Fire

CF3000 Control Panel
User Manual

COOPER Safety
Fire Systems

COOPER

CE

0832 – CPD – 1060

Introduction to the Manual

This manual provides information on the installation, operation and maintenance of the Cooper CF3000 System.

Notice

The operating system of the CF3000 may be revised as a result of enhancements to the system software or hardware. Revisions to this manual will be issued and supplied on request and should be logged in the table supplied on the contents page.

Caution

Risk of explosion if battery is replaced by an incorrect type dispose of the used batteries according to the instructions

Contact

Technical: 01302 303350
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System Installation and Design

COOPER Safety
Fire Systems

Introduction

CF3000 provides all of the sophisticated features required of a leading edge analogue addressable fire system along with the simple operation and neat installation demanded by installers and building users.

The panel can be flush or surface mounted and the generously sized metal back box allows ample facilities for rear or top cable entries. It is available in single two and four loop versions, with or without an integral printer.

In addition both passive and fully functional repeater panels are available.

A comprehensive range of ancillary devices is available to operate with CF3000, including optical, ionisation, photo-thermal and heat detectors, base mounted and stand alone sounders (including an IP67 version) a loop powered beacon and a wide range of input and output interfaces.

Each of the CF3000 system components has been specifically designed to operate as part of a CF3000 system, this provides an assurance that the panel, the detectors, the interfaces and the ancillaries are all fully compatible with each other and that the full range of system functionality is supported by each device.

Each loop of a CF3000 panel can accommodate up to 200 addresses. To comply with EN54 requirements no more than 512 addresses should be connected to a single panel. Each panel can indicate upto 96 zones. Panels are available with upto 4 detection loops, up to 126 panels can be networked together to form a single system capable of operating with over 32,000 devices.

Note:
Network systems fall outside the scope of EN54.

Project Planning

The following is a typical program and timetable for a CF3000 installation project, once the initial order has been received:

1. Project Meeting
Installer and user to be present; system specifications, schematic diagram and proposed circuit drawing to be available. CF3000 Installation and Commissioning Guide to be provided.

2. Equipment Fix
Typically 2 week's notice is required for equipment to be delivered. Cable to be installed and bases/back boxes to be fitted. Then fire detectors, callpoints, alarm sounders, isolator units and interface units to be installed.

3. Address Schedule
Schedule of sensor locations to be completed by installer and returned to enable system programming.

4. Auto Learn
Fire panel/repeater panels to be installed and terminated. System to be powered up by installer and auto learn mode activated (see Auto Learn section). System to be tested and verified by installer, prior to final commissioning.

5. Final Commissioning
Minimum 2 weeks notice is required from receipt of Address Schedule and Commission request form. Cooper Fire Service Engineer to attend site implement/oversee the final commissioning procedures (see Commissioning section), in conjunction with the installer.

System Design Guidelines

Guidelines
Systems should to the relevant local standards and codes of practice, for the UK this is BS5839 Pt 1. CF3000 meets all the relevant requirements of BS5839 Pt 1: 2002. Installation planning is simplified by the fact that every addressable CF3000 device contains an integral short circuit isolator. Care must be taken to ensure that local standards requirements regarding aspects such as loop coverage, area covered by a single spur and cable specification are observed.

There may be certain applications in which deviations from the code may be necessary and these must be listed on the commissioning certificate. (See commissioning section).

Loop Lengths
The maximum permitted loop length is 2 km measured from the near to the far terminals on the CF3000 motherboard PCB. There is no minimum limit to loop length. Any wiring spurs off the loop must be included within the 2 km limit. On long loop runs, the lengths of wiring rises and falls (between floors, down to manual callpoints) must be included. Remember to include these especially when taking loop lengths from plan drawings.

Loop Loading - Total Number of Addresses
The total number of addresses per loop is 200. this includes detectors, callpoints and all other addressable items (e.g. MPU, MIO, loop repeaters etc.) When designing systems its recommended that allowances are made for future expansion, Short circuit isolators are incorporated into every CF3000 loop device, including Smoke detectors, heat detectors, sounders, callpoints and interfaces. Therefore, no further fault protection is required, in the event of a single fault, none of the devices connected to the loop will fail to operate as the fault will be isolated by the two adjacent devices. Spur connected devices downstream of a cable fault will cease to function.

CF3000/PR Repeater Panels
Each repeater unit requires one address and consumes no more current from the loop than a smoke detector. The repeater also requires a local mains supply and incorporates battery backup.

Loop Loading System Verification
Unless a loop loading calculation has already been carried out, please contact our technical support department (01302 303350), before starting installation to verify that a proposed loop loading arrangement is acceptable.

Compatible Equipment

CF3000 system components

Order Code	Description	Dimensions (mm)
CF3000/1	1 Loop CF3000 Panel	495 W x 400 H x 180 D
CF3000/2	2 Loop CF3000 Panel	495 W x 400 H x 180 D
CF3000/4	4 Loop CF3000 Panel	495 W x 400 H x 180 D
CF3000/1/P	1 Loop CF3000 panel c/w integral printer	495 W x 400 H x 180 D
CF3000/2/P	2 Loop CF3000 panel c/w integral printer	495 W x 400 H x 180 D
CF3000/4/P	4 Loop CF3000 panel c/w integral printer	495 W x 400 H x 180 D
CF3000/1/G	1 Loop CF3000 Panel Graphite finish	495 W x 400 H x 180 D
CF3000/2/G	2 Loop CF3000 Panel Graphite finish	495 W x 400 H x 180 D
CF3000/4/G	4 Loop CF3000 Panel Graphite finish	495 W x 400 H x 180 D
CF3000/1/P/G	1 Loop CF3000 panel c/w integral printer Graphite finish	495 W x 400 H x 180 D
CF3000/2/P/G	2 Loop CF3000 panel c/w integral printer Graphite finish	495 W x 400 H x 180 D
CF3000/4/P/G	4 Loop CF3000 panel c/w integral printer Graphite finish	495 W x 400 H x 180 D
CF3000/COV	Hinged protective cover kit	
CF3000/PR	Passive repeater for CF3000	
CAS380	Sounder Base	102 Dia x 40 D
MASC	Cover for CAS380	102 Dia x 13 D
CASBB384	Base Sounder Beacon	114 Dia x 36 D
MASB870-NT	Base Beacon	114 Dia x 36 D
CAS381	Wall Sounder	105 L x 105 H x 95 D
CAS381WP	IP66 Wall sounder	108 L x 108 H x 103 D
CAS382	Addressable Beacon	95 Dia x 50 D
CBG370S	Surface / Flush Callpoint	85 L x 85 W x 53 D
CBG370WP	Weatherproof Callpoint	108 L x 108 W x 65 D
CIO351	3 Channel I/O Device	147 L x 88 W x 57 D
CIO351T	3 Channel I/O Device 1 Address	147 L x 88 W x 57 D
CIO351S	3 Channel I/O Device reset on silence	147 L x 88 W x 57 D
CMIO353	1 Channel Output Unit (mains rated)	180 L x 130 H x 60 D
CZMU352	Zone Monitor Unit	150 L x 89 H x 58 D
MIU87-IS	Zone Monitor Unit Intrinsically Safe	150 L x 89 H x 58 D
CSUM355	Shop Unit Interface	150 L x 89 H x 58 D
CSI350	Spur Isolator	112 L x 41 H x 33 D
CSC354	4 Way Sounder Circuit Controller.	300 L x 300 H x 74 D
CAB300	Common Mounting Base For Analogue Detectors	104 Dia x 22 D
CAP320	Optical Smoke Detector	101 Dia x 33 D
CAH330	Multi Mode Heat Detector	101 Dia x 43 D
CAPT340	Combined Photo Thermal Detector	101 Dia x 43 D
MIU872	Micro Zone Monitor Unit	63 L x 35 H x 18.5 D
MCIM-C	Micro Callpoint Input Module	63 L x 35 H x 18.5 D
MCOM-S	Micro Sounder Output Module	63 L x 35 H x 18.5 D
MCOM-R	Micro Output Module Resetable	63 L x 35 H x 18.5 D
MICM-NF	Micro Analogue Non Fire Input Module	63 L x 35 H x 18.5 D

COOPER Safety
Fire Systems

Detectors

Analogue Photoelectric Detector - CAP320
This is the most commonly used detector and is most suitable for detecting slow burning fires. The status LED can be programmed to either be permanently off under normal conditions or to pulse in order to confirm that it is in communication with the CF3000 control panel.
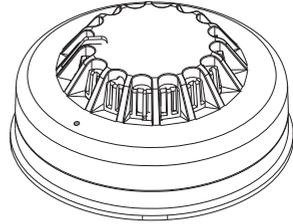
Analogue Photo/thermal Detector - CAPT340
This is a new addition to the Cooper range of detectors. It is the ideal detector for a multi-use environment as it has an excellent response to smouldering and fast burning fires. Photo/thermal detectors can be programmed for thermal only operation at certain times of day. The status LED can be programmed to either be permanently off under normal conditions or to pulse in order to confirm that it is in communication with the CF3000 control panel.
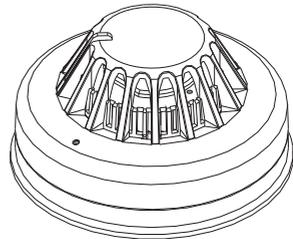
Analogue Heat Detector - CAH330
Heat detectors are suitable for dusty environments or environments where smoke is likely to be present under normal operating conditions. The CAH330 can be programmed to operate in A1R, BS or CS mode of operation depending on the required application and sensitivity requirements. The status LED can be programmed to either be permanently off under normal conditions or to pulse in order to confirm that it is in communication with the CF3000 control panel.
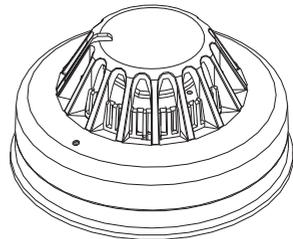
Callpoints - CBG370S / CBG370WP

The range of purpose designed callpoints for CF3000 consists of a surface callpoint, a flush callpoint and a surface weatherproof callpoint. A range of accessories is available including a hinged protective cover, resettable element kit and a flush bezel. The status LED can be programmed to either be permanently off under normal conditions or to pulse in order to confirm that it is in communication with the CF3000 control panel.
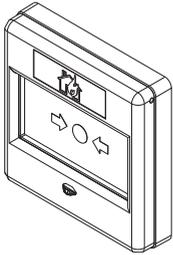
Flush mounted callpoint CBG370S
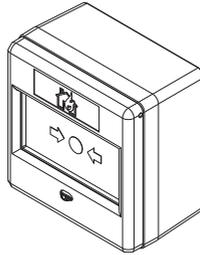
Surface mounted callpoint CBG370S
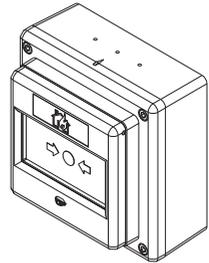
Weatherpoof callpoint CBG370WP

Sounders and Beacons

A wide range of loop powered sounders and beacons are available to operate with CF3000 consisting of a combined sounder base with a maximum output of 95 dB(A), a standalone sounder with a maximum output of 100 dB(A) that is available in standard or weatherproof versions and a stand alone loop powered beacon.

For applications where a discreet dedicated sounder is required, a cover plate is available for the white base mounted sounder enabling it to be used as a stand alone wall or ceiling mounted sounder.

All of these devices are fully programmable via the sophisticated CF3000 multi stage cause and effect programming facilities.

All sounders have multiple selectable volume settings, the volume setting is controlled globally by the CF3000 panel and so can be altered without needing to access the sounder. Alternatively individual sounders can be set through the Cooper programming utility.

Base Sounder - FXN538LBS
The CAS380 has been designed specifically to complement the latest generation of Cooper soft addressed detectors. it consists of a first fix bracket, and a main body which clips onto the bracket incorporating the sounder and a detector mounting base in a single composite assembly.

Base sounder CAS380
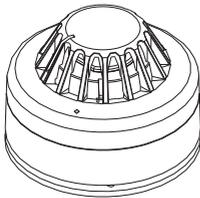
Base sounder with detector fitted CAS380
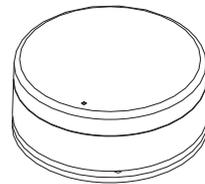
Base sounder with MASC fitted CAS380

After the body has been clicked into place and connected, a detector or front cover is then added to complete a very simple quick and neat installation. The cover enables the CAS380 to be used as a discreet stand alone wall or ceiling mounted device. The sounder base design incorporates a mechanism that can be activated if required to lock either the detector or the cover into place to prevent unauthorised removal.

Stand Alone Sounders - CAS381 / CAS381WP
Stand alone sounders are ideal for applications where greater sound outputs are required than can be achieved with a base sounder or for applications requiring a higher level of resilience or ingress protection. 2 different versions are available standard version and an IP66 rated version.

Loop Powered Beacon - CAS382
A loop powered flashing beacon is available for applications where visual alarm indication is required such as areas of high ambient noise or buildings which are used by people who are hard of hearing.

Base Sounder Beacon - CASBB384
Loop powered base sounder with a built in beacon where both sound and visual alarms are required. Taking 1 address
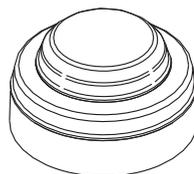
Base Beacon - MASB870-NT
Loop powered base beacon where visual alarm without sound are required. Taking 1 address.

Stand alone sounder CAS381

Stand alone sounder - weatherproof CAS381WP

Loop powered beacon CASBB384
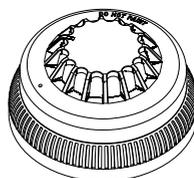
Loop powered beacon MASB870-NT

Compatible Interfaces

CF3000 has been designed to be suitable for a wide range of applications, various interfaces have been developed to enable the simple integration of other fire systems or building control and safety systems. The following devices are available:

3 Channel I/O device - CIO351
CIO351 has 3 input channels and 3 output channels, it is used to monitor up to three separate inputs from equipment such as sprinkler flow switches and also to provide 3 separately controlled volt free output contacts which are intended to be used to control external equipment such as air handling plant or access control systems. All inputs and outputs operate completely independently of each other and can be programmed using the sophisticated cause and effect capabilities of CF3000 to operate either globally or in response to activation of specific devices or specific inputs. Inputs are monitored for open and short circuits, a specific resistance is required to activate an alarm condition, fully open or short circuit conditions are monitored and generate a system fault signal. Inputs are suitable for use as fire signal inputs such as from a sprinkler flow switch, however they can also be used to monitor non fire inputs such as external keyswitches. Outputs are rated to switch a maximum of 1A resistive at 30V dc. CIO351fixes to a standard, deep, double gang back box and can be either surface or semi recess mounted.

CIO351T
This unit is identical in build to the CIO351 but this has been designed to take 3 addresses (this can be expensive in terms of outputs because it replies as 3 x 3 Channel I/O's), this means that text information can be allocated to each channel. It also allows each individual input and output to be disabled (by address). The maximum number of addressable CIO351T per loop is 6.

CIO351S
Once again this unit is identical with the CIO351 only taking 1 address. The programming is the same as the CIO351. This unit was designed so that the relay outputs reset on silence rather than full reset, thus enabling the user to interface this device with other fire panels and hence prevents locking up. The maximum number of addressable CIO351S per loop is 20.
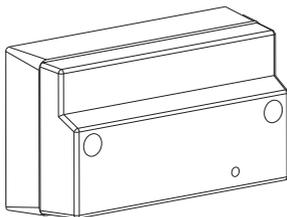
3 channel I/O device
CIO351 / CIO351T/ CIO351S

1 Channel I/O device with mains rated switching capability - CMIO353

CMIO353 is a single channel input / output unit, the output is capable of switching up to 8 A at 230 V ac. Commonly used for applications such as door release controls and plant shut down signalling The input is monitored for open and short circuits, a specific resistance is required to activate an alarm condition, fully open or short circuit conditions are monitored and generate a system fault signal. The input is suitable for use as a fire signal input such as from a sprinkler flow switch, however it can also be used to monitor non fire inputs such as an external keyswitch.
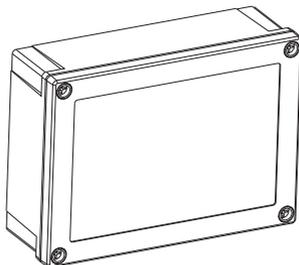
**1 channel I/O device
CMIO353**

Zone monitor unit - CZMU352

CZMU352 is designed to enable a zone of compatible conventional detectors and callpoints to be connected into the CF3000 loop, it is compatible with up to 20 Cooper conventional detectors connected via FXN520 bases. Please refer to local standards e.g. BS5839 Pt1:2002 for details of the maximum allowable area to be covered by a single spur / zone. CZMU352 fixes to a standard, deep, double gang back box and can be either surface or semi recess mounted. When semi recessed only the front section protrudes giving a maximum 29mm depth.

MIU871-IS

Similar to the above but the detection zone has been programmed to accept a Zener barrier and zone of intrinsically safe detectors. End of line for this zone now becomes 6k8 and the diode in the detector base must be removed.
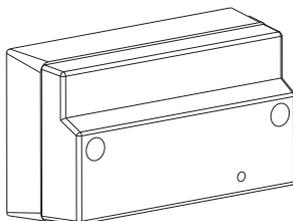
**Zone monitor unit
CZMU352 / MIU871-IS**

Shop Unit Interface - CSUM355

CSUM355 accepts a zone of conventional detectors plus an unlimited number of callpoints which can be connected to the same input as the detectors or a separate callpoint input if required. There is also a facility to connect a power supply, which can then be monitored for fault.

In addition it has the facility to connect two circuits of conventional polarised sounders, which are monitored by means of an end of line resistor and powered in alarm conditions from the external power supply. The sounder circuits can be programmed to operate in pulsed, continuous or time delayed mode.

Please refer to local standards e.g. BS5839 Pt 1:2002 for details of the maximum allowable area to be covered by a single spur / zone.

Note: This unit must always be used with a 24 V power suply
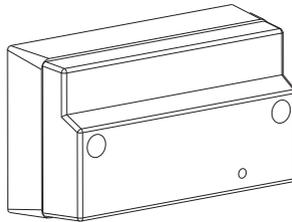
Shop unit Interface
CSUM355

Spur Isolator - CSI350

Enables soft addressing to work when the loop contains spurs, it controls the addressing operation so that when the system reaches a spur, all devices on the spur are allocated an address before it continues addressing the loop. The device also incorporates a short circuit isolator. Because each device contains a short circuit isolator only 1 is required at the start of each spur. CSl350 is mounted on a standard deep double gang back box (supplied) please refer to BS5839 Pt 1:2002 f
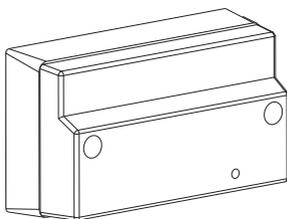
**Spur Isolator
CSI350**

4 Way Sounder Circuit Controller - CSC354

CSC354 provides power for 4 separately controllable conventional sounder circuits, each circuit can be separately programmed. CSC354 is designed to greatly simplify installation in applications where specialist sounders or beacons are required since it powers the sounders and allows full control of the sounder operation without having to wire the sounder back to the CF3000 control panel.

A 4 way unit takes up a single address but each circuit can be independently controlled. An CSC354 unit requires a local un-switched 230 V supply and incorporates a back up battery to 24 hours of standby operation followed by a minimum of 30 minutes of full alarm ringing. A standby of 72 hours can be achieved at the expense of reduced load capability.
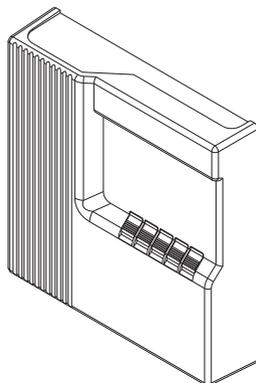
**4 Way sounder circuit controller
CSC354**

Micro Interfaces

A range of micro interfaces modules are also available:

MCIM
Is a competitively priced input module, designed to enable a Cooper panel to accept input signals from external devices such as key switches and sprinkler flow switches. It is extremely compact and therefore ideal for incorporation into other equipment. The maximum number of addressable MCIM per loop is 20.

MCOM
Is a competitively priced output module, designed to enable a Cooper panel control external devices such as door holders or access control systems. It is extremely compact and therefore ideal for incorporation into other equipment. The maximum number of addressable MCOM per loop is 20.

MIU872
Is a compact single zone input, soft addressed, microinterface, incorporating integral short circuit isolators. It is fully compatible with the current range of Cooper analogue fire detection panels. It is suitable for interfacing a zone of up to 20 conventional Cooper detectors onto a Cooper analogue fire panel. It will operate with any Cooper conventional detector in configuration with a schottky diode type base.

MCIM-C (Identified as a Callpoint)
Is a compact input module used to accept input signals from external equipment such as beam detectors, flow switches, valve monitor switches etc. The maximum number of sounder devices per loop is 200.

MCOM-S (Identified as a Sounder)
Is a compact single channel output unit. This device is identified as a sounder output by a Cooper addressable panel. The maximum number of sounder devices per loop is 60.

MCOM-R
Is a compact output module used to control or signal external equipment which require removal of power for reset purposes. The maximum number of addressable MCOM-R per loop is 20.

MICM-NF
Is a compact single channel input unit. This device is identified as a non-fire input module by the Cooper addressable panel. The maximum number of addressable MICM-NF per loop is 200. Complex cause and effect can still be achieved using the latest site installer software without any indication on the panel. However the action will still be seen in the event log. Ideally suited for non fire applications.
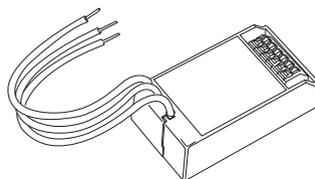
Micro interfaces
MCIM / MCOM / MIU872 / MCIM-C / MCOM-S / MCOM-R / MICM-NF

Fan Controller Interfaces (FC18 / FC6)

FC18 and FC6 Interface is designed to work with the Cooper range of analogue fire alarm control panels, providing the capability to control and display the status of AHU fans.

FC18 and FC6 Interface is connected to a Cooper analogue addressable fire alarm control panel by means of the comms loop, utilizing only one address whilst providing the ability to monitor and control up to six AHU Fans.

Each FC6 and FC18 Interface incorporates its own CPU specifically configured to control the relevant input and output logic making programming quick and easy via the 'CAPPER' software or site installer.

Using the CAPPER software or site installer, each individual Fan Control channel on the FC6 is programmed to an output and feedback input field device to control and monitor the status of an AHU fan.

