CAST XFP

Analogue Addressable
Fire Alarm Control Panel

1 Loop, 16 Zone Panel (Part No. XFP501E/CA)

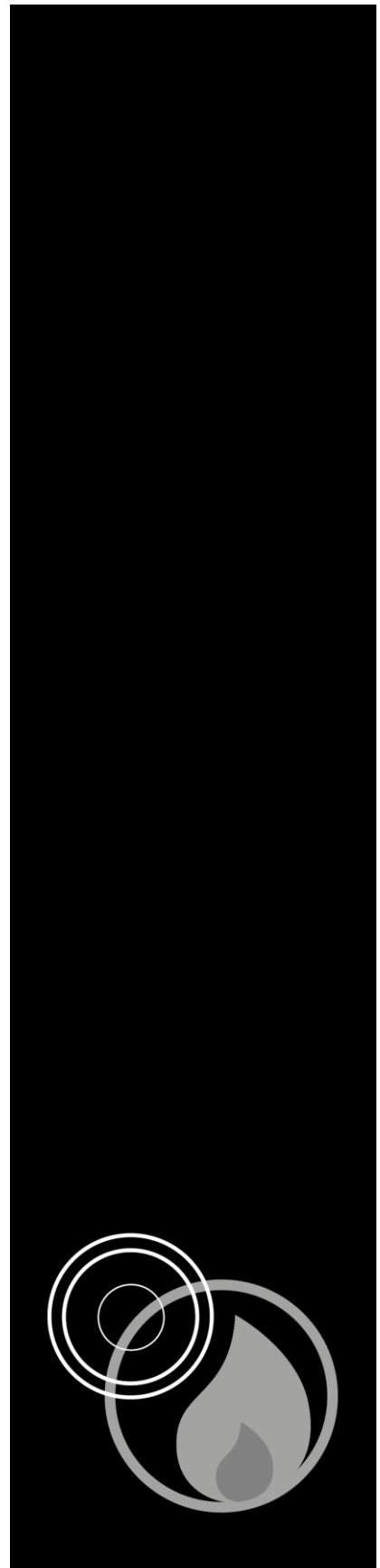1 Loop, 32 Zone Panel (Part No. XFP501/CA)

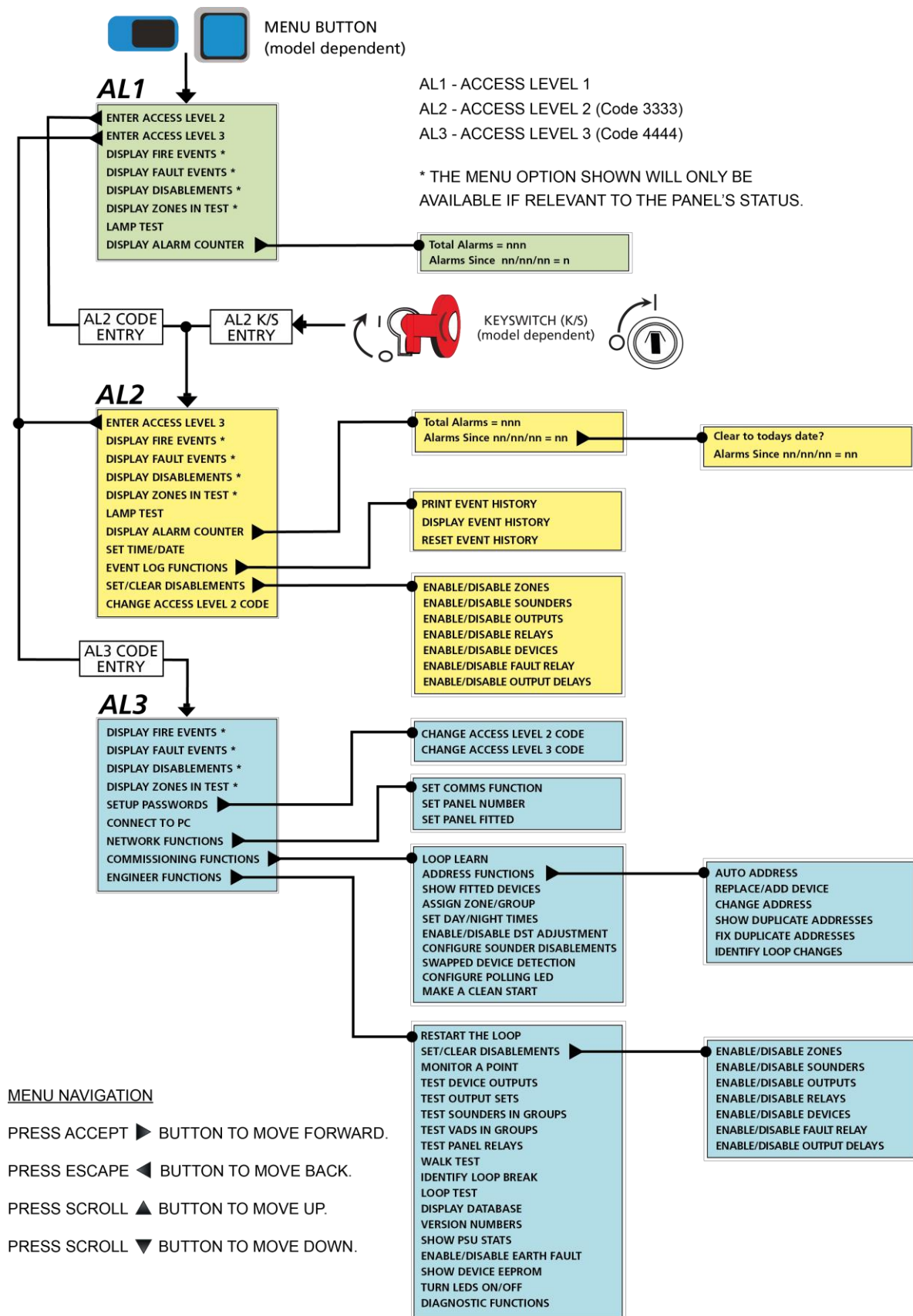2 Loop, 32 Zone Panel (Part No. XFP502/CA)

