simplicity Plus

ONE OR TWO LOOP ANALOGUE ADDRESSABLE FIRE ALARM CONTROL PANEL

INSTALLATION MANUAL

Zeta® ALARMS LIMITED

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1. SAFETY INFORMATION

WARNING: Read this section completely before commencing installation.

1.1 INSTALLATION INFORMATION

THIS FIRE ALARM CONTROL PANEL IS CLASS 1 EQUIPMENT AND MUST BE EARTHED.
This equipment must be installed and maintained by a qualified and technically experienced person.
This C.I.E. must be wired to a fused spur rated at 3A. It must NOT be connected via a removable plug, or be connected through an RCD device.
Prior to commencing installation of the control panel, ensure that adequate precautions are taken to prevent damage to the sensitive electronic components on the display board and the control board due to electrostatic discharge. You should discharge any static electricity you may have accumulated by touching a convenient earthed object such as 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 located in a clean, dry position, which is not subject to excessive shock or vibration and at least 2 metres away from pager systems or any other radio transmitting equipment. The operating temperature range is 0ºC to 40ºC; maximum humidity is 95%.
HANDLING THE PCBS
If the PCBs are to be removed to ease fitting the enclosure and cables, care must be taken to avoid damage by static.
The best method is to wear an earth strap, but touching any earth point (e.g. building plumbing) will help to discharge any static. Always handle PCBs by their sides and avoid touching the legs of any components. Keep the PCBs away from damp dirty areas, e.g. in a small cardboard box.

1.2 SAFETY PRECAUTIONS DURING NORMAL OPERATION OF PANEL

NOTE: When the Simplicity Plus panel is operating normally, i.e. not being tended by service personnel, the access door must be closed and locked. After locking, the key MUST be removed and ONLY held by the responsible person and / or the service personnel. It must under NO CIRCUMSTANCES be held by the user.

1.3 BATTERY INFORMATION

This C.I.E. uses 2 x 12V Sealed Lead Acid (SLA) batteries up to 12Ah.
CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO BATTERY MANUFACTURERS INSTRUCTIONS.
IMPORTANT NOTES ON BATTERIES:
DANGER: Batteries are electrically live at all times. **NEVER 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.
DANGER: Do NOT attempt to remove the battery lid or tamper with the internal workings of the battery. 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. Valve Regulated Lead Acid (VRLA) batteries are “low maintenance”, requiring no electrolyte top-up or measurement of specific gravity.

1.4 PRODUCT DISPOSAL AT THE END OF ITS WORKING LIFE

Like all electronic equipment, at the end of its working life this unit should not be disposed of in a refuse bin. It should be taken to a local reprocessing site as per the guidelines of the WEEE directive, for correct disposal.

2. PRODUCT DESIGN INFORMATION

2.1 FIRE ALARM CONTROL SECTION

The Simplicity Plus Fire Alarm Control and Indicating Equipment (CIE) Has been designed to EN54-2:1998 A1 + A2 - Fire Detection & Fire Alarm Systems – Control & Indicating Equipment.
As well as meeting the requirements of EN54-2:1998 A1 + A2, the Simplicity Plus also has the following options with requirements:-

Clause 7.8 Output to fire alarm devices (Option with requirements)
Clause 7.12 Dependencies on more than one alarm signal (Option with requirements)
Clause 8.3 Fault signals from points (Option with requirements)
Clause 9.5 Disablement of addressable points (Option with requirements)
Clause 10 Test Condition (Option with requirements)

The Simplicity Plus also has the following ancillary functions not required by the Standard:-
Class Change Input to allow remote activation of sounders.
Serial repeater output (RS485).
Serial Output Port (RS232).

2.2 POWER SUPPLY SECTION

The Simplicity Plus Fire Alarm Panels Power Supply Equipment (PSE) Has been designed to EN54-4:1998 A1 + A2 - Fire Detection & Fire Alarm Systems – Power Supply Equipment.
The PSE has been designed to charge batteries up to 12 Ah within the time limits specified by EN54-4.
The PSE will draw a maximum of 25mA from the battery in the event of mains failure.
The PSE is a switching power supply, with a supply rating (IMAX) of 2.0 Amps.
The PSE has a 750mA limited charger output.

2.3 ENVIRONMENTAL

It will operate in ambient temperatures of –5 to 40ºC.
It will operate in a relative humidity of up to 95% (non condensing).
It will withstand vibrations between 5 & 150 Hz.
The CIE & PSE should be maintained as described in section 3 of the User Manual, Maintenance Guide & Log Book.

3. INTRODUCTION TO THE SIMPLICITY PANEL

3.1 SIMPLICITY PANEL HISTORY

This manual covers the 3rd revision of the simplicity panel. Here is a brief history of the different versions:-

VERSION 1

VERSION 2

VERSION 3

Version 1: Simplicity 64 & Simplicity 126
The original simplicities had basic operation & no event log. The 2 versions had different PCBs, so a 64 is not upgradeable to a 126 version

Version 2: Simplicity Plus – plastic box
This had the following enhancements:-
Real time clock
Event Log (2048 events)
Printer port (RS232)
Repeater port on CPU card
Improved fault messages
Improved call point identification (Panel now identifies a call point alarm immediately)
Improved sounder base starting & stopping time
Option to disable individual devices or whole zones
Detector LED & sounder can be operated from the menu to help identify devices
Panel software version can be viewed through menu.
The 64 could be upgraded to a 126 by changing the CPU card (The Old version Simplicity 126 could also be upgraded to a Simplicity Plus by replacing the CPU card).

Version 3 Simplicity plus – Metal box
Version 3 of the Simplicity panel's main change is that it is now available as a 2 loop version. The other changes are:-
Redesigned to fit a metal enclosure
Separate EN54-4 PSU
The CPU card is now integrated on the display PCB, so is no longer user upgradable.
User definable zones
Option for zonal or common alarm operation
Options for I/O operation
Alarm Verification
User selectable languages
Option for Fyreye Mk 2 protocol

With this latest version, the panel still offers the simplicity of the previous versions, but also allows user configurations to zones & outputs to make the panel more flexible. If you need a manual for an earlier simplicity, please contact your supplier.

3.2 PANEL DESCRIPTION & DESIGN CONCEPT

The Simplicity Plus is a one or two loop analogue addressable fire alarm control panel designed to EN54 part 2 & 4. It is available in three versions. Simplicity 64 allows 64 devices to be connected to one loop, and divided into 4 zones. Simplicity Plus 126 allows 126 devices to be connected to one loop, and divided into 8 zones. Simplicity Plus 252 allows 252 devices to be connected as 2 loops of 126 devices, and divided into 8 zones.
The Simplicity has been designed to only use addressable sounders (so that all devices sit on the same wiring loop). By default all sounders on a Simplicity panel will activate on any alarm.
It has been designed to give the advantages of an addressable system, with the simplicity of a conventional system. To help achieve this, the Simplicity Plus uses default values to cut out many of the programming steps normally associated with addressable panels. It also uses its LEDs as the primary source of zone event information. The screen information is supplementary, to help identify loop device alarm or fault locations, and to help in configuring the panel.

3.3 ADVANTAGES OF AN ADDRESSABLE FIRE ALARM SYSTEM

The table below lists the main advantages of addressable systems, and how our panels use them.

FEATURE	**PREMIER QUATRO**	**SIMPLICITY**
UNIQUE ALARM IDENTIFICATION	PANEL, LOOP & ADDRESS	LOOP & ADDRESS
DEVICE LABEL	20 CHARACTERS for device, PLUS 20 Characters for the ZONE	20 CHARACTERS
PREALARM	PRESET @ 45	PRESET @ 45
DETECTOR SENSITIVITY	PRESET @ 55	PRESET @ 55
ZONE ALLOCATION	PROGRAMMABLE	SET BY DEVICE ADDRESS
PROGRAMMING	FULL PROGRAMMABILITY	COMMON OR ZONAL OPERATION ONLY
EVENT LOG	YES (4096 EVENTS)	YES (2048 EVENTS)

While all options are programmable on our Premier AL system, the Simplicity uses pre-configured settings for most options.
Device sensitivity and pre-alarm levels are preset.
To simplify configuration, there is no zone allocation programming. Instead each loop is split into 8 zones, and each device is assigned to a zone by the address set with its 8 way dip switch. The Default setting is:-

PANEL	**ZONE 1**	**ZONE 2**	**ZONE 3**	**ZONE 4**	**ZONE 5**	**ZONE 6**	**ZONE 7**	**ZONE 8**
Simplicity Plus 64	Address 1 - 16	Address 17 - 32	Address 33 - 48	Address 49 - 64	N/A	N/A	N/A	N/A
Simplicity Plus 126	Address 1 - 16	Address 17 - 32	Address 33 - 48	Address 49 - 64	Address 65 - 80	Address 81 - 96	Address 97 - 112	Address 113 - 126
Simplicity Plus 252	Address 1:1 – 1:32	Address 1:33 – 1:64	Address 1:65 – 1:96	Address 1:97 – 1:126	Address 2:1 – 2:32	Address 2:33 – 2:64	Address 2:65 – 2:96	Address 2:97 – 2:126

On the Latest Revision of Simplicity Plus panel the zone boundaries can now be altered, to accommodate zones with larger or smaller device capacities. (See CHANGING A ZONE BOUNDARY in section 12.7)
The loop sounder operation is common by default. But can be altered to zonal operation if required (see CHANGING THE ALARM RESPONSE – SOUNDERS in section 12.8)
This leaves only the device label to be programmed by the installer. This is done with the built in keyboard.

4. USING THIS MANUAL

It is beyond the scope of this manual to teach the user all the intricacies of fire alarm system design. If in doubt about what is required, read BS 5839: Pt 1: 2013 “Fire Detection and Alarm Systems for buildings - Part 1: Code of Practice for Design, Installation, commissioning and maintenance of systems in non-domestic premises” available from the BSI, or at your local reference library. Other national regulations will also give similar guidance.
This manual explains, in a step-by-step manner, the procedure for the basic design and installation of the **Simplicity Plus** Range of Fire Alarm Control Panels.
It gives detailed instructions on how to use all the features on this fire alarm panel.
For operational and maintenance information, please refer to document GLT.MAN-108 (USER MANUAL, MAINTENANCE GUIDE & LOG BOOK). It also contains a System set-up table, and Installation Certificate, that must be completed by the Commissioning Engineer prior to system handover.
Unlike the User Manual, this Installation Manual must not be left accessible to the User.

4.1 EQUIPMENT GUARANTEE

If this equipment is not fitted and commissioned according to our guidelines, and the relevant National Standards, by an approved and competent person or organisation, the warranty may become void.

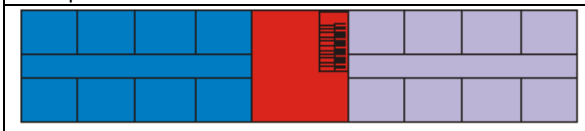
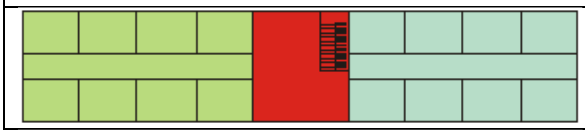
5. DESIGNING A SYSTEM

This manual is not designed to teach Fire Alarm System design. It is assumed that the System has been designed by a competent person, and that the installer has an understanding of Fire Alarm System components and their use.
We strongly recommend consultation with a suitably qualified, competent person regarding the design of the Fire Alarm System. The System must be commissioned and serviced in accordance with our instructions and the relevant National Standards. Contact the Fire Officer concerned with the property at an early stage in case he has any special requirements. If in doubt, read BS 5839: Pt 1: 2013 "Fire Detection and Alarm Systems for buildings - Part 1: Code of Practice for Design, Installation, commissioning and maintenance of systems in non-domestic premises" available from the BSI, or at your local reference library.

5.1 DESIGNING A SIMPLICITY SYSTEM

Designing a Simplicity Plus System is a fairly straightforward matter. It just takes a bit of thought to zone allocation during the system design stage. We believe that the default configuration of 16 devices per zone (for Simplicity Plus 64 & 126), and common alarm operation are suitable for most applications. Simplicity Plus 252 has the default configuration of 32 devices per zone, with 4 zones per loop, but these zone boundaries can be moved if so desired. The example (1) below is for a Simplicity Plus 126 panel.

Decide on the zone allocation for the system. Each default zone can have a maximum of 16 devices fitted. Consider the simplified 3-storey building below.

Floorplan	Floor	Zones and Default Addresses
	Second	Zone 6: Addresses 81 to 96 Zone 7: Addresses 97 to 112 Zone 1: Addresses 1 to 16
	First	Zone 4: Addresses 49 to 64 Zone 5: Addresses 65 to 80 Zone 1: Addresses 1 to 16
	Ground	Zone 2: Addresses 17 to 32 Zone 3: Addresses 33 to 48 Zone 1: Addresses 1 to 16

The advantage of this method of zone allocation is that it simplifies the panel set-up by eliminating a programming stage.
(Note that a Simplicity 64 can only have 4 zones, so would not be suitable for the above system)
The main disadvantage of this method of zone allocation is the maximum zone capacity of 16 devices. If a zone has more than 16 devices it would need to be split into smaller zones. Similarly, a zone with only one device would leave 15 empty addresses on that zone.

To overcome this limitation, the Simplicity Plus now allows the zone boundaries to be moved. (See CHANGING A ZONE BOUNDARY in section 12.7). NOTE: When changing the zone boundaries, consider if there are likely to be extra devices added to that zone before commissioning is complete, and whether it is worth allowing 2 or 3 empty addresses in a zone. Sounder operation. On the Simplicity Panels, the default setting is common sounders, i.e. an alarm signal from any device will activate all sounders. If zonal sounder operation is required the simplicity can now configure sounders to trigger zonally when an alarm comes from a detector, a call point, or both (see CHANGING THE ALARM RESPONSE – SOUNDERS in section 12.8).

If more sophisticated sounder & I/O operation is needed, ask your dealer about the Premier Quatro Fire Alarm Panels. Whenever possible, give each device as descriptive a label as possible. The better the description, the easier it is to locate in the event of an alarm. The panel allows 20 characters. It may be necessary to use abbreviations to achieve the required label.

Keep the design of the system, and any changes to it well documented. This makes it easier to trace any configuration errors during installation & commissioning

6. INSTALLING THE SYSTEM

6.1 CONSIDERATIONS BEFORE INSTALLATION

6.1.1 MOUNTING THE CONTROL PANEL

The control panel should be installed in accordance with the following recommendations:-
The panel should be close to the main entrance of the building, so that it can be viewed by any fire-fighting personnel entering the building.
It should be fitted to a sturdy wall that will not flex unnecessarily.
It should be mounted at eye level, in order for it to be viewed without need of a ladder.
It should be installed in a dry, weatherproof place, preferably NOT in direct sunlight.
It should be easily accessible, so that the responsible person can perform their regular fire alarm checks.

6.1.2 RECOMMENDED CABLE TYPES AND THEIR LIMITATIONS

All wiring must be installed to meet BS5839: Pt1: 2013 and BS 7671 (Wiring Regs) standards. Other National standards of fire alarm system installation should be adhered to where applicable.

Screened cables should be used throughout the installation to help shield the Panel from outside interference and ensure EMC compatibility.
The two categories of cable according to BS5839: Pt1: 2013, Clause 26 are:
Standard fire resisting cable – to PH30 classification of EN 50200
Enhanced fire resisting cable – to PH120 classification of EN 50200
(Note that all cables should be at least 1mm² cross section
On the Simplicity Panel the general recommendation would be to use standard fire resistant cable, such as Zeta Alarm Systems Fire Defence Cable, Firetuff™ , FP200 or any equivalent. These cables are screened, and will provide good EMC shielding when properly grounded at the panel. Certain system specifications may demand the use of a particular type of cable and due regard should be paid to this fact. For non-BS5839 installations, other cable types may be suitable. Depending on the environment, the cables may need mechanical protection (such as a conduit).

6.1.3 MAINS WIRING RECOMMENDATIONS

The Mains supply to the FACP is fixed wiring, using **Fire resisting** 3-core cable (Between 1 mm² and 2.5mm²) or a suitable 3-conductor system, fed from an isolating double pole switch fused spur, fused at 3A. **IT SHOULD NOT BE CONNECTED THROUGH AN RCD.** This should be secure from unauthorised operation and be marked 'FIRE ALARM: DO NOT SWITCH OFF'. The supply must be exclusive to the Fire Panel. **MAKE SURE ANY SPARE ENTRY HOLES ARE COVERED WITH THE GROMMETS PROVIDED.**
For information on how to connect Mains to the Panel's Power Supply PCB, see page 11.
Also refer to rating information on the mains cover inside the FACP.

6.2 FIRST FIX

6.2.1 MOUNTING THE FIRE ALARM PANEL

The Simplicity comes with many cable entry holes. If another entry hole is required, it is strongly recommended that the panels door be removed to avoid accidental damage. Also, the termination and Power Supply PCBs should be removed and stored in a safe place. This would also help while fixing the back box to the wall.

