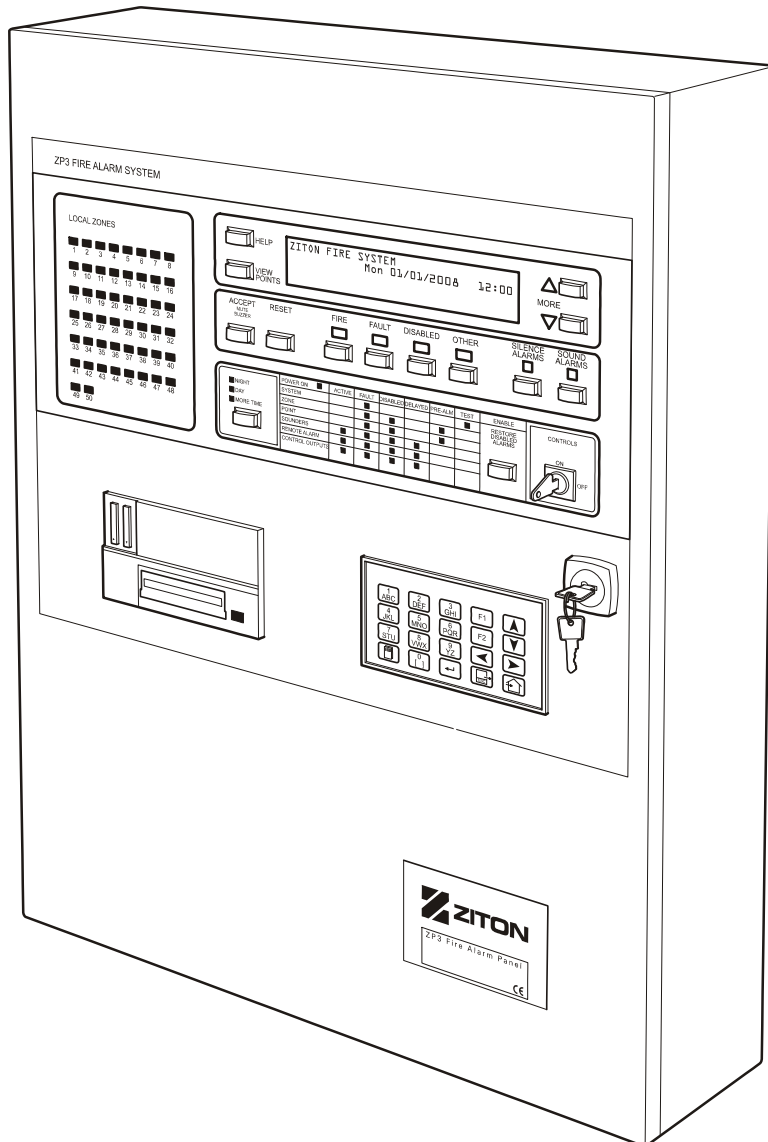


# Planner User Manual



2349-02



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## List of abbreviations and acronyms

Abbreviation	Definition
DC	Direct Current
GND	Ground
LCD	Liquid Crystal Display
LED	Light Emitting Diode
mA	milliampere
PC	Personal Computer
RX	Receive
SW	Switch
TX	Transmit
V	Volts

## Related publications

The following publications are referred from this manual:

Item	Document title	Document number
1	British Standard Fire Detection and Alarm Systems for Buildings. Code of practice for system design, installation and servicing	BS 5839 : Part 1 : 1988
2	European Standard for Fire Detection and Fire Alarm Systems	EN54 Part 2
3	ZP3 Fire Control Panel Installation, Operation and Maintenance Manual	503-1160ZE-I-10
4	ZP3 Fire Control Panel User Guide	503-1160ZE-U-10
5	Maestro Graphics System User Guide	503-126500-0-04
6	Maestro Graphics System Commissioning Manual	503-127700-0-03
7	ZCP2 Communications Protocol	
8	Remote Diagnostics User Guide Manual	503-146300-0-01

# Preface

## Purpose of manual

This manual is intended for use by fire alarm engineers and system designers in order to develop a fully operational ZP3 fire detection and alarm system of any size. It describes how to:

- Enter the required control panel and device information into the various Planner data files
- Set up mapping between outputs and inputs
- Transfer the completed programme into the ZP3 control panel.

Also covered is the method of downloading existing programmes back from the control panel into the PC for system record and amendment.

Data input and the database screens are described in detail and advice is offered on the input sequence, as Planner utilises the information from each entry to set details and the allowable parameters for any subsequent input.

A major section of the guide covers a series of step by step, I/O mapping examples. This part of the publication includes a selection of the most widely used device and zone cause and effect sequences. These examples are intended to provide the basic building blocks, from which the user can select and adapt sections to provide site specific, system cause and effect operations.

No specific Windows knowledge is expected or required. Planner is written such that only the most basic PC literacy is required. Planner runs on the Windows 2000 and XP platforms.

With reference to this document, knowledge of the ZP3 fire detection and alarm system and familiarity with the particular site being protected, the fire alarm engineer should, with some practice, be able to complete a working system and subsequently provide all necessary upgrades, maintenance and site support.

## Manual overview

This manual covers the following main areas.

- Chapter 1** - provides an overview of the Planner program and general system requirements.
- Chapter 2** - outlines the installation of the programme from CD-ROM.
- Chapter 3** - overviews the ZP3 addressing system.
- Chapter 4** - introduces the system databases.
- Chapter 5** - describes the main toolbar, its functions and menus.
- Chapter 6** - describes the input of data, via the database screens.
- Chapter 7** - provides basic examples of input/output mapping.
- Chapter 8** - covers information transfer between PC and control panel.

In several areas of the publication, the importance of producing a detailed system specification is mentioned. *Appendix A* on page 127 contains a number of suggestions for producing such a document, when Planner is to be used to configure the system.



# Chapter 1: Introduction

## Planner overview

Planner for Windows is a sophisticated software package that provides comprehensive off line configuration of ZP3 fire detection and alarm systems using a personal computer.

The software enables ZP3 equipment to be used for the protection of the widest range of building types, providing tools for developing systems, ranging from a single panel, to the largest networked sites.

Develop systems by inputting system details into seven display screens. Project details and information covering all system components are firstly logged, after which the system operation is developed using step by step input/output mapping facilities.

Planner verifies that the parameters entered into the database are within acceptable ranges and will prompt the user on the allowable options.

The programme has been developed on a project based approach, allowing the compilation of complex inter panel I/O mapping routines and multiple control panel configurations to be simply achieved by step by step data entry.

## Remote diagnosis

A remote diagnosis package utilises the Planner programme to provide facilities for panel control, system and device information and amendments to Planner files, from a remote location.

The programme is run on a PC via an appropriate modem link. Full details of the remote product are available in the Remote Diagnostics User Guide Manual, document number 503-146300-0-01.

## System architecture

The Planner programme is designed for the operational configuration of any ZP3 control panel, in systems of any size. The use of the programme is similar regardless of whether the system features a single, stand alone control panel, or a large peer-to-peer network of up to 255 control panels (verified up to 100 panels).

Configuration of both hardwired and radio (wireless) devices are included in the Planner programme.

Planner sets all system controls, responses, sensitivities as well as zone and device information.

Planner is also used to link individual fire alarm components together so as to form a fire alarm system. This manual should be read in conjunction with the relevant control panel manual, as this programme imposes the system structure upon the control panel hardware.

Maestro graphic systems, covered in the Maestro Graphics System User Guide, document number 503-126500-0-04 and Maestro Graphics System Commissioning Manual, document number 503-127700-0-03 are usually originated from Planner files. Where Maestro is to be an integral part of the system, the designer should be familiar with the operation of the graphics package, as Planner addresses the graphics workstation as a control panel in the fire detection and alarm system network.

## PC requirements

### Hardware

The Planner software runs on PC (or Laptop) with the following minimum specifications:

- Intel 350 MHz Pentium microprocessor or better
- 256 Mb RAM
- 3.2 Gb hard drive, or bigger
- 1.44 Mb floppy drive
- CD-ROM drive (only for installation – optional)
- 101 keyboard
- Mouse
- 1 x RS232 port
- 1 x PS/2 mouse port

### Operating system and software

Planner can operate on the following operating systems:

- Windows 2000 (Service Pack 4 or later)
- Windows XP (Service Pack 1 or later)
- Screen resolution 640 x 480 or higher
- Screen colours 256 or better

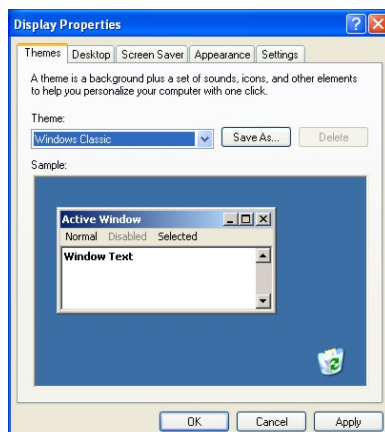
## Input method editor (IME)

This program is used to convert standard 101-keyboard characters to Chinese characters. As the user enters keystrokes, the IME auto-lookup engine attempts to identify the character or characters the keystrokes should be converted into; it then converts the keystrokes into Chinese characters.

## Setting the Windows theme (Windows XP)

When using the Windows XP operating system, set the Windows Theme to Windows Classic for optimum performance. This is located under Regional settings\Control Panel\Display\Themes.

Figure 1: Display properties screen



# Chapter 2: Installing the programme

## Overview

The Planner software programme is supplied on a single CD-ROM complete with auto run start facility.

Files contained on the CD-ROM are easily transferred to an appropriate medium, for use on PC's without CD drives.

To load the programme:

1. Insert the CD-ROM disk into the PC, CD drive. The auto run installation starts. If auto run does not start (due to individual PC settings) choose **Start > Run**, from the Windows taskbar.
2. Type **x:\install\setup.exe** (where x is the CD-ROM drive).
3. Follow the screen prompts and instructions on the installation introduction.
4. Installing from floppy disk:
5. Insert disk 1 into the A: drive
6. Choose **Start > Run**, from the Windows taskbar
7. Type A:\install

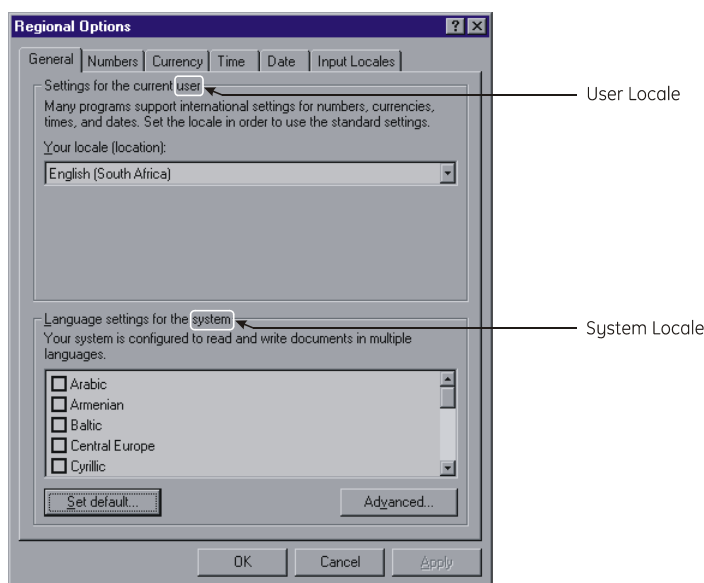
## Setting the system locale

The Windows locale setting specifies the input language. Either Windows code page 950 (Phase 1 - Traditional Chinese) or Windows code page 936 (Phase 2 - Simplified Chinese) may be selected. Follow the procedure below to configure the system locale.

### Windows 2000 operating system

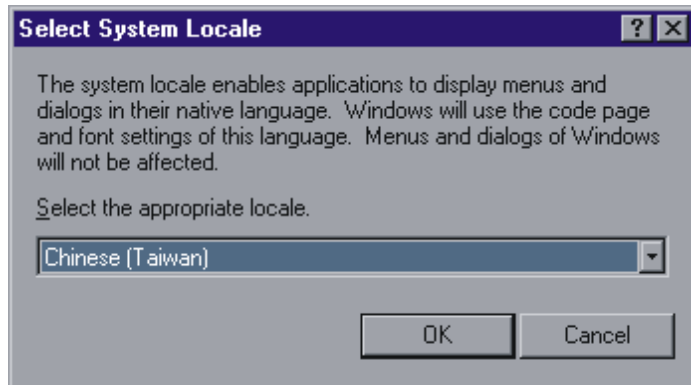
1. Navigate to Windows Control Panel\Regional Options\General tab (see Figure 2).

Figure 2: Regional options



2. Click **Set Default....** The *Select System Locale* window is displayed (see Figure 3).

Figure 3: Selecting the system locale



993892-01.cdr

3. Click on the dropdown box and select the relevant system locale.
4. Click **OK** (Regional settings) to apply the new settings.

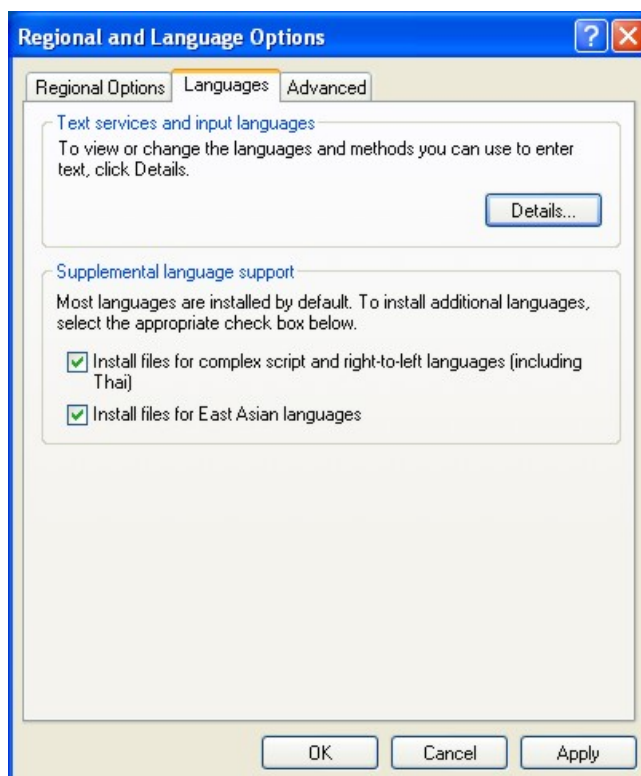
For Version 3.07 systems: Install Hong Kong Special Character Set package into the operating system. The setup files are included in a zipped file `hkscs2001.zip`. This can be downloaded from the Microsoft website: <http://www.microsoft.com/hk/hkscs/default.asp>.

**Note:** Installing this package will reboot the PC, and that the System Locale should be set to Chinese (Taiwan) or Chinese (Hong Kong) i.e. Windows code page 950, at the time of installing the package.

## Windows XP operating system

1. Navigate to Windows Control Panel\Regional and Language Options\Advanced tab (see Figure 4).

Figure 4: Regional and language options





2. Click **Details**.
3. Click on the dropdown box and select the appropriate system locale, for example set the default input language to Chinese (traditional) ChangJie (see Figure 5).

**Note:** Additional input languages may be loaded by clicking on the **Add** button (installed services section of the form – see below).

4. Click **OK** to select the option.

Figure 5: Text services and input languages



## Setting the input method editor (IME)

Select the new input method editor by left clicking on the IME icon (EN) that is located on the taskbar. The following menu is displayed (see Figure 6).

Figure 6: Input method editor





# Chapter 3: System configuration – general information

## Introduction

Devices within the system are identified and connected by assigning a unique address to each component.

The system operates by selecting trigger device addresses and linking them to the required output addresses via a software connection. Parameters are then applied to both input trigger and output addresses to formulate system facilities

For example the alarm condition assigned to a trigger device, i.e. the alarm state it must enter for its link to operate, can be selected as fire, fault or disabled. Likewise a range of modes is used to provide a variety of output conditions. A sounder can be assigned a continuous or pulsed tone, be operated on a single or double knock basis or be silenced either by the panel's silence alarm or reset controls.

In order to provide system flexibility, devices can be addressed in groups as well as individually, therefore enabling the designer to introduce zonal or group parameters, in addition to operations involving single address pairings.

## Point address structure

Each system device (or point) is assigned a unique address (or tag).

Linking the output sounder addresses to the address of the sensor or callpoint originating the alarm, signals system events, e.g. fire alarm conditions.

Planner enables the fire alarm system designer to link every input device (either individually, or in groups) controlled by the panel, to every output device in order to provide the facilities required by the system design specification.

Device addresses consist of three elements:

### **000 - 00 - 000**

- The first three digits signify the panel number. This can be any number from 1 to 255, the maximum number of panels in a networked system.
- The second two digits designate the loop or group number to which the device is assigned and may be any of the groups outlined in Section 3.3.
- The final three digits provide the point address, i.e. from 1 to 127 for loop devices.

For example, a sensor connected to panel number five, loop three and having a device address of thirty-six would appear as: **005 - 03 - 036**.

## Address groups

Individual addresses are grouped, depending upon either the method of hardwire connection to the control panel, or to provide a specific facility across a number of devices.

The three main groups are:

- Loop devices (groups 1 to 4)
- System bus (group 9)
- User bus (group 10)

### Loop devices (groups 1 to 4)

Each loop of up to 127 devices is assigned as an address group. (This is in addition to the devices individual point addresses). Therefore in a system featuring a four loop panel, address group one, are addresses of the devices connected to loop one, address group two, are the addresses of the devices connected to loop two and so on for loops three and four.

Address groups one to four are always reserved for the four sets of loop devices. On single and two-loop systems address groups for uncommissioned loops are not used.

### System bus (group 9)

This address group consists of 256 addresses, each adopting a separate function from the “host” software in the control panel. This enables any control or indication, operated within the panel to become either an input or an output address, for system use.

For example within the normal operation of the control panel software, outputs are provided to illuminate individual LED's for a zone in fire condition. These control panel software signals could be used as inputs, linked to sounder address outputs, to provide zoned alarms.

The full list of system bus group 9 addresses is shown under *System bus address list (group 09)* on page 11. Each address automatically mimics the behaviour of the programmed control panel function.

### User bus (group 10)

In addition to the loop wired devices, in most fire detection and alarm systems, other associated equipment will need to be hard wired to the control panel, (for example fire and fault inputs from other fire alarm systems and outputs to control equipment such as relays to shut down air conditioning).

The range of ZP optional auxiliary PCBs is installed either within the main control panel enclosure, or remotely in auxiliary equipment cabinets.

These inputs and outputs form the user bus group 10 addresses. This group comprises 768 freely programmable addresses, each of which can be designated as either an input or an output.

## **Other address groups**

Other address groups are provided to enable system operation to be efficiently programmed, or to provide special facilities to selected addresses.

### **Zones (group 13)**

All devices in any zone can be assigned to a single zone address group 13 and operated together. The number of zone addresses in the system is determined by the number of zones available in the control panel, either 50 or 128 dependent upon the control panel specification.

If a number of sounders is required to operate in order to provide a zonal alarm, all sounders within the zone can be assigned to a single group 13 address and this output operated by selected input addresses. Likewise all trigger devices in a zone can be configured to provide a common zone input.

### **Panel common event (group 15)**

An output assigned to this group can be operated by a selected trigger condition on any panel in the fire alarm network. The link is specific to the panel number operating the output.

### **Internal nodes (group 18)**

Software nodes can be used to provide a programming interface between large numbers of input addresses and their linked outputs.

Nodes are widely used in Planner as software connections enabling ease of programming, or for introducing more than a single facility to an input/output link. See *Nodes* on page 93 for more detailed information.

### **Zone isolate (group 20)**

The group is only used as an output. This output when actuated will isolate all devices assigned to the zone. The zone isolate facility allows applications where, for example, sensors in a specific zone are to be isolated via a key switch or programmed timer.

### **Extended time in zone (group 21)**

Addresses assigned to this group are retained in the day mode, when the system switches to night mode.

### **Day/night status (group 22)**

Outputs in this group can operate when the system changes from the day to night mode. This group could be used to operate a sounder, when the panel changes mode.

### **Comms fault (group 25)**

This group provides a facility to activate an output when a fault is registered at either Com Port 1 or Com Port 2 of the fire panel.

The Planner address groups are summarised in Table 1.

**Table 1: Planner address groups**

Group no.	Group description	Group address range
1	Loop 1.	Addresses from 1 up to 127 for devices connected to loop one
2	Loop 2	Addresses from 1 up to 127 for devices connected to loop two
3	Loop 3	Addresses from 1 up to 127 for devices connected to loop three
4	Loop 4	Addresses from 1 up to 127 for devices connected to loop four
9	System input/output	256 addresses. Address operation mimics factory set control panel functions
10	User input/output	768 addresses. Freely programmable input and/or output addresses
11	Not used	
12	Not used	
13	Zones	50 or 128 dependent upon panel specification. Any zone of devices can be programmed to operate as a group
14	Not used	
15	Panel common event	Output on one panel can be operated by a selected trigger condition on another panel
16	Not used	
17	Not used	
18	Internal nodes	Provides 128 software links to interface between large numbers of inputs and outputs
19	Not used	
20	Zone isolate	Used as an output. Enables a zone of devices to be isolated from a single input
21	Extended time in zone	Retains assigned addresses in the day mode, when the system switches to night mode.
22	Day/night status	Outputs operate on the action of the panel switching from day to night mode
23	Not used	
24	Not used	
25	Comms fault	Outputs assigned to this group operate on a communication fault registered at Comms Port 1 or Comms Port 2.

## Auxiliary board addresses

The following range of auxiliary boards can be added to the ZP3 panel, or installed remotely.

1. ZP3AB-RL8            8-way relay board
2. ZP3AB-MIP         8-way input board
3. ZP3AB-MA8         8-way sounder circuit board
4. ZP3AB-OP24        24-way output board

The boards can be set to operate on any address in the user bus (group 10) range. Each board has either 8 or 24 individual points, which are addressed automatically, by Planner from a base address assigned by the system designer.

**Note:** We recommend that all boards be placed into the group 10 bus structure, which is freely programmable. Placing boards in the group 09 bus emulates group 09 panel functions and should only be undertaken by experienced personnel.

If for example a ZP3AB-RL8 eight-way relay board is added to the ZP3 control panel and is set to operate within the user bus (group 10) addresses, the eight relay outputs are set up as follows:

- A Dipswitch setting on each board is used to select a base address. Settings between 32 and 127 set the address within the user bus (group 10). See *System bus address list (group 09)* on page 11 and *User bus address list (group 10)* on page 14.
- Each base address in-group 10 represents a block of 8-point addresses in the Planner software. Selecting the first address in the user bus, address 32, assigns the block of point addresses between 000 and 007 to the 8 auxiliary outputs.
- For the ZP3AB-OP24, 24-way output board, on the selection of the base address; Planner automatically assigns the next three vacant blocks of 8 point addresses, in order to provide the 24 individual point addresses.

## System bus address list (group 09)

Auxiliary boards are linked to the systems bus by setting the eighth Dipswitch (at the right hand end of the block) to the ON (down) position.

Table 2 shows the auxiliary board Dipswitch setting, against the blocks of system bus point addresses and the individual function each point represents.

All addresses in the system bus (group 9) are pre programmed and cannot be changed from the specified functions. The outputs linked to these addresses automatically mimic their functions.

**Table 2: Auxiliary board dipswitch setting**

Auxiliary board dipswitch settings	System bus address	Function	Auxiliary board dipswitch settings	System bus address	Function
000	000	Zone 0 Fire LED	001	008	Zone 8 Fire LED
	001	Zone 1 Fire LED		009	Zone 9 Fire LED
	002	Zone 2 Fire LED		010	Zone 10 Fire LED
	003	Zone 3 Fire LED		011	Zone 11 Fire LED
	004	Zone 4 Fire LED		012	Zone 12 Fire LED
	005	Zone 5 Fire LED		013	Zone 13 Fire LED
	006	Zone 6 Fire LED		014	Zone 14 Fire LED
	007	Zone 7 Fire LED		015	Zone 15 Fire LED

<b>Auxiliary board dipswitch settings</b>	<b>System bus address</b>	<b>Function</b>	<b>Auxiliary board dipswitch settings</b>	<b>System bus address</b>	<b>Function</b>
002	016	Zone 16 Fire LED	006	048	Zone 48 Fire LED
	017	Zone 17 Fire LED		049	Zone 49 Fire LED
	018	Zone 18 Fire LED		050	Zone 50 Fire LED
	019	Zone 19 Fire LED		051	Zone 51 Fire LED
	020	Zone 20 Fire LED		052	Zone 52 Fire LED
	021	Zone 21 Fire LED		053	Zone 53 Fire LED
	022	Zone 22 Fire LED		054	Zone 54 Fire LED
	023	Zone 23 Fire LED		055	Zone 55 Fire LED
003	024	Zone 24 Fire LED	007	056	Zone 56 Fire LED
	025	Zone 25 Fire LED		057	Zone 57 Fire LED
	026	Zone 26 Fire LED		058	Zone 58 Fire LED
	027	Zone 27 Fire LED		059	Zone 59 Fire LED
	028	Zone 28 Fire LED		060	Zone 60 Fire LED
	029	Zone 29 Fire LED		061	Zone 61 Fire LED
	030	Zone 30 Fire LED		062	Zone 62 Fire LED
	031	Zone 31 Fire LED		063	Zone 63 Fire LED
004	032	Zone 32 Fire LED	008	064	Zone 64 Fire LED
	033	Zone 33 Fire LED		065	Zone 65 Fire LED
	034	Zone 34 Fire LED		066	Zone 66 Fire LED
	035	Zone 35 Fire LED		067	Zone 67 Fire LED
	036	Zone 36 Fire LED		068	Zone 68 Fire LED
	037	Zone 37 Fire LED		069	Zone 69 Fire LED
	038	Zone 38 Fire LED		070	Zone 70 Fire LED
	039	Zone 39 Fire LED		071	Zone 71 Fire LED
005	040	Zone 40 Fire LED	009	072	Zone 72 Fire LED
	041	Zone 41 Fire LED		073	Zone 73 Fire LED
	042	Zone 42 Fire LED		074	Zone 74 Fire LED
	043	Zone 43 Fire LED		075	Zone 75 Fire LED
	044	Zone 44 Fire LED		076	Zone 76 Fire LED
	045	Zone 45 Fire LED		077	Zone 77 Fire LED
	046	Zone 46 Fire LED		078	Zone 78 Fire LED
	047	Zone 47 Fire LED		079	Zone 79 Fire LED



Auxiliary board dipswitch settings	System bus address	Function	Auxiliary board dipswitch settings	System bus address	Function
010	080	Zone 80 Fire LED	014	112	Zone 112 Fire LED
	081	Zone 81 Fire LED		113	Zone 113 Fire LED
	082	Zone 82 Fire LED		114	Zone 114 Fire LED
	083	Zone 83 Fire LED		115	Zone 115 Fire LED
	084	Zone 84 Fire LED		116	Zone 116 Fire LED
	085	Zone 85 Fire LED		117	Zone 117 Fire LED
	086	Zone 86 Fire LED		118	Zone 118 Fire LED
	087	Zone 87 Fire LED		119	Zone 119 Fire LED
011	088	Zone 88 Fire LED	015	120	Zone 120 Fire LED
	089	Zone 89 Fire LED		121	Zone 121 Fire LED
	090	Zone 90 Fire LED		122	Zone 122 Fire LED
	091	Zone 91 Fire LED		123	Zone 123 Fire LED
	092	Zone 92 Fire LED		124	Zone 124 Fire LED
	093	Zone 93 Fire LED		125	Zone 125 Fire LED
	094	Zone 94 Fire LED		126	Zone 126 Fire LED
	095	Zone 95 Fire LED		127	Zone 127 Fire LED
012	096	Zone 96 Fire LED	016	128	Zone 128 Fire LED
	097	Zone 97 Fire LED		129	Common Fire LED
	098	Zone 98 Fire LED		130	Common fire LED #2
	099	Zone 99 Fire LED		131	Sounders Active LED
	100	Zone 100 Fire LED		132	Remote Alarm Active LED
	101	Zone 101 Fire LED		133	Control o/p Active LED
	102	Zone 102 Fire LED		134	Common fault LED
	103	Zone 103 Fire LED		135	Alarm (sunder) fault LED
013	104	Zone 104 Fire LED	017	136	Remote Alarm Fault LED
	105	Zone 105 Fire LED		137	Control o/p Fault LED
	106	Zone 106 Fire LED		138	System fault LED
	107	Zone 107 Fire LED		139	Common Disable LED
	108	Zone 108 Fire LED		140	Alarm Disable LED
	109	Zone 109 Fire LED		141	Rem alarm disabled LED
	110	Zone 110 Fire LED		142	Control o/p disabled LED
	111	Zone 111 Fire LED		143	Zone disabled LED

Auxiliary board dipswitch settings	System bus address	Function	Auxiliary board dipswitch settings	System bus address	Function	
018	144	Points disabled LED	021	168	More Time	
	145	Info LED		169	Points Fault	
	146	Alarms Delayed LED		170	Double Knock	
	147	Rem Alarm Delayed LED		171	Security (door switches)	
	148	GC Function Delayed LED		172	Common Fire LED's	
	149	Day mode LED		173	Fire Alarm Relays 1+2	
	150	Test condition LED		174	Silence alarm key	
	151	Point pre-alarm LED		175	Sound alarm key	
019	152	System On LED	022	176	Reset panel key	
	153	LCD backlight On		177	Sound Alarms LED	
	154	Reserved - For future use		178	Fire alarm relays 3+4	
	155	Reserved - For future use		179	Reserved - For future use	
	156	Reserved - For future use		180	Reserved - For future use	
	157	Reserved - For future use		181	Reserved - For future use	
	158	Buzzer output		182	Reserved - For future use	
	159	Info #2 LED		183	Reserved - For future use	
020	160	Common Disable #2 LED	023	184		
	161	Common Fault #2 LED		....	....	Reserved - For future use
	162	Night mode LED		031	255	
	163	Alarm Silenced LED				
	164	More Up LED				
	165	More Down LED				
	166	Zone pre-alarm				
	167	Zone fault				

## User bus address list (group 10)

Auxiliary boards are linked to the user bus by setting the eighth Dipswitch (at the right hand end of the block) to the OFF (up) position.

The ZP3 auxiliary boards may be assigned any base address in the user bus (group 10) address range. Each auxiliary board represents a range of point addresses, either 8-way or 24-way. The address range is defined by the board address, which is set by a Dipswitch located on each board. The board address defines the first 8-point addresses on the board.

# Chapter 4: System databases

## Introduction

Planner manages all system requirements and structures the development of the database by grouping relevant information on common pages and prompting the user for correct entries.

Input into the databases is via a series of seven screen displays, outlined in detail in Section 6.0. The screens are arranged in a logical order enabling complex information to be broken down into a series of simple inputs.

Once completed, the database is downloaded into the fire control panel and a copy made for storage in a safe location.

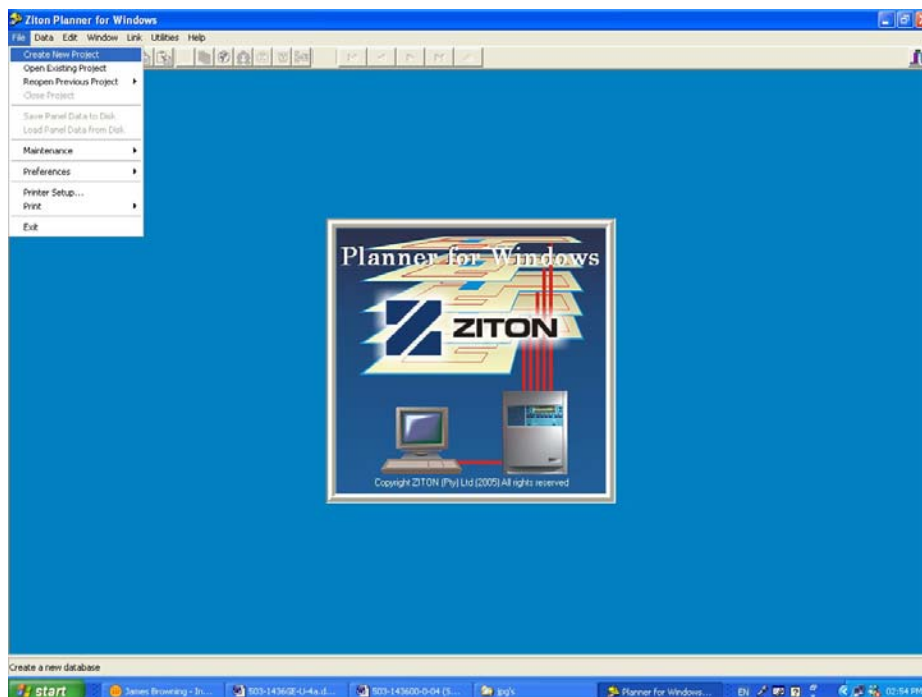
## Starting-up and running Planner

After installation the Planner default files can be found in the directory: C:\Program files\Ziton\Planner for Windows Ver 3.01\Project.

To run the program:

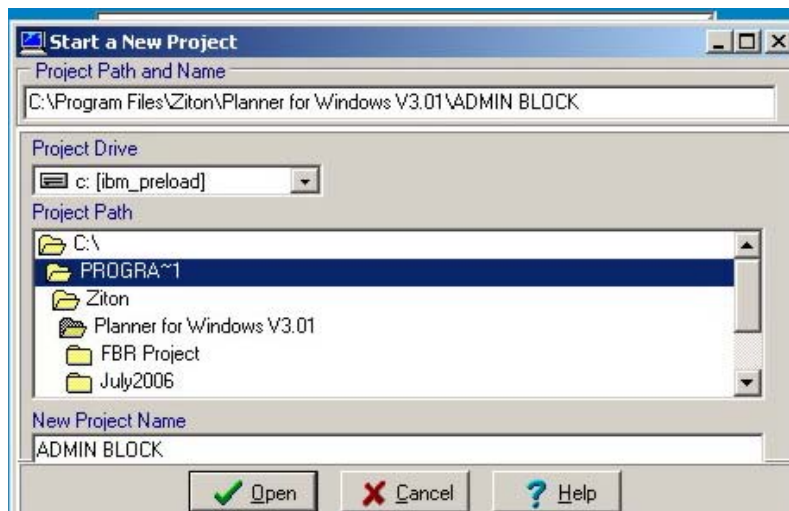
1. Click **Start**.
2. Click **All Programs**.
3. Click **Ziton Planner**.
4. Click **Planner for Windows Version XX.XX**. The Planner title screen is displayed (see Figure 7).

Figure 7: Planner title screen



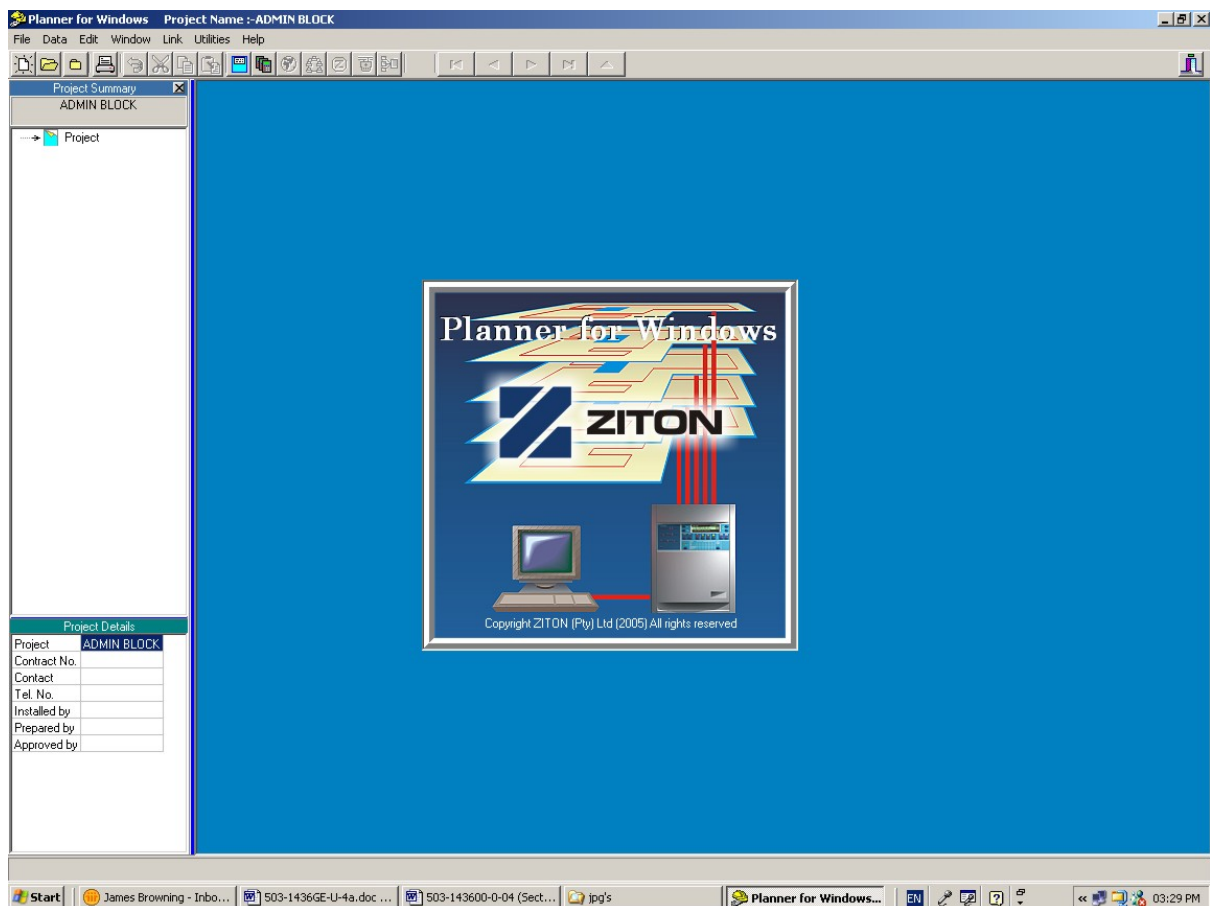
5. Click **File**.
6. Click **Create New Project**. The *Start a New Project* box is displayed (see Figure 8).

Figure 8: Start a new project window



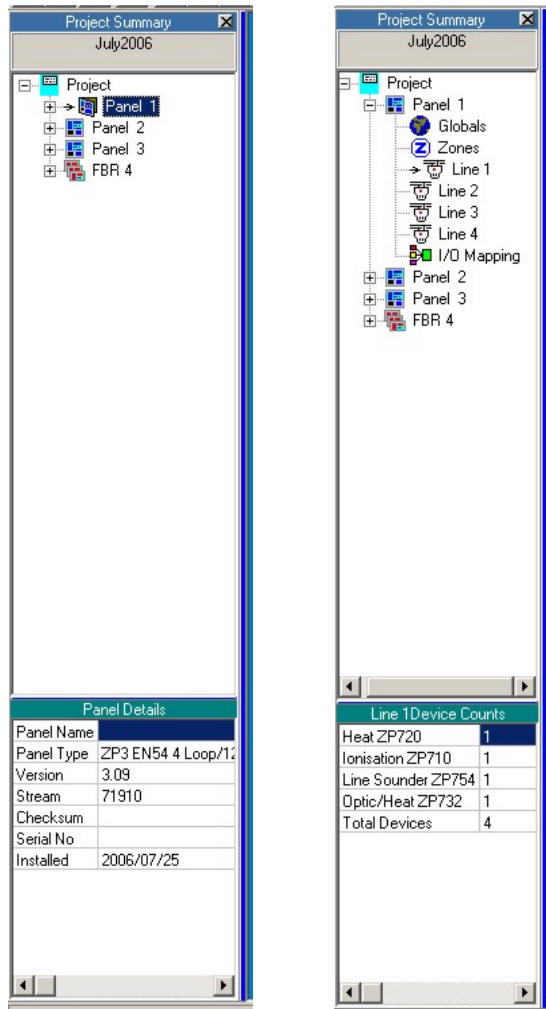
7. Type a new project name, e.g. Admin Block, into the *New Project Name* field. This enables the **Open** button.
8. Click **Open**. The *Project Name* database screen is displayed (see Figure 9).

Figure 9: Project name database screen



Details of the programme drop down menus and main toolbar facilities are provided in Chapter 5 (see page 19).

## Project summary display



An up to date configuration of the database can be displayed as a project summary column shown at the left side of each database screen.