ONLY EXPERIENCED INSTALLERS
OF ANALOGUE ADDRESSABLE
FIRE ALARM SYSTEMS SHOULD
READ THIS DOCUMENT

Commissioning & Programming Quick Start Guide

FIG.1 - CAST XFP Menu Structure

Contents

IMPORTANT NOTE

THIS QUICK START GUIDE IS FOR AUTHORISED SYSTEM ENGINEERS FAMILIAR WITH ANALOGUE FIRE ALARM SYSTEMS AND FIRE ALARM STANDARDS. ENSURE YOU HAVE ATTENDED C-TEC'S AUTHORISED TRAINING COURSE <u>BEFORE</u> USING THE XFP PROGRAMMING TOOLS (PART NO. XFP507).

IF YOU ARE IN ANY DOUBT WHATSOEVER ABOUT ANY DETAILS PROVIDED IN THIS QUICK START GUIDE, REFER TO THE CAST XFP ENGINEERING MANUALS (DFU5010000 – 16 ZONE PANEL & DFU5010020 – 32 ZONE PANEL).

1   Commissioning/Programming Overview

This quick start commissioning/programming guide for the CAST XFP 16 and 32 zone panels details a procedure for creating a <u>named</u>, <u>zoned,</u> 'one out, all out' fire alarm system and is summarised in sequential order below:

- Commission the panel by carrying out an auto address or loop learn.
- Install the XFP Programming Tools and connect the PC laptop to the panel.
- Load the auto address or loop learn data from the panel to the PC laptop.
- Name the loop devices.
- Name the Zones and assign loop devices to Zones/Groups/Sets.
- Edit the Group configuration.
- Enter the site details.
- Save the 'config data file' from the PC laptop to the panel.

Note: Further custom configuration is possible using the XFP Programming tools but is beyond the scope of this quick start guide.

2   Pre-Commissioning Checks at the Panel

<u>Before</u> commissioning, ensure the following checks have been carried out at the panel.

- Check the continuity on the negative (-ve) line of the device loop(s) to ensure they are fault free. **Note:** Loop isolators are in the positive (+ve) line, therefore continuity cannot be tested.
- Connect all loop wiring to the panel (either 1 or 2 loops dependent on CAST XFP model).
- Connect mains and standby battery supplies to the panel.
- Upon powering up, the panel's display will show a number of start-up messages detailing, time/date, panel protocol, any faults, etc.
- Investigate and rectify any faults reported on the panel's display.