Features
> Convenient loop mounting
> Comprehensive LED display
> Surface/rack mounting options
> Key operated auto/manual operation
> Comprehensive software cause and effect

Fan controller interface
FC18

Fan controller interface
FC6
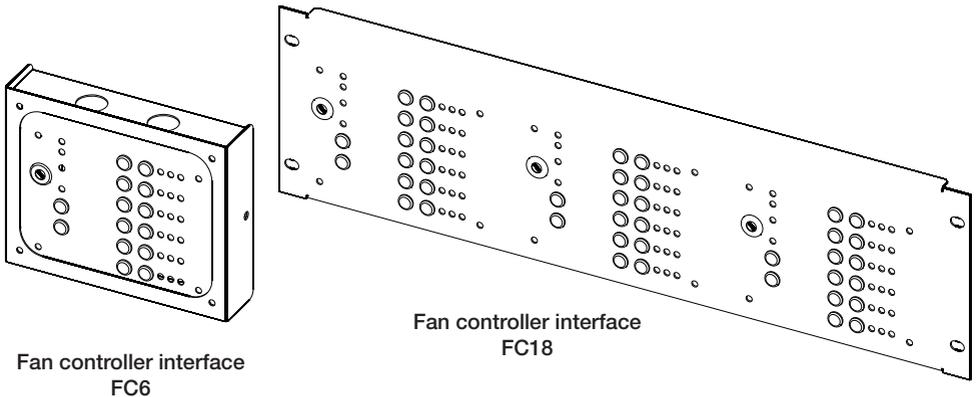
Equipment Compatibility

Detectors
Loop wired detectors must be of the Cooper series soft addressed analogue type. FXN500 series conventional detectors can be connected via an CZMU352 interface. The connection of other detector types via an CZMU352 interface is not recommended.

Callpoints
Loop wired callpoints must be the Cooper series soft addressed analogue type, FX200 series conventional callpoints can be connected via an CZMU352 interface. The connection of other callpoint types via an CZMU352 interface is not recommended.

Sounders
Loop powered addressable sounders must be of the Cooper series soft addressed analogue type. Conventional sounders can also be connected either to the conventional sounder circuits at the panel or to the loop via a CSC354 addressable sounder controller interface providing they meet the following:
1. They are suitable for operation between 18 V and 28 V.
2. They are polarised and suppressed.
3. The total alarm load is less than the rating of the panel / alarm power interface.
Note:
It is possible to use devices outside these requirements if they are supplied with power from a separate source and switched via a suitable relay.

Relay Circuits
Additional relays can be added to the CF3000 system by using either CMIO353 or CIO351 relay units. Relays / Auto-dialers and auxiliary equipment A wide variety of relays and other equipment can be connected to the CF3000 system, but you should note the following constraints:
1. CF3000 provides monitored outputs to drive fire and fault relays mounted in external equipment. External relays should be suppressed. If a non-suppressed relay is used then a diode can be connected to suppress any reverse EMF on the release of the relay which might cause the panel to malfunction.
2. A 24 V dc output is provided at the panel to make it easy to connect ancillary equipment. Although the panel can supply a continuous quiescent load of up to 30 mA, BS5839 precludes this practice and any ancillary equipment you connect should only consume power in the alarm or fault mode to meet the requirements of BS5839.

Additional Instructions for Electromagnetic Compatibility
When used as intended this product complies with EMC Directive (89/336/EEC) and the UK EMC regulations 1992 (SI 2372/1992) by meeting the limits set by the standards BS5406 (Pt 2 & 3) 1988, EN50130-4 immunity and EN 61000-6-3 emission requirements. The following installation guidelines must be followed.
1. External cables must be connected using the cable entries or knockouts provided.
2. When routing external cables inside the product they must be
   a) Kept as short as possible
   b) Routed close to the housing
   c) Kept as far as possible from the electronics
Any modifications other than those stated in this manual, or any other use of this product may cause interference and it is the responsibility of the user to comply with the EMC and Low Voltage Directives.

System Overview

Simple User Interface
The main element of the user interface with CF3000 is a large (120mm x 90mm visible area) touch screen display, which provides comprehensive user information and also acts as a multifunctional keypad.

Comprehensive context sensitive help information is provided throughout the menus to assist unfamiliar users with system operation.

The CF3000 touch screen display automatically reconfigures to suit the selected function, for example, if the change device text menu option is selected, the touch screen is automatically formatted as a full QWERTY keyboard to enable fast and simple text entry.

The use of the touch screen display enables a wide range of user and engineering facilities to be incorporated into the panel whilst still offering simple operation.

As well as a large format LCD display providing full system status information, the panel incorporates 96 traditional zone indication LED's to provide clear information about the status and spread of a fire even to a user who is completely unfamiliar with the operation of the system.

In addition there are a number of system status LED's designed to give clear status information to non technical users.

User Configuration And Maintenance Facilities
CF3000 has comprehensive facilities for on site system configuration, whereby the user can add or remove simple devices or change device text directly via the panel, without the need for a service engineer to visit site. For initial configuration or major system changes special PC configuration software is available enabling Cooper Lighting and Safety personnel to do this more efficiently than can be achieved using the system screen. Exiting configurations can be uploaded to the PC so that changes can be made to the existing system rather than having to revert to initial files.

Sophisticated Sounder Control Facilities
CF3000 has the ability to support highly complex ringing pattern requirements. Multistage cause and effect programming is possible whereby each addressable sounder or output interface can be programmed independently if required and can be set to respond to specific addresses, specific detection zones, specific panels on a networked system or standard global ringing.

The panel supports three separate sets of programming per sounder and each stage can be triggered differently For example, if a single detector is triggered the panel can be programmed such that the sounder nearest to the detector operates immediately and continuously, the remaining sounders in the affected zone operate in pulsed mode and the other sounders delay for a selectable period to allow the cause of the alarm to be investigated before global ringing commences.

Spur Tolerant Soft Addressing

CF3000 utilises intelligent soft addressing technology to greatly simplify the installation and commissioning processes. Once the system has been installed and the autolearn menu selected, the CF3000 control panel will automatically scan the detection loops and allocate each device with an address number corresponding with its position on the loop, this avoids the traditional need for manual addressing of the system devices which is time consuming and provides a potential for error.

A major innovation with CF3000 is the ability to incorporate spurs of analogue devices which are fed from the main loop by utilising a spur isolator. Whenever the panel detects a spur, it breaks from allocating address numbers to the loop wired devices, allocates address numbers to each of the devices on the spur in sequence and then continues to address the devices on the main loop. Every CF3000 analogue device incorporates an integral short circuit isolator ensuring maximum system integrity. A single short circuit will not disable any loop-mounted devices, the isolators in the devices each side of the short circuit will operate and the CF3000 control panel will drive communication from both ends of the loop. The spur isolator also incorporates a short circuit isolator such that in the event of a short circuit on the spur, the integrity of the main loop will not be compromised. Please refer to local standards e.g. BS5839 Pt 1:2002 for details of the maximum allowable are to be covered by a single spur.

Simple Future Expansion

CF3000 is designed to ensure simplicity of future expansion. If an additional device is added after the system has been programmed, the CF3000 will allocate the next available address, it will not alter any of the existing address numbers allocation thus enabling simple updating of as fitted drawings etc. Similarly if a device is removed, the relevant address is saved as a spare address for future use, the addresses of the remaining devices are not altered.

Integral Power Supply and Battery

The CF3000 panel is designed for ease of installation, the power supply and battery are integral to the main control panel so only a single panel is required even on large 4 loop systems.

Optional Printer

CF3000 panels are available with optional built in printers. Where a printer is fitted, it is housed behind a printer cover door, which can be opened by means of a special tool (Supplied) to provide simple and safe access to the printer paper roll without exposure to any live equipment. Paper replacement is extremely simple due to the drop in loading method and auto feed printer design, the paper roll is simply dropped into the purpose designed cradle and the end of the roll is then offered up to the printer, which will then automatically load the paper ready for use. The printer can be set to either print automatically or to print on demand When a printer is not fitted, a removable, flush fitting blanking plate is used to cover the printer paper aperture to enhance the appearance of CF3000 and to preserve its ingress protection rating.

Optional Hinged Lockable Cover

With a standard panel, access to all panel functions is controlled by a series of pass codes, which are entered via the touch screen display, for maximum security, a facility is built into the CF3000 to enable the user to alter the user pass code as required. For applications where a high level of resilience is required, a clear hinged lockable front cover is available which allows the screen and all of the system status indicators to be clearly seen but prevents access without first unlocking the cover. A single concealed locking mechanism provides access to both the printer door and the optional display cover Where a hinged cover is fitted, additional buttons are provided to scroll the display and to silence the fault buzzer without opening the lockable cover

Section 1 - System Installation and Design

Technical Specification

Power Supply (Approved EN54 pt 4)

Mains	
Nominal voltage	230 Vac + 10%, -15%
Nominal current	75 mA
Maximum current	750 mA
Input fuse R1	NTC SG39 Imax 4Amp
Output Voltage including tolerances	26 V = 18.5 to 29.5 V
	26 V RAW = 18.5 V to 29.5 V
	5 V Output = 4.6 V to 5.5 V
Ripple voltages	26 V = 800 mV
	26 V RAW = 800 mV
	5 V Output = 430 mV
Maximum loadings	26 V O/P = 0.98 A
	26 V RAW O/P = 1.7 A
	5 V = 0.5 A
Standby current (4 loops loaded)	26 V = 280 mA
	26 V RAW = 150 mA
	26 V = 280mA
	26 V RAW = 150 mA
	5 V = 43 mA

CF3000 is protected by an internal thermal device, this requires no maintenance

* I max a, I max b and I min = Current as specified in BSEN54-4 Published 2006 (Amendments 1 and 2)

Batteries	
Number of batteries	2
Manufacturer	YUASA NP12-12
Capacity	12 Ah
Battery fuse	6.3A Anti-Surge (F4)
Maximum battery current	3.5 Amps
Standby current (mA)	175 (4 loops), 125 (2 loops)
Maximum charging current to the batteries	1.0 Amp
Float voltage	27.4 V
Final voltage	21.0 V
Charging characteristics	Constant voltage with 0.970 A limit with temperature compensation
Maximum current drawn from the batteries (when the mains is not available)	3.5 Amps
Deep discharge protection	20.6 V
Battery Internal Impedance fault	>0.5 ohms

Inputs	
Addressable loops	
Max number	1 - 4
Max loop load per loop	220 mA
Max number of addressable devices per loop	200
Class change	Operated by external volt free contact

Section 1 - System Installation and Design

Outputs

Conventional sounder circuits	
Number of sounder circuits	4
Total sounder load	1.5 Amps
Sounder circuit fuses (F1/2/3/4)	1.6 Amp (Quick Blow)
End of line resistor	6k8
Fire Protecting Equipment	
Max load	60 ma
Fused (PTC3)	100mA polyswitch
End of line resistor	6k8
Fault Routing Equipment	
Max load	30 ma
Fused (PTC1)	100mA polyswitch
End of line resistor	6k8
Auxiliary Relays - The auxiliary relays provide fused volt free change over contacts. These contacts are not monitored.	
Max load	24 V 1 Amp
Fuse (PTC4)	1.35 Amps polyswitch
Auxiliary	24 V Supply
Nominal voltage	24 V ±10%
Fuse (PTC5)	100 mA Polyswitch
Maximum current	30 mA
This output is not to be used for fire protecting equipment or fire alarm routing equipment any power taken from the alarm system will effect the standby duration	
RS485 Port - Serial output port for driving CF3000 repeater panels, mimics etc. This output is short circuit protected	
Max cable length	2km
Min recommended cable size	1mm² (Screened)
RS232 Port - Serial output port for driving CF3000 repeater panels, mimic etc. This output is short circuit protected	
Printer	(Optional)
Type	High speed thermal
Number of characters per Line	40
Type of paper	58mm x 46mm Thermal Roll
Replacement paper roll order code	ADF6PRINTERPAPER
Mechanical Specification	
Weight	incl batteries 18kg, excl batteries 9kg
Dimensions (Standard batteries)	495mm(L) x 395mm(H) x 180mm(D)
Type of material (backbox)	Mild Steel (power coated)
Type of material (Facia)	PC/ABS
Flammability rating	UL 94 V0
Total number of knockouts	51
Diameter of knockout	20mm
Anti-Tamper cover (optional)	Weight : 250g
	Material used : Poly Carbonate
	Flammability rating : UL 94 5VA

Terminal Blocks: Do not use excessive force when tightening the screws on the terminal block

Risk of explosion if battery is replaced by an incorrect type dispose of the used batteries according to the instructions

Optional Functions as per EN54 Pt 2 & 4

CF3000 is approved to EN54 Parts 2 & 4 including all the following options which can be selected as required

Panel Outputs

Panel Sounders: (option 7.8 EN54 Pt 2)
2 pairs of outputs are provided. ONLY polarised equipment should be used. Ensure the polarity of the connections are observed at all times and end of line resistors (6k8 5%) are fitted for correct operation. The total alarm load across all sounder outputs = 1.5 Amp All outputs are fused with 1.6 Amp glass fuse alarm devices should be spread equally across the 4 sounder circuits.
WARNING: Do not exceed the rated output current

Output Fire Alarm Routing Equipment (option 7.9 EN54 Pt 2)
This output, which is fused, and monitored using a 6.8k end of line resistor, is used for the automatic transmission of the fire signals to fire alarm routing equipment (e.g. fire brigade). It operates by providing 24V output to an auxiliary device (e.g. relay). It is current limited to 30 mA using a resettable polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition, the indication will be displayed on the Touch screen display and will remain until the fire alarm is reset. Ensure the polarity of the connections are observed at all times and end of line resistors (6k8 5%) are fitted for correct operation.

Output to Fire Alarm Protecting Equipment (option 7.10 EN54 Pt 2)
This output, which is fused, and monitored using a 6.8k end of line resisters used for the transmission of the fire signals to controls for automatic fire protecting equipment (e.g. Door released units etc).It operates by providing 24 V output to an auxiliary device (e.g. relay). It is current limited to 30 mA using a resettable. polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition, this output remains energised until the fire alarm is reset. Ensure the polarity of the connections is observed at all times and end of line resistors (6k8 5%) are fitted for correct operation.

Output to Fault Warning Routing Equipment (option 9.4.1c EN54 Pt 2)
This output, which is fused and monitored using 6.8k end of line resistor, is used for the transmission of fault signals to fault warning routing equipment This output is monitored using 6k8 end of line resistor and it current limited to 30 mA.Under normal condition it operates by providing 12 V dc which can be connected directly to a 12 V auxiliary device(relay).It is current limited to 30 mA. Under fault conditions or even if the CF3000 is powered down, this output will be switch to O V. Ensure the polarity of the connections is observed at all times and end of line resistors (6k8 5%) are fitted for correct operation.

Delays to Outputs (option 7.11 Of EN54 Pt 2)
The CF3000 has the option to delay the operation of panel sounders, the fire routing equipment output and the fire protecting equipment. This delay is selectable using the CF3000 site installer download software .The delay is configurable in increments of 1 minute up to a maximum of 10 minutes. This delay can be enabled and disabled at access level 2. The CF3000 has the facility for a specific callpoint to override this delay by programming this callpoint via an input interface to provide an evacuate signal using CF3000 site Installer.

Dependencies on More Than One Alarm Signal - Type C (option 7.12.3 Of EN54 Pt 2)
The CF3000 has the facility to inhibit the operation of the output sounders, output to fire routing equipment and the output of the fire protecting equipment until one more confirmatory signals are received from different zones. This feature is programmable using CF3000 Site Installer Software.

Alarm Counter (option 7.13 EN54 Pt 2)
The panel records the number of instances that it enters the fire alarm condition. This is abbreviated in the touch screen by "AC" and it is displayed in the fire window at access level 2. This counter can only be reset by the manufacturer.

Optional Auxiliary Board Vds Requirement (Option Not Required by EN54)
This board can be connected to an Extinguishing system as well as a Fire Brigade Control Panel. This board has been tested and approved in according with DIN14661 and DIN 14675.
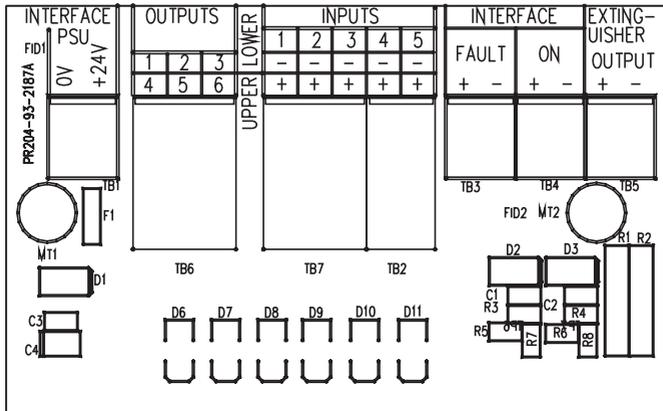
Input / Outputs to Fire Brigade Panel

Outputs

Output 1: **Fire Protecting Equipment Operated "Extinguishing On"**
This output is ON in alarm condition to indicate that the CF3000 control and indicating equipment has operated the fire protecting equipment (option 7.10 of EN54 pt2)

Output 2: **Fire Routing Equipment Operated "Fire Brigade Link"**
This output is ON in alarm condition to indicate that the CF3000 control and indicating equipment has operated the fire routing equipment (option 7.9 of EN54 pt2).

Output 3: **Disablement of Fire Protecting Equipment**
This output is ON to indicate that the fire protecting equipment has been disabled either by the CF3000 control and indicating equipment or the fire brigade panel.

Output 4: **Disablement of the Fire Routing Equipment**
This output is ON to indicator that the fire routing equipment has been disabled either by the CF3000 Control and indicating equipment or the fire brigade panel.

Output 5: **Reset from Fire Alarm Condition**
This output is ON to indicate that the CF3000 control and indicating equipment is in alarm condition. This output will remain on for at least 15mins after reset or when the reset has been activated from the fire alarm brigade panel

Output 6: **Disablement of Sounders**
This output is ON to indicate that the sounders have been disabled either by the CF3000 control and indicating equipment or the fire brigade panel

Inputs

Input 1: **Reset**
This input is used to reset the control and indicating equipment

Input 2: **Testing of Fire Routing Equipment**
This input is used to test the output to the fire routing equipment

Input 3: **Disablement of the Fire Routing Equipment**
This input is used to disable the fire routing equipment if the CF3000. Once the FRE is disabled from this interface, it can never be enabled from the CF3000 control panel

Input 4: **Disablement of the Fire Protecting Equipment**
This input is used to disable the fire protecting equipment of the CF3000. Once the FRE is disabled from this interface, it can never be enabled from the CF3000 control panel

Input 5: **Disablement of Sounders**
This input is used to disable the sounders of the CF3000. The disablement of sounders from the fire brigade panel can be re-abled from the CF3000 control panel only when the system is not alarm state.

German Interface Electrical Characteristics

Inputs
The inputs are designed to be actioned in one of two ways, see list below:

First: A change in logic state ie. switch toggled on / off.
Second: Logic pulse ie. nominal state logic high, then logic low > 200mS then return to logic high.

all inputs are held high via a weak pull up (logic high), the action of short circuiting any of the five inputs to there respective 0v will result in a logic low.

1: reset -> logic pulse
2: FRE relay test -> logic pulse
3: FPE disable -> logic state change
4: FRE disable -> logic state change
5: Acoustic disable -> pulse logic

Monitored Inputs
In Fault / Extinguisher Active

-> End Of Line resistor 3k3.
-> 680 Ohm across input to actiavte input

Relay Outputs

Normal status ->   Input sees a 3k3 resistor.
Active status ->   Input sees a 680 ohm resistor.

Outputs
1: Extinguisher released -> output high 26 V
2: FRE operated
3: FPE disabled
4: FRE disabled
5: Panel in fire, will remain on after panel soft reset for > 15 minutes, or extinguish immediately with interface reset
6: Disable all sounders.

Optional Functions Not Approved to EN54 Pt 2 & 4

Italian Mode: (option not required by EN54 pt2)
This mode can be programmed at access level 3. This relates to points 12.2(a) and 12.2(b) of the Internal Italian Ministerial Decree 9th April 1994 which states that in the event of a fire detection from 2 or more detectors or from an MCP there should be a 2 minute delay before output activation otherwise in the event of a fire detection from any one detector there should be a 5 minute delay before output activation, provided that the fire event is not acknowledged. These delays apply to siren activation as well as the shutting down/activation of other external equipment and additionally the legislation states that these delays should be adjustable depending on the type of activity being carried out within the building.

For example, if there was a fire detected from a single detector then we should start a 5-minute (adjustable) delay (T2). If however a fire is detected from a second detector or a call-point the delay should automatically revert to 2 minutes (adjustable) (T1). In this scenario the value of (T1) is critical. To keep things simple, let's assume that we set T1 = 2 minutes and T2 = 5 minutes.

Swedish Mode (option not required by EN54 Pt2)
This mode is programmed at access level 3. One of the Swedish requirements is that access level 2 and 3 is only avalailabe by the access of the keyswitch. The key switch is wired to the class change input.

Commission per Loop (option not required by EN54 Pt2)
This mode is programmed at access level 3. This allows the commissioning engineer to auto learn one loop at the time

Alarm Verification (option not required by EN54 Pt2)
This mode is programmed at access level 3.This has the flexibility to delay the activation of detectors by 30 seconds. In the event of an alarm from a detector, the led of the detector will be illuminated and no alarm will be displayed on the panel. The detectors are checked continuously for 30 seconds. If after this time, the detector is still in alarm, the output will be activated otherwise the detector will be reset.

Timer T1/T2 (option not required by EN54 Pt2)
This mode is set on at access level 3 and is a commonly used by eastern european countries.

In the event of a fire the timer T1 can be set from 0 to 3 min where the alarm will be displayed on the panel and no output activation, if during this time the alarm is acknowledged then timer T2 can be set from 0-10 min where the alarm can be investigated and alarm reset. However if timer T1 and T2 time out during alarm activation, the outputs will be activated.

Timer T1/T2 with Callpoint Override (option not required by EN54 Pt2)
This is similar to the above except a callpoint alarm will activate the output instantly

Cable and Wiring

Only the cable types listed below are allowable for loop connections.
1. Enhanced Fire TUF
2. Fire TUF™
3. FP200
4. MICC

When choosing your preferred cable type, you must take note of the following cable and wiring requirements.
1. The cable must be 2 core screened with an over sheath.
2. Maximum loop length with any of the above cables is 2KM
3. Maximum volt drop must be limited to 7 V.
4. The conductors should be 1.5mm minimum an no larger than 2.5mm
5. Multicore cable should not be used for detector wiring.
6. Different loops should NEVER be run within the same cable.
7. Loop feeds and returns should never be used within the same cable.