The summary shows, in explorer form, an overview of the system configuration of the current project on a panel by panel basis. For each panel, the major component groups are shown, and may be used to quickly navigate to the appropriate display screen.

The lower section of the *Project Summary* column provides an overview of the database screen currently displayed. For example when the line device screen is displayed, the lower section of the summary lists the numbers of each device and their totals for the loop in view, together with an overall device total.

Both sections of the *Project Summary* can be extended in screen area by clicking onto a border and dragging the double line/arrow cursor symbol.

The summary can be hidden by clicking onto the small 'x' button at the top right of the column display and reinstated by clicking onto the **Utilities** menu at the top of the display and selecting **Project Summary**.

The primary function of the project summary display is as a navigation aid, as well as a data summary.

## System development

Configure the system by completing the database in the following stages. Access buttons to each database input screen are located on the main toolbar, which is always displayed across the top of the Planner screen. See under *Toolbar functions* on page 19 for detailed information.

From the left they are positioned in order to enable the user to input information for a new system project in a sequence, whereby Planner can utilise the content of one database in subsequent information screens.

1. Create the Project Database – select **New** – assign project name. (Folder name)
2. Configure system project details. A general provision for recording system information. This should be completed as a preliminary exercise and contains the basic information such as the project name and important contacts. See *Project details* on page 34 for more information.  
In addition, certain project defaults should be assigned so that when assigning devices or I/O mapping conditions the preliminary settings used by Planner will be the most commonly used ones. See *Project details* on page 34 for more information.
3. Create and setup the required number of panels, setting panel names and types version numbers. This is important so that Planner may offer the correct set of valid choices. The first stage in the system information input. This database holds all details for the control panels in the system. See *Panel details* on page 36 for more information.
4. Apply global settings. Parameters, which are applicable to all system equipment, are added next, via the global settings screen. These include various time delays, network settings access levels for basic panel operations and level 4 operations. See *Global settings* on page 40 for more information.
5. Assign network filters. With the panel specifications detailed and the global settings completed, in multi panel systems the next stage is to decide which alarm conditions and system information is to be transferred from panel to panel. See *Network filters* on page 49 for more information)
6. Setup the zone names. At this stage the details of the zonal plans, their addresses and locations are added for each loop of each panel. See *Zone names* on page 58 for more information.
7. Add device information. Individual line devices (for example manual callpoints and room sensors) are now selected and their individual settings such as sensitivity levels, device type, zone, and device message are entered. See *Line devices* on page 60 for more information.
8. The final stage in system configuration is the input to output linking of all devices. Icons are displayed for each system component. Outputs are selected first then input devices are mapped within the system, to operate the selected output.

# Chapter 5: Main toolbar and menu options

## Toolbar functions

The main Planner toolbar (see Figure 10) runs along the top of the main screen and remains in view regardless of which main screen is currently displayed.

Figure 10: Planner toolbar



The toolbar provides the following functions.

- **New, Open and Close icons.** The first three icons on the left of the toolbar provide an on screen function for originating new project files and opening and closing project information.
- **Print project.** The fourth toolbar icon enables project information to be printed.
- **Editing.** To the right of the print icon, four standard Microsoft Windows editing icons provide undo, cut, copy, and paste functions. These are especially useful when inputting repetitive zone or device details into the database lists.
- **Database access.** The seven main database screens are accessed from the row of icons placed centrally on the toolbar. From the left the icons provide access to; Project Details, Panel Details, Global Settings, Network Filters, Zone Names, Line Devices and I/O Mapping.
- **Navigation and editing.** The row of icons to the right of the toolbar provides navigation through the database screens and the editing of additions and deletions.

## Menu options

In conjunction with the toolbar and main screen functions, Planner is operated by way of menus and sub-menus. The menu headings are always shown along the top of the display, above the toolbar area, regardless of the screen in view.

### File menu

The following sub menus (options/functions) are accessed from the file menu.

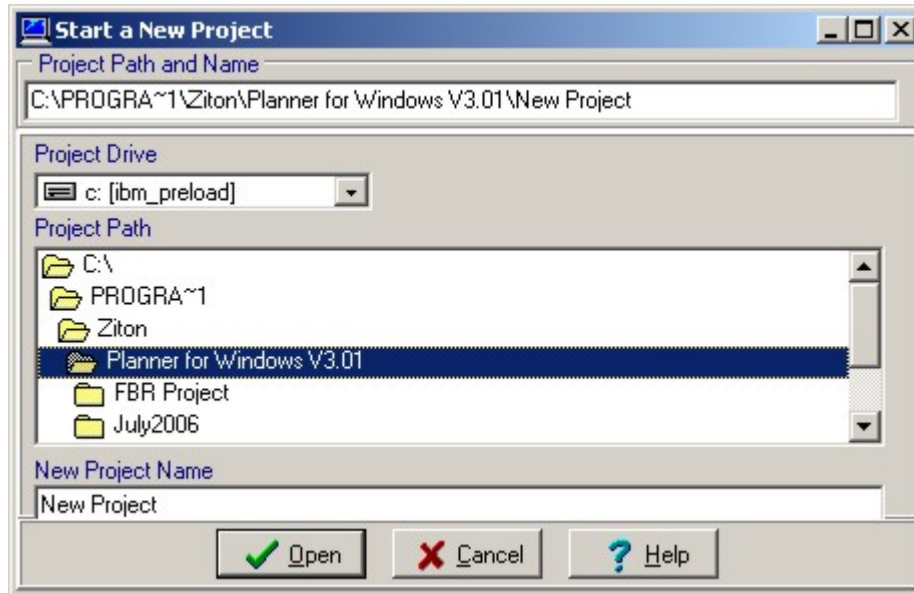
- Create New Project
- Open Existing Project
- Reopen Previous Project
- Close Project
- Save Panel Data to Disk
- Load Panel Data from Disk
- Maintenance
  - Backup Project
  - Restore Project
  - Merge Two Projects
  - Split Project
- Preferences
- Printer Setup
- Print
  - Full Report
  - Project Details
  - Panel Details
  - Global Settings
  - Zone Messages
  - Line Devices
  - I/O Mapping
    - by Output
    - by Input
  - Knowledge Base
    - Compatibility List
    - Panel Types
    - H/W Capabilities
    - Device Types
    - I/O Names
- Exit



## Create new project

Select **Create New Project** to create a new project. The *Start a New Project* screen is displayed (see Figure 11).

Figure 11: Start a new project screen



- **Project Path and Name.** Confirmation of the file path and its name is displayed at the top of the screen.
- **Project Drive.** The drive for the new project is selected from the drop down list.
- **Project Path.** An extension of the project path is displayed. Use the scroll bar located at the right of the display to scroll the path. Double click the appropriate folder icon shown in the list to view the sub directory of a new project.
- **New Project Name.** Confirmation of the project name is shown in the window at the bottom of the display.

Buttons are provided across the bottom of the screen to open or cancel the new file. A help button (for future development) is also available to the user. Typing in the new project name activates the open button at the bottom of the display.

## Open existing project

Select **Open Existing Project** to open a similar screen to the start a new project (see Figure 11), with the same functions.

Existing files can be retrieved for reference or update.

## Reopen previous project

Select this sub-menu to display a list of recently opened projects. Any project on the list may be opened directly by clicking on the project name.

## Close project

Select this sub-menu to close the project currently displayed.

## Save panel data to disk and load panel data from disk

Select the appropriate sub-menu to either save the entered panel data to disk or to load existing panel data from disk. This provides a way of transferring data from one PC to another on a panel-by-panel basis.

A *Select a Panel to Transfer to Disk* box is displayed (see Figure 12 for an example). Select a panel in the system by scrolling through panel numbers using the navigation buttons provided.

The **OK** or **Cancel** buttons respectively to confirm or cancel the selection.

The **Help** button (for future development only) is also available to the user.

Figure 12: Select a panel to transfer to disk



## Maintenance

Select this sub-menu and click on the appropriate sub-item to backup a project (copy an entire project, including all panels, to a sub-folder of the project) or restore a project (copy project information in the backup folder to the currently open project). This sub-menu also provides sub-items that allow you to merge two projects or split projects for use when a site has different panel groups.

## Preferences

This sub-menu allows you to enable or disable certain user preferences with respect to warnings and error messages.

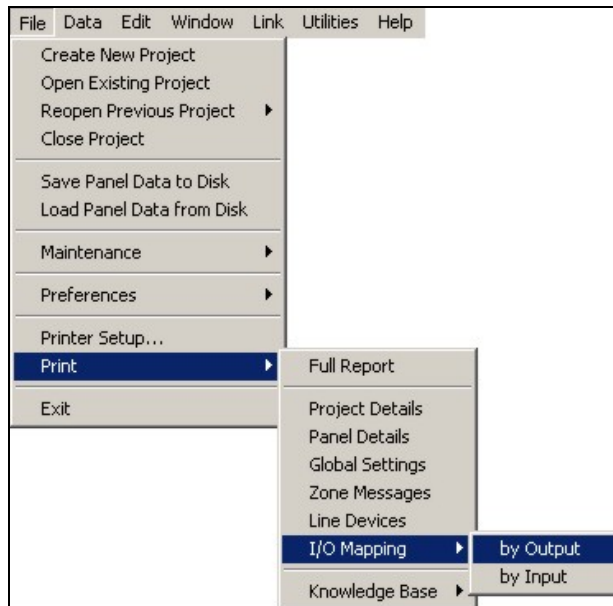
## Printer setup

Select this option to display details of all printers connected to the Planner PC. It displays their controls and details their properties and general information.

## Print

Select this sub-menu to display a dropdown list of printout options as shown in Figure 13. Either the complete Planner file (*Full Report*), or any of the individual database files, e.g. *Project Details*, *i*, *Global Settings*, *Line Devices*, etc. can be printed.

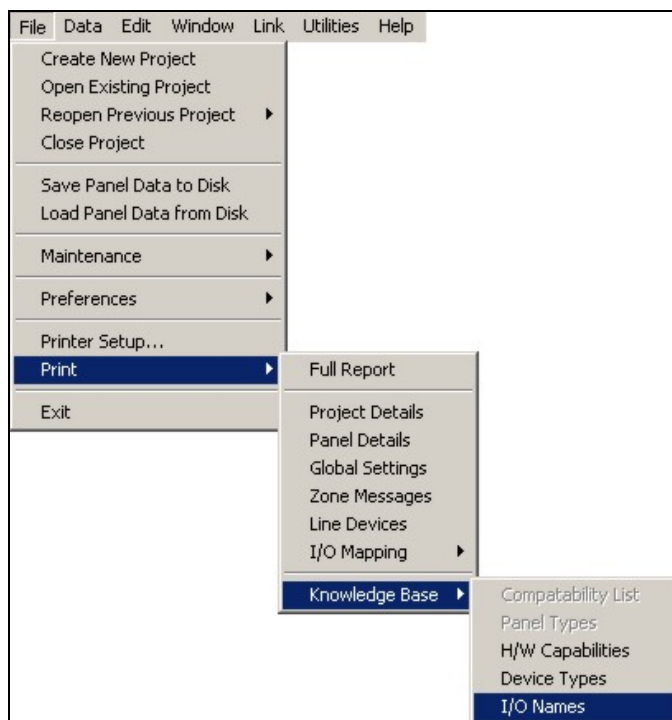
Figure 13: Print menu – I/O mapping option



The **I/O Mapping** sub-menu allows you to print the file either by *Output* or *Input*.

The **Knowledge Base** sub-menu displays further items that offer spreadsheet style information on compatibility, panel types, hardware capability, device types and I/O names as shown in Figure 14.

Figure 14: Print menu – knowledge base sub-menu



An extract from the device type report is shown in Figure 15.

Figure 15: Typical device type report

Device Report										
Project : July2006							Page number 1			
Device Name	Ref	Type No.	Category	AVF	Testable	Sounder	I/S	P347	P688	P719
Spare			Spare	No	No	No	No	Yes	Yes	Yes
Ionisation ZP710	2-12	ZP710	Smoke	Yes	Yes	Yes	No	Yes	Yes	Yes
Heat ZP720	2-13	ZP720	Heat	Yes	Yes	Yes	No	Yes	Yes	Yes
Heat ZP725	2-14	ZP725	Heat	Yes	Yes	Yes	No	Yes	Yes	Yes
Optical Smoke ZP730	2-15	ZP730	Smoke	Yes	Yes	Yes	No	Yes	Yes	Yes
Callpoint ZP785	2-22	ZP785	Manual Devices	Yes	No	No	No	Yes	Yes	Yes
WF Sprinkler ZP740/5-T23	2-23	ZP740/5-T23	Interface	No	No	No	No	Yes	Yes	Yes
WF Fire ZP740/5-T24	2-24	ZP740/5-T24	Interface	Yes	No	No	No	Yes	Yes	Yes
WF Conventional ZP570	2-32	ZP570	Interface	No	No	No	No	Yes	Yes	Yes
WF Conventional 4 ZP574	2-35	ZP5-574	Interface	No	No	No	No	Yes	Yes	Yes
WF Non Fire ZP740/5-T52	2-52	ZP740/5-T52	Non-Fire	No	No	No	No	Yes	Yes	Yes
WF Control Sw ZP740/5-T53	2-53	ZP740/5-T53	Interface	No	No	No	No	Yes	Yes	Yes
WF Secur L ZP740/5-T62	2-62	ZP740/5-T62	Interface	No	No	No	No	Yes	Yes	Yes
HS Aspirating Smoke	2-33	ZP740ST	Smoke	Yes	No	No	No	Yes	Yes	Yes
Addressable Relay ZP750	2-42	ZP750	I/O Devices	Yes	No	Yes	No	Yes	Yes	Yes
Extinguishing Cbf Unit	2-44	ZP3-ECU	ECU	Yes	No	No	No	Yes	Yes	Yes
Sounder Driver ZP752	2-45	ZP752	I/O Devices	Yes	No	Yes	No	Yes	Yes	Yes
Ionisation Ex ZP710Ex	6-55	ZP710Ex	Intrinsic Safe	Yes	Yes	No	Yes	Yes	Yes	Yes
Heat ZP720Ex	6-56	ZP720Ex	Intrinsic Safe	Yes	Yes	No	Yes	Yes	Yes	Yes
Callpoint Ex ZP786Ex	6-65	ZP786Ex	Intrinsic Safe	No	No	No	Yes	Yes	Yes	Yes
WF Fire Ex ZP740Ex-F	6-66	ZP740Ex (F)	Intrinsic Safe	No	No	No	Yes	Yes	Yes	Yes
WF NonFire Ex ZP740Ex-NF	6-67	ZP740Ex (NF)	Intrinsic Safe	No	No	No	Yes	Yes	Yes	Yes

## Exit

Select the **Exit** sub-menu to exit the Planner program.

## Data menu

Select the **Data** menu to display the following list of the database input sub-menus for the project currently being viewed:

- Project Details
- Panel Details
- Global Settings
- Network Filters
- Zone Names
- Line Devices
- I/O Mapping
- Event Archive
- Device Analogues
- Facia View

Clicking a menu item accesses the database section.

The list can always be accessed regardless of which screen or report is being viewed within the Planner programme.

## Edit menu

Selecting the **Edit** menu provides access to the following sub-menus:

- Undo
- Cut
- Copy
- Paste

These functions are also directly available as toolbar buttons as described under *Toolbar functions* on page 19.

## Window menu

The **Windows** menu allows you to arrange the various information screen display windows in different ways by selecting the window formation from the following sub-menus:

- Normalise
- Tile
- Cascade
- Arrange All
- Close All

## Link menu

The **Link** menu – see Figure 16 (**Panel** menu in Planner software issues up to 1.16 REL 4), offers the following sub-menus, which are primarily used to transfer completed Planner system files from PC to panel and visa-versa:

Figure 16: Link menu



### Send data to panel

Select this sub-menu to display the following sub-items:

- **Send All Data.** Used to transfer a complete Planner system file, from Planner PC to the fire alarm system.
- **Send Maintenance Data.** Future development, not yet implemented.
- **Send All Messages.** Used to send zone and device messages.
- **Send Zone Names.** Used to transfer only the zone names database file (names only – no other zone information is sent).
- **Send Device Messages.** Used to transfer only the device messages database file (messages only are sent – no other information is transferred).

## Receive data from panel

Select this sub-menu to display the following sub-items:

- **Receive All Data.** Used for uploading a complete Planner system-operating file from the fire alarm system to the Planner PC.
- **Receive Maintenance Data.** Future development, not yet implemented.
- **Receive All Messages.** Used to upload zone and device messages only.
- **Receive Zone Names.** Used to upload only the zone names database file from panel to PC.
- **Receive Device Messages.** Used to upload only the device messages database file from panel to PC.

## Send file to panel (CODE or DATA)

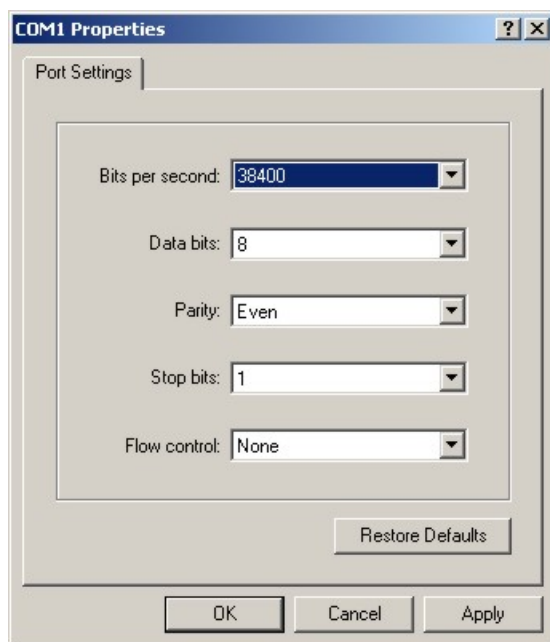
Select this sub-menu to transfer new or upgraded operating software from the Planner PC to the control panel. Configuration data files may also be sent to the panel using this option.

## Set baud rate

Select this sub-menu to access the COM1 Properties screen (see Figure 17). This allows you to view and edit the communications port properties and settings.

**Note:** When transferring Planner files from PC to control panel, or vice-versa, the baud rate of the PC must match that of the control panel. See *Planner PC communication settings* on page 106 for more details about this function.

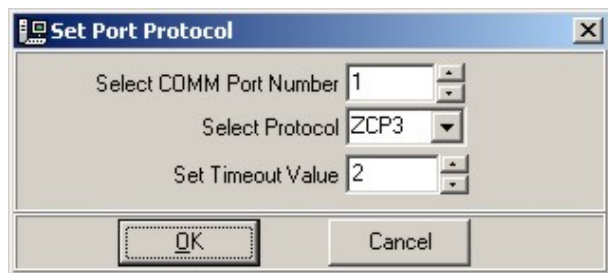
Figure 17: COM1 Properties screen



## Set port protocol

Select this sub-menu to set the protocol of the comms ports to ZCP3 as shown in Figure 18.

Figure 18: Set port protocol screen



## Utilities menu

The Utilities menu provides a variety of tools to assist the user in the configuration of the fire alarm system.

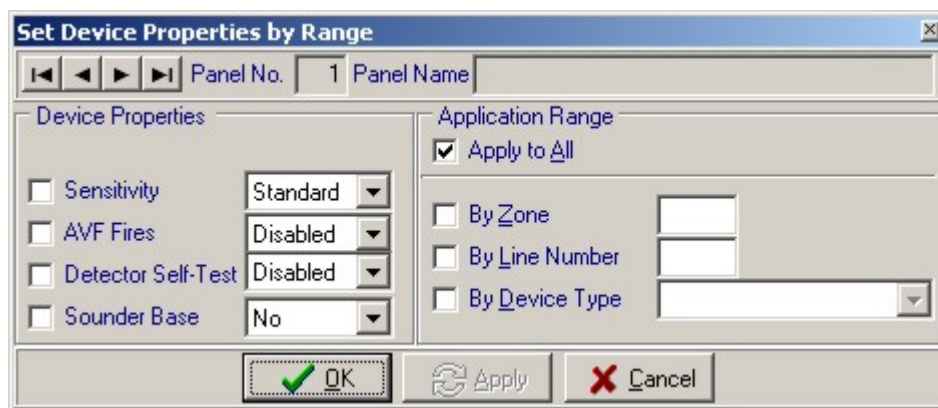
The following sub-menus are available from the utilities menu:

- Set device properties by range
- Project summary
- Password protect
- Checksum calculate
- Current status
- Database explorer
- Project default settings

### Set device properties by range

Select this sub-menu to display the device properties and application range properties screen (see Figure 19). This screen allows you to set a range of properties to assign by device type, zone or loop number.

Figure 19: Typical set device properties by range screen



Use the navigation buttons positioned at the top of the display to select the panel number and name.

The properties, listed on the left are selected by marking the relevant checkbox. A tick appears when a property is selected. Property options are chosen from drop down lists.

The right side of the display provides for selection of the range the application is to cover. Marking the "Apply to All" checkbox applies the device properties to all devices connected to the chosen panel.

Properties can be applied to a specified zone or loop, by clicking the appropriate window and entering the zone or loop number.

Device properties can be set for all devices of a type by using the *By Device Type* function at the bottom right of the screen.

**OK**, **Apply** and **Cancel** buttons are provided across the bottom of the display. The **OK** button applies the selected settings and closes the window. The **Apply** button applies the selected settings and leaves the window open for additional settings to be changed. The **Cancel** button closes the window without implementing any of the changes.



## Project summary

Select this sub-menu to display the project summary down the left of the main screen. The display can be hidden by clicking on the exit button at the top right of the summary.

The project summary option is explained in more detail under *Project summary display* on page 17.

## Password protect

Select this sub-menu to display the password protect box (see Figure 20). The Planner project can be password protected by selecting the function and typing in the required password.

**Add**, **Remove** and **Cancel** buttons are provided at the bottom of the box.

Once password protected the project files cannot be opened or edited without the appropriate password authority.

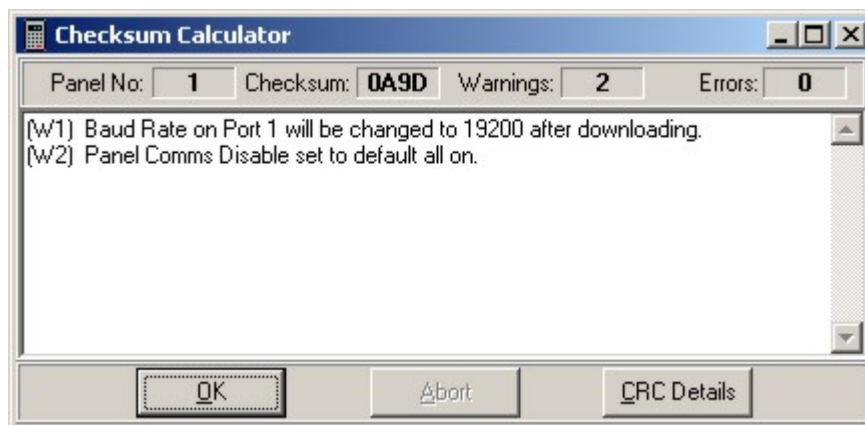
Figure 20: Project password screen



## Checksum calculate

Select this sub-menu to display the checksum calculator (see Figure 21). This screen shows the checking of the data for the selected panel, as well as any error or warning messages related to the panel data.

Figure 21: Typical checksum calculate screen



## Current status

Select this sub-menu, at any time during system configuration, to display the current status of the project. The total number of line devices per loop and the totals of both inputs and outputs are displayed on the *Current Status* screen (see Figure 22).

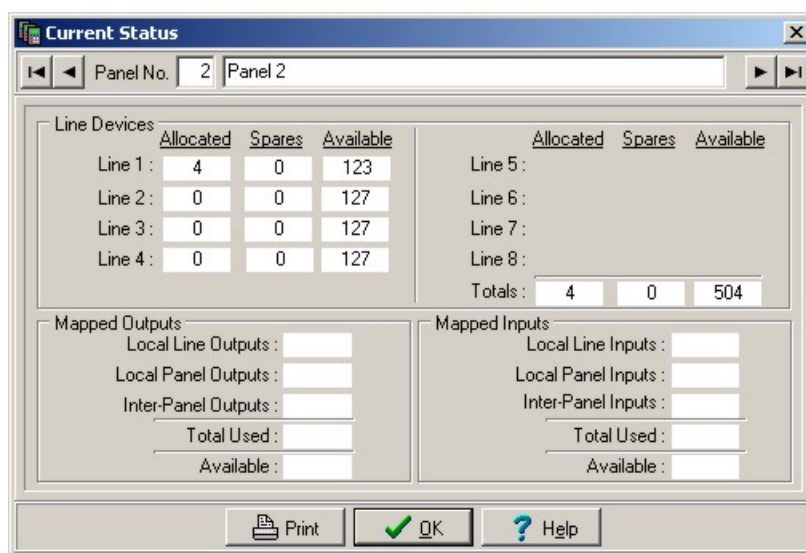
Panels are selected via the navigation buttons at the top of the screen.

The top part of the screen shows the totals of allocated, spares (those reserved for future use within the system) and available line device addresses, for each individual loop. Only the available loops are active in the display.

The lower part of the screen shows a listing of *Mapped Outputs* and *Mapped Inputs*, the type, the total used and the number still available.

A **Print** buttons to print the screen contents and **OK** button to return to the main display are provided at the bottom right. A **Help** button is also provided (for future development only).

Figure 22: Typical current status screen

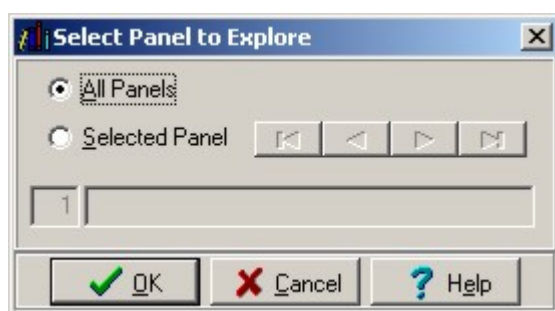


## Database explorer

The *Database Explorer* sub-menu provides a complete view of the project configuration. A search facility is provided to locate any text message, name or location in the entire project.

Select the *Database Explorer* sub-menu to display the *Select Panel to Explore* box (see Figure 23). The scope of the search is confirmed by selecting either a specific panel number or all panels in the project.

Figure 23: Select panel to explore screen



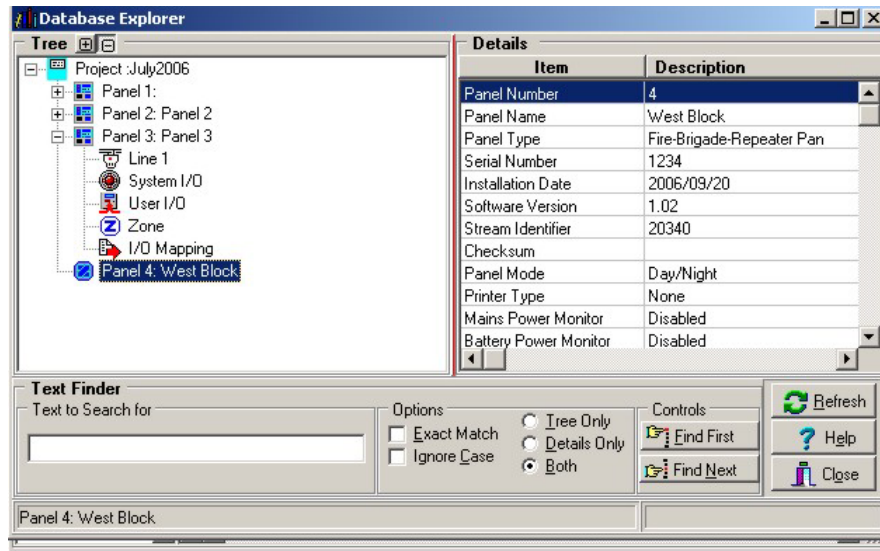
Click **OK** to display the *Database Explorer* view screen for the selected panel/s (see Figure 24).

The left side of the screen features an extendable tree, which shows a detailed system structure for the project. The right side of the screen shows the details of the item highlighted by the cursor in the Tree display.

The text finder function is located across the bottom of the display.

The **Refresh** button rebuilds the tree and details to reflect the latest change made to any data. The **Close** button closes the screen and returns the user to the main screen. A **Help** button is provided (for future development only).

Figure 24: Selected panel/s explorer view



## Project default settings

The *Project Default Settings* sub-menu allows you to enter a range of defaults that are attributed individually to projects.

Select the *Project Default Settings* sub-menu to display the *Project Default Settings* screen (see Figure 25). Select the required defaults from the drop-down lists.

Figure 25: Typical project default settings screen - line device defaults (ZCP3 protocol selected)

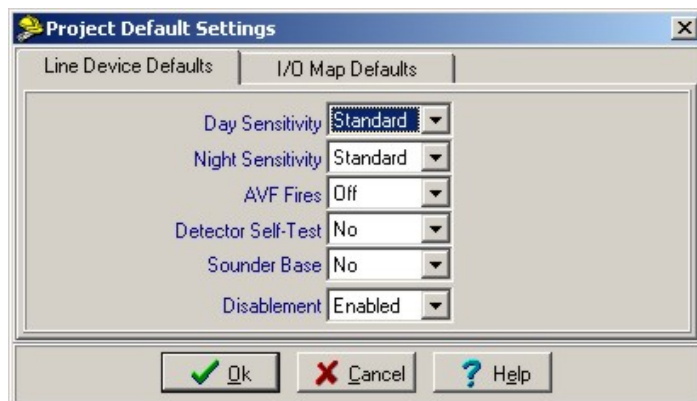
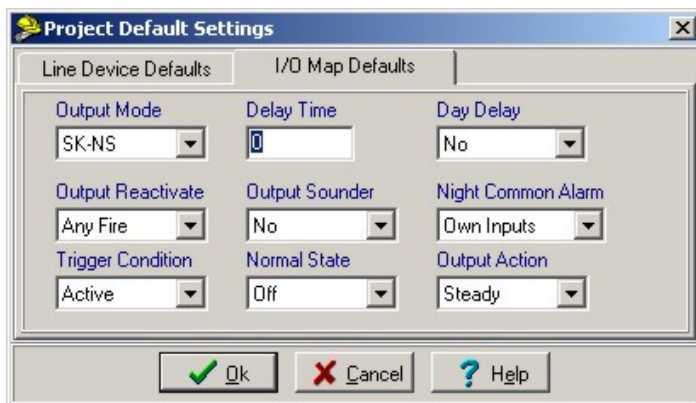


Figure 26: Typical project default settings screen – I/O map defaults (ZCP3 protocol selected)



Information is contained on one of two screens, which are selected by clicking on the appropriate tab.

Whenever a device or new I/O map link is added to the project, it is initially given the settings allocated by these default settings.

**Note:** Changing settings on the *Project Default Settings* screen does not affect any device or I/O map link already in the project and only affects new devices or I/O links added to the project. Change the settings of existing devices by using the *Set Devices Properties by range* function described under “Set device properties by range” on page 28.

The following defaults can be set:

- **Line device defaults.** Day Sensitivity, Night Sensitivity, AVF, Detector Self Test and Sounder Base identification defaults can be set for the project.
- **I/O map defaults.** Output Mode, Delay Time, Day Delay, Output Reactive, Output Sounder, Night Common Alarm, Trigger Condition, Normal State and Output Action.

Click **OK** to confirm and accept an entry. Click **Cancel** to abort an entry. A **Help** button is also provided (for future development only).

## Help menu

The *Help menu* is under development and currently provides only Planner version, properties and support list information under the *About* sub-menu.

# Chapter 6: System database configuration screens

## Introduction

The fire alarm system is configured by inputting information into a series of database screen displays. The screens are arranged logically and completion of the system detail from screen to screen enables the designer to include both operational and equipment elements, allocate all zone and address information to devices and complete system mapping requirements.

Planner automatically checks that the parameters entered into the database are within the ranges allowed and will only permit parameter selection that is compatible with the hardware specified.

Before starting a Planner project, all information should be converted from the fire alarm, 'As Installed drawings' and 'Equipment Schedules' to produce a detailed System Specification, covering every detail of the system (see *System specification* on page 127).

Information is entered into Planner by way of the following sub-menus available from the **Data** menu:

- **Project Details.** This sub-menu summarises all contract, installation and site detail for easy reference. It also provides a full listing of all panels included in the Planner scheme. See *Project details* on page 34 for more detailed information.
- **Panel details.** This sub-menu is used to enter panel types, their operating software and associated hardware modules. See *Panel details* on page 36 for more detailed information.
- **Global settings.** This sub-menu is used to select the required network configuration and system settings for each panel. See *Global settings* on page 40 for more detailed information.
- **Network filters.** This sub-menu shows the functions transmitted between panels in multi panel systems. See *Network filters* on page 49.
- **Zone names.** This sub-menu is used to assign names to all fire alarm zones in the fire alarm system. See *Zone names* on page 58 for more detailed information.
- **Line devices.** The sub-menu provides input for each device, its allocated address and information on its settings within the overall system. See *Line devices* on page 60 for more detailed information.
- **I/O mapping.** This sub-menu is used to configure addresses as either inputs or outputs and allows devices (either individually or as a zone) to be linked together to form the operational system cause and effect matrix. See *I/O mapping* on page 66 for more detailed information.

These sub-menu screens provide a logical progression enabling both simple single panel systems and complex networks to be easily completed. These screens are intended for use both during initial system configuration as well as for subsequent updates throughout the life of the fire alarm system.

Database information is completed for each panel separately and downloaded on a panel-by-panel basis. See *Chapter 8: Information transfer* on page 105 for more detailed information.

## Project details

Project details and general installation information are entered into the Planner database by means of the project details screen.

Access the project details screen by clicking the **Project Details** icon () located on the toolbar at the top of the main screen, or by selecting the **Project Details** sub-menu on the drop-down list from the **Data** menu (see Figure 27). The *Project Details* screen is displayed (see Figure 28).

Figure 27: Data menu/project details

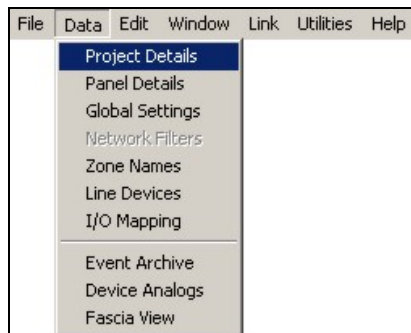
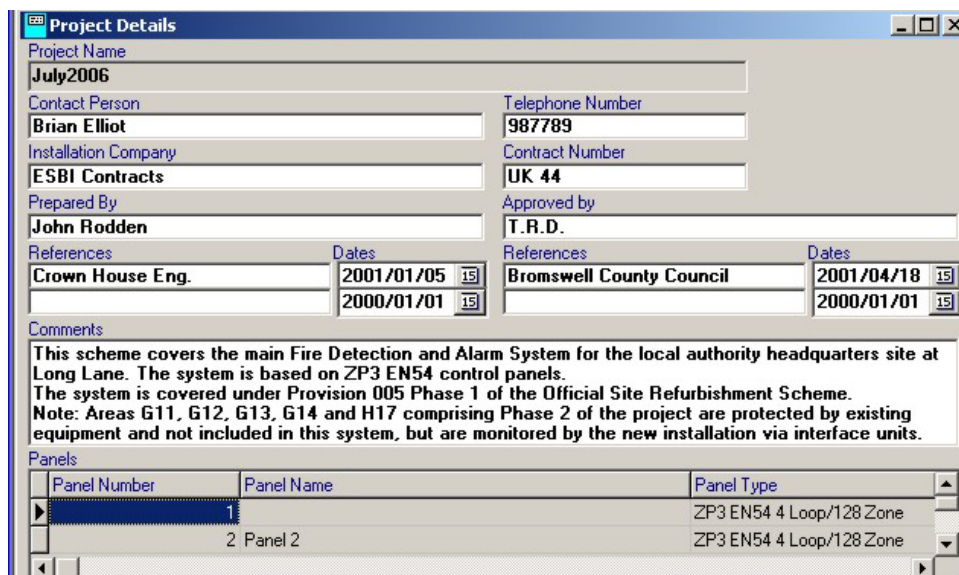


Figure 28: Project details screen



The screenshot shows the 'Project Details' window with the following information:

- Project Name:** July2006
- Contact Person:** Brian Elliot
- Telephone Number:** 987789
- Installation Company:** ESBI Contracts
- Contract Number:** UK 44
- Prepared By:** John Rodden
- Approved by:** T.R.D.

References	Dates	References	Dates
Crown House Eng.	2001/01/05	Bromswell County Council	2001/04/18
	2000/01/01		2000/01/01

**Comments:**  
 This scheme covers the main Fire Detection and Alarm System for the local authority headquarters site at Long Lane. The system is based on ZP3 EN54 control panels. The system is covered under Provision 005 Phase 1 of the Official Site Refurbishment Scheme.  
 Note: Areas G11, G12, G13, G14 and H17 comprising Phase 2 of the project are protected by existing equipment and not included in this system, but are monitored by the new installation via interface units.

Panel Number	Panel Name	Panel Type
2	Panel 2	ZP3 EN54 4 Loop/128 Zone

Enter the required details into the *Project Details* screen as follows:

- **Project name.** Enter a name or reference for the project. Planner uses this information for headings and titles of other screen displays and care should be taken to make sure that the description is unambiguous and recognised by all parties involved with the fire detection system.

**Note:** The project name is the same name as the folder under which the project is stored on the hard disk.

- **General details.** A series of entry fields are available for entering *Contact Person, Telephone Number, Installation Company, Contract Number, Prepared By, Approved By* and *Reference Document Titles*.

References can be dated by left clicking onto the calendar icons located on the right of the *Dates* field. This action opens a current month's calendar (see example below). Dates are selected by clicking the required date on the calendar.



The current month's date is always highlighted. Navigation buttons are provided at the top of the display. Single arrow buttons scroll the calendar forwards or backwards by month. Double arrows scroll the display by year.

- **Comments.** Comments, site and system information can be typed into this field. Up to five lines are displayed, and further details can be viewed by scrolling using the keyboard controls.
- **Panels.** A schedule of all panels connected to the system is provided at the bottom of the screen. Details are automatically added or deleted as panel information is edited via the *Panel Details* screen (see *Panel details* on page 36 for more details).

Panel number, panel name and panel type are listed. Use the bar located to the right of the list to scroll through the schedule. Panel details may not be edited in this list.

Details originated via this screen are shown at the bottom left of the main Planner screen (see illustrations under "*Project summary display*" on page 17) within the *Project Summary* column and can be displayed on all database input screens.

## Panel details

The **Panel Details** sub-menu provides facilities for the input of control panel information. Panel type, software versions and optional modules can be selected. The screen establishes the hardware for each panel in the system, automatically assigning addresses to each input or output.


Access the panel details screen by clicking either directly onto the **Panel Details** button () located on the toolbar at the top of the main screen, or by selecting the **Panel Details** sub-menu on the drop-down list from the **Data** menu (see Figure 29). The *Panel Details* screen is displayed (see Figure 30).

Figure 29: Data/panel details menu

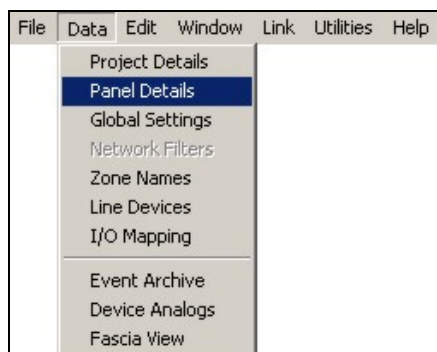
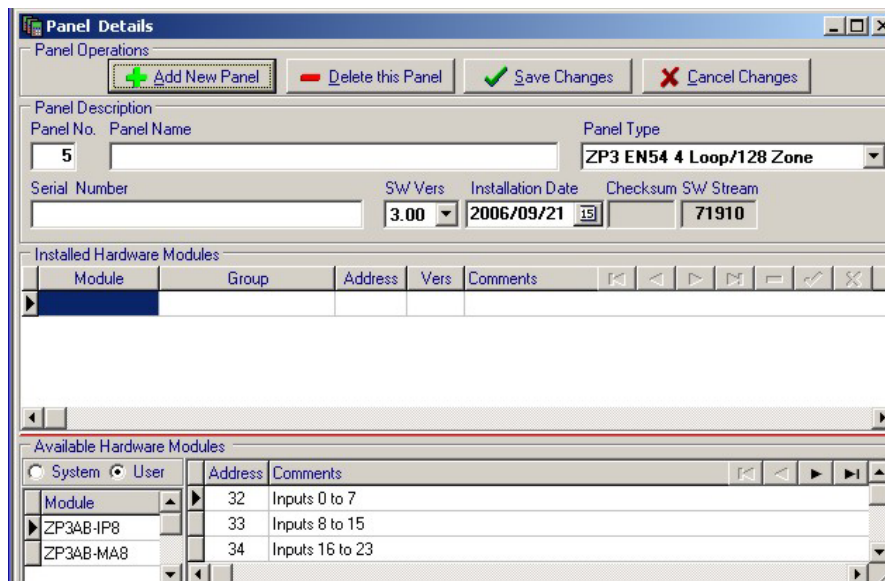


Figure 30: Panel details screen



The panel details screen is divided into three main areas:

- Panel operations
- Panel description
- Installed hardware modules

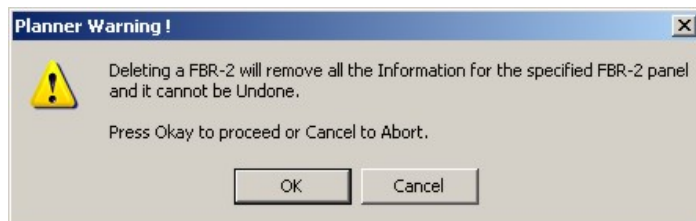


## Panel operations

The panel operations area of the screen enables you to add or delete panels' to/from the system. Up to a maximum of 255 panels can be connected to the ZP network and configured by Planner.