After all faults have been cleared, proceed to commission the panel.

3   Commissioning the Panel

SEE FIG.1, PAGE 2 FOR THE PANEL'S AL3 MENU OPTIONS

⚠ **CAUTION: USING THE AUTO ADDRESS OR LOOP LEARN FUNCTIONS DETAILED BELOW MAY COMPLETLEY ERASE THE PANEL'S DATABASE OF STORED LOOP DEVICE INFORMATION.**
THESE FUNCTIONS MUST BE USED WITH EXTREME CARE.

All the loop devices connected to the panel need to have a unique address assigning to them. In addition, the panel needs to read all the loop devices and identify their address.

There are <u>two</u> options to do this: Auto Address and Loop Learn.

3.1 Auto Address

During an auto address the panel automatically assigns an address to each loop device in sequentially wired order.

At the panel, enter **AL3 (4444) > Commissioning Functions > Address Functions > Auto Address.**

When the AUTO ADDRESS prompt appears, press the Accept ▶ button to continue.

Press the scroll ▲ button to select 'Yes' then press the Accept ▶ button shown below:

```
Continue with Loop Learn? No
The Database will be erased
```
▶
```
Continue with Loop Learn? Yes
The Database will be erased
```

When requested by the panel fit the NVM link shown below:

```
Please fit the NVM Link now
or press ESCape to abort
```

You now have two options: 'Continue from last address? No', or 'Continue from last address? Yes', as detailed below:

Option 1: Select 'Continue from last address? No'

⚠ **CAUTION: USING THIS OPTION WILL COMPLETELY ERASE THE PANEL'S DATABASE OF STORED LOOP DEVICE INFORMATION <u>INCLUDING ERASING ALL EXISTING DEVICE ADDRESSES AND DEVICE ADDRESSES ASSIGNED BY A CAPROG PROGRAMMER.</u> THIS IS DIFFERENT TO THE LOOP LEARN FUNCTION. USE THIS OPTION WITH EXTREME CARE.**

Use this option if the panel has not previously been programmed, or if you want to program an existing system as if it were a new system, and you are confident to proceed.
Press the scroll ▲ button to select 'No' then press the Accept ▶ button shown below:

```
Continue from last address? No
```

The panel will perform an auto address. Wait for the process to complete and a brief summary window will appear, similar to the one shown below:

> 112 devices found
> Auto learn complete, Press Accept

Press the Accept ▶ button then press Escape ◀ button x 4 to return the panel to a normal condition.

When requested by the panel remove the NVM link shown below:

> 6:50   16 Jan : Normal
> Remove the NVM Un-Lock link

AFTER A SUCCESSFUL AUTO ADDRESS YOU WILL HAVE A 'ONE OUT, ALL OUT' FIRE ALARM SYSTEM.

See Table 1 below for the default device assignment following an auto address.

DEVICE	DEFAULT ASSIGNMENT
Loop Smoke/Heat Detectors	Zone 1
Loop Manual Call Points	Zone 1
Loop I/O Unit Inputs	Zone 1
Loop I/O Unit Outputs	Set 1
Loop Sounders/VADs	Group 1
Panel Conv. Sounder Circuit 1	Group 1
Panel Conv. Sounder Circuit 2	Group 2

Table 1 : Default Device Assignment

Assignment Terms:
Input devices such as detectors, MCPs and the input channels of I/O units are programmed to be members of a **Zone**.
Output devices such as loop powered sounders and the panel's conventional sounder circuits are programmed to be members of a **Group**. The output channels of I/O units and panel relays are programmed to be members of a **Set**.

Default Cause & Effects (C&E)**:**
Zone 1 triggers Group 1 and Set 1.

Option 2: Select 'Continue from last address? Yes'

Use this option if you do not want to erase the stored loop device data. The panel will start to learn the loop from the last known address in its memory. Existing data will not be overwritten, e.g. zone and group allocation, device names, etc., will remain unchanged. The only data that will be overwritten is device type and whether or not it is fitted.