Cable Resistance

Core Diameter	Typica l FP200 Resistance
1.0mm²	18.1 Ohms/km/Core
1.5mm²	12.1 Ohms/km/Core
2.5mm²	7.41 Ohms/km/Core
4.0mm²	4.61 Ohms/km/Core

Cable Anchorage
The mains cable must be fixed securely with a 20mm cable gland. Remove a suitably located knockout feed the cable through the gland and bolt the gland to the CF3000 backbox as shown. Secure the cable to the side of the box using the cable clip provided.
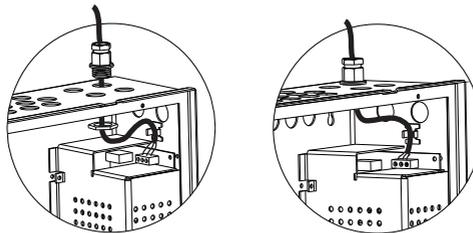
NOTE: The mains cable tail ends must be insulated to prevent dangerous conditions arising in the event of accidental switching on of the mains supply.

Installation

the panel should be installed in a clean, dry, reasonably well ventilated place, and not in direct sunlight. Temperatures in excess of 40°C and below 5°C may cause problems, if in doubt consult Cooper Lighting and Safety. The panel should be located away from any potential hazard, in a position where it is readily accessible to authorised staff, and the fire services, ideally on the perimeter of a building near a permanent entrance. Mount the panel to the wall using the drill template provided. Do not drill through the panel to the wall as dust will contaminate the circuitry.

Installation Guide

! Never carry out insulation tests on cables connected to electronic equipment.

! DO NOT OVER TIGHTEN TERMINAL CONNECTOR SCREWS

! Always use the correct type of cables specifically designed for the operation of fire detection and alarm circuits.

! Always adhere to volt drop limitation when sizing cables

! Always observe polarity throughout. Non colour coded conductors should be permanently identified.

! Screen continuity must be maintained throughout the entire loop circuit including at each junction point and at each device, terminals are provided on each device to facilitate this.

! The screen should be earthed at the connection point provided at the CF3000 panel and not at any other point. Both the loop start and the loop end must be connected to the appropriate earthing points. Care must be taken to avoid connecting the screen to the earthed body of any metal devices, enclosures or cable containment. The screen or drain wire of the loop cables should not be considered as safety earth and therefore should not be connected to terminals marked with the earth symbol, except at the panel, and should not be insulated with green and yellow sleeving.

! CF3000 utilises intelligent soft addressing technology to greatly simplify the installation and commissioning processes. Once the system has been installed and the autolearn menu selected, the CF3000 control panel will automatically scan the detection loops and allocate each device with an address number corresponding with its position on the loop, this avoids the traditional need for manual addressing of the system devices which is time consuming and provides a potential for error.

! It is of vital importance that accurate details are kept of the exact wiring route in order to determine which address has been allocated to each device.

Fixing Details

Read all the installation instructions before commencing with the installation. The installation of this panel must be carried out by a suitably qualified /trained person. Theinstallation must comply with IEE wiring regulations and with BS5839 Pt 1 2002 The electronic components within the fire panel are Static Sensitive. Do not touch the electronics directly.

Mounting the Backbox
The CF3000 can be flush mount or surface mounted.

1. Surface Mount: Drill four holes and fix the backbox to the wall.

2. Flush Mount: The backbox requires a hole 364 x 472 with a depth of 117mm (standard battery / backbox) or 217 mm if deep backbox is used.

Installing Cabling
Once the backbox is mounted the next stage is to install the power and loop cables and fit the glands.
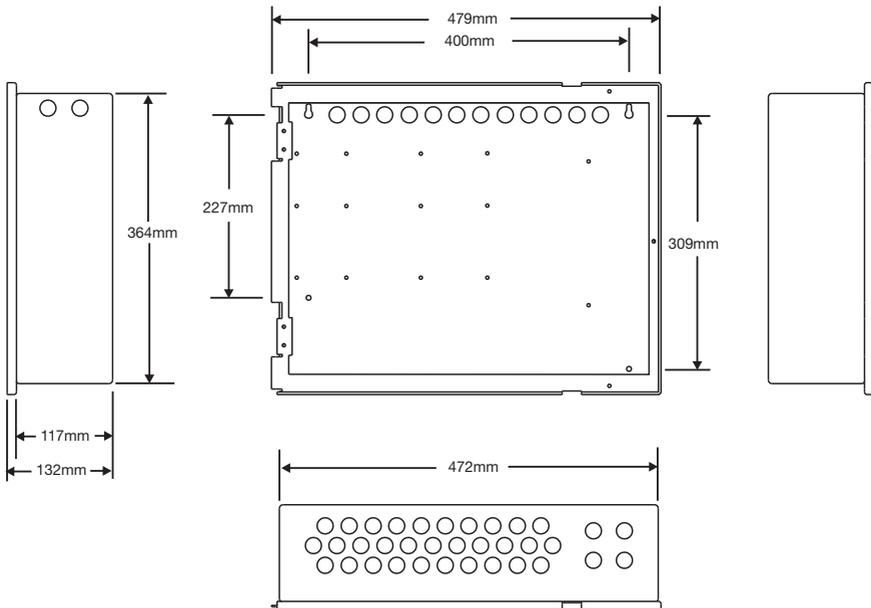
External Connections (Mains Supply)

The mains supply should be installed in accordance with the current edition of the IEE wiring regulations. Connection to the mains supply must be via an isolating device (e.g. an isolating fuse rated at 3 Amps maximum) reserved solely for the fire alarm system. The cover should be coloured red and labelled "FIRE ALARM - DO NOT SWITCH OFF". The isolating protective device should be secure from unauthorised operation and ideally installed in a securely closed box with a breakable cover.

An additional warning label should be provided, depending on whether:

1. The isolating protective device is fed from the live side of the main isolating device in which case the label on the isolating protective device, should read in addition - "WARNING: THIS SUPPLY REMAINS ALIVE WHEN THE MAIN SWITCH IS TURNED OFF". A further label should be placed on the main isolating device reading "WARNING: THE FIRE ALARM SUPPLY REMAINS LIVE WHEN THIS SWITCH IS TURNED OFF.

Or

2. If the isolating protective device is fed from the dead side of the main isolating device, a label should be fixed to the main isolating device reading "WARNING: THIS SWITCH ALSO CONTROLS THE SUPPLY TO THE FIRE ALARM SYSTEM".

Distributed Power Supplies
The above also applies to any distributed power supply (i.e. mains connections for CF3000/PR repeat units CSC354 relay units, etc.)

Cable Segregation
All cables for the fire alarm system should be segregated from any other cables/wiring/services.

Wiring configurations
Spurs can be taken off the loop in the following ways:

1. CZMU352 Addressable Interface - Allows up to 20 conventional smoke detectors and unlimited FX501 / 503 callpoints.
2. Direct Loop Spur Wiring - Allows a zone of analogue detectors and callpoints to be directly spurred off the loop

Note: The mains cable tail ends must be insulated to prevent dangerous conditions arising in the event of accidental switching on of the mains supply.

COOPER Safety
Fire Systems

Networking

Up to 126 CF3000 panels or passive repeaters can be networked together to operate as a single networked system. To achieve this each panel must be fitted with a network card (supplied at additional cost.)

When operating as a networked system all fire and fault event information is displayed at every panel, silencing and resetting of alarms can also be carried out from any panel on a networked system if panels are suitably configured.

Networked panels are connected using a loop topology illustrated, or radial.

Networked panels can be used as active repeaters, alternatively a low cost passive repeater is available. This can either be connected a loop of an individual panel or it can be connected to the network. The recommended network cable for the network connection between panels is an enhanced Firetuf cable Manufactured by Draka cables (part number 910234.) Screen continuity must be maintained throughout the entire network circuit including at each junction point. The screen should only be earthed at the connection point provided at the first panel and not at any other point. The screen or drain wire of the network cable should not be considered as a safety earth and therefore should not be connected to terminals marked with the earth symbol, except at the panel, and should not be insulated with green and yellow sleeving.

Where the network cable passes between buildings, screen continuity should not be maintained from building to building. A booster device must however be used irrespective of cable length and should be fitted at a suitable point in the link between buildings. The cable screen should be connected to the earth of one panel in each building.
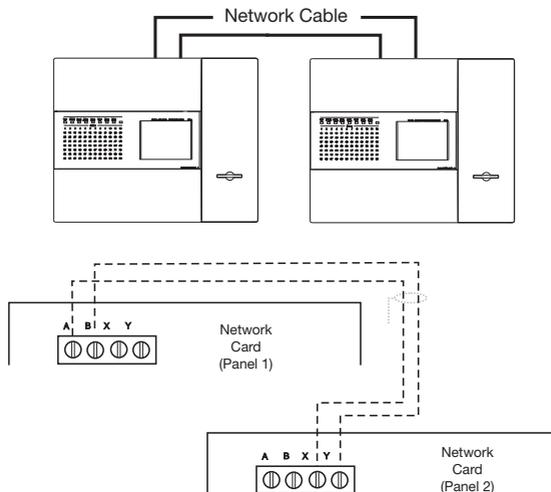
Input/Outputs

Panel Inputs
Class Change: (option not required by EN54)
A pair of terminals are provided for class change. By shorting these terminals together (e.g. switch, time clock) the alarm will sound (panel sounders + loop sounders only). The panel will not indicate a fire. The alarm will cancel when the short circuit is removed. If the short circuit is not removed the alarms will not cancel.
WARNING: No voltage should be applied to this input
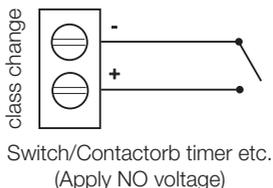
Switch/Contactorb timer etc.
(Apply NO voltage)

Panel Outputs
Panel Sounders: (option 7.8 EN54 Pt 2)
2 pairs of outputs are provided. ONLY polarised equipment should be used. Ensure the polarity of the connections are observed at all times and end of line resistors (6k8 5%) are fitted for correct operation. The total alarm load across all sounder outputs = 1.5 Amp All outputs are fused with 1.6 Amp Glass fuse Alarm devices should be spread equally across the 4 sounder circuits.
WARNING: Do not exceed the rated output current

All sounders must be polarised
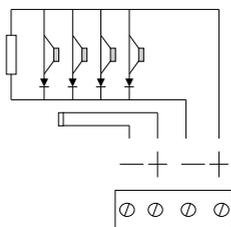
Both sounder circuits must be terminated with a 6800 Ohm end of line resistor

Output Fire Alarm Routing Equipment
(option 7.9 EN54 Pt 2)
This output, which is fused and monitored using a 6.8k end of line resistor, is used for the automatic transmission of the fire signals to fire alarm routing equipment (e.g. fire brigade). It operates by providing 12 V output to an auxiliary device (e.g. relay). It is current limited to 30 mA using a resettable polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition, the indication will be displayed on the Touch screen display and will remain until the fire alarm is reset. Ensure the polarity of the connections are observed at all times and end of line resistors (6k8 5%) are fitted for correct operation.

Output to Fire Alarm Protecting Equipment (option 7.10 EN54 Pt 2)
This output, which is fused and monitored using 6.8k end of line resistor is used for the transmission of the fire signals to controls for automatic fire protecting equipment (e.g. Door release units etc). It operates by providing 24 V output to an auxiliary device (e.g. relay).

It is current limited to 30 mA using a resettable polyswitch. Class change and test conditions do not operate this output. If operated under a fire alarm condition , this output remains activated until the fire alarm is reset. Ensure the polarity of the connections is observed at all times and end of line resistors (6k8 5%) are fitted for correct operation. All activated devices must be polarised.

Output to Fault Warning Routing Equipment (option 9.4.1c EN54 Pt 2)
This output, which is fused and monitored using 6.8k end of line resistor is used for the transmission of fault signals to fault warning routing equipment This output is monitored using 6k8 end of line resistor and it current limited to 30 mA.

Under normal conditions it operates by providing 24 V dc which can be connected directly to a 24 V auxiliary device (relay). It is current limited to 30 mA. Under fault conditions or even if the CF3000 is switched off, this output will switch to 0 V. Ensure the polarity of the connections is observed at all times and end of line resistors (6k8 5%) are fitted for correct operation.

Auxiliary Relay (option not required by EN54)
This output is a volt free contact, which is protected by a polyswitch. It is rated at 24 V 1Amp. If operated under a fire alarm condition, this output will remain energised until the fire alarm is reset.

Auxiliary DC Output (option not defined by EN54)
A 24 V dc output is provided. This output is protected by a polyswitch. This output can be used to power fire or fault auxiliary equipment. Please ensure that all equipments connected to this output will only draw current when a fire condition exists.
WARNING: Do not exceed the rated output current

Mimic Output (option not required by EN54)
This RS485 output is used to send data to a mimic display or a repeater panel. The maximum distance is 2km.

Maintainance

Daily Inspection
Check that only the green "POWER ON" indicator shows. Inspect for any fault indication. Notify any faults to a system supervisior.

Weekly Test
Check indicators. Press supervisor mode on the top left of the touch screen. Enter passcode. Select "others" tab. Press the button labeled weekly test, confirm you wish to perform the test and the amber "System Test" LED will light. The panel will stay in the weekly test mode for 5mins before resetting. During the weekly test, trigger a smoke detector or callpoint and check the fire panel registers the device and illuminates the correct zonal indicator. Trigger a different device every time a weekly test is performed ensuring devices are tested in rotation until all have been checked. It is advisable to develop a detailed a building plan highlighting devices and locations to aid testing. The panel will reset automatically once the 5mins have elapsed. If no devices are triggered during the weekly test the panel will abort the test and reset after 5mins. Record weekly test in the table provided in the log book.

Quarterly Test
Check all previous log book entries and verify that remedial action has been taken. Carry out the weekly test. Visually examine the batteries and their connections, by loosening the screws behind printer door and opening the hinged front from the right hand side. Disconnect the mains supply and check that the battery is capable of supplying the alarm sounders, by operating a callpoint.

Annual Test
As weekly test and quarterly test above. Additionally test all sensors and callpoints and check operation.

Every 2-3 Years
Replace or return the smoke detectors for cleaning to ensure correct operation and freedom from false alarms. Special equipment is required for cleaning smoke detectors. Consult Cooper Lighting and Safety.

Every 5 Years
Replace sealed lead acid battery.

Cleaning
When cleaning the panel, use a moist cloth. Do not use solvents or harsh abrasives.

Printer Paper Order Code

Servicing: Cooper Lighting and Safety can offer a regular servicing contract.
Cooper Lighting and Safety
Service Division,
Wheatley Hall road
Doncaster
DN2 4NB.
Telephone: 01302 303352 Web: www.cooperfire.com

Section 2
Panel Assembly Information

Attaching the Door

The door is designed as a drop on fit. Offer the door up to the back box in the open position as shown below. Align the hinges and lower the door onto the hinge pins. Check the hinges are secure.

COOPER Safety
Fire Systems
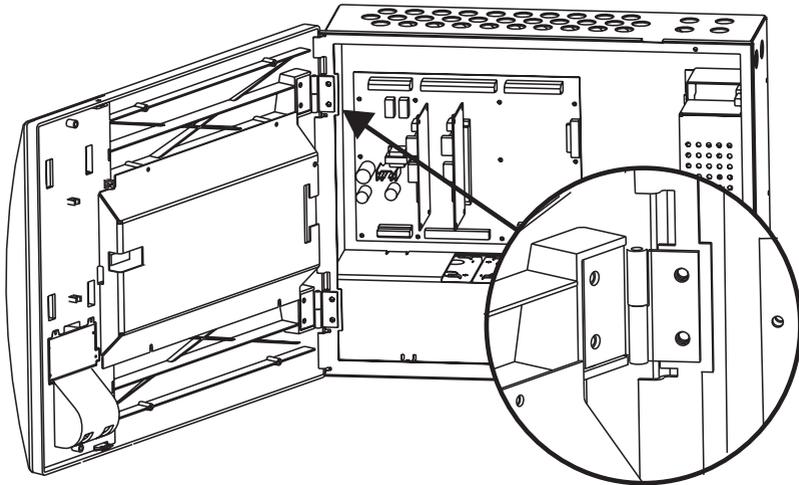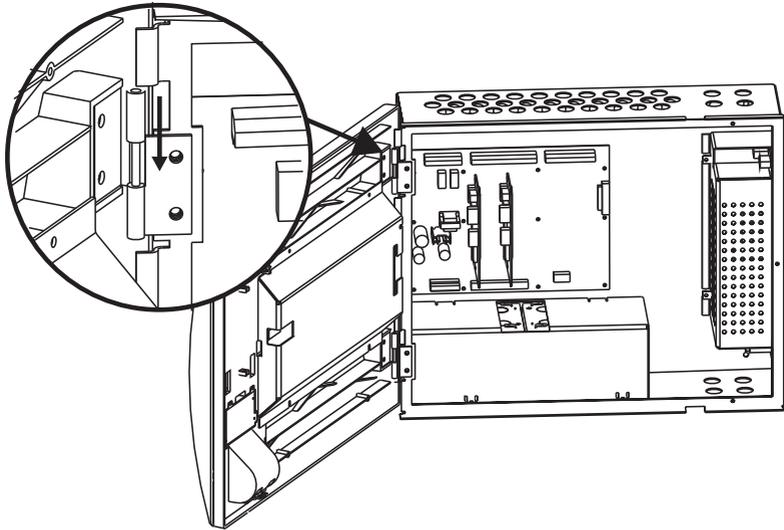
Installing a Hinged Cover

An option hinged cover is available as an optional extra item for CF3000. This can be fitted as standard equipment prior to despatch or retro-fitted later. The method for fitting a cover is shown below.

Insert the bottom peg of the hinged cover into the panel as shown and close the hinged cover followed by the printer door. Next from the back of the panel insert second peg though the hole shown below and push into the hinged cover
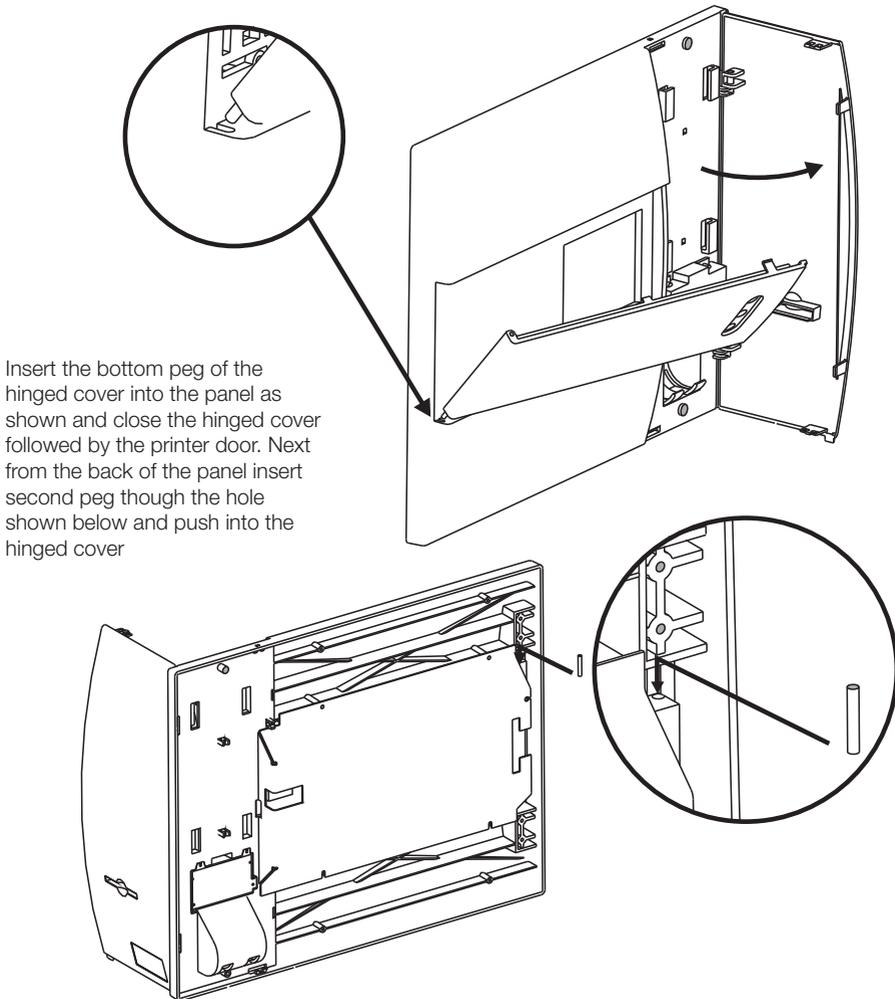
Fitting Printer Paper Roll

Open the printer access door on the right hand side of the panel using the key provided. Drop the paper roll into the paper holder and feed paper into the printer. The printer will then automatically pull the paper through if the panel is powered up. Tear off the excess paper them close and secure the printer access door. Please note for paper feed to operate correctly, paper end must be straight
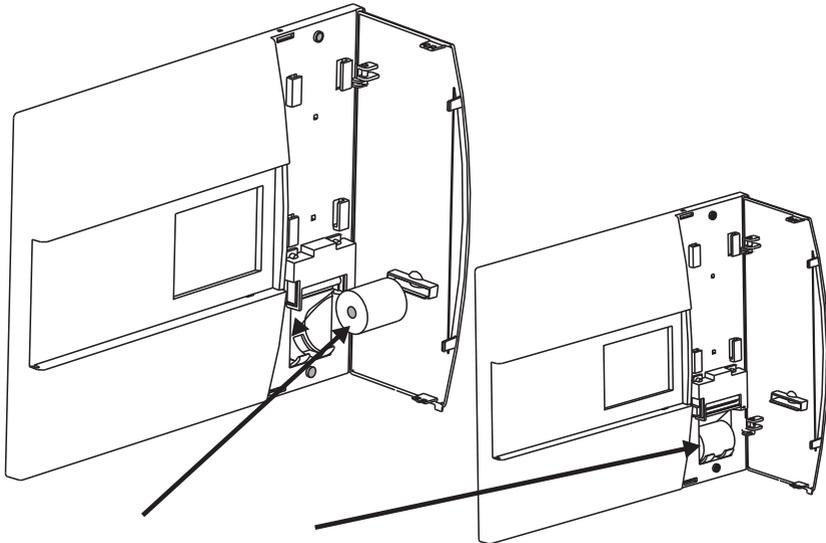
New paper roll simply drops into the holder.