- **Add new panel.** Click this button to open the screen to enter the required panel information. Creating the panels is the first step in setting up a planner project. If the project is a multi-panel system, create each panel first, supplying the necessary details of panel number, panel name, panel type and software version if available. In addition, the panel serial number and installation date may now be entered, but can be entered at a later stage once all the panels have been created. Click the **Save Changes** button to create the panel once all the available details have been entered. This inserts the panel into the project. Adding a panel is a key function and must be carried out before anything else can be done.
- **Delete this panel.** Click this button to clear the screen and erase all records of the displayed panel number. A warning dialogue box is displayed for operator confirmation of the cancellation (see Figure 31). Click **OK** to delete or **Cancel** to abort the deletion process.

Figure 31: Delete this panel – warning dialogue box



- **Save and cancel changes buttons.** Click the appropriate button (**Save Changes** or **Cancel Changes**) to either save or cancel the changes respectively. Information changes can also be saved or cancelled by clicking the tick or cross icons located in the row of navigation buttons, in the toolbar above the panel details screen.

### Panel description

The panel description area of the screen allows you to enter the following information for each panel:

- **Panel number.** The display always defaults to the next assigned number. Change the panel number if required by clicking in the field and typing in the new number.
- **Panel name.** This is the panel or location description, which appear throughout the fire alarm system, for example on all panel LCD displays, printouts and graphics system screens.

The field allows descriptions of up to 40 characters long. The selected panel name should be familiar and recognisable to all system operators and should be chosen in conjunction with the end user.

- **Panel type.** Select the correct panel type from the drop-down list provided. The list contains all panel types together with their software stream identifications. Planner automatically supplies the stream number once the panel type is selected.

The panel type selected from the drop-down list is displayed in the panel type window.

- **Serial number.** For record purposes, enter the serial number of the selected panel in this field. The panel serial number is printed on a label positioned at the bottom left, inside the control panel door.
- **Software version (SW Vers).** Select the relevant software version from the drop-down list provided.

**Note:** The current software version release from the factory must be verified. Versions displayed in the drop-down list may not yet have been released or are for future development only.

- **Installation date.** Click the calendar icon next to the installation date field and select the correct installation date from the calendar provided.

Navigation buttons are provided at the top of the display. Single arrow buttons scroll the calendar forwards or backwards by month. Double arrows scroll the display by year.

- **Checksum.** This field shows the checksum value for the complete configuration map for the displayed panel. This value is filled in by Planner whenever an upload or download to the panel is performed, or if the checksum calculator is activated (see also *Loading the database from PC to panel* on page 108).
- **Software stream.** The software stream identification is automatically displayed for reference, when the panel type is selected in the panel type window. The software stream is a reference number used to identify the software type.
- **Language.** This field is used with earlier software versions for which the language is preset. Not applicable to S/W Stream 719XX.

### Hardware module selection

All ZP3 control panels can be provided with additional optional input or output facilities. These are described in detail in the ZP3 Fire Control Panel Installation, Commissioning and maintenance manual, document number 503-1160ZE-I-09. Setup requirements conforming to EN54 are described under the heading "EN54 Setup Requirements" in the same manual.

The following additional facility boards are configurable in the Planner programme.

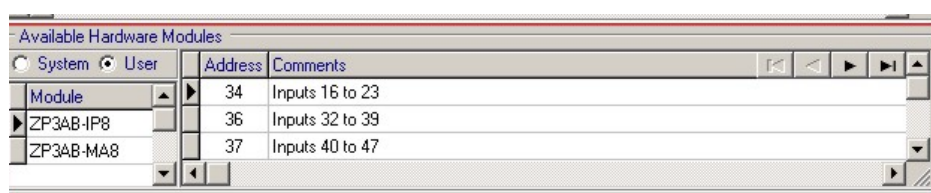
- ZP3AB-MIP8      8-way input board with fault monitor
- ZP3AB-MA8      8-way programmable sounder driver board
- ZP3AB-OP24     24-way programmable open collector output board
- ZP3AB-RL8      8-way programmable relay output board

The screen area for selecting the additional facilities to add to which panel is divided into two sections as follows:

#### Available hardware modules

This is located in the lower part of the hardware modules selection screen area (see Figure 32).

**Figure 32: Available hardware modules**



As modules are selected from the available list, they appear in the upper, installed modules area of the screen (see Figure 33)

## System/user bus selection

At the top left of the Available Hardware Modules selection area a facility is displayed for assigning the module to either the system bus I/O (as a group 9 address), or the user bus I/O (as a group 10 address). See *System bus (group 9)* on page 8 and *User bus (group 10)* on page 14 for more details).

Select the appropriate action by clicking the *System* or *User* radio button. Because each optional board can be assigned to either group 9 or group 10, the selection toggles between the two headings.

## Module

Modules are listed for selection and chosen by clicking onto the required item (or items), from the list. The list can be scrolled via the scroll bar located down the right side of the selection area. As each module is selected, it is displayed in the Installed Module area of the screen.

## Address

After selecting the module, select the appropriate address by clicking onto the required address in the address column. The address and comments are highlighted. Addresses 0 to 31 define the systems bus (group 9) and addresses 32 to 127 define the user bus (group10).

Double clicking in the highlighted area opens a dialog box, which prompts the user regarding the location of the optional board. This can be local (within the panel enclosure), or remote (usually in an auxiliary equipment cabinet located away from the main control panel).

Once the location is confirmed, the details of the optional I/O board are displayed in the installed hardware modules list.

## Comments

The comments column displays the inputs or outputs reserved for the address by Planner.

Planner automatically assigns the correct number of inputs or outputs to the next available address number.

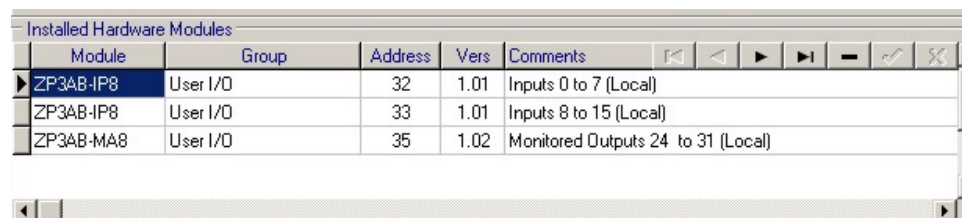
## Navigation buttons

Navigation buttons are provided at the top right of the display to scroll backwards and forwards through the list of available modules and their addresses.

## Installed hardware modules

The *Installed Hardware Modules* area of the screen (see Figure 33) allows you to enter the following information for each panel:

**Figure 33: Installed hardware modules**



Module	Group	Address	Vers	Comments
ZP3AB-IP8	User I/O	32	1.01	Inputs 0 to 7 (Local)
ZP3AB-IP8	User I/O	33	1.01	Inputs 8 to 15 (Local)
ZP3AB-MA8	User I/O	35	1.02	Monitored Outputs 24 to 31 (Local)

- **Module.** Indicates the selected module type.
- **Group.** Indicates the group to which the module and its input or output facilities have been included. Either system group 9 or user group 10.

**Note:** All cards should be placed into the group 10 bus structure, which is freely programmable. Placing cards in the group 9 bus emulates group 9 functions (often resulting in unintended system operations) and should only be considered by experienced system designers.

- **Address.** Indicates the address to which the module has been assigned. This can be selected in the available modules list. If no selection is made then Planner assigns the module to the next available address.
- **Version.** Indicates the software version of the selected module.
- **Comments.** Displays details of the selected module, together with the assigned address (or addresses) and whether the module is local or remote to the panel.


**Note:** The addressing of optional auxiliary PCB's is explained under *Auxiliary board addresses* on page 11.

- **Navigation buttons.** Arrow buttons are provided at the top right of the display area (see below). These are used to scroll backwards and forwards through the list of selected modules. The navigation controls include a button for deselecting any module and buttons for posting and cancelling selections.

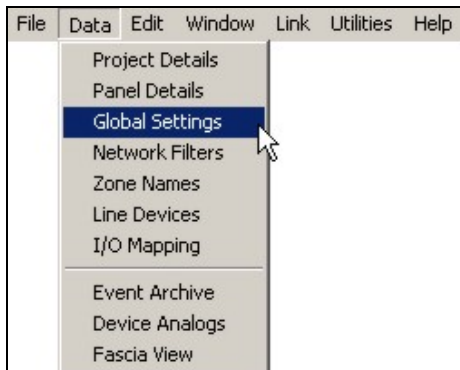


## Global settings

The **Global Settings** sub-menu enables the user to set the global parameters for each control panel in the system. Global settings provide facilities for all devices connected to a particular panel. For example if the service alarm mode is selected, it applies to all sensors. The settings are selected from the global settings display screen.

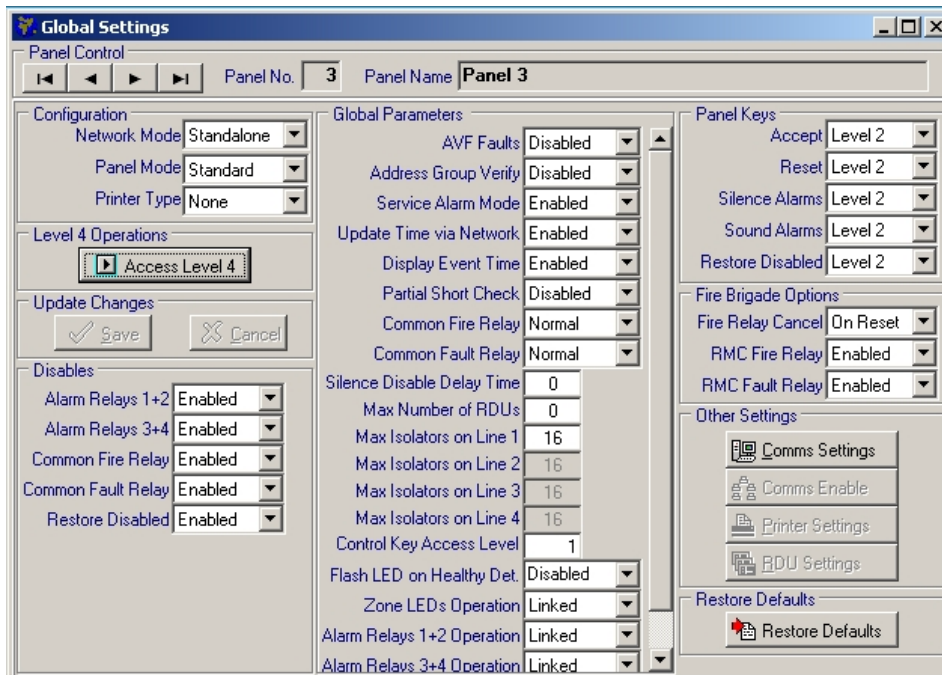
Access the global settings screen by clicking on the **Global Settings** button () located in the toolbar running across the top of the screen or by selecting the **Global Settings** sub-menu from the **Data** menu (see Figure 34).

**Figure 34: Data/global settings menu option**



The global settings (panel control) screen (see Figure 35) is divided into four main sections:

**Figure 35: Global settings (panel control) screen**



## Panel control

The current panel number and name is displayed at the top of this screen. The information is automatically displayed by Planner from the information entered on the panel details screen as described under *Panel operations* on page 37.

The navigation buttons (arrows) are provided to enable easy movement from panel to panel in multi panel networks.

The remaining part of the screen is displayed as three columns. When configuring new systems, selections should be made in order, firstly down column one, then down column two and finally down column three.

### Column one

The following field/settings are available in column one:

#### Configuration

These provide general settings for networking (in multi panel systems), the panel mode and the printer type.

- **Network mode.** Offers the following options:
  - Standalone. This configures single panel systems
  - Peer to peer. This is selected for networking applications where all panels communicate together.
- **Panel mode.** This sets the panel for either standard or day/night operation. Click the relevant down-arrow and select the required option from the drop-down list
- **Printer type.** This allows you to select a suitable printer (on-board printer or serial desktop devices). Click the relevant down-arrow and select the required printer option from the drop-down list. The Able Ap24 option should be selected for ZP3 standard on board panel printers.

## Level 4 operations

European Standard EN54 Part 2 sets out access levels for controls and setting of fire detection panels.

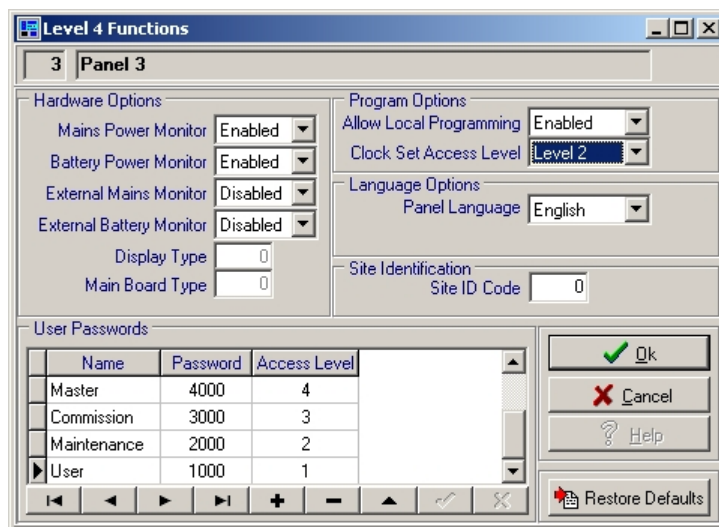
Level one - generally allows use by everyone and may cover only the most basic operations.

Level two - usually enables the day-to-day operating controls for the system.

Level three - generally used by commissioning authorities.

Level four (see example in Figure 36) - typically designated as a manufacturer's level, and as such allows access to every aspect of hardware and software operations.

**Figure 36: Level 4 functions screen**



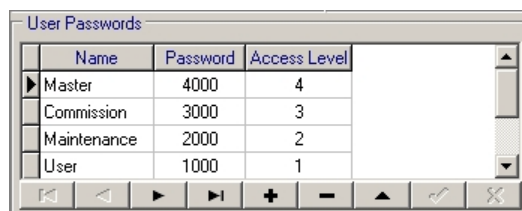
The level 4 functions screen is divided into the following areas:

- **Panel number and name.** The selected panel is always shown across the top of the display.
- **Hardware options.** Level four password control allows the user to disable and enable the monitoring of primary and secondary power supplies, both in the control panel and at remote locations (where relevant). Click the relevant down-arrow and select the required option (*Enabled/Disabled*) from the drop-down list.
- **Display type.** Provision for future display types – set to 0 for current display.
- **Main board type.** Provision for future main board types - set to 0 for current models.
- **Program options**
  - **Allow local programming.** When this option is enabled, it allows programming either via the panel keyboard at levels three and four, or externally by PC and the Planner programme. When disabled, the panel programme can only be changed or modified via the Planner facility.
  - **Clock set access level.** Selects the access level at which the panel clock may be set on the panel.

**Note:** In multi panel networks, all panel clocks are synchronized via the *Update Time via Network* function (see *Global parameters* on page 44.).

- **Language options**
  - **Panel language.** This selects the default language displayed (subject to the software version installed).
  - **Display character set.** This selects the character set used on the LCD display (subject to the software version installed).
- **Site identification.** A unique site identification code number can be set in the site ID code window. This is a future option for multi-site installations.
- **User passwords.** Passwords are assigned to users by entering details into the user password screen (see Figure 37). Up to 20 names and corresponding passwords can be entered.

Figure 37: User passwords screen



	Name	Password	Access Level
▶	Master	4000	4
	Commission	3000	3
	Maintenance	2000	2
	User	1000	1

Type the password holder names into the column on the left.

Type the passwords (any four-digit number), into the centre column.

Type the access level allowed into the column on the right. This sets the user's access level, which determines the level of access allowed.

**Note:** Passwords should be unique, and there must be at least one level 4 password configured on each panel.

Navigation and editing facilities for the user password list are provided across the bottom of the display.

Buttons are provided at the bottom right of the screen to OK or Cancel any changes from the default settings.

A help facility is shown, which is under development and is not yet available to the user.

Clicking the **Restore Defaults** button reverts, via a confirmation dialogue box, all custom settings made on the Level 4 Functions screen, back to the default state.

### Update changes

When any default item or value is changed on the global settings input screen, the changes must either be saved or cancelled by clicking onto the appropriate update changes button, i.e. **Save** or **Cancel**.

### Disables

Configure the disables as required (see Figure 35 on page 41). These allow you to enable or disable alarm relays and/or common fire or fault relays.

## Column two

### Global parameters

This column allows you to select the required states and values for a range of system functions. Parameters chosen are assigned to all devices of a type. For example if the parameter '*Flash LED on Healthy Detector*' is enabled, it applies to all detectors connected to the selected panel. The following global parameters can be configured:

- **AVF faults.** Applies a verification period, prior to the panel registering a fault condition.
- **Address group verify.** Allows device addresses installed between loop isolators to be defined as a group and then checks for correct group membership.'
- **Service alarm mode.** Allows the enabling or disabling of automatic notification of sensors requiring service.
- **Update time via network.** Allows synchronisation of all panel clocks on a multi panel network.
- **Display event time.** Disables the display of the time stamp for each system event, recorded by the panel. Increases the number of characters available for the zone message.
- **Partial short check.** When enabled, checks for partial short circuits and data corruption, isolating the cause with the loop isolators.
- **Common fire relay.** Sets common fire output to either normally open or normally closed operation.
- **Common fault relay.** Sets common fire output to either normally open or normally closed operation.
- **Silence disable delay time.** Sets the delay time period (in seconds), for the silence disable facility. Ensures in certain alarm configurations, that the sounders cannot be silenced locally prior to them sounding in remote locations.
- **Max number of RDUs.** Confirms the total number of remote display units connected to the selected panel.
- **Max isolators on line 1 to line 4.** Confirms the total number of short circuit isolators connected to each panel loop.
- **Flash LED on healthy detector.** Red alarm LED flashes every 5 seconds on all healthy sensors.
- **Control key access level.** Defines the access level at which the control key operates (either Level 1 or Level 2).
- **Smoke alert delay.** Sets the length of the time delay (between 1 and 5 minutes). The facility is used to provide an initial local alarm, without alerting the panel, for ZP732 Duet sensors.
- **Zone LEDs operation.** Zone LEDs displayed on the control panel can be either linked directly to their discreet zone, or mapped as an output.
- **Alarm relay 1 +2 operation.** Determines whether alarm relays 1 & 2 operate under the direct control of the panel, or I/O map.
- **Alarm relay 3 +4 operation.** Determines whether alarm relays 3 & 4 operate under the direct control of the panel, or I/O map.
- **Fire coincidence detection.** Select the required option for coincidence detection (enabled either on a system wide basis, or a zonal basis) by selecting the required option from the drop-down list.



## Column three

### Panel keys

The following control panel main facilities access levels can be set:

- Accept
- Reset
- Silence alarms
- Sound alarms
- Restore disabled

Click the appropriate down arrow and select the required access level (Free, Level 2 or Level 3) from the drop-down list.

### Fire brigade options

- *Fire Relay Cancel* controls the cancellation of the fire brigade relay. Select the required option from the drop-down list, i.e. on panel reset or on disablement of the device that detected the fire condition used to trigger the fire brigade relay.
- *RMC Fire Relay* controls the calling of the remote control centre upon receipt of a fire alarm. Select *Enabled* or *Disabled* from the drop-down list as required.
- *RMC Fault Relay* controls the calling of the remote manned centre upon receipt of a fault alarm. Select *Enabled* or *Disabled* from the drop-down list as required.

### Other settings

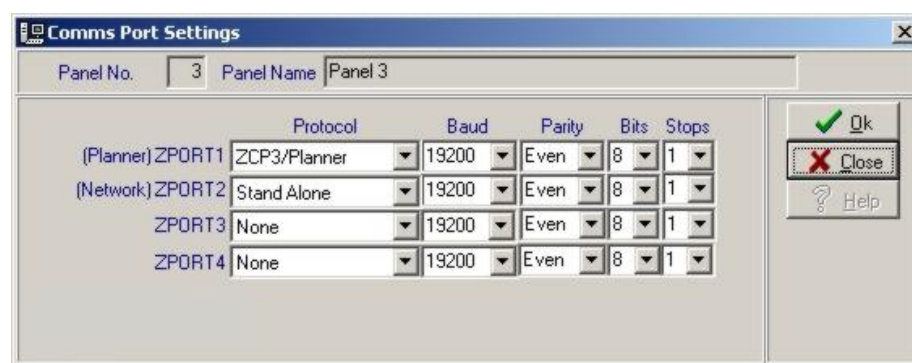
Clicking the appropriate button accesses settings for other functions.

#### 1. Comms settings

Click the **Comms settings** button to display the comms port settings screen (see Figure 38). This screen allows you to configure the protocols for both information input, between the Planner PC and the control panel and the network protocol for system operation.

**Note:** The Advanced settings option is only available on software version 3.08 and later.

**Figure 38: Comms port settings screen**



The display features four rows:

- **(Planner) ZPORT 1.** (Includes Port 1A). For input of system configuration between the Planner PC and the control panel. This is the main RS232 port.
- **(Network) ZPORT 2.** For setting the network protocol in multi panel systems.
- **ZPORT3**
- **ZPORT4**

Five columns are provided for setting the protocol details:

### Protocol

Protocol is a function of fire alarm control panel type, the following options are displayed by clicking onto the drop down list:

#### (Planner) ZPORT1

1. None. No protocol selected. Port not in use.
2. ZCP2-Multi. Selects multi-event ZCP2 protocol for connection to an external graphics computer.
3. ZCP2-Single & text. Selects Tx only ZCP2 protocol for connection to an external graphics computer.
4. ZCP2-Single. Selects single-event ZCP2 protocol for connection to an external graphics computer.
5. Peer-to-peer. Suitable for ZP3 panels running software prior to version 1.25.
6. Peer-to-peer V2. Later peer to peer, recommended for all new networks featuring ZP3 panels, with software version 1.25 or later.

**Note:** Used for specialist application – for normal network configurations see following paragraphs (Network) ZPORT2.

7. ZCP3/Planner. Selects the protocols required to communicate between planner and the panel.
8. Tx Analogues.
9. Serial Printer.
10. TX Periph.
11. TX Loop Ft.
12. TX Data.
13. Peer-to-Peer V3.
14. ZCP2-3. Selects the protocol that allows the panel to interface to building management systems.

#### (Network) ZPORT2

This sets the protocol type for the selected panel, either as a stand-alone unit or, connected to a graphics package, within a multi panel network.

1. Stand Alone with graphics package. Selected for single panel systems, with no inter panel communications.
2. Peer to Peer. Suitable for networked ZP3 panels running software prior to version 1.25.
3. Peer-to-Peer V2. Recommended for all new networks featuring ZP3 panels, running version 1.25 software or later.
4. Tx Analogues.
5. TX Periph.
6. TX Loop Ft.
7. TX Data.
8. Peer-to-Peer V3.

#### ZPORT 3

TBD (to be determined)

#### ZPORT 4

TBD (to be determined)

## Baud rate

- ZPORT1: Sets the baud rate for the communications between the PC and panel.
- ZPORT2: The communications speed of the selected panel via Network ZPORT2 must be matched to the network communication speed. Site wiring and distances between the panels will determine the maximum speed that can be used.

## Parity

The following parity settings can be selected from the drop down lists:

- Even. This is the setting selected for all ZP3 systems using either P2P or P2P-2 protocol.
- Odd. Not used.
- None. Not used.
- Mark. Not used.
- Space. Not used.

**Note:** The default setting for both Planner ZPORT1 and Network ZPORT2 is Even parity. This is a suitable setting for all ZP3 systems.

## Bits

7 bit or 8 bit communication must be selected for both ports, from the drop down lists, to match the output of the fire alarm control panel. ZP3 systems operating on P2P-2 protocol are set to 8 bit, whilst ZCP2 protocols are usually 7 bits.

## Stops

The Stop Bit value can be set for either 1 or 2 bits. Both ZPORT1 and ZPORT2 should be set to one stop bit.

All selections in the Comms Port Settings Box must be confirmed by clicking the OK button, or cancelled via the Cancel button.

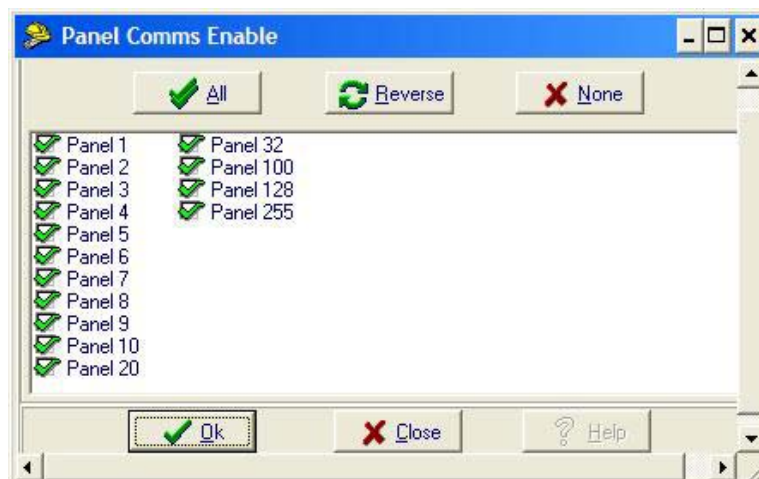
A Help facility is shown. This facility is under development and is not yet available to the user.

## 2. Comms enable

Click the **Comms enable** button in a multi-panel system to enable peer-to-peer communications. The **Panel comms enable** screen is displayed as shown in the example in Figure 39 below.

Select (tick) the required panels for peer-to-peer communication and click the **OK** button when complete. Click the **All** button if you want to select (enable) all the panels in the system. Click the **Close** button to close the screen if required.

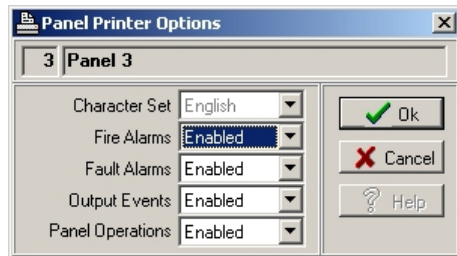
Figure 39: Panel comms enable



### 3. Printer settings

If a printer has been selected in the printer type window in column one, the **Printer Settings** button is shown active. Click the **Printer Settings** button to display the printer settings options box (see Figure 40). The panel number and name are shown across the top of the display box.

Figure 40: Panel printer options



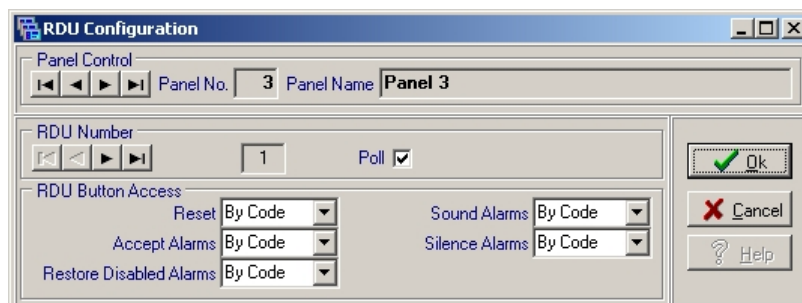
- **Character set.** Enables the selected special character sets to be used by the panel printer, when fitted.
- **Fire alarms.** When enabled, fire alarm events are printed on the selected printer.
- **Fault alarms.** When enabled, fault events are printed on the selected printer.
- **Output events.** When enabled, output events are printed on the selected printer.
- **Panel operations.** When enabled, panel operations are printed on the selected printer.

All selections in the panel printer options box must be confirmed by clicking the **OK** button, or cancelled via the **Cancel** button. A **Help** button (not yet implemented) is also shown.

### 4. RDU settings.

Remote display units connected to the control panel are configured via the RDU settings button. Click the **RDU Settings** button to display the RDU configuration screen (see Figure 41).

Figure 41: RDU configuration screen



The screen is divided into the following main areas:

- **Panel control**

Navigation buttons, for scrolling through panels connected to multi panel networks, together with the displayed panel number and name are located at the top of the box.

- **RDU number**

When more than one RDU is connected to a panel, navigation buttons are provided for scrolling through their configurations. The RDU number is also displayed.

A poll options window is displayed, when selected instructs the panel to communicate with the selected RDU.

- **RDU button access**

The following main panel controls can be operated from any full function RDU; reset, accept alarms, restore disabled alarms, sound alarms and silence alarms.

For standard RDUs, controls are accessed by key switch only. The switch option should be selected from the drop down boxes.

On fully functional RDUs, access to the above controls can be by either key switch or access code number (via the key pad). The required option should again be selected from the drop down boxes.

All selections in the RDU configuration box must be confirmed by clicking the OK button, or cancelled via the cancel button.

A help facility is shown, which is under development and is not yet available to the user.

## 5. Phone numbers

Future feature for call back operations in alarm conditions.

## Network filters

The Network Filters sub-menu allows you to select the events and command functions that are sent from one panel to others in a multi panel network.


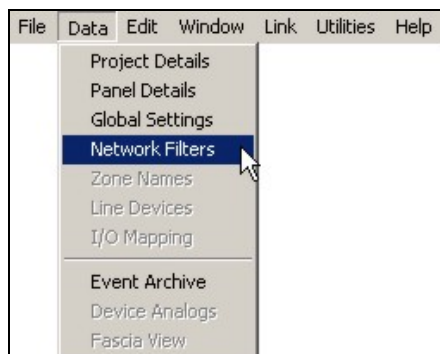
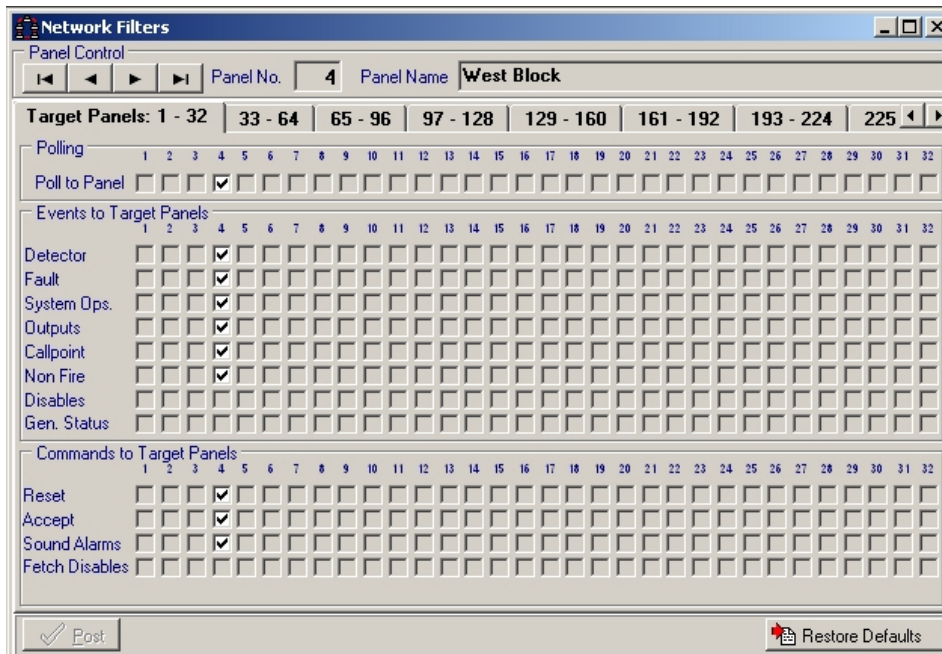
Access the network filters screen either by clicking directly onto the **Network Filters** button (  ), located centrally in the toolbar running across the top of the screen, or by selecting the **Network Filters** sub-menu from the **Data** menu (see Figure 42).

Figure 42: Data/network filters menu option



Only panels set to be part of a peer-to-peer network (refer to *Panel description* on page 37), are displayed in the network filters display (see Figure 43).

Figure 43: Network filters



The network filters screen comprises four sections:

### Panel control

A set of navigation buttons/arrows is provided for scrolling between the panels in a network system.

### Target panels

Panel numbers from 1 to 255 are displayed in a matrix format. The display is presented in several parts, each consisting of 32 target panels. Each part is accessed by clicking onto the relevant name tab at the top of the display.

Panel numbers, previously entered into the panel's details screen (see *Panel description* on page 37) are displayed across the top of the matrix, with their poll to panel selection windows highlighted in white.

### Polling

Panels to be polled are selected in the poll to panel row running across the top of the display. Panels are selected by clicking onto the relevant window in the row.

On selection, a tick symbol appears in the window and the column of selectable items directly below becomes active. All selections down the column are shown as active in the default state. Note that all panels in a network must be set to poll all other panels in the network regardless of whether any information or data has to be shared between them. Failure to adhere to this causes the system to operate incorrectly.

### Events to target panels

The following send filters can be selected, or deselected, by clicking onto the selection windows, shown for each panel:

- **Fire alarms.** The selected target panels are sent fire alarm events and alarms from the originating panel.
- **Faults.** The selected target panels are sent fault signals that occur on the originating panel.
- **Keys.** The selected target panels are sent system operations, generated via the keypad at the originating panel.
- **Outputs.** The selected target panels are sent output operations that occur on the originating panel.
- **Callpoints.** The selected target panels are sent manually activated fire alarm signals received from Callpoints connected to the originating panel.  
This option is usually selected as an alternative to the full fire alarms facility listed above.
- **Non-fires.** The selected target panels are sent non-fire events occurring on the originating panel.

### Commands to target panels

The following commands can be selected, or deselected, by clicking onto the windows, shown down the column for each panel:

- **Reset.** When the originating panel is reset, the target panel is also reset.
- **Silence.** When alarms are silenced at the originating panel, alarms are also silenced at the target panel.
- **Sound alarms.** When alarms sound at the originating panel, the alarms are also sounded at the target panel. Alarm outputs at the target panel operate as programmed.
- **Isolation.** Allows remote isolation of devices to be controlled by the originating panel.

### Post and restore defaults buttons

Buttons for posting selections to the database or restoring defaults, are located at the bottom left and bottom right of the screen respectively.

The post button displayed as inactive confirms posting the selections.

Clicking the restore defaults button, displays a dialogue box to confirm that the user wishes to reset the system to the factory set defaults.

## Setting up a network

### Introduction

The ZP3 Panel status can be a standalone (single panel system) or part of a network. Network communications is provided by proprietary RS485 protocol. For details of hardware requirements refer to the ZP3 Fire Control Panel Installation, Commissioning and Maintenance Manual, document number 503-1160ZE-I-09.

ZP3 incorporates Peer-to-Peer configuration, where all panels communicate on the same level, where there is no need for a dedicated master central fire control panel.

Software filters in each panel allow the user to create a variety of system configurations such as:

- Single master/multiple slave
- Multiple master/multiple slave

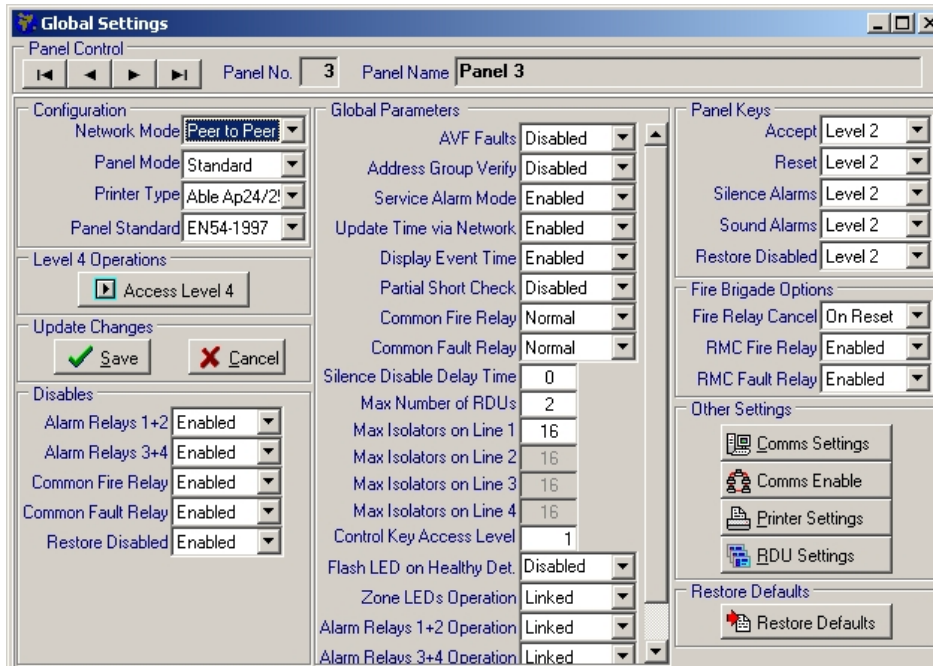
The software filters enable specific events and control functions to be broadcast to all panels or directed to specific panels only.

Cause and effect mapping is also allowed across the network when panels are set to intercommunicate and receive events.

### Setting up a network system

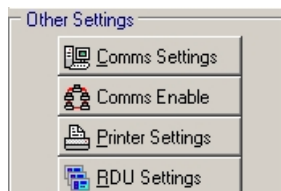
1. Create a new project and insert all individual fire panels to be incorporated in the system. Refer to *Add New Panel* under *Panel operations* on page 37 for more information.
2. Set the network mode to peer to peer on the global settings screen as shown in Figure 44.

Figure 44: Global settings screen



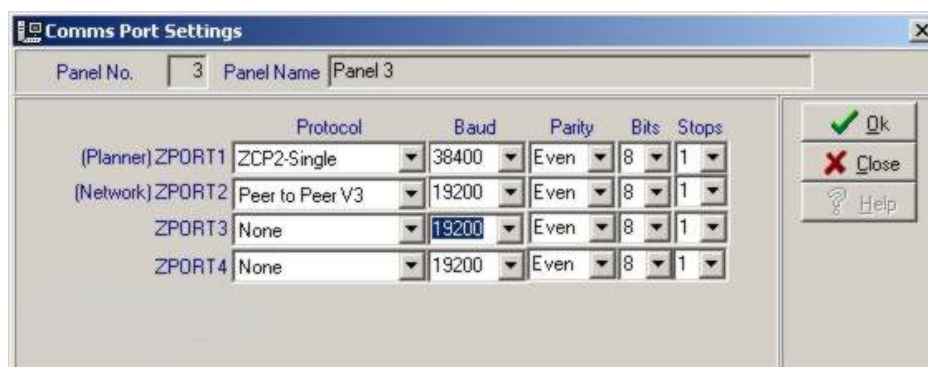
3. Click the **Comms Settings** button in the *Other Settings* area of the screen (see Figure 45).