6.2.2 FIXING THE BACK BOX TO THE WALL

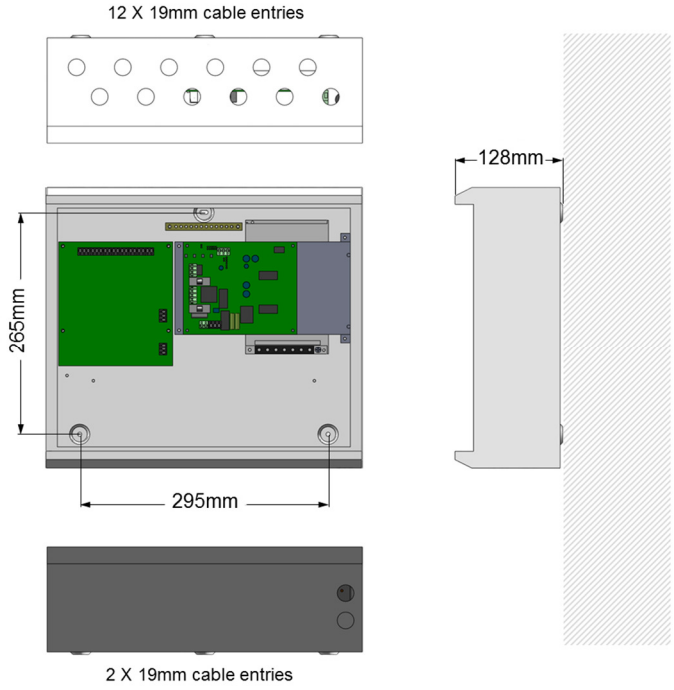


Figure 2: Plan view inside the enclosure without PCBs. Side view for surface installation.
Fix the enclosure to the wall using the three mounting holes provided.
Check the build & condition of the wall to decide a suitable screw fixing.
The mounting holes are designed for No 8 roundhead or countersunk woodscrews (or similar).
Remove any debris from the enclosure.
Take care not to damage the FACP during installation.

6.2.3 PLANNING CABLE ENTRY

Fig.2 above shows the location of the cable entries to facilitate planning of wiring (home runs) to be brought to the panel.
The grommets can be easily removed by a push from inside the control panel box.
If a grommet is removed, fill the hole with a brass cable gland. If any knockout is removed, but subsequently not used, it should be covered up.
The 230Va.c. Mains cable must be fed into the enclosure via one of the cable entries at the top right corner of the back box. (Refer to “Connecting the Mains” on Following Page).

6.2.4 CONNECTING THE MAINS POWER

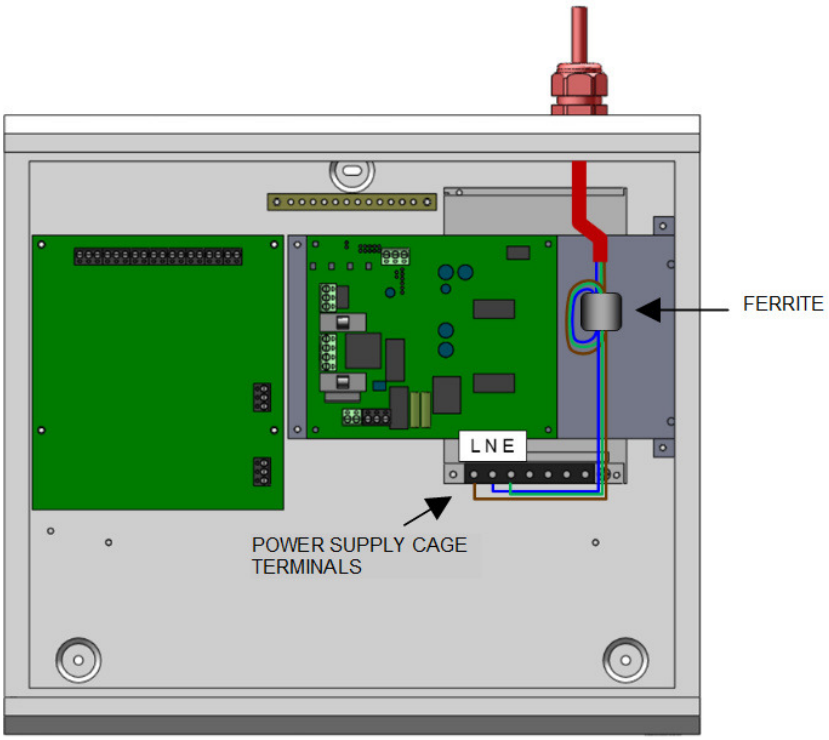


Figure 3: Power Supply PCB layout and Mains connection details

The panel should be connected to 230V AC by a 3A rated spur to the fuse box with 1mm2 to 2.5mm2 3-core cable. Nothing else should be connected to this supply. The cable should be fire resistant.
Having entered the panel via the cable gland, the mains cable should be passed twice through the provided ferrite. This is made easier by removing the outer insulation. The cable is then connected to the Live, Earth and Neutral connections marked on the power supply cage. The Mains is protected by an INTERNAL fuse on the PSU cage. (This fuse is not user replaceable)
The incoming mains cable should be kept separate from the addressable loop cables to help minimise mains interference.
MAKE SURE ANY SPARE ENTRY HOLES ARE COVERED WITH THE PLASTIC GROMMETS PROVIDED
It is advisable to apply power to the panel before connecting any devices, to check for correct operation, and to familiarise yourself with the fire alarm panels controls.

6.2.5 CONNECTING THE BATTERIES

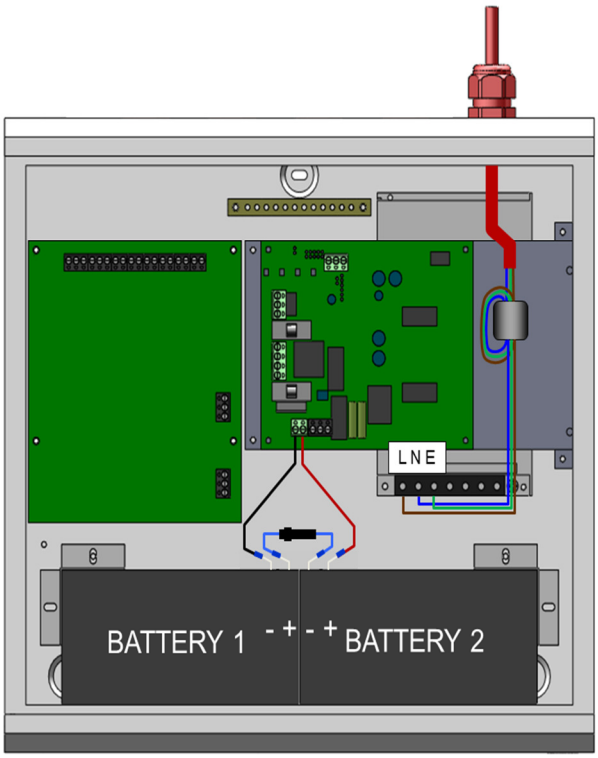


Figure 4: Battery location and connection details

Although there are many sizes of suitable battery, the sizes we usually recommend for the SIMPLICITY are 12V 7Ah or 12V 12 Ah, depending on the load.

To calculate the exact requirement, use the equation in section 20.1, STANDBY BATTERY CALCULATIONS

The two batteries are wired in **series** to give **24 Volts**.

Connect the **–ve** of Battery 1 to the **black** battery charger lead.

Connect the **+ve** of Battery 2 to the **red** battery charger lead.

The +ve of the first battery is connected to the -ve of the second battery using the FUSED link wire supplied.

When fitting the batteries, take care not to damage the temperature monitoring thermistor (next to the charger lead connections). This is used to prevent overcharging the batteries in high ambient temperatures.

Recommended Battery Types:

Small / Lightly loaded systems – Powersonic 12V, 7 Ah;

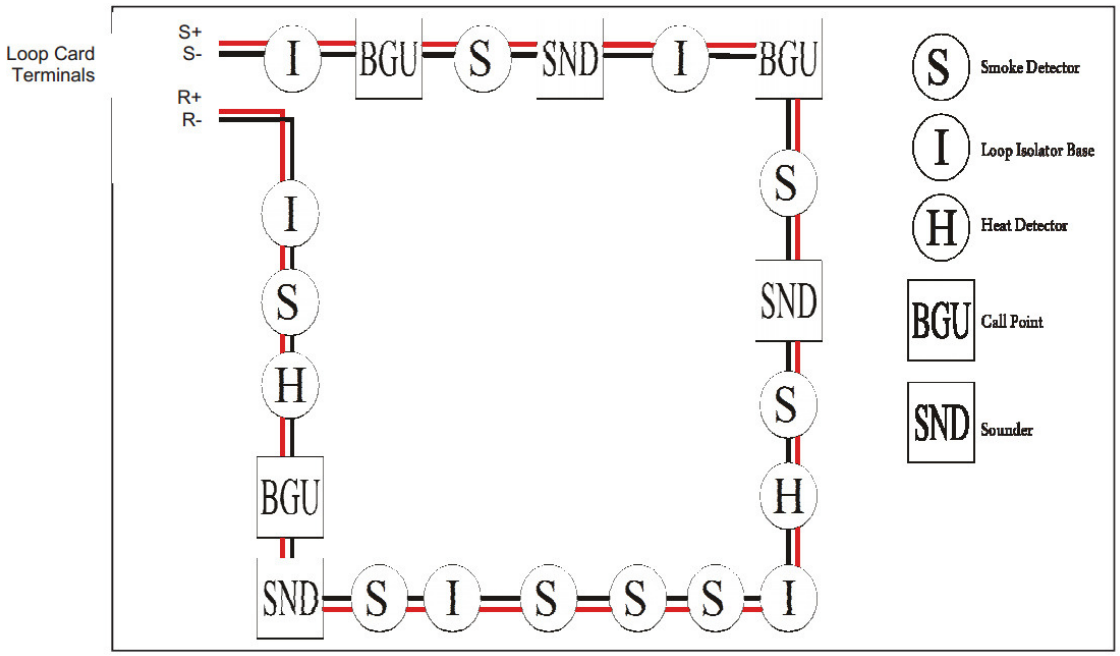
Heavily loaded systems, or systems requiring longer stand by – Powersonic 12V 12 Ah.

Other makes and sizes of battery may be suitable.

Calculate the standby requirements to determine the most suitable size of battery

7. ADDRESSABLE LOOP WIRING

The Simplicity Plus 64 and 126 can connect to one addressable loop. Addressable detectors, addressable call points, addressable loop powered sounders and several other interface units can be connected to this loop. A MAXIMUM OF 64 DEVICES CAN BE CONNECTED TO THE LOOP WHEN POWERED BY THE SIMPLICITY 64 PANEL, AND 126 DEVICES WHEN POWERED BY THE SIMPLICITY 126 PANEL. The Simplicity Plus 252 panel can connect to one or two loops. A MAXIMUM OF 126 DEVICES CAN BE CONNECTED TO EACH OF THE TWO LOOPS. We recommend that the first and last devices on a loop have isolator bases fitted. Also the last device on each zone should have an isolator fitted. This is to prevent a short circuit



fault in one zone affecting another zone.
Note that some Devices (for example, a sounder controller circuit) may require a separate 24 volt supply to operate.

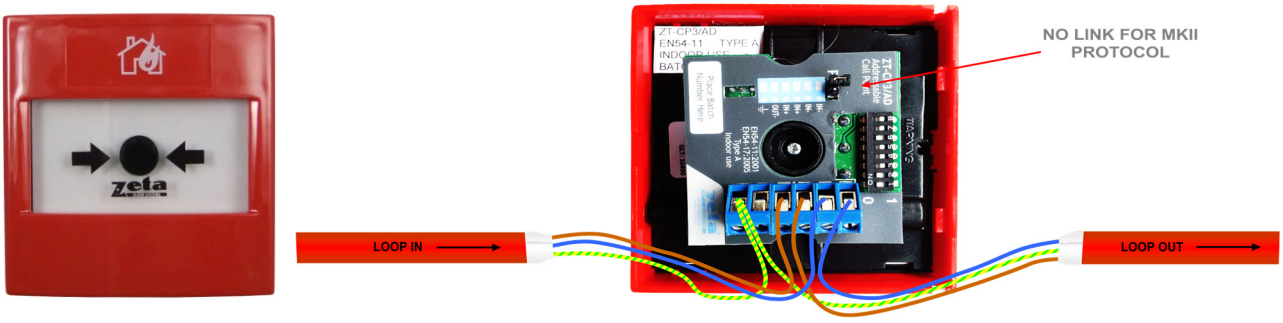
A maximum of 32 loop-powered addressable sounders or sounder bases are permitted on a loop.
Short circuit isolators should be used to prevent losing the whole loop in the event of a single short circuit fault. They should be fitted to each zone boundary, such that any short circuit will only affect the devices in 1 zone.
The termination of each wiring circuit must be as indicated on the main PCB (See Fig 6). The Earthing of the cable screens should be as shown in Fig 6.

Pre-Commissioning Cable Checks
+ve in to +ve out less than 24 ohms.
-ve in to -ve out less than 24 ohms (may need to temporarily disable isolators to measure).
+ve to –ve greater than 500k ohm.
+ve to Earth greater than 1M ohm.
-ve to Earth greater than 1M ohm.
+ve to –ve less than 50 mV pickup (on AC & DC scales).

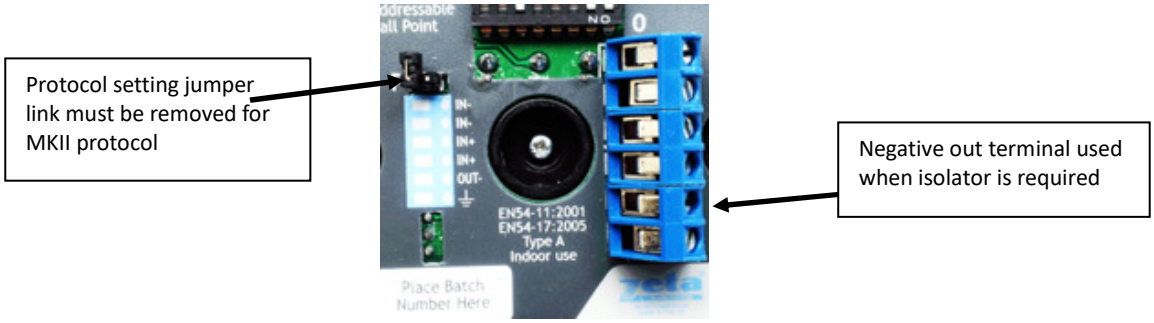
7.1 SPECIFIC DEVICE WIRING INSTRUCTIONS

All products will come with their own wiring instructions. This should be used when connecting a product. But as a general guideline, here are the connection details of most Zeta Addressable products.

7.1.1 CP3/AD Manual Call Point

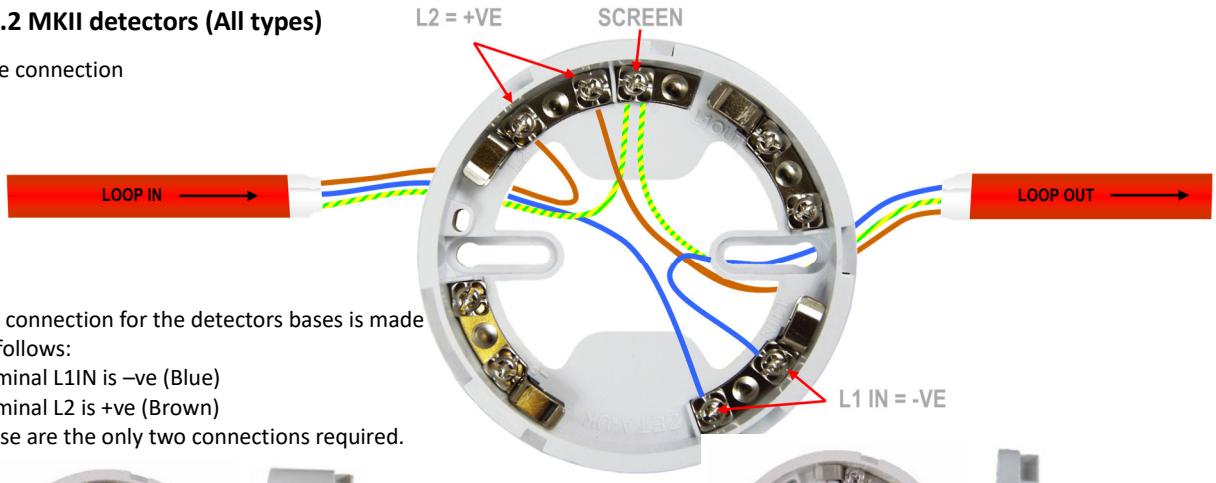


The CP3/AD call point has a built in isolator which can be wired in circuit or not used. This is done by means of not wiring to the negative out terminal on the call point. The following terminals are used for connecting the call point.
2 x Negative in terminals (note if you only connect to the negative in terminals then the isolator is bypassed)
1 x Positive in terminal
1 x Positive out terminal
1 x Negative out terminal (note if used puts the isolator in circuit)
1 x Earth terminal used to connect the cable screen



7.1.2 MKII detectors (All types)

Base connection

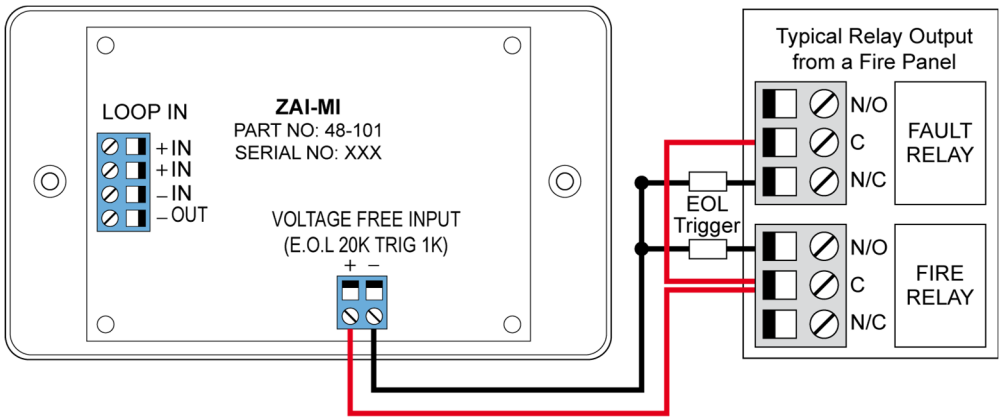


The connection for the detectors bases is made as follows:
Terminal L1IN is –ve (Blue)
Terminal L2 is +ve (Brown)
These are the only two connections required.