Press the scroll ▲ button to select 'Yes' then press the Accept ▶ button shown below:

> Continue from last address? Yes

The panel will perform an auto address. Wait for the process to complete and a brief summary window will appear, similar to the one shown below:

> 112 devices found
> Auto learn complete, Press Accept

Press the Accept ▶ button then press Escape ◀ button x 4 to return the panel to a normal condition.

When requested by the panel remove the NVM link shown below:

> 6:50   16 Jan : Normal
> Remove the NVM Un-Lock link

3.2 Loop Learn

NB! LOOP LEARN WILL NOT AUTO ADDRESS DEVICES.
Loop learn requires all devices to be pre-addressed, e.g. using the CAPROG handheld programmer. New addresses will not be assigned.

During a loop learn, the panel interrogates every pre-addressed device on the loop to see if an addressable unit is present and, if so, find out what type of device it is.

At the panel, enter **AL3 (4444) > Commissioning Functions > Loop Learn.**

When the LOOP LEARN prompt appears, press the Accept ► button to continue.

Press the scroll ▲ button to select 'Yes' then press the Accept ► button shown below:

| Continue with Loop Learn? No | ► | Continue with Loop Learn? Yes |

When requested by the panel fit the NVM link shown below:

| Please fit the NVM Link now or press ESCape to abort |

As the panel may already have loop device data stored in its memory from a previous loop learn or PC upload, you will be asked if you want to erase this information before the loop learn begins.

You now have two options, 'Erase Loop 1 device data first? No', or 'Erase Loop 1 device data first? Yes', as detailed below:

Option 1: Select 'Erase Loop 1 device data first? No'

Use this option if you do not want to erase the stored loop device data. The panel will learn the loop without overwriting existing data, e.g. zone and group allocation, device names, etc., which will remain unchanged. The only data that will be overwritten is device type and whether or not it is fitted.

Press the scroll ▲ button to select 'No' then press the Accept ► button shown below:

| Erase Loop 1 device data first? No |

The panel will start a loop learn. Wait for the process to complete and a summary window will appear, similar to the one shown below:

| 112 devices found Auto learn complete, Press Accept |

Press the Accept ► button then press Escape ◄ button x 3 to return the panel to a normal condition.

When requested by the panel remove the NVM link shown below:

| 6:50   16 Jan : Normal Remove the NVM Un-Lock link |

Option 2: Select 'Erase Loop 1 device data first? Yes'

⚠️ CAUTION: USING THIS OPTION WILL COMPLETELY ERASE THE PANEL'S DATABASE OF STORED LOOP DEVICE INFORMATION <u>EXCLUDING DEVICE ADDRESSES PREVIOUSLY ASSIGNED BY A CAPROG PROGRAMMER, WHICH IS RETAINED.</u> THIS IS DIFFERENT TO THE AUTO ADDRESS FUNCTION. USE THIS OPTION WITH EXTREME CARE.

Use this option if the panel has not previously been programmed, or if you want to program an existing system as if it were a new system.

Press the scroll ▲ button to select 'Yes' then press the Accept ▶ button shown below:

```
Erase loop 1 device data first? Yes
```

The following message will appear:

```
Are you sure you want to erase
the Database? No
```

Only if you are confident to proceed, press the scroll ▲ button to select 'Yes', then press the Accept ▶ button.

The panel will erase its database, update its flash memory and start a loop learn.

Wait for the process to complete and a summary window will appear, similar to the one shown below:

```
112 devices found
Auto learn complete, Press Accept
```

Press the Accept ▶ button then press Escape◀ button x 3 to return the panel to a normal condition.
When requested by the panel remove the NVM link shown below:

```
6:50   16 Jan : Normal
Remove the NVM Un-Lock link
```

AFTER A SUCCESSFUL LOOP LEARN YOU WILL HAVE A 'ONE OUT, ALL OUT' FIRE ALARM SYSTEM. See Table 1 (page 6) for the default device assignment following a loop learn.

4   Programming the Panel

This section details a procedure for creating a basic configuration (config) data file, using the XFP Programming Tools, resulting in a <u>named</u>, <u>zoned</u> 'one out, all out' fire alarm system.