Figure 45: Other settings



4. Select comms port 2 (network) Z Port 2 and configure the options as required (see Figure 46 for a typical set up).

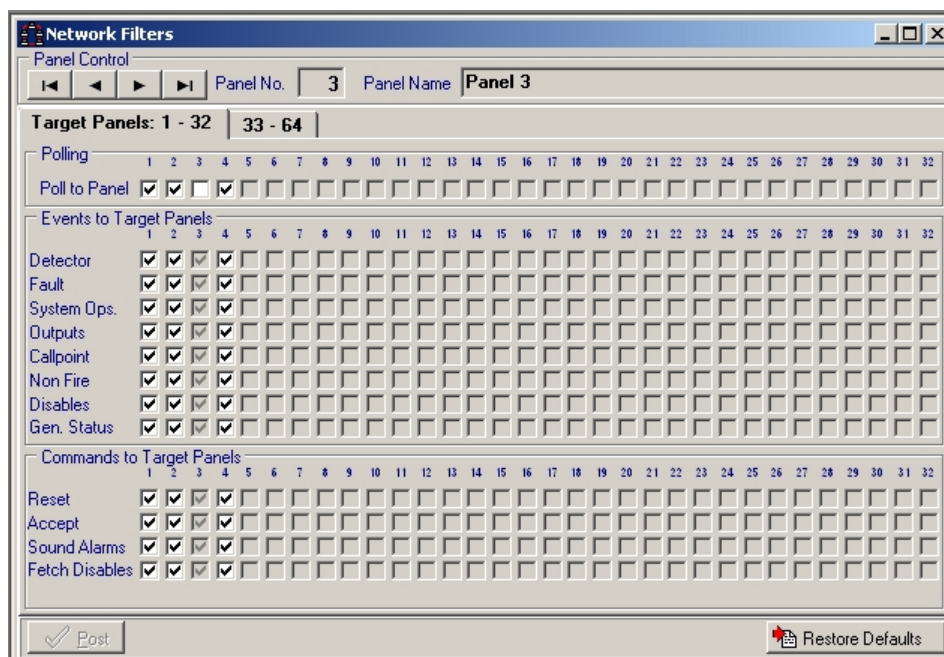
Figure 46: Typical comms port settings





- After successful completion of steps 1 to 4, the network filters option in the data menu becomes active. Figure 47 shows the filter setting for Panel 3 to communicate with panels 1, 2 and 4 in a four panel system.

Figure 47: Typical network filters screen



The *Network Filters* screen consists of four sections:

- Panel control.** Indicates the source panel.
- Polling.** The network uses a token ring protocol; therefore each panel needs to be aware of all other panels in the network. All other panels in the network must be selected by clicking on the relevant panel numbers.
- Events to target panels.** Once panels have been set in the poll screen, events to target panels are automatically enabled by default. The events to be sent to the chosen target panel can then be selected or deselected.

**Note:** If select events are not chosen, I/O mapping may result in failure. That is, if a relay has to be switched on panel A by the activation of an input on panel B, then panel B must be set to broadcast that event to the target panel.

- Commands to target panels.** This section defines the type of control, i.e. e.g. accept, reset, silence and sound alarms keys on the front of the fire panel and includes the authority to disable/enable from the source panel.

**Note:** If panel A is selected in panel control, and panel B is to be reset, then the reset option would be selected under commands to target panel for panel B.

The following are examples of typical network configurations.

### Example 1 – master/slave

Refer to Figure 48, Figure 49 and Figure 50.

A system comprises three ZP3 fire panels. Panel 1 is located in a ground floor control room, with panels 2 and 3 in risers on upper floors of the building.

Panel 1 reports all events, i.e. it is a master panel and can control panels 2 and 3.

Panels 2 and 3 need not send information to each other. There are no inter-panel cause and effect routines.

Figure 48: Example 1 - panel 3 network filters screen

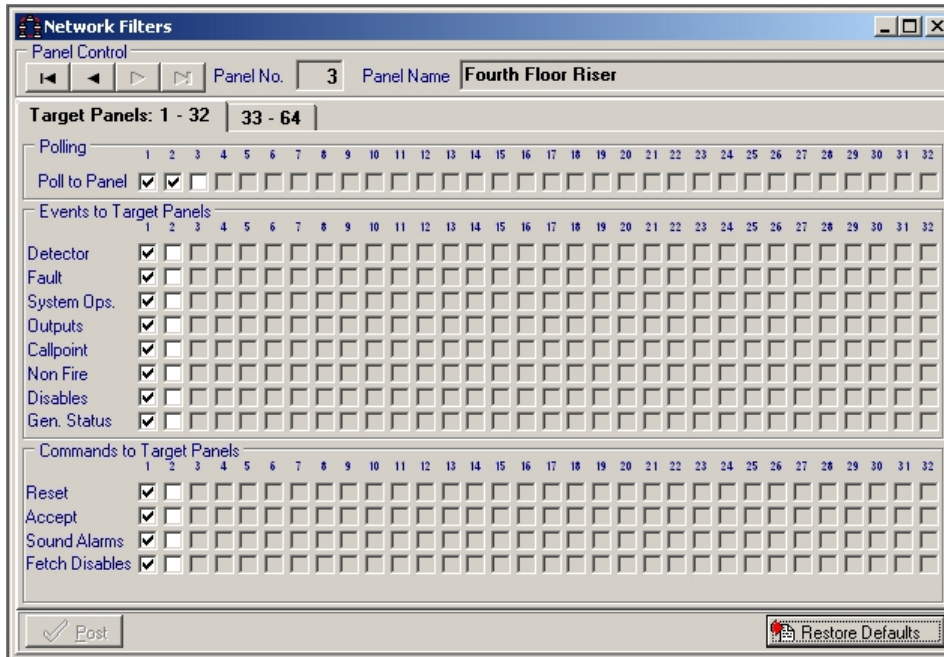


Figure 49: Example 1 – panel 2 network filters screen

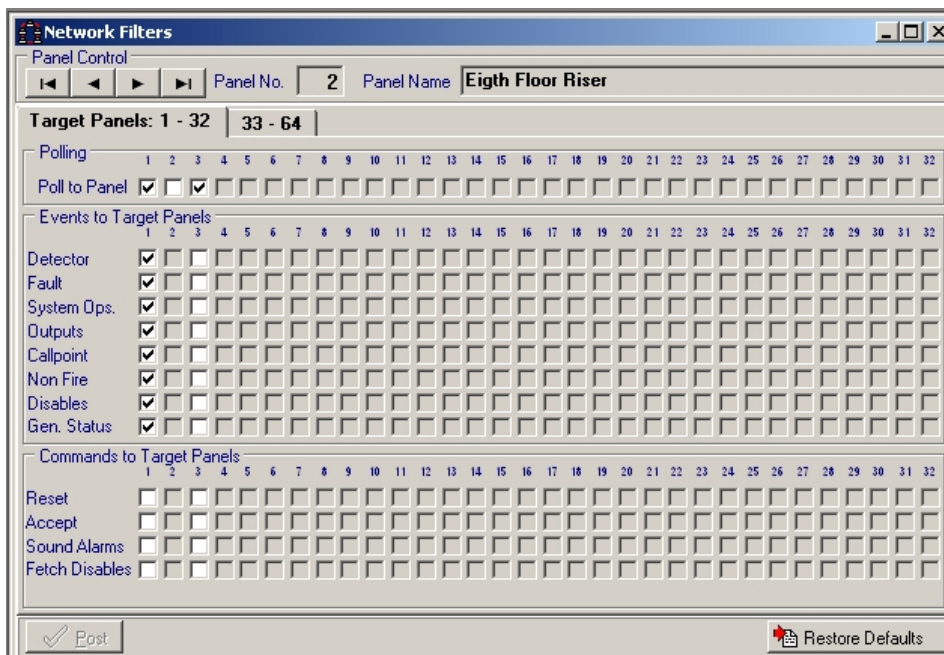
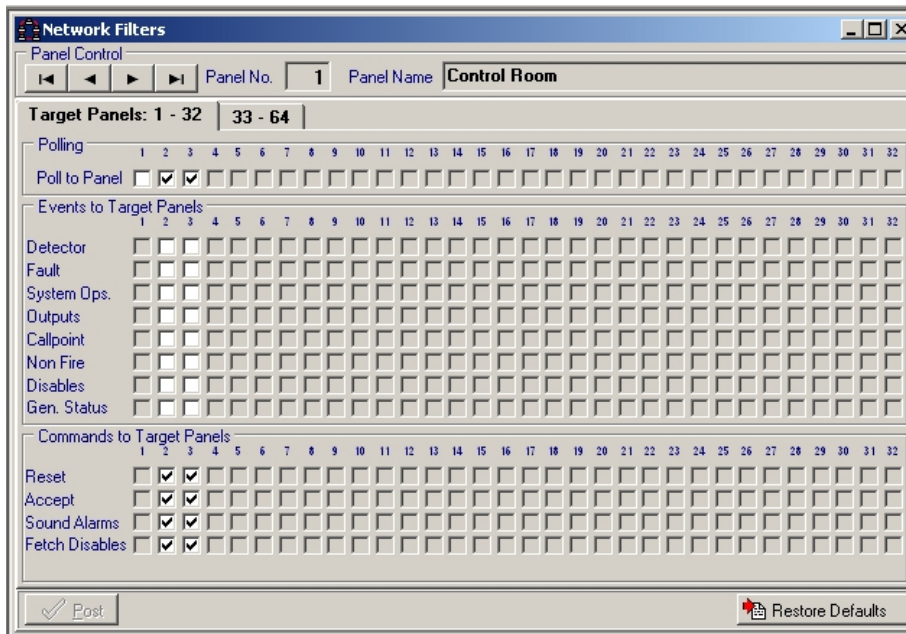


Figure 50: Example 1 - panel 1 network filters screen



**Example 2 - master/slave (with comprehensive I/O mapping features)**

Refer to Figure 51, Figure 52 and Figure 53.

The system is configured as in example 1, but comprehensive mapping is required between panels.

Although the I/O mapping will be completed later via the I/O mapping database screen, the polling and network filters must be configured in the network filters screen, at this stage.

Options are selected in the three network filters screens as in example 1, with the addition that every option in the events to target panels is included, for all panels.

**Note:** The commands to target panels, options need not be selected for slave panels 2 and 3, as this would provide the ability for these panels to reset the main panel, promoting them to the same authority as panel 1 (master).

Figure 51: Example 2 - panel 3 network filters screen

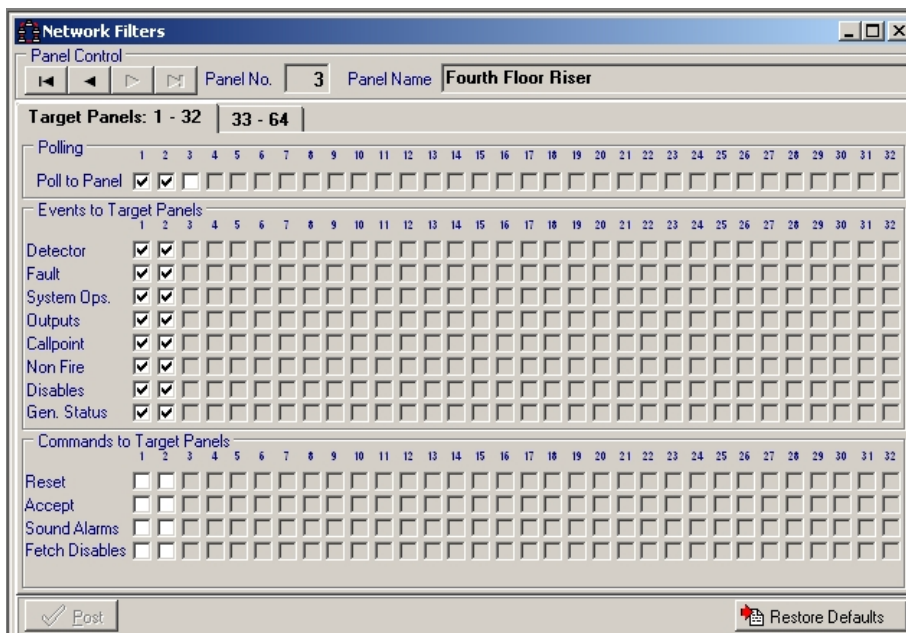


Figure 52: Example 2 – panel 2 network filters screen

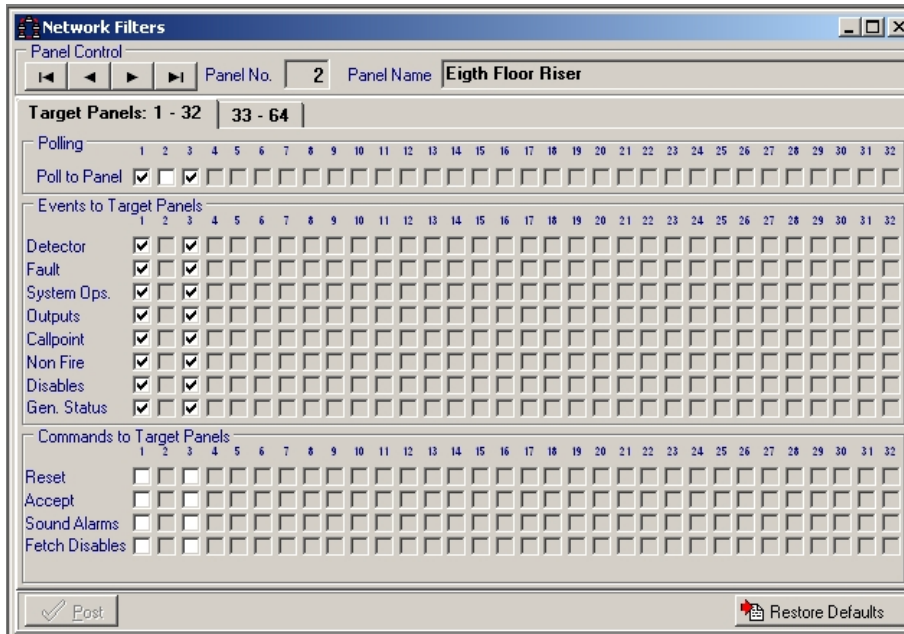
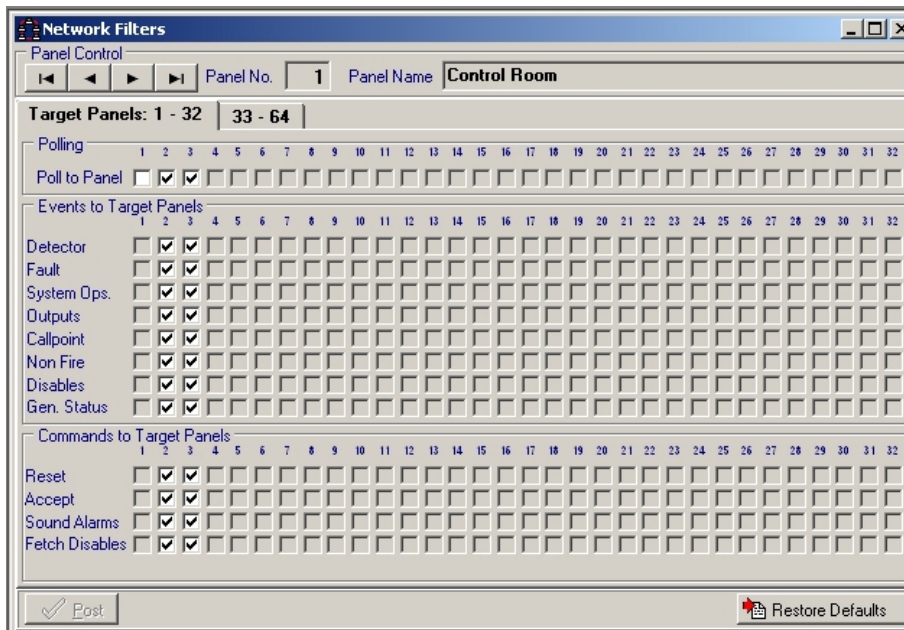


Figure 53: Example 2 – panel 1 network filters screen



### Example 3

The three panels are configured as master and slave as for example 1, but panel 2 (installed in the maintenance engineer's office) is required to gather all fault conditions throughout the site. No faults are to be sent to the master panel.

The network filter settings for the three panels are shown in Figure 54, Figure 55 and Figure 55.

Figure 54: Example 3 – panel 3 network filters screen

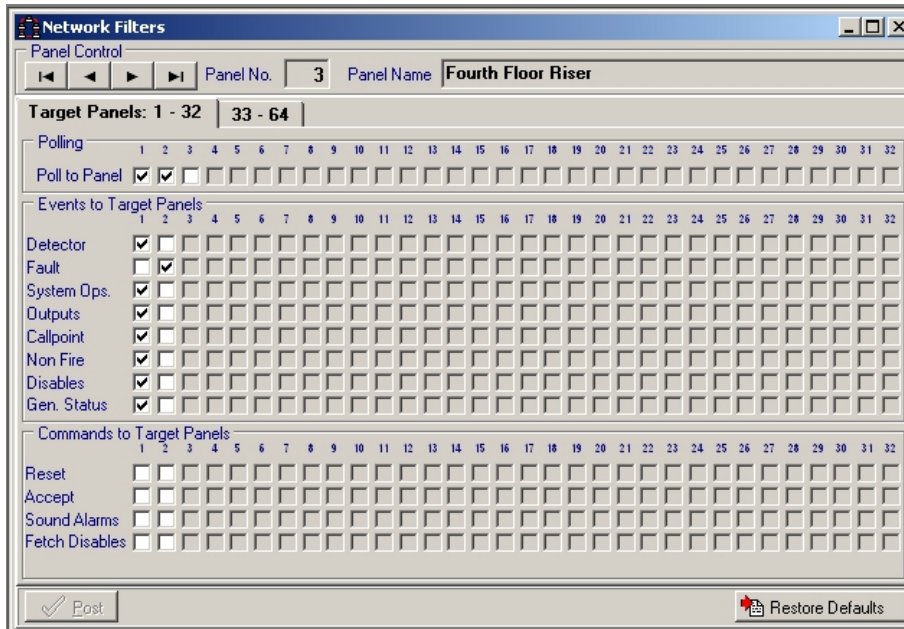


Figure 55: Example 3 – panel 2 network filters screen

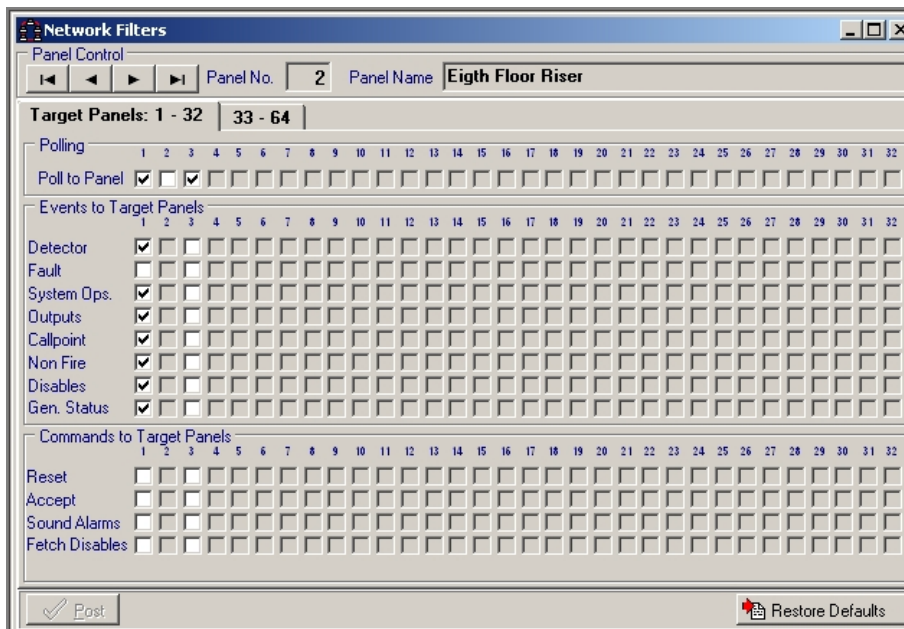
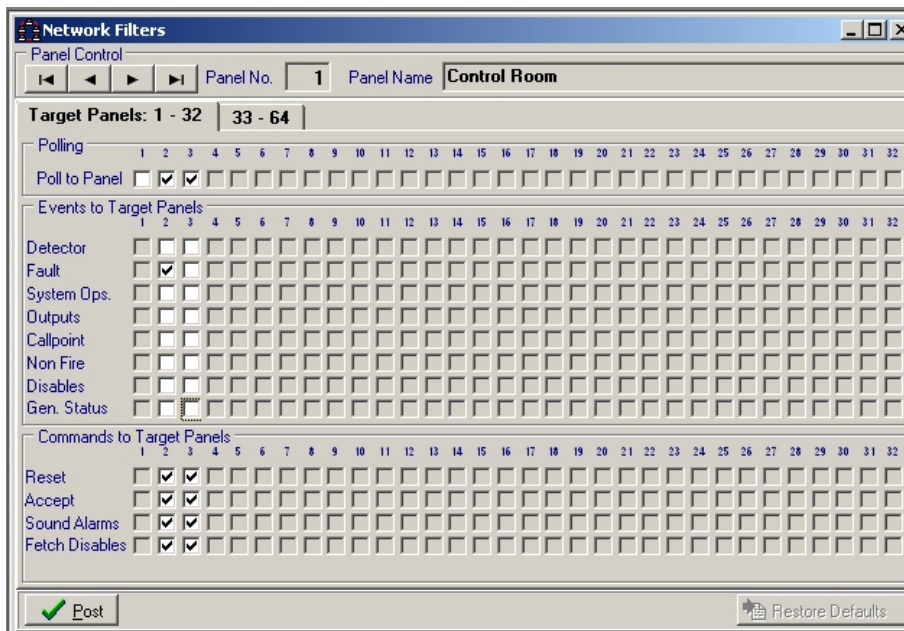


Figure 56: Example 3 – panel 1 network filters screen



**Note:** In the above configuration shown in example3, faults from panels 3 and 1 (master) are sent to panel 2. Only faults on panel 1 are displayed on panel 1.

## Zone names

The zone names sub-menu is designed as a list format for each panel. Information is typed in for each zone. All Planner input screens are interactive with each other, that is, information provided by the user via one set of screens, is used by the programme when providing or displaying other relevant information.

For example, if a panel with a maximum of 50 zones is selected in the panel details screen (see *Panel Type* under *Panel description* on page 37), only 50 zones become available in the zone names list.


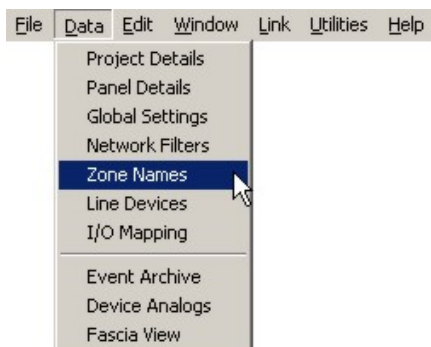
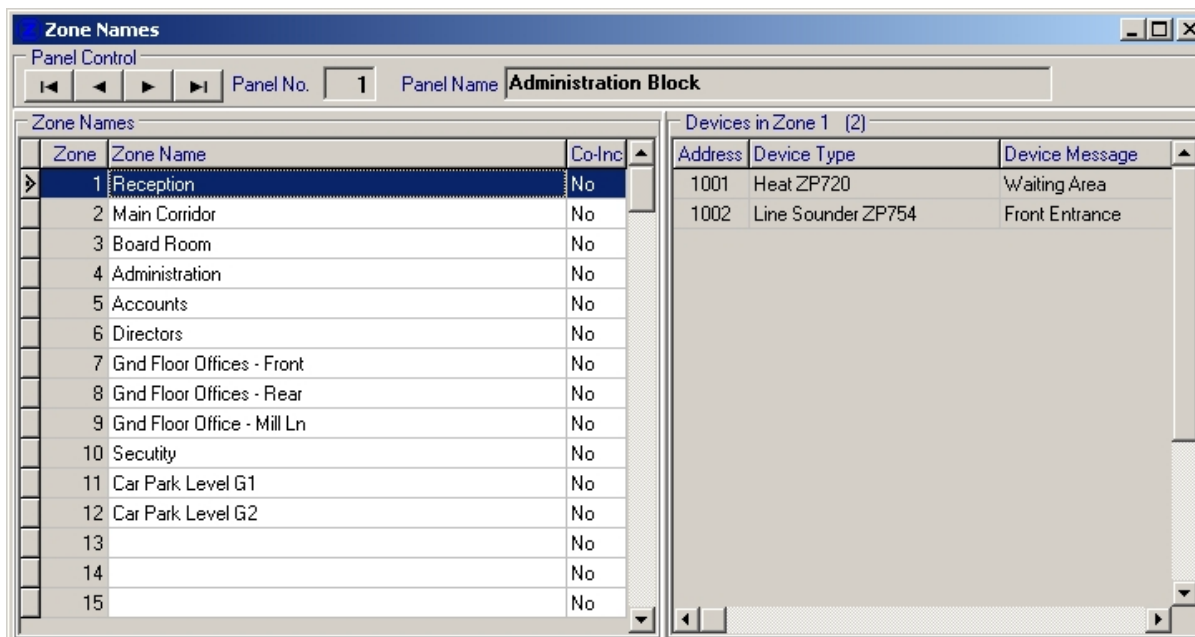
Access the zone names screen either by clicking on the **Zone Names** button () located centrally in the toolbar running across the top of the screen or by selecting the **Zone Names** sub-menu from the **Data** menu (see Figure 57).

Figure 57: Data/zone names menu option



The zone names screen (Figure 58) comprises three sections:

**Figure 58: Zone names screen**



### Panel control

This section provides a set of navigation buttons for scrolling between the panels in a multi panel system.

### Zone names list

Zone numbers are displayed down the left of the display.

Spaces are provided in the list to type in the zone name. Zone names can be up to 26 characters in length. Longer zone names must be shortened and a dialogue box is displayed to prompt the user to enter a shorter name.

At the right of the list a column is provided for selecting coincidence detection. The default setting is No, with coincidence selected by typing 'Yes' for the appropriate zone. The column is viewed by using the scroll bar at the bottom right of the list.

On selection, coincidence detection operates in the chosen zone. Simultaneous fire conditions must be sensed by two sensors within the assigned zone, prior to the control panel commencing its alarm programme. The facility operates with sensors only; signals from manual call points are processed as direct alarms.

Vertical scroll bars are provided, in order to view all parts of the list.

### Devices in zone

Click anywhere on the zone number or description in the zone number list, (see *Zone names list* above), to highlight the selected zone line. The pointer at the left edge of the display also moves to identify the selected zone.

All devices in the highlighted zone appear beneath the devices in zone heading, at the right side of the display.

The loop address, device type and device description are listed. The heading shows the selected zone and gives the total number of devices in that zone, shown in brackets.

Planner automatically takes the device information input by the user via the line devices screen (see *Line devices* on the next page), to formulate the devices in zone list.

Horizontal and vertical scroll bars are provided in order to view any part of the devices in zone list.

The *Devices in zone* heading changes colour from black to red, if the number of devices in a zone exceeds the recommendations for zone isolation in EN54 Part 2 Specification.

## Line devices

The line devices sub-menu provides input facilities for adding detail of each device connected to the control panel.


Access the line devices screen either by clicking directly onto the line devices button () located centrally in the toolbar running across the top of the screen or by selecting the line devices option from the data pull-down menu (see Figure 59). The line devices screen (Figure 60) is displayed.

Figure 59: Data/line devices menu option

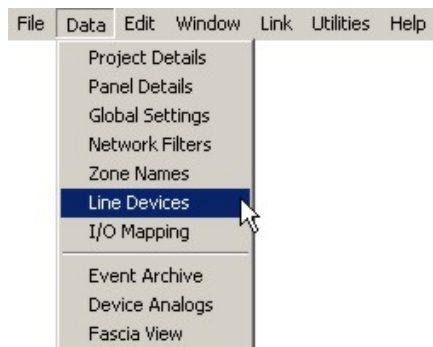
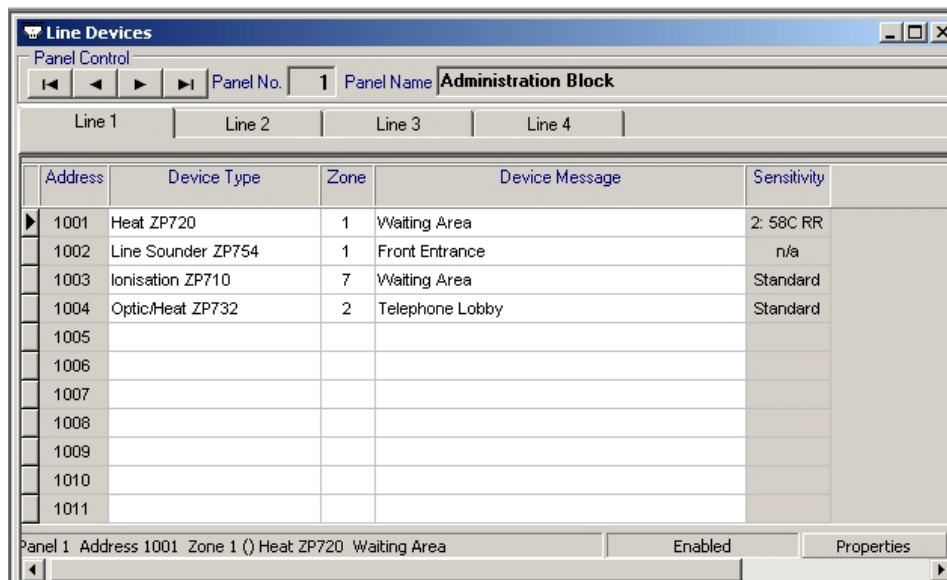


Figure 60: Line devices screen





The line devices screen (Figure 60) consists of two main sections:

### **Panel control**

This section provides a set of navigation buttons for scrolling between the panels in a multi panel system.

### **Lines 1 to 4**

Each line (or loop) is displayed as a list. In multi loop panels a separate list is provided for each loop. Access the required line by clicking the appropriate tab (Line 1 to Line 4) displayed across the top of the screen.

Address numbers are displayed down the left of the display.

Select the required address by clicking anywhere in the appropriate row. The selected address number is highlighted and an arrow is displayed to indicate that the row is selected. Select or edit the device type by clicking in the relevant device type field. An arrow appears next to the device type. Click on the arrow to display a drop-down list of possible device types, from which the required component can be selected.

The highlighted line from the list is also displayed across the information bar at the bottom of the line devices screen.

Spaces are provided for the devices zone number and location description. Descriptions can be up to 40 characters in length.

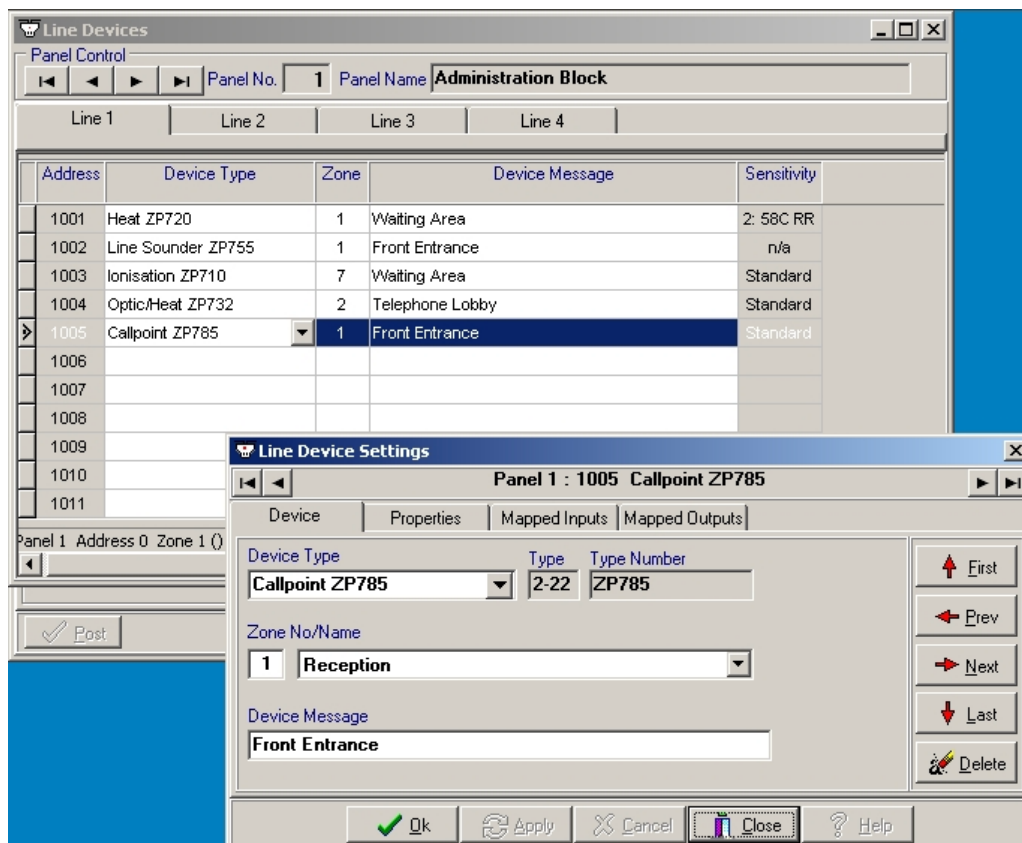
A column, indicating the default sensitivity of the device (where appropriate), is displayed to the right of the list.

Vertical and horizontal scroll bars are also provided to view all parts of the line device screen.

### **Line device settings screen**

Double click anywhere on the highlighted row (address), or click the **Properties** button located at the bottom right corner of the *Line Devices* screen, to display the *Line Device Settings* screen (see Figure 61).

Figure 61: Line devices settings screen - device tab



The panel number and device description are shown across the top of the box together with navigation buttons to move up or down the device list.

Access the line device settings and information by clicking on the relevant tab at the top of the screen, i.e. device, properties, mapped inputs or mapped outputs.

Buttons are provided across the bottom of the line device settings box to provide the following functions:

- **OK.** Posts changes to any settings made and closes the line device settings screen.
- **Apply.** Posts changes to any settings and leaves the line device settings screen open.
- **Cancel.** Cancels changes to default settings.
- **Close.** Closes the line device settings screen.
- **Help.** This feature is currently under development and is not yet available to the user.

### Device tab

The devices tab (Figure 61) provides the following functions:

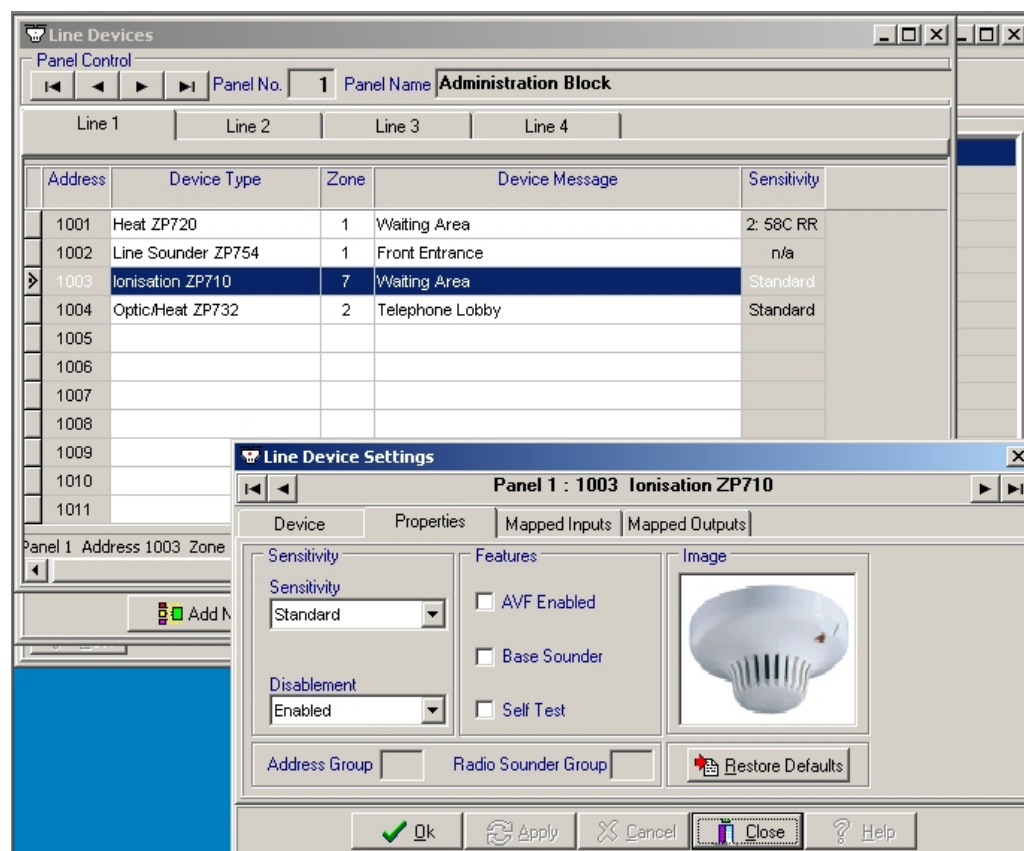
Information on existing devices is displayed on the screen. New additions can be made, by highlighting a blank address row in the device list (see *Lines 1 to 4* on page 61) and selecting device type and zone no/name from the drop down lists on the device settings screen.

Provision is also made down the right side of the screen for moving up and down the devices List and deleting device details.

## Properties tab

The properties tab (see Figure 62) provides the following functions:

Figure 62: Line devices settings screen - properties tab



Where relevant, sensitivity can be set by selecting the required value from the sensitivity drop down list.

Alarm verification and self-test facilities are enabled for the selected device via the selection windows displayed under the features part of the card. A further window is provided which must be activated if the device is fitted with a room sounder.

An image of the device type is included on the card for visual recognition.

**Address group** – shows the address group the device is located in. This field is determined by the panel and is read-only.

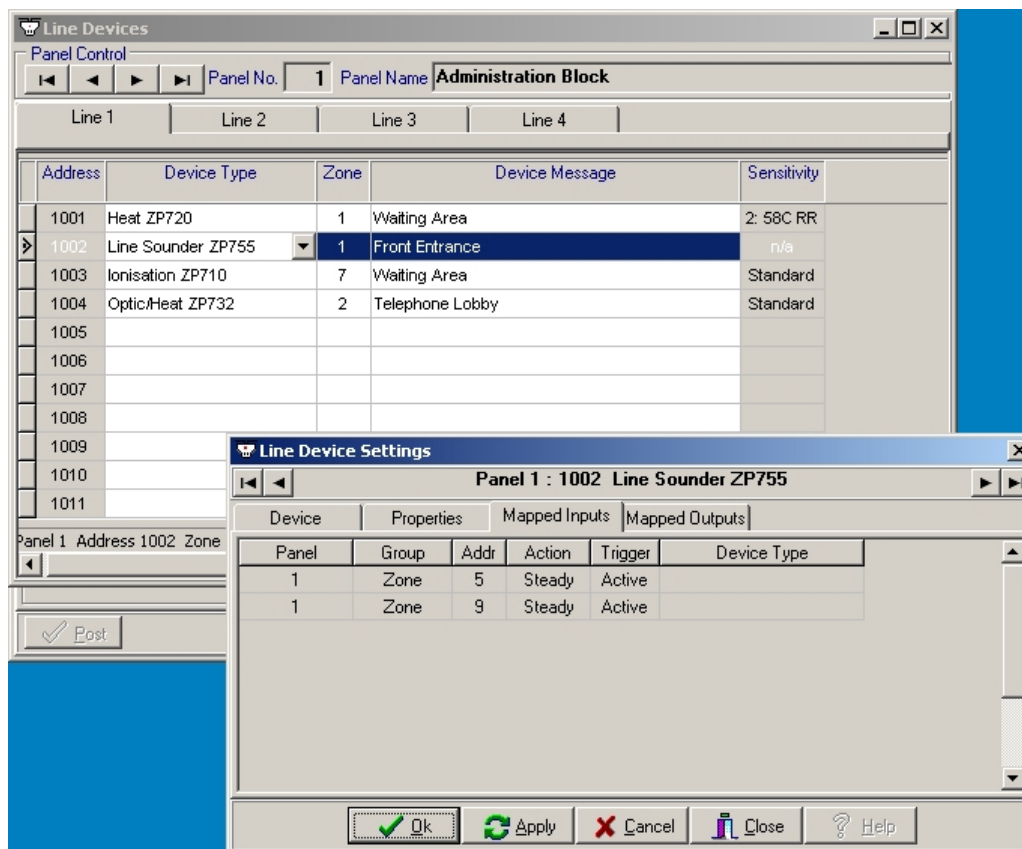
**Radio sounder group** – Sets the radio sounder groups the selected device unit must trigger in alarm condition. Only meaningful in systems with mixed hard-wired and radio devices.

A restore defaults button is provided located at the bottom right corner of the screen. Clicking onto the button restores all the original factory set default values.