Deep Base MKII-CB/D

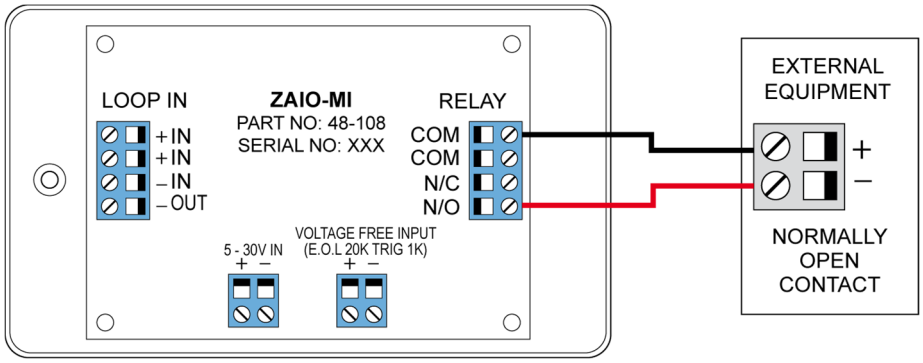
Common Base MKII-CB

7.1.3 ZAI - MI Input Module



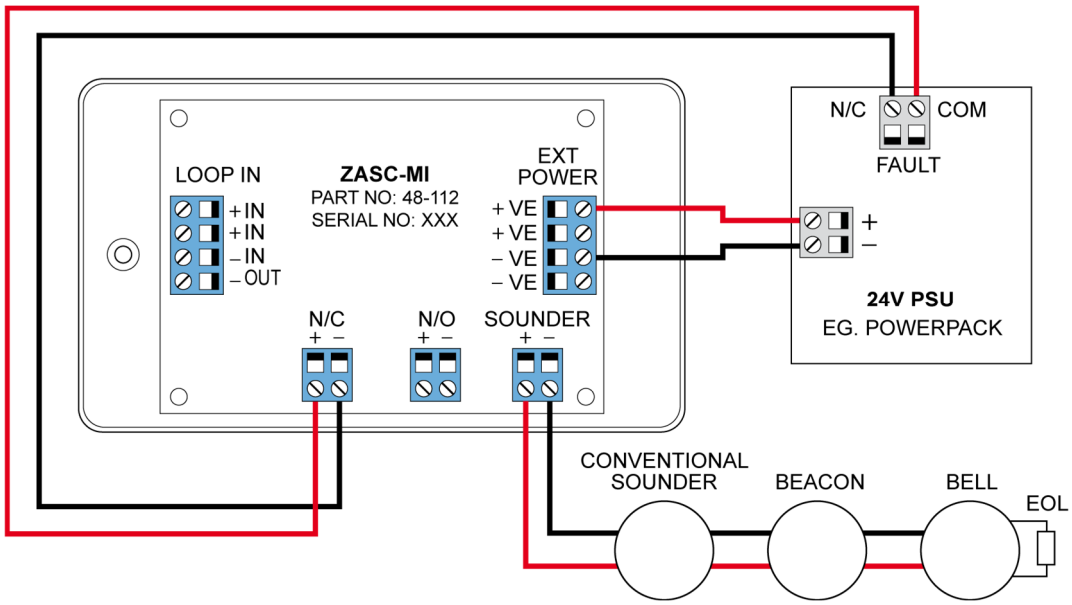
The end of line resistor value is 20KΩ and the trigger resistor value is 1 KΩ

7.1.4 ZAIO – MI Input/output Module



The end of line resistor value is 20KΩ and the trigger resistor value is 1K

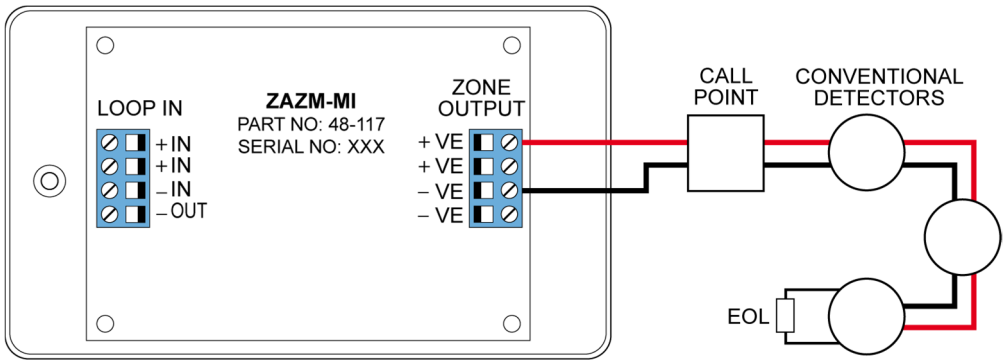
7.1.5 ZASC – MI Sounder Control Module



The ZASC requires a external 24vdc power supply (as shown in the above diagram). The EOL for the sounder circuit is 10KΩ. When using the ZASC make sure the PSU being used has a fault output relay, so that in the event of a power supply fault it is reported to the control panel.

Note: All Power Supplies used on fire alarm systems MUST comply with EN54 part 4

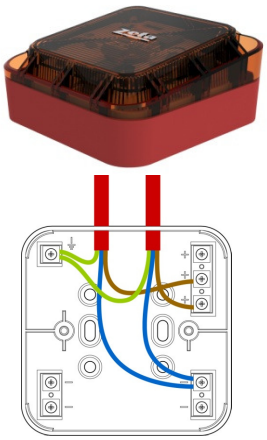
7.1.6 ZAZM – MI Conventional Zone Module



The ZAZM powers the conventional zone from the addressable systems loop, so no external power supply is required. The EOL for the zone is 6.2KΩ.

7.1.7 Xtratone Sounder/Sounder Flasher

The Xtratone sounder or sounder flasher is a wall mount sounder.
The programming of the sounder is done via the D.I.L switch mounted on the inside (front). It may also be programmed via the handheld programming tool.



Connecting the sounder is done using the terminals in the back box of the device. Please refer to the above diagram.

7.1.8 Sandwich Sounder

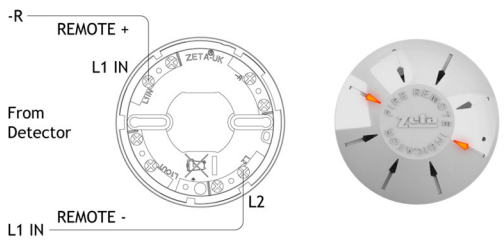
The sandwich sounder has no wiring to connect as it just clips straight on to a standard base. It will run as a platform sounder using no address, it is controlled by the detector fitted to it. It can also be given an address via the handheld programming tool making it an addressable sounder.

7.1.9 Remote LED Indicator

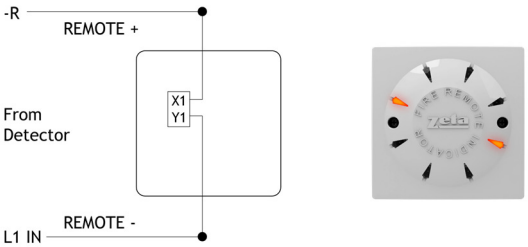
Ceiling Mount (MKII-ARL/C)

Wall Mount (MKII-ARL/W)

There are two versions of the remote LED, Wall mounted and Ceiling mounted. The ceiling mounted version requires a standard detector base.
Each version of the remote LED can monitor 1 or up to 12 devices. The way in which the LED is programmed is either via the D.I.L switches on the device or soft addressing via the handheld programmer.



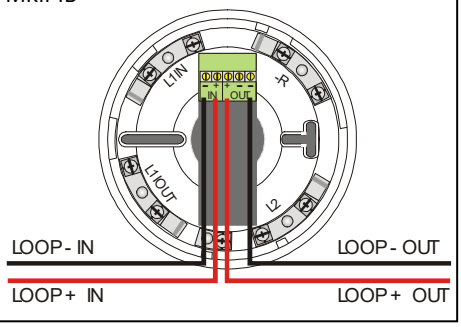
Cconnections for a ceiling mount version remote LED



Connections for a wall mount version remote LED

7.1.10 Isolator Base

Fyreye MKII Loop Isolator Base
MKII-IB



Note that on the Fyreye Loop Isolator Base, the loop wiring connects to the terminal block on the PCB and NOT to the Base Spring Screws.

The terminals are marked + & - in, and +,- &- out.

The second –ve contact can be used during commissioning to check the loop integrity.

(Connect the –in to the spare – out. Repeat for all isolators. Measure –ve line resistance with a DVM. Return the –in cable to its original terminal block when tests completed.)

7.2 MAXIMUM LOOP LENGTH RECOMMENDATIONS

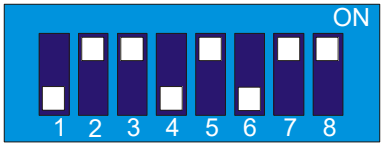
With an addressable system, some care must be taken when calculating the appropriate cable gauge for the system.
The main limitation is that during an alarm condition (maximum current draw), the voltage at all devices must be at least 17 Volts with at least 5V of superimposed data signal.
The exact calculation equations are beyond the scope of this manual, because of the distributed load of the sounders on the loop, but the following table gives a rough guide for maximum cable lengths at various current loads for 3 different cable gauges

Maximum Loop Current (in Alarm)	**500 mA**	**400 mA**	**300 mA**	**200 mA**
1.0mm CSA cable	500m	625m	830m	1250m
1.5mm CSA cable	750m	930m	1250m	1870m
2.5mm CSA cable	1000m	1250m	1660m	2000m

EG. A system with a maximum load of 300mA using 1.5mm cable can have a maximum loop run of 1250m end to end.

7.3 SETTING THE DEVICE ADDRESS (DETECTORS, CALL POINTS & SOUNDERS)

The device address is set with a dip switch on the rear of the device.



The address setting is binary, with the ON position being binary 0 , and the OFF position being binary 1.

On a Simplicity system, a MKII Protocol device must ALWAYS have Switch 8 set to the ON position.

If you are not familiar with binary, check the table in section 7.4 or use the following rule:

Switch 7 off = add 64,
Switch 6 off = add 32,
Switch 5 off = add 16,
Switch 4 off = add 8,
Switch 3 off = add 4,
Switch 2 off = add 2,
Switch 1 off = add 1.

The example shown would be:
switches 6, 4 & 1
=32 + 8 + 1 = Address 41

7.4 ADDRESS - ZONE TABLE

On the Simplicity 64 and 126, each available address corresponds to a zone, with 1-16 being in zone 1 by default, 17-32 being in zone 2 by default, 33-48 in zone 3 by default etc. On the Simplicity 252, by default addresses 1-32 are in zone 1, 33-64 in zone 2 etc.
The following table shows the dip switch settings for each address, and the DEFAULT zone that address will be in.
Note that if the zone boundaries on Simplicity 252 are changed, the affected addresses will now be in a different

ADDRESS		SWITCHES							ADDRESS		SWITCHES							ADDRESS		SWITCHES						
		1	2	3	4	5	6	7			1	2	3	4	5	6	7			1	2	3	4	5	6	7
0	=	N	O	T	U	S	E	D	**43**	=	OFF	OFF	ON	OFF	ON	OFF	ON	**86**	=	ON	OFF	OFF	ON	OFF	ON	OFF
1	=	OFF	ON	ON	ON	ON	ON	ON	**44**	=	ON	ON	OFF	OFF	ON	OFF	ON	**87**	=	OFF	OFF	OFF	ON	OFF	ON	OFF
2	=	ON	OFF	ON	ON	ON	ON	ON	**45**	=	OFF	ON	OFF	OFF	ON	OFF	ON	**88**	=	ON	ON	ON	OFF	OFF	ON	OFF
3	=	OFF	OFF	ON	ON	ON	ON	ON	**46**	=	ON	OFF	OFF	OFF	ON	OFF	ON	**89**	=	OFF	ON	ON	OFF	OFF	ON	OFF
4	=	ON	ON	OFF	ON	ON	ON	ON	**47**	=	OFF	OFF	OFF	OFF	ON	OFF	ON	**90**	=	ON	OFF	ON	OFF	OFF	ON	OFF
5	=	OFF	ON	OFF	ON	ON	ON	ON	**48**	=	ON	ON	ON	ON	OFF	OFF	ON	**91**	=	OFF	OFF	ON	OFF	OFF	ON	OFF
6	=	ON	OFF	OFF	ON	ON	ON	ON	**49**	=	OFF	ON	ON	ON	OFF	OFF	ON	**92**	=	ON	ON	OFF	OFF	OFF	ON	OFF
7	=	OFF	OFF	OFF	ON	ON	ON	ON	**50**	=	ON	OFF	ON	ON	OFF	OFF	ON	**93**	=	OFF	ON	OFF	OFF	OFF	ON	OFF
8	=	ON	ON	ON	OFF	ON	ON	ON	**51**	=	OFF	OFF	ON	ON	OFF	OFF	ON	**94**	=	ON	OFF	OFF	OFF	OFF	ON	OFF
9	=	OFF	ON	ON	OFF	ON	ON	ON	**52**	=	ON	ON	OFF	ON	OFF	OFF	ON	**95**	=	OFF	OFF	OFF	OFF	OFF	ON	OFF
10	=	ON	OFF	ON	OFF	ON	ON	ON	**53**	=	OFF	ON	OFF	ON	OFF	OFF	ON	**96**	=	ON	ON	ON	ON	ON	OFF	OFF
11	=	OFF	OFF	ON	OFF	ON	ON	ON	**54**	=	ON	OFF	OFF	ON	OFF	OFF	ON	**97**	=	OFF	ON	ON	ON	ON	OFF	OFF
12	=	ON	ON	OFF	OFF	ON	ON	ON	**55**	=	OFF	OFF	OFF	ON	OFF	OFF	ON	**98**	=	ON	OFF	ON	ON	ON	OFF	OFF
13	=	OFF	ON	OFF	OFF	ON	ON	ON	**56**	=	ON	ON	ON	OFF	OFF	OFF	ON	**99**	=	OFF	OFF	ON	ON	ON	OFF	OFF
14	=	ON	OFF	OFF	OFF	ON	ON	ON	**57**	=	OFF	ON	ON	OFF	OFF	OFF	ON	**100**	=	ON	ON	OFF	ON	ON	OFF	OFF
15	=	OFF	OFF	OFF	OFF	ON	ON	ON	**58**	=	ON	OFF	ON	OFF	OFF	OFF	ON	**101**	=	OFF	ON	OFF	ON	ON	OFF	OFF
16	=	ON	ON	ON	ON	OFF	ON	ON	**59**	=	OFF	OFF	ON	OFF	OFF	OFF	ON	**102**	=	ON	OFF	OFF	ON	ON	OFF	OFF
17	=	OFF	ON	ON	ON	OFF	ON	ON	**60**	=	ON	ON	OFF	OFF	OFF	OFF	ON	**103**	=	OFF	OFF	OFF	ON	ON	OFF	OFF
18	=	ON	OFF	ON	ON	OFF	ON	ON	**61**	=	OFF	ON	OFF	OFF	OFF	OFF	ON	**104**	=	ON	ON	ON	OFF	ON	OFF	OFF
19	=	OFF	OFF	ON	ON	OFF	ON	ON	**62**	=	ON	OFF	OFF	OFF	OFF	OFF	ON	**105**	=	OFF	ON	ON	OFF	ON	OFF	OFF
20	=	ON	ON	OFF	ON	OFF	ON	ON	**63**	=	OFF	OFF	OFF	OFF	OFF	OFF	ON	**106**	=	ON	OFF	ON	OFF	ON	OFF	OFF
21	=	OFF	ON	OFF	ON	OFF	ON	ON	**64**	=	ON	ON	ON	ON	ON	ON	OFF	**107**	=	OFF	OFF	ON	OFF	ON	OFF	OFF
22	=	ON	OFF	OFF	ON	OFF	ON	ON	**65**	=	OFF	ON	ON	ON	ON	ON	OFF	**108**	=	ON	ON	OFF	OFF	ON	OFF	OFF
23	=	OFF	OFF	OFF	ON	OFF	ON	ON	**66**	=	ON	OFF	ON	ON	ON	ON	OFF	**109**	=	OFF	ON	OFF	OFF	ON	OFF	OFF
24	=	ON	ON	ON	OFF	OFF	ON	ON	**67**	=	OFF	OFF	ON	ON	ON	ON	OFF	**110**	=	ON	OFF	OFF	OFF	ON	OFF	OFF
25	=	OFF	ON	ON	OFF	OFF	ON	ON	**68**	=	ON	ON	OFF	ON	ON	ON	OFF	**111**	=	OFF	OFF	OFF	OFF	ON	OFF	OFF
26	=	ON	OFF	ON	OFF	OFF	ON	ON	**69**	=	OFF	ON	OFF	ON	ON	ON	OFF	**112**	=	ON	ON	ON	ON	OFF	OFF	OFF
27	=	OFF	OFF	ON	OFF	OFF	ON	ON	**70**	=	ON	OFF	OFF	ON	ON	ON	OFF	**113**	=	OFF	ON	ON	ON	OFF	OFF	OFF
28	=	ON	ON	OFF	OFF	OFF	ON	ON	**71**	=	OFF	OFF	OFF	ON	ON	ON	OFF	**114**	=	ON	OFF	ON	ON	OFF	OFF	OFF
29	=	OFF	ON	OFF	OFF	OFF	ON	ON	**72**	=	ON	ON	ON	OFF	ON	ON	OFF	**115**	=	OFF	OFF	ON	ON	OFF	OFF	OFF
30	=	ON	OFF	OFF	OFF	OFF	ON	ON	**73**	=	OFF	ON	ON	OFF	ON	ON	OFF	**116**	=	ON	ON	OFF	ON	OFF	OFF	OFF
31	=	OFF	OFF	OFF	OFF	OFF	ON	ON	**74**	=	ON	OFF	ON	OFF	ON	ON	OFF	**117**	=	OFF	ON	OFF	ON	OFF	OFF	OFF
32	=	ON	ON	ON	ON	ON	OFF	ON	**75**	=	OFF	OFF	ON	OFF	ON	ON	OFF	**118**	=	ON	OFF	OFF	ON	OFF	OFF	OFF
33	=	OFF	ON	ON	ON	ON	OFF	ON	**76**	=	ON	ON	OFF	OFF	ON	ON	OFF	**119**	=	OFF	OFF	OFF	ON	OFF	OFF	OFF
34	=	ON	OFF	ON	ON	ON	OFF	ON	**77**	=	OFF	ON	OFF	OFF	ON	ON	OFF	**120**	=	ON	ON	ON	OFF	OFF	OFF	OFF
35	=	OFF	OFF	ON	ON	ON	OFF	ON	**78**	=	ON	OFF	OFF	OFF	ON	ON	OFF	**121**	=	OFF	ON	ON	OFF	OFF	OFF	OFF
36	=	ON	ON	OFF	ON	ON	OFF	ON	**79**	=	OFF	OFF	OFF	OFF	ON	ON	OFF	**122**	=	ON	OFF	ON	OFF	OFF	OFF	OFF
37	=	OFF	ON	OFF	ON	ON	OFF	ON	**80**	=	ON	ON	ON	ON	OFF	ON	OFF	**123**	=	OFF	OFF	ON	OFF	OFF	OFF	OFF
38	=	ON	OFF	OFF	ON	ON	OFF	ON	**81**	=	OFF	ON	ON	ON	OFF	ON	OFF	**124**	=	ON	ON	OFF	OFF	OFF	OFF	OFF
39	=	OFF	OFF	OFF	ON	ON	OFF	ON	**82**	=	ON	OFF	ON	ON	OFF	ON	OFF	**125**	=	OFF	ON	OFF	OFF	OFF	OFF	OFF
40	=	ON	ON	ON	OFF	ON	OFF	ON	**83**	=	OFF	OFF	ON	ON	OFF	ON	OFF	**126**	=	ON	OFF	OFF	OFF	OFF	OFF	OFF
41	=	OFF	ON	ON	OFF	ON	OFF	ON	**84**	=	ON	ON	OFF	ON	OFF	ON	OFF	**127**	=	N	O	T	U	S	E	D
42	=	ON	OFF	ON	OFF	ON	OFF	ON	**85**	=	OFF	ON	OFF	ON	OFF	ON	OFF									

