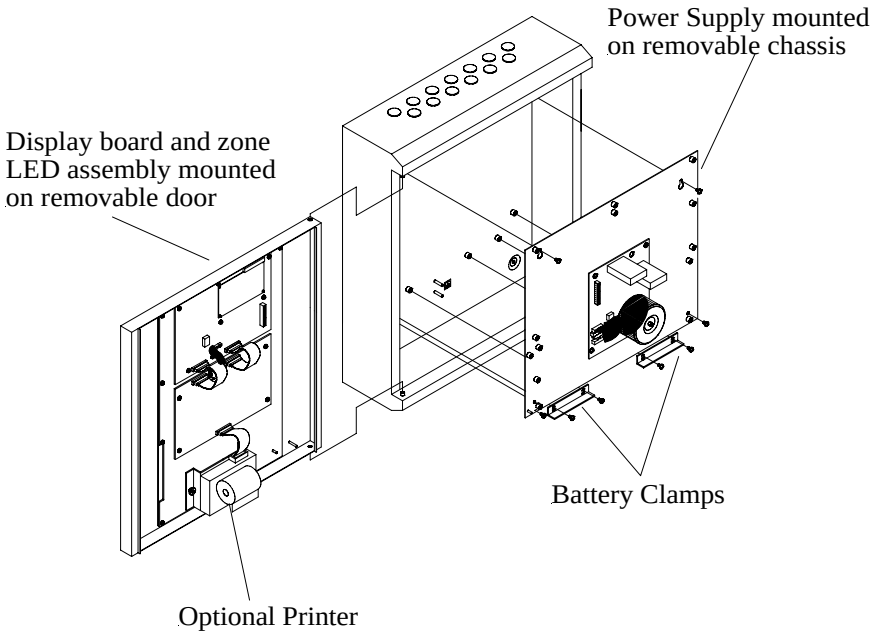


		Dimensions
Hole height	***a***	375mm
Hole width	***b***	345mm
Hole depth	***c***	106mm
Bezel height	***d***	411mm
Bezel width	***e***	423mm
Hinge protrusion	***f***	20mm

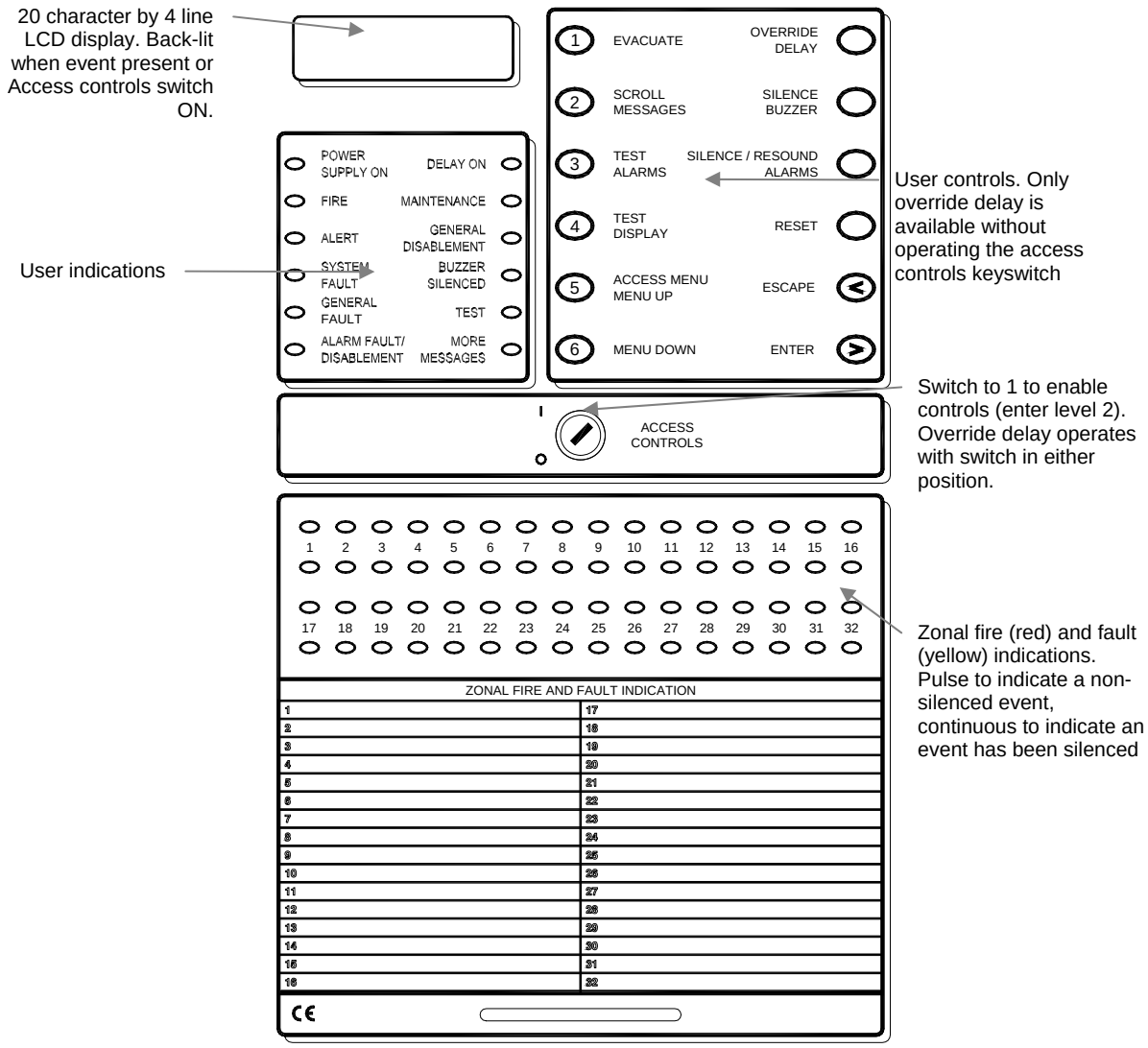
Part No	Description
2501/127	Fully-flush painted bezel for A1575 small repeater panel (painted to customer's specification)
2501/128	Fully-flush stainless steel bezel for A1575 small repeater panel (brushed or polished)
2501/129	Fully-flush brass bezel for A1575 small repeater panel (brushed or polished)
2501/153	Fully-flush painted bezel for A1575 large repeater panel (painted to customer's specification)
2501/154	Fully-flush stainless steel bezel for A1575 large repeater panel (brushed or polished)
2501/155	Fully-flush brass bezel for A1575 large repeater panel (brushed or polished)