## Mapped inputs tab

The mapped inputs tab (see Figure 63) provides the following information:

Figure 63: Line devices settings screen – mapped inputs tab



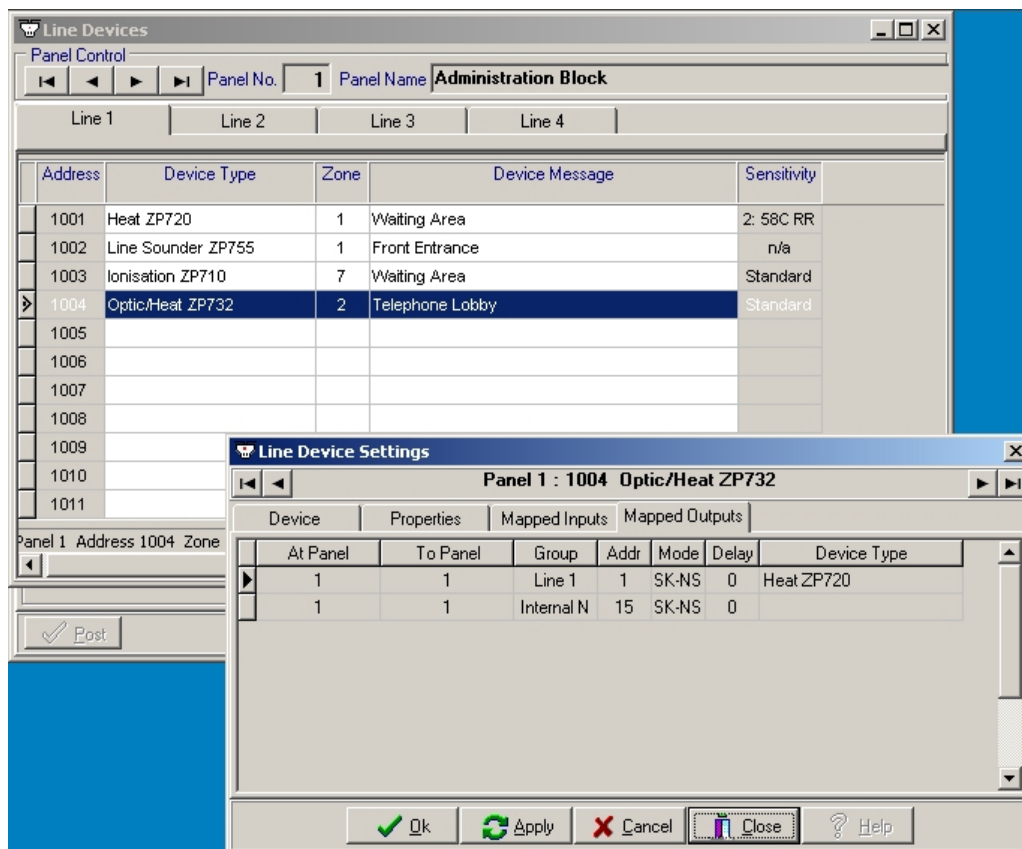
Any addresses mapped as inputs to the device, are listed on the mapped inputs card. Details of mapping are covered under *I/O mapping* on page 66, and *I/O mapping examples* on page 75.

Information displayed on this screen is read-only. I/O mapping must be done on the I/O mapping screen (see *I/O mapping* on page 66 for more details).

## Mapped outputs tab

The mapped outputs tab (see Figure 64) provides the following information:

Figure 64: Line devices settings screen – mapped outputs tab



Any addresses mapped as outputs to the device, are listed on the mapped outputs card. Details of mapping are covered under *I/O mapping* on page 66 and *I/O mapping examples* on page 75.

Information displayed on this screen is read only. I/O mapping must be entered on the I/O mapping screen (see *I/O mapping* on page 66 for more details).

## I/O mapping

This section describes the layouts and operation of the I/O mapping screen displays. For details on device configuration and examples of I/O mapping see *I/O mapping examples* on page 75.


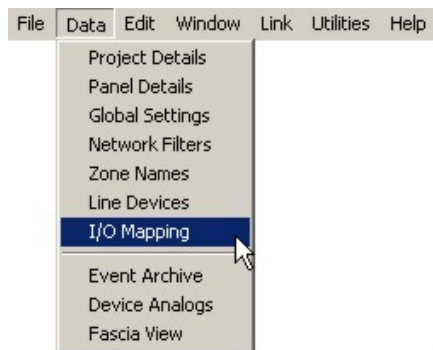
Access the I/O mapping screen either by clicking directly onto the **I/O Mapping** icon () located centrally in the toolbar running across the top of the screen, or by selecting the **I/O Mapping** sub-menu from the **Data** menu (see Figure 65).

Figure 65: Data - I/O mapping menu option



Input/output mapping is a set of software defined rules that allow the inter linking of input devices to output devices. Up to 2000 input triggers may be configured to link with up to 768 outputs per panel.

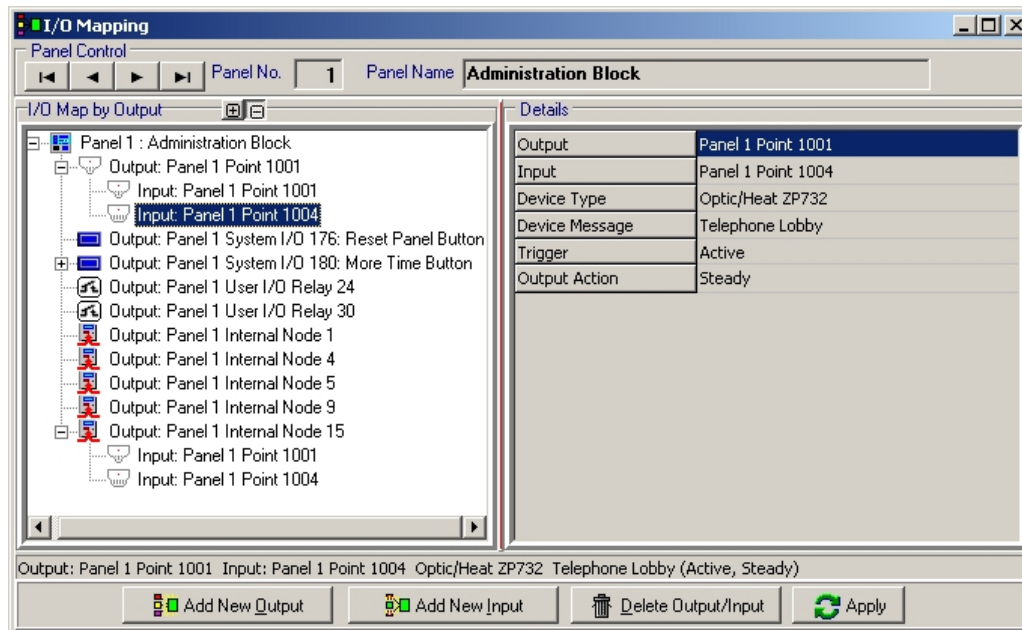
The ZP3 system provides the ability to set-up comprehensive cause and effect mapping whereby any required action may be automatically triggered in response to user specified input conditions.

The I/O mapping screen provides the means of configuring which outputs are to be operated when any trigger device changes state i.e. goes into fire or fault condition or is disabled or enabled.

The following section describes the I/O screen displays, used to configure the fire alarm system. Input/output mapping is fully explained in the ZP3 Fire Control Panel Installation, Commissioning and Maintenance Manual, document number 503-1160ZE-I-09.

The *I/O Mapping* screen (see Figure 66) consists of four sections:

**Figure 66: I/O mapping screen**



### Panel control

A set of navigation buttons is provided for scrolling between the panels in a multi panel system.

### I/O map by output

Planner systems are configured by firstly specifying each output and then mapping the input device (or devices), which when triggered, cause the output to operate.

The left half of the I/O mapping screen as shown in Figure 66, displays the I/O map for the currently selected panel. The panel icon is shown together with its name and number and the list of already specified outputs and linked inputs.

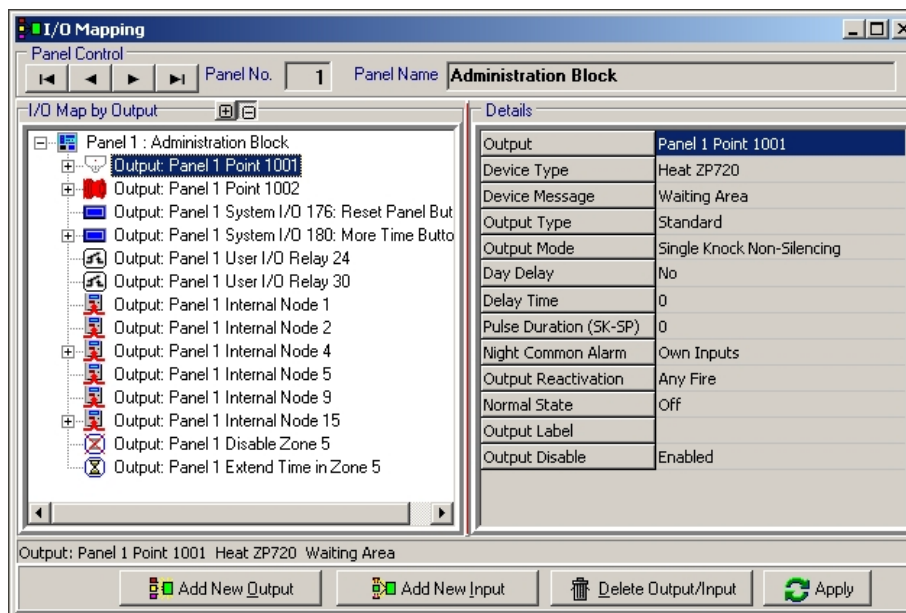
### Device details

As devices are selected either as inputs or outputs, any device highlighted by the cursor in the I/O map by output screen has its details displayed in the details list at the right side of the screen.

The details area of the screen (see Figure 67) displays information on the device and is also used to select and set the output parameters, by either selecting from drop down lists, or typing in required values.

A number of output parameters are set for devices, via the details list. The illustration below shows the selection of a sounder output mode from the options listed in the drop down selection list.

Figure 67: I/O mapping - details



The following details are displayed in on this screen:

1. **Output.** List heading for the device highlighted in the I/O map by output display.
2. **Device type.** Displays device type and code.
3. **Device message.** Displays device location, or any information input for the device in the Line device database.
4. **Output type.** Confirms the output type for the highlighted device (standard, sounder and control):
  - **Standard.** Operates as a general purpose output in accordance with the selected output mode (Single knock silencing etc.).
  - **Sounder.** Responds to the specified I/O map trigger devices, and in addition will be turned on if the sound alarms button is pressed on the panel. A sounder output type also causes the sounders active LED to turn on at the panel. Control outputs operate like standard outputs, but in addition will eliminate the controls active LED on the panel.
  - **Control.** Primarily used in extinguishing control systems such as extinguishing discharge units.
5. **Output mode.** Shows the output mode for the selected device. Select the output modes for the highlighted device by clicking onto the relevant field in the right column in the list and then clicking onto the required item. The following options are available:
  - **Single knock non-silencing.** The output will operate from a single device entering the selected trigger condition. The output will not be silenced (i.e. returned to its quiescent state) by the operation of the panel silence alarms control, remaining operational until the panel is reset.
  - **Single knock silencing.** The output will operate from a single device entering the selected trigger condition. The output will be silenced (i.e. returned to its quiescent state) by the operation of the panel silence alarms control.
  - **Single knock single pulse.** The output will operate from a single device entering the selected trigger condition, for a pre-determined period only, after which it will silence (i.e. return to its quiescent state).

When this mode is selected, the pulse length in seconds must be provided in the pulse duration (SK-SP) field (see point 8 on next page). The delay time field may also be used to delay the onset of the single pulse output.



- **Double knock non-silencing.** The output will operate when two automatic devices enter their selected trigger conditions simultaneously or sequentially in coincidence. The output will not be silenced (i.e. returned to its quiescent state) by the operation of the panel silence alarms control, but remain operational until the panel is reset.

The double knock mode can be applied either on a zone basis, or to all automatic sensors connected to a specified panel.

The trigger condition should only be applied to automatic devices the operation of a manual call point should immediately actuate any mapped outputs.

- **Double knock silencing.** The output will operate when two automatic devices enter their selected trigger conditions simultaneously or sequentially in coincidence. The output will be silenced (i.e. returned to its quiescent state) by the operation of the panel silence alarms control.

The double knock mode can be applied either on a zone basis, or to all automatic sensors connected to a specified panel.

The trigger condition should only be applied to automatic devices; the operation of a manual call point should immediately actuate any mapped outputs.

- **Single knock dynamic.** The output operates from a single device entering the selected trigger condition. The output is controlled (i.e. switched on and off) only by the state of the trigger device. The panel has no silence or reset control over the selected output.

A dynamic relationship between trigger device and its linked outputs is a common requirement in fire detection systems, for example to provide a class change facility, or to arrange disablement of devices via a key switch input. In this mode the output follows the input in sympathy after any programmed delay; however the delay is only applied to the turn on event.

- **Double knock dynamic.** The output operates when two automatic devices enter their selected trigger conditions simultaneously or sequentially in coincidence. The output is controlled (i.e. switched on and off) only by the states of the trigger devices. The panel has no silence or reset control over the selected output.

The trigger condition should only be applied to automatic devices, the operation of a manual call point immediately triggering mapped output.

The use of the details lists for the selection of output modes is demonstrated throughout the examples of I/O mapping in Section 7.

6. **Day delay.** Imposes a delay on the operation of the output during the 'day' period. When selected the operation of the output will not be delayed during the 'night' period. The delay time is configured on the global settings screen. An extended day delay time may also be configured to operate in response to the **more time** button being activated on the panel.
7. **Delay time.** Sets the delay period. The required time is entered into the window provided. This delay time is a delay to onset of the output and is in addition to any day delay time that may be enabled.
8. **Pulse duration.** Sets the length of pulse in seconds, when the single knock single pulse option is selected in output mode field (see point 5 on the previous page).
9. **Night common alarm.** Night common alarm is a means by which all outputs so enabled will be activated whenever the input conditions for any one of them are met. Applied only to fire conditions and only when the panel is in night mode.
10. **Output reactivation.** Applicable to silencing outputs only. This allows an output that has been silenced (from a previous alarm) to be re-activated by two options, either from any new fire alarm in the system, or only by a new alarm from input devices that are already linked to it in the I/O map.

11. **Normal state.** Defines the state of the output when the system is in the quiescent condition, for example, when the panel is reset. Each output can be individually defined to be normally off (de-energised in the non-alarm condition, energising on alarm) or normally on (energised in the non-alarm condition, de-energising on alarm). Normally off is the default setting.
12. **Output label.** A general-purpose text field (10 characters) used as an identifier for an output.

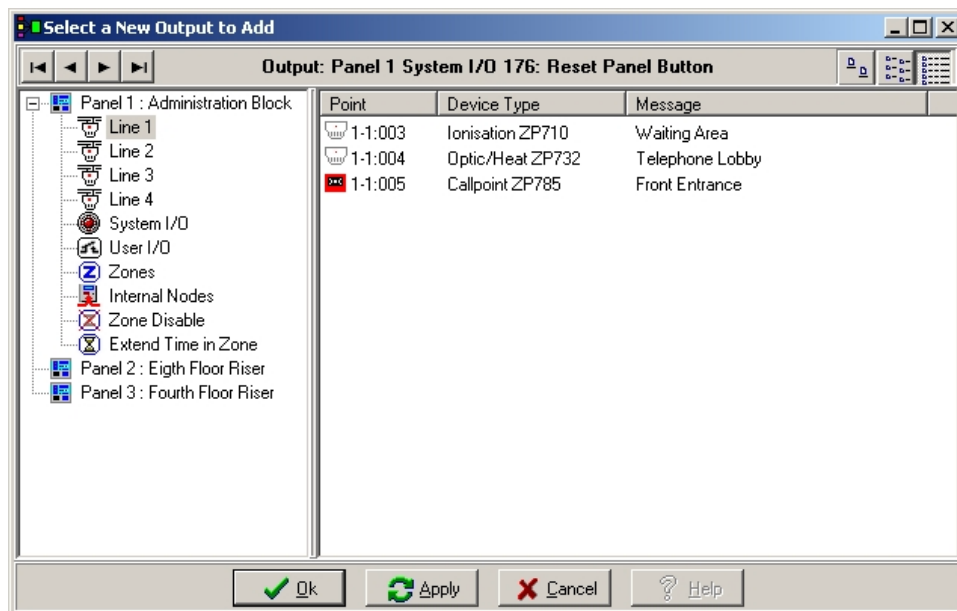
### Adding inputs and outputs

Buttons for adding outputs, adding inputs and deletions are provided at the bottom of the main screen. As outputs are always selected first, initially only the **Add New Output** button is shown active. The **Add New Input** and **Delete Output/Input** button become active once the output has been selected by clicking on the icon displayed on the I/O by outputs screen.

#### Select a new output to add

Select a new output to add by clicking the **Add New Output** button located at the bottom left of the screen. The *Select a New Output to Add* screen is displayed (see Figure 68).

Figure 68: Select a new output to add Screen



The left part of the screen shows the selected panel icon highlighted (in single panel systems, only Panel 1, or whichever number the panel has been designated will appear). Planner derives the list automatically from the panel details screen (see *Panel details* on page 36).

A list of all the ZP3 output address groups, each with its identifying icon is displayed below the selected panel. Clicking onto the address group icon displays a list of all devices (inputs and outputs) assigned to that address group and available for I/O mapping.

Outputs are selected by double clicking on an output icon on the right part of the display. The icon is removed from the select a new output to add screen and appears below the highlighted panel icon in the main I/O mapping display.

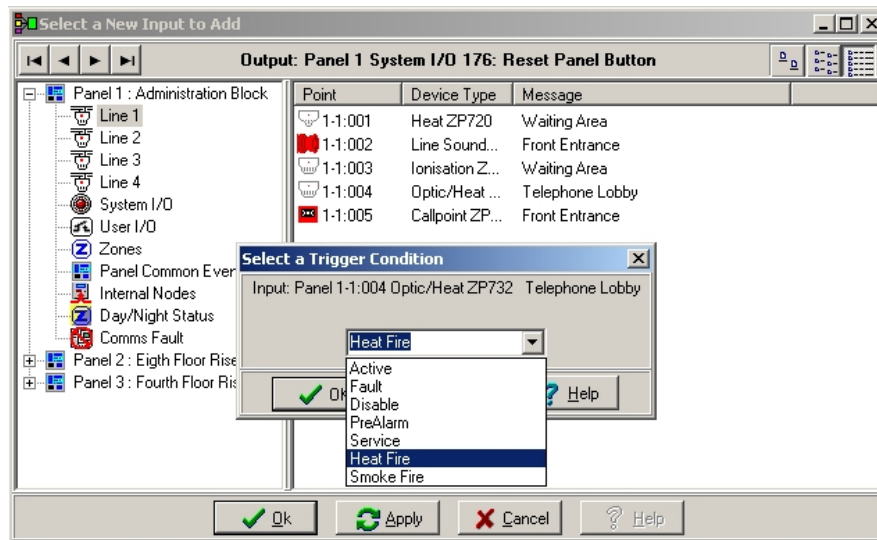
#### Select a new input to add

Trigger devices required to operate this output are selected by a similar method. Select the required output from the list of outputs on the left pane of the I/O mapping window. The **Add New Input** button is then highlighted and may be clicked to open the *Select a New Input to Add* screen (see Figure 69).

When selected by a double click on the device in the list, a select trigger condition dialogue box appears to confirm the device name and location, and the alarm state the trigger device must be in when the output is required to operate.

**Note:** The Select Trigger Condition dialog will not be shown if the System default for Trigger state has previously been set and the default trigger state is a valid trigger condition for the selected input device.

**Figure 69: Select a new input to add screen**



The alarm condition for the selected device type can be chosen from the drop down list.

To select more than one input at a time for a specific output, hold down the Ctrl key on the keyboard whilst clicking on the device selector with the mouse. Alternatively, a range of devices may be selected by holding down the shift key on the keyboard whilst 'dragging' the mouse over the required range of devices.

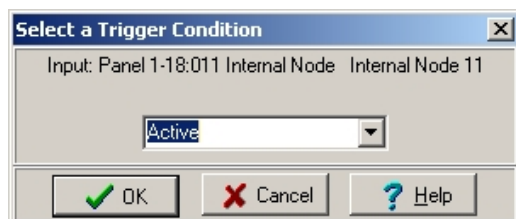
On completing all inputs and the trigger condition required to operate the selected output. The next output is selected and the process repeated.

In multi-loop or multi-panel systems, outputs can be selected on each panel to operate from trigger devices located anywhere on the network, provided all the necessary information has been inputted via the previous Planner database screens. All outputs in an I/O map are always local to a specific panel.

### Control nodes

This feature (SW719 panels only) allows the user to map the addresses of control nodes as inputs. The *active* trigger type is the only required trigger type for control nodes (see Figure 70).

**Figure 70: Select a trigger condition screen**



### Cancelling inputs and outputs

Inputs and outputs can be cancelled at any time by highlighting the required cancellation in the I/O map by output screen and clicking on the delete output/input button at the bottom right of the display.



# Chapter 7: System configuration

## Introduction

Planner provides a complete facility to originate and develop systems using the Ziton ZP3 fire detection and alarm range of equipment.

The database screens described in Chapter 6 allow systems to be built up from original design material on a stage-by-stage basis.

Planner only accepts the addition of equipment and system parameters that fall within the hardware specifications. This prevents systems being developed that won't function in practice.

Warnings are displayed throughout the Planner programme when inappropriate equipment is selected.

## Preparatory work

Before starting to 'build' a ZP3 system using Planner, complete the following preliminary work:

1. Produce a detailed system schematic diagram, showing all panels, auxiliary boards and modules. The schematic should include the layout of each Z-Loop, together with its schedule of devices and loop isolators.

The schedule of devices should include each device type, location details and point address.

Drawings should be completed showing loop wiring runs with the positions and point address of each device, together with the exact location and details of each loop isolator. A loop schedule, listing zones covered, loop lengths, wiring details and the number and type of devices on the each loop can provide vital information and a master source of checking quantities and details during the Planner configuration.

Information to assist in the development of a system specification is provided in Appendix A of this publication.

2. Make sure that you are familiar with Chapters 5 and 6 of the ZP3 Fire Control Panel: Installation, Commissioning Operation and Maintenance Manual, document number 503-1160ZE-I-09. These chapters provide detailed information, on both system configuration and software setup and should always be used as reference, in conjunction with this publication.

## Information input

The Planner program provides facilities to input all the system data for a complete fire system installation. This is completed via a series of database input screens.

The screens are covered in detail in Chapter 6, and are presented on the main toolbar in the following sequence:

1. **Project details.** General introductory information concerning the fire alarm project, including contacts and references.
2. **Panel details.** Details of all the panels connected to the system, their type, number of loops and software versions. All optional input or output modules whether housed within the control unit or situated remotely are input into the Planner program at this point.
3. **Global settings.** All the requirements at system level, such as the overall network mode, panel security passwords and the ability to be able to update or change the software locally at the panel or only through the Planner programme, are added to the configuration at this stage.
4. **Network filters.** This is the configuration area where, in multi panel systems, selections of which indications, operations and controls are to be transmitted from one panel to other panels are entered.

In projects where the sounders of one panel are to operate from a sensor or callpoint connected to another panel, or outputs on one control panel are to be silenced or reset remotely from a control panel installed elsewhere, the required operating connections are selected from the network filters screen display.

5. **Zone names.** With the completion of the control panel configuration, each zone is defined, via input into the zone names database screen. Zones are designated and zonal descriptions added on a panel-by-panel, loop-by-loop basis.
6. **Line devices.** Information is added on each device. Addresses are assigned automatically with other information added by Planner from the previous inputs already completed. Each device may be assigned to exactly one zone as defined in the zone names screen.
7. **I/O mapping.** The final stage in system configuration is the input to output linking of all devices. Icons are displayed for each system component. Outputs are selected first and then input devices are mapped within the system to operate the selected output.

The information provided under *I/O mapping examples* on page 75 illustrates Planner I/O mapping procedures by a number of step by step examples covering some of the basic fire alarm system facilities.

Following the above sequence ensures that information is installed in the correct order, enabling Planner to utilise detail inputs from one screen on subsequent database displays.

## I/O mapping examples

### Introduction

The methods of connecting alarm outputs to their trigger device input, or inputs are standard throughout the Planner programme, regardless of system size. Complex cause and effect relationships are built up by the software connections of individual or groups of components via the I/O Mapping screen.

The following outlines are intended to represent typical examples for mapping individual and groups of addresses and can be easily modified by the user to provide the specific links in any system.

### Example 1: Specified output address to operate from specified input address

#### Overview

Map a loop sounder to operate from a fire condition originated by an individual trigger device.

This example is typical for any output device, for example an alarm sounder, relay output, which has to operate when a specific sensing device, for example a sensor or manual callpoint, goes into an alarm condition.

**Note:** Throughout the I/O mapping programme the required output is always selected first, then the input or inputs are mapped to it.

**Stage 1: Select an output**


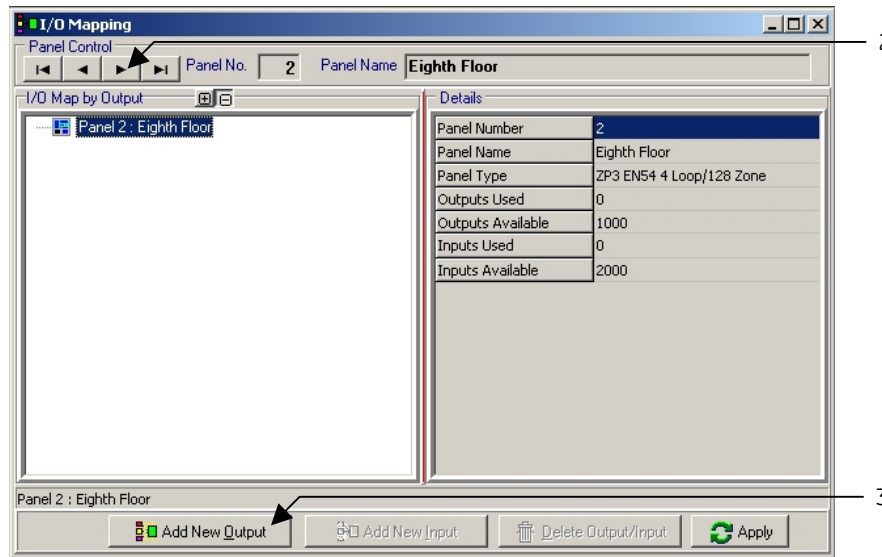
1. Refer to Figure 71. Click the **I/O Mapping** icon () to display the I/O mapping screen.
2. Select panel number (item 2). In multi panel systems – outputs are always on the local panel – **never remote**.
3. Click **Add New Output** (item 3). The *Select a New Output to Add* screen is displayed (item 4). This screen displays a list of the address groups, in its left window (item 5).
4. Click the icon to select address group of the output (item 6). In this example both output and input are connected via the system loop 1 wiring and therefore their addresses will be in group 1. The address list of devices in group 1 is displayed (item 7).
5. Double click on selected output (item 8).
6. Refer to Figure 72. Close the *Select a New Output to Add* screen (item 9). This action removes the selected output from the list (item 10) and positions it on the main I/O mapping screen – below the panel icon (item 11).
7. Click on the output icon, on the main I/O mapping screen to enable the **Add New Input** and **Delete** buttons.



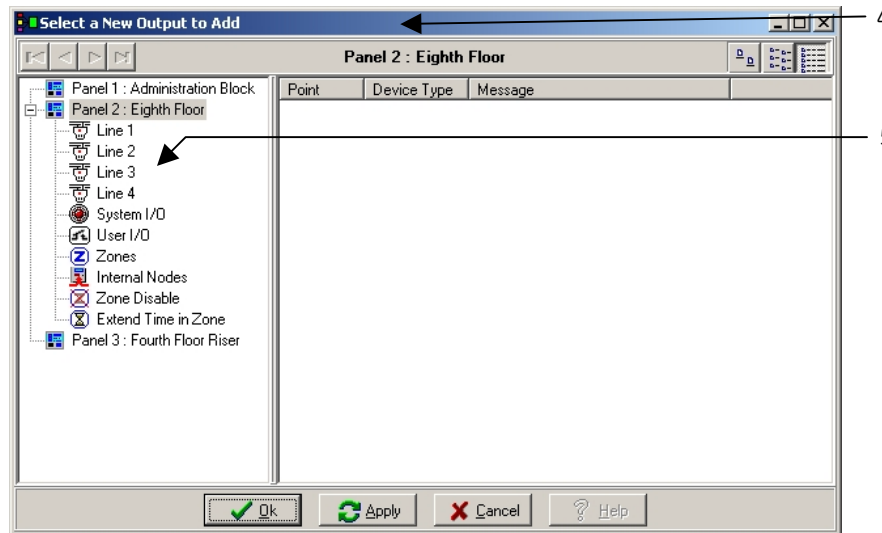
Figure 71: Example 1 – selecting an output

Display

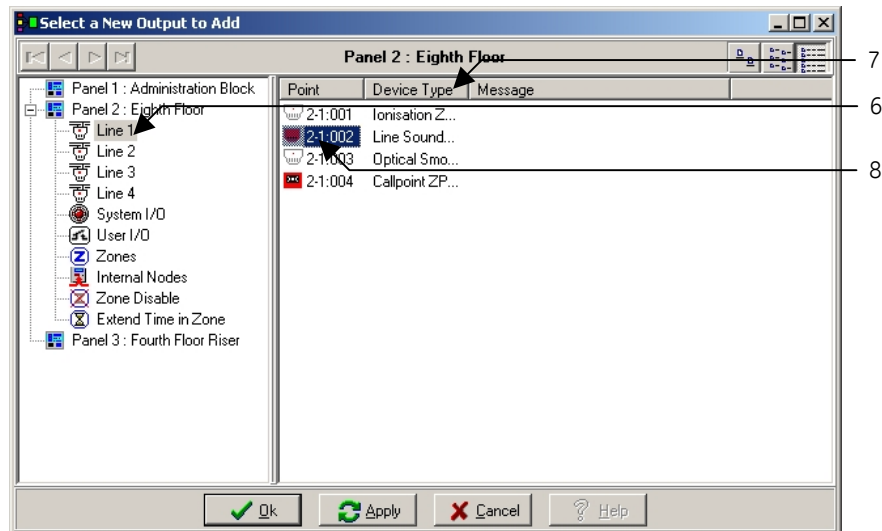


Cross references

I/O mapping on page 66  
 Panel control on page 67

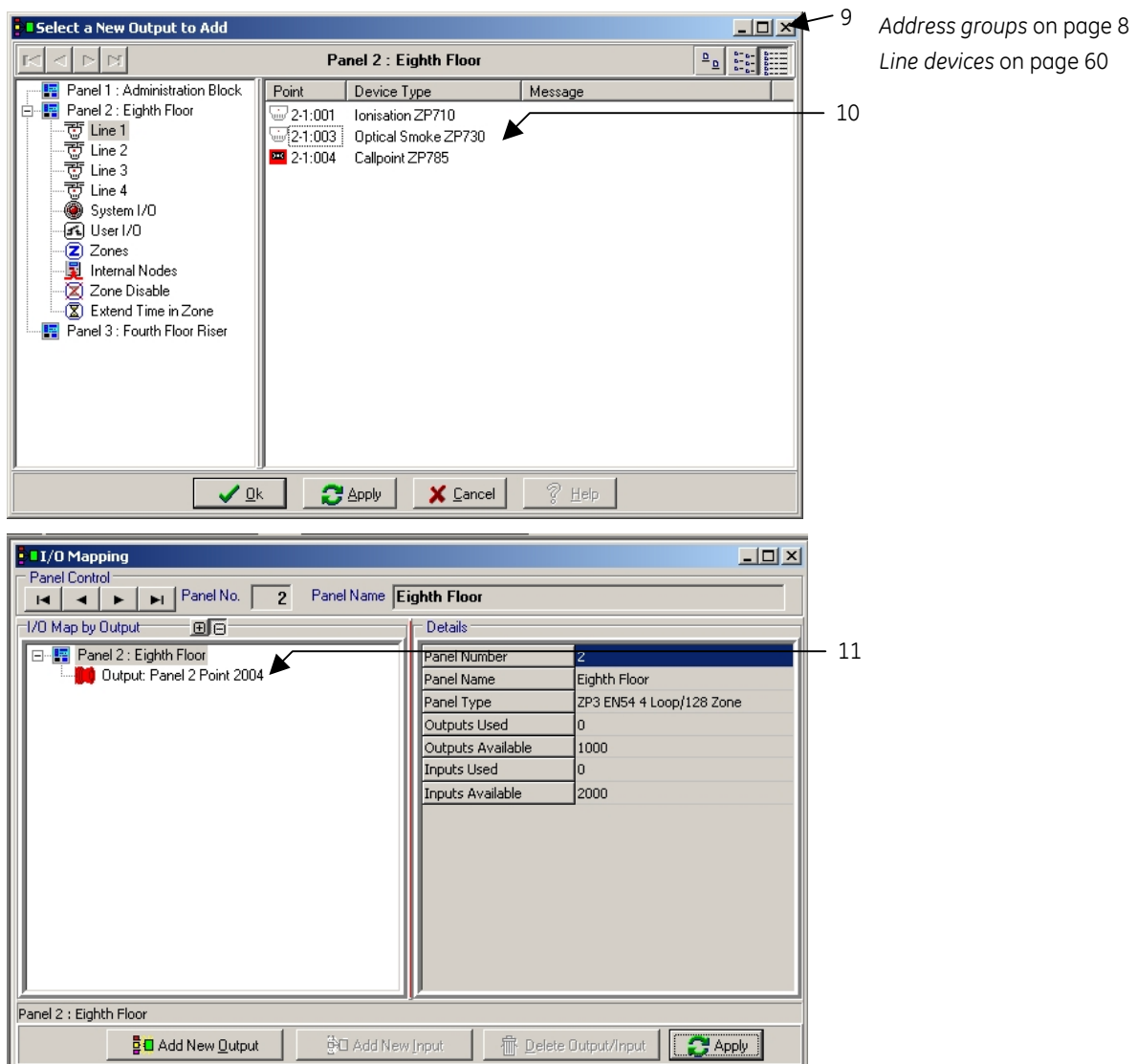


4 Adding inputs and outputs on page 70



7 Address groups on page 8  
 8 Line devices on page 60

Figure 72: Example 1 – selecting an output (continued)



## Stage 2: Map input to selected output

Refer to Figure 73 and Figure 74.

1. Click on appropriate output panel icon to select an output (item 1).
2. Click **Add New Input** (item 2). A *New Input to Add* screen displays a list of the address groups, in its left window (item 3).
3. Click the icon to select address group of the output to which the input will be mapped (item 4). In this example both output and input are connected via the system loop 1 wiring and therefore their addresses will be in group 1. Address list of devices in group 1 is displayed (item 6).
4. Double click on the selected device (item 5). The *Select a Trigger Condition* screen is displayed (item 7). This input determines which alarm condition the input must adopt for the output to be operated. In this example *active* is selected by clicking onto the item in the list.

If an output, for example a buzzer or lamp must operate when a sensor goes into the pre alarm state, then the “pre alarm” item must be selected from the list.

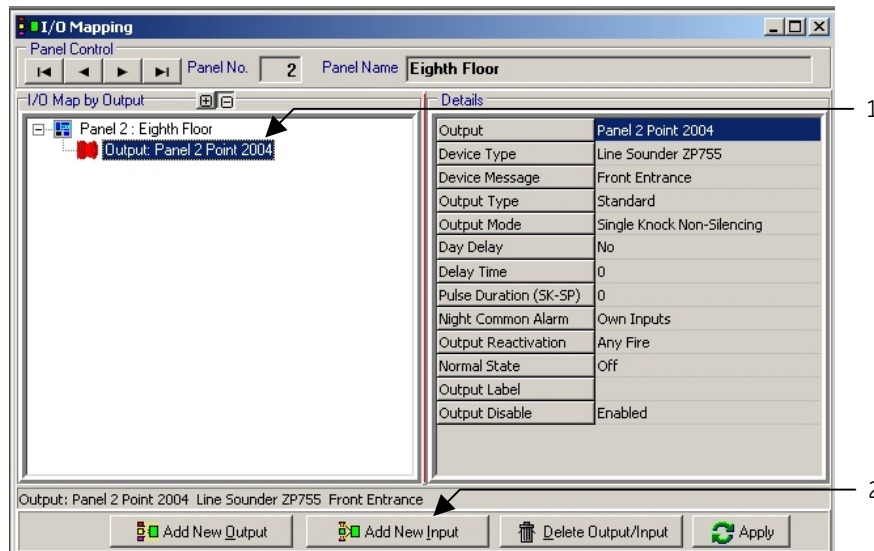
- Click **OK** on the *Select a Trigger Device* display (item 8). The selected input is mapped to the output (item 9).

When the optical smoke sensor (address 1002) located in the waiting area goes into the alarm condition, the loop sounder (address 1004) will operate.

Figure 73: Example 2 – Mapping an input to a selected Output

Display

Cross references



Adding inputs and outputs on page 70

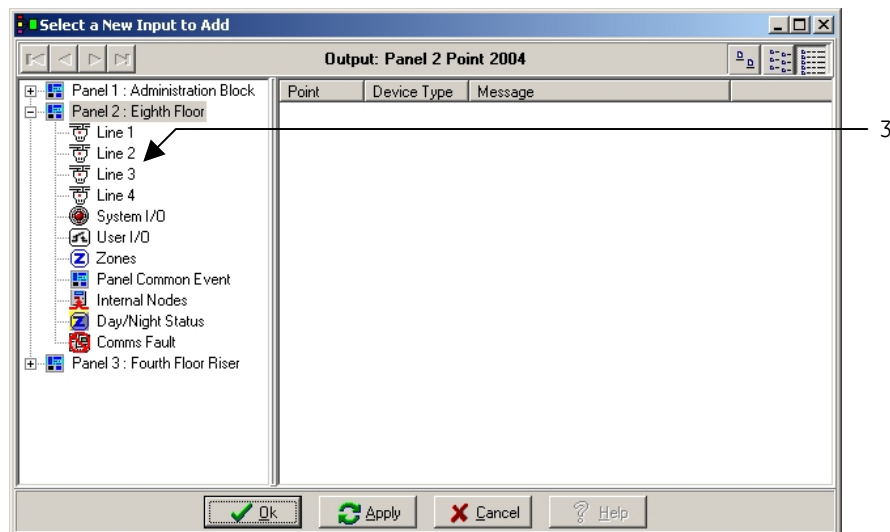
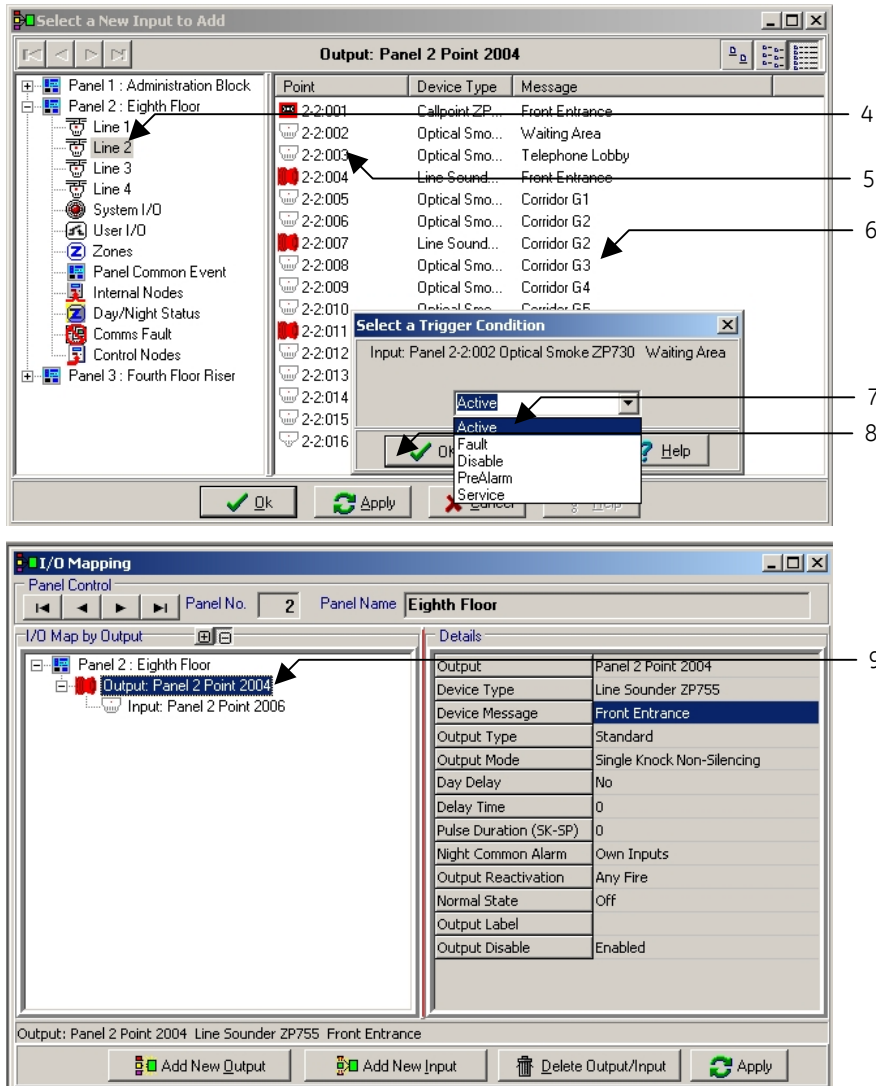


Figure 74: Example 2 – Mapping an input to a selected output (continued)

Display

Cross references

Device details on page 67



## Output modes

The previous basic example, demonstrates the typical procedure for I/O mapping using the Planner programme.