8. SOUNDERS

The Simplicity panel does not have any conventional sounder circuits on board. The idea of the simplicity is to connect everything to one circuit, so it only uses addressable sounders.
There are several types of addressable sounder that can be used on the simplicity, all with advantages & disadvantages. Choose the sounder type that is most suitable for the intended application.

8.1 ADDRESSABLE SOUNDERS

These are standard addressable sounders. Each sounder is given a unique address, so that it can communicate with the control panel. Examples include the Zeta Addressable Maxitone & Zeta Addressable Xtratone sounders.

8.2 SANDWICH SOUNDER BASES - DETECTOR TRIGGERED

This is the default setting of the Sandwich Sounder. In this configuration, the sounder is controlled by the detectors remote LED output. The panel can not "see" the sounder in this configuration. This type of sounder is sometimes called an Associated sounder base or platform sounders. These do not communicate with the fire alarm panel. They are controlled by the detectors remote output signal. This means that when a panel configures the loop, it cannot see these sounders. The Simplicity assumes that any detector could have one of these sounders connected, so when an alarm signal comes, the panel sends the “turn on your remote output” to EVERY detector. This makes their operation slower than standard addressable sounders.
If not every detector has a sounder base fitted, it might be possible to speed up the sounder base start/stop time. See CONFIGURING ASSOCIATED SOUNDERS section.

8.3 SANDWICH SOUNDER BASES - ADDRESSD MODE

The sandwich sounder can be given an address with the hand held programming tool. The sunder needs to be given a separate address to the detector. The advantage is that the sounder is seen by the panel, so can be monitored by the panel.

8.4 ADDRESSABLE SOUNDER CIRCUIT CONTROLLER

If conventional sounders or bells need to be fitted, then a sounder circuit controller can be used (Zeta Addressable Sounder Circuit Controller Unit). It will need to be separately powered. In operation, it will behave the same as an addressable sounder

8.5 COMPARISON OF SOUNDER TYPES

The Simplicity supports 4 general sounder types. All types have advantages & disadvantages.

SOUNDER TYPE	ADVANTAGE	DISADVANTAGE
Addressable Wall Sounder	Device is seen by panel (so is monitored by protocol comms)	Tends to be more expensive Uses device address. Can’t be used for alarm verification Extra wiring point
Sandwich Sounder - Detector Triggered	Doesn’t occupy Device Address Can be used for the alarm verification mode. Detector & sounder at one wiring point	Slow stop time on heavy loaded loop
Sandwich Sounder - Addressed Mode	All sounders start instantly, and in sync. Detector & sounder at one wiring point	Can’t be used for alarm verification
Addressable Sounder Circuit Controller	Wide range of devices Devices tend to be cheaper. Can add many sounder circuits to system	Needs Extra Cabling. Needs External PSU Uses device address. Can’t be used for alarm verification

If you need to use alarm verification, the Sandwich Sounder - Detector Triggered base is needed.
If you need bells or XENON flashers, you will need a sounder circuit controller.

8.6 SOUNDER START & STOP TIMES

On a Fyreye MKII system, sounders are normally started with a group start command, so the panel will start all sounders together.

When using Sandwich sounder in detector triggered mode, the panel will start all sounders instantly using the group start command. But due to the nature of the base, it will turn them off individually, so stopping sounders on a large loop may take a few seconds.

There are 2 methods to speed up the stop times of these sounders.

1. For ease of functional checking during installation, the simplicity panel assumes that every detector found during the loop configuration has an associated sounder base. This allows every sounder to run.
   If the system uses associated sounders on some addresses, then the addresses with no sounder should have the associated sounder turned off in order to speed up sounder response time (See Section 12.4)

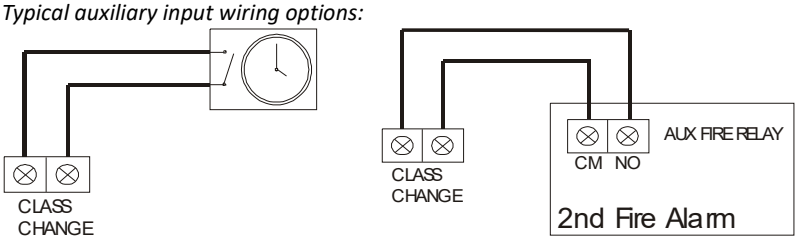
2. Give the sounders an address with the address programming tool.

NOTE: If alarm Verification is used on the system, only the first option can be used as alarm verification requires a detector & sounder to be at the same address

9. AUXILIARY INPUTS & OUTPUTS

9.1 AUXILIARY INPUT WIRING EXAMPLES

There is one non-latching auxiliary input connection on the Fire Alarm Panel.
Class Change Input (CC): This will energise all alarm outputs continuously when the CC terminals are shorted together.
Typical auxiliary input wiring options:

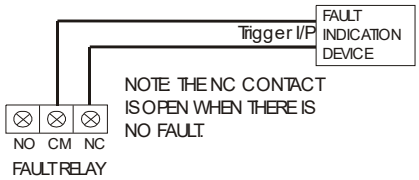


The termination for the above inputs must be as indicated on the main PCB (See page 15). The Earthing of the cable screens should be as shown on page 9.

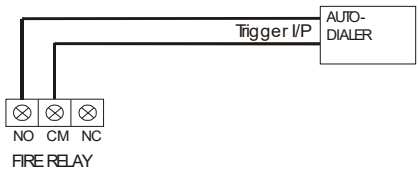
9.2 AUXILIARY OUTPUT WIRING

Auxiliary Fire Relay (AUX): This is a SELV volt free relay that operates in the alarm condition. It can be connected to emergency lights, local fire fighting equipment such as sprinkler systems, magnetic door holders, air conditioning shut off, etc. Extra alarm relays can be achieved by fitting extra I/O Interfaces to the addressable loop (ZAIO-MI).

Fault Output (FAULT): This is a SELV volt free relay that operates in the Fault condition. It is Normally Energised, which ensures it can give a fault signal, even in the event of total power loss.
Typical auxiliary output wiring:



The fault relay is used to connect to a remote indication device



The fire relay can be used to connect to various devices which are activated on a fire alarm. e.g. Auto dialler , magnetic door release (24V), sprinkler system etc.

The Earthing of the cable screens should be as shown on the following page.

10. FIELD DEVICE TERMINATION

10.1 TERMINATING THE WIRING

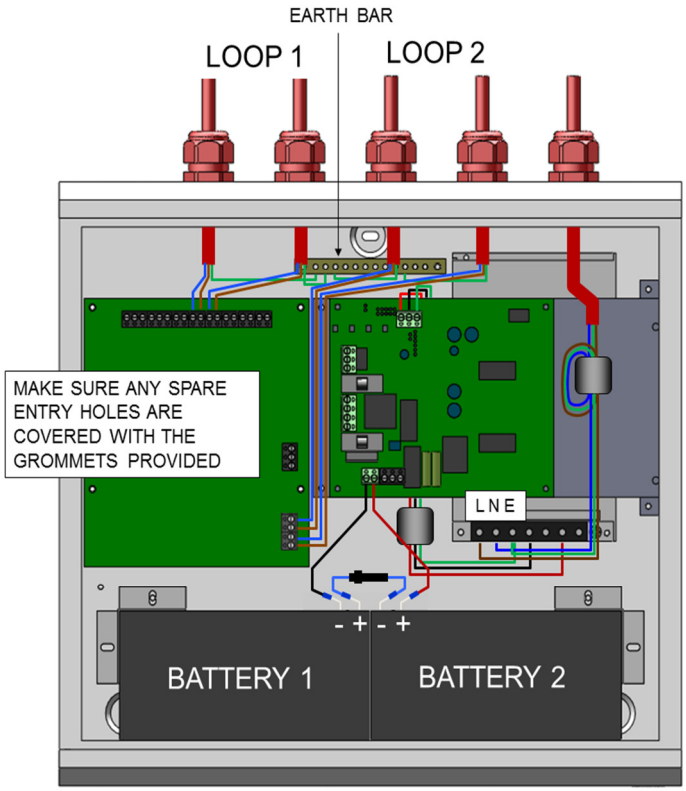


Figure 6: Cable connections

All cables entering the enclosure should have cable glands, which will prevent unwanted openings in the enclosure.
The Addressable Loop circuits should be connected to the appropriate connector block on the Termination PCB.
All cable screens should be terminated at the brass earthing strip as shown in Figure 6 .

11. OTHER CONNECTIONS

11.1 REPEATER CONNECTION

The Simplicity has an RS485 connection for a serial repeater. The repeaters are display only (no control). A single repeater can be powered from the 24V DC outputs on the panel's Power Supply Unit (A or B). If 2 or more are to be connected, then they must be powered from external 24V power supplies. The panel supports up to 4 repeaters.

Connections

See Section 21 for the serial repeater connections.

11.2 SERIAL PRINTER CONNECTION

The Simplicity has an RS232 Serial output that transmits panel events as they occur. It can connect to the Zeta TCP/IP Interface (Ask distributor for more details), or a serial printer. The recommended printer is an Epson LQ300 II+. The serial port on the Simplicity is configured to this printer's default settings. See also Section 21.

CONNECTIONS	
SIMPLICITY	**25 PIN D CONNECTOR**
TX	Pin 3 (RX)
RX	Pin 2 (TX)
GND	Pin 7 (GND)
CTS	Pin 4 (RTS)
DSR	Pin 20 (DTR)

SERIAL PORT SETTINGS	
SETTING	**VALUE**
Baud Rate	19200
Data Bits	8
Stop bits	1
Parity	NO
Flow Control	Hardware

12. CONFIGURING THE SIMPLICITY FIRE ALARM PANEL

12.1 CONFIGURING THE LOOPS

12.1.1 FROM A BLANK SIMPLICITY PANEL

```
  Fire Alarm Panel
To EN54  pt2 & pt4
    System Normal
 15-01-2006 12:59
```

1. After the system has been installed, and the cabling checked and the addresses of each device set, connect Loop 1 to the CIE termination PCB (connection 3 as shown in Section 21.1), and Loop 2 (if required) to the CIE termination PCB (connection 10), and power up the system (mains & batteries). The LCD should say "System Normal", and only the green Power LED will be lit. After a few seconds, the panel will find all the new devices & report them unconfigured.

```
Devices Found

Press ENTER to
 Configure Panel
```

2. Press the enter button to configure the loop. The panel will show Configuration in progress for about 9 seconds, then it will then return to the system normal screen.

```
  Configuration in
     Progress

    Please Wait
```

The loop is now configured.

12.1.2 FROM A PREVIOUSLY CONFIGURED PANEL

```
Configuration Menu 1
1:Loop Contents
2:Device Status
3:Event logs       >
```

1. Press Enter button. This will bring up Configuration Menu 1 (the user menu). In this Menu there are options to view loop contents, view the status of each device, or view the event log. The arrow in the bottom left hand corner shows that pressing NEXT will bring up a new screen

(Note that if the panel has a fault on the screen, pressing enter will give fault details. Press cancel from the details screen to enter configuration Menu 1).

```
  Enter Access Code

        ***
```

2. Press NEXT button. This will prompt for the access code to enter Configuration Menu 2 (the engineer menu). The access code for the Simplicity is 369.

```
Configuration Menu 2
4:Configure Loops
5:Edit Device
6:Config System    <
```

3. The panel now shows Configuration Menu 2. In this menu there are options to Configure the loops, to edit each device, and to configure the system options. The arrow in the bottom left hand corner shows that pressing PREVIOUS button will return to Configuration Menu 1.

```
  Configuration in
     Progress

    Please Wait
```

4. Press button 4 to configure the loop. The panel displays configuration in progress, Please wait. It will return to Configuration Menu 2 when completed.

12.1.3 REDUCED LOOP SIMPLICITY PANELS

```
  Devices Outside
   Address Range

ENT to turn on LED
```

For the reduced loop capacity Simplicity panels (EG Simplicity Micro, or Simplicity Plus 64), it is possible to address a device outside the panels range. Previous versions of simplicity panel would expect the user to find this problem by checking the device contents screen, and comparing to system drawings, but this latest version will warn that there are devices outside the panels address range, and help identify them.

12.2 VERIFYING THE LOOP CONFIGURATION

```
Configuration Menu 1
1:Loop Contents
2:Device Status
3:Event logs       >
```

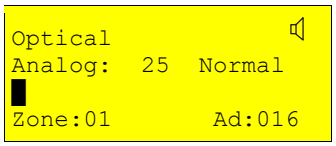
1. Go to Configuration menu 1 (either Press PREVIOUS button, from Menu 2, or press ENTER from System normal screen.
2. Press button 1 to view the loop contents. It lists the number of each type of device, the number of Double Addresses (DAD) on the system, the loop number (Loop 1 only), and the total number of devices on that loop. Check that the number of devices seen compares to the number expected. If it is different, refer to the fault finding guide.

```
CO  00|SCC 14|DAD 00
I/O 03|ION 02|
ZMU 01|OPT 45|Loop 1
HET 07|BGU 05|Tot 77
```

3. The panel is now configured, and will function as a basic system, (press Cancel until screen shows system normal to run the panel), but it is more useful to enter device labels, to give a more precise location of an alarm device. We recommend that the device labels be entered to allow the panel to be more user friendly during normal operation.

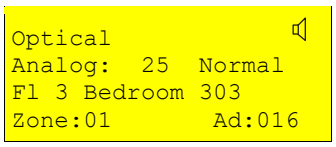
12.3 LABELLING THE LOOP DEVICES

1. To add a label, go to configuration menu 2 as described above. Select option 5 to Edit Device. Use Next / Previous to select the first device to edit. Press Enter, and a cursor will appear at the start of the 3rd line. Type in the 20 character label for this device, using the caps lock as necessary.