3.0 Hardware Specifications

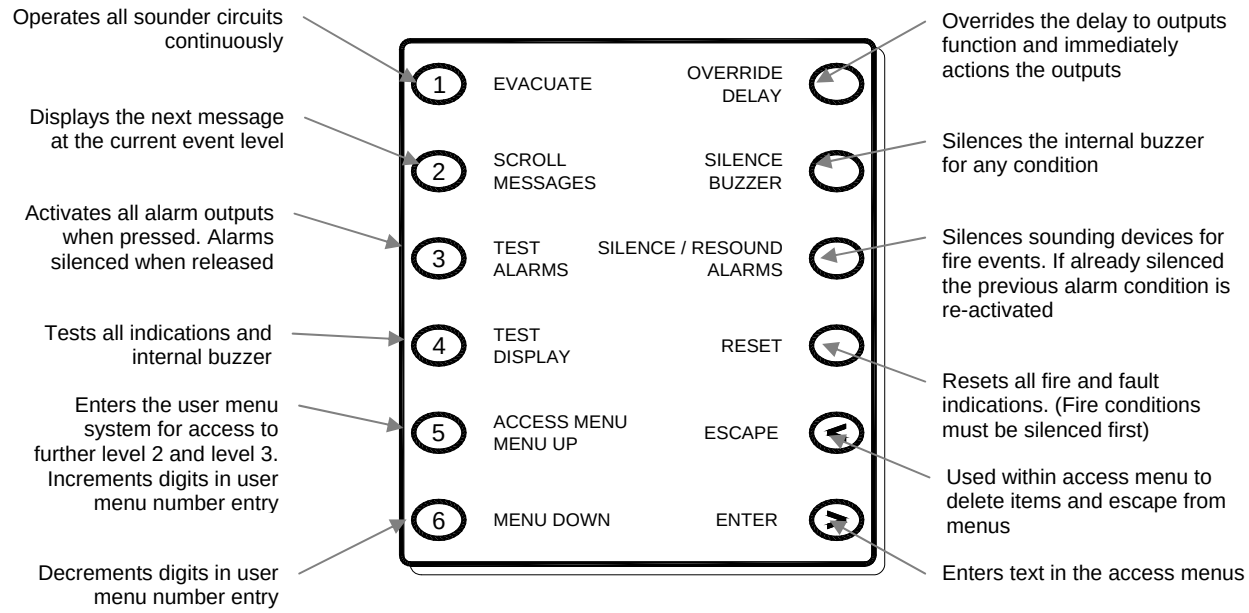


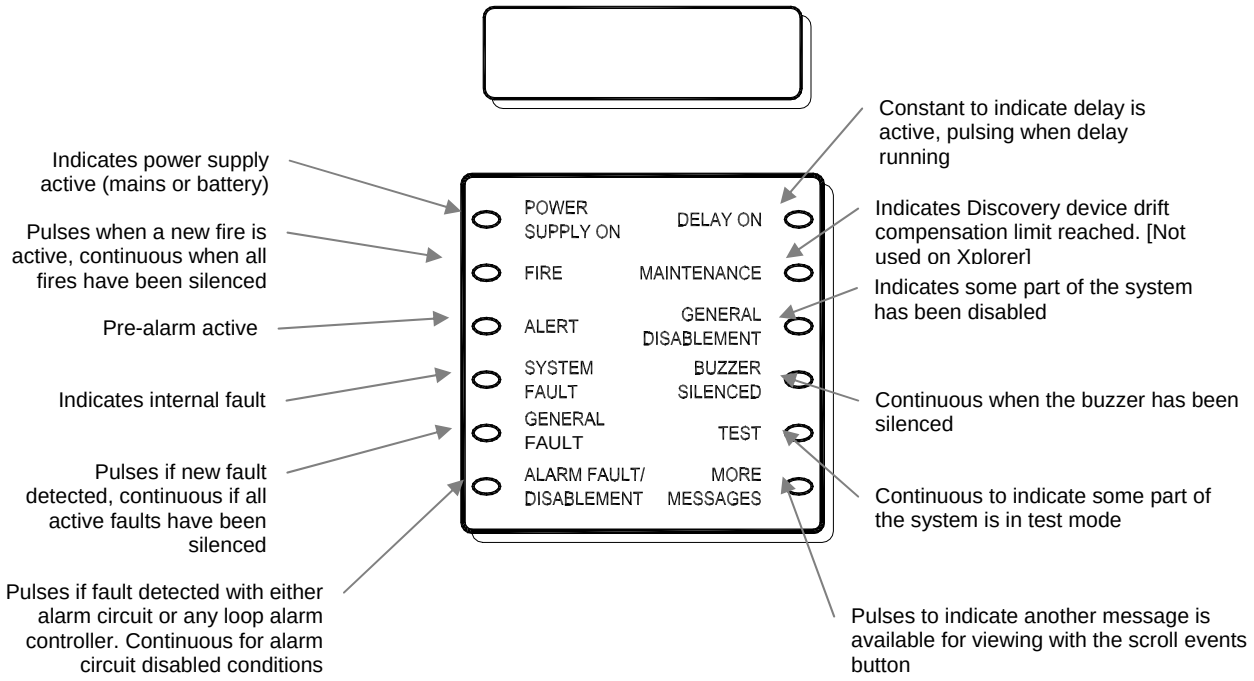


3.1 User Controls & Indications (General Overview)

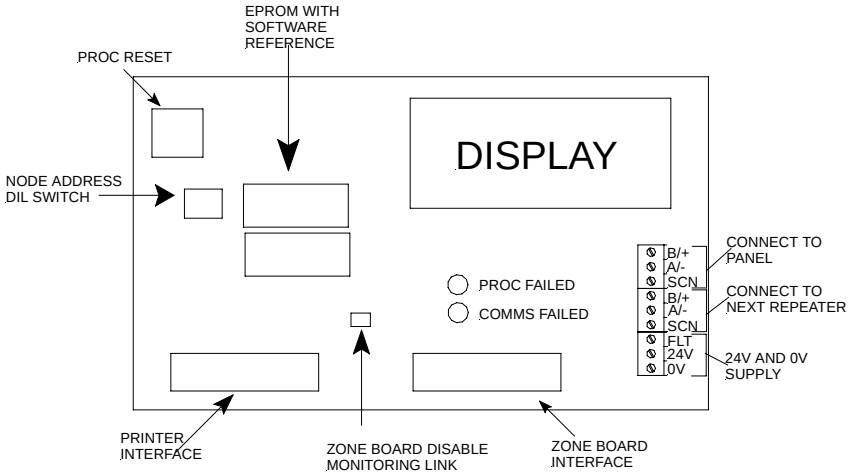


3.1.1 User Controls and Indications in Detail





3.2 Printed Circuit Board Viewed from Inside the Cabinet



4.0 Cabinet Installation

WARNING: ***Please read this section completely before commencing installation.***

Prior to commencing installation of the control panel, ensure that adequate precautions are taken against static damage to the sensitive electronic components on the control board. You should discharge any static electricity you may have accumulated by touching a convenient earthed object, e.g. an unpainted copper radiator pipe. You should repeat the process at regular intervals during the installation process, especially if you are required to walk over carpets.