4.1 Install the XFP Programming Tools

Install the PC laptop with the latest version of the XFP Programming Tools (XFP507). There is a free download of the tools available on the C-TEC website via the following link:
http://www.c-tec.com/info/software-downloads.html.
Note: The tools are Windows XP/Vista/10 compatible and supplied with a 2m long programming lead.

4.2 Connect PC Laptop to Panel

Using the supplied programming lead, connect the PC laptop to the RS232 port on the CAST XFP panel.

Note: Application Note 0001.0 details setting up a Serial Comms Port on a PC laptop to connect to C-TEC control panels. App Note 001.00 is available under 'Support' @ www.c-tec.com.
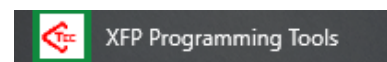
4.3 Set Up the Panel

At the panel, enter **AL3 (4444) > Connect to PC**.

When the CONNECT TO PC prompt appears, press the Accept ▶ button. If all connections are correct the following message will appear:

> PC connected...
> Press ESC to disconnect from PC

4.4 Load Data from the Panel to the PC Laptop

Open the tools by clicking on the desktop icon, or '**XFP Programming Tools**' in the PC's Start menu (shown right).

Load the auto address or loop learn data from the panel to the PC laptop by clicking on the toolbar icon (shown right).

The CAST protocol settings will be automatically recognised by the tools when the data is loaded.

The following message will appear at the panel:

> PC connected...
> Panel ⟶ PC

Create a suitable filename for the 'config data file' and save the file on the PC laptop. The default filename extension for data files is '**.xfp**'.

4.5 Name Loop Devices

To make the system understandable to the user, you should create 'device names' (specific areas within a Zone) for the loop devices.

The following example uses the **Loop Summary** tab option to edit device names.

The **Loop Summary** window below (see FIG.2) shows the typical results after the auto address or loop learn data has been loaded from a CAST XFP panel into the XFP Programming Tools.

The tools have automatically allocated loop addresses and device types and assigned all smoke/heat detectors and MCPs to Zone 1, all sounder/VADs to Group 1 and all I/O units to 'Click for I/O Configuration'.

To change a device name, simply click in the **Device Name** column and type the name you require. The device name is limited to 24 characters (including spaces) and there are a maximum of 255 devices per loop (dependent on CAST XFP model).

FIG.2 – Loop Summary Window

4.6 Name Zones and Assign Devices to Zones/Groups/Sets

4.6.1 Name the Zones

A Zone is a geographical location of the protected premises and may also be a fire compartment.

To make the system understandable to the user, you should name all the Zones.

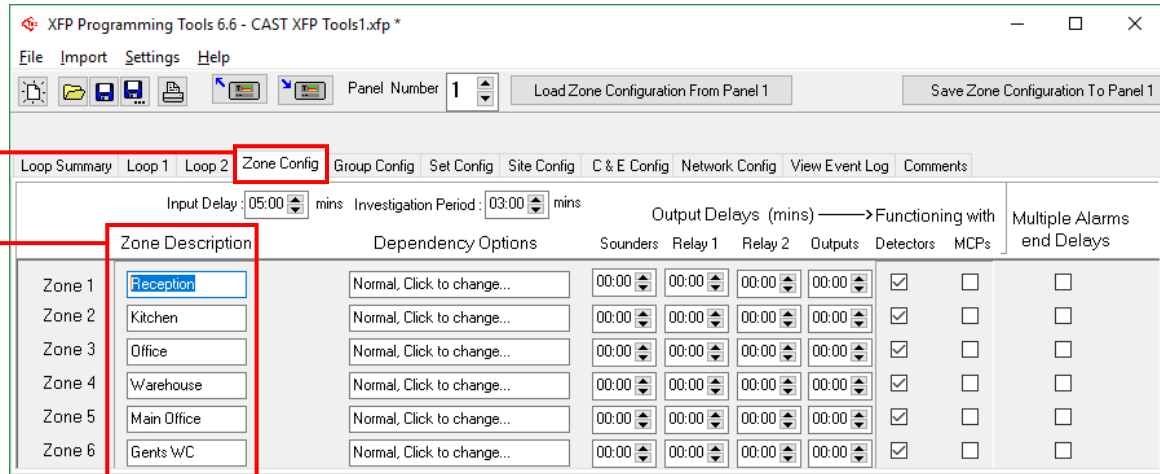The following example uses the **Zone Config** tab option to show the results of editing Zone names.