Push paper underneath the roller as shown until printer automatically loads the paper. Tear off excess paper and close the printer compartment door.
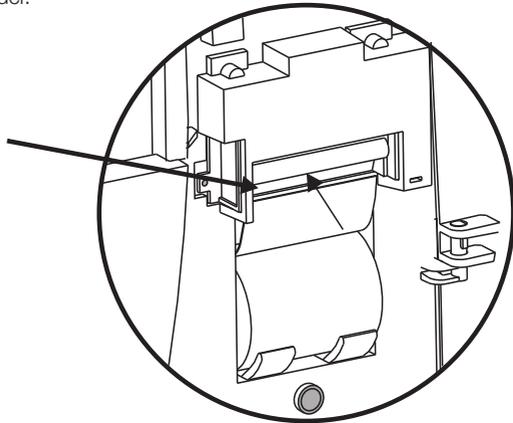
Section 3
Commissioning

Commissioning Mode

Walk test mode allows a single engineer to test the various detectors and callpoints on a system without always having to return to the panel either to reset the system or silence the alarms. When in COMMISSIONING MODE, the system operates as normal except that when a detector or callpoint goes into alarm, the alarms only operate for a few seconds and then will silence. The panel then tries to reset the device automatically and, if successful, the alarms are operated again for a few seconds and the installation engineer can move on to the next detector. After a full test has been carried out the engineer can check the order in which the detectors/callpoints were operated using the DISPLAY LOG mode. This information can also be printed on the optional printer.

When the panel is in "Walk Test Mode" the control panel inserts a different code into the log and also onto the print-out. This is to distinguish between when a device has been tested in "Walk Test Mode" and when a device has been triggered while in normal operation.

The following differences will occur:

1. When in the LOG mode, "One man walk test"" will appear on the display followed by the address text and device type.
2. On the printout a "One man walk test" message will appear will appear followed by the address text and device type.
3. During a real fire "FIRE !" Will appear on the display followed by the address text and device type.

COOPER Safety
Fire Systems

Configuration

DB Level Check
CF3000 includes the facility to test and set the system sounders with the minimum amount of disturbance. In sounder test mode, the sounders will sound for 30 seconds on then 30 seconds off. This facility can be accessed via the engineering menu.

Detector LED Flashing
The CF3000 detector flashing function is used to allow a visual inspection and confirmation that the fire panel is in communication with the installed system devices. This facility can be accessed via the engineering menu and can be switched on or off at any time as required.

Up/Downloading Using PC Software
The PC Software enables the address, location text, device type and any comments to be downloaded to the CF3000 panels.

The software can download to all 126 networkable panels.

The PC is connected to each panel on the network in turn. All data for the panel is downloaded.

For networked systems, panels are identified by panel number, P1, P2 etc.

Panel Fault Finding

V = +5.5V ± 0.5V (No Printer Attached)

AUX RELAY (NO, C, NC)
= O/C Normal   S/C Fire
= S/C Normal   O/C Fire

FAULT RELAY (-, +)
V = 12V No Fault   0V (short CCT) Fault

+24V O/P (-, +)
V = 28.5V (No Load Connected)

FIRE R/E (+24V, -)
V = -O.6V-No Fire   28V Fire   No Fires
See Scope Plots for
Monitoring Condition

FIRE R/E (+28V, -, +)
V = -O.6V-No Fire   28V Fire

LOOP 1 (S+, S-, F-, F+)
V = 22V (Device Fitted) 0V (Unused)
V = 22V (Device Fitted) 0V (Unused)

LOOP 2 (S+, S-, F-, F+)
= As Above

LOOP 3 (S+, S-, F-, F+)
= As Above

LOOP 4 (S+, S-, F-, F+)
= As Above

CLASS CHANGE (-, +)
V = 28V (Open Circuit, No Input)

SOUNDER CIRCUIT 1 (+, -, +, -, +, 2, -)
V = -0.6V Mon   +28V Fire (Depends on Programming)
V = -0.6V Mon   +28V Fire (Depends on Programming)

SOUNDER CIRCUIT 2 (+, 1, -, +, 2, -)
V = -0.6V Mon   +28V Fire (Depends on Programming)
V = -0.6V Mon   +28V Fire (Depends on Programming)

} See Scope Plots for Monitoring Conditions

MODEM/PC RS232 (Tx, Rx, CTB, RTB, OV)
V -9V
V 0V } Static Conditions (No Data)
V 9V
V 0V

MIMIC REPEATER (Rx, Tx-)
V =0V (No Data)

Protocol Format

Normal Communications to Devices:
With the command bits set for the 'Normal' command and the MSB of the three mode bits set at 0, this shortened version of the normal communications to each device allows the analogue reply or status from each device to be read. This format of communication is generally used throughout all background supervision of the addressable loop.

Alarm Interrogate Command:
This command is seen by all devices on the loop, so no address byte is required, and is periodically sent out during normal communications. This command allows any device experiencing an alarm condition to respond, with callpoints given the highest priority, reporting their address. This causes the control panel to break off from general background supervision of the loop and focus directly on the device in question.

Full Protocol Format:
With the command bits set for the 'Normal' command and the MSB of the three mode bits set at 1, the long version of the normal communications can be sent to any device. This would normally be done by the panel following a response to the alarm Interrogate command, allowing the panel to check the device address, ID and confirm that the analogue reply, or status, is truly an alarm condition before actioning the panel sounder outputs, for example.

Viewing the Voltage and Current waveforms at the panel:

Loop 1: Using a digital storage oscilloscope, connect one channel to R34 on the loop driver card; probe 0V clip to the 'in-board' side of the resistor. This will display the loop current. Connect the other channel to loop 1, S+ terminal on the main mother board. DO NOT connect the 0 V clip of this probe.

Loop 2: Using a digital storage oscilloscope, connect one channel to R36 on the loop driver card; probe 0 V clip to the 'in-board' side of the resistor. This will display the loop current. Connect the other channel to loop 2, S+ terminal on the main mother board. DO NOT connect the 0 V clip of this probe
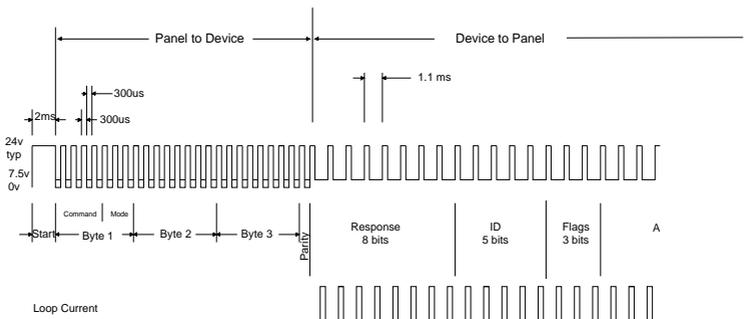
Each Packet of Comms above must be separated by a gap of 20ms minimum where the line is held at 24v

PC Comissioning Software
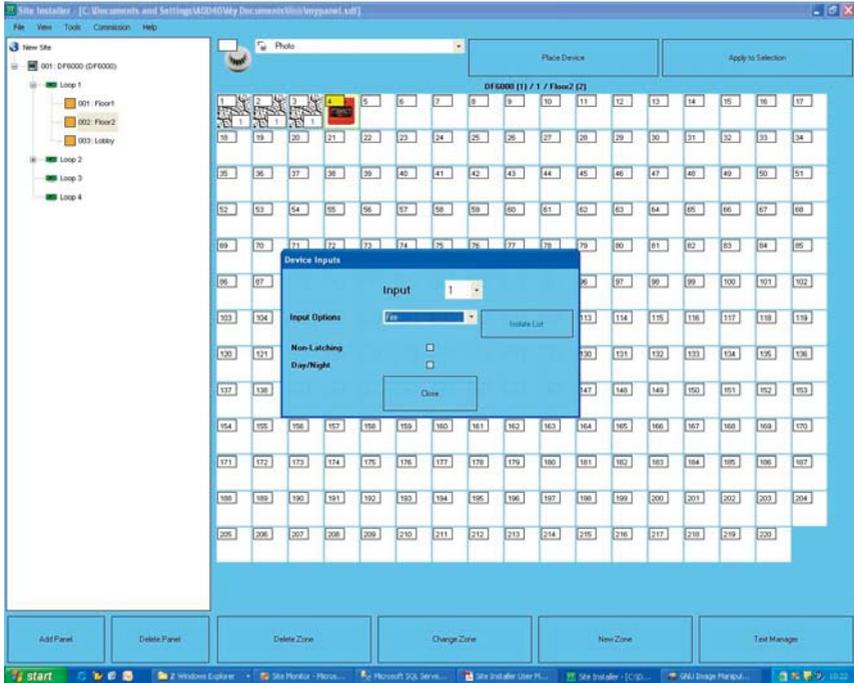
Device Input Programming

Fire	panel reports fire from device.
Fault	panel reports fault from device.
Reset	panel resets.
Silence	silence all currently active sounders.
Pre-Alarm	panel reports pre-alarm from device.
Non-Latching	device won't latch in alarm condition, used in conjunction with isolates.

Isolate Zone / Address

user can define between zones or addresses to be isolated on activation of the device. The isolate list button enables the user to enter upto 8 unique zones or addresses.

If non-latching has been enabled, Isolated devices can be un-isolated as the triggered device returns to normal operation. (a callpoint keyswitch is an example for this application)

PC Comissioning Software
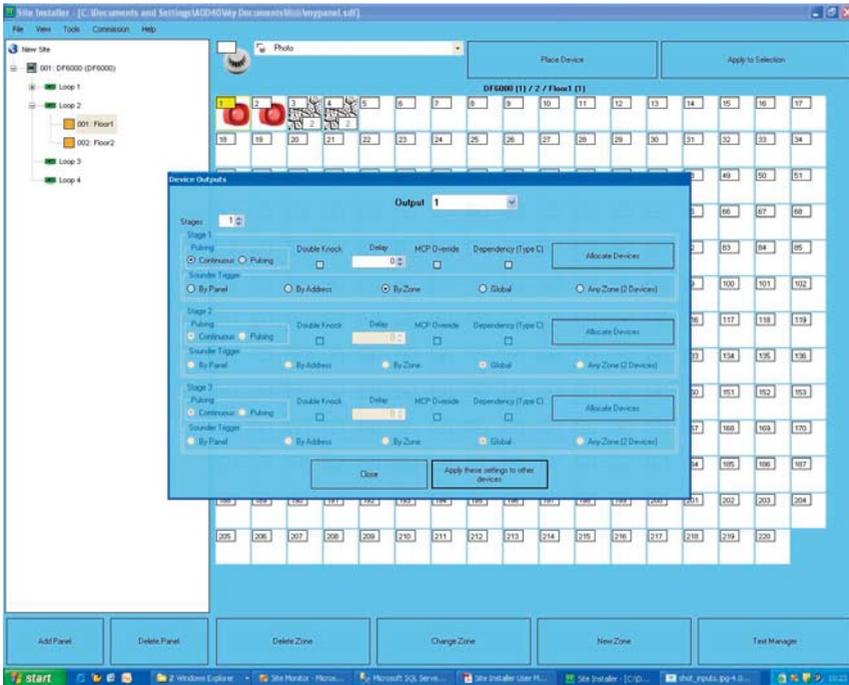
Device Outputs

Delay Configuration
The output of a device when triggered can be delayed - based on a user defined value in minutes.
This programming option is enabled when a value other than zero is entered inside the 'Delay' window.

MCP Override
This option is a manual intervention override, when enabled (check in box) the delay can be overridden
from any callpoint on the loop when triggered.

PC Comissioning Software
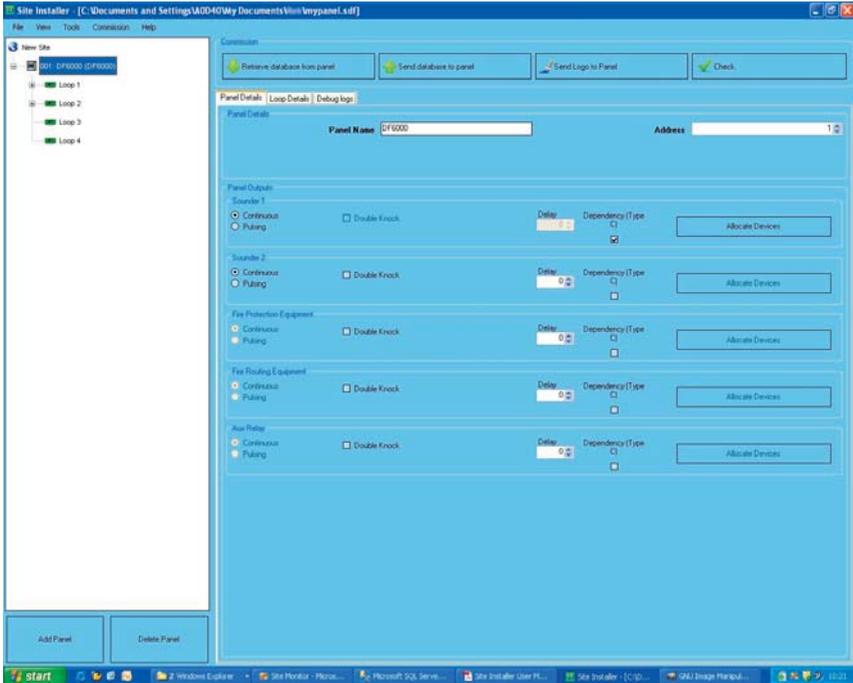
Panel Outputs

Dependency Type C
Each panel output can be assigned a unique list of zones derived from the zones available on the loop, to activate this output, two unique zones from this list have to be in fire or alternatively any zone outside this list will trigger the output also. When the 'Coincidence' box is checked - the 'Allocate device' button allows the user to populate this list.

COOPER Safety
Fire Systems

Section 4
Panel Controls and Indicators

Panel Controls and Indicators

1. System LED's
2. Zonal LED's
3. Touch Screen Display
4. Printer Access Door
5. Slot for Optional Printer
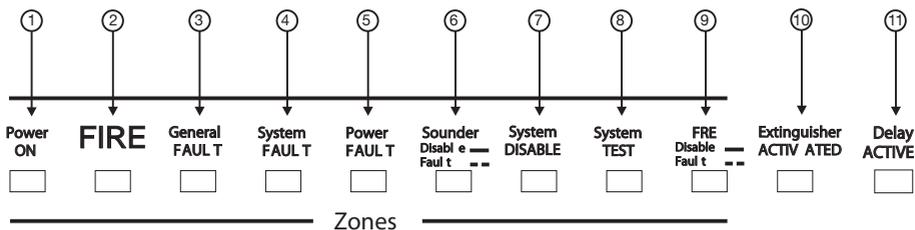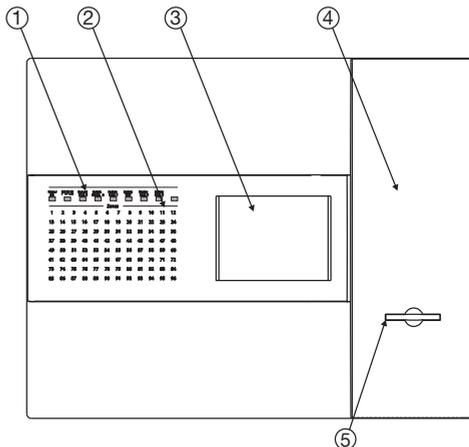
LED	Name Function	Action
1	Power On Shows Panel is On	Check Indicator is Illuminated
2	Fire Indicators Panel has Detected a Fire	Impliment Fire Action Procedure
3	General Fault Monitors Devices for Faults e.g. Smoke detectors/Sounders	Report to System Supervisor
4	System Fault Monitors Fire Panel for Faults	Report Fault to Service Dept
5	Power Fault Monitor Internal Battery Charger	Report Fault to Service Dept
6	Sounder Monitors Sounder Circuits/Indicates Disablement of this Output	Report Fault to Service Dept
7	System Disable Part of the System has been Disabled	Report to System Supervisor
8	System Test Supervisor/Engineer is Testing the System	Check with System Supervisor
9	FRE Monitors the FRE Circuit/Indicates Disablement of this Output	Report Fault to Service Dept
10	Extinguisher Activated Display Activatiion of Extinguishers (If Option Fitted)	Check with System Supervisor
11	Delay Active Delays on Outputs Active	Check with System Supervisor

Panel Controls and Indicators

1. Log Book Storage
2. Insert Supervisor Key Here
3. Printer
4. Paper Roll Storage
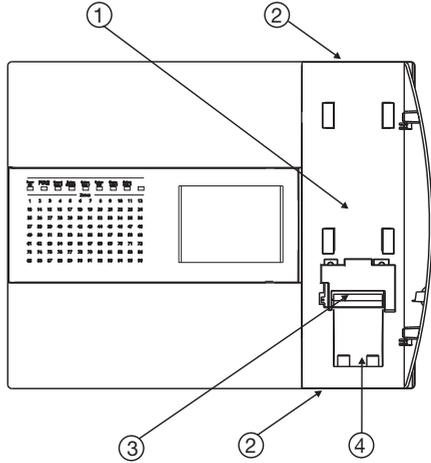
1. Optional Hinged Cover
2. Scroll Up
3. Mute Buzzer
4. Scroll Down
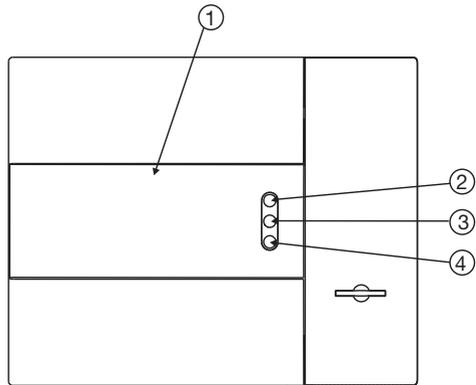
Touch Screen Display

Supervisor FRE Off	Fire 0	Pre Alarms 0	Faults 0	Disabled / Test

Systems Healthy
XX Zones Acitve

Tuesday
dd-mm-yyyy

16:25.25
BST On

MENVIER

The touch screen is a multi-function display consisting 320 x 240 dots featuring high intensity backlighting. In normal operation, the display indicates as above with the backlighting off.

During an event on the system the display shows the FIRST EVENT and LAST EVENT plus other events as space allows.

The last 2 lines are normally used to display the total number of events, but they are also used for scrolling fire conditions, faults, pre alarms or disabled devices independently or for displaying a reduced menu when in fire condition.

When an event occurs the Touch Screen backlighting comes on unless there is a mains power supply fault.

Use the touch screen to scroll through all active events on the system by using the SCROLL UP and SCROLL DOWN buttons (available at access level 1). You can display the contents of the log and also view details of any fires, faults, pre-alarms,faults or disablements.. When displaying the system menu on the touch screen, the last 5 lines of the display are shown in reverse text.

COOPER Safety
Fire Systems

Panel Operation

CF3000 is operated via a backlit touch screen. The default fire screen is shown below. From this screen all the panels functions can be operated. The first time you touch the screen the backlight will illuminate the panel.

Supervisor FRE Off	Fire 0	Pre Alarms 0	Faults 0	Disabled / Test

Systems Healthy
XX Zones Acitve

Tuesday
dd-mm-yyyy

16:25.25
BST On

MENVIER
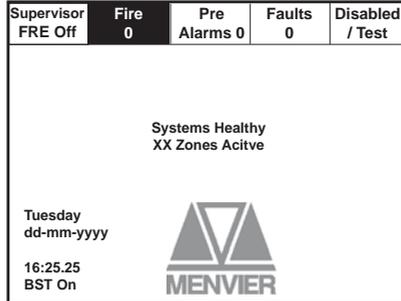
Pressing a field will highlight it and forward to the next screen as shown below.

Touch the screen here to view details

Supervisor FRE Off	Fire 1	Pre Alarms 0	Faults 0	Disabled / Test

Systems Healthy
10 Zones Acitve

Tuesday
dd-mm-yyyy

16:25.25
BST On

MENVIER

Supervisor FRE Off	Fire 1	Pre Alarms 0	Faults 0	Disabled / Test

First Fire — Meeting Room 1, Building 1, 1st floor
Loop: 1, Zone: 2, Type: Optical (150)

Total Fires = 1   Print All   Help

Tuesday
dd-mm-yyyy

16:25.25
BST On
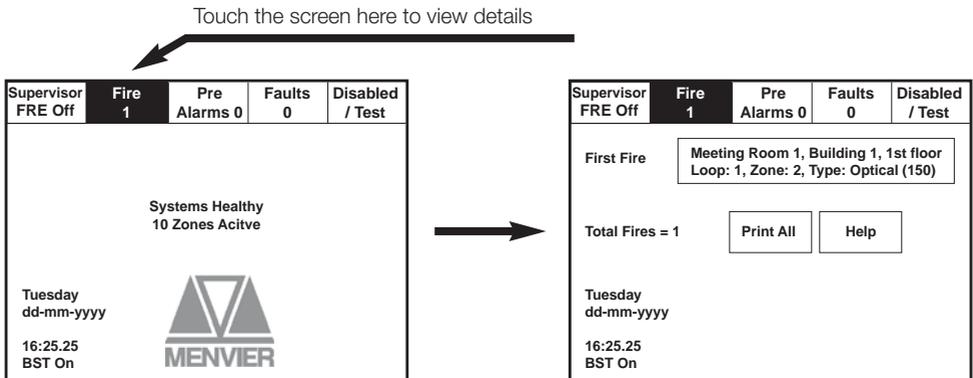
Public (Access Level 1)

Public access level does not require an access code and allows anybody to review the functions outlined below.