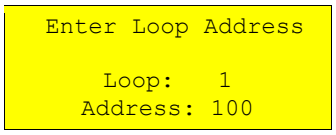


2. Press enter when the label has been entered. Press Next to edit the next device.

3. To skip many addresses, press 1 (for loop 1), or 2 (for loop 2 on a 2 loop simplicity.) The Panel will then prompt for the address. Type the address and press enter. The panel will now jump to this address.

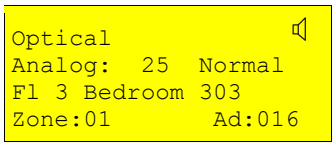


NOTE: For many installations, only these configuration steps are required.



12.4 CONFIGURING ASSOCIATED SOUNDERS

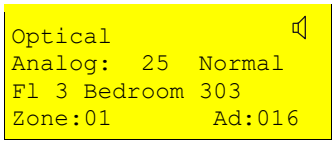
On the Simplicity, all detectors are treated as if they have an associated sounder base during the initial configuration (indicated by the sounder symbol in the top right hand corner of the edit device screen) . The panel will send the “activate base sounder” command to all address with this sounder symbol in the event of an alarm.



If a loop contains a large number of detectors, and a small number of associated sounder bases, then the sounders might take a long time (between 4 & 8 seconds) to start.
If this scenario exists, it is possible to speed up operation as shown below. (Note: if every detector has a sounder base, or if most of the detectors have a sounder base this “speed up operation” will have little or no effect.

1. Press enter, NEXT, followed by 369 to enter Configuration Menu 2. Select option 5 to edit device status. Select a detector that does NOT have a sounder base attached.

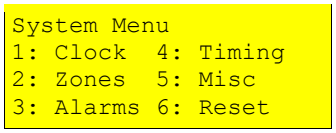
2. Press the Disablement SELECT button. The sounder symbol turns off to show that this detector no longer has an associated sounder. (Pressing select again will continue to toggle the sounder on & off.)



3. Repeat for all detectors that do not have an associated sounder base fitted.
If a system had say 40 detectors, but only 20 with an ASSOCIATED sounder base, configuring the sounders as shown above should half the sounder start time.

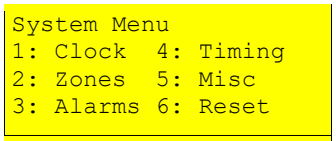
12.5 SETTING TIME AND DATE

To set the time & date, enter Configuration Menu 2 and select Configure System (6). The System Menu is now displayed. Select option 1 to set time & date. Enter the Day, Month, Year, Hour & Minutes as prompted, and press enter to save, or Cancel at any time to exit.

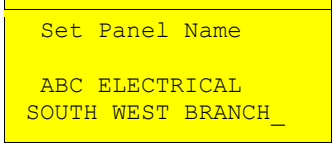


12.6 SETTING A CUSTOM BANNER

On the Simplicity, the default screen shows Simplicity 64 or Simplicity 126 or Simplicity 252 on the 1st line of the LCD (depending on panel version), and Fire Alarm Panel on the 2nd line. This can be changed to any 2 lines of 20 Characters that are required. From Menu 2, select configure system, followed by MISC. Select option 5, Name.



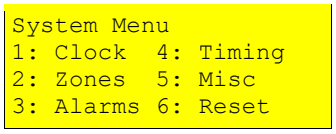
Then type the first line of text, followed by enter, then the second line of text, followed by enter. This message will now be the screen message when the panel is running normally, with no faults or alarms present.



12.7 CHANGING A ZONE BOUNDARY

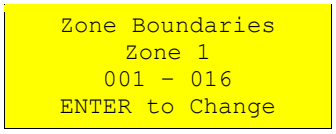
The Simplicity's default zone allocation may not be suitable for every installation. The Zone boundaries can now be altered as follows:-

1. Enter Configuration Menu 2 & select System Menu (option 6)



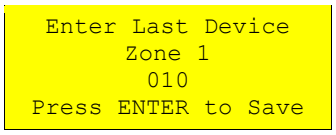
2. Select Option 2 (Zones). The screen will show the Zone boundaries selection screen. The screen shows the currently selected zone, and the range of addresses within that zone e.g. Zone 1 consists of addresses 1 to 16.

3. Use Previous & Next buttons to select the zone to change, then press ENTER.



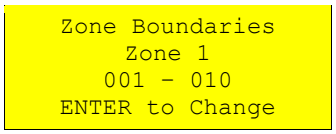
4. The Screen now prompts for the new last address of that zone to be entered. (On a 2 Loop simplicity, the panel will prompt for the loop number to be entered first).

5. Type in the address & press ENTER to save, or press CANCEL to keep the existing Address.



6. The Zone will now change to the selected boundary, with the first device of the next zone changing accordingly, e.g. just changing zone 1 last device to 10 would result in zone 1 being addresses 1 to 10, Zone 2 being 11 to 32, zone 3 being the default 33 to 48 etc.

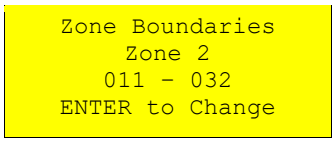
NOTE: If the building plans have not been finalised, it would be wise to leave a few spare addresses at the end of each zone, just in case extra devices need to be added.



The Simplicity Plus COULD use all addresses in a single zone, but it is good practice to limit a zone to 32 or less detectors (to avoid an unacceptably large zone search area). The minimum number of addresses per zone is 2.

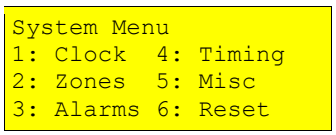
All 8 zones do not need to be use, i.e. the 126 device version could be configured as 6 zones of 21 devices, leaving zones 7 & 8 void.

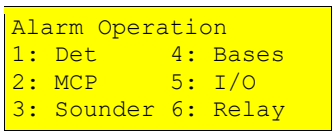
NOTE: Zones 1 to 7 must have a minimum of 2 addresses per zone.



12.8 CHANGING THE ALARM RESPONSE – SOUNDERS

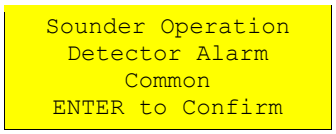
By Default, the Simplicity uses a common alarm configuration, i.e. any alarm sets off all sounders. This default operation may not be suitable for every installation. As alarms from Manual Call points often need to be treated differently, the operation of detectors & call points can be configured separately. Enter the Configuration Menu 2 & select System Menu (option 6) and select option 3 (Alarms).





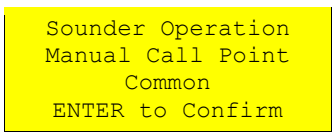
12.8.1 CHANGING DETECTOR ALARM RESPONSE

To change the alarm response of detectors, select option 1. The following screen is Shown. Use Prev/Next buttons to scroll between the options Common and Zonal. Press enter to confirm.



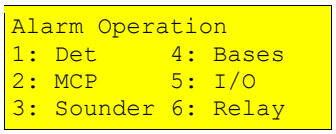
12.8.2 CHANGING MCP ALARM RESPONSE

To change the alarm response of manual call points, select option 2. The following screen is shown. Use Prev/Next buttons to scroll between the options Common and Zonal. Press enter to confirm.



12.8.3 ZONAL SOUNDER TO COMMON SOUNDER DELAY

If Zonal sounder operation is selected, in the event of an alarm, the sounders will only ring in a certain part of the building (the zone that signalled the alarm). Sometimes there is a requirement to start all the other sounders if the alarm continues for a given time. On the



Simplicity system, we refer to this as the Zonal to Common sounder time.

Select option 3 (Sounder) from the alarm operation menu. This zonal to common sounder time can either be disabled, i.e. alarms stay zonal, or it can be enabled, i.e. all the sounders will start after the programmed time delay.

```
Sounder Operation
Zonal-Common Time
     Disabled
ENTER to Confirm
```

To alter this delay, go to the System Menu and select option 4 (Timing)

```
System Menu
1: Clock  4: Timing
2: Zones  5: Misc
3: Alarms 6: Reset
```

The panel will bring up the following menu. Select option 1 (Zonal to common)

```
Alarm Timing
1: Zonal to Common
2: Alarm Verify
```

The panel will now show the currently selected delay time. This can be set between 30 seconds and 10 minutes, in 15 second increments, using the previous and next buttons. Press enter to confirm the selected time.

```
Zonal-Common Time
      0:30

ENTER to Confirm
```

12.8.4 ASSOCIATED SOUNDER BASE SETTINGS

On previous Simplicity Panels, associated sounder bases have always been common acting. There is now an option for them to be zonal. In the Alarm Operation Menu, select option 4 (bases).

```
Alarm Operation
1: Det    4: Bases
2: MCP    5: I/O
3: Sounder
```

Press Prev / Next to select common or Zonal operation, then press enter.

```
Sounder Operation
  Sounder Bases
     Common
ENTER to Confirm
```

12.9 CHANGING THE ALARM RESPONSE – I/O UNITS

Because a system could have several I/O units, each reacting to different types of events the simplicity system adopts the following method for configuring I/O units:-
1. Select a default I/O unit operation (This is done from the Alarm Operation Menu)
This will then be the default operation of all I/O units on the system.
2. Any I/O units which need a different operation can be edited individually from the edit device screen

12.9.1 TYPES OF I/O UNIT OPERATION

The simplicity now has the following types of I/O operation:-

Common	Operates output on ANY alarm
Zonal Detector	Operates its output on a DETECTOR alarm from its own ZONE
Zonal All	Operates its output on any alarm from its own ZONE
Own Input	Operates its output ONLY when its own INPUT is triggered
Panel Link	Special type used for Inter-panel link. Output operates on any alarm , EXCEPT from its own address, AND the input is non latching and behaves similar to class change.
Manual Alarm	Operates output on ANY MCP alarm
Detector Alarm	Operates output on ANY Detector alarm
Zonal MCP	Operates its output on a MCP alarm from its own ZONE

12.9.2 SETTING DEFAULT I/O UNIT OPERATION

To set the simplicity panels default I/O operation, enter configuration menu 2, then select config system to bring up the system menu.

```
System Menu
1: Clock  4: Timing
2: Zones  5: Misc
3: Alarms 6: Reset
```

Select Option 3 (Alarms) to bring up the alarm operation Menu.

Select option 5 (I/O). This brings up the following screen.

```
Alarm Operation
1: Det     4: Bases
2: MCP     5: I/O
3: Sounder
```

Press Prev & Next to select the default operation, then press enter.

```
  I/O Unit Operation
       Common

   ENTER to Confirm
```

12.9.3 SETTING INDIVIDUAL I/O UNIT OUTPUT OPERATION

To alter the operation mode of an individual I/O unit, go to configuration menu 2.

Select Edit Device.

```
Configuration Menu 2
4:Configure Loops
5:Edit Device
6:Config System    <
```

Scroll to the required Address.

Press V to cycle through the different Variations of I/O configuration.

```
I/O-COM                  🔇
Analog:  16  Normal
Interface to Main FA
Zone:01       Ad:013
```

12.9.4 SETTING INDIVIDUAL I/O UNIT INPUT OPERATION

To alter the INPUT mode of an individual I/O unit, go to configuration menu 2

Select Edit Device.

Scroll to the required Address

Press Button “I” (for Input) to cycle through the different Triggering Options of I/O configuration

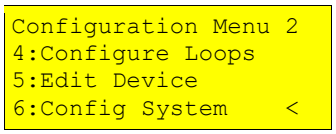
```
I/O Zn-D          P
Normal
Plant Room
Zone:01         ID:01
```

The different options are:-

Letter	Description	Use
A	AUTOMATIC ALARM	I/O signals Detector alarm when operated. Default setting. Used when device being monitored is Automatically triggered.
M	MANUAL CALL POINT ALARM	I/O signals a MCP alarm when operated. Used when device being monitored is Manually triggered, and the system is set to distinguish manual & automatic alarms.
P	PREALARM	I/O signals a Pre-Alarm when operated. Used when a device being monitored needs to give a warning signal , but not an alarm signal.
F	FAULT	I/O signals a Fault Signal when operated. Used when a device being monitored does not have a normally closed fault relay
D	DISABLE RELAYS	I/O sets all connected I/O relays as disabled when operated. Used when user testing of the panel needs to suspend relay operation to avoid shutting down connected equipment. Turning off the input re-enables the relays

12.10 SETTING THE LCD LANGUAGE

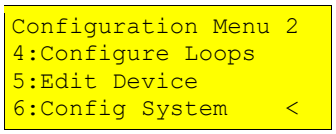
From Configuration menu 2, Select configure system (option 6).



Then from the Misc Settings menu, select option 1 (Language).

Pressing Prev / Next will scroll through the available languages.

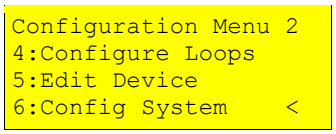
The currently supported languages are:-



Language Bank 1:

English
Spanish
Portuguese
French
Italian

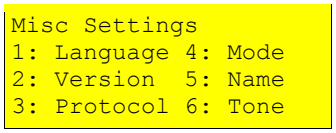
Language Bank 2:



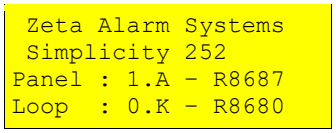
English
Hungarian
Serbian
Lithuanian

12.11 SOFTWARE VERSIONS

From Configuration menu 2, Select configure system (option 6) .
Then from the Misc Settings menu, select option 2 (Version Info).



The panel will display the software versions in its two Microcontrollers, one for the main functions and one for the Loop Driver. This information may be useful for technical support in the Event of any problems occurring with the Control Panel.



(Note that the revision number is an internal reference number. It does not mean that there have been 8000+ software revisions)

12.12 PROTOCOL

The Simplicity Panel now supports 2 addressable protocols. The Original Zeta Addressable Protocol, and the new Fyreye Mk II Protocol. The New protocol has been introduced to allow future development of our products, but is unfortunately incompatible with the original Protocol.
Check the information below and select the correct protocol for the devices you have on the system.

Original Fyreye Detectors (1 LED)

FEAO2000 FEAH2000

Use STANDARD Protocol setting

Fyreye Extra Detectors (2 LED)

FEAOE2000 FEAHE2000

Use **STANDARD** Protocol setting

Fyreye MK II Detectors (8 LED)

FEII-AOP FEII-AHR

Use **FYREYE MK II** Protocol setting

Changing the protocol

From Configuration menu 2, Select configure system (option 6)

Then from the Misc Settings menu, select option 3 (Protocol)

Press Prev / Next to select Standard or Fyreye-Mk2 protocol, and then press ENTER

```
Select Protocol
 Fyreye-Mk2

ENTER to Confirm
```

NOTE: The Factory Default option will reset the panel to the Fyreye Mk II Protocol. If your system is running the standard Zeta protocol devices, then you will need to change the protocol (as described above) before the panel will see the devices

13. ALARM VERIFICATION

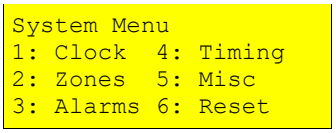
The Simplicity now includes an option to use alarm verification.
It is intended for use in apartments, and similar buildings, where it is desirable that an alarm from one apartment (or area) would need to be confirmed before the whole system goes into alarm.

13.1 HOW ALARM VERIFICATION WORKS

The verification function works as follows:-
Any SMOKE detector on the system can be set to verify an alarm.
If a detector with the verification setting senses smoke, the detector alarm led will turn on. If the detector has an associated sounder base, the sounder will turn on with the Alert tone (i.e. pulsed) rather than the Evacuate tone. The Simplicity panel's screen will show "Confirming alarm" and the PRE-ALM LED will start flashing.
If the detector drops below the alarm level within the programmed verification time (60 seconds to 3 minutes 45 seconds), the sounder will turn off and the PRE-ALM LED will turn off, but the panel will continue displaying "Confirming Alarm" for at least 5 minutes. The buzzer will also continue to operate as long as the "Confirming Alarm" message is displayed.
If the detector stays in alarm by the end of the verification delay, the system will go into full alarm.
If another detector WITHOUT verification setting or a call point goes into alarm, the panel will go straight into full alarm.
With this method of operation a "cooking alarm" in one apartment will alarm locally, giving the apartment occupants a chance to clear the smoke before the whole building is evacuated. Also, as a "failsafe", if a heat detector alarms, or if a second smoke detector on the system goes into alarm, the system will go into full alarm.

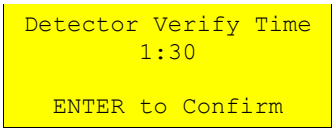
13.2 SETTING THE ALARM VERIFICATION DELAY

To set the verification delay, go to Configuration menu 2 and select option 6 System menu.
From the system menu, select option 4 (timing)

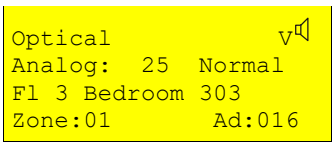


From the alarm timing screen, select option 2 (Alarm Verify)
Use Prev & Next to adjust the time, then press enter to confirm

13.3 APPLYING ALARM VERIFICATION DELAY TO A DETECTOR
To set the verification delay for a detector, go to Configuration menu 2 and select option 5 (Edit Device).



Scroll to the required device, then press V for Verification. The letter V appears in the top right hand corner to confirm that this device now has the verification delay. Pressing "V" again will toggle the Verification off.