The panel must be powered down before removing or replacing any card or module. Failure to observe this may cause damage to the loop cards and the motherboard.

When changing any plug-in cards or printers, observe anti-static precautions. Ensure that all power is removed from the system. Failure to do so may result in damage to the cards or panel.

The panel must be located in a clean, dry position which is not subject to shock or vibration and at least 2 metres away from pager systems or any other radio transmitting equipment. The maximum temperature range is 0ºC - 40ºC; maximum humidity is 95%.

This equipment may contain dangerous voltages. To prevent electric shock to unqualified personnel ensure that the door is locked at all times when the panel is left unattended. Do not leave the key to open the panel door with unqualified personnel. There are no user-serviceable parts inside.

IMPORTANT NOTES ON BATTERIES:

DANGER: Batteries are electrically live at all times, take great care never to short circuit the battery terminals.

WARNING: Batteries are often heavy, take great care when lifting and transporting batteries. For weights above 24 kilos, lifting aids should be used.

WARNING: Do not attempt to remove battery lid or tamper with the battery internal workings. Electrolyte is a highly corrosive substance, and presents significant danger to yourself and to anything else it touches. In case of accidental skin or eye contact, flush the affected area with plenty of clean, fresh water and seek immediate medical attention.

VRLA batteries are "low maintenance" requiring no electrolyte top-up or measurement of specific gravity.

WARNING: If required, clean the case with a cloth that has been soaked or dampened with distilled water. Do not use organic solvents (such as petrol, paint thinner, benzene or mineral spirits) and other materials can substantially weaken the case.

WARNING: Avoid operating temperatures outside the range of -15℃/5℉ to +50°C/122°F for float/standby applications.

DANGER: Do not incinerate batteries. If placed in a fire, the batteries may rupture, with the potential to release hazardous gases and electrolyte. VRLA batteries contain substances harmful to the environment. Exhausted batteries must be recycled. Return them to the battery manufacturer or take them to your Council tip for appropriate disposal.

The versions of this repeater panel fitted with a power supply requires a 230V AC supply. All installation work should be carried out in accordance with the recommendations of BS5839 Part 1 and the current edition of the IEE regulations by suitably qualified and trained personnel.

The panel must be earthed.

Locate the panel keys and the Installation Kit containing installation spares as follows:

1 set of battery leads (positive, negative and a jumper lead)
3k9 resistors
1A spare fuse for 24V Aux Supply
1.5A spare battery fuse

Open the display door with the key provided. Carefully remove the repeater panel interior by releasing the cables to the display (where fitted) and unscrewing the door pin located in the bottom fold of the door. On the repeater panel version fitted with a power supply, remove the top two chassis screws (located top left and right and removing the lower two screws (located bottom left and right) on the chassis plate.

NOTE*: The chassis screws are bright chrome finish.*

Fix the empty enclosure to the wall using the fixing hole(s) in the upper section of the enclosure. Complete the fixing operation using the remaining fixing holes in the enclosure.

Gland installation wiring into the enclosure using the cable entry points provided. Leave plugs in any unused cable entry holes.

Replace and fix the repeater panel door and chassis. Reconnect any internal earth wires.

5.0 Display Address Setting

Each repeater is given an individual address to enable the main panel to monitor its presence on the system. It is necessary to set the repeater address number at each repeater panel by means of the node address DIL switch and also to set the number of displays on the main panel via the engineers set up menu (Please refer to the relevant panel manual to set the number of displays).

The table in Appendix iii shows the setting options for the node address DIL switch.

6.0 Commissioning Procedure

1. If a power supply unit is fitted then gland a 230 VAC mains supply into the enclosure and attach the cables to the mains terminal block. DO NOT SWITCH THE MAINS POWER ON AT THIS TIME.

2. Set the node address DIL switch on the A1575 board to the required display number as shown in Appendix iii. Each repeater must be addressed sequentially without gaps in the numbering system.

3. Connect the cables from the B/+ and A/- terminals on the main fire alarm panel to the B/+ and A/- terminals respectively on the A1575 board. Connect the data screens to the SCN terminal adjacent to the A/- terminal.

4. Connect the d.c. power supply cables to the 0V and 24V terminals on the A1575 board. The d.c. supply may be provided by the main fire alarm panel or by a local power supply unit if fitted.