In Planner outputs can be assigned a range of operating modes. The previous example is based on the operating mode default settings. That is, when an input operates it causes the mapped output (or outputs) to operate. These outputs then continue to operate until the control panel is reset, i.e. they are unaffected by the silence alarms control at the panel.

Although the above sequence is a requirement for many operations there are several control functions that fall outside this standard arrangement.

For example to comply with certain aspects of BS 5839 Part1 recommendations, provision should be made to silence sounders without the need to reset the system. A further popular requirement is for trigger devices to be disabled and enabled from a key switch, during periods of system maintenance.

Output modes are selected directly from the I/O mapping screen. Details are listed, dependant on device type, for each output in the right half of the screen display. Options are selected and values added by clicking onto the selections listed on the right of the display.

Refer to *Device details* on page 67 for details of the available output modes and how they function.

### **Example 2: Specified output address to operate from any fire input**

Map loop sounder to operate from a fire condition originated by any trigger device. Output to be silenced, via the silence alarms panel function and reset via System Reset button.

It is possible to link the output to all inputs on the system in turn, by mapping each sensor or callpoint individually as outlined in example 1, stage 2.

If the system has few trigger devices this method is feasible, but if hundreds, or perhaps even more, trigger devices are required to operate a specific output, the method described under *Stage 2: Map input to selected output* becomes impractical.

In this case, the input is selected as a control panel function, and the sounders active LED function in the control panel is used as the input. As this function is common to any trigger device going into the alarm condition, it is simply mapped to the specified loop sounder.

In the following example, loop sounder address 1007 is to operate when any trigger device enters the fire condition. The sounder must respond to both the control panel silence alarms and reset facilities.


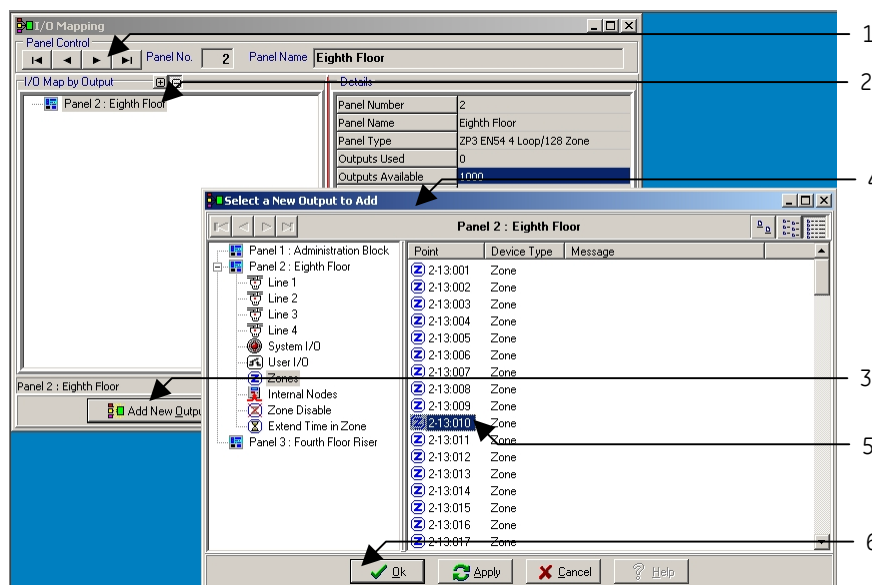
1. Click on the **I/O Mapping** icon () in the database toolbar.
2. Refer to Figure 75. Select panel number - in multi panel networks (item 1).
3. Click on panel icon displayed in I/O window (item 2).
4. Click **Add New Output** (item 3). The *Select a New Output to Add* screen (item 4) is displayed.
5. Click **Zones** icon displayed in output group address list, in the left window of the *Select a New Output to Add* screen.
6. Click selected output zone address icon (2-13-010), now displayed in the right window of the *Select a New Output to Add* screen (item 5).
7. Click **OK** (item 6) to confirm selection.

Figure 75: Example 2 – Select a new output to add

### Display



### Cross reference

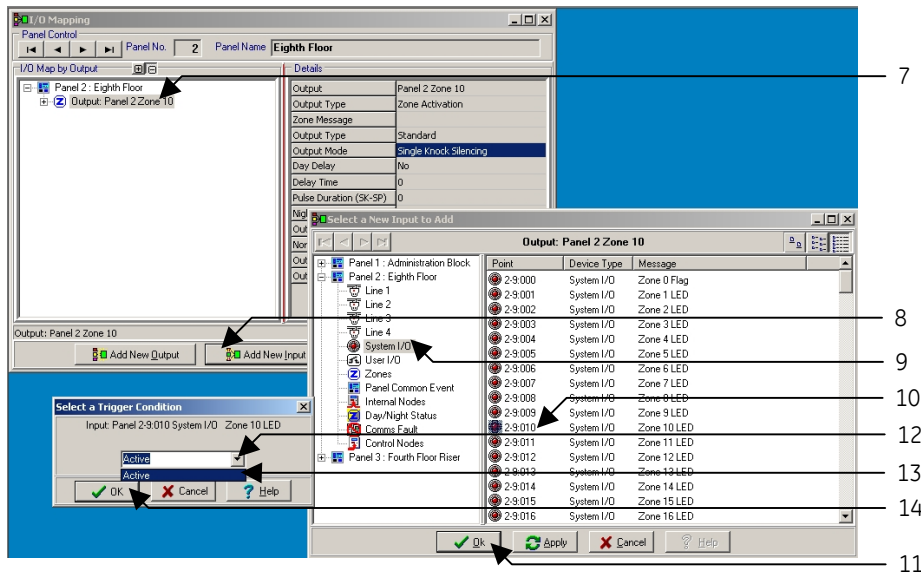
"I/O mapping" on page 66

"Adding inputs and outputs" on page 70

8. Refer to Figure 76. Click output panel icon displayed beneath the panel number icon in the main I/O mapping screen (item 7).
9. Click **Add New Input** button (item 8).
10. Click input address group now displayed in input group address list, in the left window of the *Select a New Input to Add* screen. In this example the input is a group 9 system I/O (item 9) function, operated within the control panel.
11. Scroll the list of devices and click the required input address (for example address 2-9:010 "sounders active LED" – item 10), displayed in the right window of the *Select a New Input to Add* screen.
12. Click **OK** (item 11) to confirm selection.
13. Click on the drop down list arrow (item 12) from the *Select a Trigger Condition* screen
14. Select trigger condition by clicking item from the list. In this example select *Active* (Item 13).
15. Click **OK** (item 14) to confirm selection.

Figure 76: Example 2 – Select a new input to add

Display



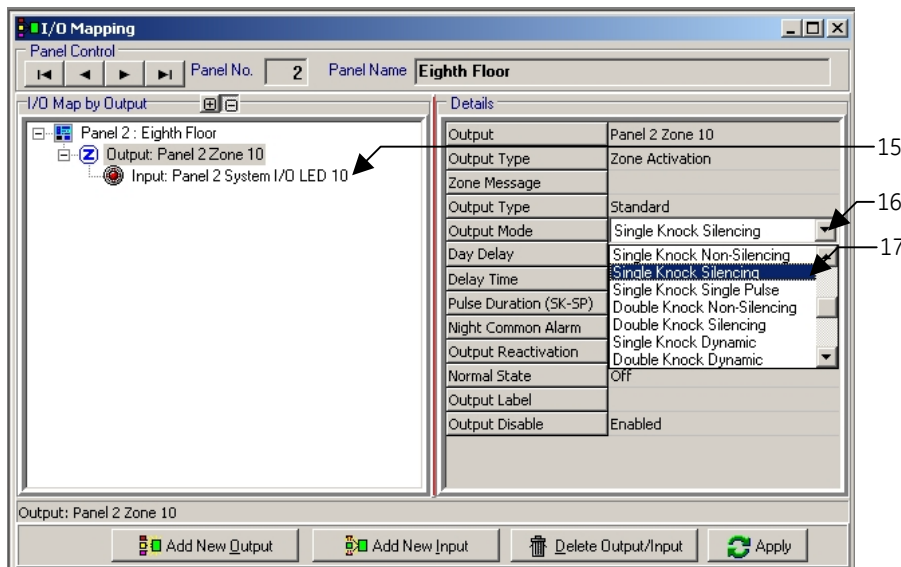
Cross reference

I/O mapping on page 66  
 Device details on page 67  
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16. Refer to Figure 77. The selected input icon (item 15) is displayed mapped to the output in the main I/O map by output screen.
17. Set the output mode type by clicking on down-arrow (item 16) next to the *Output Mode* field in the right column of the details list). In this example the single knock silencing output mode type is selected.
18. Click on *Single Knock Silencing* (item 17) from the output mode drop down list. Single knock silencing mode appears, as selected.

Figure 77: Example 2 – Completed I/O mapping screen

Display



Cross reference

I/O mapping on page 66  
 Device details on page 67  
 Adding inputs and outputs on page 70

Any trigger device entering the fire condition will operate loop sounder address 1007. The sounder continues sounding with a continuous tone until silenced at the control panel. After operation the sounder and the trigger device (or devices) are restored to the quiescent condition, via the control panel reset facility.

### Example 3: General alarm

All outputs are operated from any fire input. Sounders only silence, via the silence alarms panel function, when all outputs are reset.

Most fire detection and alarm systems operate either on a general alarm basis, or have their alarm output organised around a full evacuation principle.

It is possible with Planner to map every individual output device in turn to every individual input, but impracticality, due to sheer numbers, soon becomes obvious.

In Example 2, the method of operating an output from any fire input was outlined. The most convenient method of I/O mapping a system to operate as a general alarm is to utilise this method of grouping inputs (via the 9-131 address) and mapping it to a single address representing all outputs.

The common output address is achieved by using a zone number for all sounders throughout the system and linking it to the input from the group 9 system I/O address.

The zone number chosen is usually the final zone number (either zone 50, or zone128) dependant upon the control panel specification.


**Outputs must have previously been assigned to this zone during the input of information into the Line Device database input screen (see Lines 1 to 4 on page 61 for more details).**

The zone is a mapping convenience only and should not be confused with any geographical zones used to identify sections of buildings within BS 5839 Part1 recommendations.

The assignment of sounders to a separate zone precludes them being displayed with other zonal equipment, in zone displays. For clear identification the building zone number should be included in the device description thereby identifying the location of each unit when the sounder zone is displayed.

In the following example, only the sounders respond to the silence alarms function, other outputs operated on a fire condition would be mapped separately as non-silencing and remain operational until reset. Any non-sounder outputs that need to be silenced, must be included within zone 50.

Refer to Figure 78.

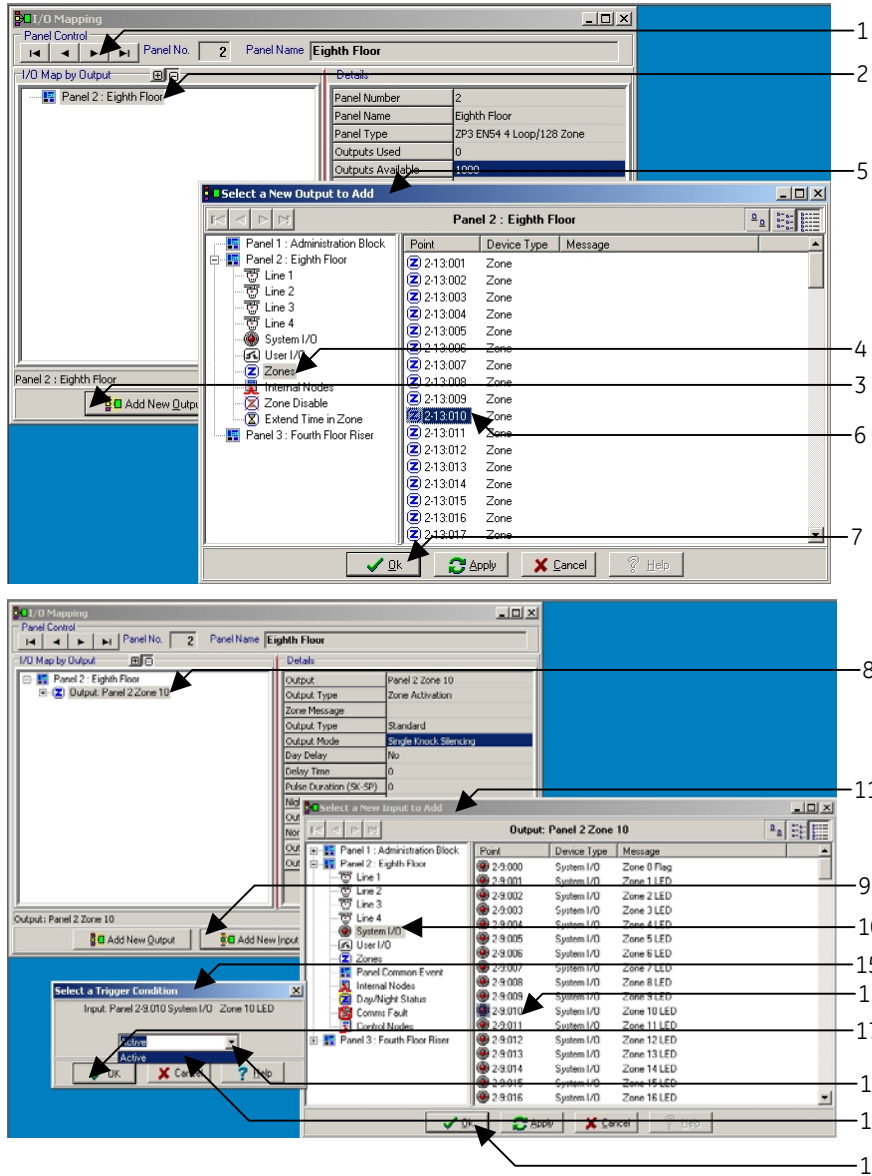
1. Click on the **I/O Mapping** icon () in the database toolbar.
2. Select panel number (in multi panel networks) – item 1.
3. Click on panel icon displayed in I/O window (item 2).
4. Click **Add New Output** (item 3).
5. Click the **Zones** icon (item 4) displayed in output group address list, in the left window of the *Select a New Output to Add* screen (item 5).
6. Click required output zone address Icon, e.g. 2-13:050 (item 6), displayed in the right window of the *Select a New Output to Add* screen.
7. Click **OK** (item 7) to confirm selection.
8. Click output Icon (item 8), now displayed beneath the panel number icon in the main I/O mapping screen.
9. Click **Add New Input** button (item 9).
10. Click input address group now displayed in input group address list, in the left window of the *Select a New Input to Add* screen. In this example the output is a group 9 system I/O function (item 10), operated within the control panel.
11. Scroll the list of devices and click the required input address, e.g. address 2-9:131 *Sounders active LED* (item 12), displayed in the right window of the *Select a New Input to Add* screen (item 11).



12. Click **OK** (item 13) to confirm selection.
13. Click on the drop down list arrow (item 14) displayed on the *Select a Trigger Condition* screen (item 15).
14. Select the trigger condition from the drop-down list, e.g. select *Active* (item 16).
15. Click **OK** (item 17) to confirm selection.

**Figure 78: Example 3 – General alarm setup**

**Display**



**Cross reference**

I/O mapping on page 66  
 Adding inputs and outputs on page 70

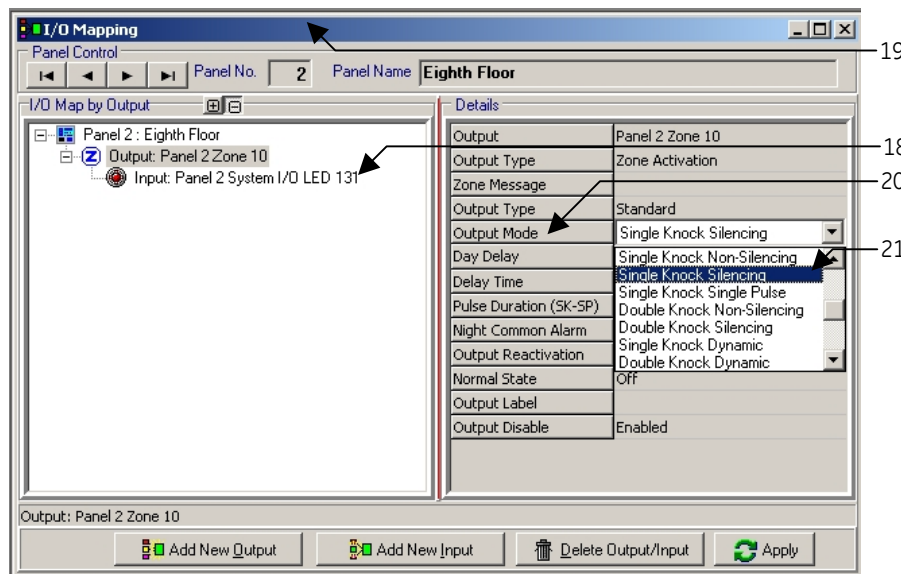
System bus (group 9) on page 8  
 Device details on page 67  
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16. Refer to Figure 79. The selected input icon (item 18) is displayed mapped to the output in the main I/O Map by Output screen (item 19).
17. Click on the *Output Mode* field (item 20) in the right column of the Details List and then click the down arrow to view the output mode options from the drop-down list.
18. Click on the *Single Knock Silencing* option (item 21) from the *Output Mode* drop down list. The *Single Knock Silencing* mode appears as selected.

When mapped as above, the system operates all outputs in the selected zone on any trigger device entering the Fire condition. Sounder outputs can be silenced via the control panel Silence Alarm facility. Other outputs, for example relays, are mapped individually as non-silencing and are returned to the quiescent state upon system reset.

Figure 79: Example 3 – Completed I/O mapping screen

## Display



## Cross reference

Device details on page 67


### Example 4: Operate optional output address from a zonal fire input

Map first relay output of ZP3AB-RL8 optional control panel PCB to be operated by a fire input from a specified zone of trigger devices.

This arrangement provides the basis for operations based on any required output (sounder, loop relay device, etc.) to be operated from a specified zone of trigger devices. The mapping differs only in the selection of the output address group.

In this example the relay output is a group 10 user address. The mapped input is a specified zone of trigger devices with a group 13 zone address.

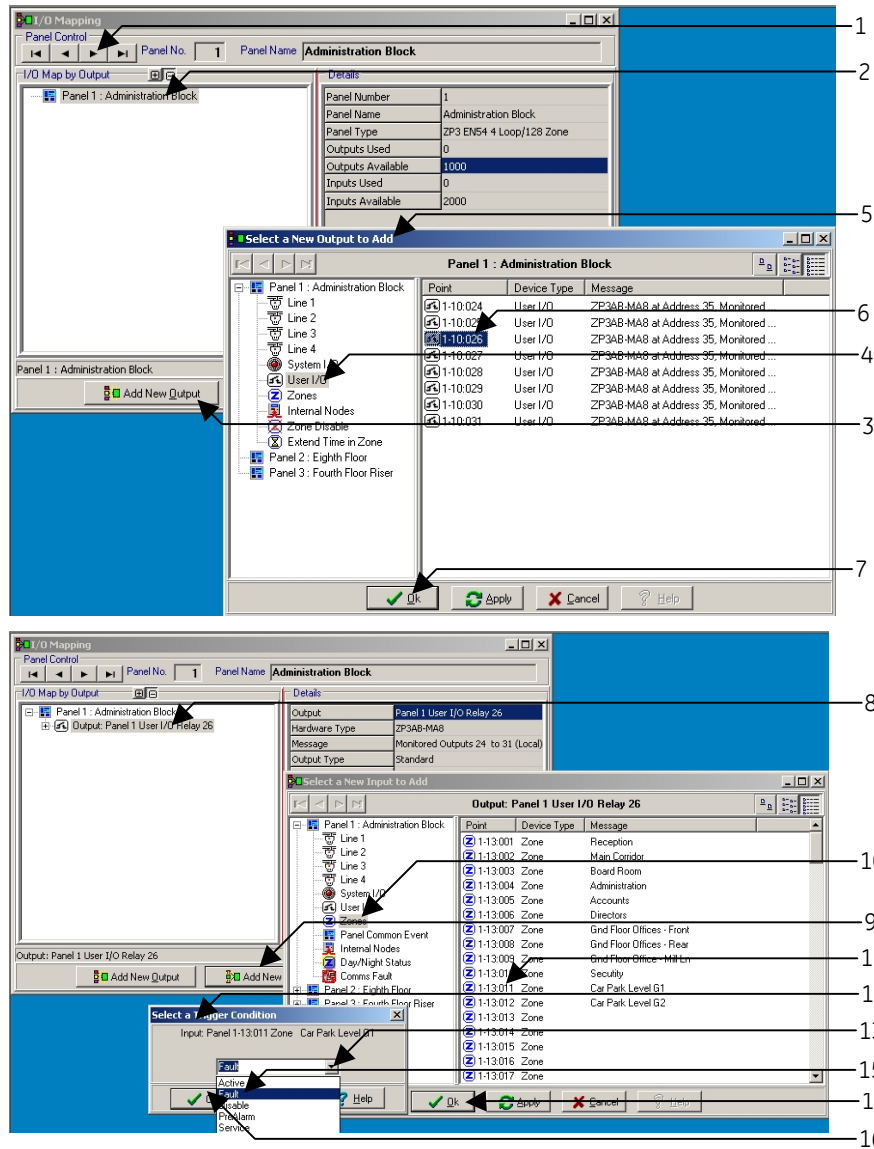
**Note:** Available optional outputs must have been pre-selected via the hardware module screen, in the panel details display (see *Hardware module selection* on page 38 for more details).

1. Click on the **I/O Mapping** icon () in the database toolbar.
2. Refer to Figure 80. Select panel number (in multi panel networks) – item 1.
3. Click on panel icon displayed in I/O window (item 2).
4. Click **Add New Output** button (item 3).
5. Click **User I/O** icon (item 4) displayed in output group address list, in the left window of the *Select a New Output to Add* screen (item 5).
6. Click selected output user address Icon, e.g. 1-10-026 (item 6), displayed in the right window of the *Select a New Output to Add* screen.
7. Click **OK** (item 7) to confirm selection.
8. Click **Output** icon (item 8) displayed beneath the panel number Icon in the main I/O Mapping screen.
9. Click **Add New Input** (item 9).
10. Click input address group (item 10) displayed in input group address list in the left window of the *Select a New Input to Add* screen. In this example the output is a group 13 zone address.
11. Scroll the list of devices and click the required input address, e.g. address 1-13:011 “car park level G1” (item 11), displayed in the right window of the *Select a New Input to Add* screen.
12. Click **OK** (item 12) to confirm selection.
13. Click on the drop down list arrow (item 13) from the *Select a Trigger Condition* screen (item 14).

14. Select trigger condition by clicking item from the list, for example *Fault* (item 15).
15. Click **OK** (item 16) to confirm selection.

Figure 80: Example 4 – Optional output address from zonal fire input setup

Display



Cross reference

I/O mapping on page 66  
 Adding inputs and outputs on page 70

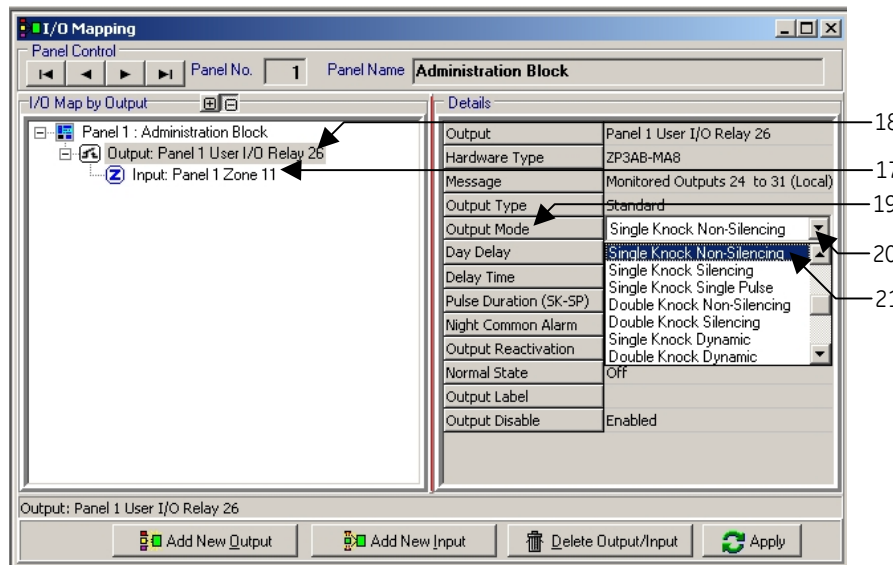
System bus (group 9) on page 8  
 Device details on page 67  
 Adding inputs and outputs on page 70

16. See Figure 81. The selected input icon (item 17) is displayed mapped to the output (item 18) in the main *I/O map by output* screen.
17. Click on the *Output Mode* field (item 19) in the right column of the details list and then click the down arrow (item 20) to view the output mode options from the drop-down list.
18. Click on the *Single Knock Non-silencing* option (item 21) from the output mode drop down list. The single knock non-silencing mode appears as selected.

When mapped as shown in example 4, the system operates the 1st relay of the ZP3AB-RL8 optional board (Address 1-10:026), installed within the control panel, when any trigger device in zone 11 (car park level G1) enters the fire condition. Once operated the relay will not respond to the silence alarm facility, but is returned to the quiescent state on system reset.

Figure 81: Example 4 – Completed I/O mapping screen

## Display



## Cross reference

Device details on page 67

### Example 5: All outputs to operate from an individual loop (line) address

All sounders to operate from a key switch input.

This example of I/O mapping covers most general evacuation arrangements, where the alarm origination is from a single address. Evacuation via a key switch input, or a signal originated by third party equipment, are common requirements of system design.

Keyswitch input is via an interface unit, either addressed as a loop device (address group 01, 02, 03, 04.), or from a hardwired input via an optional input PCB in the control panel (address group 10).

In the following example an evacuation signal, has to operate from a key switch located on Loop 2 (Line 2) wiring. This is achieved by selecting the Zone 50 Sounders arrangement as the output (see *Example 3: General alarm* on page 84) and mapping it to the input from an individual loop wired device as shown in *Example 1: Specified output address to operate from specified input address / Stage 2: Map input to selected output* on page 78.

As the sounder operation will be switched off, as well as on, by the loop address, the output mode selected is dynamic, i.e. the output follows the state of the input and is unaffected by the silence alarms and reset facilities at the control panel.

In this example, sounders are required to operate without the panel entering the fault condition (i.e. as for class change facility), and then the ZP745 interface unit must be configured as emulated non-fire, in the line device database.

In situations where the input is required to originate a fire indication at the control panel, the ZP745 interface unit must have been pre-configured as an emulated fire input. This operates all control panel indications, as a fire condition.

If the key switch interfaces to the loop wiring via a ZP740 interface unit, the input type is configured by selection switches on the unit itself and is identified as a separate item in the line device database (e.g. non-fire ZP740-T53).


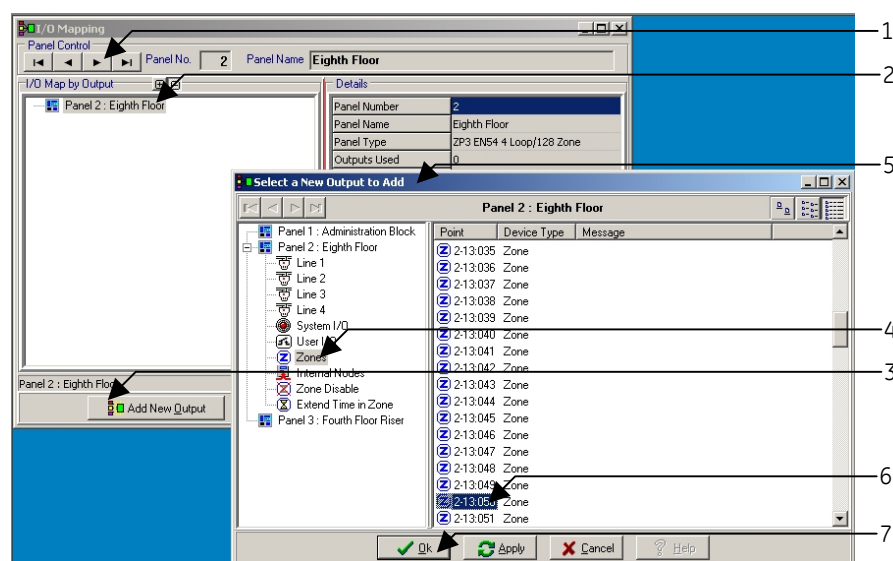
1. Click the **I/O Mapping** icon (  ) in the database toolbar.
2. See Figure 82. Select panel number (in multi panel networks) – item 1.
3. Click on panel icon displayed in I/O window (item 2).
4. Click **Add New Output** (item 3).
5. Click the **Zones** icon (item 4) displayed in output group address list in the left window of the *Select a New Output to Add* screen (item 5).
6. Click selected output zone address icon, e.g. 2-13-050 (item 6) displayed in the right window of the *Select a New Output to Add* screen.
7. Click **OK** to confirm selection (item 7).

Figure 82: Example 5 – Outputs to operate from an individual loop (line) address

### Display



### Cross reference

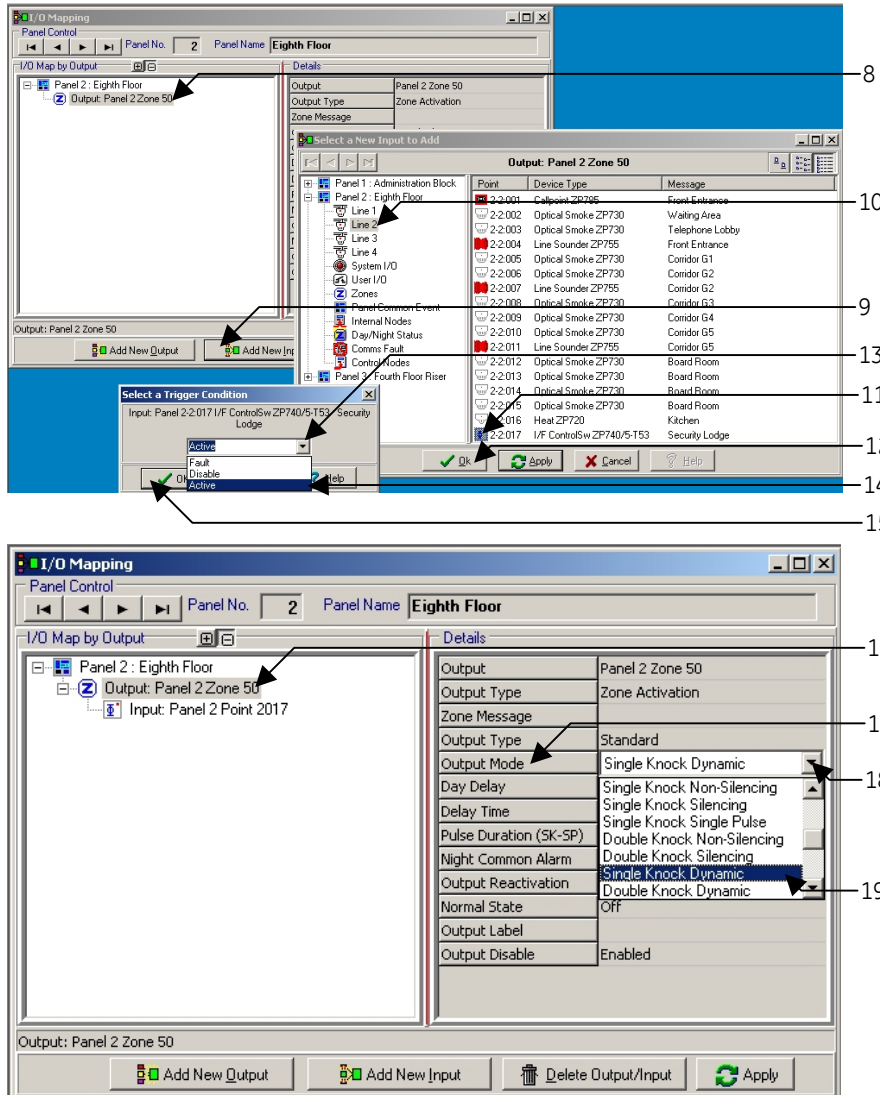
Device details on page 67

8. See Figure 83. Click **Output** icon (item 8) displayed beneath the panel number Icon in the main I/O Mapping screen.
9. Click **Add New Input** button (item 9).
10. Click input address group (item 10) displayed in input group address list, in the left window of the *Select a New Input to Add* screen. In this example the input is a loop 2 (line 2) device.
11. Scroll the list of devices and click the required input address, e.g. address 1018, I/F control Sw, ZP740-T53 – security lodge (item 11), displayed in the right window of the *Select a New Input to Add* screen.
12. Click **OK** (item 12) to confirm selection.
13. From the *Select a Trigger Condition* box, now displayed, click on the drop down list arrow (item 13).
14. Select trigger condition by clicking item from the list, e.g. select *Active* (item 14).
15. Click **OK** (item 15) to confirm selection. The selected input icon (item 16) is displayed mapped to the output in the main I/O Map by output screen.
16. Click on the *Output Mode* field (item 17) in the right column of the details list.
17. Select *Single Knock Dynamic* (item 18) from the *Output Mode* drop down list. Single knock dynamic mode appears (item 19), as selected.

When mapped as described in example 5, i.e. when the ZP740-T53 interface is switched to the On position the system operate all sounders (zone 50, common output zone). As the output mode selected is dynamic, the sounders follow the state of the input, and silence only when the input is turned off.

Figure 83: Example 5 – Completed I/O mapping screen

Display



Cross reference

I/O mapping on page 66  
Adding inputs and outputs on page 70

System bus (group 9) on page 8  
Device details on page 67  
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## Example 6: Zone disable from specified loop address

All devices in a specified zone are to be disabled or enabled from a specified input.


This example illustrates the basic mapping to provide temporary disablement for parts of the fire alarm system, often a requirement during service visits or whilst maintenance work is carried out on the building.

Zone disablement may also a requirement in situations where products of combustion may be present due to industrial processes during certain times of the day.

Input is usually via a ZP740, or ZP745 interface unit. The ZP740 should be selected as a non-fire ZP740-T53, if operating the disable function from a ZP745 the unit should be configured as emulated non-fire in the line device database.

Inputs are usually controlled from a manual key switch, or programme timer.

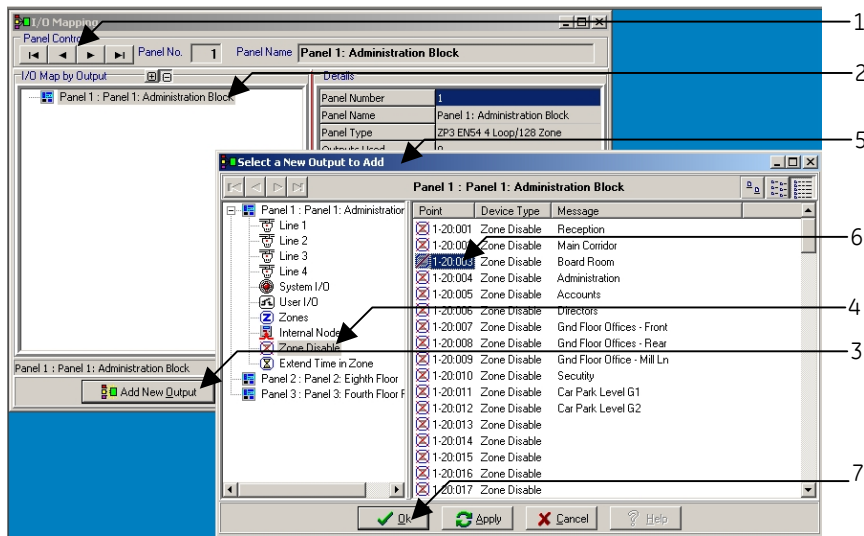
In the following example devices in zone 3, boardroom are disabled from a manual key switch wired to loop 1, located in the security lodge.

1. Click on the **I/O Mapping** icon () in the database toolbar.
2. See Figure 84. Select panel number (in multi panel networks) – item 1.
3. Click on panel icon (item 2) displayed in I/O window.
4. Click **Add new output** (item 3).
5. Click **Zone Disable** icon (item 4) displayed in output group address list, in the left window of the *Select a New Output to Add* screen (item 5).
6. Click selected zone address Icon (item 6) displayed in the right window of the *Select a New Output to Add* screen.
7. Click **OK** (item 7) to confirm selection.
8. Click **Output** icon (item 8) displayed beneath the panel number Icon in the main I/O Mapping screen.
9. Click **Add New Input** (item 9).
10. Click input address group (item 10) displayed in input group address list, in the left window of the *Select a New Input to Add* screen. In this example loop 1 (Line 1) is selected as this includes the location of the required input address.
11. Scroll the list of devices and click the required input address (item 11), from the selected input address group displayed in the right window of the *Select a New Input to Add* screen (item 12).
12. Click **OK** to confirm selection (item 13).
13. Click on the drop down list arrow (item 14) from the *Select a Trigger Condition* box (item 15).
14. Select trigger condition, e.g. *Active* (item 15) by selecting the item from the drop-down list.
15. Click **OK** to confirm selection (item 16). The selected input icon is displayed mapped to the output in the main I/O map by output screen
16. Click on the output mode type field (item 17) in the right column of the details list.
17. Select the output mode type, e.g. *Single Knock Dynamic* from the output mode drop down list (item 18). Single knock dynamic mode appears (item 19), as selected.

Provided the interface unit type is correctly configured as outlined above, when the key switch address 1018 (security lodge) is turned to the on position, all zone 3 (board room) devices are disabled. As the single knock dynamic out put mode was selected, when the input key switch is returned to the off position the output follows the condition and the devices in zone 3 are enabled.