14. RESTORING THE PANELS DEFAULT SETTINGS

Because the simplicity now allows several configuration changes, we have also included an option to reset the panel back to its default operation. From Configuration Menu 2, Select Option 6 (Configure System).
Then from the System Menu, Select option 6 (Reset). This brings up the screen to select to reset :-

```
System Menu
1: Clock  4: Timing
2: Zones  5: Misc
3: Alarms 6: Reset
```

```
Optical            V
Analog:  25  Normal
Fl 3 Bedroom 303
Zone:01       Ad:016
```

* Event Logs
* Zones
* Panel
* Devices

Or

* All

The panel can be reset in sections, or completely as follows:-

OPTION	ITEM	FUNCTION
1	Logs	Clears event log (Note that the Event counter is not reset)
2	Zones	Sets the zone boundaries back to their default setting
3	Panel	Resets alarm response back to all common & resets system timers
4	Devices	Clears device information from memory, and clears device label & device configuration
6	All	Performs (2),(3),(4) in one operation

When you select to reset a section, the panel will display something like:

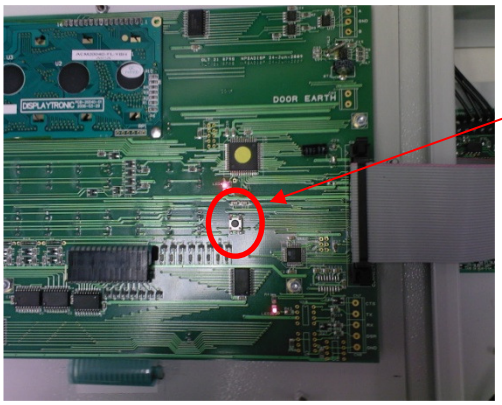
```
  Clear Event Log


  ENTER to Continue
```

Press enter to confirm, or cancel to abort the action. The panel will then warn that this action cannot be undone.

```
Clear Event Log
WARNING: This Action
cannot be undone
ENTER to Continue
```

Press enter to confirm, or cancel to abort the action. The panel will then ask for the Write protect button to be pressed. To Press the write enable button, the panel door will need to be unlocked, providing that extra level of security against accidental erasure.

```
Please press the
Write-Enable switch
on the CPU board
```



NOTE: Selecting Reset ALL will perform a factory reset on the panel, and will set the protocol to Fyreye MK II.

If the system was running Original Protocol devices, the protocol would need to be set to STANDARD protocol before the panel will see the devices. See Section 12.12

15. VIEWING PANEL INFORMATION

15.1 MENU STRUCTURE

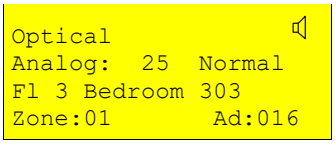
To help locate the different features available, the menu structure of the simplicity panel is shown here.

MENU LAYOUT			
MAIN MENU	SUB MENU 1	SUB MENU 2	DESCRIPTION
CONFIGURATION MENU 1 – THE USER MENU			
1:Loop Contents	-	-	View quantity of each device type configured on the loop
2:Device Status	-	-	View the status of an individual device (Status – normal/fault/alarm, Analogue value, device label
3:Event logs	VIEW EVENT LOG		
	1: Alarms	-	
	2: Faults	-	
	3: System	-	
	4: All	-	
CONFIGURATION MENU 2 – THE ENGINEER MENU			
4:Configure Loops	-	-	Configure the loop
5:Edit Device	-	-	Edit device label (press enter for cursor) Turn on detector LED Ring associated sounder Select alarm verification Turn off associated sounder at this address Disable this device. Select specific I/O Operation for an I/O unit
6:Config System	System Menu		
	1: Clock	-	Adjust time & date
	2: Zones	-	Change zone boundaries
	3: Alarms	Alarm Operation	
		1: Det	Choose detectors to cause zonal alarm or common alarm for sounders. There is also an option for alarms from detectors not to ring any sounders.
		2: MCP	Choose MCP to cause zonal alarm or common alarm for sounders
		3: SOUNDER	Select if the sounders have a zonal to common time out when triggered zonally
		4: Bases	Select if associated sounder bases work common or zonal
		5: I/O	Select default I/O type
		6:Relay	Chose if the on board fire relay operates for all alarms, detector alarms only, or manual call point alarms only
	4: Timing	Alarm Timing	
		1: Zonal to Common	Select the delay for all the sounders to operate after a zonal alarm
		2: Alarm Verify	Select alarm verification time
	5: Misc	Misc Settings	
		1: Language	Select LCD language
		2: Version Info	Displays the firmware versions
		3: Protocol	Select device protocol
		4: Mode	Select maintenance or running mode. Maintenance mode reports all faults as soon as the panel detects them. Running mode requires a fault to be present for around 30 seconds before reporting
		5: Name	Allows a panel name to be entered (2 x 20 characters)
		6: Tone	Allows the alarm tone to be selected. See sounder manuals for further information.
	6: Reset	Reset Settings	
		1: Logs	Erases event logs
		2: Zones	Resets the default zone boundaries
		3: Panel	Resets panel to default alarm & timing settings
		4: Devices	Erases loop contents from memory, clears device labels, resets verification & sounder base settings to default.
		6: All	Resets all configuration settings, but preserves event log.

15.2 VIEWING DEVICE STATUS

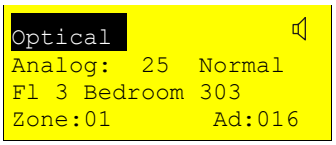
On the Simplicity, all loop devices can be viewed from Configuration Menu 1, or viewed & edited from Configuration Menu 2.

Enter configuration menu 2 as described above, and select option 5 (Edit Device).
The following screen is shown:

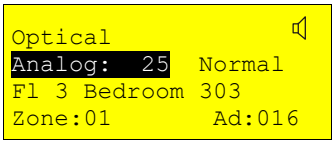


The screen is divided into the following sections:-

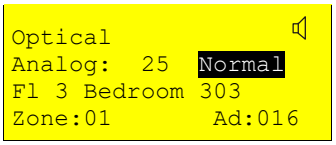
Configured Device Type
This shows the Device that was at this address during the last loop configuration.
There are 8 possibilities for this:-
Optical, Ion, Heat, Call-Pt, Sounder, I/O Unit, Zone Mon or CO



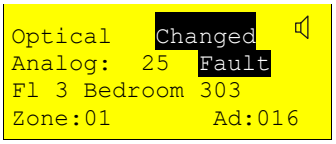
Analogue Value
This shows the analogue value that the device is sending To the panel. For detectors, this value is usually about 25 for clean air, and 55 during alarm. Non analogue devices such as call points and I/O units have a normal value of 25, and an alarm value of 55. They will return a value of less than 8 to report a fault condition.



Device Status
This is the current status of the device. It will show one of the following values:-
Normal, Fault, Alarm or Prealarm

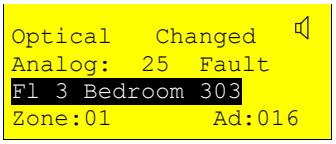


Fault Description
If the device is in a fault condition, a description of the fault will appear here. It will show one of the following messages:-

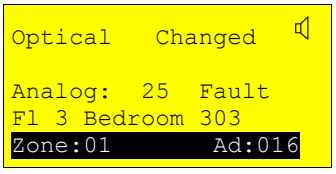


FAULT	MEANING
Changed	The device had been changed with one of a different type since last configuration. The message will flash between Changed, and the new type of device seen (e.g. Ion).
Missing	The device is not communicating (i.e. removed , damaged or Address setting changed)
Side A Only	There is a break in the cable, and the device is only seen from Side A
Side B Only	There is a break in the cable, and the device is only seen from Side B
2-ADDR	Two devices have the same address setting
No message	This device is signalling an internal fault by returning a value of less than 8. (e.g. sounder control unit that has lost its power supply.)

Device Label
This is the 20 character description of the device location entered by the installer. To change this Press Enter button to activate the cursor.

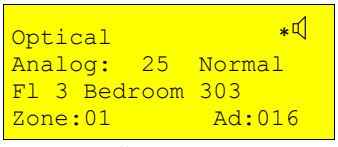


Device Identification
This is the Zone and address of the device. This is how the device will probably be referred to on the system drawings.



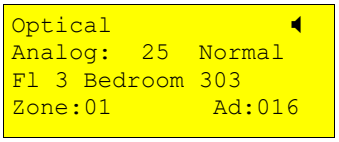
15.3 LOCATING A DEVICE

From the edit device screen, it is possible to send commands to individual devices to start their sounder, or to turn on their alarm LED.
Select the loop and address for the device to be checked.



If the device is an addressable detector, its LED can be turned on by pressing the TEST SELECT Button. A star will appear in the top right hand corner to show that the LED has been lit on this device. Press again to turn off.

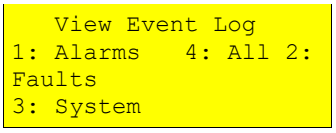
If the device is an addressable sounder, or a detector with an associated sounder base attached, the sounder can be started by pressing the TEST button. The Outline sounder Symbol turns solid to show that the Sounder is active. Press again to turn off.



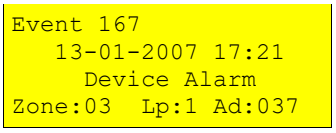
The LED & sounder can both be activated if required.
Scrolling to another device or exiting the menu will automatically turn the LED or sounder off.

15.4 USING THE EVENT LOG

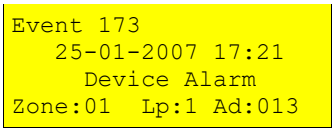
The Simplicity has a 2048 entry event log. In the event of the log being full, it will wrap around, and overwrite the earliest entries. The event log can be viewed through Configuration Menu 1 by selecting Option 3 - View Event Log. The screen prompts for which events to display: Alarms, Faults, System or All.



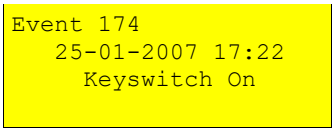
Alarms
If the alarm option is shown, only alarms will be displayed. The screen will show the event number, the date, the time, the type of event (in this case, a DEVICE ALARM), and the Zone, loop and address. Next & Previous buttons will cycle through the list.



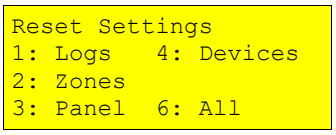
Faults
Selecting this option will display all the faults recorded on the system, Both device faults and general faults. The screen will show the event number, the date, the time, the type of event (in this case, a DEVICE CHANGED fault), and the Zone, loop and address, if appropriate. Next & Previous buttons will cycle through the list.



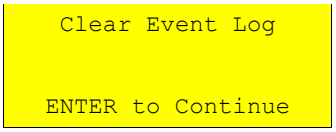
System
The Simplicity also records other non critical items, such as keyswitch turned on etc. These can be used to help determine the chain of actions before or after an event. The type of events recorded are:- Power On/Startup, Panel Reset, Evacuate, Keyswitch ON, Keyswitch OFF, Sounders Silenced, Configure Loops, Time & Date Set, Zone Disabled, Zone Enabled, Device Disabled, Device Enabled, Zone Test Start, and Zone Test Finish.



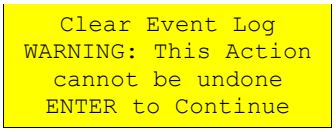
Note: during installation and commissioning, it is possible to create a large number of events, especially if a configured loop is disconnected. This is normal, and is not a case for concern. These events can be cleared, using Configuration Menu 2.



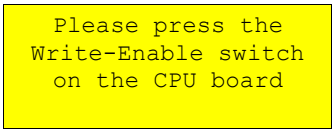
To clear the event log, go to Configuration Menu 2 and select option 6 (Configure System). Select Option 6 to go to the reset screen. Choose option 1 to reset event log.



The screen warns that this can not be undone. Press ENTER to clear the event log, or any other button to cancel this screen. It will also prompt for the write enable switch to be pressed.



Note that when the event log is cleared, the EVENT NUMBER remains the same. This is so that a visiting engineer will have an idea of the activity on a panel, even if the event log has been cleared. The counter has a maximum value of 524287, and will return to 0 after this.



16. THE FIRE ALARM CONDITION

16.1 VIEWING A FIRE ALARM EVENT

The way the simplicity panel shows fire alarm information has been changed slightly from previous versions of the panel. The LCD screen text has been altered to show the first & last zone entering the alarm condition.

For Example, a first alarm on a system will bring up the display:
This Means there is a fire alarm condition. It is the first (and only) alarm that has Occurred (Fire 1 of 1) The device signalling alarm is in the Manager's office, and It is address 001 in zone 01.
If a second fire then occurs in say zone 2, the system would display:

```
FIRE        First Z01
1 of 1
Managers Office
Zone:01        Ad:001
```

The bottom 2 lines will still show the details of the first alarm (Press Prev or Next to Display information about the second alarm). The top right hand corner shows the first zone that gone into alarm, and the last NEW zone that has gone into alarm. Note that the numbers in the top left corner (1 of 2) is the number of DEVICES in alarm, not the number of zones in alarm. The ZONAL LEDS will indicate the number of zones in the alarm condition.

```
FIRE        First Z01
1 of 2       Last Z02
Managers Office
Zone:01        Ad:001
```

So for example, if there was a third alarm, this time from zone 1 again, the right hand corner would continue to show First alarm ZONE 1, Last alarm ZONE 2. This allows the fire brigade to see the spread of the fire.

```
FIRE        First Z01
2 of 2       Last Z02
Kitchen
Zone:02        Ad:017
```

Because of this, if there are multiple alarms, they are grouped by zone, so scrolling to review alarms would show all alarms in the first zone in alarm , then all alarms in the second zone that went into alarm etc. To view the alarms chronologically, the event log must be used.

```
FIRE        First Z01
2 of 2       Last Z02
Kitchen
Zone:02        Ad:017
```

16.2 VIEWING FAULTS DURING A FIRE ALARM CONDITION

In the event of multiple alarms, and multiple faults on the system at the same time, the LCD screen will give priority to alarm events. The screen will show the first alarm, and the Prev/Next scroll buttons will cycle through alarm events only. The LEDs will show general fault information. To show fault event details on the LCD screen, press the CANCEL button. Prev & next will now scroll through the faults. Press cancel to return to viewing the fire alarm information. (If the panel is left viewing a fault, after a short period of inactivity, the panel will revert to the fire alarm display)

16.3 VIEWING ZONE DISABLEMENTS DURING A FIRE ALARM CONDITION

Zone disablements are indicated by a LED for each zone.
If no individual devices are disabled, then by pressing the GENERAL DISABLEMENT button and the disablement SELECT button, information about zone disablements and the number of individually disabled devices per zone can also be viewed on the LCD.
If one or more devices are disabled, then when the GENERAL DISABLEMENT button is pressed, the screen will display the options as shown in section 17.4. Press 1 to select zone disablements, and then continue as per the paragraph above.

16.4 VIEWING DEVICE DISABLEMENTS DURING A FIRE ALARM CONDITION

To view individual device disablements during an alarm condition, press the GENERAL DISABLEMENTS button, and the screen will display the options as shown in section 17.4. Press 2 to select device disablements, and press the Next button to scroll through all the disabled devices.
16.5 VIEWING ZONES IN TEST MODE DURING A FIRE ALARM CONDITION
On the simplicity panel, zone test mode is indicated by a LED for each zone, so LCD screen access is not required.

17. DISABLEMENT

On the Simplicity, there are 2 disablement options. A whole zone of devices can be disabled, or an individual device in a zone can be disabled. Both types of disablement can be used at the same time if required.

Note that when there is any type of disablement present, line 3 of the "System Normal" screen will show "Disablements Present".

```
SIMPLICITY 252
FIRE ALARM PANEL
Disablements Present
27-09-2010   15:16
```

Also note that any required disablement(s) must be programmed before a zone is put in to test mode.

17.1 ZONE DISABLEMENT

To aid commissioning and assist routine maintenance checks, any of the zones or the loop sounders can be disabled. When a zone is disabled, the panel will not respond to any fault or fire signals it receives from any device in that zone. This might be used if the system requires routine maintenance, and the customer needs the system to continue running, but doesn't want spurious false alarms.
The panel will respond in the usual manner to any events in any non-disabled zones.
The Simplicity also allows the loop sounders to be disabled. If they are disabled, the panel will not start any sounders in an alarm condition.

17.2 TO PROGRAMME ZONE (OR SOUNDERS) AS DISABLED

Any number of zones (or the sounders) can be disabled, but it is good practice to only disable one zone at a time.