FIG.3 – Zone Config Window

Enter the desired name in the **Zones Description** column in the **Zone Config** window (see FIG.3). The Zone name is limited to a maximum of 14 characters (including spaces) and there are a maximum of 16 or 32 Zones (dependant on CAST XFP panel model).

4.6.2 Assign an Input Device to a Zone

An input device is any device that can signal an event such as 'fire', 'fault', etc. to the fire alarm panel, e.g. smoke/heat detectors, MCPs and the input channels of I/O units.

Click on the **Loop Summary** tab to open the **Loop Summary** window.

For each input device, click on the drop-down menu in the **Zone/Group/Set** column to assign a device to a Zone (see FIG.4).
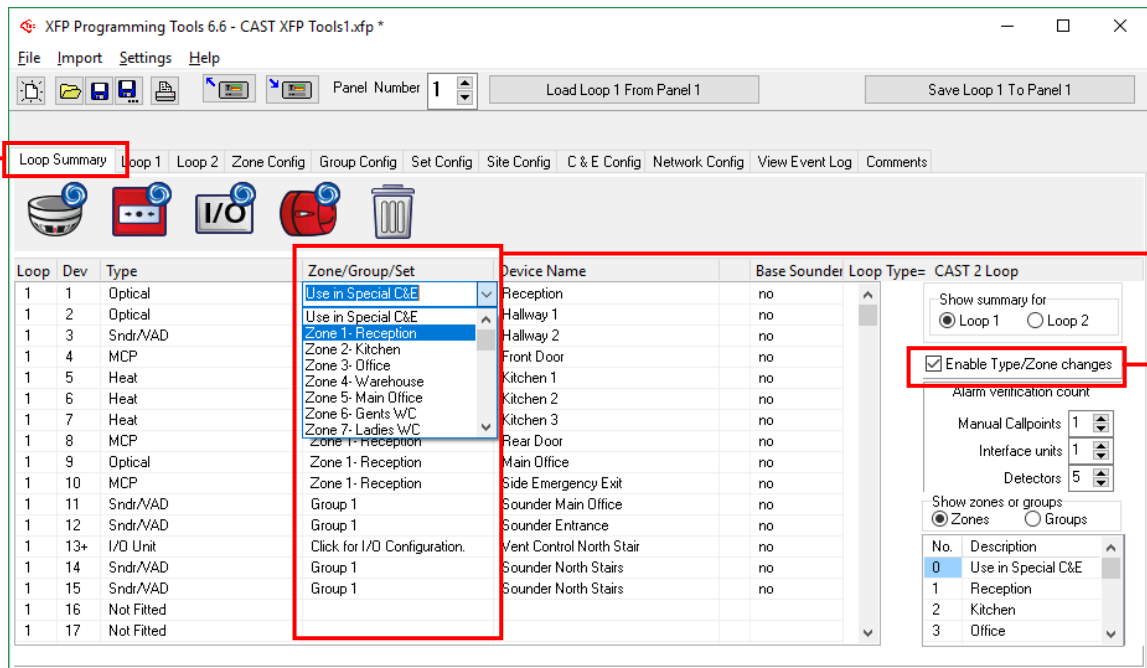

FIG.4 – Loop Summary Window

Note: In order to make any changes to the Zone/Group/Set data in the Loop Summary window, click on the Enable Type/Zone Changes box.

4.6.3 Assign a Sounder/VAD to a Group

A Group comprises of loop sounder/VADs and the panel's conventional sounders.

In the **Loop Summary** window, for each sounder/VAD, click on the drop-down menu in the **Zone/Group/Set** column to assign a device to a Group (see FIG.5).

Note: In order to make any changes to the Zone/Group/Set data in the Loop Summary window, click on the Enable Type/Zone Changes box.