Public access level

Supervisor FRE Off	Fire 0	Pre Alarms 0	Faults 5	Disabled / Test

Systems Healthy
10 Zones Active

Tuesday
dd-mm-yyyy

16:25.25
BST On

MENVIER

Supervisor FRE Off	Fire 1	Pre Alarms 0	Faults 0	Disabled / Test

First Fire   12:26:23 Device 1, Zone 1
Lp: 1, Ad:1, Z:1, Opto/thermal, [69]

Total Fires = 1   Print All   Help

Tuesday
dd-mm-yyyy

16:25.25
BST On

Supervisor FRE off	Fires 0	Pre Alarms 6	Faults 6	Disabled / Test
Show Addresses	Show Zones	Show I/O	Show Test Zone	

Print All   Help

001	Device 2, Zone 1 Loop 1, Zone: 1, Type : Opto/thermal
002	Device 3, Zone 1 Loop 1, Zone: 1, Type : Opto/thermal
003	Device 4, Zone 1 Loop 1, Zone: 1, Type : Opto/thermal
004	Device 5, Zone 1 Loop 1, Zone: 1, Type : Opto/thermal

Supervisor FRE off	Fires 0	Pre Alarms 6	Faults 0	Disabled / Test

Print All   Help

001	03-Jun-03 12:51 Warning! : Device 1 Lp: 1, Ad: 1, Z: 1, Opto / Thermal [69]
002	03-Jun-03 12:51 Warning! : Device 2 Lp: 1, Ad: 2, Z: 1, Opto / Thermal [69]
003	03-Jun-03 12:51 Warning! : Device 3 Lp: 1, Ad: 3, Z: 1, Opto / Thermal [69]
004	03-Jun-03 12:51 Warning! : Device 4 Lp: 1, Ad: 4, Z: 1, Opto / Thermal [69]
005	03-Jun-03 12:51 Warning! : Device 5 Lp: 1, Ad: 5, Z: 1, Opto / Thermal [69]

Supervisor FRE off	Fires 0	Pre Alarms 6	Faults 5	Disabled / Test

Print All   Help

001	03-Jun-03 12:51 Fault! : Device 1 Lp: 1, Ad: 1, Z: 1, Opto / Thermal [0]
002	03-Jun-03 12:51 Fault! : Device 2 Lp: 1, Ad: 2, Z: 1, Opto / Thermal [69]
003	03-Jun-03 12:51 Fault! : Device 3 Lp: 1, Ad: 3, Z: 1, Opto / Thermal [69]
004	03-Jun-03 12:51 Fault! : Device 4 Lp: 1, Ad: 4, Z: 1, Opto / Thermal [69]
005	03-Jun-03 12:51 Fault! : Device 5 Lp: 1, Ad: 5, Z: 1, Opto / Thermal [69]

Evacuate (Access Level 2)

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode Passcode and select "Evacuate" on the menu at the top of the screen.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Others

View Faults

View Disabled

View Fires AC = 0

View Pre Alarms

Pre-alarm = Some smoke / heat but below fire threshold these warnings will appear and disappear
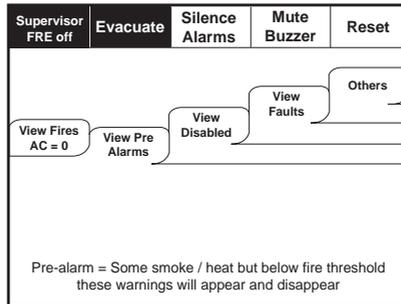
Select "Yes" to evacuate the building.

Supervisor FRE Off

This will activate ALL sounders and activate all panel relays
Do you wish to continue?

Yes   No

Silence Alarms

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode Passcode and select "Silence Alarms" button as the top of

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

View Fires
AC = 0

View Pre
Alarms

View
Disabled

View
Faults

Others

I/O

Zone: 0

Address: 0

Touch button to view list
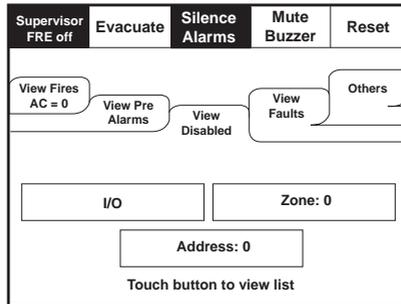
Select "yes" to silence Alarm.

**Supervisor
FRE Off**

**This will silence ALL sounders
Do you wish to continue?**

Yes   No

Mute Buzzer

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select "Mute Buzzer" from the Top Menu

Supervisor FRE off	Evacuate	Silence Alarms	**Mute Buzzer**	Reset

View Fires AC =19	View Pre Alarms	View Disabled	View Faults	Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	

Reset

Enter the Supervisor Mode and Select "Reset" from the top Menu. Select "Yes" to reset the panel.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	**Reset**

View Fires AC =19	View Pre Alarms	View Disabled	View Faults	Others

001	14:22:49 Mains Failure

Faults = Short circuits, broken detectors etc.
To remove faults from this list:
1) Fix Fault
2) Reset Panel

Supervisor FRE Off

The panel will reset
Do you wish to continue?

Yes	No

Pre-Alarms

Enter the Supervisor Mode and Select "Pre-Alarms" tab.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

View Fires AC = 0 · View Pre Alarms · View Disabled · View Faults · Others

Pre-alarm = Some smoke / heat but below fire threshold
these warnings will appear and disappear

A pre-alarm is shown when a detector appears to register heat or smoke but in a quantity that is insufficient to warrant an alarm. Pre-alarm may indicate a build up of dirt in a smoke detector which can be interpreted by the detector as smoke presence.

Disabled Devices

Enter the Supervisor mode and Select the "Disabled" tab.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

View Fires AC = 0 · View Pre Alarms · View Disabled · View Faults · Others

I/O	Zone: 0

Address: 0

Touch button to view list
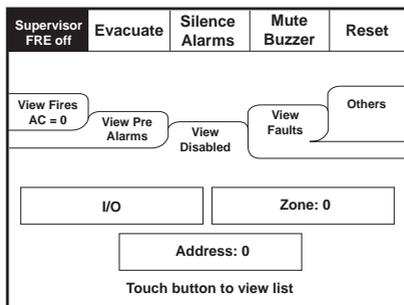
The individual buttons show which devices and the number of devices which have been disabled. Press one of the buttons to display detailed information for a particular category

Faults

Enter Supervisor Mode Passcode and select "Faults" tab.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 0   View Pre Alarms   View Disabled   View Faults   Others

Pre-alarm = Some smoke / heat but below fire threshold
These warnings will appear and disappear
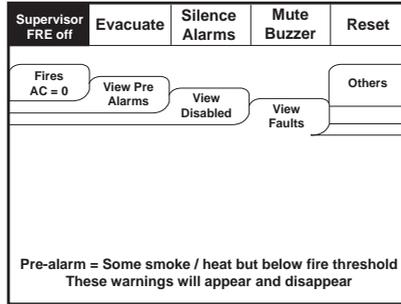
Enable/Disable (Others Menu)

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode

Enter the Supervisor Mode passcode and select the "Others" tab.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 0   View Pre Alarms   View Disabled   View Faults   Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	
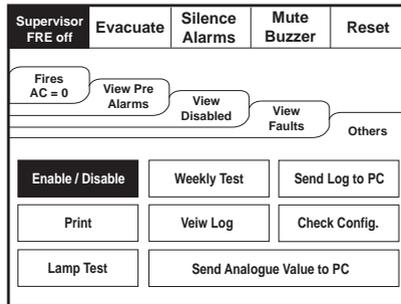
Enable/Disable (Others Menu) Cont.

The Enable/Disable feature allows the operator to disable part or a whole system by the sub menus shown on the left.

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Network Enable / Disable

Enable / Disable Zone

Enable / Disable I/O

Enable All

Enable / Disable Address

Exit

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Show All	Show Detectors	Show Alarms	Show I/O Units	Exit

001	Device 1, Zone 1 Loop 1, Zone 1, Type: Optical / Thermal	Enable
002	Device 2, Zone 1 Loop 1, Zone 1, Type: Optical / Thermal	Disable
003	Device 3, Zone 1 Loop 1, Zone 1, Type: Optical / Thermal	Disable
004	Device 4, Zone 1 Loop 1, Zone 1, Type: Optical / Thermal	Enable
005	Device 5, Zone 1 Loop 1, Zone 1, Type: Optical / Thermal	Disable

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fire Routing: Enabled

Fire Protection: Enabled

Delayed: Enabled

Aux Realy: Enabled **Fire Relay: Enabled**

Fault Realy: Enabled

Exit

Supervisor FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Exit	Touch "Enabled" button to Disable Touch "Disabled" button to Enalbe	

Zone 001 Zone 1	Enable
Zone 002 Zone 2	Disable
Zone 003 Zone 3	Disable
Zone 004 Zone 4	Enable

Supervisor FRE Off

Enable all devices?

Do you want to continue?

Yes   No

Print
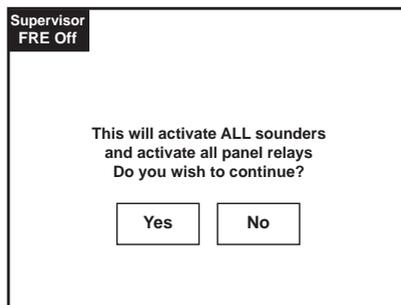
To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select the "Others" Tab. Press "Print"

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 19 · View Pre Alarms · View Disabled · View Faults · Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	
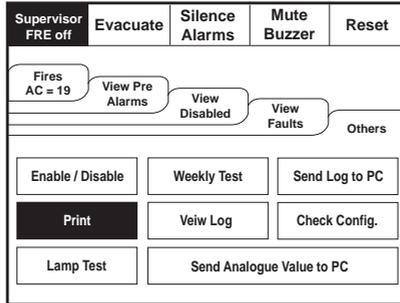
Select the Information You wish to Print from the Buttons Listed.

Service FRE off	Evacuate	Silence Alarm	Mute Buzzer	Reset

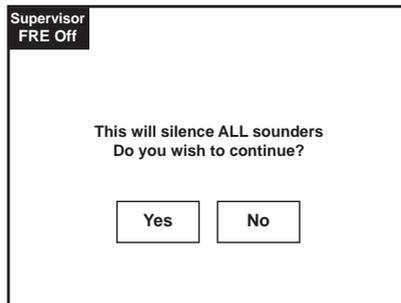| Print All Log Records | Print Fire Log |
Print last 10 Log Records	Print Fault Log
Print Disablement	Print Test Log
Print Current Faults	
Print Current Files	Exit

Lamp Test

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

Enter the Supervisor Mode and Select the "Others" Tab. Press "Lamp Test"

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 19   View Pre Alarms   View Disabled   View Faults   Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	

Supervisor FRE Off

Lamp Test

LED's will light in numerical order

Yes	No

COOPER Safety
Fire Systems
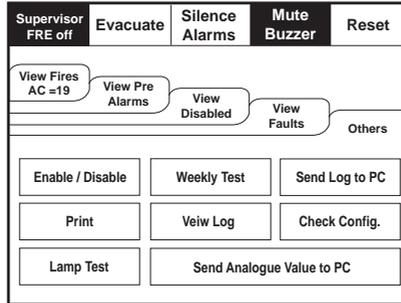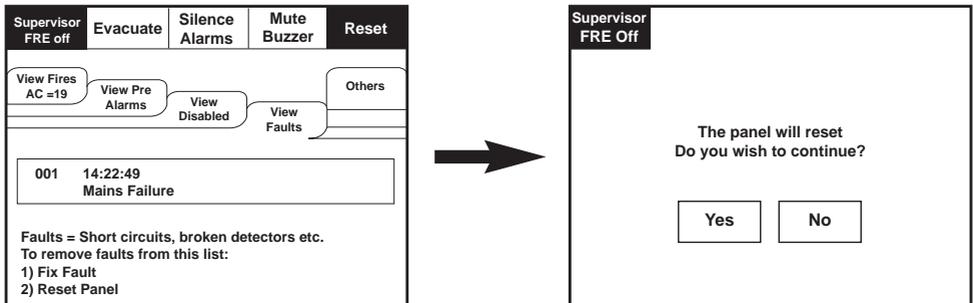
Weekly Test

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode. Select the others tab as shown below. Press Weekly test.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 19   View Pre Alarms   View Disabled   View Faults   Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	

Weekly test is now in progress.

Supervisor FRE Off

* Features outside EN54 spec

**Weekly Test
Do you want to continue?**

Yes	No

→

**Weekly Test
Awaiting alarm signal**

Will rest after 4 minutes

Cancel

The panel will automatically return to the system healthy screen once the weekly test has been completed.

Viewing Events

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.
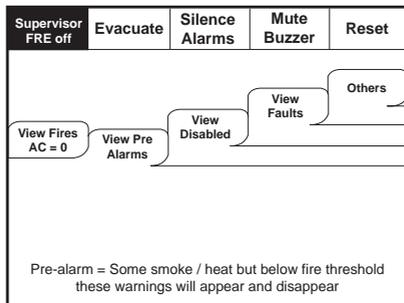
Enter the Supervisor Mode Passcode. Select the "Others" tab and press View Log.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 19	View Pre Alarms	View Disabled	View Faults	Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	
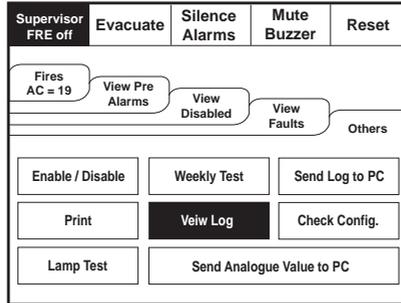
Use the scroll bar to view the list of upto 1000 events.

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Newest	Oldest	Exit		
Show All	Show Fires	Show Faults	Show Tests	

001	Monday 13-Jan-2004 08:34:12 Hard Reset
002	FIRE! Lobby, [Optional] (Ana=150) Building 1, Ground flour, Panel 1, Loop1, device 1
003	Monday 06-Nov-2000 11:22:12 Soft Reset
004	Monday 13-Nov-2001 11:22:12 Fault Panel 1, Loop1, device 1
005	Monday 18-Feb-2001 22:20:18 Mains or battery failure

Events can be sorted by selecting from the sort option menu.

The CF3000 event log stores up to 1000 events including, fires, faults, resets and address changes. Once the maximum 1000 events has been reached CF3000 will automatically overwrite the oldest event every time a new event is stored. The event log can only be reset by an approved service engineer.

CF3000 - USER MANUAL
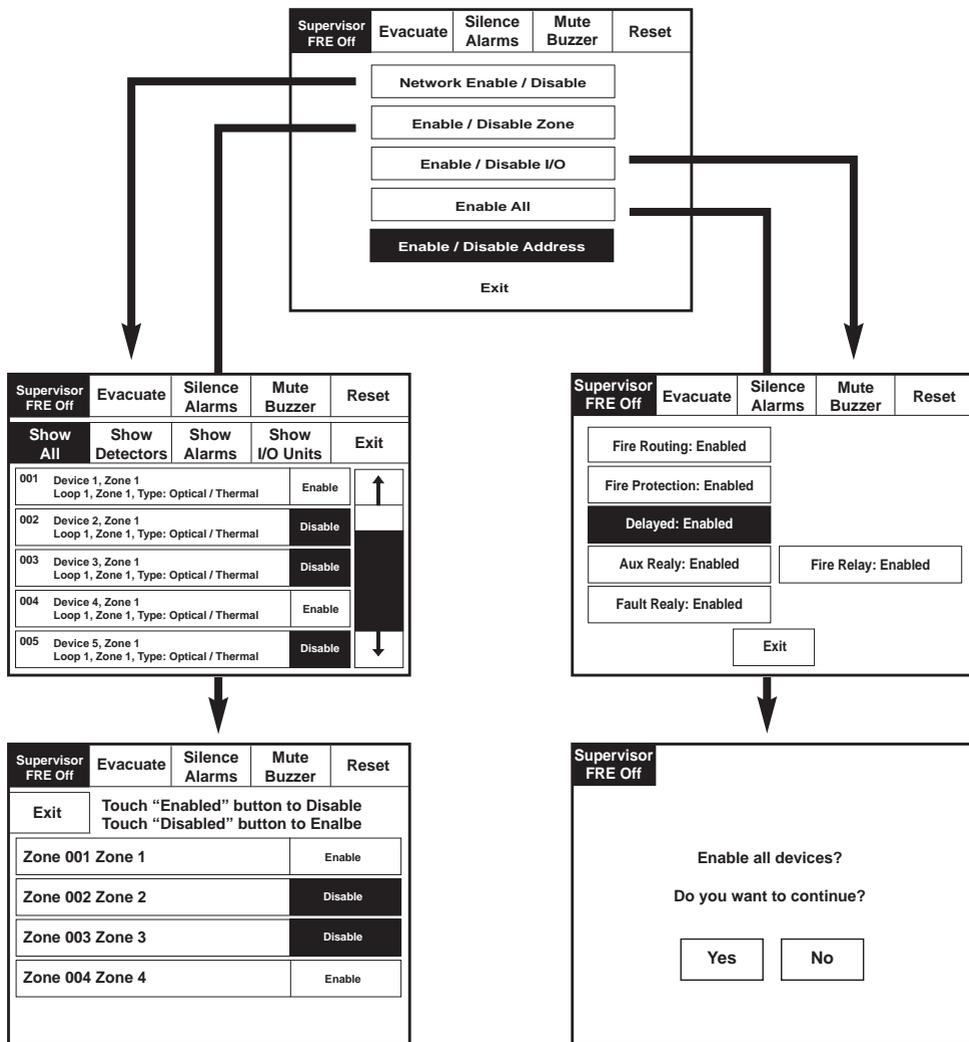
Cooper Safety
Fire Systems

Check Auto Config

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the passcode.

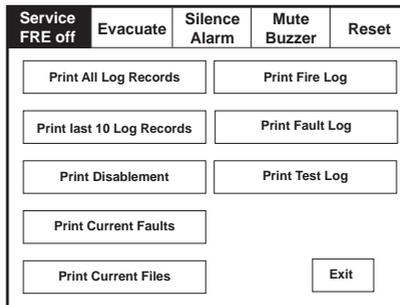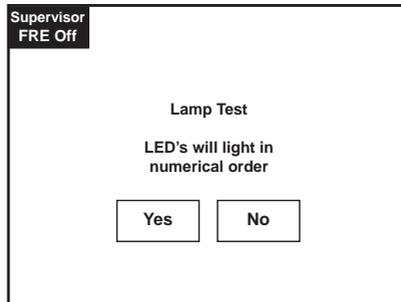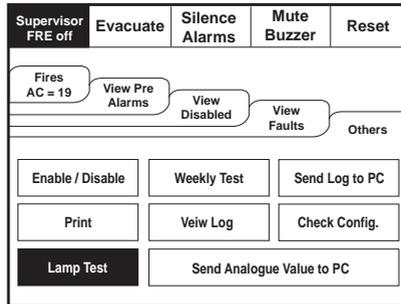Enter the Supervisor Mode and Select the "Others" Tab. Press Check Auto Config. This feature will scan the loop and pinpoint the exact location of any break in the loop wiring and will also identify any changes in the loop configuration (e.g. New devices added or changed device types).

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 0 | View Pre Alarms | View Disabled | View Faults | Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	

Supervisor FRE Off

Check Auto Config

Replace Device

Exit

Supervisor FRE Off

Check Auto Config

Yes | No
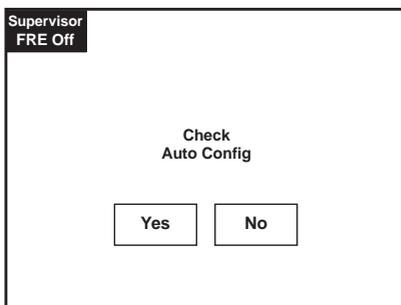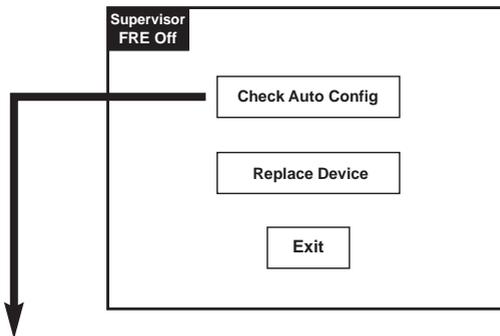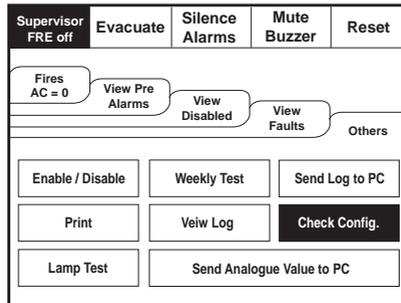
Replace Device

Replace device enables an existing device to be replaced with a new device without losing the existing text and sounder programming. Replace a single device then use use the replace device menu to allocate an existing address to the new device

Supervisor FRE off	Evacuate	Silence Alarms	Mute Buzzer	Reset

Fires AC = 0	View Pre Alarms	View Disabled	View Faults	Others

Enable / Disable	Weekly Test	Send Log to PC
Print	Veiw Log	Check Config.
Lamp Test	Send Analogue Value to PC	

Supervisor FRE Off

Check Auto Config

Replace Device

Exit

Supervisor FRE off

Select a Loop

Loop 1

Loop 2

Exit

Supervisor FRE off

Enter Loop 1 Address

0	1	2	3
Del	4	5	6
OK	7	8	9

Exit

Test Device (Access Level 3)
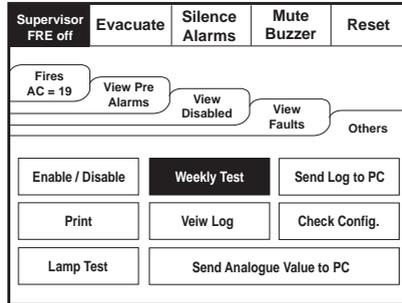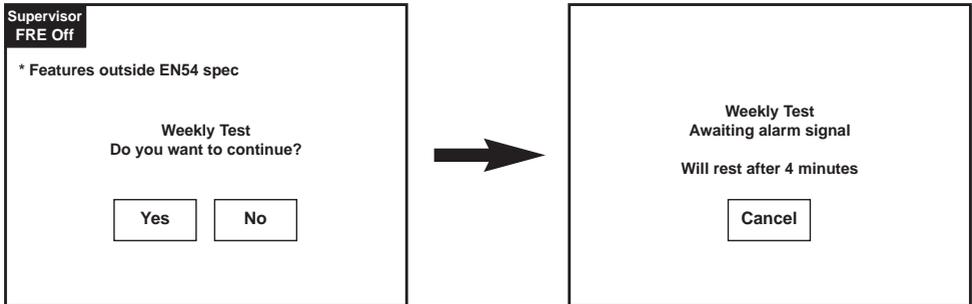
To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the service mode touch the supervisor button and enter engineer passcode.

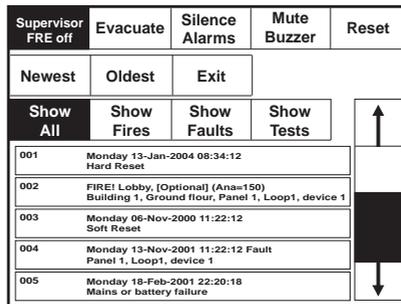| Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Enter the Service mode. Select "Test".

Service FRE off	Exit		Mute Buzzer	Reset

Test Device

Test Zone

Sounder Level Test Mode

Globle Flashing LED on/ff
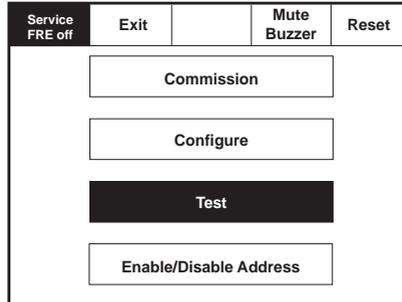
One Walk Walk Test

Select the "Test Device" button.

Touch row to select device to test.