Insert and turn control key to enabled position;
Press GENERAL DISABLEMENT button and the screen will show: ZONE DISABLEMENT ZONE 1.
The panel is now in SELECT DISABLEMENT MODE.

```
Zone Disablement
    Zone  1
Zone Enabled
Disabled Devices:  0
```

Press DISABLEMENT SELECT until the required zone or loop sounders is DISPLAYED. Press DISABLEMENT CONFIRM button. The screen will now show that the zone is disabled, and the Zone or Sounder LED will come on steady, along with the GENERAL DISABLEMENT LED.

```
Zone Disablement
Zone  3
Zone Disabled
Disabled Devices:  0
```

This section is now disabled. **(NOTE: Call points in this zone will also be disabled. To keep the call points functioning, disable the detectors in that zone individually as devices – see 17.3)**

If more than one zone (or sounder) needs to be disabled, then press DISABLEMENT SELECT again until the required zone (or sounder) is selected.
If the panel needs to be taken out of SELECT DISABLEMENT MODE (e.g. to silence a fault on another part of the system), Either press GENERAL DISABLEMENT button, or turn the keyswitch off, then back on again.
Once all the maintenance work has been done the zones need to be enabled again. If the panel is still in SELECT DISABLEMENT MODE, jump to paragraph 7, otherwise, turn the keyswitch to controls enabled, press GENERAL DISABLEMENT button. The panel is now in SELECT DISABLEMENT MODE
Press the DISABLEMENT SELECT button until the disabled zone is displayed on the screen. Press DISABLEMENT CONFIRM button to de-select disablement. Scroll to any other disabled zone and enable in the same way. When all zones are enabled again, the GENERAL DISABLEMENT LED will turn off. Turn the keyswitch to off position to return the system to normal. (NOTE: This will also enable any points individually disabled in that zone)

17.3 DEVICE DISABLEMENT

The Simplicity Plus panel can also disable individual devices (detector, call point, sounder or interface). To do this, enter CONFIGURATION MENU 2 and select EDIT DEVICE. Select the required device, then press GENERAL DISABLEMENT button. The Device label now flashes between the programmed label and Device Disabled. The general disablement LED will also be lit. This device is now disabled.

```
Optical                  🔇
Analog:  25  Normal
  Device Disabled
Zone:01  Lp:1 Ad:016
```

To re-enable the device, press the disable button again. Note that when all the devices in a Zone are disabled, the Zone is considered to be disabled, and the Zone disablement LED will light.

17.4 VIEWING DISABLEMENTS

When disablements have been programmed (either zone or device), the general disablement LED will be lit. To view the disablements, press the GENERAL DISABLEMENTS button, and the screen will show the following:

```
  Disablement
1: Zones
2: Devices
```

17.4.1 VIEWING DISABLED ZONES

To view which zones are disabled, press 1 and then scroll through all the zones, by pressing the disablement Select button or the Next button.

If a zone is not disabled, the screen will show:

```
Zone Disablement
Zone  1
Zone Enabled
Disabled Devices:  0
```

If a zone is disabled, the screen will show:

```
Zone Disablement
Zone  1
Zone Disabled
Disabled Devices:  0
```

If there are one or more disabled devices in a zone, the screen will show this by the number of Single Devices as follow.
(TIP: a quick way to enable several disabled devices is to disable the zone in which these devices are located, then re-enable it)

```
Zone Disablement
Zone  1
Zone Enabled
Disabled Devices:  2
```

17.4.2 VIEWING DISABLED DEVICES

To view which devices are disabled, press 2 and scroll through all the disabled devices, by pressing the Next button.

The screen will show:
Line 3 will flash between the device label and Device Disabled Message.

```
Optical                 🔇
Analog:  25  Normal
  Device Disabled
Zone:01       Ad:016
```

18. TEST MODE

18.1 WHY USE TEST MODE

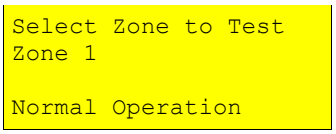
To aid commissioning and assist routine maintenance check, a silent, non-latching test facility is available.
When a detector or manual call point is triggered on any zone in Test, the Device will light its LED, When the smoke has cleared, or the call point has been reset, the LED will turn out.
Should an Alarm occur on a zone that is not programmed to test, the Fire Alarm Panel will go into full alarm. The Zone test LED will continue to be lit. When the alarm has been reset, test mode will resume

18.2 TO PROGRAMME ZONE IN TEST MODE

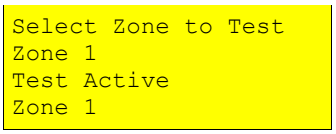
NOTE: Only one zone can be programmed in test at any one time.

Insert and turn control key to enabled position;
Press TEST Button. The screen will prompt for the test code
Enter the Test code **2 4 8**.

The screen will now invite you to select the zone to be tested, as follows:
Press TEST FUNCTION SELECT button to select the zone to be tested.
Press CONFIRM to enter test mode for this zone. The General Test and Zone Test LEDs will now be lit.

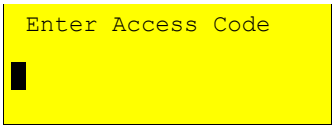


Detectors in this zone can now be tested with smoke spray. The Detector will light its LED until the smoke clears, then it will reset. The Sounders & the fire relay are not operated during test mode.
Once testing of that zone is completed, press TEST FUNCTION SELECT button to move to another Zone or turn the control key switch to off position to exit test mode.

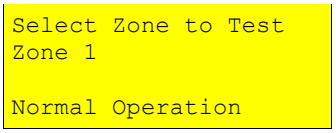


18.3 TO PROGRAM SOUNDER CIRCUITS IN TEST MODE

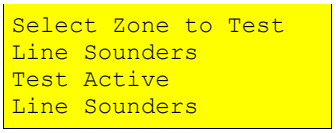
Insert Control Key and turn key to enabled position;
Press General TEST Button, The screen will prompt for the test code.
Enter the code **2 4 8**.
The screen will now show Test Mode, Zone 1, Normal Operation.



Press TEST FUNCTION SELECT button several times to select the Loop SOUNDERS.
Press confirm to enter test mode for this function. The general test LED and the sounders test LED will now be lit.



The Sounders will now pulse 8 seconds on, 8 seconds off until they are taken out of test mode. This allows all the sounders to be tested for correct operation, and dB output.
Once testing of the loop sounder circuit is completed press CANCEL or turn the control key switch to off position to exit test mode.



Note : During Test Mode the Panel is at Access Level 2. Steps should be taken to avoid unauthorised access to the panel while it is in test mode.

19. GENERAL FAULT FINDING

On the Simplicity panel, Faults are divided into 2 types, “Faults” and “Device Faults”. Device Faults are any fault associated with a particular address on the loop. Faults are everything else, EG , power supply etc. In the event of multiple faults, the Faults are grouped together first, followed by the device faults. Next button will scroll to next fault.

19.1 COMMON FAULT

This is a general indicator which lights whenever a fault is present. It doesn’t refer to a specific fault.

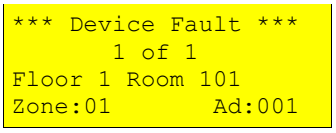
19.2 LOOP CONTENTS FAULT FINDING

If the loop contents are different to what was expected, then there three probable causes:-
Two or more devices may have the same address setting. This is referred to as a double address fault. If this occurs all devices with the same address will answer at the same time. The panel will not be able to understand the answer it receives. NOTE: If a panel detects a double address, it will light the LEDs of the devices with the problem. (NOTE: only detectors will light their LED. Sounders & interface modules will not be indicated).
There may be some reversed connections to devices (they are polarity sensitive). The Fyreye detectors should be connected Loop + to L2, loop – to L1IN. Other devices will have their polarity marked by their connections.
On the reduced loop Simplicity panels (i.e. Simplicity Micro & Simplicity Plus 64), it is possible to address a detector out of the panels range (e.g. a Simplicity Plus 64 would not read a detector set to address 65, but it will now report a device out of its address range to help identify this problem)
If the panel reports any double addresses present, investigate these first as they are the easiest to find. The panel will turn on the LED of any incorrectly addressed detector. (See 19.6 DOUBLE ADDRESS)
If there are still less devices than expected, check the missing addresses for correct wiring polarity. If in doubt, contact your supplier.
If the wiring polarity is correct, check that there is no cable break on the loop. (If there is a break, the panel will report the break after 60 seconds or so, and inside the panel, the LOOP POWERED LEDS (on the termination PCB) will alternate on & off). Some devices take a few seconds to power up, so may show as missing during the repeated Power Down / Power Up cycle that occurs during a line break.

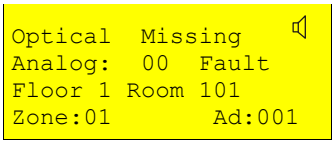
19.3 ZONE FAULTS

There are several reasons for the zone fault LED to light.
There is a cable break, or short circuit to devices in that zone,
A device has been removed from that zone
A device has been changed for one of a different type
There is a double address in this zone (see previous section)
A device in that zone is communicating a fault condition to the panel with its analogue value. A value less than 8 is usually a fault condition. (This could be a zone monitor reporting a fault in its zone wiring, for example.)

The LCD will show Device Fault, the user label, and the address Of the fault. Pressing enter will bring up the View Device screen for the device showing fault. This will give more information about the fault.
In this example, the device is Missing. IE the panel is not receiving an answer from this address.

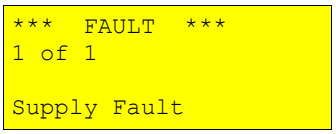


This could either be a removed detector, a changed address switch setting, or a damaged detector. Check the device has not been removed. Check that there is power to the base. Check address hasn’t been changed (compare to system set-up chart). Check that the base contacts are clean and free from dirt & corrosion. If possible, try a replacement head (remembering to set the correct address).



19.4 SUPPLY FAULTS

This version of the simplicity panel uses a separate power supply, so individual Fault indications are not available on the LCD.
To locate the cause of the supply fault, open the panel door, and check the LED indications on the Power Supply Board.

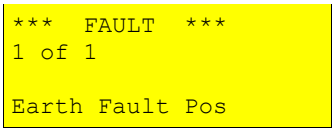


The Power supply will have LED indications for:-
Mains Fail (Mains low or missing)
Battery Fail (battery low, battery missing, battery high impedance)
Charger fail

Earth fault (Earth fault is generally disabled on the PSU because the earth fault is monitored by panel)

19.5 EARTH FAULTS

An EARTH fault indicates that something is shorting to earth (usually through the cable screen). Disconnect the earth screens one at a time to determine the problem line.
(Note: connecting other equipment , e.g. an oscilloscope or a PC , to the panel can give an earth fault)



The Screen will indicate if it is a Positive or Negative voltage shorting to earth (Earth Fault Pos or Earth Fault Neg).
*****DO NOT DISCONNECT THE MAINS EARTH CONNECTION. THIS WILL CAUSE A PROBLEM WITH THE PANELS OPERATION*****

19.6 DOUBLE ADDRESS

This indicates that a double address has been detected. This usually happens during initial setup, where 2 detectors are given the same address, or if a head is replaced during maintenance, and its address has been wrongly set. In the second scenario, the panel will report 2 fault addresses, one will be the double address, and the other will be a missing device. As a further aid to finding the fault, the panel will light the LEDs of any detectors with a double address (Sounders & I/O units will not be indicated as they have no panel controlled LED to light up)
Make a list of the double addresses reported (there may be more than one).
Go to view device screen in Configuration menu 1. Scroll through the devices, and make a list of any that are missing (Note: the panel skips over empty addresses when scrolling)
Go to the location of the missing device, and check if it has its LED on (Detector), or check the dip switch setting.
If this does not cure all double addresses, go to the known location, and temporarily remove the device. The panel will now report the type of device that was also configured to this address from the view device screen. This will help narrow down the search for the device. (e.g. if extra device is call point, check the address settings of all the call points)

19.7 SYSTEM FAULT

A system fault is an abnormal microprocessor running condition due to various unexpected phenomena.
This will result in the panel attempting to correct itself. Should this fault occur, the System Fault LED, General Fault LED, General Fault relay and fault internal buzzer will be constantly active until the control keyswitch is turned from off position to control enable position. This should cause this fault condition to reset. If not, consult your supplier.

19.8 PRE-ALARM

This is not a fault condition. The panel has detected a high reading from one of the devices on the loop. This could be caused by a fire starting (in which case it acts as an early warning), or it could be caused by a contaminated head. The panel will report the location of the problem device, which should then be investigated.
The PRE-ALM LED is illuminated constantly during the pre-alarm condition. **Note that the same LED is used during the confirmation period of Alarm Verification (see section 13), but in this case the LED flashes.**

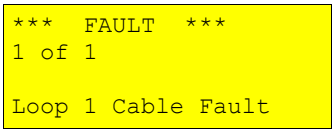
19.9 SOUNDER FAULTS

On the Simplicity there are only loop controlled sounders, but there may be conventional sounder circuits connected via a ZSCC - Sounder circuit controllers (ZSCC).

Check that the correct END of Line resistor is fitted. (47K – Yellow, purple, orange, gold)
Check that the sounder fuses is OK (FS1, – 4000mA TD)
If working on an existing installation, check that the devices are polarised. (See Page 5)
Check cable continuity (remove from panel and measure continuity. Should read 47K)
Check its external power supply is connected & working
For loop powered sounders, check that all sounders are communicating, and check their analogue value. If a sounder is returning a value less than 8, then it has detected an internal fault and should be replaced.
If they are not communicating, then check that they have power, and that the power is connected the correct way. If they have power, they may be damaged. Try a replacement if available.
Note that common sounder bases, and associated sounders are only monitored through the cable continuity (similar to a conventional sounder circuit), so are not able to give any fault messages.

19.10 LOOP WIRING FAULTS

A loop fault can be caused by a break, or short circuit in the Loop wiring. Open the panel and look for the 2 LOOP ON LEDs on the termination PCB. (4 LEDs for a 2 loop Simplicity).Under normal conditions these should be all lit steady. The LEDs represent Loop1 Side A and Loop 1



side B, and Loop2 Side A and Loop 2 side B.

If both loop LEDs for a loop are off, then this indicates that there is a short on the loop that the isolators couldn't bypass. (Check that the isolators are enabled, and aren't set for a cable continuity check). Split the loop half way, and check if either side of the loop will power up. Continue making more splits until the short has been found.
If the LEDs for a loop are flashing (both on, side A only, both on, side B only etc. – monitor for 12 or so seconds to see if LEDs flash), then this indicates a break in the wiring. This could be caused by either a break, or a pair of isolators shutting down a short circuit. If there are several missing devices (wait for the zone fault LED & check the addresses in that zone), then there is probably a short circuit on the loop (look for isolators lit Yellow or flashing). The missing devices should give an indication of the section with the break. Investigate that section as per the dead short circuit fault tracking method, as described above.

If there are no missing devices, then there is probably a simple break. If the loop has been configured such that as you move down the loop, the address always increases, then the fault can be located through the menu.
Go to view device screen. And select the first device on the loop. The screen will say either Side A only or Side B only. Scroll through the loop. When it changes from Side A only to Side B only (or Vice versa), this should be the location of the break.

Alternatively, disconnect one side of the loop and check which devices can be read. The break should be after the last read device. (Take care to keep the removed cables away from the panels circuit boards.)

20. STANDBY BATTERY REQUIREMENTS

The Following Table shows the Quiescent, Fault & alarm currents of the main parts of a Simplicity Fire Alarm System.

DEVICE	PRODUCT CODE	I_Q (MA)	I_{FLT} (MA)	I_{ALM} (MA)	MAX PER LOOP	MAX PER SYSTEM
SIMPLICITY PLUS 64 Fire Alarm Panel	SP-64	90	105	115	N/A	1
SIMPLICITY PLUS 126 Fire Alarm Panel	SP-126	90	105	115	N/A	1
SIMPLICITY PLUS 252 Fire Alarm Panel	SP-252	115	120	130	N/A	1
Premier Addressable REPEATER PANEL	REP-AD	200	220	220	N/A	4*
Fyreye MKII Addressable Optical Smoke Detector	MKII-AOP	0.5	N/A	5.0	126	252
Fyreye MKII Addressable Heat Detector	MKII-AHR	0.5	N/A	5.0	126	252
Fyreye MKII Fixed Temperature Heat Detector	MKII-AHF	0.5	N/A	5.0	126	252
Fyreye MKII Addressable Opto-Heat Detector	MKII-AOH	0.5	N/A	5.0	126	252
Zeta Addressable Call Point (EN54)	ZT-CP3/AD	0.45	N/a	2.3	126	252
Zeta Weatherproof Addressable Call Point	ZT-CP3/AD/WP	0.45	N/a	2.3	126	252
Zeta Addressable Input Module with SCI	ZAI-MI	1.0	1.25	3.6	32	64
Zeta Addressable Input/ Output Module with SCI	ZAIO-MI	1.0	1.25	2.0	16	32
Zeta Addressable Input/ Output Module with SCI – mains switching	ZAIO-MI /230	0.9	2.8	19	10	20
Zeta Sounder Control Module	ZASC-MI	0.6	0.6	0.8	16	32
Zone Monitor Unit	ZAZM-MI	3.5	12.6	13.2	10	20
Fyreye Addressable Beam Detector (5-50m)	ZT-BEAM + SMM/B	5	7	9	16	32
Sandwich Sounder Base	MKII-SSB	0.6	N/a	7.5	32	64
Zeta Addressable Maxitone Sounder	MKII/AMT	0.6	N/a	7.0	32	64
Zeta Addressable Maxitone Sounder flasher	MKII/AMTF	0.6	N/a	10.6	24	48
Zeta Addressable Xtratone Sounder	MKII/AXT	0.6	N/a	7.5	32	64
Zeta Addressable Maxitone Sounder flasher	MKII/AXTF	0.6	N/a	7.5	24	48
Zeta Addressable Remote LED Indicator	MKII-ARL/W(C)	0.45	N/a	2.1	32	64
Zeta Conventional wire Remote LED	MKII-RL/W(C)	0	N/a	10	32	64
Conventional Sounders (via a sounder Control Circuit)						
Zeta Conventional Maxitone Sounder	ZMT/8	0	N/a	15	N/a	N/a
Zeta Conventional Miditone Sounder	ZMD/8	0	N/a	15	N/a	N/a
Zeta Conventional Securetone Sounder	ZST/8	0	N/a	15	N/a	N/a
Zeta Conventional Megatone Sounder	ZIDC	0	N/a	200	N/a	N/a
Zeta Conventional Flasher	ZFL2RR	0	N/a	90	N/a	N/a
Zeta Conventional Sounder Flasher	ZLT/8RR	0	N/a	110	N/a	N/a
Zeta Conventional 6” Bells	ZTB6B/24	0	N/a	25	N/a	N/a
Zeta Conventional 8” Bells	ZTB8B	0	N/a	35	N/a	N/a
Conventional Detectors (via a Zone Monitor)						
Fyreye MKII Conventional Optical Detector	MKII-OP	0.06	N/a	25	N/a	N/a
Fyreye MKII Conventional Heat Detector (A2R)	MKII-HR	0.04	N/a	25	N/a	N/a
Fyreye MKII Conventional Heat Detector (A2S)	MKII-HF	0.04	N/a	25	N/a	N/a
Fyreye MKII Conventional Opto-Heat Detector	MKII-Oh	0.06	N/a	25	N/a	N/a
GSM COMMUNICATOR	GSM-COM	200	500	500	N/A	1
TCP-IP COMMUNICATOR	TCP-IP	80	80	80	N/A	1

* The Simplicity can only power 1 repeater. Any subsequent ones will need a separate power supply.