There are a maximum of 16 Groups (which cannot be re-named), see *'Edit Group Configuration'*.
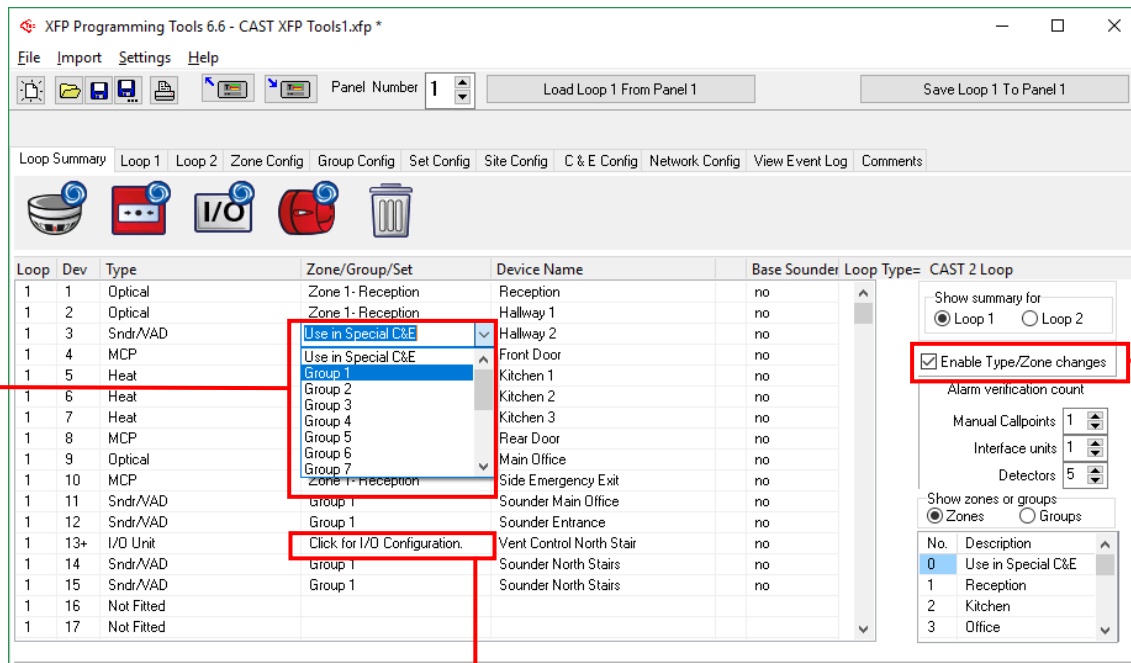

FIG.5 – Loop Summary Window

Normally, after a 'One Out, All Out' auto address or loop learn the I/O unit inputs are assigned to Zone 1 and I/O units outputs to Set 1. If required, click on the 'Click for I/O Configuration' in the **Zone/Group/Set** column to configure the I/O unit. See Table 1 (page 6) for default device assignment.

4.7 Edit Group Configuration

Clicking the **Group Config** tab displays the **Group Config** window which deals with how loop sounder/VADs and the panel's conventional sounders interact with Zones. The intersection of the rows and columns clearly show the settings (see FIG.6).

There are a maximum of 16 or 32 Zones (dependent on CAST XFP model) and a maximum of 16 Groups. By default, Groups 1 to 5 are set to continuous (Evacuation) operation if a fire event occurs in any Zone and Groups 6 to 16 are not configured.

There are two conventional sounders circuits in the CAST XFP panel, i.e. Panel Sounder 1 & Panel Sounder 2. By default, Panel Sounder 1 assigns to Group 1 and Panel Sounder 2 assigns to Group 2.