Service FRE off			Exit	Reset

Touch row to test

Show All	Show Detectors	Show Alarms	Show Relay

001	Lobby, Building 1, 1st Floor Loop 1, Zone 2, Type: Optical
002	Main Reception, Building 1, 1st Floor Loop 1, Zone 2, Type: Optical
003	Storage / archive, Building 1, 1st Floor Loop 1, Zone 2, Type: Optical
004	Meeting Room 1, Building 1, 1st Floor Loop 1, Zone 2, Type: Optical

Test Devises

Loop 1, Address 1

Yes	No

Test Zone

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
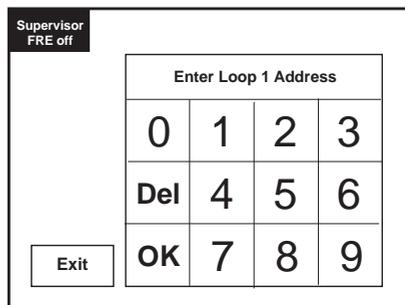
Enter the Service Mode, Select "Test" and on the Screen Shown Below Press "Test Zone"

Service FRE off	Exit		Mute Buzzer	Reset

Test Device

Test Zone

Sounder Level Test Mode

Globle Flashing LED on/ff

One Walk Walk Test

Service FRE off			Exit	Reset

Touch "_" Button to place a zone into test mode
Touch "_" Button to remove a zone into test mode

Zone 001 Building 1, Ground	–	↑
Zone 002 Building 1, 1st Floor	Test	
Zone 003 Building 1, 2nd Floor	–	
Zone 004 packing & Stores	–	
Zone 005 Building 2, Basement	–	↓

COOPER Safety
Fire Systems

Sounder Level Test Mode

Enter the Service Mode and Select Test. From the Test Menu Select "Sounder Level Test Mode"

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE off	Exit		Mute Buzzer	Reset
	Test Device			
	Test Zone			
	Sounder Level Test Mode			
	Globle Flashing LED on/ff			
	One Walk Walk Test			

Sound Level Test Mode

Do you want to continue?

Yes	No

Sound Level Test Mode

All sounders will now pulse
15 seconds on, 30 seconds off

Touch "Stop" button to stop test

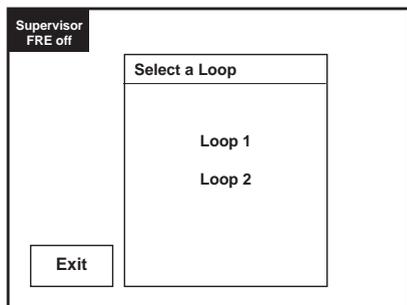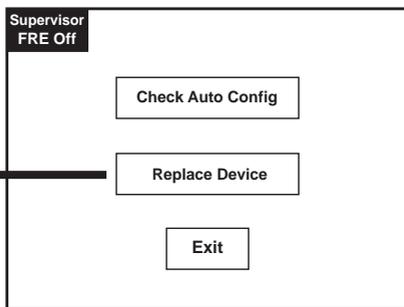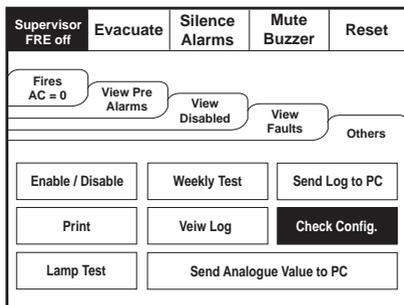| Stop |
|---|

Global Flashing LED On/Off

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Test.

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address
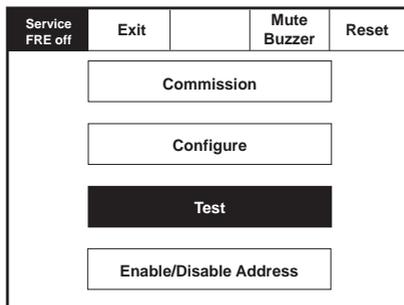
If global LED flashing is set to on, all device LED's will pulse intermittently to confirm correct communication.

Service FRE off	Exit		Mute Buzzer	Reset

Test Device

Test Zone

Sounder Level Test Mode

Globle Flashing LED on/ff

One Walk Walk Test

Select "Global Flashing LED On/Off" from the Test Menu Screen.

Global Flashing LED's

Flashing   **Off**

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Fire Systems

One Man Walk Test
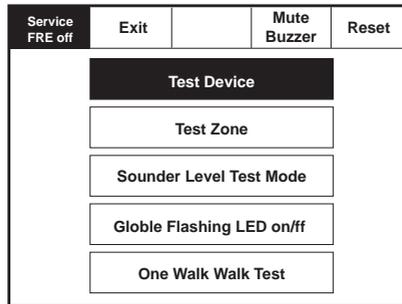
To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
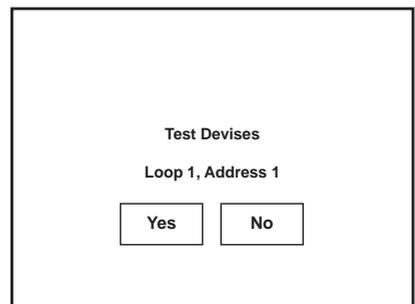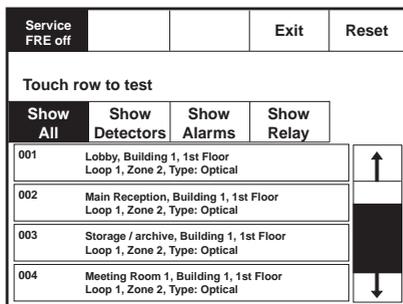
Enter the Service Mode and Select Test.

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE off	Exit		Mute Buzzer	Reset
	Test Device			
	Test Zone			
	Sounder Level Test Mode			
	Globle Flashing LED on/ff			
	One Walk Walk Test			
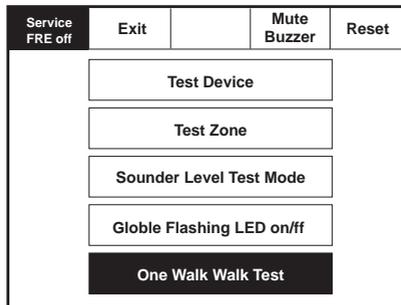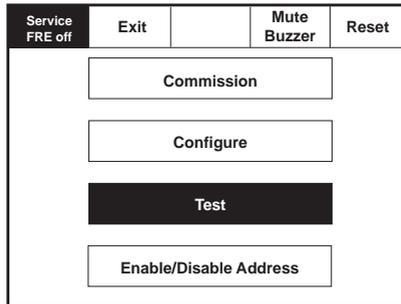
Select "One Man Walk Test" from the Test Menu Screen.

* Features outside EN54 spec

One Man Walk test

Do you want to continue?

Yes	No

One Man Walk Test

Awaiting Alarm Signal

Stop

Commission: Load CDR from Laptop

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
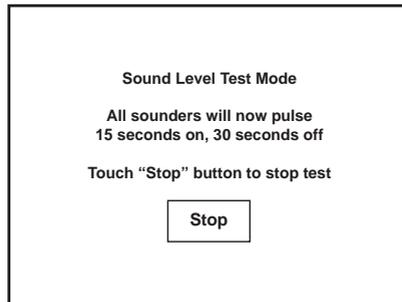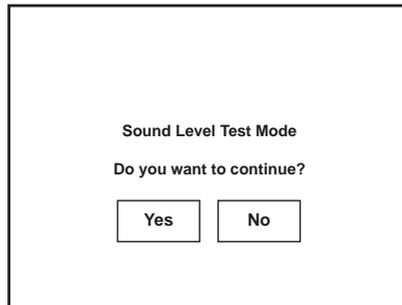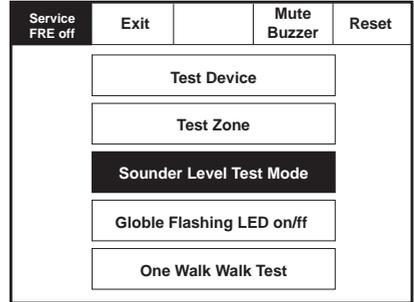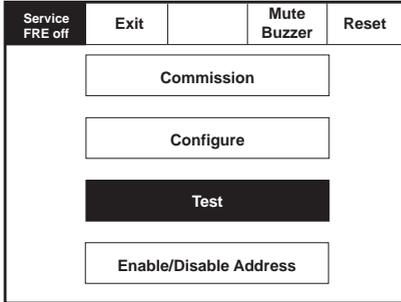
Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Service FRE Off	Exit		Mute Buzzer	Reset

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	Change Panel Number
Erase Log	Number of Panel in Network
Systems Detail	Screen Cover
Load Logo From PC	Italian Mode

Select "Load CDR from Laptop" from the Commission Menu"

Load CDR from Laptop

This will erase the current CDR Do you want to continue?

Yes	No

After pressing "Yes" click commission on the PC download software.

Important: Do not click commission before pressing "Yes" on the "Load CDR" screen.

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Fire Systems

Commission: Download CDR to Laptop

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Service FRE Off	Exit		Mute Buzzer	Reset

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	Change Panel Number
Erase Log	Number of Panel in Network
Systems Detail	Screen Cover
Load Logo From PC	Italian Mode
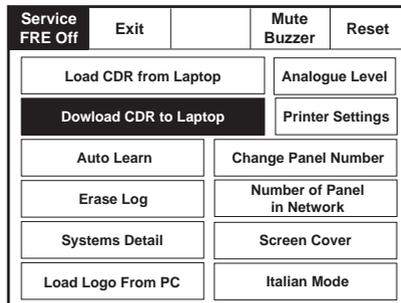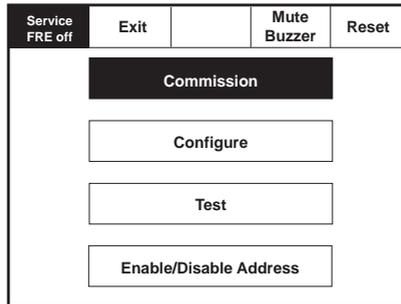
Select "Download CDR from Laptop" from the Commission Menu Screen.

Download CDR to Laptop

Start PC Program

Press "OK" to continue Or "Cancel" to Exit

Ok   Cancel

Commission: Auto Learn
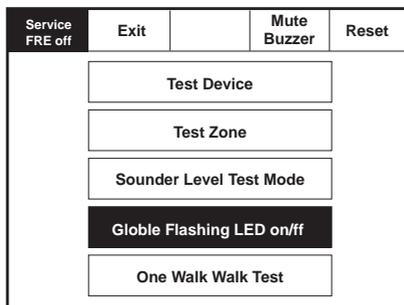
To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
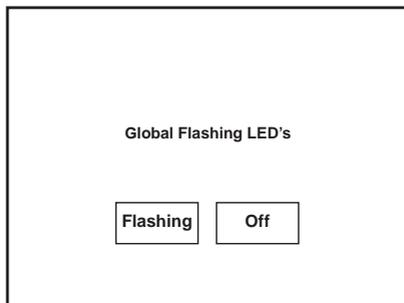
Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	Change Panel Number
Erase Log	Number of Panel in Network
Systems Detail	Screen Cover
Load Logo From PC	Italian Mode

Select "Auto Learn" from the Configure Menu Screen.

Service FRE off	Exit	Auto Learn
	Do you want to continue?	
	No	
	Pre- Addressed Auto Learn	
	Yes - Autolearn All Loops	

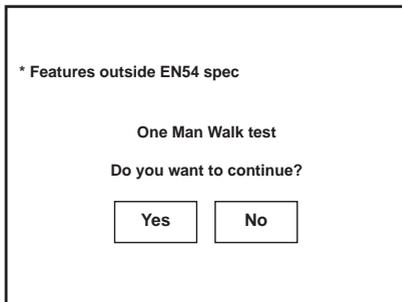**Important: Activating autolearn will erase all existing programming, text and configuration data.**

Erase Log

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
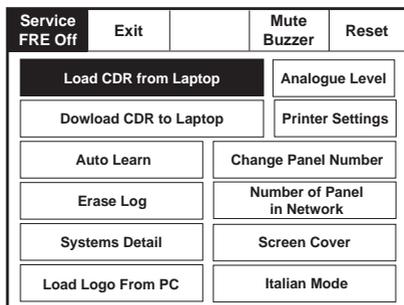
Enter the Service Mode and Select Commission.

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE Off	Exit		Mute Buzzer	Reset
	Load CDR from Laptop		**Analogue Level**	
	Dowload CDR to Laptop		**Printer Settings**	
	Auto Learn		**Change Panel Number**	
	Erase Log		**Number of Panel in Network**	
	Systems Detail		**Screen Cover**	
	Load Logo From PC		**Italian Mode**	
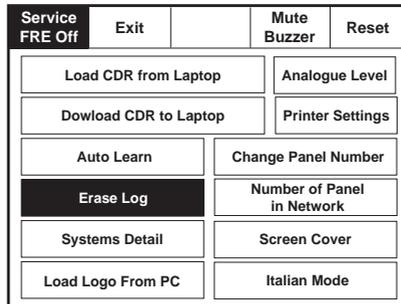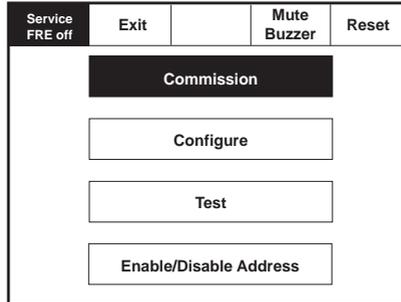
Select "Erase Log and Reset" from the Configure Menu Screen.

This will delete all log entries

Do you want to continue?

Yes	**No**

System Details

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
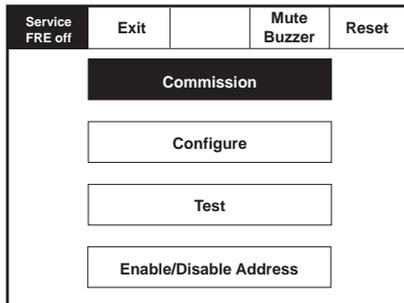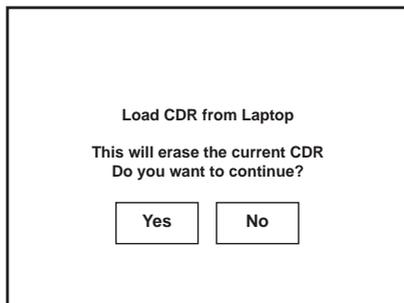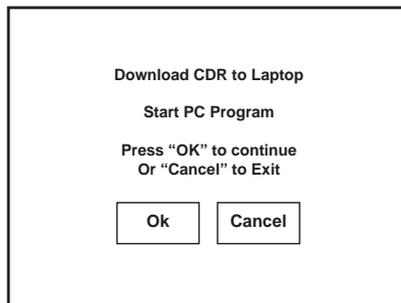
Enter the Service Mode and Select Commission, then Press "System Details".

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Service FRE Off	Exit		Mute Buzzer	Reset

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	Change Panel Number
Erase Log and Reset	Number of Panel in Network
Systems Detail	Screen Cover
Load Logo From PC	Italian Mode

Service FRE Off	Print	Exit		Reset

Program	V3.02.01
Program Data	22/01.08
CDR	V0.5
CDR Checksum	0xF7D95E
Loop Controller 1	V2.1.4
Loop Controller 2	V0.0.0
Panel Number	0
Total Panels	1
Total Addresses	13
Total Zones	4

Page 1	Page 2	Page 3	Page 4	Page 5

Service FRE Off	Print	Exit		Reset

	Loop 1	Loop 2	Loop 3	Loop 4
Optical	0	0	0	0
Ionisation	13	14	0	0
Thermal A1R	0	0	0	0
Opto / Thermal	0	0	0	0
Thermal BS	0	0	0	0
Thermal CS	2	1	0	0
Alarm	0	0	0	0
I / O Units	0	0	0	0

Page 1	Page 2	Page 3	Page 4	Page 5

Service FRE Off	Print	Exit		Reset

	Loop 1	Loop 2	Loop 3	Loop 4
SCU	0	0	0	0
Voice Annunciator	13	14	0	0
Repeater	0	0	0	0
ZMU / {SUM	0	0	0	0
Beam Detector	0	0	0	0
Technical Timer	2	1	0	0
Access Control	0	0	0	0
Emerg.Light.Module	0	0	0	0
Carbon Monoxide	0	0	0	0

Page 1	Page 2	Page 3	Page 4	Page 5

COOPER Safety
Fire Systems

Analogue Level

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
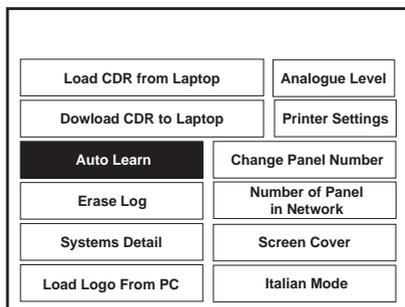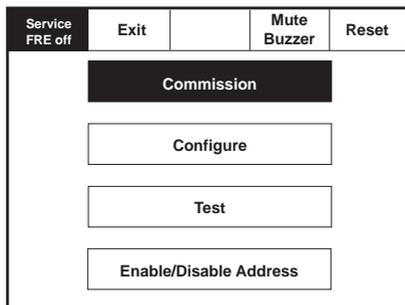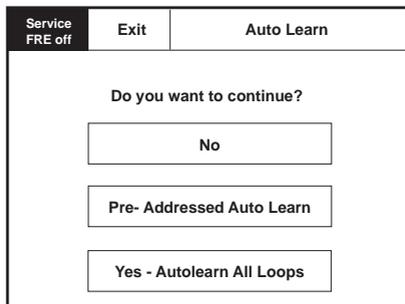
Enter the Service Mode and Select Commission then press "Analogue Levels".

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop			Analogue Level	
Dowload CDR to Laptop			Printer Settings	
Auto Learn			Change Panel Number	
Erase Log and Reset			Number of Panel in Network	
Systems Detail			Screen Cover	
Load Logo From PC			Italian Mode	

Service FRE Off	Exit	Goto		Reset
Show All	Show Detectors	Show Optical	Show Ionisation	Show Thermal

001	Device 1, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal
002	Device 2, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal
003	Device 3, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal
004	Device 4, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal
005	Device 5, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal

Note:
Go to command can be used to jump to a specific address

Enter Address

....

Loop 1	0 - 13
Loop 2	0 - 0
Loop 3	0 - 0
Loop 4	0 - 0
Cancel	

1	2	3
4	5	6
7	8	9
ok	0	←

Printer Settings

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press "Printer settings".

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop		Analogue Level		
Dowload CDR to Laptop		**Printer Settings**		
Auto Learn		Change Panel Number		
Erase Log and Reset		Number of Panel in Network		
Systems Detail		Screen Cover		
Load Logo From PC		Italian Mode		

Service FRE Off	Exit			Reset
	Auto			
	Request			

Change Panel Number

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press "Change Panel Number"

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Service FRE Off	Exit		Mute Buzzer	Reset

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	**Change Panel Number**
Erase Log and Reset	Number of Panel in Network
Systems Detail	Screen Cover
Load Logo From PC	Italian Mode

Change Panel Number
0 ....

1	2	3
4	5	6
7	8	9
ok	0	←

Cancel

Number of Panels in Network

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.

Enter the Service Mode and Select Commission then press "Number of Panels in Network"

Service FRE off	Exit		Mute Buzzer	Reset
	Commission			
	Configure			
	Test			
	Enable/Disable Address			

Service FRE Off	Exit		Mute Buzzer	Reset
Load CDR from Laptop			**Analogue Level**	
Dowload CDR to Laptop			**Printer Settings**	
Auto Learn			**Change Panel Number**	
Erase Log and Reset			**Number of Panel in Network**	
Systems Detail			**Screen Cover**	
Load Logo From PC			**Italian Mode**	

Number of Panels In Network
1 ....

```
1  2  3
4  5  6
7  8  9
ok 0  ←
```

Cancel

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Screen Cover

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
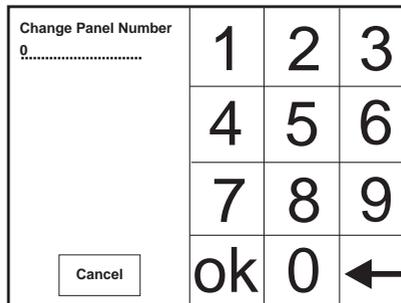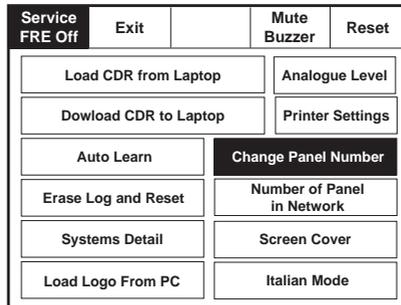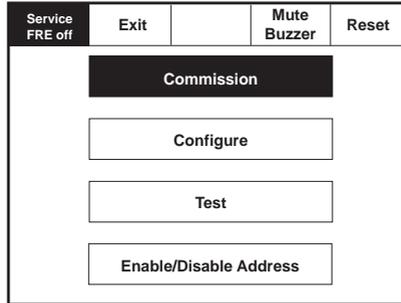
Enter the Service Mode and Select Commission then press "Screen Cover"

Service FRE off	Exit		Mute Buzzer	Reset

Commission

Configure

Test

Enable/Disable Address

Service FRE Off	Exit		Mute Buzzer	Reset

Load CDR from Laptop	Analogue Level
Dowload CDR to Laptop	Printer Settings
Auto Learn	Change Panel Number
Erase Log and Reset	Number of Panel in Network
Systems Detail	**Screen Cover**
Load Logo From PC	Italian Mode

Service FRE Off	Exit			Reset

Installed

Not Required

Programming I/O and Sounders

To activate the touch screen, touch the top left corner of the screen until the screen illuminates. To enter the supervisor mode touch the supervisor button and enter the service passcode.
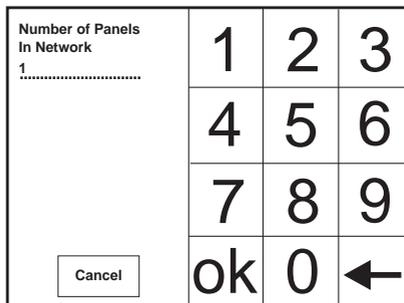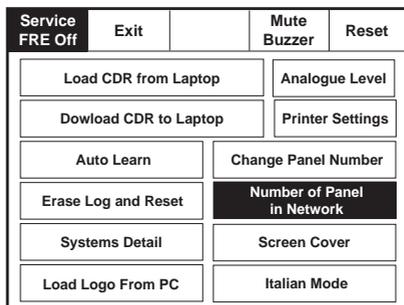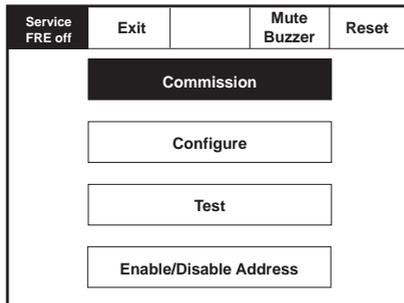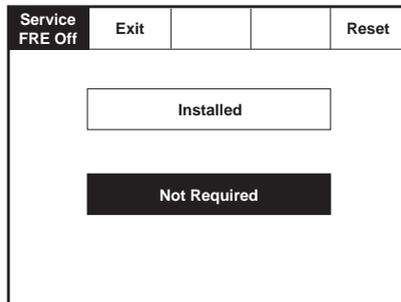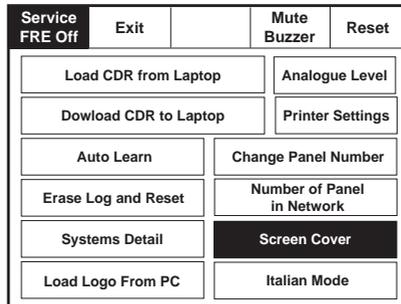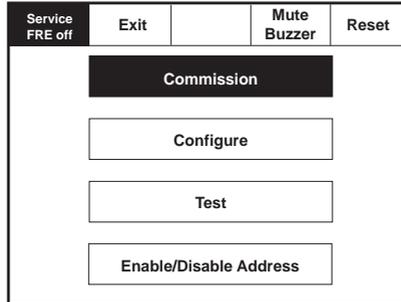
Enter the Service Mode and Select Configure.