20.1 STANDBY BATTERY CALCULATION

In order to calculate the standby battery size required, the following formula can be used:-

Battery Size (Standby time in Amp Hours) = 1.25 x [(T_{ALM} x I_{ALM}) + (T_{SBY} x (I_{QP} + I_{QZ}))]

Where:

T_{ALM} = Maximum time in hours required for the alarm [½ hour is most common time]

I_{ALM} = Total Alarm Current in amps for all alarm devices connected to the alarm circuits

T_{SBY} = Standby time in hours for the system after mains failure [normally 24, 48 or 72 hr]

I_{QP} = Quiescent current in amps of control panel in fault condition [because of mains failure]

I_{Qz} = Quiescent current in amps of all detection zones. e.g. Addressable optical detector 0.00048 Amp (480 µA)

Typical Example:

A system comprises of 80 Addressable Optical detectors, 30 Sounder bases and the required standby is 24 hours. It will need to operate in alarm for ½ hour.

Calculate the battery size required.

T_{ALM} = 0.5 Hr

T_{SBY}= 24 Hr

I_{QP} = 0.105A (Quiescent current for panel)

I_{QD} = 80 x 0.00048 =0.0384 A [the quiescent current for an Addressable Optical detector is 480 µA)

I_{Qs} = 30 x 0.0004 =0.012 A [the quiescent current for an Addressable sounder is 400 µA)

$I_{Alm-snd}$ = 30 x 0.004 =0.12A

I_{AP} = 0.115A

Therefore using the equation:

Battery Size (Standby time in Amp Hours) = 1.25 x [(Df x T_{ALM} x $I_{ALM-snd}$+I_{AP})+ (T_{SBY} x (I_{QP} + I_{QD}+ I_{Qs}))]

(DF is a derating factor (typically = 2) used when a battery has to supply a high current load)

Battery Size (Standby time in Amp Hours) = 1.25 x [(2 x 0.5 x (0.115+0.12)) + (24 x (0.105 + 0.0384 + 0.012))]

Battery Size (Standby time in Amp Hours) = 1.25 x [0.235 + (24 x 0.1554)]

Battery Size (Standby time in Amp Hours) = 1.25 x [0.235 + 3.7296]

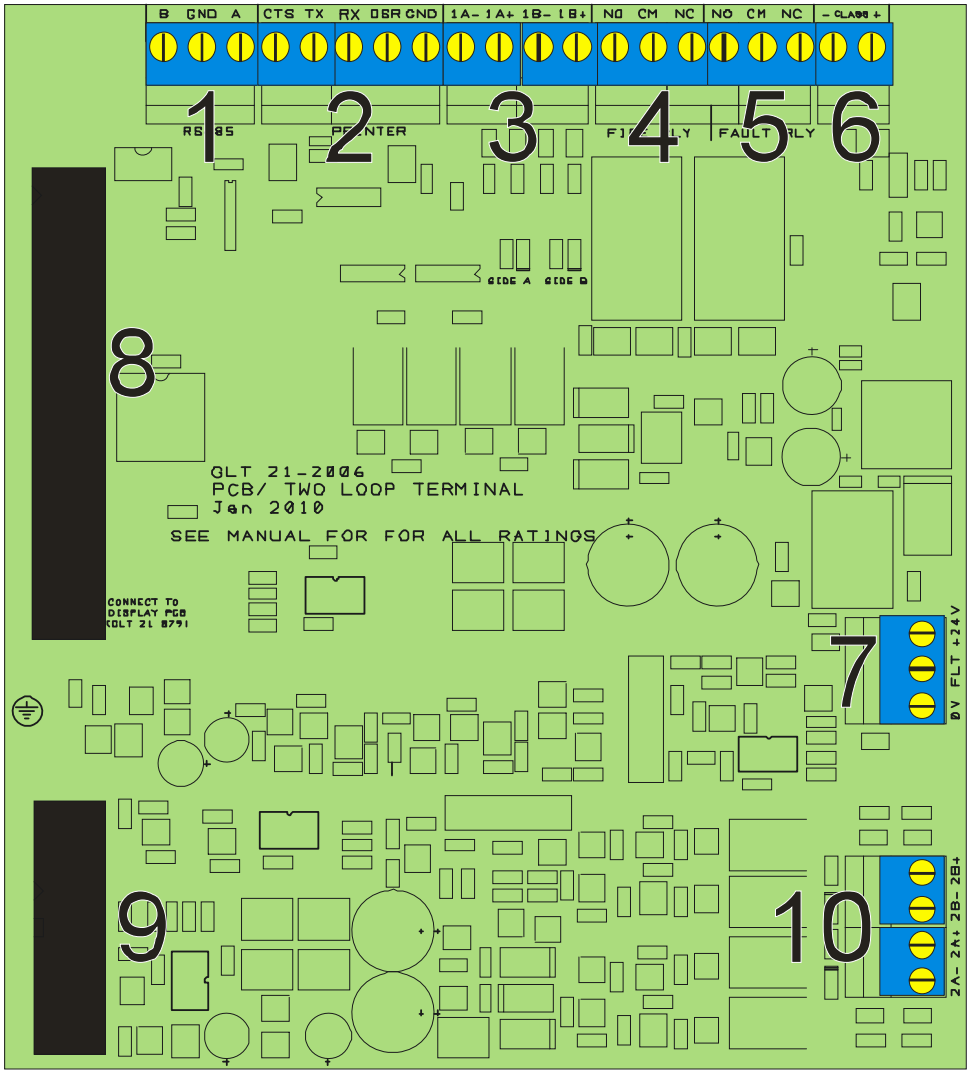
Battery Size (Standby time in Amp Hours) = 1.25 x 3.9646

Battery Size (Standby time in Amp Hours) = 4.95575 Amp Hours

This system would require a minimum of 4.96 Ah batteries, so we would recommend using 7Ah batteries .

21. PCB TERMINATION CONNECTIONS

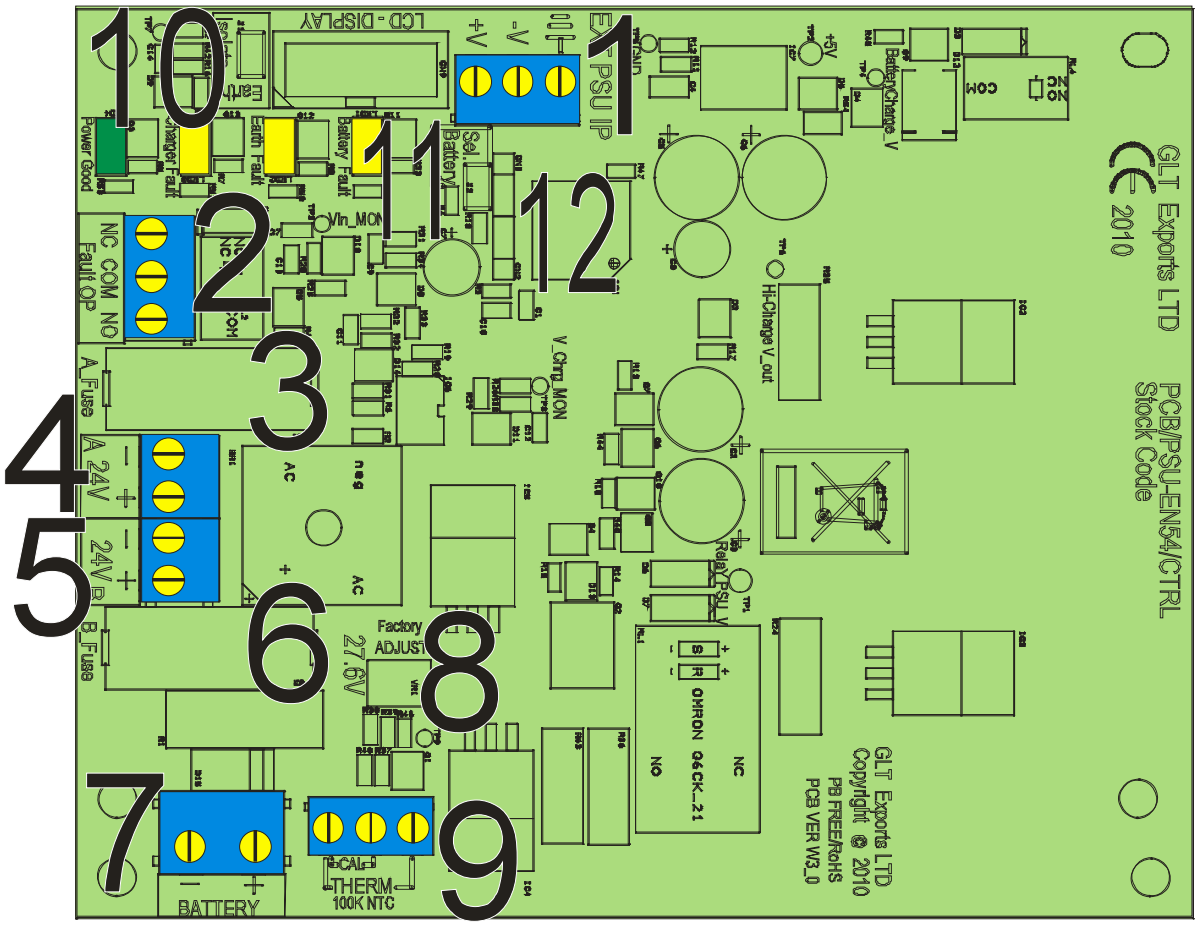
21.1 SIMPLICITY PLUS CIE TERMINATION PCB



21.2 CONNECTIONS

CONNECTION NO	DESCRIPTION	USE
1	RS 485 REPEATER	To link to addressable repeater
2	RS232 PRINTER	Serial port. Link to printer or TCP-IP reporting module
3	ADDRESSABLE LOOP 1	Connect to detector wiring: loop 1
4	FIRE RELAY	Volt free relay. Operates on any alarm
5	FAULT RELAY	Volt free relay – normally energised. Operates on any fault
6	CLASS CHANGE	Remote input to operate fire alarm panel sounders
7	24V & FAULT FROM PSU	Power & power supply fault connection to power supply
8	34 WAY RIBBON CABLE TO DISPLAY	Connects Loop 1 signals & general signals to display PCB
9	10 WAY RIBBON CABLE TO DISPLAY	Connects Loop 1 signals to display PCB (on 2 loop simplicity only)
10	ADDRESSABLE LOOP 2	Connect to detector wiring: loop 2 (on 2 loop simplicity only)

21.3 SIMPLICITY PLUS POWER SUPPLY PCB



21.4 SIMPLICITY PLUS POWER SUPPLY CONNECTIONS

CONNECTION NO	DESCRIPTION	USE
1	EXT PSU IP	External Power input from Switch Mode cage
2	FAULT OP	Volt free fault relay, normally energised
3	A-FUSE	Fuse for the first 24V output
4	24V A	Connection for the first 24 V output
5	24V B	Connection for the second 24 V output
6	B-FUSE	Fuse for the second 24V output
7	BATTERY	Battery connection. 2 x 12V SLA batteries wired in series
8	FACTORY ADJUST	Charger adjust pot. DO NOT ADJUST
9	THERM	Battery charger temperature compensation thermistor
10	EARTH ISOLATE	Jumper link to enable / disable earth fault reporting
11	SEL. BATTERY	Link to put charger in calibration mode from power up.
12	CN2 / CN3	ISP programming connector

21.5 SIMPLICITY PLUS POWER SUPPLY FUSES

FUSE NO	DESCRIPTION	RATING
IN LINK WIRE	Battery Fuse	5.0A time delay 5 x 20mm glass
FS1	Supply Fuse A	1.0A time delay 5 x 20mm glass
FS2	Supply Fuse B	1.0A time delay 5 x 20mm glass

22. SPECIFICATIONS

22.1 ENCLOSURE SPECIFICATIONS

DESCRIPTION	VALUE
ENCLOSURE SIZE	375 x 335 x 125 mm
TOP CABLE ENTRIES	12 x 19mm DIA GROMMETED ENTRIES
BOTTOM CABLE ENTRIES	2 x 19mm DIA GROMMETED ENTRIES
REAR CABLE ENTRIES	2 REMOVABLE CABLE ENTRIES, 60 x 20mm

22.2 ELECTRICAL SPECIFICATIONS

ELECTRICAL DESCRIPTION	VALUE
MAINS VOLTAGE	230V AC +10% / -15% @ 50/60 Hz
BATTERY VOLTAGE	24V DC (2 X 12V SLA BATTERY)
SYSTEM VOLTAGE	28V DC NOMINAL (18 – 32 V)
SYSTEM VOLTAGE RIPPLE	1V PK-PK MAX
CHARGER SIZE	750mA
LOOP VOLTAGE	28V DC NOMINAL (+9 volt data)
SOUNDER ALARM OUTPUTS	LOOP POWERED SOUNDERS ONLY
AUXILIARY FAULT OUTPUT	1 x FAULT RELAY SELV@1A (NORM. ENERG)
AUXILIARY FIRE OUTPUT	1 x FIRE RELAY SELV@1A
NUMBER OF LOOPS	SIMPLICITY PLUS 64 - 1 LOOP SIMPLICITY PLUS 126 - 1 LOOP SIMPLICITY PLUS 252 - 2 LOOPS
MAXIMUM NUMBER OF ZONES	SIMPLICITY PLUS 64 - 4 ZONES SIMPLICITY PLUS 126 - 8 ZONES SIMPLICITY PLUS 252 - 8 ZONES
MAXIMUM LOOP CAPACITY	SIMPLICITY PLUS 64 – 64 Devices SIMPLICITY PLUS 126 - 126 Devices SIMPLICITY PLUS 252 - 126 Devices
MAXIMUM ZONE CAPACITY	RECOMMENDED MAX - 32 DEVICES PER ZONE
MAXIMUM LOOP RESISTANCE	25 ohms
MAXIMUM LOOP CAPACITANCE	0.3µF
MAXIMUM VOLTAGE PICKUP ALLOWED	50mV
REMOTE SOUNDER ACTIVATION	VIA N/O CONTACTS
CHARGER VOLTAGE	27.6V @ 22-24^{O}C (NO BATTERY CONNECTED)
LOOP SHORT CIRCUIT PROTECTION	750mA
BATTERY DEEP DISCHARGE PROTECTION	Batteries less than 19.7V
TOTAL PSU OUTPUT	2.5 Amp

CE

0905

Zeta Alarms Limited
72-78 Morfa Road, Swansea SA1 2EN

12

0905-CPR-00145

EN54-2:1997+A1:2002 + A2: 2006
EN54-4:1997+A1:2002 + A2: 2006

Control and indicating equipment for fire detection and fire alarm systems for buildings

Simplicity Plus
SP-64/M, SP-126/M, SP/252-M

Provided options:

Output to fire alarm devices
Dependencies on more than one alarm signal
Fault signals from points
Disablement of addressable points
Test condition

Other Technical Data: See Doc: “Simplicity Plus Product file” held by the manufacturer

Installation Manual Modification History

Do Not Print this Page when creating PDF Of the manual

Issue	Date	Changes
3.09	01/08/2011	Version before Modification history page added.
3.10	14/06/2012	Corrected mains voltage references to 230V AC.
3.11	16/7/2012	Updated product images. Fixed formatting & spelling/punctuation issues. (Incorrectly marked as 3.2)
3.12	26/7/2012	Fixed Formatting Updated Device wiring Drawings Removed one man test mode reference. Amended Cable type Added Battery Type Added note that zones 1-7 must have at least 2 devices Added information about sounder start time Deleted “enclosure designed for 7AH” comment in battery calc section – refers to Original Plastic version of panel.
3.13	29/8/2012	Corrected Max loops/Devs to reflect 2 loop version (sect 22.2) NOTE: Use PDF Printer – Save as PDF causes problem on zone diagram.
3.14	5/3/2015	Added Max Zones Per System, Max points per system Added I/O config information Updated for MKII Protocol operation & devices Corrected general typos Updated BS5839 references to latest version Updated wiring info to MKII devices Mentioned Switch 8 always on for a simplicity Updated sounder selection to reflect current sounders Corrected panel name entry Updated interface setting to show all input & Output options Updated language list Changed verification time to minimum of 1 minute Added missing menu items
3.15	25/5/2017	Updated Company name to Zeta Alarms Limited
3.16	21/9/2017	Corrected CPR ref on CE box from 0359-CPR-0145 to 0359-CPR-00145.
3.17	6/5/2021	Updated NB number in CE box