   NOTE*: If the D.C. supply is derived from the main fire alarm panel then ensure that the panel is switched off before connecting any cables.*

5. If a local power supply unit is fitted then check that the FLT terminal on the power supply unit is connected to the FLT terminal on the A1575 board.

6. If the D.C. power is derived from the main fire alarm panel then ensure that the drain wires of the incoming cables have been connected to an Earth point at the fire alarm panel.

7. If a printer and/or zone board is fitted then check that the ribbon cables are correctly connected. If the zone board is fitted then ensure that the link at LK1 on the back of the A1575 board is removed. If this link is fitted then the zone A1575 display board will not monitor the zone board for ribbon disconnection.

8. Switch the main fire alarm panel on.

9. If the A1575 derives its power from a local power supply then connect the batteries to the local power supply unit and switch the a.c. mains on.

10. At the main fire alarm panel access the engineer menu with the highest access code and select NUMBER OF DISPLAYS as described in the panel's installation manual. Set the number of displays to the required value. When this has been done exit the menu mode completely.

11. At the A1575 repeater the display may be showing a COMMS FAILED indication. Press CLEAR DISPLAY on the repeater. The display should clear and show only the time and fire alarm panel name. The same should be displayed at the main fire alarm panel.

12. Press and hold the TEST DISPLAY button on the repeater. Check that all the LEDs on the repeater illuminate, the LCD backlight illuminates, the LCD shows all the pixels as black, the buzzer sounds and the zonal LEDs illuminate if fitted. Release the button to return the display to normal.

13. If a local power supply is fitted then disconnect the negative battery lead at the repeater and check that the repeater displays a local power supply fault. Press the SILENCE BUZZER button to silence the fault buzzer. Re-connect the battery lead and press CLEAR DISPLAY to return the display to normal.

14. Press and hold the TEST ALARMS button on the repeater and check that all the alarm circuits operate. Release the button and check that all the alarm circuits switch off.

15. Remove the data cable from the A/- terminal on the repeater. Check that the repeater shows a COMMS FAILED indication and the main fire alarm panel shows a DISPLAY OFF-LINE message (the display number will depend on the switch setting of the repeater). Note: The fault indications could take up to 60 seconds to appear.

16. Re-connect the cable to the A/- terminal on the repeater. Press CLEAR DISPLAY and check that the system returns to normal.

If you are installing more than one A1575 repeater then each repeater should be installed and commissioned individually.

Appendices

i Technical Specifications

A1575 Premier AL Stand Alone Repeater mains failed current consumption @ 25 V DC.

Repeater status	**Powered from panel auxiliary supply**	**Powered from local 1A p.s.u. batteries**
Mains failed battery current	40mA	105mA
Alarm condition battery current	75mA	140mA
Maximum battery current	80mA	145mA
With zone board		
Mains failed battery current with zone board	40mA	105mA
Alarm condition battery current with one board	80mA	145mA
Maximum battery current with zone board	180mA	245mA
With printer		
Mains failed battery current with printer	45mA	110mA
Alarm condition battery current with one board	80mA	145mA
Maximum battery current with printer	420mA	485mA
With printer and zone board		
Mains failed battery with zone board and printer	45mA	110mA
Alarm condition battery current with one board	85mA	150mA
Maximum battery current with zone board and printer	560mA	625mA

ii Other Relevant Documentation

Premier AL / Premier AL Global Network Repeater Panel Installation , Commissioning and Maintenance Manual.

iii Repeater Node DIL Switch Settings

Decimal Value	S13 – 1 Bit 0	S13 – 2 Bit 1	S13 – 3 Bit 2	S13 – 4 Bit 3	PREMIER AL Assignment
0	OFF	OFF	OFF	OFF	Not used
1	ON	OFF	OFF	OFF	Repeater 1
2	OFF	ON	OFF	OFF	Repeater 2
3	ON	ON	OFF	OFF	Repeater 3
4	OFF	OFF	ON	OFF	Repeater 4
5	ON	OFF	ON	OFF	Repeater 5
6	OFF	ON	ON	OFF	Repeater 6
7	ON	ON	ON	OFF	Repeater 7
8	OFF	OFF	OFF	ON	Repeater 8
9	ON	OFF	OFF	ON	Repeater 9
10	OFF	ON	OFF	ON	Repeater 10
11	ON	ON	OFF	ON	Repeater 11
12	OFF	OFF	ON	ON	Repeater 12
13	ON	OFF	ON	ON	Repeater 13
14	OFF	ON	ON	ON	Repeater 14
15	ON	ON	ON	ON	Not used for Repeaters