Service FRE off	Exit		Mute Buzzer	Reset
		Commission		
		Configure		
		Test		
		Enable/Disable Address		

Service FRE Off	Exit		Mute Buzzer	Reset
	Programming I/O and Sounders		Add/Delete	
	Change Date/Time		Configure Heat Detectors	
	Change Text		Network	
	Configure Zones		Language	
	Change Passcode		Day / Night	
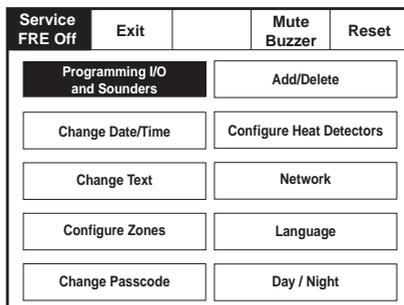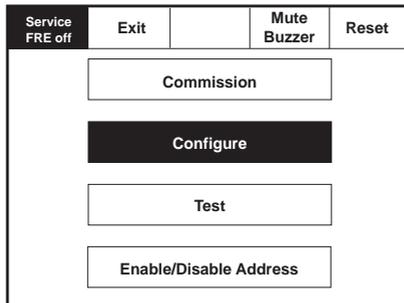
Select "Programming I/O and Sounders"" from the Configure Menu Screen.

Service FRE Off	Exit		Mute Buzzer	Reset
	Panel Outputs		T1/T2	
	Auxiliary Board		Alarm Verification Feature	
	HMO		FRE Double Knock Override	
	Sounder Tone			
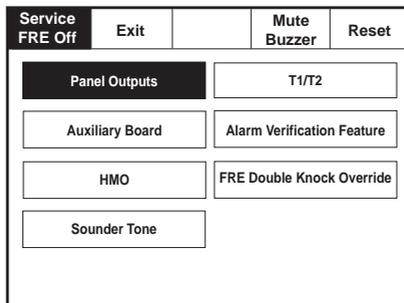
Press panel outputs -

Note:
Interface Inputs/Interface Outputs are only used in certain export markets

CF3000 - USER MANUAL

COOPER Safety
Fire Systems

Sound Settings

Touch sound settings.

Service FRE Off	Exit			Reset
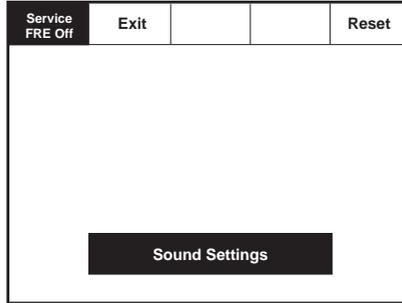
Sound Settings

Selections from the screens below will become the global settings for all loop sounders.

Service FRE Off	Exit			Reset

Volume

Sound

Service FRE Off	Exit			Reset

Volume
This will efffect all sounders

Low

Medium

High

Service FRE Off	Exit			Reset

Volume

Sound

Service FRE Off	Exit			Reset

Volume
This will efffect all sounders

Slow Loop

Two Tone

Continuous
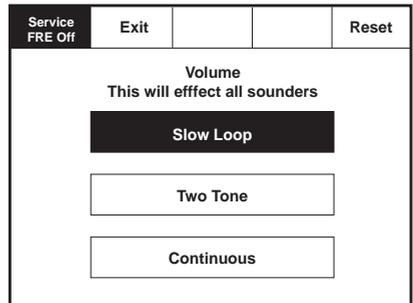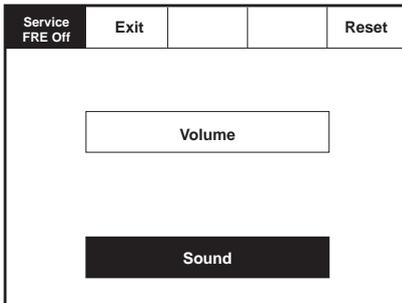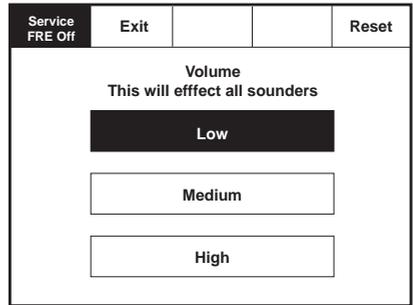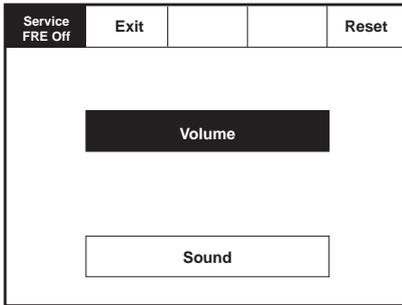
Change Date/Time

Enter the Service Mode and Select Configure. Select Change Date/Time.

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders			Add/Delete	
Change Date/Time			Configure Heat Detectors	
Change Text			Network	
Configure Zones			Language	
Change Passcode				

Set the Time Using the Buttons Shown Below.

Service FRE Off	OK	Cancel		Reset
Current Time:	+ 1 Hour	+ 10 Minutes	+ 1 Minute	
10:10:04	- 1 Hour	- 10 Minutes	- 1 Minute	
BST On				
Current Date:	+ 1 Day	+ 10 Month	+ 1 Year	
Wednesday dd-mmm-yyyy	- 1 Day	- 10 Month	- 1 Year	

COOPER Safety
Fire Systems

Change Address Text

Enter the Service Mode and Select Configure. Select "Change Text"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Passcode				

Press "Change Address Text"

Service FRE off	Exit		Mute Buzzer	Reset
		Change Address Text		
		Change Zone Text		
		Change Panel		

Select the Address you wish to change and edit using the keyboard

Service FRE Off	Exit			Reset
Show All	Show Detectors	Show Alarms	Show I/O Units	
001	Device 1, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			
002	Device 2, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			
003	Device 3, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			
004	Device 4, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			
005	Device 5, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			

Name for address 1

Address 1

1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	L	
CAPS Z	X	C	V	B	N	M	,	.	

OTHER	SPACE	OK	CANCEL

CF3000 - USER MANUAL

Change Zone Text

Enter the Service Mode and Select Configure. Select "Change Text"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Passcode				

Service FRE off	Exit		Mute Buzzer	Reset
Change Address Text				
Change Zone Text				
Change Panel				

Press "Change Zone Text"

Select the Address you wish to change and edit using the keyboard

Supervisor FRE Off				Reset
Exit				
Zone 001 Zone 1				↑
Zone 002 Zone 2				
Zone 003 Zone 3				
Zone 004 Zone 4				↓

Enter the name for zone 2

Zone 2 ....

←

1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	L	
CAPS Z	X	C	V	B	N	M	,	.	
OTHER	SPACE		OK	CANCEL					

COOPER Safety
Fire Systems

Change Panel Text

Enter the Service Mode and Select Configure. Select "Change Text"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Passcode				

Service FRE off	Exit			Reset
Change Address Text				
Change Zone Text				
Change Panel				

Press
"Change Panel Text"

Correct Panel Text

DF6000 ....

←

1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	L	
CAPS	Z	X	C	V	B	N	M	,	.

| OTHER | SPACE | OK | CANCEL |

CF3000 - USER MANUAL

Configure Zones

Enter the Service Mode and Select Configure. Select "Configure Zones"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Passcode				

Select Zone into which device will be added

Service FRE Off			Exit	Reset

Touch row to configure

Zone 001 Zone 1

Zone 002 Zone 2

Zone 003 Zone 3

Zone 004 Zone 4

Touch the dash to move the device into the selected zone.

Service FRE Off	Exit	Goto		Reset
Show All	Show Detectors	Show Alarms	Show I/O Units	Show Selected

001	Device 1, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal	In Zone
002	Device 2, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal	In Zone
003	Device 3, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal	In Zone
004	Device 4, Zone 2 Loop: 1, Zone 2, Type: Opto / Thermal	–
005	Device 5, Zone 2 Loop: 1, Zone 2, Type: Opto / Thermal	–

Change User Code

Enter the Service Mode and Select Configure. Select "Change User Code"

Service FRE Off	Exit			Reset

Programming I/O and Sounders	Add/Delete
Change Date/Time	Configure Heat Detectors
Change Text	Network
Configure Zones	Language
Change Passcode	

Service FRE Off	Exit		Mute Buzzer	Reset

Change Engineering Code

Change User Code

Please Enter Code
....
New Code
....
Verify New Code
....

Cancel

1	2	3
4	5	6
7	8	9
ok	0	←

**Passcode is not correct.
No change made**

Ok

**Verification is incorrect.
No change made**

Ok

**New password accepted.
Save**

Ok

CF3000 - USER MANUAL

Add Zone

Enter the Service Mode and Select Configure. Select "Add Zone"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders			**Add/Delete**	
Change Date/Time			**Configure Heat Detectors**	
Change Text			**Network**	
Configure Zones			**Language**	
Change Passcode				

Service FRE Off	Exit			Reset
	Add Zone			
	Delete Zone			
	Add Device			
	Delete Device			

Add Zone?

Yes	No

Delete Zone

Enter the Service Mode and Select Configure, select "Add/Delete" then "Delete Zone"

Service FRE Off	Exit			Reset

Add Zone

Delete Zone

Add Device

Delete Device

Service FRE Off				Reset

Exit   **Touch row to delete**

Zone 001 Zone 1

Zone 002 Zone 2

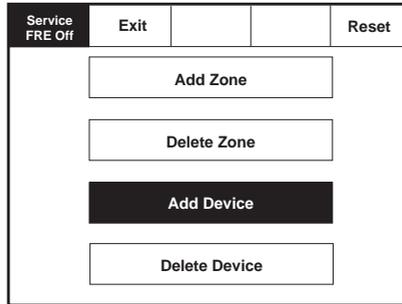Zone 003 Zone 3

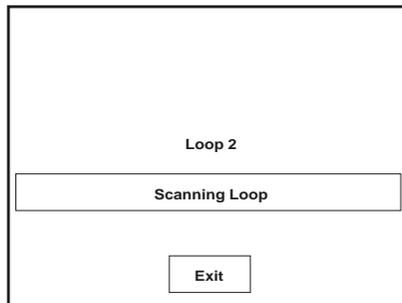Zone 004 Zone 4

Select Zone to be Deleted

Add Zone 2?

Yes   No

Confirm or Cancel Deletion

Add Device

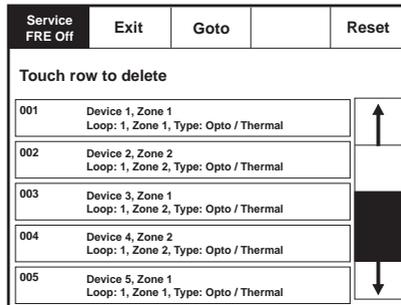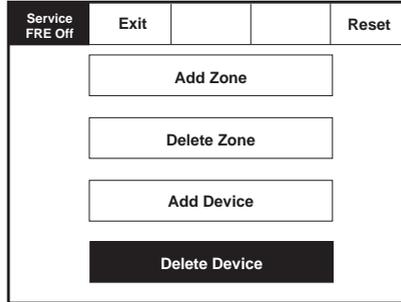Enter the Service Mode and Select Configure, select "Add/Delete" then "Add Device"

Service FRE Off	Exit			Reset

Add Zone

Delete Zone

Add Device

Delete Device

Service FRE Off				Reset

Loop 1

Loop 2

Loop 3

Loop 4

Exit
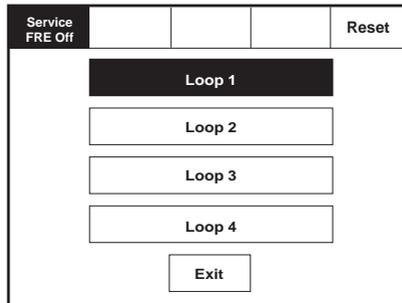
Select a Loop to Add a New Device

Loop 2

Scanning Loop

Exit

Confirm New Device and Loop

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Fire Systems

Delete Device

Enter the Service Mode and Select Configure, select "Add/Delete" then "Delete Device"

Service FRE Off	Exit			Reset

Add Zone

Delete Zone

Add Device

Delete Device

Service FRE Off	Exit	Goto		Reset

Touch row to delete

001	Device 1, Zone 1
	Loop: 1, Zone 1, Type: Opto / Thermal
002	Device 2, Zone 2
	Loop: 1, Zone 2, Type: Opto / Thermal
003	Device 3, Zone 1
	Loop: 1, Zone 2, Type: Opto / Thermal
004	Device 4, Zone 2
	Loop: 1, Zone 2, Type: Opto / Thermal
005	Device 5, Zone 1
	Loop: 1, Zone 1, Type: Opto / Thermal

Select a Device to Delete

Delete device 3?

Device 3
Loop 1, Address 3. Device Type Opto / Thermal

Yes   **No**
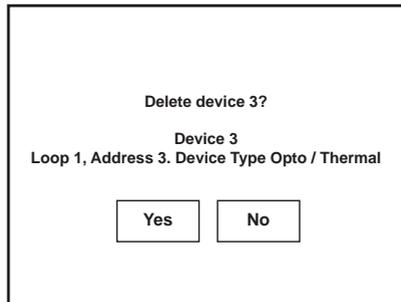
Confirm or Cancel Deletion

Configure Heat Detectors

Enter the Service Mode and Select Configure. Select "Configure Heat Detectors"

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		Network		
Configure Zones		Language		
Change Passcode				

Service FRE Off	Exit	Goto		Reset
Touch row to delete				
001	Device 1, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			
002	Device 2, Zone 2 Loop: 1, Zone 2, Type: Opto / Thermal			
003	Device 3, Zone 1 Loop: 1, Zone 2, Type: Opto / Thermal			
004	Device 4, Zone 2 Loop: 1, Zone 2, Type: Opto / Thermal			
005	Device 5, Zone 1 Loop: 1, Zone 1, Type: Opto / Thermal			

Select a Device to Configure

Select appropriate detector class

Service FRE Off				Reset
	Thermal A1R			
	Thermal BS			
	Thermal CS			
	Exit			

Network

Enter the Service Mode and Select Configure. Select "Network", This menu defines whether messages are broadcast across the network or remain local.

Service FRE Off	Exit		Mute Buzzer	Reset
Programming I/O and Sounders		Add/Delete		
Change Date/Time		Configure Heat Detectors		
Change Text		**Network**		
Configure Zones		Language		
Change Passcode				

Service FRE Off	Exit	Receive message over network
Reset		Network
Evacuate		Network
Silence		Network
Fire		Network
Fault		Network
Pre-Alarm		Network

Service FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Exit				
Network Filter				
Configure Zones				

→

Service FRE Off	Evacuate	Silence Alarms	Mute Buzzer	Reset
Exit				
Panel 001				Enable
Panel 002				Enable
Panel 003				Enable

Section 4 - Panel Controls and Indicators

Password Protection

The Cooper CF3000 system has password protection which restricts access to the DISABLE Menu and to TEST/COMMISSIONING MODE. The password is a four digit code and the default number is 2214 for access level two and 143243 for access level three. The password entry screen is accessed via the supervisor mode button. Press supervisor mode and the password entry screen will be displayed, type in the passcode and press Ok. If the wrong password is entered three times further access to the system is denied.

```
Service
FRE Off
                1    2    3
Please enter code:
...........................
                4    5    6

                7    8    9

      Cancel    ok   0    ←
```

Section 5
Appendix

Spur Isolator - CSI350

Installation
1. Fit the unit in position.
2. Connect the unit according to the diagram below.

Notes:
A Spur Isolator must be used when making spurs from the analogue addressable panel loop. Without this unit, the self addressing features of the system will not function correctly.

No addressing of the interface is required. See control panel operation for details.

Standard Connections
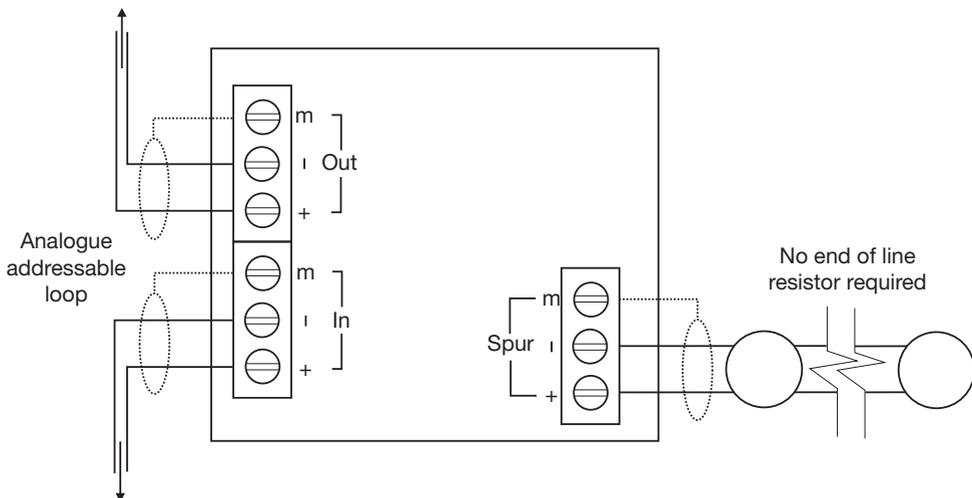
Notes:
1. Only connect cable screen to its adjacent earth terminal.
2. For maximum spur length / load see BS5839 Pt 1:2002.
3. This unit can only be used with Cooper CAB300 detector bases and compatible detectors.

4 Way Sounder Controller - CSC354

Installation
1. Remove the cover of the unit.
2. Fit the back-plate in position and pass the wires into it taking care not to damage the circuit board.
3. Connect the unit according to the diagram below.

Notes:
No addressing of the interface is required. See control panel operation for details. This unit requires a permanent 230 V AC supply.

Standard Connections
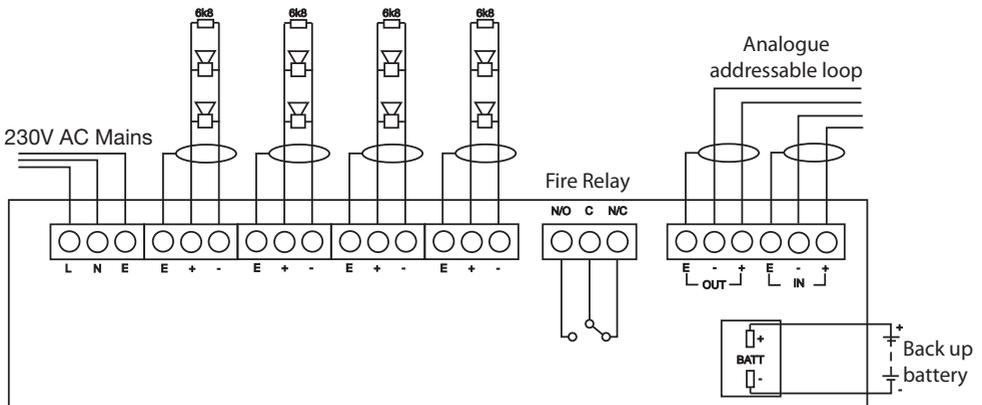
Notes:
1. Only connect cable screen to its adjacent earth terminal.
2. The end of line resistors must always be fitted, even if the sounder circuits are Unused
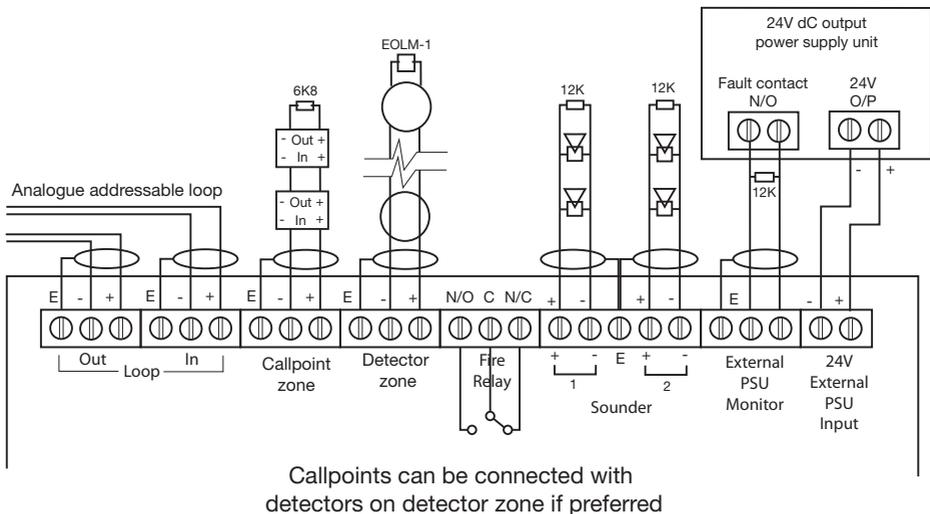
Zone Monitor Unit - CZMU352

Installation
1. Separate the two halves of the unit.
2. Drill out (or knock out) the required cable entries in the surface mounting backbox.
3. Fit the back-box in position and pass the wires into it.
4. Connect the unit according to the diagram below.