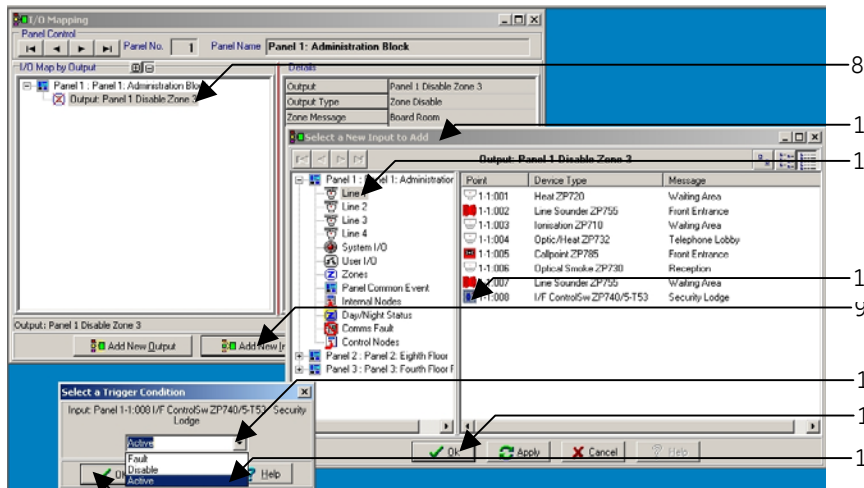
Figure 84: Example 6 – Zone disable form specified loop address

Display

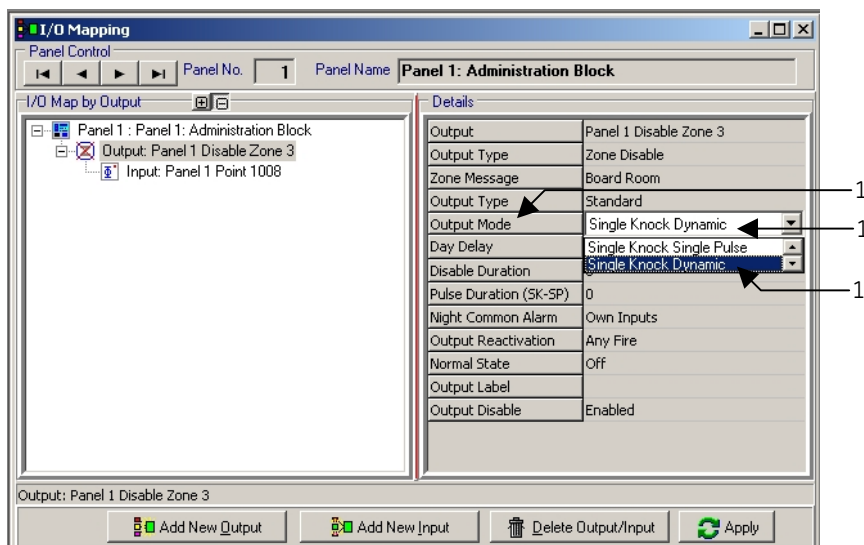


Cross reference

I/O mapping on page 66  
 Adding inputs and outputs on page 70



System bus (group 9) on page 8  
 Device details on page 67  
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Device details on page 67



## Nodes

The previous examples demonstrate that selecting groups, or individual outputs and mapping inputs to them can build up a wide range of system operations.

In order to provide maximum flexibility, engineer system facilities and to simplify the mapping of large numbers of output and input devices, the Planner programme utilises a system of software nodes. Any number of device or system addresses can be attached to a software node (software flag or internal address). A single node can then be configured as either an input or output, representing all the devices attached to it.

Nodes are used in two main areas of system configuration:

1. To represent a number of individual inputs, thereby reducing large numbers of software links in large systems.

For example, if 100 smoke detectors were to operate 12 sounders on a zonal basis (not general alarm), this arrangement would require over 1000 software I/O links alone. Introducing nodes enables all 100 addresses to be collected as a single node within the I/O configuration.

2. To apply a wide range of attributes to both individual and groups of system devices.

Nodes can be used to apply additional facilities to I/O mapping arrangements. Extra operational modes for example the zonal response of alarm sounders and complex time delay sequences can be introduced to the main cause and effect programme.

The following examples are intended to illustrate some of the most common applications featuring the use of nodes. They outline only the more straightforward applications, as the mapping of addresses will differ from system to system.

Combined with elements taken from the basic I/O programming examples previously outlined, with some practice, most fire detection and alarm system configurations can be completed.

### Example 7: Zoned outputs


Any zone in fire condition (from zones 1 to 5) to sound alarms in zones 1 to 5 only. Any zone in fire condition (from zones 6 to 10) to sound alarms in zones 6 to 10 only.

The above requirement covers the basic system operation where alarms are zoned or sectorised, usually to prevent the need for the evacuation of a whole site containing several separate buildings.

The example outlined can be modified to cover any such application from a system where all alarm outputs are zoned, to a situation requiring a general alarm in all but a small part of the protected building.

In the following example loop 1 (line 1) covers two areas of a large building. Zones 1 to 5 cover area A and zones 6 to 10 cover area B.

For clarity, only one sounder output per zone is used, but the method is the same no matter how many outputs are included.

1. Click on I/O mapping screen icon () in the database toolbar.
2. See Figure 85. Select panel number (in multi panel networks) – item 1.
3. Click **Add New Output** (item 2).
4. Add sounder outputs – Stages 4 to 10 as described under *Example 1: Specified output address to operate from specified input address* on page 75.

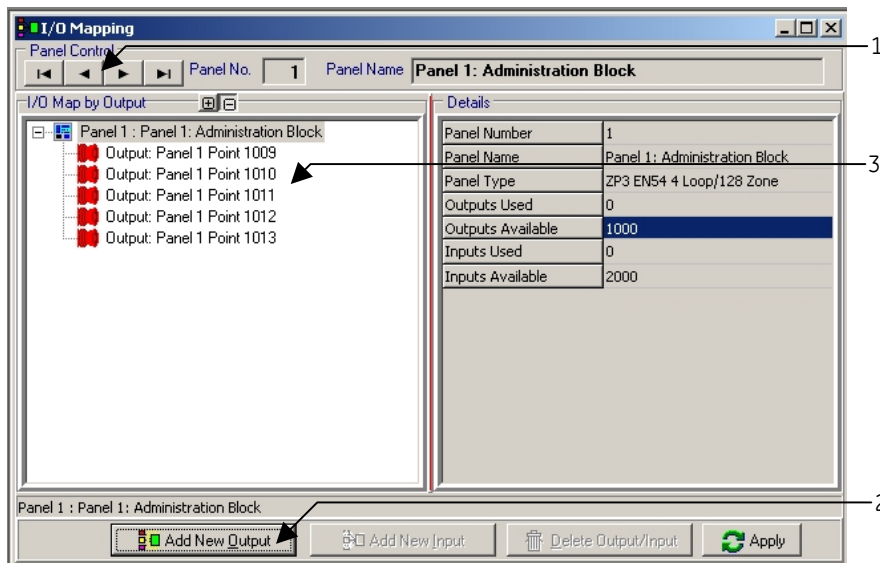
Each sounder output is added individually. In this example the five sounders (one per zone) to operate from a fire condition in zones 1 to 5 (area A of the building) are shown as selected (item 3).

The input to these sounders will be via node 1.

5. Click **Add New Input** (item 4).
6. Select internal nodes (item 5) from the input group address list.
7. Select internal node 1, e.g. address 1-18:001 (item 6) displayed in the right window of the *Select a New Input to Add* screen (item 7).
8. Click **OK** (item 8) to confirm selection.
9. Click on the drop down list arrow (item 9) from the *Select a Trigger Condition* screen (item 10).
10. Select trigger condition, e.g. *Active* (item 11) from the drop-down list.
11. Click **OK** (item 12) to confirm selection. The output of sounder address 1001 appears mapped to the input of internal node 1.

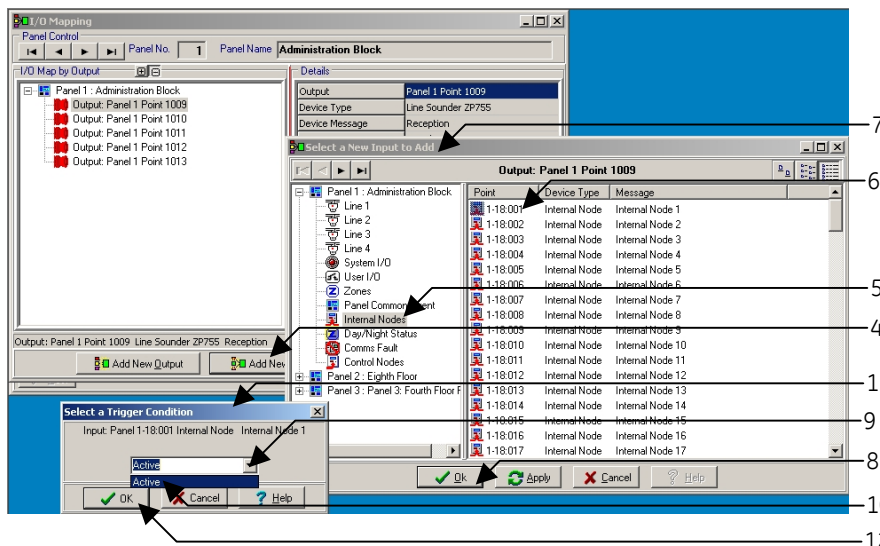
Figure 85: Example 7 – Zoned outputs

Display



Cross reference

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 Adding inputs and outputs on page 70

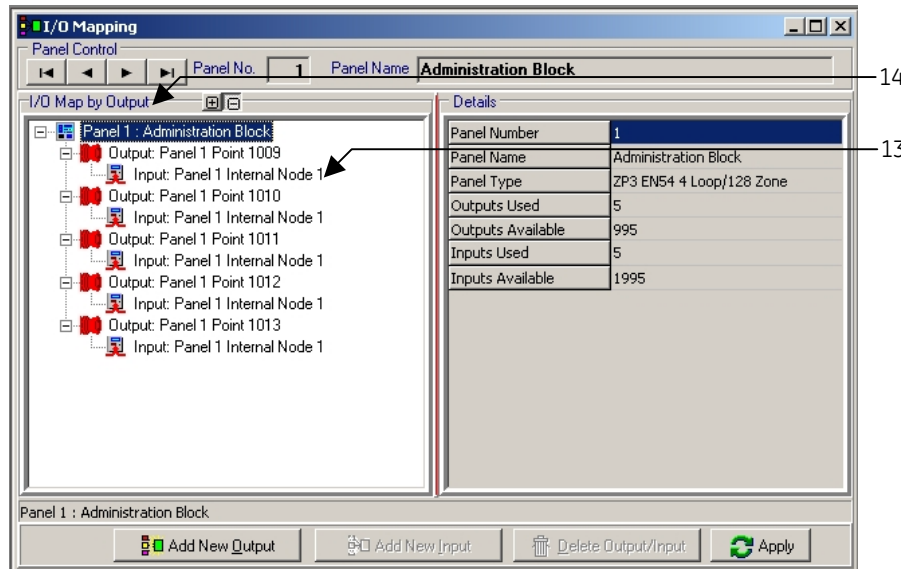


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12. See Figure 86. Repeat steps 5 to 11 for each sounder output in turn. On completion, all sounder icons are listed mapped to Internal node 1 (item 13) in the left window of the I/O map by output area of the screen (item 14).

Figure 86: Example 7 – Zoned outputs (continued)

#### Display



#### Cross reference

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The next stage is to map the output of the internal node to the input of the zones required to operate the selected sounders. Use the same selection method as any other mapped output to complete this.

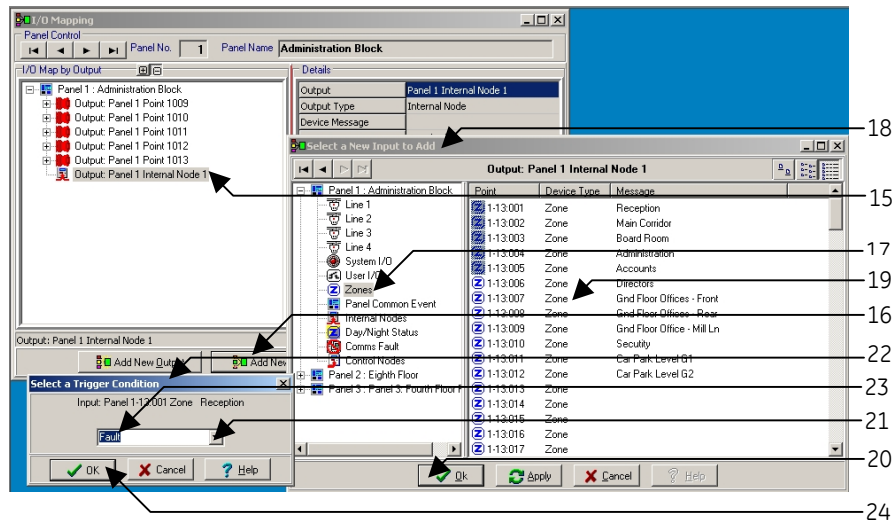
13. See Figure 87. Click the output icon of internal node 1 (item 15) in the main I/O map by output screen. The internal node output icon is shown in the I/O map by output screen mapped to each of the sounders.
14. Click **Add New Input** (item 16).

**Note:** Zone icons can be selected individually by clicking on the required icon, or per block by clicking onto an icon, then pressing the <Shift> or <Ctrl> keys while clicking another icon as per standard Windows procedure.

15. Select **Zones** (item 17) from the input address list displayed in the left window of the *Select a New Input to Add* screen (item 18).
16. Select Zone 1 to 5 addresses from the list now displayed in the right window of the *Select a New Input to Add* screen (item 19).
17. Click **OK** to confirm selection (item 20).
18. Click on the drop down list arrow (item 21) from the *Select a Trigger Condition* screen (item 22).
19. Select trigger condition, e.g. *Fault* (item 23), by clicking the required item from the drop-down list.
20. Click **OK** (item 24) to confirm selection. The zone icon, or icons (item 25) selected appear in the **I/O Map by Output** screen, shown mapped to the sounders via internal node 1.

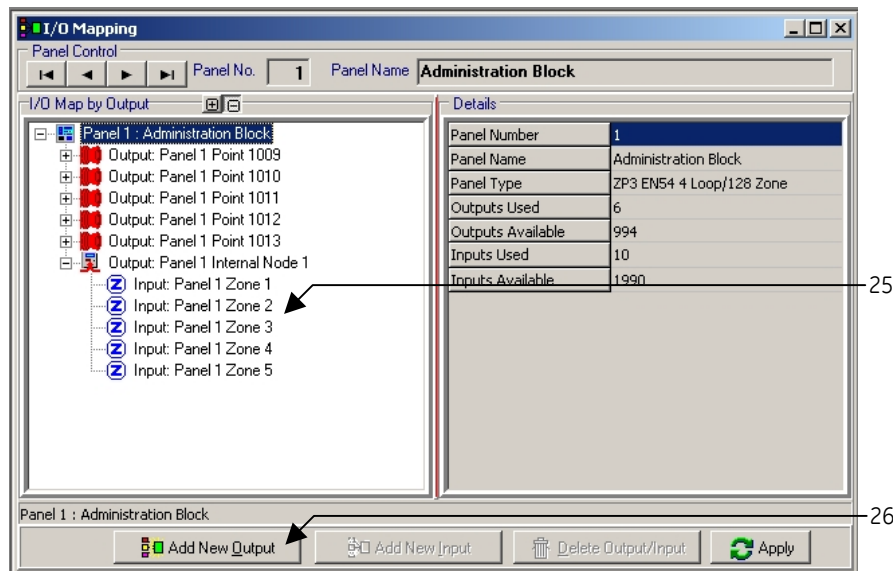
Figure 87: Example 7 – Zoned outputs (continued)

Display



Cross reference

I/O mapping on page 66  
 Adding inputs and outputs on page 70



System bus (group 9) on page 8  
 Device details on page 67  
 Adding inputs and outputs on page 70

All five selected sounder outputs will now operate when any device in zones 1 to 5 enters the fire condition.

Using the above method, area B sounder outputs are now mapped to zones 6 to 10 via a second internal node.

21. Click **Add new output** as shown in Figure 87 (item 26).
22. Add sounder outputs – Stages 4 to 10 as described under *Example 1: Specified output address to operate from specified input address* on page 75.

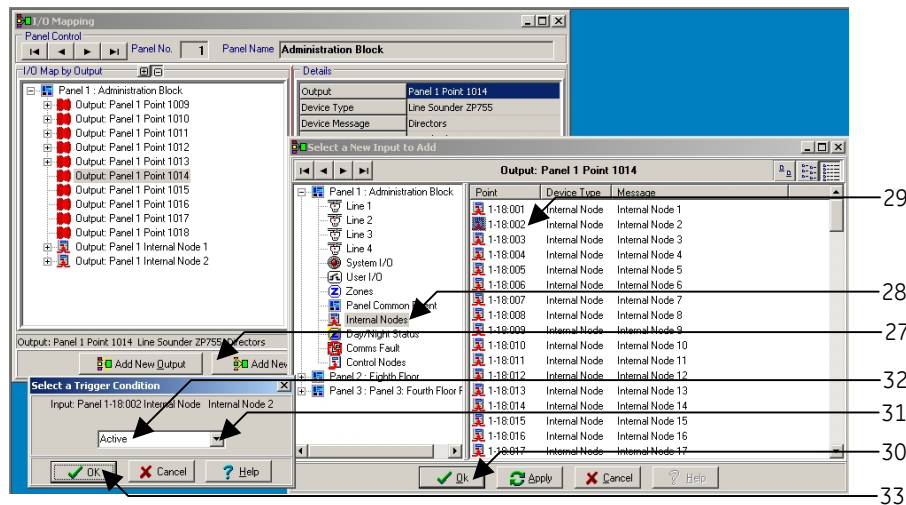
Each sounder output is added individually. In this example the five sounders (one per zone) to operate from a fire condition in Zones 6 to 10 (Area B of the building) are shown as selected.

See Figure 88. The input to these sounders will be via node 2:

23. Click **Add New Input** (item 27).
24. Select *Internal nodes* (item 28) from the input group address list.
25. Select Internal node 2, e.g. address 1-18:002 (item 29) displayed in the right window of the *Select a New Input to Add* screen.
26. Click **OK** (item 30) to confirm selection.
27. Click on the drop down list arrow (item 31) from the *Select a Trigger Condition* screen.
28. Select trigger condition, e.g. *Active* (item 32) by clicking the item from the drop-down list.
29. Click **OK** (item 33) to confirm selection.

**Figure 88: Example 7 – Zoned outputs (continued)**

**Display**



**Cross reference**

*Device details* on page 67

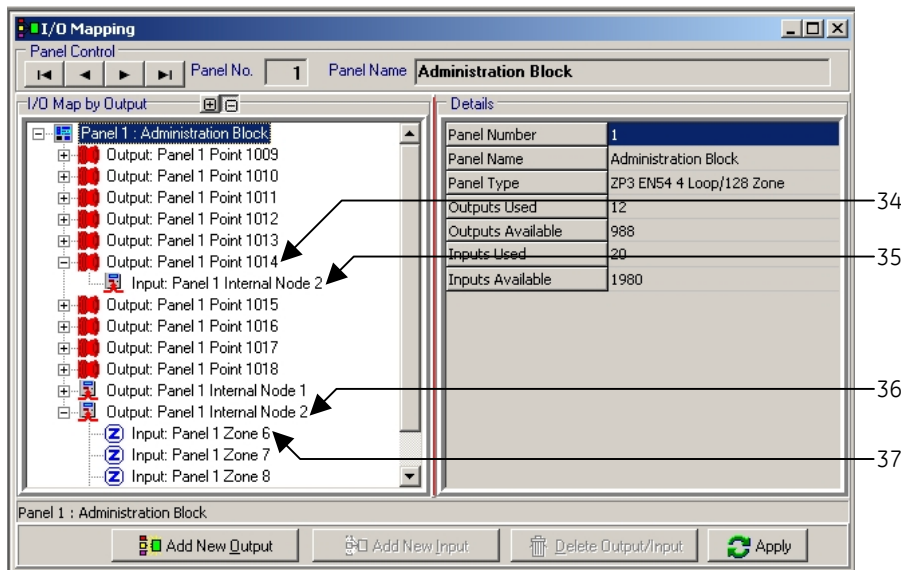
30. Refer to Figure 89. The output of sounder address, e.g. 1014 (item 34), appears mapped to the input of internal node 2 (item 35).
  31. Repeat steps 23 to 29 above for each sounder output in turn. On completion all sounder icons are listed mapped to internal node 2 in the left window of the *I/O Map by Output* window.
- The final stage is to map the output of the internal node to the inputs of the zones required to operate the selected sounders. This is completed by again following steps 13 to 20.
32. On selection, internal node 2 (item 36) is displayed mapped to the sounder outputs.
  33. The final mapping of zones to sounders is displayed in the *I/O Map by Output* window (item 37).

Figure 89: Example 7 – Zoned outputs (continued)

Display

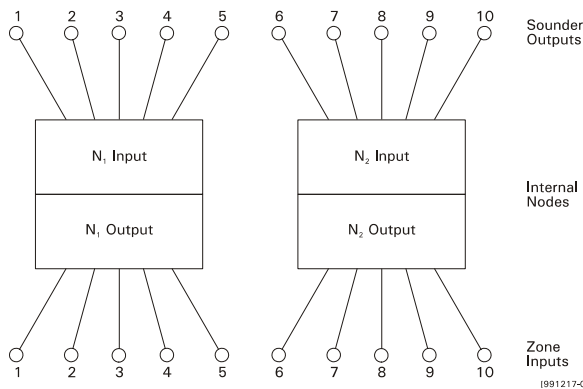
Cross reference

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See Figure 90. The system will now operate as two separate areas. A fault condition in Area A operates only the area A sounders, while on a fault condition in area B operates the sounders in area B only.

Figure 90: Typical zoned outputs operation



The sounders output mode is selected via the *Output Mode* field in the device details list, as in previous example. Full system status is shown for all zones at the control panel.

### Example 8: Zoned alarm, evacuate and standby, with delays


Zones in alarm sound evacuation tone (steady), all other zones sound standby tone (pulsed). After 60 seconds, if alarms are not silenced, all zones evacuate (sound steady).

This example covers the range of system requirements where the alarm output is configured on a zonal basis, as described under *Example 7: Zoned outputs* on page 93, with different details attributed to the different zone alarms conditions.

In order to illustrate the basic method, the following example has been mapped using only two zones and two sounders. The example is typical and is used for systems of all sizes.

Any alarm in zone 1 must cause the sounder in zone 1 to sound with a continuous tone, but the sounder in zone 2 to pulse. Likewise an alarm in zone 2 must operate the zone 2 sounder with a continuous tone, while at the same time causing the zone 1 sounder to pulse. If after a pre determined time period, e.g. 60 seconds, the alarms are not silenced, then all alarms sound steady.



1. Click on the **I/O Mapping** icon () in the database toolbar.
2. Refer to Figure 91. Select panel number (in multi panel networks) – item 1.

#### Stage 1: Map Z1 sounder to Z1 trigger devices via node 1

3. Select Z1 sounder, e.g. address 1009 (item 2), as an output and select the output mode as *Single Knock Silencing*.
4. Select internal node 1 (item 3) as input to sounder Z1 while selecting the trigger condition as *Active* and the output action as *Steady*.
5. Select internal node 1 (item 4) as an output and select the output mode as *Single knock silencing*.
6. Select zone 1 (item 5) as the input to internal node 1 output while selecting the trigger condition as *Fire* and the output mode as *Single knock Silencing*.

Steps 1 to 6 above, map the zone 1 trigger devices to the Z1 sounder through node 1. Any device in fire condition in zone 1 operates the Z1 sounder (address 1009) with a steady tone. The sounder will be silenced by the silence alarms facility at the control panel.

#### Stage 2: Map Z2 sounder to Z2 trigger devices via node 2

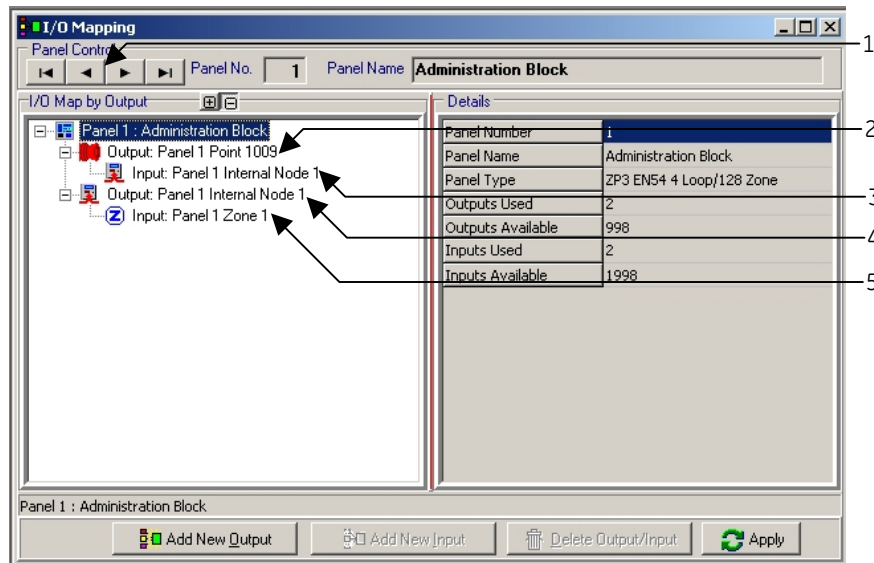
7. Select Z2 sounder, e.g. address 1010 (item 6), as an output and select output mode as “single knock silencing”.
8. Select internal node 2 (item 7) as input to sounder Z2 while selecting the trigger condition as *Active* and the output action as *Steady*.
9. Select internal node 2 (item 8) as an output and select output mode as *Single Knock Silencing*.
10. Select zone 2 (item 9) as the input to internal node 2 output while selecting the trigger condition as *Fire*.

Steps 7 to 10 connect the trigger devices in zone 2 to the Z1 sounder via node 2; the sounder operation will be pulsed.

At this stage a fire in zone 1 sounds the Z1 sounder with a continuous tone, and a fire in zone 2 sounds the Z2 sounder with a continuous tone.

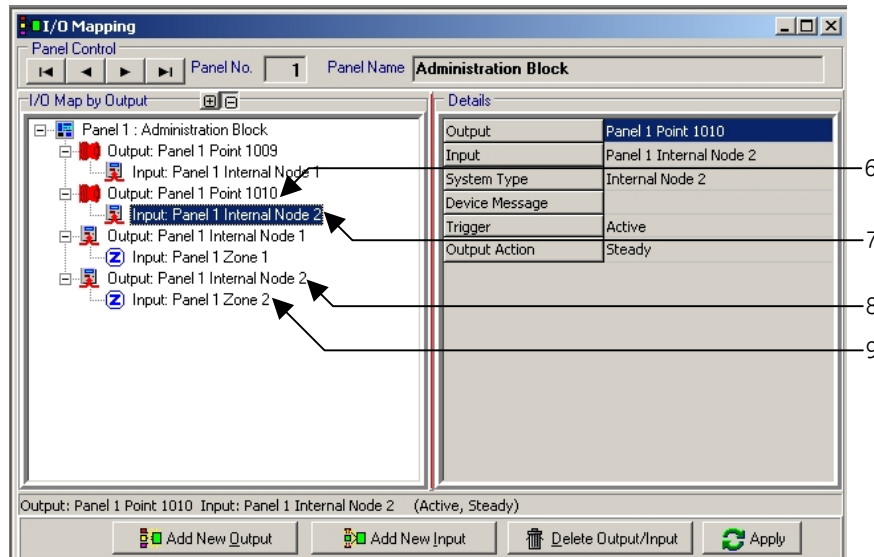
Figure 91: Example 8 – Zoned alarm, evacuate and standby, with delays

Display



Cross reference

I/O mapping on page 66  
 Device details on page 67  
 Adding inputs and outputs on page 70



Device details on page 67  
 Adding inputs and outputs on page 70  
 Other address groupsSystem bus (group 9) on page 9



**Stage 3: Map Z1 sounder to node 2 and Z2 sounder to node 1**

This stage provides alarm in the non-fire zone. On a fire condition in zone 1, Z1 sounder sounds steady; Z2 sounder is now linked to node 1 to provide a pulsed tone. Similarly Z1 sounder is linked to node 2.

11. Refer to Figure 92. Click on Z2 sounder icon, e.g. address 1010 (item 10) in the *I/O Map by Output* screen and select the output mode as *Single Knock Silencing*.
12. Select node 1 (item 11) as an input to Z2 sounder output. Select *Fast Flash (Pulsed)* as the output action from the details window and select *Active* as the trigger condition.
13. Click on Z1 sounder icon, e.g. address 1009 (item 12), in the *I/O Map by Output* screen, and select the output mode as *Single Knock Silencing*.
14. Select node 2 (item 13) as an input to Z1 sounder output. Select *Fast Flash (Pulsed)* as the output action from the details window and select *Active* as the trigger condition.

At this stage a fire in zone 1 operates the sounder Z1 continuously and the sounder Z2 with a pulsed tone. A fire in zone 2 operates sounder Z2 continuously and the sounder Z1 with a pulsed tone. Both sounder outputs are silenced by the control panel silence alarms facility.

**Stage 4: Map sounder outputs Z1 and Z2 to system addresses 9-131 via node 3**

After a period of 60 seconds, sounders operating with a pulsed tone are required to switch to continuous output, unless silenced.

To do this, link both sounder outputs to the control panel function group 9 address 9-131 Sounders active LED (as described under *Example 2: Specified output address to operate from any fire input* on page 81, via a third node.

By introducing node 3, an all sounders or general alarm condition can be assigned to the sounder outputs. The use of node 3 also enables a time delay to operate for a selected period prior to the node 3 conditions being applied.

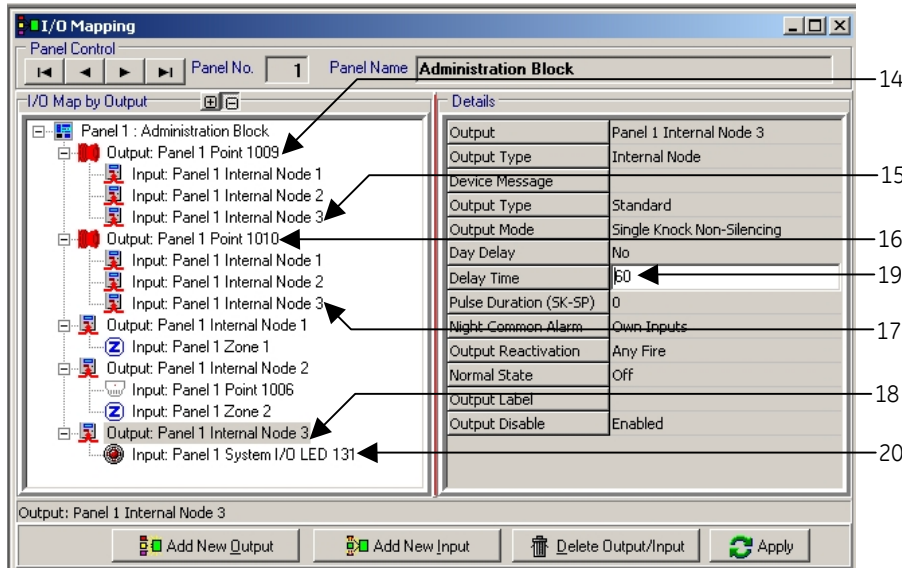
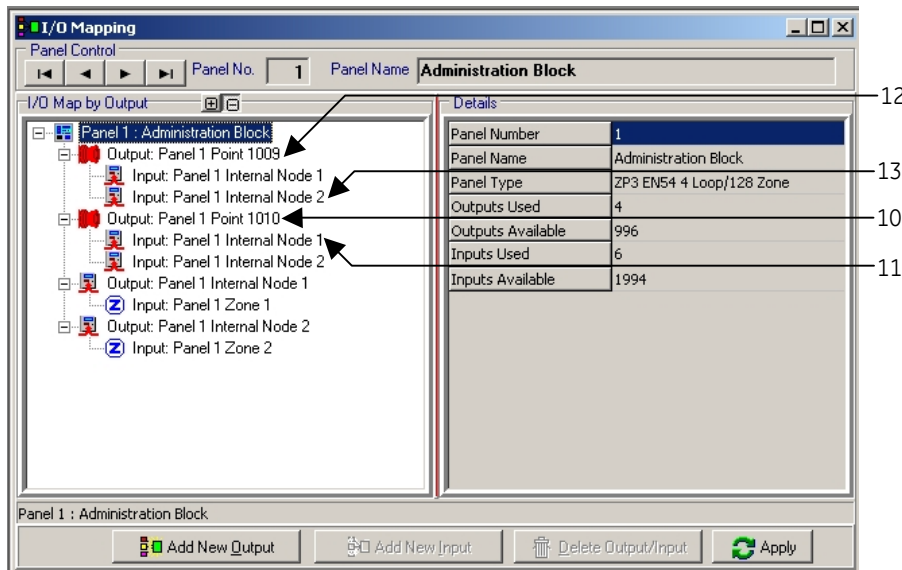
15. Refer to Figure 92. Click on Z1 sounder icon, e.g. address 1009 (item 14) in the in the *I/O Map by Output* screen.
16. Select node 3 (item 15) as an input to Z1 sounder output. Select *Steady* as the output action from the details window and select *Active* as the trigger condition.
17. Click on Z2 sounder icon, e.g. address 1010 (item 16) in the in the *I/O Map by Output* screen.
18. Select node 3 (item 17) as an input to Z1 sounder output. Select *Steady* as the output action from the details window and select *Active* as the trigger condition.
19. Select node 3 (item 18) as an output via the *Select a New Output to Add* screen.
20. Set the delay time setting in the details window to, for example, 60 seconds (item 19).
21. Select the system I/O LED 131 (sounders active LED) – item 20, as the input to the node 3 output via the *Select a New Input to Add* screen.

Figure 92: Example 8 – Zoned alarm, evacuate and standby, with delays (continued)

Display

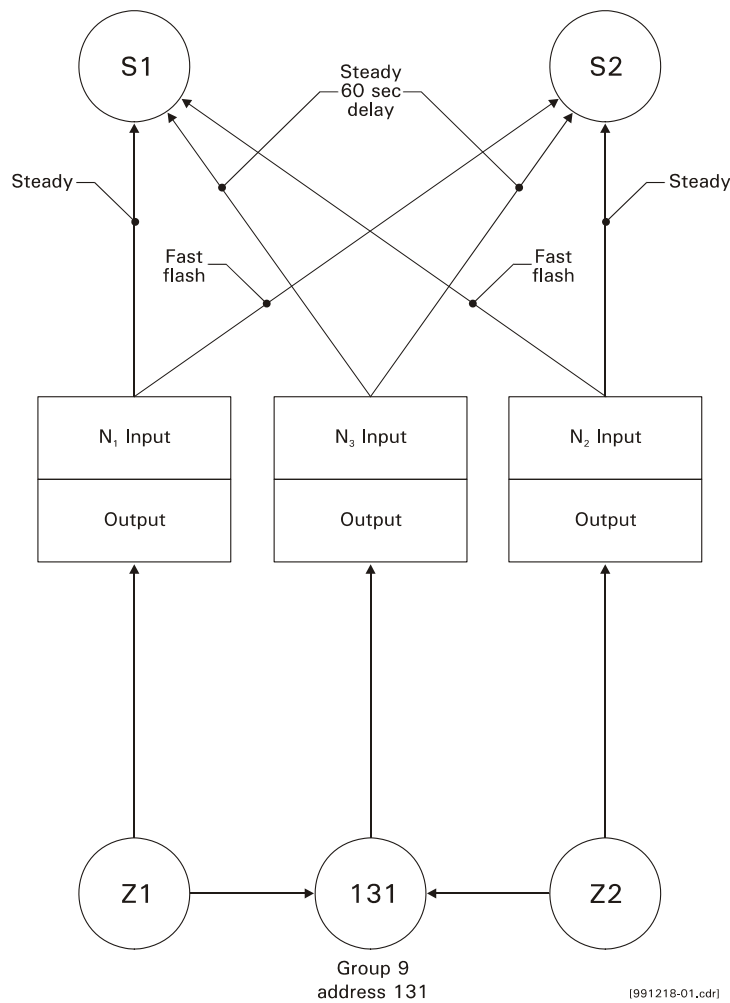
Cross reference

Device details on page 67



This completes the configuration (refer to Figure 93 for a typical sounder configuration). Sounder outputs in the zone in fire sound steady. Sounder outputs in the other zone sound pulsed. After 60 seconds all sounders switch to steady tone. By selecting single knock non-silencing modes, all sounders are silenced by the silence sounders facility at the control panel.

Figure 93: Typical Sounder configuration



## I/O Mapping between loops and panels

Responses, by outputs to inputs, from other loops or panels are a regular requirement in fire detection and alarm systems.

Mapping between loops is achieved via the Input and output selection address screens, in the same way as other address groups. The input or output is selected via the 1, 2, 3 or 4 loop address group.

In multi panel systems, an output on one panel can be mapped to an input on another, simply by selecting the panel number and output icon, in the first panel's I/O mapping screen and mapping it to a new input selected from the second panel's I/O mapping screen.

The output destination is shown, alongside the input icon and vice-versa for the input.

**Note:** Outputs are always applicable to the local panel, while inputs may be from the local or from a remote panel. In this way each local panel is responsible for controlling its own outputs based upon stimulus conditions arising either from its own input devices or from the input devices located on other, remote panels.



# Chapter 8: Information transfer

## Introduction

In multi panel systems panel configuration and database information is downloaded on a panel by panel basis. In networks, each panel retains its own configuration and database settings, together with its networking information for input and output to other panels connected to the system.

Information transfer between the PC running the Planner programme and the Fire Detection and Alarm System is via a serial data link. The communications is a secure arrangement that divides the database into blocks, each of which is sent individually. An acknowledgement is received for the receipt of each block, by the transmitting device, prior to the next block being sent.

**Note:** The control panel will not detect fire conditions whilst serial communications are in progress.

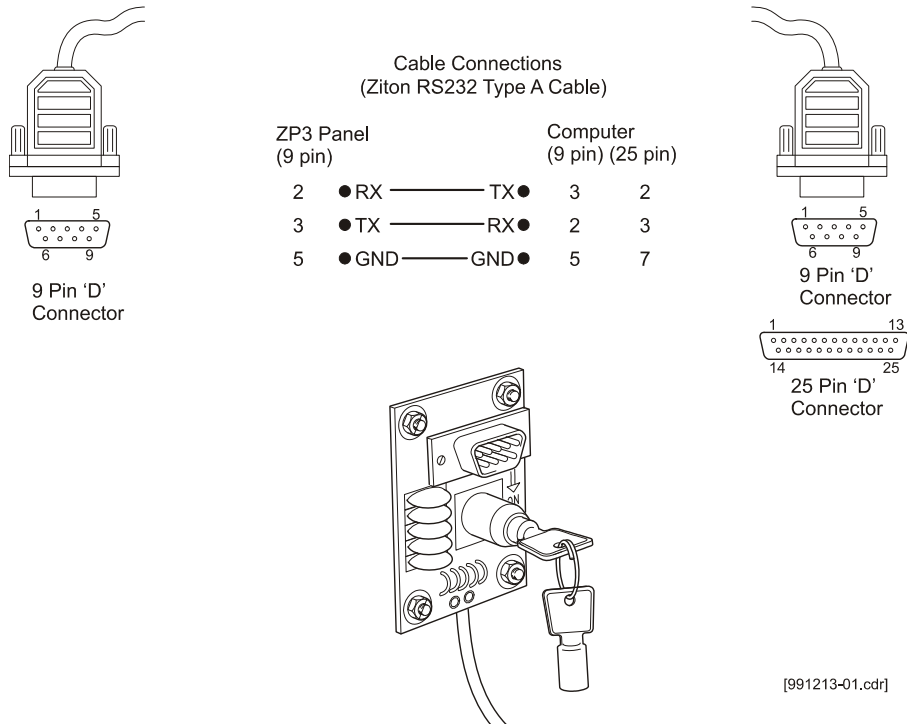
## Cables and connections

Information is transmitted from PC to control panel, or from control panel to PC, by the Planner cable.

The control panel is fitted with a 9-pin RS232 connector (located on the reverse of the front door). Output from the PC will be by either a 9-pin or a 25-pin RS232 connector.

The wiring and connections are shown in Figure 94.

**Figure 94: Cabling and connections**



[991213-01.odr]

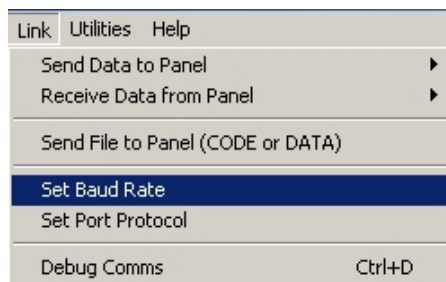
## Communication settings

When transferring data in either direction, the communication settings must be the same at both the Planner PC and the control panel.

### Planner PC communication settings

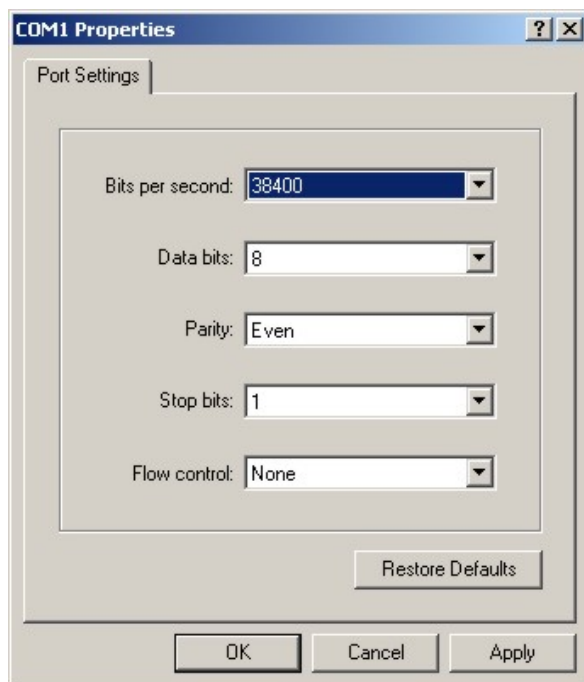
1. Select the **Link** menu from the main menu bar (see Figure 95).