Combined loop sounder/VAD devices can be assigned to different Groups in the **Loop Summary** window, see '*Assign a Sounder/VAD to a Group'*.
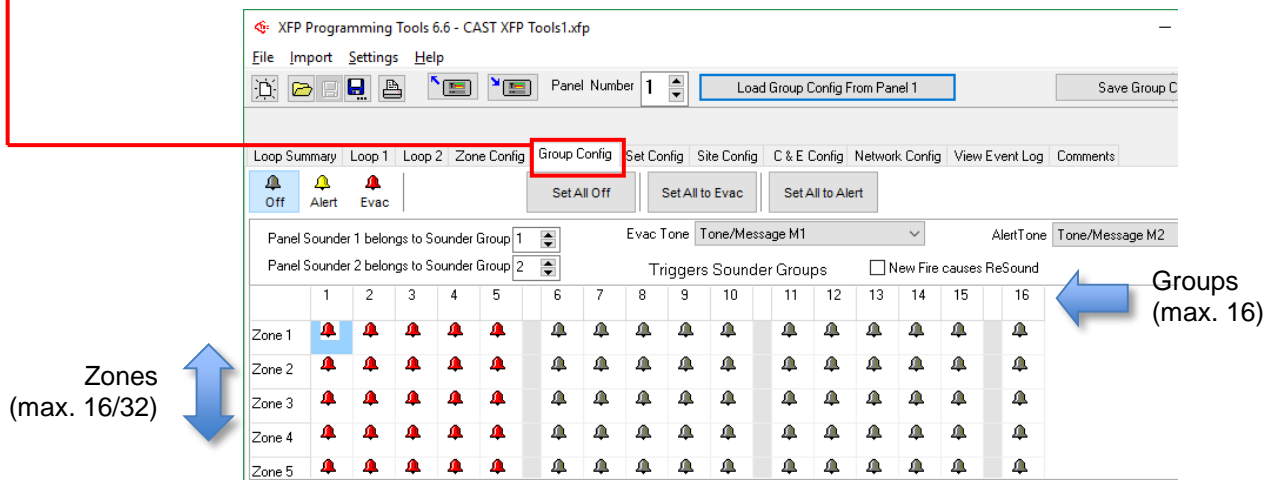

FIG.6 – Group Config Window

To change the status of a Group for a specific Zone, simply click on the desired state button (Off, Alert or Evac), then click on the individual field to change the status, as shown below.

🔔   - The grey bell indicates the Group is set to OFF for that Zone.

🔔   - The yellow bell indicates the Group is set to the Alert Tone/Message for that Zone.

🔔   - The red bell indicates the Group is set to the Evac Tone/Message for that Zone.

4.8 Enter Site Details

Clicking the **Site Config** tab displays the **Site Config** window, which is used to enter the site details (see FIG.7).

Note: The client and installer details entered in the window are saved in the 'config data file' on the PC laptop but <u>not saved</u> in the panel's memory.

However, the following lower sections of the window, containing programming data, are saved in the panel's memory.

- The **Normal String** is the text normally shown on the panel's display. This string is limited to 40 characters (including spaces). By default, 'C-TEC CAST XFP Fire Panel' is entered.

  The **Maintenance String** is the text shown on the panel's display when the **Maintenance Date** is reached. By default, 'Service Required, Call Engineer' is entered. Typically, set the maintenance date to 12 months after the commissioning date.

  Tick the **Send to Panel?** box to send these settings when data is saved to the panel.

- An **Auto Adjust DST** (Daylight Saving Time) option is also selectable.

  Tick the **Send to Panel?** box to send the DST setting and the time/date on the PC laptop when data is saved to the panel.

- The default entry codes for Access Level 2 and 3 can be modified. These codes are automatically sent when data is saved to the panel.

- **Day** and **Night** times alter the time the panel enters day (building occupied) and night (building unoccupied) mode. These settings are automatically sent when data is saved to the panel.

- **Blink Polling LED** gives the option to turn the loop devices' polling LED ON/OFF.
  Real Time Output of Events option is for future use.

FIG.7 – Site Config Window

4.9 Save Data from the PC Laptop to the Panel

After the site details have been entered, save the completed 'config data file' to the PC laptop.

Using the XFP Programming Tools, save the 'config data file' from the PC laptop to the panel by clicking on the toolbar icon (shown right).

When requested by the panel fit the NVM link shown below:

Please fit the NVM Link now
or press ESCape to abort

The following message will appear at the panel:

PC connected...
PC ⟶ Panel

Wait for the data transfer to complete.

Press Escape ◀ button.

The panel will update its flash database.

Press Escape ◀ button x 2.

When requested by the panel remove the NVM link shown below:

6:50   16 Jan : Normal
Remove the NVM Un-Lock link

**AFTER SAVING THE DATA TO THE PANEL, YOU WILL HAVE A <u>NAMED</u>,
<u>ZONED,</u> 'ONE OUT, ALL OUT' FIRE ALARM SYSTEM.**