Notes:
No addressing of the interface is required. See control panel operation for details.

Standard Connections
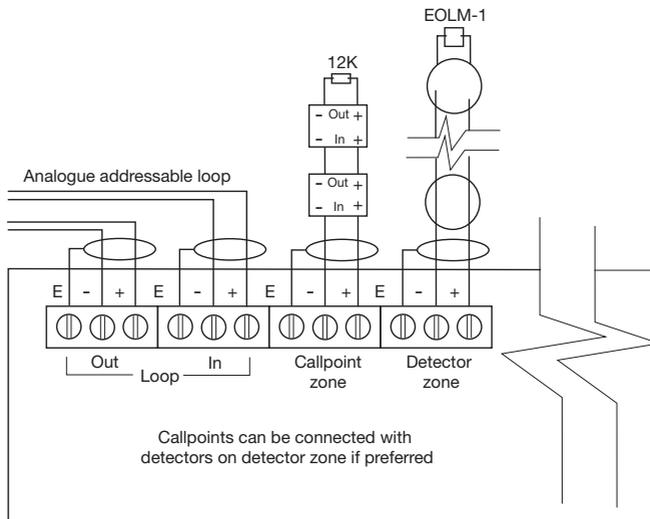
Notes:
1. This unit can only be used FXN520 detector base and compatible detectors.
2. Only connect cable screen to its adjacent earth terminal.
3. The end of line resistor must always be fitted, even if the spur is unused.
4. Maximum spur length - See BS5839 Pt 1:2002 for zone coverage.
5. Maximum number of callpoints allowed is unlimited.
6. Detector zone end of line device is EOLM-1 (supplied)
7. Callpoint zone has end of line resistor

Shop Monitor Unit - CSUM355

Installation
1. Separate the two halves of the unit.
2. Drill out (or knock out) the required cable entries in the surface mounting backbox.
3. Fit the back-box in position and pass the wires into it.
4. Connect the unit according to the diagram below.

Notes:
No addressing of the interface is required. See control panel operation for details.

Standard Connections

Callpoints can be connected with
detectors on detector zone if preferred

Notes:
1. This unit can only be used with FXN520 detector base and compatible detectors.
2. Only connect cable screen to its adjacent earth terminal.
3. The end of line resistor must always be fitted, even if the spur is unused.
4. Maximum spur length - See BS5839 Pt 1:2002 for zone coverage.
5. Maximum number of callpoints allowed is unlimited.
6. Detector zone end of line device is EOLM-1
7. Callpoint zone has end of line resistor

1 Way Input / Output Unit - CMIO353

Installation
1. Separate the two halves of the unit.
2. Drill out (or knock out) the required cable entries in the surface mounting back-box.
3. Fit the back-box in position and pass the wires into it.
4. Connect the unit according to the diagram below.

Notes:
No addressing of the interface is required. See control panel operation for details.

Standard Connections
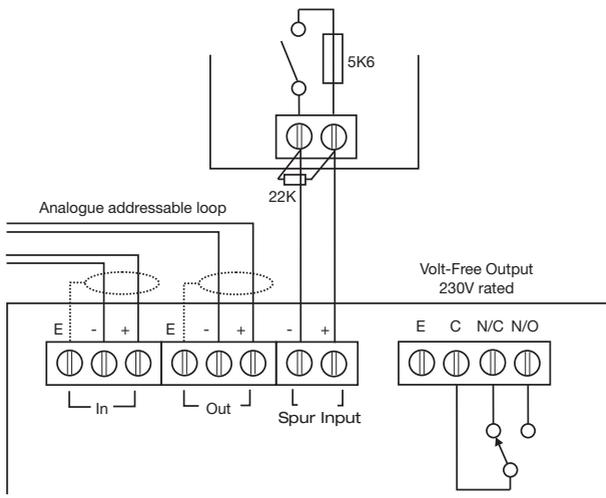
Only connected cable screen to its adjacment earth terminal.
The end of line resistor must always be be fitted, even if the spur is unused.

WARNING: Segregate mains cable from other connections to this unit. 230 V Relay output is un-fused. Ensure that the 230 V supply feeding this unit is adequately protected

Notes:
1. Only connect cable screen to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if the inputs are unused.
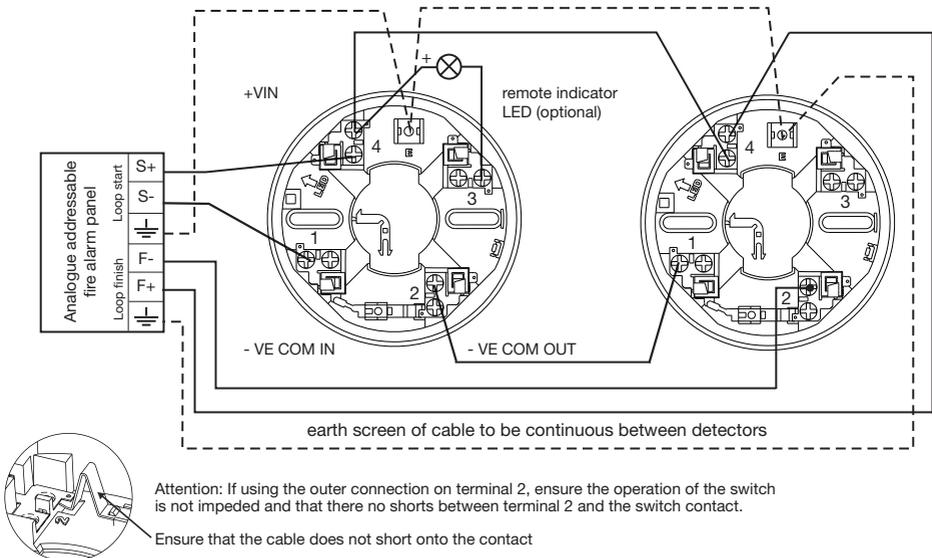
Detector Base Wiring - CAB300

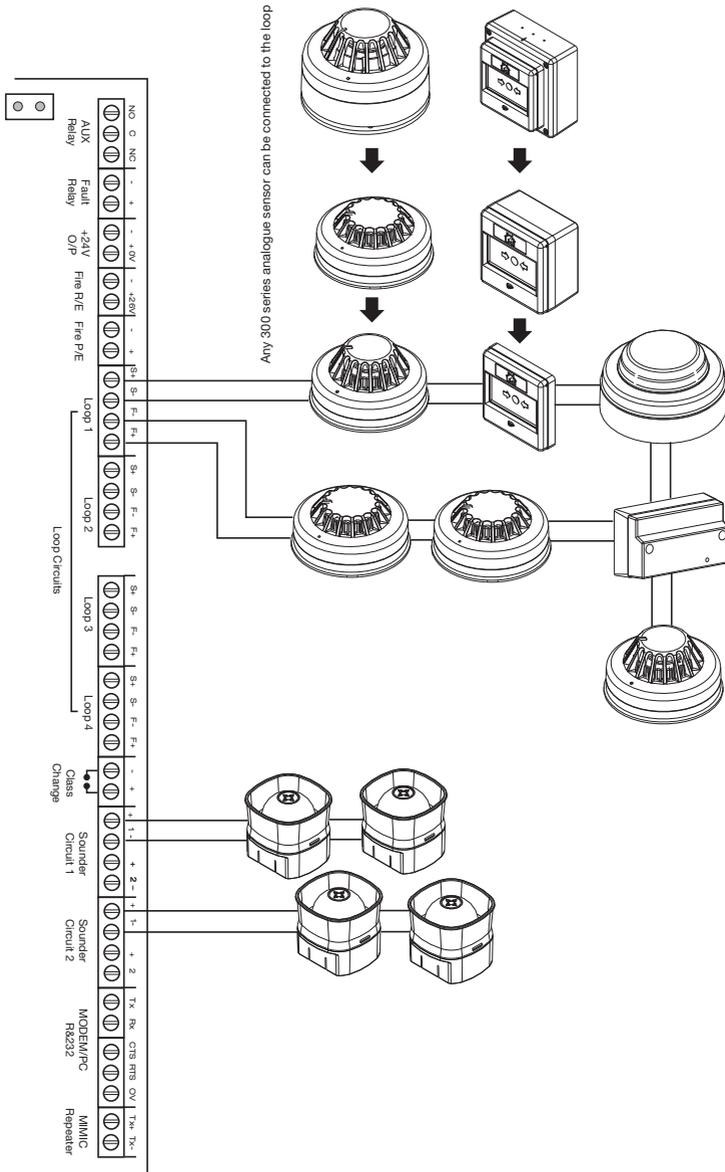|	
Supply Voltage	18 - 30 V dc
Cable Size	0.5 - 2.5mm²
Recommended cable types	FIRETUF, FP200 or MICC
Mounting hole centres	50 - 80mm

Wiring Hints

1. Each terminal is suitable for clamping up to 2 wires
2. Clamping of 2 wires of very different diameters under one screw is not recommended.
3. Suitable for mounting to mounting boxes with 50-80mm fixing centres. General If difficulty is experienced when mounting the detector, this may be due to the following:
4. Wiring causing an obstruction - move or shorten wires.
5. Although the base is tolerant to uneven mounting surfaces, a very uneven surface may cause the base to deform when the mounting screws are tightened down - loosen screws to reduce this or slide base to a more flat position.

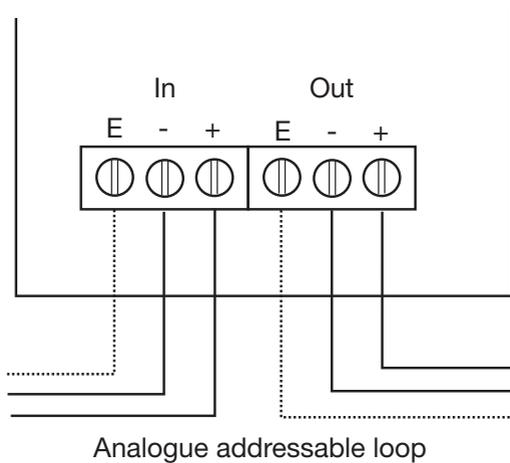**WARNING: Do not use high voltage testers when detectors or control panel are connected to the system.**

+VIN

remote indicator
LED (optional)

Analogue addressable
fire alarm panel

Loop start

Loop finish

S+
S-
F-
F+

- VE COM IN

- VE COM OUT

earth screen of cable to be continuous between detectors

Attention: If using the outer connection on terminal 2, ensure the operation of the switch is not impeded and that there no shorts between terminal 2 and the switch contact.

Ensure that the cable does not short onto the contact

Section 5 - Appendix

System Wiring

Any 300 series analogue sensor can be connected to the loop

Terminal labels (left column, top to bottom):

Section	Terminals
AUX Relay	NO, C, NC
Fault Relay	-, +, -
+24V O/P	-0V, -24V
Fire R/E Fire P/E	-, +
Loop 1	S+, S-, F-, F+
Loop 2	S+, S-, F-, F+
Loop 3	S+, S-, F-, F+
Loop 4	S+, S-, F-, F+
Class Change	-, +
Sounder Circuit 1	+, 1, -, +, 2, -
Sounder Circuit 2	+, 1, -, +, 2, -
MODEM/PC RS232	Tx, Rx, CTS, RTS, 0V, Tx+, Tx-
MIMIC Repeater	

Loop Circuits

Weatherproof Wall Sounder - CAS881WP

Installation
1. Drill required holes for the cable gland fixing
2. Drill out the required fixing holes
3. Fix to mounting surface using two suitable screws

Standard Connections

WARNING: Do not use high voltage testers if any equipment is connected to the system. earth screen must be continuous along entire length of loop.



Analogue addressable loop

Internal Wall Sounder - CAS881

Installation
1. Fix to mounting surface using two suitable screws - the rear gasket fits underneath the base and the sounder gasket fits inside the base.

Standard Connections

WARNING: Do not use high voltage testers if any equipment is connected to the system. earth screen must be continuous along entire length of loop.

Note:
Care should be taken to ensure the cable does not put stress on the circuit board

Analogue addressable loop

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Fire Systems
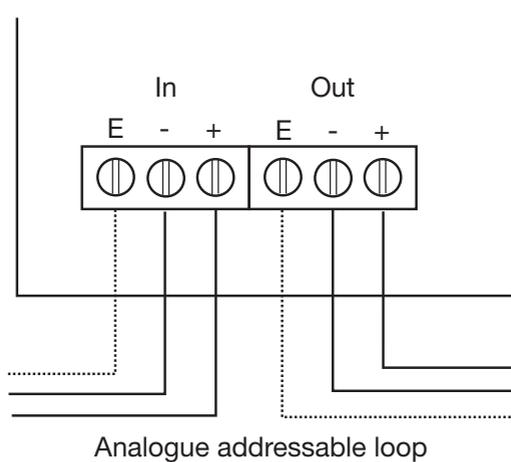
Base Sounder - CAS380 + MASC

Supply Voltage	17 ~ 32 V dc
Cable Size / type	0.5 ~ 2.5mm/ FIRETUF, FP200 or MICC
Standby current	< 320 uA
Operating temperature	-10 to +55 degrees C (95%RH)
Sound output @ +/-3dB (set by panel)	Low volume: 84 dB @ <4 mA
	Medium volume: 92dB @ <8 mA
	High volume: 95dB @ <12 mA
Tones (set by panel)	Continuous 910Hz
	Pulsed: 910 Hz / 0 Hz pulse 1 Hz
	Two tone: 610 Hz / 910 Hz @ 1 Hz cycle
	Slow whoop: 500-1200 Hz in 3.5 seconds / 0.5secs gap
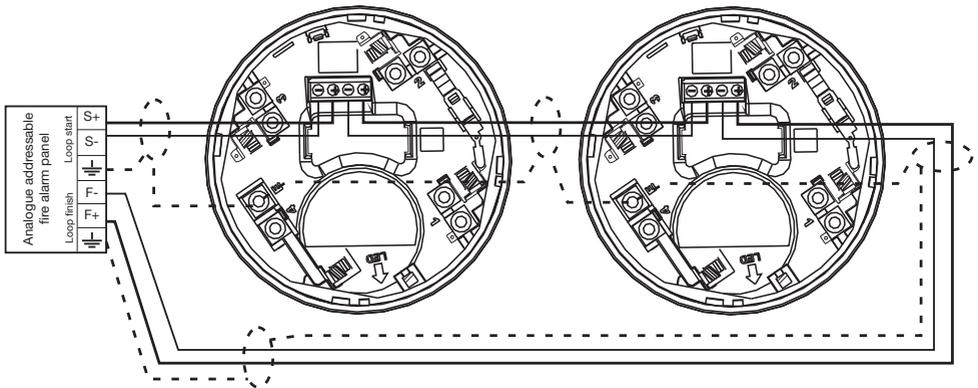
3 Way Input / Output Unit - CIO351

Installation
1. Separate the two halves of the unit.
2. Drill out (or knock out) the required cable entries in the surface mounting back-box.
3. Fit the back-box in position and pass the wires into it.
4. Connect the unit according to the diagram below.

Notes:
No addressing of the interface is required. See control panel operation for details.

Standard Connections
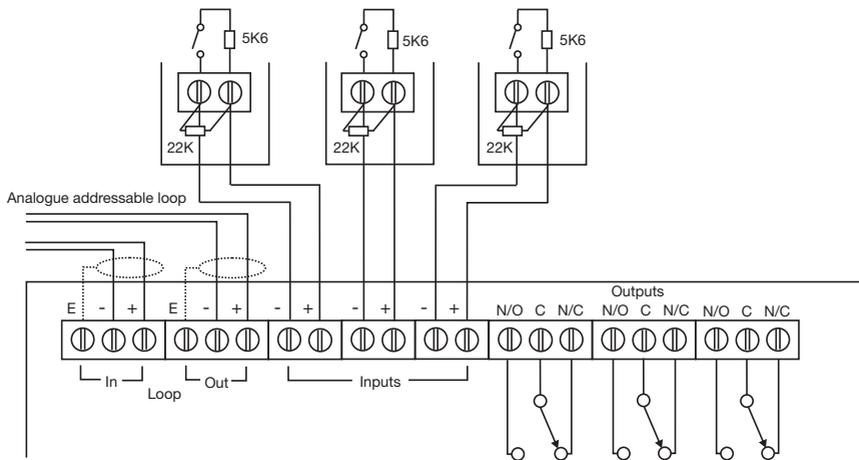
Notes:
1. Only connect cable screen to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if the inputs are unused.
3. Monitored inputs can detect open or short circuit faults.
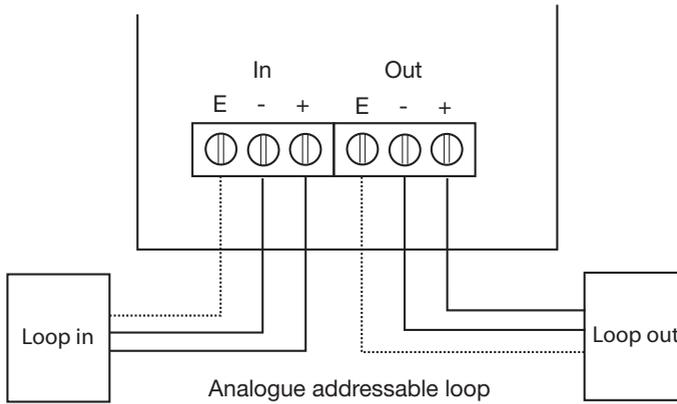4. Output relays are volt-free contacts and are not monitored.

COOPER Safety
Fire Systems

Loop Powered Beacon - CAS382

Connection Details
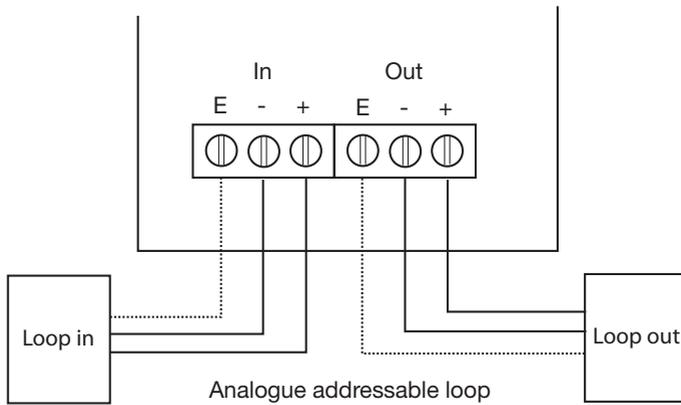Earth screen of cable to be continuous between beacons

WARNING: Do not use high voltage testers if any equipment is connected to the system.
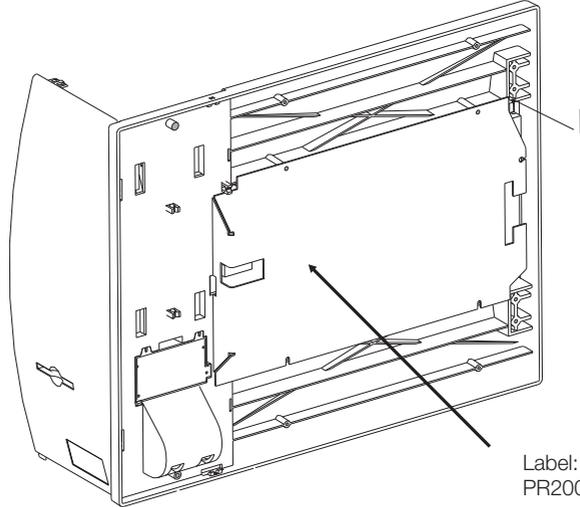
Standard Connections

Callpoint - CBG370S / CBG370WP

Standard Connections

Analogue addressable loop

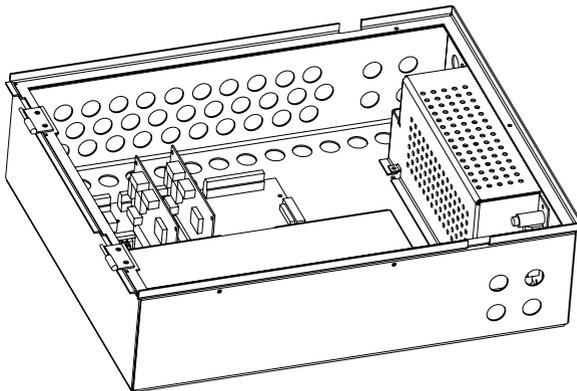COOPER Safety
Fire Systems
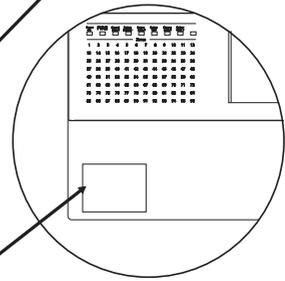
EN54 Product Spec Label

Note: X=2 on a 2 Zone Panel / X=4 on a 4 Zone Panel

Label: D6K XB
PR200-04-517-01

Label: D6K XA
PR200-04-518-01

Note: If the panel is recessed this label must be placed on the front of the panel

Battery Disposal Instructions

Although batteries contain lead and small amounts of antimony and arsenic, they are safe if handled according to the accompanying guide. The battery cells must not be dismantled as this involves several hazards, which are best handled under controlled conditions, using specialised equipment. No attempt should be made to repair any batteries; they should be treated as disposable when they have outlived their use. Batteries must be disposed of in accordance with current waste disposal and pollution legislation and in particular; The Environment Protection Act 1990, Special Waste Regulation 1996. It is recommended that the following authorities are contacted before any attempt is made to dispose of batteries; Environment Agency Local office, Local Authority Environmental Health or Waste Handling department.

COOPER Safety
Fire Systems

CE Marking

$\mathsf{C}\,\mathsf{E}$ LPCB
0832 – CPD – 1060   714h/01

Cooper Lighting and Safety Ltd
Wheatley Hall Road
Doncaster
South Yorkshire
DN2 4NB

09

EN 54-2 1997 & A1:2006

CF3000

Control and indicating equipment for fire detection and fire
alarm systems for buildings
EN 54-2 Clause

Options Provided

7.8   Output to fire alarm devices
7.9.1   Output to fire alarm routing equipment
7.10.1   Output to automatic fire protection equipment (type A)
7.10.2   Output to automatic fire protection equipment (type B)
7.11   Delays to outputs
7.12.3   Dependencies on more than one alarm signal-Type C
7.13   Alarm counter
8.9   Output to fault routing equipment
9.5   Disablement of each point
10   Test condition

$\mathsf{C}\,\mathsf{E}$ LPCB
0832 – CPD – 1060   714h/01

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EN 54-4 1997 & A1:2002 A2:2006

CF3000

Power supply equipment for fire detection and fire alarm
systems for buildings

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Fire Systems