Figure 95: Link/set baud rate option



2. Select the **Set Baud Rate** sub-menu. The COM1 properties screen is displayed (see Figure 96).

Figure 96: COM1 properties screen



3. Configure port settings (see below for information):
  - **Comms port.** The default comms port displayed is comms port 1. In systems where comms port 1 is unsuitable, the default can be changed via the set port protocol (Section 6.4.4. para 5).
  - **Bits per second.** Click the arrow at the right of the window and select the required speed from the dropdown list to select the baud rate.

A value of 38400 bits per second should be selected.

- **Data bits.** The data bit selection should be set to 8 bit, to match the input/output of the fire alarm system.
- **Parity.** The following parity options can be selected from the drop down list.
  - **None.** No parity setting.
  - **Even parity setting.** The ZCP3 protocol for transferring data between Planner and the Panel uses even parity.
  - **Odd parity setting.** Not used.
  - **Space parity.** Not used.
  - **Mark parity.** Not used.
- **Stop bits.** Values of 1, 1.5 and 2 are displayed. **All Planner systems operating on any protocol should be set to 1.**
- **Flow control.** The options X on, X off, Hardware and None are displayed. The item *None* should be selected. Completing the com properties box completes the Planner PC settings. Press **OK** to finish.

## Fire control panel settings

The communications software parameters are set at the panel by using the LCD display and the main keypad on the front of the unit:

1. Open the panel door and turn the *Set-up* key to the **On** position.
2. Press the **Menu** key.
3. Select **Set-up**.
4. Enter commissioning code and press **Enter**.
5. Select **System Configuration**.
6. Select **Peripheral Comms**.
7. Select **Communication Parameters**.
8. Use the < > keys and Enter key to set up ZPORT1 to the following.

Z PORT 1

Protocol	11 -ZCP3
Setup	38400/8/E/1

9. Press **Home** to save the configuration.

The physical control panel address must match the address set in the Planner global settings menu (see *Panel operations* on page 37), or data transmission will not start.

The control panel address is set by again using the LCD display and main keypad on the front of the unit.

1. Press the **Menu** key.
2. Select **Set-up**.
3. Enter commissioning code and press **Enter**.
4. Select **System configuration**.
5. Select **Panel options**
6. Select **Panel numbers**
7. Enter the required panel number.
8. Press **Home** to save the configuration.

**Note:** The following control panels are supported by PLANNER:  
 34710 Vers 1.40, 34711 Vers 1.40, 34712 Vers 1.40  
 68810 Vers 1.40 (Paradigm Panel)  
 71900 Vers 1.10 (EN54 Panel)

It is important to ensure that the correct database file is being loaded into the control panel. Full details of the panel type and operating software are required for successful data transmissions.

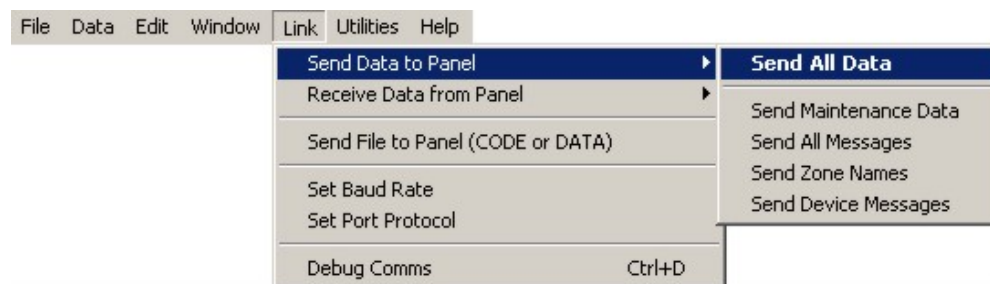
## Loading the database from PC to panel

With PC and control panel connected via the Planner cable and all settings complete, PC and control panel must be set up as follows prior to data down load.

### At the PC

1. Select **Link**, from the main Planner menu.
2. Select the **Send Data to Panel** sub-menu (see Figure 97). Available options are; send all data, send maintenance data, send all messages, send zone names or send device messages. The send command can be operated either by clicking on the menu item or via the "S" key on the PC keyboard.

Figure 97: Link/send data to panel option



3. Select the required option to initiate the down load from the Planner programme, to the control panel.
4. Enter the panel number and password (default password is 2000) - see Figure 98.

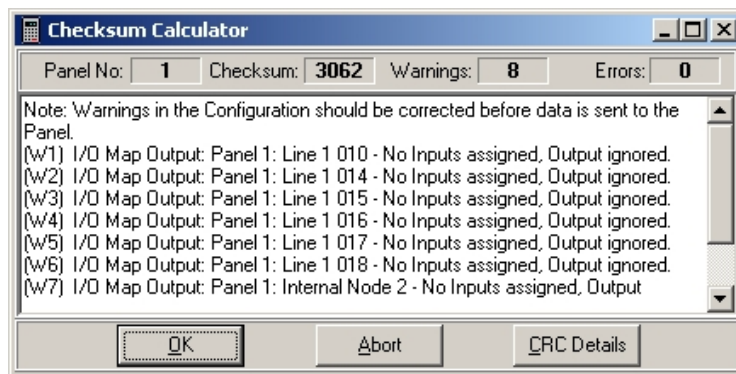
Figure 98: Send all messages screen



If there are any errors or warnings about potential data problems, these are displayed in the checksum calculator dialogue box (see Figure 99). If the warnings are accepted transfer can commence by clicking the **OK** button.



Figure 99: Typical checksum calculator screen



The panel displays *Receiving block XX of XX*, and a download progress timer and abort facility is displayed as shown in Figure 100. Refer to *Aborted transmissions* on the next page for more information on the abort facility.

Figure 100: Sending all messages to panel 1 progress screen



**Note:** Data transfer of a complete database takes approximately sixty (60) seconds to complete.

The **Checksum Calculator** screen is displayed.

## At the fire control panel

- Make sure the control panel is set to protocol 11 -ZCP3 (see *Fire control panel settings* on page 107).
- The panel is now ready to receive down load.

**Note:** No keyboard intervention at the panel is required for the Planner download process to be initiated. However, for data to be stored in the Panel memory, Jumper J2 on the main CPU board must be inserted. After download, this jumper should be removed to render the configuration memory as write-protected.

- The panel displays *Receiving block XX of XX*.
- When the down load is complete, disconnect the Planner cables and reset the fire control panel.

## Checking data transfer

On completion of the data transfer operation, the new information should be checked in the control panel. The fire alarm panel should be reset and a few parameters and messages scrolled to confirm that they correspond to the Planner file.

It is important that any discrepancies between the information displayed on the panel between the database and the actual field installation should be analysed carefully before any changes are accepted.

The data transfer process can be set up in any order, either at the panel first, then at the PC, or if preferred the PC first then the panel.

The date and time information can be entered after resetting the panel.

## Aborted transmissions

If the database transmission is interrupted or aborted, or if problems are experienced in communication, the panel should be restarted, i.e. power off/on, and set the time and date).

During the sending or receiving of data the transfer can be aborted by clicking the abort transmission or abort reception buttons on the send data to panel box.

Planner creates files that the fire alarm control panel can interpret and execute. Planner files include details that are not transferred to the control panel, which include project details, for example the building name, fire installation company; as well as comment and records fields.

When transferring an existing database from a panel to a PC only the system configuration will be transferred. Project details and comments must be inserted manually.

## Loading an existing database from control panel to PC

Before Planner files can be loaded from the fire panel into the PC, a new (blank/empty) project needs to be created. See *Create new project* on page 21 for details.

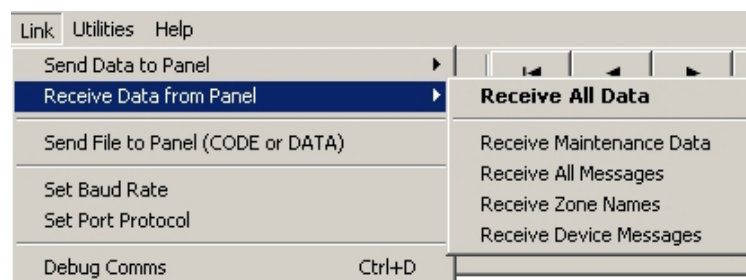
If the programme is already held on the PC then the information can be updated by overwriting the existing project file.

When creating a new project, make sure you do the following before the data transfer upload:

- Create the fire panels to upload to
- Enter the panel number, type and software version.

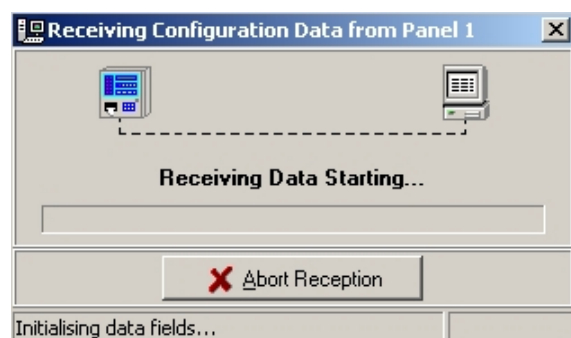
In the Main menu of the Planner PC (see Figure 101):

1. Select **Link**.
2. Select the **Receive Rata from Panel** sub-menu. The following options are displayed:
  - Receive all data (includes the entire database)
  - Receive maintenance data
  - Receive all messages
  - Receive zone names
  - Receive device messages

**Figure 101: Link/receive data from panel menu option**

Uploading data from the panel is controlled entirely by the Planner programme on the PC, and no intervention is required at the panel, provided the panel comms port has been correctly set up. Jumper J2 does not have to be inserted on the panel for upload purposes.

3. Select the required option to initiate the down load from the control panel, to the Planner programme. A download progress timer is displayed (see Figure 102).

**Figure 102: Receiving Configuration Data from Panel n**

**Note:** Data transfer of a complete database may take up to several minutes to complete.

Once all the data blocks have been loaded and the checksums checked between the control panel and the PC, the download display window will close automatically.

## Updating the control panel operating software

The ZP3 range of fire detection and alarm control panels contain their operating/executable files in Flash RAM, which allows service pack updating via a PC loaded with Planner.

Service pack upgrades are despatched on quality controlled 3.5 ins. floppy disks. As the service pack upgrades are data files, they are also transferable in other electronic formats, for example as e-mail attachments or over the Internet.

When data files are electronically transferred over the Internet, it is imperative that their checksums are verified. All information is correct on transmission and it is the responsibility of the receiver should corrupt files be loaded by this method.

## Panel operating software upgrade procedure

Upgrades are usually distributed on 3.5" floppy disks. Send changes in software to the control panel as follows:

**Note:** Make sure that the PC and fire alarm control panel are correctly connected via the Planner cable as described under *Cables and connections* on page 105.

The following steps are dependent on Planner version.

To transfer an operating software upgrade, perform the following procedure at the Planner PC:

1. Select **File** from the menu bar or select **Link** from the menu bar.
2. Select the **Send File to Panel** sub-menu item (code or data).
3. Select the correct drive, e.g. "A" drive for 3.5" floppy disk.
4. Select file appearing in the A: Drive, i.e. 68810xxx.bin, 34710xxx.bin, or 71910xxx.bin, depending upon the software stream on the ZP3 or ZPX3 panel, then select "Open".
5. Enter the number of the destination panel, the panel password and code.
6. Click **OK** to initiate the software transfer from the PC, to the control panel. A window is displayed showing the number of blocks being sent to the control panel. During the transfer a download progress timer is displayed.

When Planner has completed sending all data blocks to the panel, it 'beeps' once, and then return to the main page.

## Preparing the panel to receive a new software version

To receive an operating software upgrade, perform the following steps at the fire alarm control panel:

1. Insert the write protect jumper switch (JP2), located on the CPU inside the control panel.
2. Connect the Planner cable between the PC and the panel.
3. Make sure that the ZPORT1 settings on the panel are correct. A baud rate of 38400/8/E/1 is typically used.

## Initiating software load to panel

Confirm Comms settings on PC are set correctly. See *Planner PC communication settings* on page 106 for more details.

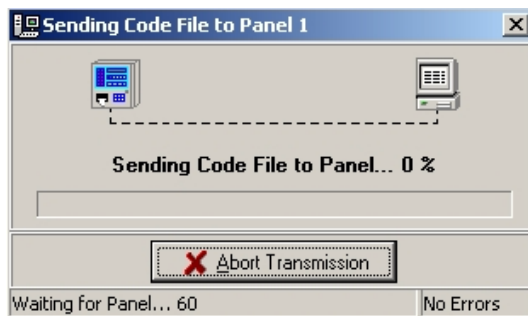
1. Select **Link** from the main drop down menu.
2. Select the **Send File to Panel** sub-menu item.
3. Select the file to send from the appropriate directory.
4. Click **Open**.
5. Enter the panel number and password (default panel code is 2000) - see Figure 103.

Figure 103: Send code file screen



6. Click **Send**. The panel waits for the Planner PC to start transferring files (in block format). When it begins transferring, the panel displays *Sending Code File to Panel.....n%* and a download progress timer and abort facility is also displayed (see Figure 104).

Figure 104: Sending code file to panel screen



After the first 64 blocks of data have been transferred, the panel enters a “sleep” mode with the display blank and the panel buzzer sounding for the rest of load process. If the load is now interrupted, the panel will not be in an operable mode and the download must be re-done before the panel operates normally.

**Note:** Software upgrades may take several minutes to transfer.

7. Manually restart the panel after receiving all the blocks.
8. Check the software version via the operator menu:
  - Select **Menu**
  - Select **Operator**
  - Select Reports to display (2)
  - Select Software version (2)
9. Make sure that the software installed corresponds to the version displayed on the screen.
10. Remove jumper switch JP2.

## Site set up and testing

To provide a successful, error free system, with the minimum of site disruption, all preparation work should be completed prior to the transfer of data to the panel.

### Off site preparation

Where possible the Planner software should be complete prior to visiting site. The Planner Project should be fully programmed with all its databases ready for data transfer into the fire alarm control panel(s).

All database information should always be backed up within the PC. In addition the complete database contents should be copied to an appropriate medium, with copies held by both client and supplier. This provides a high level of security should the database information ever become lost or damaged and enables efficient maintenance and update of the system. It also provides the supplier with accurate records of the original, or 'last visit' facilities, should the system subsequently become modified by the user.

### On site activity

The minimum preparation should be left for completion on site. Where possible the loaded PC should be taken to site complete and connected to the fire detection and alarm system.



# Chapter 9: Loading a language file

## Loading the ZP3 language file

### Overview

Loading the ZP3 language file is described under the following headings:

- Setting the language file on the ZP3 to English – see *Setting the language file on the ZP3 to English* below.
- Configuring the comms link between the Planner PC and the ZP3 panel – see *Configuring the comms link between the Planner PC and the ZP3 Panel* on page 116
- Loading of the language file from the Planner PC – see *Loading of the language file from the Planner PC* on page 117.
- Selecting the language file on the ZP3 Panel – see *Selecting the language file on the ZP3 Panel* on page 119.
- Language file loading error messages – see *Language file loading error messages* on page 119.

### Setting the language file on the ZP3 to English

**Note:** The language MUST be set to English before downloading a new language file to the ZP3 panel.

1. Access the Setup screen.
2. Select option 3: Level 4 operations/more.
3. Select option 2: Language select.

The language files that are currently loaded on the ZP3 panel are displayed. If a language file has been loaded on the ZP3 panel then a message similar to the one shown below is displayed on the LCD.

Setup: Level 4 operations: Language select

1. English
2. Español

4. Press 1 to select English.

If a language file has not been loaded on the ZP3 panel, then refer to *Language file loading error messages* on page 119 for a description of the ZP3 Panel Language File Loading Error Messages.

5. Press *Home* to return to the ZP3 home screen.

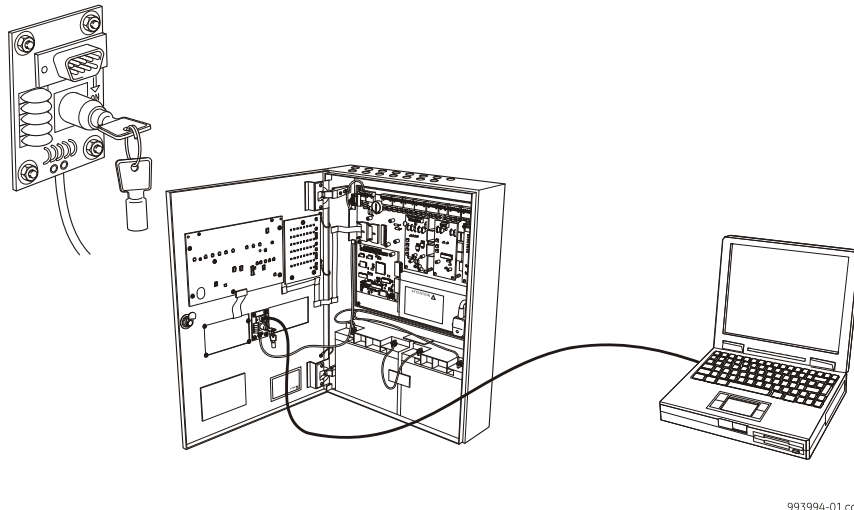
## Configuring the comms link between the Planner PC and the ZP3 Panel

### Hardware setup

Refer to Figure 105.

1. Open the ZP3 panel door.
2. Make sure the key is in the position indicated below.
3. Plug the RS-232 COMMS lead from the Planner PC into the COMMS port on the ZP3 panel.

**Figure 105: Comms link hardware setup**



### Software setup

To be functional, the RS232 built-in serial port (Zport1) must be configured in software, and must be set to match the communications parameters of the PC and program being used.

1. Access the communications parameters menu using the following path:
2. Setup / System configuration / Peripheral comms / Comms parameters

The following screen is displayed:

```

SETUP : SYS   CFG:PERIPH.   COMMS: COMMS PARMS
Z-PORT  : (1)           (<- -> More Z-Port)
Protocol : 0 -None
Setup   : 2400/8/e/2           <Enter> - Edit
  
```

To change a setting, move the bracket to the selected item, and press <Enter>.

The parameters are dependent upon the programme being used. For "Ziton Planner", set the parameters as follows:

```

Z-PORT      Enter Z-port number [1]
Protocol     Select [0] to disable the port, or [1] for use with "Ziton Planner".
Setup       Baud rate      =      38400
            Data bits      =      8
            Parity         =      None
            Stop bits      =      1
  
```



## Loading of the language file from the Planner PC

1. Launch the Planner program by clicking on the program shortcut icon.
2. Open the project file, which includes the ZP3 panel you want to configure.
3. Locate the project summary window (located in the left panel of the Planner screen).
4. Click on the panel to which you want to download a language file.
5. Click the **Link > Send File to Panel (CODE or DATA)** menu option (see Figure 106). A dialogue box titled *Select a File to Send to a Panel* is displayed (see Figure 107).

Figure 106: Link/send file to panel (CODE or DATA) menu option

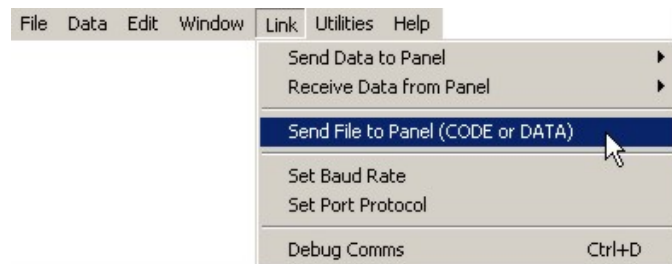
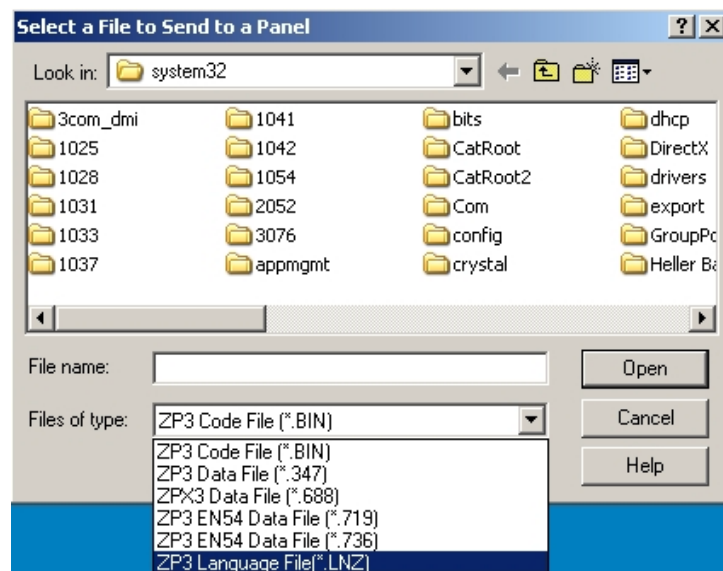


Figure 107: Select a file to send to a panel dialogue box



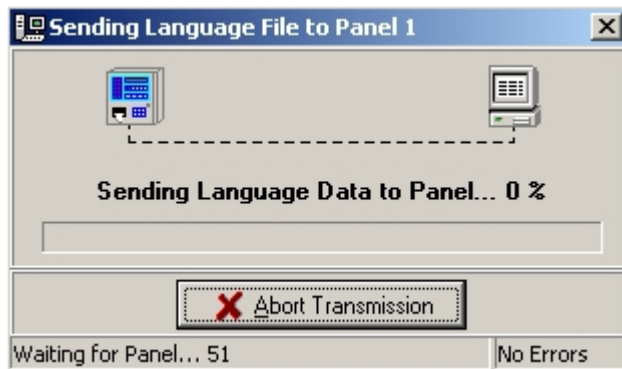
6. Set *File of type* field to **ZP3 Language File (\*.LNZ)**.
7. Navigate to the directory where the language file is stored and select the language file.
8. Click **Open** to open the file. The *Send Language File* dialogue box appears (see Figure 108).

Figure 108: Send language file dialogue box



- Click **OK**. The *Sending Language File to Panel n* dialogue box appears, indicating the progress of the language file download to the target panel.

Figure 109: Sending language file to panel dialogue box



- Upon successful completion of language file download, the following *Planner to Panel language load* dialogue box appears (see Figure 110).

Figure 110: Language load successful dialogue box



**Note:** If there were any errors during the language file download procedure, refer to *Language file loading error messages* on page 119.

## Selecting the language file on the ZP3 Panel

Proceed as follows:

1. Select: **Setup > 3**. Level 4 operations. The following message is displayed on the ZP3 panel LCD if additional languages have been loaded.

Loading extra languages...

If the language file was not loaded successfully then an error message, indicating the cause of the problem is displayed.

2. Assuming that only English and Spanish language files have been loaded successfully, the following message is displayed.

Setup: Level 4 operations: Language select

1. English
2. Español

3. Select the language file by pressing the relevant number on the panel keypad.
4. Allow five seconds for the panel to accept the selection.
5. Press **Home** on the keypad to save settings and return to the home page menu.
6. All menus should now be displayed in the language selected.

## Language file loading error messages

### Planner language file loading error messages

#### The Panel does not have the English language active



#### Cause

The English language file was not loaded before trying to load a different language file.




#### Remedy

Load and select the English language file and then try to load a different language file.

## Language flash error messages

Refer to Table 3 below.

**Table 3: Language flash error messages**

No.	Description/cause	Dialogue box	Remedy
1	<b>Flash erase failed</b> - the flash memory must be cleared before a new language file can be loaded. This error message indicates that the flash memory could not be cleared.		Make sure that jumper JP3 of the Maintenance Flash on the ZP3 CPU Board is ON.
2	<b>Flash program failed</b> - this indicates that an attempt to write to the flash memory failed.		Makes sure that jumper JP3 of the Maintenance Flash on the ZP3 CPU Board is ON.
3	<b>Received data CRC error</b> - The stored CRC in the language file is compared to the calculated CRC of the language file after download.		Reload the language file.

## ZP3 Panel language file loading error messages

The menu heading **Language switch error** (see Figure 111) is displayed on the first row of the ZP3 LCD display. This menu heading is displayed for all language error messages.

**Figure 111: Sending language file to panel dialogue box**

Language switch error:  
 <error message displayed here>  
 <Esc>-Exit

The error checks must be performed in the order that the error messages have been listed in Table 4 below.

**Table 4: ZP3 Panel language file loading error messages**

Ref.	Error message	Corrective action
1	European LCD Display with Display Software Version >= 3.00 needed	The following is needed: A <i>DB1 Display Board PIC</i> with the correct software version for supporting European characters and a European LCD display capable of displaying European characters. <ul style="list-style-type: none"> <li>Check that the part number of the DB1 PIC is 72101 ver. 3.00 or higher. If a PIC with the incorrect software version was used, replace the PIC with a PIC containing the correct software version.</li> <li>Check the part number of the LCD display (sticker on back of LCD display) and verify with agent that this LCD is in fact a European LCD display. If the ZP3 does not have the correct European LCD display mounted, return to agent to have the correct LCD display fitted.</li> </ul>
2	No language loaded	Check the integrity of the loaded language file as follows:
3.0	Decompression error: <error message>	Navigate to the following menu. Menu/Maintenance/Reports to display/Checksum
3.1	No extra lang	<ul style="list-style-type: none"> <li>The stored and calculated CRC values of the language file will be displayed in the last column (right) on the LCD display (under the "LANG" heading).</li> <li>If the stored CRC is zero then no language file has been loaded and the language file must be reloaded (see <i>Loading of the language file from the Planner PC</i> on page 119).</li> <li>If the stored CRC is not equal to the calculated CRC then the language file is corrupt and must be reloaded (see <i>Loading of the language file from the Planner PC</i> on page 119).</li> <li>If the stored CRC is equal to the calculated CRC then the language file integrity is ok.</li> <li>Compare CRC number displayed with the CRC number of the language file supplied by the agent. If the CRC number displayed is different from that supplied by the agent, then an incorrect version of the language file has been loaded. Reload the correct version of software. If the problem still persists, the wrong language file version might have been provided by the agent. Request correct language file version from your local agent.</li> </ul>
3.2	Compression CRC	
3.3	No extra lang data	
3.4	Write overflow	
3.5	Read overflow	
3.6	Decompression CRC	
3.7	Undefined Error	
4	Stream <Z> loaded, <Z> required	
5	Version <Z> loaded, <Z> required	
6	Language Revision: <Z> loaded, <Z> required	
7	Entries mismatch, group: <Z>	
8	Unexpected data end, group: <Z>	
9	Max str length too large, group: <Z>	
10	String too long, group: <Z>	
11	Too many entries, group: <Z>	

**Notes:** "Z" is the respective variable data.

If the suggested remedial action does not solve the problem then please contact your local Ziton agent. Quote the exact error message displayed.

## LCD display errors

If the special European characters are missing on the DB1 LCD display:

Check the part number of the LCD display (sticker on back of LCD display) and verify with agent that this LCD is in fact a European LCD display. If the ZP3 does not have the correct European LCD display mounted, return to agent to have the correct LCD display fitted.

If the special European characters are missing on the RDU display:

Check that the DB1 PIC is ver. 3.00 or higher. If a PIC with the incorrect software version was used, replace the PIC with a PIC containing the correct software version.

Check the part number of the LCD display (sticker on back of LCD display) and verify with your local Ziton agent that this LCD is in fact a European LCD display. If the ZP3 does not have the correct European LCD display mounted, return it to your local Ziton agent to have the correct LCD display fitted.

## Detailed description of ZP3 error messages

**Note:** Only the first error counted by the ZP3 software is displayed.

### 1. European LCD display with display software version $\geq$ 3.00 needed

Language switch error:  
European LCD Display with Display Software Version  $\neq$  3.00  
needed <Esc>-Exit

The first check is to determine whether the software of the DB1 display board is version 3.00 (or higher). Version 3.00 (or higher) software should always be installed with a European LCD display. The user must ensure that the correct LCD display and micro-controller software is installed before loading the language file.

### 2. No language loaded

Language switch error:  
No language loaded. <Esc>-Exit

No loadable language file is present in the storage area of the ZP3 panel.

### 3. Decompression error: <error message>

Several decompression errors may occur during the decompression process. One of the following error messages will be displayed if a decompression error occurs:

#### No extra lang

Language switch error:

**Decompression error:** No extra lang

<Esc>-Exit

No loadable language file is present in the storage area of the ZP3 panel.

#### Compression CRC

Language switch error:

**Decompression error:** Decompression CRC

<Esc> -Exit

CRC check of loadable language file (before decompression) failed. The file must have been corrupted after Planner download and is therefore not present in the flash memory of the ZP3 panel.

The "Compression CRC" error message indicates that one of the following errors occurred during the download from Planner:

- CRC error
- Bad maintenance flash error
- Erase flash error
- Panel language not set to English
- No language file loaded to the ZP3 flash memory

#### No extra lang data

Language switch error:

**Decompression error:** No extra long data

<Esc>-Exit

No compressed data is present in the loadable language file for decompression.

#### Write overflow

Language switch error:

**Decompression error:** Write overflow

<Esc>-Exit

During decompression, a write was attempted to an address outside the allocated RAM area.

#### Read overflow

Language switch error:

**Decompression error:** Write overflow

<Esc>-Exit

During decompression, a read was attempted outside the storage area for the loadable language file.

## Decompression CRC

Language switch error:

**Decompression error:** Decompression CRC

<Esc>-Exit

A CRC check is also performed after decompression is completed, to verify 100 % that the decompressed data is the same as the original data before compression. This error indicates that this final CRC check failed.

## Undefined error

Language switch error:

**Decompression error:** Undefined error

<Esc>-Exit

An unknown error occurred during decompression.

### 4. Stream <release no.> loaded, <release no.> required

Language switch error:

Stream 71911 loaded, 71910 required.

<Esc>-Exit

Every loadable language file contains inside its compressed data a software stream and release version number of ZP3 software, which is the only version of software the language file will be allowed to work on. After the loadable language file has been decompressed a check is done to verify that the software stream (e.g. 71910) is the same as the ZP3 CPU software.

### 5. Version <version no.> loaded, <version no.> required

Language switch error:

Version 3.03 loaded, 3.02 required.

<Esc>-Exit

In the same way, the software revision number is also checked (e.g. ver "3.01" software of software stream 71910).

### 6. Language Revision: <revision> loaded, <revision> required

Language switch error:

Language revision: 1 loaded, 0 required.

<Esc>-Exit

This message should never occur - the revision number of the language file is currently always 0 and should match the default 0 value of the ZP3 CPU software.



## 7 to 11 describe errors by category of decompressed language data

The language data is grouped by category. The error messages that follow relate to these categories.

Language data category group numbers:

Group	Language data category
1	Fixed Length strings
2	Operator strings
3	Maintenance strings
4	Setup strings
5	Extra strings (reserved for future use)
6	Menu headings
7	Menus
8	Help menus
9	Event strings
10	Printer strings

### 7. Entries mismatch, group: 1

There are various categories of language data that is compressed into the loadable language file. After decompression, every category is checked to verify that the amount of strings in every category matches the amount of strings in the ZP3 CPU software.

```
Language switch error:  
Entries mismatch, group: 1  
  
                                <Esc>-Exit
```

### 8. Unexpected data end, group: 1

```
Language switch error:  
Unexpected data end, group: 1  
  
                                <Esc>-Exit
```

These errors occur if the end of a category is prematurely reached.

### 9. Max str length too large, group: 1

```
Language switch error:  
Max str length too large, group: 1  
  
                                <Esc>-Exit
```

Every category specifies a maximum string length and even this maximum length may not exceed a specific value (currently 1000 characters).

### 10. String too long, group: 1

```
Language switch error:  
String too long, group: 1  
  
                                <Esc>-Exit
```

This error message is displayed if a specific string in a category exceeds the maximum allowable length for that category.

### 11. Too many entries, group: 1

```
Language switch error:  
Too many entries, group: 1  
  
                                <Esc>-Exit
```

This error message is displayed if there are too many string entries in a group.



# Appendix A: System specification

## System specification

All fire detection and alarm systems should have a system specification. For simple systems in small buildings this may be no more than a short description and a list of all the equipment. Together with the "As fitted" drawings, the system specification forms the official record of the fire detection equipment installed into a building.

A good system specification, together with 'as installed' drawings often proves invaluable for confirming facilities and compliance to the end user. In addition it provides an official record for service and maintenance purposes, building structural changes and system upgrades and amendments.

When using the Planner programme to configure a system, a system specification should always be completed and discussed with the user prior to any data being inputted into the configuration software.

The specification should cover two main areas:

- A schedule of equipment based on a panel-by-panel listing. This should start by confirming each panel type, its number of loops and any auxiliary boards and optional modules, which may be fitted. Each loop should then be scheduled listing fully (usually in address order) each device and loop isolator connected to it. Loop information should also be added, covering for example loop length and wiring sizes.

Finally all equipment hardwired directly to the panel, loop interface units or connected via radio modules should be added to the list.

- A statement of operation. This should provide at least a clear description of exactly how the system works, usually on a zonal basis. It may include method statements and often on larger sites detailed cause and effect diagrams, ideally in some type of matrix format.

## Developing the specification

The following areas may be helpful in the development of a system specification:

- **Panel identification.** Each panel must be assigned a unique number between 1 and 64. A title message, which is displayed by the panel in its quiescent condition, is optional. If specified, it can be up to a maximum of 40 characters in length.
- **Menu access codes.** The panel uses four levels of passwords to control access to menus. A four digit numeric code must be specified for each of the three controlled levels. Operator level is the lowest entry and is uncontrolled.
- **Control key access levels.** A facility can be specified to prevent unauthorised operation of the four main control keys Accept, Reset, Silence Alarms and Sound Alarms. Each can be assigned to any of the three password protected levels. If unassigned, the action operates at level one which is uncontrolled.
- **Local programming.** The control panel can be configured either from the panel keypad, or only by downloading information from the Planner programme. Specifying panel keyboard configuration also allows input via Planner.
- **Networking.** Panels must be defined as stand alone or part of a network.

- **Zone allocation.** All input devices on a loop must be assigned to a zone. This includes sensors, callpoints and interface units. Output devices for example sounders and loop wired relay units can be optionally zoned if required. Zones must be specified and numbered and the point addresses belonging to each zone must be defined.
- **Zone names.** Each zone requires an identification message. This message can be up to 29 characters in length. If the alarm time stamp, displayed on the screen, is enabled then the message is reduced to 23 characters. It is unnecessary to include the zone number in the message as it is automatically displayed.
- **Point information.** The device type and its address must be defined.
- **Device identification message.** Each device in the system can be assigned an identification message, which is tagged to the point address of the device. For loop wired devices this message can be up to 40 characters in length. For control panel outputs the message is limited to a total of 10 characters.
- **Sensor self test.** The panel automatically tests ZP700 sensors every 24 hours. The test is optional and can be specified on a device-by-device basis.
- **Sensor sensitivity.** The sensitivity of each sensor must be specified, as well as whether alarm verification is to be enabled. Sensitivity can be selected from four levels, (1-HIGH), (2-NORMAL), (3-MEDIUM) and (4-LOW). Alarm verification, when enabled, confirms that smoke or the products of combustion have been present inside the detector chamber for a period of 15 seconds. The normal verification period is 4 seconds. All sensor types have a (2-Normal) default setting and no alarm verification (AVF-OFF).
- **Sounder bases.** ZP700 sensors can be installed with a sounder base, enabling an audible alarm at each sensor location. The point address of each sensor fitted with a sounder base and if it is loop or externally powered must be specified. The maximum number of sounders powered from a loop is a function of total number, sound output and the loop length (refer to the relevant Loop Sounder installation sheet for more information if required).
- **Loop sounders.** Sounders can be connected directly to the loop wiring and assigned their own address. The point address of each loop wired sounder must be specified, in order for it to operate correctly. In addition it must be specified whether the sounder is powered from the loop or from an external source. The maximum number of sounders powered from a loop is a function of total number, sound output and the loop length (refer to the relevant Loop Sounder installation sheet for more information if required).
- **Panel sounders.** Sounders can be connected directly to panel outputs via dedicated, conventional wiring. They may also be conventionally connected via remote panel outputs. In such cases it is the output circuit that is assigned its own point address.  
Panel sounders are usually powered from the panel power supply, but can be separately powered from an auxiliary power supply unit. This will depend upon the number of sounders, their remoteness to the panel, the required sound output and whether they are powered from the main panel or from a remotely located remote control unit (RCU).
- **Loop isolators.** The number of loops and the number of loop isolators on each loop must be specified. In addition, the location of each isolator must be shown either on a system schematic diagram, a loop layout drawing, or on the installation drawings. Up to 16 loop isolators can be installed on each loop. A loop start and a loop end isolator are integrated into the panel, giving a total of 17 isolatable cable sections.
- **Common relays.** The normal state for common (auxiliary) fire and fault relays must be defined. The control panel defaults are fire relay normally de-energised and fault relay normally energised.
- **Printer.** Specify if a panel printer is to be fitted and specify the type of events to be included in printouts. Events are categorised into fire alarms, fault alarms, panel operations and outputs activated.

- **Alarm time display.** Specify if the alarm event is to be time stamped and displayed on the control panel screen. All events in printouts are timed stamped.
- **Silence delay.** A delay can be programmed into the silence alarms key in order to prevent the system sounders being prematurely silenced in the event of a fire alarm. The delay can be set between 0 (no delay) and 600 seconds.

The above items are discussed in more detail in Chapter 6 on page 33 of this manual.

More details on all aspects of the ZP3 system are available in the ZP3 Fire Control Panel Installation, Commissioning and Maintenance Manual, document number 503-1160ZE-I-09 and ZP3 Fire Control Panel User Guide, document number 503-1160ZE-U-09.



# Appendix B: Advanced exception reporter

## Overview

In any computer based system the possibility that an error can occur is always present. Ziton has reduced the risk of errors to an acceptable minimum consistent with the needs and expectations of a Life Safety system. However, it is still possible that unexpected problems can occur. In order to track and record all unexpected errors Planner contains a sophisticated error trapping mechanism that records all salient details when an unexpected error occurs.

## Features

- Pop-up display (see Figure 112)
- Displays Windows operating system and hardware resource issues
- Generates a fully detailed exception report (see Figure 113)

Figure 112: Advanced exception reporter dialogue screen



## Procedure

1. Select the *Copy to clipboard* tick box. A confirmation dialog box will be displayed.
2. Click **OK**.
3. Open a text editor e.g. Notepad.
4. Paste the clipboard contents into the text file.
5. Save the text file and e-mail it to the relevant agent. If this is a new report type the agent should forward the details to the Ziton Engineering department.

**Note:** Exceptions reported by Planner do not imply that the Planner software is compromised. It should not be necessary to reinstall Planner.

Advanced exception reporter is used to facilitate future development.

Once a report has been supplied to the agent the significance of the problem can be relayed to the user.

Figure 113: Typical exception report details



```
Eureka (MC) - Planner 2009 error.txt - Notepad
File Edit Format View Help
EurekaLog 4.6.4
-----
Application:
1.1 Start Date      : Mon, 28 Feb 2005 09:06:01 +0100
1.2 Name/Description: Planner for windows
1.3 Version Number  : 2.0.0.9
1.4 Parameters      :
-----
Exception:
2.1 Date           : Mon, 28 Feb 2005 09:09:16 +0100
2.2 Address        : 0042A9EE
2.3 Module         : PlannerNT.exe
2.4 Type           : EAccessViolation
2.5 Message        : Access violation at address 0042A9EE in module 'PlannerNT.exe'. Read of address 00000000.
-----
Active Controls:
3.1 Form Class     : TMainForm
3.2 Form Text      : #Planner for windows version 2.00  Project Name :- Planner2009
3.3 Control Class  : TTreeView
3.4 Control Text   :
-----
Computer:
4.1 Name          : MAESTRO1
4.2 User           : CVT TEST
4.3 Total Memory  : 255 MB
4.4 Free Memory   : 104 MB
4.5 Total Disk    : 18.65 gb
4.6 Free Disk     : 14.35 gb
-----
Operating System:
5.1 Type          : Microsoft windows xp
5.2 Build #       : 2600
5.3 Update        : Service Pack 2
5.4 Language      : English (United States)
```